Draft Generic Environmental Impact Statement (DGEIS) City of Plattsburgh

Downtown Area Improvement Projects

Clinton County, New York

Appendices

Appendix A: State Environmental Quality Review Information

RESOLUTION DETERMINING TO SEEK LEAD AGENCY STATUS UNDER THE STATE ENVIRONMENTAL QUALITY REVIEW ACT FOR REVIEW OF DOWNTOWN AREA IMPROVEMENT PROJECTS

WHEREAS, the City of Plattsburgh revitalization efforts, including the projects described within the Downtown Revitalization Initiative as funded by the New York State Department of State, will result in several downtown area improvement projects, some of which have already been specifically proposed and some of which are in the conceptual stage (collectively, the "Projects"). These Projects may include but not be limited to the Durkee Lot mixed use development; Saranac Riverwalk; Durkee Street reconfiguration and parking improvements; Bridge Street parking improvements; demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street; streetscape improvements at various downtown locations; Westelcom Park improvements and art-walk; expansion and reconfiguration of the Broad Street municipal parking lot; additional parking improvements in various downtown locations; installation of paid parking kiosks throughout the downtown area; the relocation of the Plattsburgh Farmers' and Crafters' Market from the Durkee lot to the Harborside area; and Harborside improvements, and possibly others.

WHEREAS, the City Common Council wishes to review the potential impacts of the Projects taken together rather than separately, including consideration of potential cumulative impacts; and

WHEREAS, the Common Council meets weekly and the Planning Board meets monthly; and

WHEREAS, the City Common Council wishes to expand its involvement in environmental review of the Projects by conducting comprehensive review through possible preparation of a Generic Environmental Impact Statement pursuant to the State Environmental Quality Review Act (SEQRA) and Section 617.10 of the implementing Regulations set forth at Title 6 of the New York Compilation of Codes, Rules and Regulations (NYCRR);

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

- 1. The Projects will require review under SEQRA.
- 2. The Projects are determined to be a Type 1 Action under SEQRA.
- 3. The following are or may be Involved Agencies under SEQRA:

City of Plattsburgh Planning Board City of Plattsburgh Zoning Board of Appeals

Clinton County Legislature

Clinton County Planning Board

Clinton County Industrial Development Agency

New York State Department of State

New York State Department of Transportation

New York State Department of Environmental Conservation

New York State Historic Preservation Office

New York State Office of Community Renewal Empire State Development Corporation New York State Electric and Gas Corporation

- 4. The City Council wishes to assume SEQRA Lead Agency status and conduct a coordinated SEQRA review of the Projects through possible preparation of a Generic Environmental Impact Statement.
- 5. The City Council authorizes and directs the Community Development Office, Corporation Counsel and/or Special Counsel to send a Lead Agency designation letter to all of the Involved Agencies requesting their consent to designation of the City Common Council as Lead Agency for SEQRA review of the Projects.

City of Plattsburgh Downtown Area Improvement Projects

City of Plattsburgh, Clinton County, New York Draft Generic Environmental Impact Statement (DGEIS)

Scoping Document

Name of Project: City of Plattsburgh

Downtown Area Improvement Projects

Applicant: City of Plattsburgh

Project Location: City of Plattsburgh

Clinton County, NY

SEQRA Classification: Type I

Lead Agency: City of Plattsburgh Common Council

41 City Hall Place Plattsburgh, NY 12901

Lead Agency Contact: Matthew Miller

Director of Community Development

41 City Hall Place Plattsburgh, NY 12901

(518) 536-7510

Date of Scoping Meeting: August 22, 2019

Close of Comments: August 26, 2019

Date of Scope Adoption: September 5, 2019

Downtown Area Improvement Projects City of Plattsburgh, New York Draft Generic Environmental Impact Statement (DGEIS) Scope

This document identifies the issues to be addressed in the Draft Generic Environmental Impact Statement ("DGEIS") for the City of Plattsburgh Downtown Area Improvement Projects (the "Project") in the City of Plattsburgh, New York (the "City"), proposed by the City of Plattsburgh Common Council (the "Lead Agency"). This Scope document contains the items described in 6 NYCRR Part 617.8 (e) (1) through (7). For purposes of this Scope, the term "Project" or "Projects" means the Project and all related implementing actions, such as approvals and permits.

REQUIRED ELEMENTS OF THE DGEIS

The DGEIS shall conform to requirements for preparation and content of environmental impact statements as stipulated in 6 NYCRR 617.9, which include but are not limited to the following:

- A description of the proposed Project and its environmental setting;
- A statement of the environmental impacts of the proposed Project, including its short- and long- term effects, and typical associated environmental effects;
- An identification of any significant adverse environmental effects that cannot be avoided if the proposed Project is implemented;
- A discussion of alternatives to the proposed Project;
- o An identification of any irreversible and irretrievable commitments of resources that would be involved with the proposed Project should it be implemented; and
- A description of mitigation measures proposed to minimize or avoid any significant adverse environmental impacts of the proposed Project.

All discussions of mitigation will consider at least the mitigation measures identified in this Scope. Where reasonable and necessary, such mitigation measures will be incorporated into the proposed Project if they are not already so included. If any mitigation measures listed in this Scope are not incorporated into the proposed Project, the rationale for not incorporating them will be discussed in the DGEIS. The Applicant may suggest additional mitigation measures where appropriate. When no mitigation is provided, the rationale will be discussed in the DGEIS.

PROPOSED PROJECT

The City of Plattsburgh is undertaking revitalization efforts that will result in several downtown area improvement Projects, some of which have already been specifically proposed and some of which are in the conceptual stage (collectively, the "Projects") as described below.

Four of these Projects (marked below with an asterisks (*)) are included in the City's Downtown Revitalization Initiative (the "DRI"), an initiative funded by New York State ("NYS") to improve the vitality of urban centers throughout the state. The City of Plattsburgh was selected as a Phase 1 DRI community, securing \$10 million in public funding for the DRI Projects identified above and others

outside the scope of the DGEIS, "because strong and sustainable job growth in the region has increased the demand for housing and retail opportunities in the downtown. Under the DRI, Plattsburgh will build on recent investments, including a new municipal marina, streetscape improvements, and renovation of historic buildings to create a vibrant downtown that serves the needs of local employees, residents, students and visitors. The focus will be on mixed-use infill development, a greater variety of retail and housing, expansion of the successful Farmers' Market, and providing an enhanced connection to the waterfront." The intent of the DRI is to advance downtown revitalization through transformative housing, economic development, and transportation and community projects that will attract and retain residents, visitors and businesses - creating dynamic neighborhoods where tomorrow's workforce will want to live, work, and raise a family.

Building upon on a long tradition of local planning, the City organized a Local Planning Committee ("LPC") comprised of residents, civic leaders, and business owners to lead the DRI planning process and create a unified vision for the role that DRI investment should play in building Plattsburgh's future. The LPC guided extensive community engagement, including several LPC meetings and four public engagement events.

At the end of the planning process, the LPC created and submitted a Strategic Investment Plan to NYS based on the results of all its meetings, public input received, and best practices. This plan proposed projects to advance downtown Plattsburgh revitalization and did serve as the basis for the DRI funding awarded funding from the State.

A parking study of Plattsburgh's downtown was commissioned by the Common Council and completed by Carl Walker, Inc. (a.k.a. WGI, Inc.). The Common Council accepted the completed study in February of 2018. It provided an analysis of current parking trends in the City and included recommendations for changes to the parking system based on the anticipated development of the Durkee Street parking lot.

Many of the Projects identified as receiving DRI funding are also anticipated to receive additional funding from other sources. Alternatively, some Projects were not proposed as part of the DRI and will be funded using alternative sources. The Projects are as follows:

Durkee Lot mixed use development*

A multi-story mixed use development that will require a Special Use Permit from the City's Zoning Board of Appeals. The development will also require City Planning Board approval for amendments to an existing Planned Unit Development and Site Plan approval. Termination of the pre-existing General Municipal Law ("GML") Redevelopment Plan for the City's downtown area and its related tax incentive will need to be completed by the Common Council. The proposed mixed-use development would contain approximately 114 apartments, 10,000 square feet of

¹ "Downtown Revitalization Initiative, North Country – Plattsburgh." New York State Downtown Revitalization Initiative. *New York State*. https://www.ny.gov/downtown-revitalization-initiative/north-country-plattsburgh. Webpage accessed July 23, 2019.

commercial space, two surface parking lots, and a large, underground parking garage. Fifty public parking spaces would also be provided in the surface parking lots as part of the development. The Durkee Street Municipal Parking Lot (the "DSMPL") is located at 22 Durkee Street. The proposed development encompasses approximately 3.3 acres and is located on a portion of tax parcel 207.20-7-15. A second tax parcel, 207.20-7-14, was recently merged with parcel 207.20-7-15 and the proposed development will occupy the former footprint of tax parcel 207.20-7-14. The entirety of this tax parcel currently contains 289 public parking spaces in the DSMPL, approximately 57 public parking spaces in the Broad Street Municipal Parking Lot (the "BSMPL"), the Gateway Office Building and its associated two-story parking structure, the Plattsburgh Farmers' and Crafters' Market (the "PFCM"), and a remediated former gas station ("Highway Oil");

Saranac Riverwalk*

- o Complementing the Durkee Street Redevelopment, the City is also undertaking design and construction of a Riverwalk along the Saranac River. The Riverwalk will be located on tax parcel 207.20-7-15 and be located at the top of the western bank of the Saranac River between Bridge and Broad Streets. It will be replacing an existing wooden boardwalk that sits on the western bank of the Saranac River along the eastern edge of the DSMPL. The Project will contain a walkway with an overlook and landscape plantings that will accommodate pedestrians and bicycles. It will connect to MacDonough Park to the north via a crosswalk over Bridge Street and path, and to the Saranac River Trail to the south via a path to be constructed between the Gateway Office Building and Broad Street that will connect to the existing sidewalk at the intersection of Broad and Durkee Streets;
- Durkee Street reconfiguration and streetscape improvements*
 - Reconfiguration of Durkee Street from two-way to one-way, northbound traffic with streetscape improvements (wider sidewalks, street tree plantings, pedestrian lighting, transformer art covers) and the establishment of 43 additional public parking spaces (angled and parallel on-street parking) on Durkee Street between Broad and Bridge Streets;
- Bridge Street parking improvements
 - Streetscape improvements (street tree plantings, pedestrian lighting) and approximately six new parallel, public, on-street parking spaces along the south side of Bridge Street between Durkee Street and the Veterans Memorial Bridge;
- Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza (the "APMPP") with the associated abandonment of Division Street
 - The City has committed to providing adequate replacement parking capacity prior to redevelopment of the DSMPL into a mixed-use development by Prime Plattsburgh, LLC ("Prime"). The former Glens Falls National Bank branch located at 25 Margaret Street is considered a suitable area for public parking improvements. The APMPP is to be located on tax parcel 207.19-3-15 that comprises a total area

of approximately 0.73 acres and was purchased by the City in 2018. The City is currently evaluating bids for the abatement and demolition of the existing on-site bank structure and the development of a 109-space municipal parking lot. This Project will necessitate the abandonment of an adjacent, little-used City street (Division Street) and the incorporation of that street's former footprint into the APMPP;

- Westelcom Park improvements*
 - o Improvements to the existing Westelcom Park, now referred to as the Arts Park, located across the street from the DSMPL on tax parcels 207.82-1-12, 207.82-1-13, 207.82-1-14, and 207.82-1-15 totaling approximately 0.55 acres in size. The redesign will result in a multi-tiered Arts Park which will include sculpture areas, multiple water features, a plaza, bicycle infrastructure, and pedestrian walking areas with landscaping throughout;
- Expansion and reconfiguration of the Broad Street Municipal Parking Lot
 - The City has committed to providing adequate replacement parking capacity prior to redevelopment of the DSMPL into a mixed-use development by Prime. The BSMPL is considered a suitable area for public parking improvements. The 57-space BSMPL is located on a 0.72-acre part of tax parcel 207.20-7-15 to the south of Broad Street between Durkee Street and the Saranac River. The proposed improvements include minor expansion and restriping of the existing lot to accommodate 21 additional parking spaces;
- Relocation of the Plattsburgh Farmers' and Crafters' Market from DSMPL to the Harborside area
 - The City proposes to relocate the PFCM from the DSMPL to a site in the City's Harborside area near Dock Street. The site is anticipated to become part of a larger Master Plan considering future development along the harbor, which is being pursued through funding as part of a 2019 consolidated funding application by the City.

The proposed Project requires the approvals and permits identified in Table 1:

Table 1: Required Approvals and Permits

	Agency	Project		Approval/Permit
1.	City of Plattsburgh Common Council	All Projects	•	SEQRA Determination
		Durkee Lot Mixed Use Development	•	Termination of the pre-existing GML Redevelopment Plan for the downtown area and its related tax incentive.
		Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street	•	Abandonment of Division Street
2.	City of Plattsburgh Planning Board	Durkee Lot Mixed Use Development	•	Site Plan Approval (§360) Planned Unit Development (PUD) (§ 360-21)
		Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements; Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street; Westelcom Park (Arts Park) improvements; Expansion and reconfiguration of the Broad Street Municipal parking lot; Relocation of the Plattsburgh Farmers' and Crafters' Market from the Durkee lot to the Harborside area.	•	Advisory Opinion for all Projects listed
3.	City of Plattsburgh Zoning Board of Appeals	Durkee Lot Mixed Use Development	•	Special Use Permit (§ 360-31)

	Agency	Project		Approval/Permit
4.	Clinton County Planning Board	Durkee Lot Mixed Use Development; Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements; Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street; Westelcom Park improvements; Expansion and reconfiguration of the Broad Street Municipal parking lot;	•	General Municipal Law Referral (§12B-239)
5.	Clinton County Industrial Development Agency	Durkee Lot Mixed Use Development	•	Payment in Lieu of Taxes (PILOT) approval
6.	Clinton County Highway Department	Durkee Lot Mixed Use Development; Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements	•	Highway Work Permit for Non- Utility Work Highway Work Permit for Utility Work
7.	New York State Department of Environmental Conservation ("DEC")	Durkee Lot Mixed Use Development	•	SPDES General Permit GP-0-15- 002 For Stormwater Discharges From Construction Activities
		Other projects (as may be required)	•	SPDES General Permit GP-0-15- 002 For Stormwater Discharges From Construction Activities
8.	New York State Department of Transportation (NYSDOT)	Durkee Lot Mixed Use Development; Bridge Street parking improvements	•	Highway Work Permit
9.	New York State Historic Preservation Office	All Projects	•	Consultation pursuant to Section 14.09

ORGANIZATION AND CONTENT OF THE DGEIS

The DGEIS will contain the following information and address the following issues as they relate to the proposed Project.

COVER SHEET identifying:

- (1) The proposed Project and its location;
- (2) The name, address, email and telephone number of the Lead Agency and contact person;
- (3) The name, address, email and telephone number of the preparer and other organizations that contributed to the DGEIS; the date of DGEIS submission and acceptance;
- (4) The name, address, email and telephone number of the Applicant/Owner;
- (5) Public hearing date and DGEIS comment period; and
- (6) Website where the DGEIS and Final Generic Environmental Impact Statement ("FGEIS") will be posted.

Following the cover sheet, a list (name, address, email and telephone numbers) of all of the Applicant's consultants, and a list of all interested and involved agencies will be provided, with names, address, email and phone numbers for each agency provided.

TABLE OF CONTENTS, indicating the chapters of the DGEIS and page numbers, as well as lists of exhibits, tables and appendices.

The text of the DGEIS will include the following:

I. EXECUTIVE SUMMARY

- A. Introduction;
- B. Describe the proposed Project;
- C. Provide a list of all involved and interested agencies and identification of local, county, State and other approvals required;
- D. Provide a statement of Project purpose and need;
- E. Summarize significant adverse environmental impacts identified in each subject area;
- F. Summarize mitigation measure(s) proposed for significant adverse environmental impacts; and
- G. Describe alternatives analyzed and a table comparing the impacts of the proposed Project with the impacts of the various alternatives.

II. DESCRIPTION OF THE PROPOSED PROJECT

- A. Identify the location (including mapping and other descriptive graphics) of the proposed Projects
- B. Describe current uses and site conditions, including (as applicable):
 - 1. Year built and ownership
 - 2. Any easements or licenses
 - 3. Lighting and security conditions
 - 4. Annual maintenance costs and responsible party
 - 5. Historic contamination issues and remediation activities
 - 6. Existing and abutting street network, site frontage, and access
 - 7. Existing streetscape and parking
 - 8. On- and off-site utilities serving the Project Site
 - 9. On-site or abutting local, State and/or National Register Listed or eligible resources and archaeological sensitive resources
 - 10. Existing zoning
 - 11. Current operation/tenants, including years occupied, hours of operation, lease terms and/or licenses
- C. Description of the Project's history, including prior redevelopment considerations
- D. Description of each component of the proposed Project, including the following elements, as applicable:

1. Proposed Uses:

- Describe & provide illustrations of the residential component, including number and types of dwelling units (including total number of bedrooms), typical floor plan diagrams, residential amenities within building on-site, price point/target rents, (if any)
- ii. Describe & provide illustrations of the commercial component, including permitted and proposed uses, proposed layout (e.g., approximately square feet and configuration), number of employees anticipated, hours of operation
- iii. Describe & provide illustrations of the required and proposed parking and loading, including the number, location, hours of operation, and parking management program (if any) of the public parking component

2. Massing:

i. Describe & provide illustrations of the architectural design, including materials, colors, characteristic details and dimensions of proposed structures (elevations and perspectives)

3. Site Design & Landscaping:

- i. Describe & provide illustrations of streetscape improvements and the conceptual landscaping plan, including plant lists and maintenance plan
- ii. Describe lighting and security design

4. Access & Parking:

- i. Describe road network changes
- ii. Describe proposed pedestrian and bicycle facilities
- iii. Describe emergency, refuse service, and maintenance access and circulation
- iv. Describe & provide illustrations of parking changes
- v. Describe parking management plan

5. Infrastructure & Utilities:

- i. Describe any necessary infrastructure upgrades/changes
- ii. Describe proposed Stormwater Pollution and Prevention Plan(s) (SWPPP) to manage stormwater quantity and quality

6. Phasing:

i. Describe Project phasing, if any, including how market conditions may affect phasing

7. Maintenance:

- i. Describe anticipated annual maintenance costs and responsible party
- ii. Summarize snow removal storage and maintenance plan
- E. Summarize DRI funding and any other funding mechanisms
- F. Describe required approvals, including advisory approvals and regulatory approvals

G. Project Purpose and Need

- 1. Discuss the purpose and need for the Projects identified above, including demographic trends, economic conditions analysis, other relevant information and data supporting the various downtown revitalization Project.
- 2. Describe of objectives/goals being sought by the City through the development of these Projects.
- 3. Summarize any benefits of the proposed Projects.

III. EXISTING CONDITIONS, POTENTIAL IMPACTS AS A RESULT OF THE PROPOSED PROJECT AND PROPOSED MITIGATION

- A. Land Use, Zoning and Public Policy
 - 1. Land Use
 - a. Existing Conditions
 - (1) Description and mapping of current land use and within a ½-mile radius for each Project Site, including public and private open space areas.
 - (2) Description of any relevant licenses, easements or covenants affecting the proposed Projects.
 - (3) Describe existing buildings and/or structures and their current conditions for each Project Site, as applicable.
 - b. Potential Impacts from the proposed Projects
 - (1) Discuss compatibility of proposed Projects with existing land uses within a ½-mile radius of the Project Sites, including (as appropriate):
 - (a) Proposed residential uses, including proposed layout, affordability of proposed apartments, residential amenities, and associated parking, if any.
 - (b) Commercial uses that will be permitted within the commercial component, the proposed layout, anticipated hours of operation, and what the anticipated use is based on market analysis data.
 - (c) Proposed buildings, including detailed information about private and public parking areas.
 - (d) Potential impacts and/or compatibility with surrounding area from changes in uses
 - (e) Potential impacts from amendment to PUD, Special Use Permit and the termination of the GML Redevelopment Plan and associated tax incentive.
 - (f) Potential changes to lease terms or required parking for neighboring sites.
 - (g) Potential impacts related to the exclusion of neighboring sites from the Project Site.
 - (h) Potential conflicts with existing easements, licenses or covenants.

- (i) Potential new easements, licenses or covenants, including any easement retained by City for the Saranac Riverwalk and access(es) along and across the Durkee Lot.
- (j) Compatibility with future master plans

c. Mitigation

(a) Discuss appropriate mitigation measures to reduce identified impacts.

2. Zoning

a. Existing Conditions

- (1) Map and describe zoning districts within a ½-mile radius of each Project Site. Include the current zoning requirements as well as: use, density, bulk and height, and lot and dimensional requirements per Chapter 360 of the City of Plattsburgh Code as applicable per Project Site.
- (2) Describe the current compliance with zoning for parking areas as it pertains to existing public parking lots included within various the improvement Projects.
- (3) Description of site plan review and approval process, and site plan design standards per Chapter 360 as it applies to each Project.
- (4) Describe compliance with current zoning requirements.
 - (a) Describe the prior history of development efforts at the site and the current conditions of the zoning affecting the site.
 - (b) Describe recent changes to zoning requirements that affects the site.
 - (c) Describe neighboring sites' current compliance with zoning requirements.
- b. Potential Impacts as a result of the proposed Projects
 - (1) Describe proposed Project's compliance with zoning regulations applying to the site, including parking
 - (2) Assess the impact of the Project on neighboring sites' zoning compliance, including parking
 - (3) Describe any variances or waivers that may be required for the proposed Projects
 - (4) Describe required amendments to approved PUD and to-be sought Special Use Permit
 - (5) Discuss applicable recreation and/or open space fees, as applicable

(6) Describe applicability of zoning and required advisory approvals

c. Mitigation

(1) Discuss appropriate mitigation measures to reduce identified impacts.

B. Public Policy

a. Existing Conditions

- (1) Describe local, regional, and other applicable public planning and policy documents including, but not limited to the City of Plattsburgh 1999 Comprehensive Plan; Plattsburgh DRI Strategic Investment Plan 2017; Durkee Street Reimagined Study 2016; 58 Point Plan for Energy and Economic Resiliency; Clinton County Destination Master Plan 2017; and relevant City capital plans. Include recommendations relevant to the Project Area and/or Project Sites.
- b. Potential Impacts as a result of the Proposed Projects
 - (1) Discuss compatibility of the proposed improvement Projects with relevant planning and public policy documents.
- c. Proposed Mitigation
 - (1) Discuss appropriate mitigation measures to reduce identified impacts.

C. Community Character/Visual Impacts

- 1. Existing Conditions
 - Document, with photographs and narrative the visual and community character of the various Project Sites and the immediately surrounding area.
- 2. Potential Impacts as a result of the proposed Project
 - a. Describe the architectural and landscaping design, including materials, colors, characteristic details and dimensions of proposed structures (elevations and perspectives).
 - b. Assess potential Projects' compatibility with surrounding uses.
 - c. Discuss how exterior lighting program complies with City lighting standards
- 3. Proposed Mitigation
 - a. Discuss appropriate mitigation measures for identified impacts.

D. Aquatic and Natural Resources

1. Aquatic Resources

a. Existing Conditions

- Map existing streams, waterbodies, wetlands and aquatic resource on or within close proximity to the Project Sites.
 Describe such resources in close proximity to each Project Site.
- ii. Describe and map any floodplains on the Project Site.

b. Potential Impacts as a result of the Proposed Project

- i. Describe potential impacts to regulated aquatic resources and measures to avoid and/or minimize potential impacts.
- ii. Discuss compliance with Federal, State and City permitting standards for any activities affecting regulated resources.
- iii. Describe any impacts to floodplains and compliance with Federal, State and City permitting standards for any activities within floodplain areas.

c. Proposed Mitigation

i. Discuss appropriate mitigation measures to reduce identified impacts.

2. Natural Resources

a. Existing Conditions

- i. Obtain data from the New York Natural Heritage Program (NYNHP) and the USFWS regarding potential Rare, Threatened and Endangered species on and in the vicinity of the site and assess the potential for the each site to support these species.
- ii. Discuss the sites habitat and wildlife values.

b. Potential Impacts as a result of the Proposed Project

- i. Discuss impacts to site habitat and wildlife values.
- ii. Discuss the impact of construction activities and ongoing use on vegetation on adjoining properties including trees and their root systems, shrubs, and plant materials, and on wildlife and terrestrial and aquatic ecosystems.

c. Proposed Mitigation

- Describe proposed landscape plan, including use of native species. Identify any City ordinance or requirements to be met.
- Discuss the landscape maintenance plan, including responsibilities and proposed use of fertilizers, pesticides and herbicides.

E. Municipal Utilities

1. Stormwater Management

1. Existing Conditions

- a. Discuss existing drainage patterns (including regional watershed and on-site drainage) and their relationship to the Project Sites.
- b. Compute pre-development stormwater volumes and peak rates for the 1, 10, and 100-year storms to each design point/point of interest throughout the site where ground disturbance is anticipated to exceed one acre.
- c. Discuss existing stormwater and drainage infrastructure on the Project sites.
- d. Discuss relevant City, County and State Stormwater Management and Erosion and Sediment Control regulations.

2. Potential Impacts as a result of the proposed Project

- a. Describe any changes to stormwater infrastructure for the various Project Sites.
- b. For Project Sites where the proposed ground disturbance is greater than one acre, describe the components and function of the proposed drainage system.
- c. Describe potential impacts to the local drainage system and downstream discharge points from construction and operation of the proposed drainage system. Discuss the need for improvements to any downstream components of the drainage system.
- d. Describe pre and post development stormwater volumes and peak rates for the 1, 10, and 100-year storms to each design point/point of interest throughout the site based on proposed area of disturbance.
- e. Discuss impacts to the Saranac River and Lake Champlain, including the potential to exacerbate flooding.
- f. Discuss the proposed erosion and sediment control plan and material components of the SWPPP.
- g. Discuss the proposed stormwater management (quantity and quality) plan and SWPPP, including practices necessary to address all relevant State and City design criteria including "green infrastructure" practices.
- h. Describe the potential for sedimentation and induced turbidity in onsite and downstream water courses and bodies.
- i. Discuss ownership and maintenance of stormwater management facilities for each Project Site.

j. Discuss compliance with relevant Stormwater Management and Erosion and Sediment Control regulations.

3. Proposed Mitigation

a. Discuss appropriate mitigation measures to reduce identified impacts.

2. Water Supply

1. Existing Conditions

- a. Discuss the existing City of Plattsburgh Consolidated Water District water supply and capacity.
- b. Discuss existing on-site infrastructure and the extent to which it will be used or abandoned per Project Site.

2. Potential Impacts as a result of the proposed Project

- Describe changes to or upgrades proposed for water supply infrastructure per Project Site, including proposed water lines, locations of any booster stations, pressure reducing stations, ownership and maintenance
- b. Describe Project-generated demand for potable water, irrigation water and water for fire suppression at full buildout. Assess the ability of the system to provide required flows and pressure when considering the Project as well as other approved or planned Projects identified by City planning staff
- c. Describe capacity of the City of Plattsburgh Consolidated Water District to accommodate Project-generated demand

3. Proposed Mitigation

- a. Discuss appropriate mitigation measures to reduce identified impacts.
- b. Discuss measures to reduce water consumption.

3. Sanitary Sewage

1. Existing Conditions

- a. Describe the existing Plattsburgh Sewer District Resources Recovery Facility facilities and treatment capacity.
- Describe ownership and maintenance of the existing on-site Project wastewater conveyance system including locations of significant infrastructure items such as sewer pump stations, sewers and force mains
- c. Discuss existing off site (downstream) infrastructure and characterize in terms of age, condition, adequate capacity, slope, etc.
- 2. Potential Impacts as a result of the proposed Project

- a. Discuss estimated Project-generated demand by use component at full buildout. Assess the ability of the system to convey and treat wastewater from the Project as well as from other known or planned Projects as identified by City planning staff.
- b. Discuss any proposed upgrades or changes for the system.

3. Proposed Mitigation

a. Discuss appropriate mitigation measures to reduce identified impacts.

4. Solid Waste

1. Existing Conditions

- a. Discuss existing solid waste generation from the Project Sites.
- b. Discuss current solid waste collection and disposal for the Project Sites.

2. Potential Impacts as a result of the proposed Project

- a. Discuss anticipated Project generated solid waste, by use component, at full build out for Project Sites, where applicable.
- b. Discuss on-site storage, removal, etc. (including discussion of recycling) for Project Sites, where applicable.
- c. Describe whether solid waste removal will be handled by a private company or through the City's services for Project Sites, where applicable..
- d. Discuss disposal location and ability of this off-site location to accommodate Project generated solid waste and related construction and demolition debris for Project Sites, where applicable.
- e. Discuss maintenance plans related to ensuring all Project Sites remain clear of litter.

3. Proposed Mitigation

a. Discuss appropriate mitigation measures to reduce identified impacts.

F. Traffic, Transportation, Pedestrians and Transit

1. Existing Conditions

- a. Complete a Traffic Impact Study (TIS) using the standards and guidelines in common use and as developed by the New York State Department of Transportation (DOT), the Institute of Transportation Engineers (ITE), City of Plattsburgh, and any other applicable sources.
- Describe the roadway network and local intersections serving the sites.
 Descriptions are to include number of lanes and lane widths, pavement condition, speed limits, sidewalks and crosswalks, intersection geometry,

- signal timing, turn restrictions, and traffic control. Vehicle mix, pedestrian volumes, and bicycle volumes are to be described as well.
- c. The study will evaluate the following intersections during both AM and PM weekday peak traffic periods, which will span 6:00 to 9:00 a.m. for the AM Peak period, 3:00 to 6:00 p.m. for the PM Peak period, and 11:30 AM 1:30 PM for the Midday Peak period:
 - Durkee Street at Bridge Street
 - Durkee Street at Broad Street
 - Margaret Street at Bridge Street
 - Margaret Street at Brinkerhoff Street
 - Margaret Street at Broad Street
 - Peru Street at Broad Street
 - Peru Street at Bridge Street
- d. The count data will include vehicle mix, pedestrian volumes, and bicycle volumes.
- e. A field review of the intersections will be conducted to gather information as to intersection geometry, traffic control, signal timings, turn restrictions, etc.
- f. The latest three-year crash history will be collected and analyzed for the intersections.
- g. The TIS will be coordinated with all other transportation studies and Projects recently completed and those that are currently on-going (i.e., other traffic studies, connector road study, etc.)
- h. This section will also include a discussion of existing public transportation network facilities in the overall Project area.

2. Potential Impacts of the proposed Project

- a. Trip Generation. Using the Institute of Transportation Engineers (ITE) Trip Generation Manual, latest edition, provide estimates of traffic generated by the proposed Projects for the Build Year. Trip generation estimates should be developed for the residential and commercial components of the Project which are proposed on the Project Sites, as applicable.
- b. Trip distribution percentages to/from the Project Sites will be estimated for employees and trucks and will be based on current volume data and rerouting of traffic for converting Durkee Street from two-way to one-way traffic flow between Bridge Street and Broad Street. Closure of Division Street as a public road will be accounted for in assigning trips to the network.

- c. The TIS will factor in other developments that are before various boards and will use a standard background growth factor. Traffic forecasts will be made for year of full build-out.
- d. Capacity analyses will be conducted using the latest procedures of the Highway Capacity Manual for the study intersections for the weekday AM and PM peak hours. Capacity analyses will be conducted for existing, nobuild, and build conditions for full build-out. A discussion will be provided of traffic impacts. Performance measures to define operating conditions and impacts will include level of service and vehicle delay, and volume-tocapacity ratios.
- e. Internal Site Traffic Circulation. Discuss access to the Sites and planned circulation within the Sites.
- f. Parking Facilities On-Site. Identify the residential and commercial parking requirements based on the City Code and compare with estimated parking demand and the proposed to be included on the Sites, as applicable.
- g. Describe provision of public parking and parking management program, if any.
- h. Loading, Trash & Delivery Areas On-Site. Discuss truck traffic impacts, including local truck deliveries and by-pass truck traffic on Durkee Street.
- i. Discuss provisions for emergency access and evacuation.
- j. Discuss impacts to parking used by neighboring sites.
- k. Describe available transit services for future residents of the Projects, including distances to transit stops and accommodations to access transit.
- Evaluate pedestrian and bicycle infrastructure on and/or near to the Project Sites.
- m. Discuss pedestrian and bicycle connections to nearby trails and parks for various Project Sites.
- n. Discuss parking management program for parking lot Project Sites.
- o. Discuss the potential for impacts associated with construction truck traffic for Project Sites.
- 3. Proposed Mitigation.
 - a. Measures to mitigate traffic impacts will be discussed and analyzed. Mitigation measures will be presented conceptually noting any right-of-way impacts and any other restrictions.

G. Fiscal and Economic Conditions

1. Existing Conditions

- a. Identify current taxes provided to each taxing jurisdiction (City, County, school district, special assessment district for parking, etc.) under current ownership.
- Summarize the current operating budgets for the City School District, Fire
 Department, Police, Public Works, Water Works Water District, and other
 service providers.

2. Potential Impacts as a result of the proposed Project

- a. Estimate annual tax revenues to be generated to each taxing jurisdiction upon Project completion using current tax rates.
- b. Generally discuss potential impacts to community facilities and services, including the City departments, and other taxing jurisdictions by estimating variable revenues and expenses associated with the Projects. Standard metrics (new residents, new school aged children, as appropriate and applicable) will be used to determine new costs using a "marginal costing" technique. An annual net fiscal impact (revenues less expenditures) will be generated for each jurisdiction.
- c. Describe employment generation resulting from construction, and operation of the Projects.
- d. Identify any anticipated Payment in Lieu of Taxes (PILOT), tax certiorari, or other tax relief/abatement programs that may be applied for, before or after construction, and the impacts that those programs may have on the anticipated taxes paid to each taxing jurisdiction, including the City of Plattsburgh School District.

3. Proposed Mitigation

a. Discuss appropriate mitigation measures to reduce identified impacts.

H. Historic and Cultural Resources

1. Existing Conditions

- a. Prepare and submit Notice of Project to New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP) Cultural Resources Information System (CRIS) for the various Projects.
- b. Upon receipt of comment from NYOPRHP, if required, prepare and submit Phase IA cultural resources report as identified per Project Site.
- c. If recommended by the 1A study, prepare a Phase 1B cultural resources report.

2. Potential Impacts of the proposed Project

a. Describe potential direct and indirect impacts to historic and cultural resources from the various Projects.

3. Proposed Mitigation

- a. Discuss appropriate mitigation measures to mitigate any identified impacts.
- I. Environmental Contamination
 - 1. Existing Conditions
 - a. Discuss environmental site conditions for the various Projects Sites, as applicable.
 - b. Discuss the fate of existing buildings with respect to the potential for lead and asbestos contamination.
 - 2. Potential Impacts of the proposed Project
 - a. Discuss potential impacts based on identified environmental site conditions.
 - 3. Proposed Mitigation
 - a. Discuss appropriate mitigation measures.

ALTERNATIVES

The analysis of reasonable alternatives to the proposed Project will be based on schematic concept plans, with impacts addressed qualitatively and quantitatively. Alternatives will be compared to one another and to the Proposed Action in a summary table. The alternatives will include:

- A. The "No Action" Alternative.
- B. Multi-story parking garage featuring 250 spaces

SIGNIFICANT IMPACTS THAT CANNOT BE AVOIDED

Identification of significant long term and short-term construction impacts (including construction impacts: traffic, air quality, noise, etc.) that cannot be avoided.

GROWTH INDUCING ASPECTS

A description and analysis of potential growth-inducing aspects, including short and long term, and primary, secondary and indirect impacts, will be provided and mitigation measures discussed if necessary. This section would provide a qualitative discussion of the potential impact of the proposed Projects on local business, population characteristics, community character, and community services.

EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

A description of the effect of the proposed Projects on the short and long term use and conservation of energy resources will be provided including ways to reduce inefficient or unnecessary consumption during construction and long term operation.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Identification of those natural and man-made resources consumed, converted or otherwise made unavailable for future use as a consequence of the proposed Projects.

SUPPLEMENTAL SITE-SPECIFIC ENVIRONMENTAL REVIEW

This section will describe the review process for projects and/or actions examined in the GEIS and their subsequent compliance with the thresholds and conditions established. This will include thresholds that could trigger the need for supplemental determinations or site-specific environmental impact statements and the environmental issues that would need to be addressed.

APPENDICES

- A. SEQRA Notices and Filings
- B. Scoping Document
- C. Letters of Record
- D. Traffic Impact Analysis
- E. Stormwater Pollution Prevention Plan(s)
- F. Cultural Resources Report(s)
- G. Phase I Environmental Site Assessment(s)
- H. Construction Management Plan
- I. Others as required

Appendix B: Natural Resource Information

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program 625 Broadway, Fifth Floor, Albany, NY 12233-4757 P: (518) 402-8935 | F: (518) 402-8925 www.dec.ny.gov

October 10, 2019

Caren LoBrutto
Chazen Companies
21 Fox Street
Poughkeepsie, NY 12601

Re: City of Plattsburgh Downtown Area Improvement Projects

County: Clinton Town/City: Plattsburgh

Dear Ms. LoBrutto:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 5 Office, Division of Environmental Permits at dep.r5@dec.ny.gov, (518) 623-1286.

Sincerely,

Heidi Krahling

Environmental Review Specialist

New York Natural Heritage Program



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Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare animal has been documented in the vicinity of the project site.

We recommend that potential impacts of the proposed project on this species be addressed as part of any environmental assessment or review conducted as part of the planning and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following animal, while not listed by New York State as Endangered or Threatened, is rare in New York and is of conservation concern.

COMMON NAME SCIENTIFIC NAME NY STATE LISTING HERITAGE CONSERVATION STATUS

Birds

Common Loon Gavia immer Special Concern

Breeding

Documented in Lake Champlain at Plattsburgh, and so could occur in the vicinity of the proposed farmer's market relocation project site. 1994.

12178

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

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IPaC: Explore Location

IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional sitespecific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section. ONSUL

Location

Clinton County, New York



Local office

New York Ecological Services Field Office

(607) 753-9334

(607) 753-9699

3817 Luker Road Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 **Threatened**

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
 http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location Page 4 of 9

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
VERY LIBERAL ESTIMATE OF THE
DATES INSIDE WHICH THE BIRD
BREEDS ACROSS ITS ENTIRE
RANGE. "BREEDS ELSEWHERE"
INDICATES THAT THE BIRD DOES
NOT LIKELY BREED IN YOUR
PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Black-billed Cuckoo Coccyzus erythropthalmus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9399

Bobolink Dolichonyx oryzivorus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Dunlin Calidris alpina arcticola

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Snowy Owl Bubo scandiacus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Dec 1 to Aug 31

Breeds May 15 to Oct 10

Breeds May 20 to Jul 31

Breeds elsewhere

Breeds elsewhere

Breeds elsewhere

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

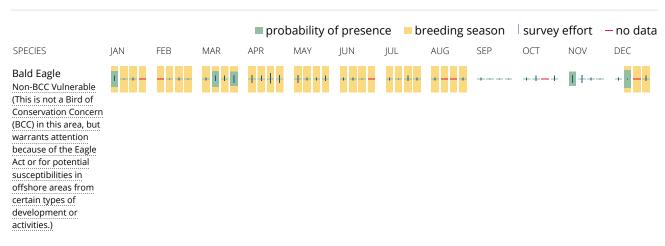
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

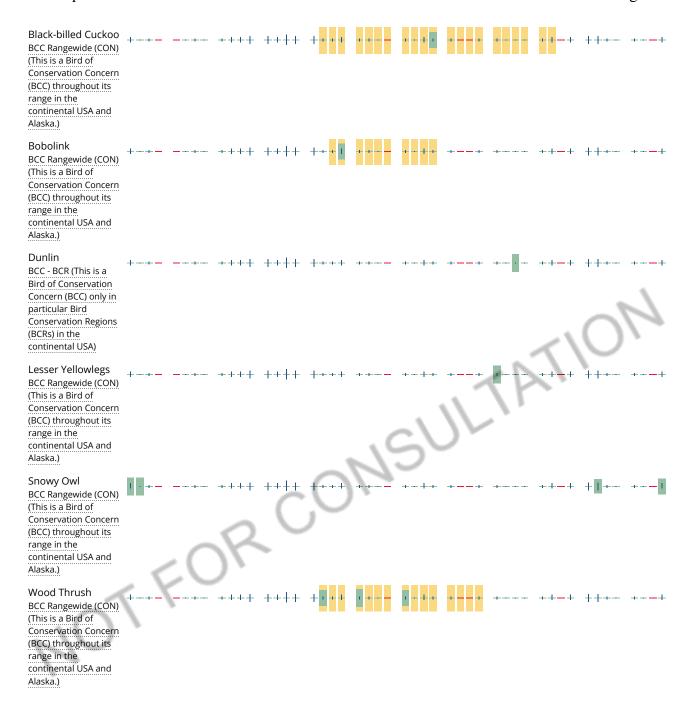
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your JSULTA migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional sitespecific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section. ONSUL

Location

Clinton County, New York



Local office

New York Ecological Services Field Office

(607) 753-9334

(607) 753-9699

3817 Luker Road Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

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The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 Threatened

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
 http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location Page 4 of 9

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
VERY LIBERAL ESTIMATE OF THE
DATES INSIDE WHICH THE BIRD
BREEDS ACROSS ITS ENTIRE
RANGE. "BREEDS ELSEWHERE"
INDICATES THAT THE BIRD DOES
NOT LIKELY BREED IN YOUR
PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Breeds Dec 1 to Aug 31

Black-billed Cuckoo Coccyzus erythropthalmus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9399

Breeds May 15 to Oct 10

Bobolink Dolichonyx oryzivorus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Jul 31

Dunlin Calidris alpina arcticola

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679

Breeds elsewhere

Snowy Owl Bubo scandiacus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

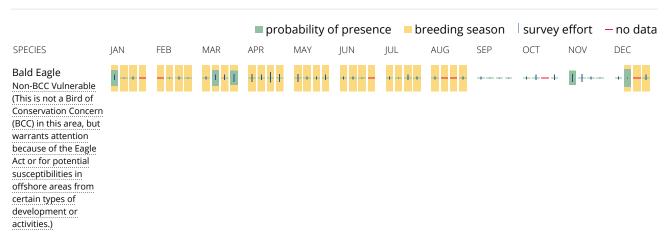
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

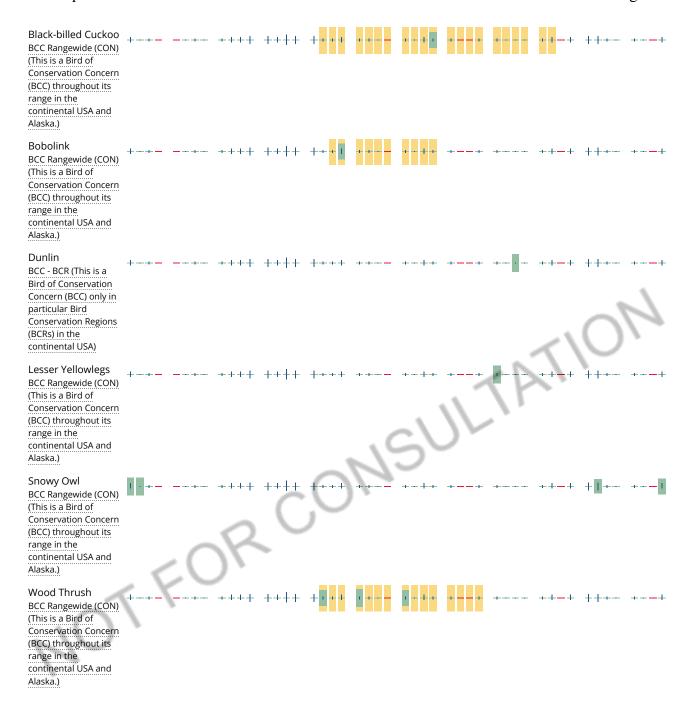
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your JSULTA migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Listed species

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The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 Threatened

IPaC: Explore Location Page 3 of 9

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

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For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location Page 4 of 9

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
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Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

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Breeds Dec 1 to Aug 31

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This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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Breeds May 15 to Oct 10

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Breeds May 20 to Jul 31

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This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Breeds elsewhere

Snowy Owl Bubo scandiacus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

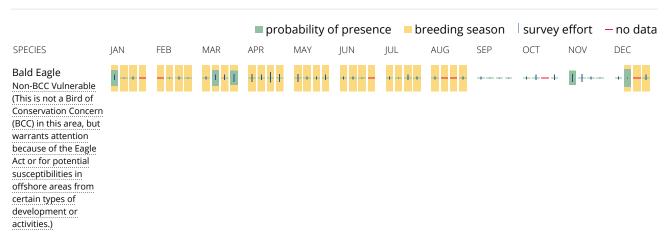
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

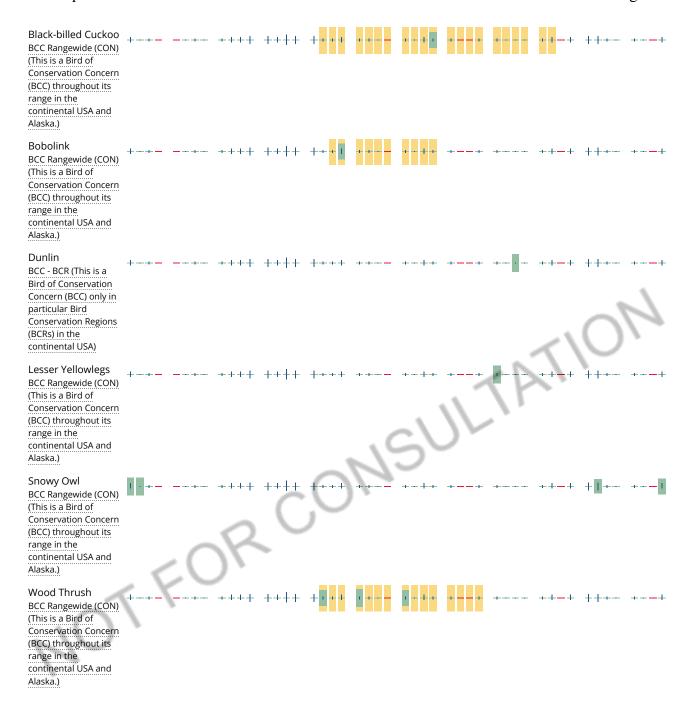
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page. ULTA

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities , or .ect such involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or

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IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional sitespecific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section. ONSUL

Location

Clinton County, New York



Local office

New York Ecological Services Field Office

(607) 753-9334

(607) 753-9699

3817 Luker Road Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 **Threatened**

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
 http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location Page 4 of 9

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
VERY LIBERAL ESTIMATE OF THE
DATES INSIDE WHICH THE BIRD
BREEDS ACROSS ITS ENTIRE
RANGE. "BREEDS ELSEWHERE"
INDICATES THAT THE BIRD DOES
NOT LIKELY BREED IN YOUR
PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Breeds Dec 1 to Aug 31

Black-billed Cuckoo Coccyzus erythropthalmus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9399

Breeds May 15 to Oct 10

Bobolink Dolichonyx oryzivorus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Jul 31

Dunlin Calidris alpina arcticola

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Breeds elsewhere

Snowy Owl Bubo scandiacus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

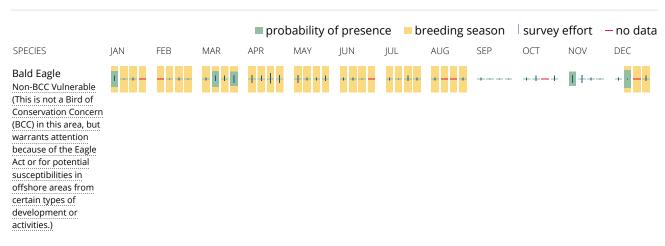
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

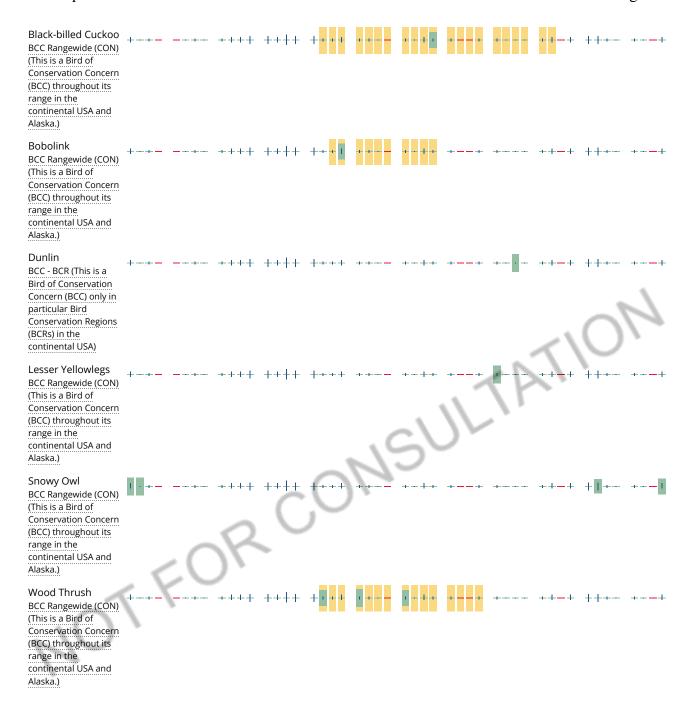
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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

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The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

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Details about birds that are potentially affected by offshore projects

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What if I have eagles on my list?

IPaC: Explore Location Page 8 of 9

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Proper Interpretation and Use of Your Migratory Bird Report

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

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IPaC: Explore Location Page 1 of 9

IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

IPaC resource list

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Location

Clinton County, New York



Local office

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http://www.fws.gov/northeast/nyfo/es/section7.htm

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 Threatened

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
 http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location Page 4 of 9

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
VERY LIBERAL ESTIMATE OF THE
DATES INSIDE WHICH THE BIRD
BREEDS ACROSS ITS ENTIRE
RANGE. "BREEDS ELSEWHERE"
INDICATES THAT THE BIRD DOES
NOT LIKELY BREED IN YOUR
PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Black-billed Cuckoo Coccyzus erythropthalmus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9399

Bobolink Dolichonyx oryzivorus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Dunlin Calidris alpina arcticola

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Snowy Owl Bubo scandiacus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Breeds Dec 1 to Aug 31

Breeds May 15 to Oct 10

Breeds May 20 to Jul 31

Breeds elsewhere

Breeds elsewhere

Breeds elsewhere

Breeds May 10 to Aug 31

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

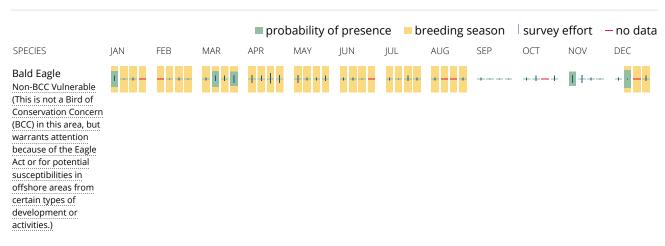
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

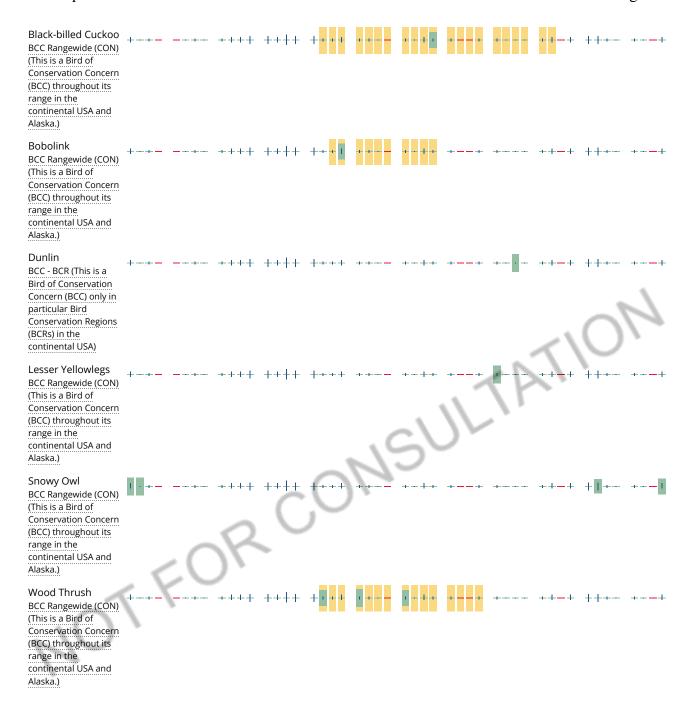
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your JSULTA migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



Mixed Use Development Plattsburgh, New York

April 3, 2019 Terracon Project No. JB195049

Prepared for:

Prime Plattsburgh, LLC Cohoes, New York

Prepared by:

Terracon Consultants-NY, Inc Dba Dente Group Watervliet, New York

Environmental 📁 Facilities 🧰 Geotechnical 😐 Materials

April 3, 2019

Prime Plattsburgh, LLC 621 Columbia Street Cohoes, New York 12047



Attn: Mr. Todd Curley, Partner

P: (518) 785-9000

E: tcurley@CBCPrime.net

Re: Preliminary Geotechnical Engineering Report

Mixed Use Development Durkee & Bridge Streets Plattsburgh, New York

Terracon Project No. JB195049

Dear Mr. Curley:

We have completed the Preliminary Geotechnical Engineering Report services for the above-referenced project. This study was performed in general accordance with Terracon Proposal No. PJB195049 dated March 5, 2019. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs, and pavements for the proposed project. This report should be used for preliminary planning purposes only. Supplemental subsurface explorations and evaluation will be required to refine and finalize the geotechnical related recommendations.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants-NY, Inc.

Edward C. Gravelle, P.E. Senior Engineer

Fred A. Dente, P.E. Principal

REPORT TOPICS

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SITE CONDITIONS	
PROJECT DESCRIPTION	
GEOTECHNICAL CHARACTERIZATION	
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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES SITE LOCATION AND EXPLORATION PLANS EXPLORATION RESULTS SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Mixed Use Development Durkee & Bridge Streets Plattsburgh, New York Terracon Project No. JB195049 April 3, 2019

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Mixed-Use Development to be located at Durkee & Bridge Streets in Plattsburgh, New York. The purpose of these services is to provide preliminary information and geotechnical engineering recommendations relative to:

- Subsurface soil (and rock) conditions
- Groundwater conditions
- Site preparation and earthwork
- Demolition considerations
- Excavation considerations
- Dewatering considerations

- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per NYSBC
- Lateral earth pressures
- Pavement design and construction
- Frost consideration

The geotechnical engineering Scope of Services for this project included the advancement of four test borings to depths ranging from approximately 20 to 27.5 feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included in the **Exploration Results** section.

SITE CONDITIONS

The project site is located at the intersection of Durkee and Bridge Streets in the City of Plattsburgh, New York. The site is currently used as a municipal parking lot which we understand was formerly occupied by commercial buildings. The north, south and west sides of the site are bordered by City streets and the east side by the Saranac River. The parking lot surface grades slope from elevations 120 to 128 feet along Durkee Street downward to between 116 and 118 feet at the top of the Saranac River embankment. The toe of the river embankment slope is between elevations 98 and 100 feet.

Mixed Use Development Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049



The USDA Soil Survey of Clinton County has mapped the surficial soils as Urban Land at the project site. Mapping and information obtained from the National Cooperative Soil Survey website is presented in the **Supporting Information**. Bedrock in the project area is shown to be Trenton Group shale and limestone on the Geologic Map of New York published by the State Education Department.

PROJECT DESCRIPTION

The project will entail the construction of two mixed-use buildings with associated parking lots and entrances from the adjoining City streets. The buildings will be five levels, with the first providing automobile parking spaces and the remaining levels a mix of apartments and commercial spaces. Portions of the buildings may be built into the gently sloping site grades resulting in partial basement areas. Site grading plans and floor elevations for the buildings we not developed at the time this report was prepared.

We assume the addition may be a combination of steel and/or wood framing. Loading information was not provided to us but for the purposes of this report we have assumed a maximum column load of 500 kips and wall load less than 6 kips per linear foot.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Fill / Former Topsoil	Varying mixes of gravel, sand, silt and clay, pieces of wood, brick, and cinders underlain by the former topsoil layer
2	Alluvial Sand	Clayey sand with gravel
3	Glacial Till	Silty sand with gravel

The fill and underlying topsoil layers extended to depths ranging between 6 and 24.5 feet below the ground surface. The fills were deepest in test boring B-1 located at the northeast corner of the site near the bridge over the Saranac River. As would be expected, the fill depths diminished

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further away from the river approaching Durkee Street. The native soils beneath the fills were of various thickness and they extended to the boring refusal depths encountered between 20 and 27.5 feet below the ground surface. Refusal may have been encountered at or near the bedrock surface, but this was not confirmed in the preliminary site explorations.

Groundwater measurements were obtained during and/or upon completion of drilling and sampling as denoted on the Boring Logs. In borings B-1, 2, and 3, the groundwater depths varied from 19.4 to 20.2 feet below grade. This corresponds roughly to groundwater surface elevations in the range of 97.6 to 100 feet. In test boring B-4, it appears that layers of trapped and perched groundwater were present within the deep fill layers at this location. Groundwater at this location was measured at 6.4 feet below grade 24 hours after the drilling was completed. It is expected that the groundwater depths will vary with fluctuations in the Saranac River water levels and seasonal changes in precipitation and runoff.

GEOTECHNICAL OVERVIEW

The project site was filled in the past to create the existing parking lot surface elevations. The fills varied in composition from clean sand to silt and clay containing wood, brick and other debris. These fills and the original topsoil layer found beneath them are not suitable for the support of conventional shallow spread foundations and slab-on-grade design. Thus, for preliminary planning purposes it should be assumed that the new building foundations and floor slabs must be supported on deep pile foundations. Steel H-piles driven to end bearing on bedrock is the recommended pile option for this site. While the presence of bedrock was not confirmed through coring during this preliminary site exploration, it appears it may be found near the depths where the borings were terminated, i.e., about 20 to 28 feet below the ground surface.

While removal and replacement of the existing fills would allow for the use of standard shallow spread foundations and slab-on-grade design, this option may not be economically feasible considering the depths of fill, the need for temporary shoring along City streets, and any environmental factors that may be of concern related to the removal of the fills from the site. Thus, the recommendations which follow were prepared assuming pile support will be provided for the new building. These preliminary conclusions and recommendations may be modified based upon the results of supplemental explorations and evaluations which are required to finalize planning for the geotechnical aspects of design and construction.

Removal of the existing fills would not be feasible beneath new pavements. Thus, the Owner must accept some degree of risk that the pavements may settle over time and required periodic maintenance. Subgrade preparation procedures are provided in the following sections of this report to reduce, but not eliminate these risks.

The General Comments section provides an understanding of the report limitations.

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SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC).

Seismic Site Classification

Based on the soil properties encountered at the site and as described on the exploration logs, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 28 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth, if desired.

Liquefaction

Based upon the composition and relative density of the site soils, their liquefaction should not occur in response to earthquake motions.

EARTHWORK

Earthwork is anticipated to include stripping of asphalt and topsoil, removal of any former building remains, and cut and fill placement as applicable to the site grading plans to be developed. The following sections provide preliminary recommendations for use in planning for the site development. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Site Preparation

Site preparation should begin with stripping of asphalt and topsoil from proposed building and pavement areas. If the remains of former buildings are encountered they should be removed in

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their entirety from beneath the building pad and to a depth of a least three feet below any final pavement surface.

Prior to placing fill and/or after cut to the plan subgrade elevation in pavement areas, the surface should be proof-rolled using a steel drum roller with a static weight of at least ten tons. The roller should operate in its vibratory mode, unless requested otherwise by the Geotechnical Engineer observing the work, and travel at a speed not exceeding three feet per second (two miles per hour). Areas found to be excessively deflecting under the proof-roll should be delineated and subsequently addressed by the Geotechnical Engineer. Excessively wet or dry material should either be removed, or moisture conditioned and recompacted as required to achieve their satisfactory compaction. The proof-roll and surficial stabilization work will reduce, but not eliminate the risk for the pavements to settle over time.

Proof-rolling should also be done beneath pile supported slabs to establish a stable base for the slab construction.

Fill Material Types

Structural Fill should be used as fill/backfill within the proposed building pad and pavement areas. The fill should consist of imported sand and gravel or suitable on-site material. Imported Structural Fill should contain no particles larger than 3 inches and less than 10 percent, by weight, of material finer than a No. 200 mesh sieve. The imported materials should be free of recycled concrete, asphalt, bricks, glass, and pyritic shale rock. Portions of the existing on-site fills composed of sand which is free of organic matter and other debris may be consider Suitable for reuse as Structural Fill pending its acceptance by the Geotechnical Engineer at the time of construction. Existing fills composed of silt and clay should not be reused as Structural Fill.

Fill Compaction Requirements

The Structural Fill should be placed in uniform loose layers no more than about one-foot thick where heavy vibratory compaction equipment is used. Smaller lifts should be used where hand operated equipment is required for compaction. Each lift should be compacted to no less than 95 percent of the maximum dry density for the soil which is established by the Modified Proctor Compaction Test, ASTM D1557. In landscape areas, the compaction may be reduced to 90 percent of maximum dry density.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks.

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Temporary Excavations and Bracing

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations. For planning purposes, it should be assumed the existing fills and native soils are classified as OSHA Type C materials.

All excavations should be completed so as not to undermine roads, utilities, and/or foundations of adjacent structures. In general, excavations should not encroach within a zone of influence defined by a line extending out and down from the existing structures at an inclination of 1.5H:1V. Excavations that encroach within this zone should be sheeted, shored, and braced to support the soil and adjacent structure loads, or the structure should be underpinned to establish bearing at a deeper level.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proof-rolling, and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

It should be understood the actual subsurface conditions that exist will only be known when the site is excavated. The continuation of the Geotechnical Engineer into the construction phase of the project will allow for validation of the subsurface conditions assumed to exist for this study and the design recommended in this report, including assessing variations, providing recommendations and reviewing associated design changes.

DEEP FOUNDATIONS

Steel H-piles driven to end bearing on bedrock may be designed for an allowable axial compressive load equal to 10.5 kips per square inch (ksi) times the pile cross-sectional area. For example, HP14x89 section piles of Grade 50 steel with an area of 26.1 square inches would have an allowable axial capacity of 274 kips (26.1 in² x 10.5 ksi). Similarly, and HP12X53 section would have an allowable axial load capacity equal to 162 kips. A smaller section could be selected for lighter loaded piles which may be used to support building floor slabs. It appears that bedrock may be present at or near the boring termination depths of 20 to 28 feet, but this must be confirmed by supplemental test borings and rock coring to finalize the pile design.

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The HP14x89 and HP12x53 pile sections can be assumed to develop lateral load capacities of at least five kips at translations of one-quarter (¼) inch or less with a semi fixed head condition. Lateral load capacity of pile caps may be calculated using a reduced passive earth pressure as lateral pile capacity is predicated on allowable lateral translation of one-quarter (¼) inch. The coefficient of passive lateral earth pressure and total unit weight of the compacted Structural Fill against pile caps and grade beams may be assumed to equal 2.5 and 120 pounds per cubic foot, respectively. As an example, applying these parameters to a five feet thick pile cap which is embedded 1.5 feet beneath grade generates an allowable lateral loading of six kips per lateral lineal foot of pile cap. This load capacity would be in addition to that of the individual piles.

The piles should be spaced no closer than three feet, with a minimum of three piles in any group supporting columns not restrained laterally by grade beams or haunched slabs. Piles which are laterally restrained may be installed in single or double pile groups. No pile group reduction factor for vertical loads is necessary. Group reductions for lateral loads will be required and determined through future evaluation of the actual location, layout and loadings.

A wave equation analysis should be performed to verify that the hammer, cushion, and pile section which are used achieves the design capacity without over-stressing the pile. Dynamic load testing should be conducted on at least four piles at locations spaced around the site and approved by the Geotechnical Engineer. Results of the wave equation analysis and load testing can be used to define the pile driving criteria.

The piles should be fitted with cast steel point protection such as the Hard-Bite – HP77600-B manufactured by Associated Pile and Fitting Co., Inc. to protect the piles as they are driven through the existing fills and native soils to end bearing on bedrock.

Settlement of the pile top should be less than one-half (1/2) inch and consist of elastic shortening of the pile under the design load and penetration of the pile into the bearing surface.

FLOOR SLABS

For preliminary planning purposes it should be assumed that building floor slabs must be pile supported. The subgrade surfaces should proof-rolled and stabilized as required to support the slab construction as specified in the **Earthwork** section of this report. A minimum six-inch thick base of crusher-run stone should be placed to provide a more uniform and stable base for construction. The crusher-run stone should meet the requirements specified for Item #304.12 in the NYSDDOT Standard Specifications for Construction and Materials. If tiles, rugs or moisture sensitive coatings are to be placed on the slabs, the base material should be changed to clean crushed stone and a vapor retarder installed. The crushed stone should be an ASTM C33 Blend 57 material and the vapor retarder a Stego Wrap 15 mil Class A or equivalent.



LATERAL EARTH PRESSURES

Design Parameters

Site or building walls that retain earth should be designed to resist lateral pressures, with applicable surcharge loads, at least equal to the values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Active earth pressures may be assumed for site walls that are free to deflect as the backfill is placed. At-rest earth pressures should be assumed for all building walls and site walls that are braced prior to backfilling or applying surcharge loads. Recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls.

Earth Pressure Condition	Earth Pressure Coefficient	Equivalent Fluid Density (pcf)		
Active (Ka)	0.33	40		
At-Rest (Ko)	0.50	60		

For the tabulated values to be valid, the wall must be backfilled with Structural Fill as specified in the **Earthwork** section of this report. The Structural backfill must extend out and up from the base of the wall at an angle of at least 45 degrees from vertical for the active and at-rest cases.

Subsurface Drainage for Below-Grade Walls

The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining crushed stone, such as ASTM C 33, Blend No. 57 aggregate. The free-draining aggregate should be encapsulated in a filter fabric. The granular backfill should extend to within two feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system. If pavements abut the building the granular fill should be taken to the subgrade elevation for the pavement section. Basement walls should be damp-proofed as a minimum.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the site assuming the traffic will generally consist of automobiles with occasional delivery type trucks. A critical aspect of pavement performance is

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site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

Pavement Section Thickness

Assuming the pavements are subject primarily to automobile traffic with occasional light deliver trucks, we suggest the following flexible pavement section for consideration. The Light Section may be used for automobile parking and Heavy Section for entrance lanes.

Flexible Asphaltic Concrete Pavement Design							
Layer	NYSDOT Item Number ¹	Thickness (inches)					
·		Light Duty Heavy					
Asphaltic Concrete Top	#402.127303	1.0	1.5				
Asphaltic Concrete Binder	#402.257903	2.0	2.5				
Crusher-Run Stone Base	#304.12	10	12				
Stabilization Fabric ²	N/A	Single Ply	Single Ply				

All materials should meet the current New York State Department of Transportation (NYSDOT)
 Standard Specifications for Construction and Materials.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment.

^{2.} Stabilization Fabric should be Mirafi 500X or approved equivalent.

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Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).

Temporary Construction Access Roadways

The recommended pavement sections are not designed to support heavy construction traffic which may require thicker sections. The contractor shall construct temporary haul and construction roadways and routes on site as appropriate for the specific weather conditions and equipment anticipated at the site.

Frost Considerations

It should be understood that sidewalks and pavements constructed upon the site's soils will heave as frost seasonally penetrates the subgrades. The magnitude of the seasonal heave will vary with many factors and result in differential movements. As the frost leaves the ground, the sidewalks and pavements will settle back, but not entirely in all areas, and this may accentuate the differential movements across the pavement areas. Where curbs, walks, and storm drains meet these pavements, these differential heave and settlements may result in undesirable movements and create trip hazards. To limit the magnitude of heave and the creation of these uneven joints to generally tolerable magnitudes for most winters, a 16-inch thick crushed stone base course, composed of Blend 57 aggregate, may be placed beneath the sensitive sidewalk, drive, etc. areas. The stone layer must have an underdrain placed within it.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and

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are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

FIGURES

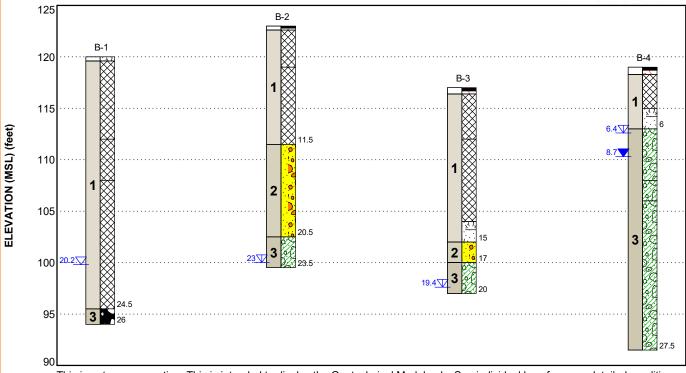
Contents:

GeoModel

GEOMODEL

Bridge Street Building ■ Plattsburgh, New York 4/03/2019 ■ Terracon Project No. JB195049





This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Fill / Former Topsoil	Varying amounts of gravel, sand, silt, and clay, pieces of wood, brick, cinders, loose to dense / medium-stiff to hard, underlain by former topsoil
2	Alluvial Deposit	Clayey sand (SC), with gravel, gray to brown, wet, loose
3	Glacial Till	Silty sand (SM), with gravel, occasional cobbles and boulders, gray, dry, medium dense to very dense

LEGEND

Topsoil Asphalt Glacial Till

Fill Aggregate Base Course

Poorly-graded Sand with Gravel

- ✓ First Water Observation
- ▼ Second Water Observation
- Third Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

Mixed Use Development ■ Plattsburgh, New York April 3, 2019 ■ Terracon Project No. JB195049



EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet)	Location
4	20 to 27.5	building pad

Boring Layout and Elevations: Terracon personnel staked the boring locations by traditional pacing and taping methods from existing features and approximate elevations were obtained by interpolation from the ALTA Survey Map prepared by R.M. Sutherland, P.C., dated 10/16/16. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the borings with a standard rotary drill rig using continuous flight augers. As the augers were advanced, the soils were sampled at intervals of five feet or less in accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs.

The soil samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Final boring logs were prepared, and they represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture)
 Content of Soil and Rock by Mass (1 sample tested)
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils (4 samples tested)
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (1 sample tested)

SITE LOCATION AND EXPLORATION PLANS

Contents:

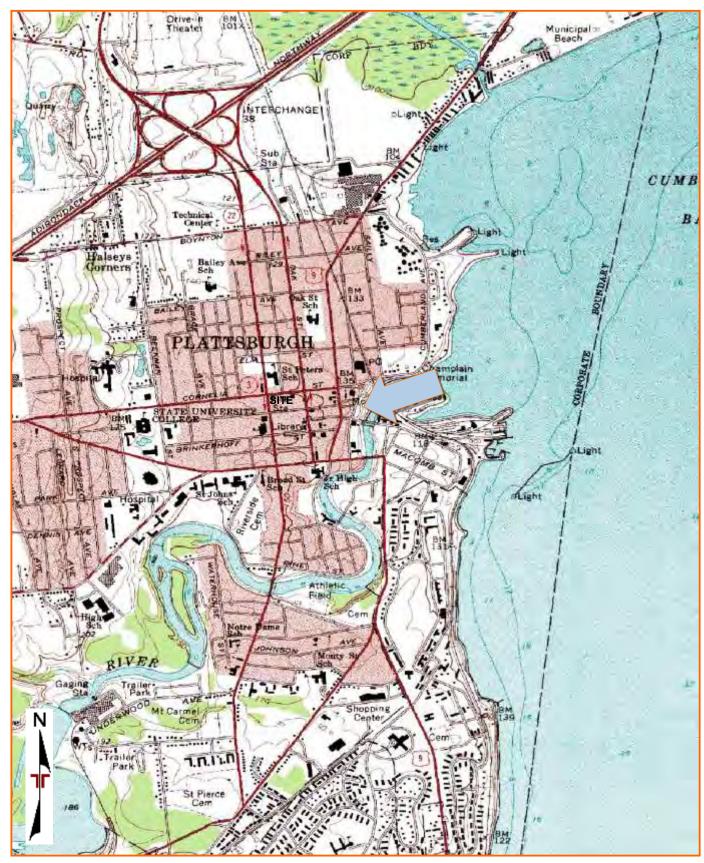
Site Location Plan Exploration Plan

Note: All attachments are one page unless noted above.

SITE LOCATION

Bridge Street Buildings Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049





EXPLORATION PLAN

Bridge Street Buildings Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049





EXPLORATION RESULTS

Contents:

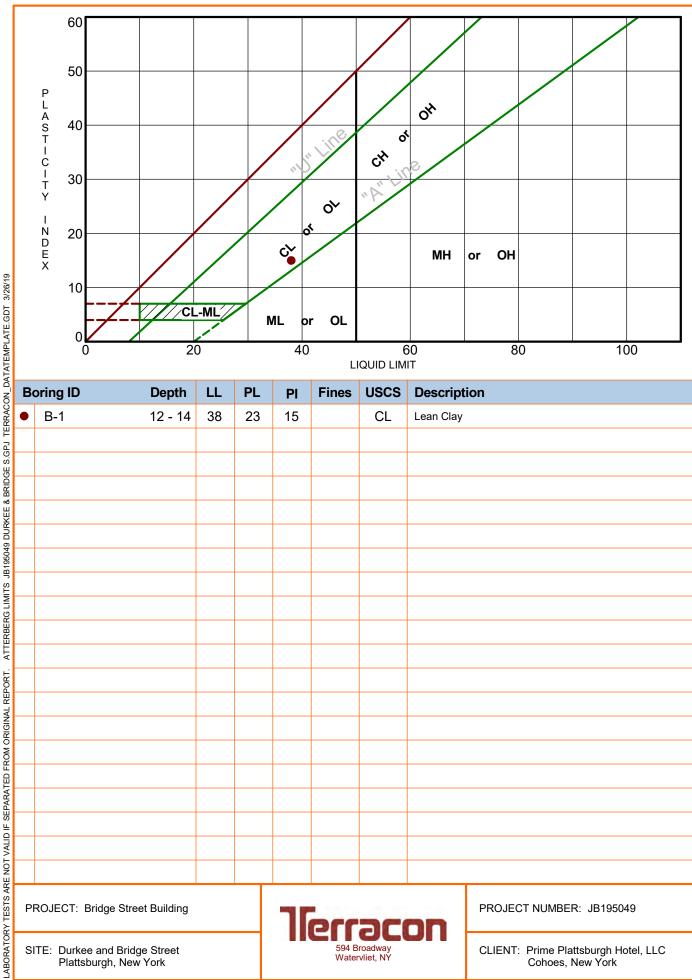
Boring Logs (B-1 through B-4) Atterberg Limits Grain Size Distribution (2 pages)

Note: All attachments are one page unless noted above.

			BORING L	OG NO. B-2)					Page 1 of	1
P	ROJ	ECT: Bridge Street Building		CLIENT: Prime	Plattsbu	rgh F	lotel	, LI	LC		
S	SITE:	Durkee and Bridge Street Plattsburgh, New York		Conoe	:3, New 1	OIK					
MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 44.6971° Longitude: -73.452° DEPTH	Aį	pproximate Surface Elev.: ¹	123 (Ft.) +/- ATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
F		0.2 ASPHALT 0.4 PAVEMENT BASE			123+/-						
		FILL - POORLY GRADED SAND, with g	gravel, orange to brow	vn, dry, dense		_		X	18	24-20-17-17 N=37	
		4.0 FILL - SILTY SAND, with gravel, pieces	of brick and cinders,	brown, moist to wet,	119+/-	_		X	22	17-14-6-4 N=20	
1		loose to medium dense				5 — –		X	19	2-2-2-3 N=4	
						_		X	18	2-3-3-2 N=6	
						10-		X	22	1-2-4-4 N=6	
	,0(11.5 POORLY GRADED SAND (SP), with gradense	ivel, gray to brown, w	et, loose to medium	111.5+/-	_		X	20	1-2-4-9 N=6	
2						- 15- - -			20	4-4-4-4 N=8	_
	0 0	20.5 SILTY SAND (SM), occasional cobbles a	and boulders, gray, di	ry, very dense	102.5+/-	20 -		X	20	7-20-45-50/2" N=65	
3							∇				
	(4,1/29)	Sampler Refusal on Probable Boulders	s at 23.5 Feet		99.5+/-				0	50/0"	
Adva 3											
	St	ratification lines are approximate. In-situ, the transition m	nay be gradual.		Hammer Ty	pe: Aut	omatic	-			
Adv 3	/anceme 3 1/4" ID	ent Method: 9 HSA	See Exploration and Te description of field and used and additional data	laboratory procedures	Notes:						
Aba E	Boring b	ent Method: ackfilled with soil cuttings upon completion. repaired using "cold patch" asphalt.									
		WATER LEVEL OBSERVATIONS	site plan		Boring Started	d: 03-20-	2019		Borin	ng Completed: 03-20	-2019
	7 00	fact ofter having completion	llerr		Orill Rig: CME		-			er: S. Loiselle	-
		B feet after boring completion	594 Br	oadway	Project No.: J		9		1		

ATTERBERG LIMITS RESULTS

ASTM D4318



	Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
	B-1	12 - 14	38	23	15		CL	Lean Clay
2								
р 5								
A N								
200								
3004								
2								
ATTENDENCE LIMITS OF 19004% DOUNTER & DAIDGE G.GTG TENTACON LIMITS								
Y DELY								
(
-								
5								
ANE NOT VALID IT SETAINSTED TOOLS ON SETAINSTED TO SETAINS								
5								
F .								
YALII V								
2								
{								

PROJECT: Bridge Street Building

SITE: Durkee and Bridge Street Plattsburgh, New York

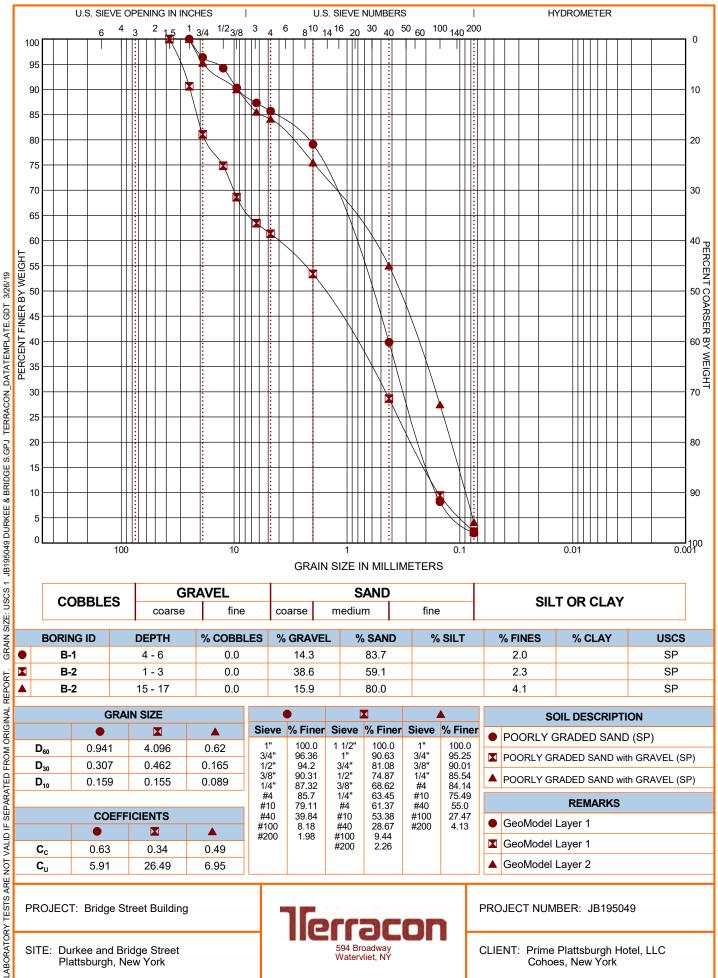


PROJECT NUMBER: JB195049

CLIENT: Prime Plattsburgh Hotel, LLC Cohoes, New York

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



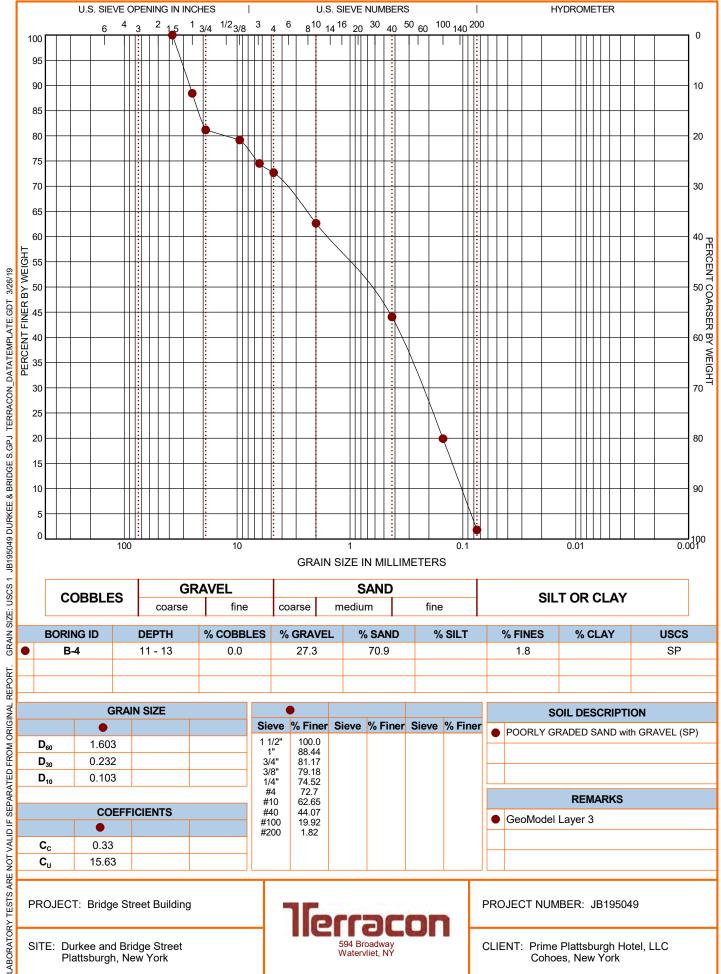
SITE: Durkee and Bridge Street Plattsburgh, New York



CLIENT: Prime Plattsburgh Hotel, LLC Cohoes, New York

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



SUPPORTING INFORMATION

Contents:

General Notes Unified Soil Classification System Clinton County Soils Survey Information

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

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SAMPLING	WATER LEVEL		FIELD TESTS
	_ <u></u> Water Initially Encountered	N	Standard Penetration Test Resistance (Blows/Ft.)
Split Spoon	Water Level After a Specified Period of Time	(HP)	Hand Penetrometer
	Water Level After a Specified Period of Time	(T)	Torvane
	Water levels indicated on the soil boring logs are the levels measured in the borehole at the times	(DCP)	Dynamic Cone Penetrometer
	indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not	UC	Unconfined Compressive Strength
	possible with short term water level observations.		Photo-Ionization Detector
		(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

	STRENGTH TERMS							
RELATIVE DENSITY	OF COARSE-GRAINED SOILS	CONSISTENCY OF FINE-GRAINED SOILS						
	retained on No. 200 sieve.) Standard Penetration Resistance	Consistency de	(50% or more passing the No. 200 stermined by laboratory shear strength to procedures or standard penetration re	esting, field visual-manual				
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.				
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1				
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4				
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8				
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15				
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30				
		Hard	> 4.00	> 30				

RELATIVE PROPORTION	IS OF SAND AND GRAVEL	RELATIVE PROPORTIONS OF FINES			
Descriptive Term(s) of Percent of Other constituents Dry Weight		Descriptive Term(s) of other constituents	Percent of Dry Weight		
Trace	<15	Trace	<5		
With	15-29	With	5-12		
Modifier	>30	Modifier	>12		
GRAIN SIZE 1	FERMINOLOGY	PLASTICITY DESCRIPTION			
Major Component of Sample	Particle Size	Term	Plasticity Index		
major component or campre	Particle Size	renn	r idstroity much		
Boulders	Over 12 in. (300 mm)	Non-plastic	0		
			•		
Boulders	Over 12 in. (300 mm)	Non-plastic	0		
Boulders Cobbles	Over 12 in. (300 mm) 12 in. to 3 in. (300mm to 75mm)	Non-plastic Low	0 1 - 10		



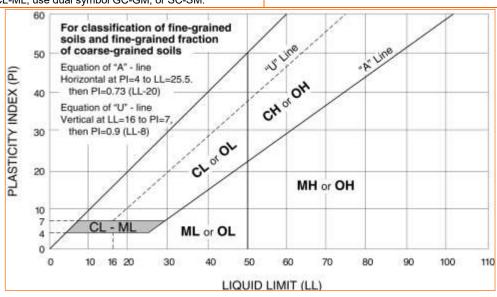
	5	Soil Classification			
Criteria for Assigni	Group Symbol	Group Name ^B			
		Clean Gravels:	Cu ≥ 4 and 1 ≤ Cc ≤ 3 ^E	GW	Well-graded gravel ^F
	Gravels: More than 50% of	Less than 5% fines ^C	Cu < 4 and/or [Cc<1 or Cc>3.0] ^E	GP	Poorly graded gravel ^F
	coarse fraction retained on No. 4 sieve	Gravels with Fines:	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}
Coarse-Grained Soils: More than 50% retained	retained on No. 4 sieve	More than 12% fines ^C	Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}
on No. 200 sieve		Clean Sands:	Cu ≥ 6 and 1 ≤ Cc ≤ 3 ^E	SW	Well-graded sand
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Less than 5% fines [□]	Cu < 6 and/or [Cc<1 or Cc>3.0] E	SP	Poorly graded sand
		Sands with Fines: More than 12% fines	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}
			Fines classify as CL or CH	sc	Clayey sand ^{G, H, I}
		In a receipt	PI > 7 and plots on or above "A"	CL	Lean clay ^{K, L, M}
	Silts and Clays:	Inorganic:	PI < 4 or plots below "A" line ^J	ML	Silt K, L, M
- . - -	Liquid limit less than 50	Organic:	Liquid limit - oven dried < 0.75	OL	Organic clay ^{K, L, M, N}
Fine-Grained Soils: 50% or more passes the			Liquid limit - not dried	OL	Organic silt ^{K, L, M, O}
No. 200 sieve		Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}
	Silts and Clays:	morganic.	PI plots below "A" line	MH	Elastic Silt ^{K, L, M}
	Liquid limit 50 or more	Organic:	Liquid limit - oven dried < 0.75	ОН	Organic clay ^{K, L, M, P}
		0.94.110.	Liquid limit - not dried	OH	Organic silt ^{K, L, M, Q}
Highly organic soils:	Primarily	organic matter, dark in co	olor, and organic odor	PT	Peat

- A Based on the material passing the 3-inch (75-mm) sieve.
- If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
- Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
- D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

E Cu =
$$D_{60}/D_{10}$$
 Cc = $\frac{(D_{30})^2}{D_{10} \times D_{60}}$

- F If soil contains ≥ 15% sand, add "with sand" to group name.
- ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

- HIf fines are organic, add "with organic fines" to group name.
- If soil contains ≥ 15% gravel, add "with gravel" to group name.
- ^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- $^{\perp}$ If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.
- MIf soil contains \geq 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
- N PI \geq 4 and plots on or above "A" line.
- OPI < 4 or plots below "A" line.
- PI plots on or above "A" line.
- OPI plots below "A" line.





MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

(o) Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Candfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

ND

C-3

Stony SpotVery Stony Spot

Spoil Area

Very Stony S

Wet Spot

△ Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clinton County, New York Survey Area Data: Version 19, Mar 7, 2019

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 28, 2012—Oct 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Un	Urban land	4.3	100.0%
Totals for Area of Interest		4.3	100.0%

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Clinton County, New York

Un-Urban land

Map Unit Setting

National map unit symbol: 9r0w

Mean annual precipitation: 31 to 42 inches



Mean annual air temperature: 39 to 45 degrees F

Frost-free period: 105 to 165 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Minor Components

Udipsamments

Percent of map unit: 3 percent Hydric soil rating: No

Udorthents

Percent of map unit: 3 percent Hydric soil rating: No

Deerfield

Percent of map unit: 1 percent Hydric soil rating: No

Covert

Percent of map unit: 1 percent Hydric soil rating: No

Grattan

Percent of map unit: 1 percent Hydric soil rating: No

Plainfield

Percent of map unit: 1 percent Hydric soil rating: No

Data Source Information

Soil Survey Area: Clinton County, New York Survey Area Data: Version 19, Mar 7, 2019

Appendix C: Traffic Impact Study Information

Chazen COMPANIES®

TRAFFIC IMPACT STUDY

for

DOWNTOWN AREA IMPROVEMENT PROJECTS

Proud to Be Employee Owned
Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects

City of Plattsburgh Clinton County, New York



Issued: November 11, 2019

Prepared for: City of Plattsburgh

41 City Hall Place Plattsburgh, NY 12901

Prepared by:

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APPENDIX A: TRAFFIC VOLUME DATA

APPENDIX B: CAPACITY ANALYSIS PRINTOUTS APPENDIX C: PROJECT TRIP ASSIGNMENTS

EXECUTIVE SUMMARY

The City of Plattsburgh is undertaking revitalization efforts that will result in several Downtown Area Improvement Projects in the Durkee Street area. The projects include improvements to parking, streetscapes and traffic configuration, riverfront and open space resources, and redevelopment projects. To better understand the implications of the various projects on traffic, several projects were considered as part of this Traffic Impact Study, as follows:

- 1. Durkee Lot Mixed Use Development 13,400 square feet (SF) of retail space, 115 residential units, an 86-space parking lot for visitors and customers including 50 parking spaces to be made available for use by the public, and a 35-space surface parking lot for tenants. Private parking for 165 spaces will also be provided for the residential component.
- 2. Durkee Street Reconfiguration and Streetscape Improvements introduction of angled parking for net gain of 27 spaces; or potential of reconfiguration to one-way northbound traffic with a combination of parallel and angled parking and a net gain of approximately 43 parking spaces.
- 3. Bridge Street Parking Improvements addition of approximately 6 on-street parking spaces adjacent to Durkee Lot Mixed Use Development.
- 4. Arnie Pavone Memorial Parking Plaza removal of existing bank building for approximately 109 new public parking spaces and abandonment of Division Street.
- 5. Broad Street Parking Lot expansion of public parking lot to add approximately 22 spaces.

This Traffic Impact Study assesses and compares existing traffic conditions to anticipated traffic conditions upon completion of the proposed projects. While the Arnie Pavone Memorial Parking Plaza and expansion of the Broad Street Parking Lot are anticipated to be completed prior to commencement of construction of the Durkee Lot Mixed Use Development, the remaining projects are anticipated to be operational by 2022.

Seven intersections surrounding the project area were reviewed and analyzed to determine the potential for traffic impacts that may result from the proposed projects. Traffic volumes at the existing seven locations were documented with turning movement counts during three weekday peak periods: AM, Midday, and PM. These time frames, as well as the intersections studied, were chosen in conjunction with the City of Plattsburgh.

Traffic analyses were conducted for two future roadway scenarios: Durkee Street remaining as two-way, and Durkee Street reconfigured into one-way travel in the northbound direction. The conclusions of the study, including the conversion of Durkee Street to one-way traffic northbound, show that the potential traffic effects of the proposed projects will be minimal and that no improvements are needed to mitigate these effects.

Based on the analyses contained in this study, it is the considered professional opinion of The Chazen Companies that the proposed Downtown Area Improvement Projects will not have a significant adverse impact on traffic operating conditions on the roadway system.

1.0 INTRODUCTION

The Chazen Companies (Chazen) has been retained by the City of Plattsburgh to investigate the potential for traffic impacts that may be associated with certain proposed Downtown Area Improvement Projects listed below:

- 1. Durkee Lot Mixed Use Development
- 2. Durkee Street Reconfiguration and Streetscape Improvements
- 3. Bridge Street Parking Improvements
- 4. Arnie Pavone Memorial Parking Plaza
- 5. Broad Street Parking Lot

The study area is shown on Figure 1 and is bounded by Bridge Street on the north, Broad Street on the south; Margaret Street on the west, and Peru Street on the east.

2.0 PROJECT DESCRIPTIONS

The Downtown Area Improvement Projects are defined as:

- 1. Durkee Lot Mixed Use Development 13,400 square feet (SF) of retail space, 115 residential units, an 86-space parking lot for visitors and customers including 50 parking spaces to be made available for use by the public, and a 35-space surface parking lot for tenants. Private parking for 165 spaces will also be provided for the residential component.
- 2. Durkee Street Reconfiguration and Streetscape Improvements introduction of angled parking for net gain of 27 spaces; or potential of reconfiguration to one-way northbound traffic with a combination of parallel and angled parking and a net gain of approximately 43 parking spaces.
- 3. Bridge Street Parking Improvements addition of approximately 6 on-street parking spaces adjacent to Durkee Lot Mixed Use Development.
- 4. Arnie Pavone Memorial Parking Plaza removal of existing bank building for approximately 109 new public parking spaces and abandonment of Division Street.
- 5. Broad Street Parking Lot expansion of public parking lot to add approximately 22 spaces.

In addition, the proposed reconfiguration of the Clinton County Government Center parking lot to add public parking spaces was considered in calculating available parking since those additional public parking spaces could be used by future displaced parkers from the Durkee Street parking lot.

3.0 SCOPE OF STUDY

This traffic study follows standard engineering principles and practices and examines the potential traffic impacts associated with the proposed projects. The following tasks were performed for this study:

- Collected intersection manual turning-movement vehicle counts on a typical weekday for the Weekday AM, Midday, and PM peak hours at seven intersections;
- Contacted the City to determine if other projects are in the area which may affect traffic flows in the area;
- Obtained historical traffic volume data for area roadways from NYSDOT website, and applied a representative growth rate to the Existing conditions to establish Horizon Year conditions to determine "No-Build" conditions;
- Conducted a trip generation analysis for the proposed projects;
- Assigned the project generated trips to the roadway system;

- Added the project generated trips to the "No-Build" conditions to establish the "Build" condition traffic volumes;
- Conducted intersection capacity analyses for the "Existing", "No-Build" and "Build" conditions
 during the Weekday AM, Midday, and PM peak hours to evaluate existing and future operating
 conditions; and
- Reviewed the available accident data for the most recent three years at the study intersections.

4.0 STUDY INTERSECTIONS

Seven intersections were studied in detail to assess the potential traffic impacts of the projects:

• Margaret Street and Bridge Street

This is an unsignalized three-way intersection with Stop sign control on the Bridge Street approach. Bridge Street is one-way westbound into the intersection and has separate left-and right-turn lanes.

Margaret Street and Brinkerhoff Street

This is a signalized three-way intersection. There are no turn lanes at the intersection.

• Margaret Street and Broad Street/Pine Street

This is a signalized four-way intersection. The eastbound approach of Broad Street includes a left-turn lane. There are no turn lanes on the other approaches.

• Durkee Street and Bridge Street

This four-way intersection operates under all-way Stop sign control. The west leg is one-way westbound away from the intersection. The westbound approach includes a separate right-turn lane.

Durkee Street and Broad Street

This four-way intersection operates under Stop sign control on the Durkee Street approaches. The southbound approach of Durkee Street includes a separate left-turn lane.

Peru Street and Bridge Street/Green Street

This is a signalized four-way intersection with Green Street slightly offset from Peru Street. Turn lanes are included on the Bridge Street approaches as well as the Peru Street approach.

• Peru Street and Broad Street/Hamilton Street

Peru Street at Broad Street and at Hamilton Street are signalized intersections offset by about 100 feet. The two intersections operate under a single signal controller. Turn lanes are on the eastbound Broad Street approach and the northbound Peru Street approach.

5.0 PEDESTRIAN FACILITIES

Sidewalks are provided throughout this downtown study area. Crosswalks and pedestrian signal indications at the signalized intersections also exist throughout the area. Mid-block crosswalks are provided on Durkee Street and Bridge Street. A walkway exists along a portion of the western bank of the Saranac River between Broad Street and Bridge Street and continues into MacDonough Park.

6.0 TRANSIT AVAILABILITY

Clinton County Public Transit is the local public transit system in Plattsburgh. Most regular transit routes have a stop at the Government Center on Cornelia Street (north and adjacent to the study area) and some routes travel along Durkee Street, including the Express Shuttle, Keeseville au Sable, CCC Seasonal, South Connector and Uptown Downtown routes. The Express Shuttle and Uptown Downtown routes have flag stops on Durkee Street.

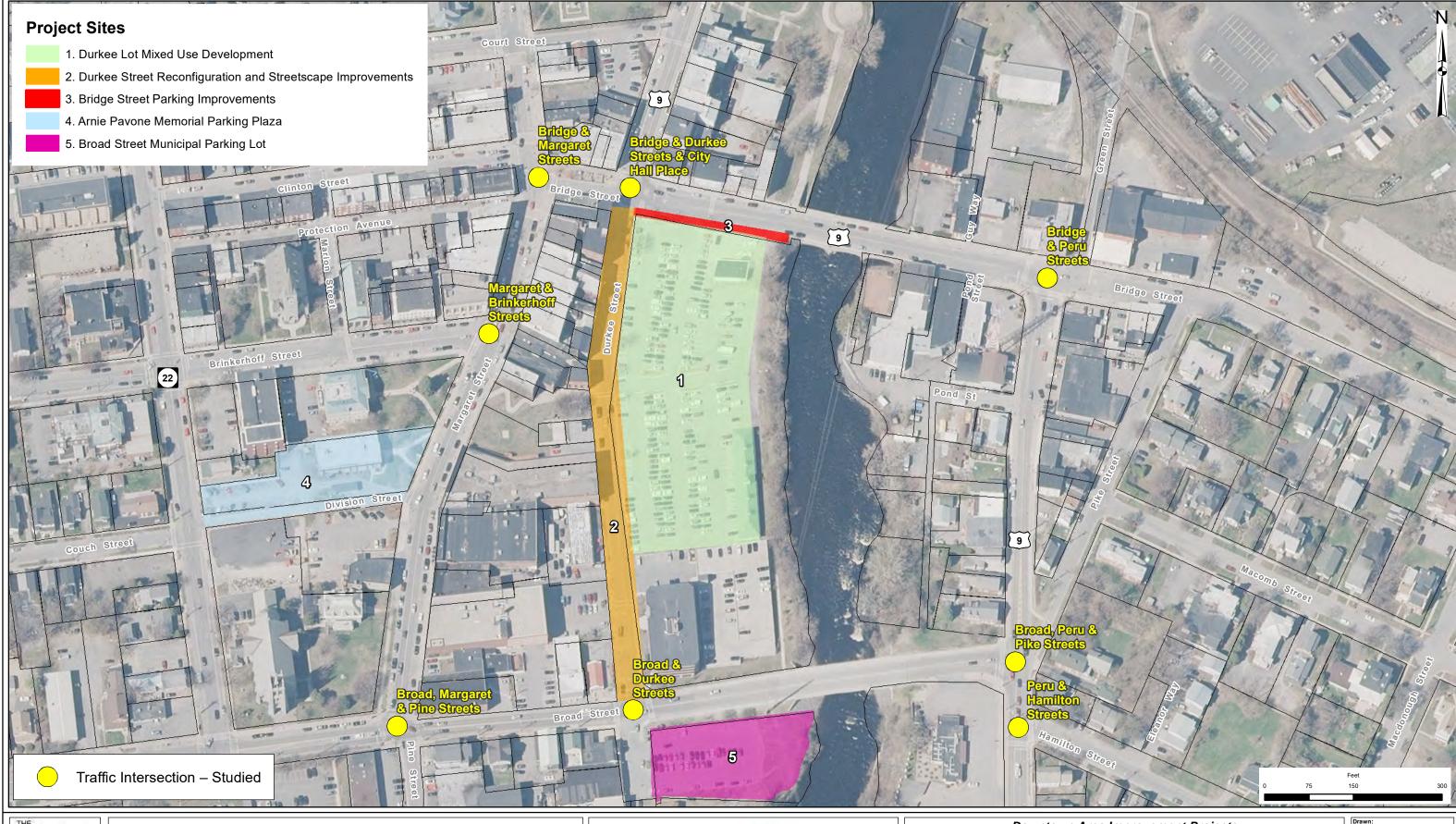
7.0 FIELD STUDIES

Typically, the busiest periods of traffic activity on the roadway network under consideration near the project area are during the weekday morning, midday, and evening commuter periods. To develop baseline data for the peak commute hours, turning movement counts were collected at the seven intersections on Tuesday and Wednesday, September 10 and 11, 2019 from 6:00 AM to 9:00 AM, 11:30 AM to 2:30 PM, and from 3:00 PM to 6:00 PM.

A review of the traffic data revealed the peak hours of traffic activity in the project area to generally be:

AM Peak Hour 7:30 AM to 8:30 AM.
 Midday Peak Hour 12:15 PM to 1:15 PM.
 PM Peak Hour 3:45 PM to 4:45 PM.

The 2019 Existing peak hour traffic volumes are shown on Figures 2, 3, and 4 for the AM, Midday, and PM peak hours, respectively. The traffic count data is included in Appendix A.





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Downtown Area Improvement Projects

Study Area

City of Plattsburgh - Clinton County, New York

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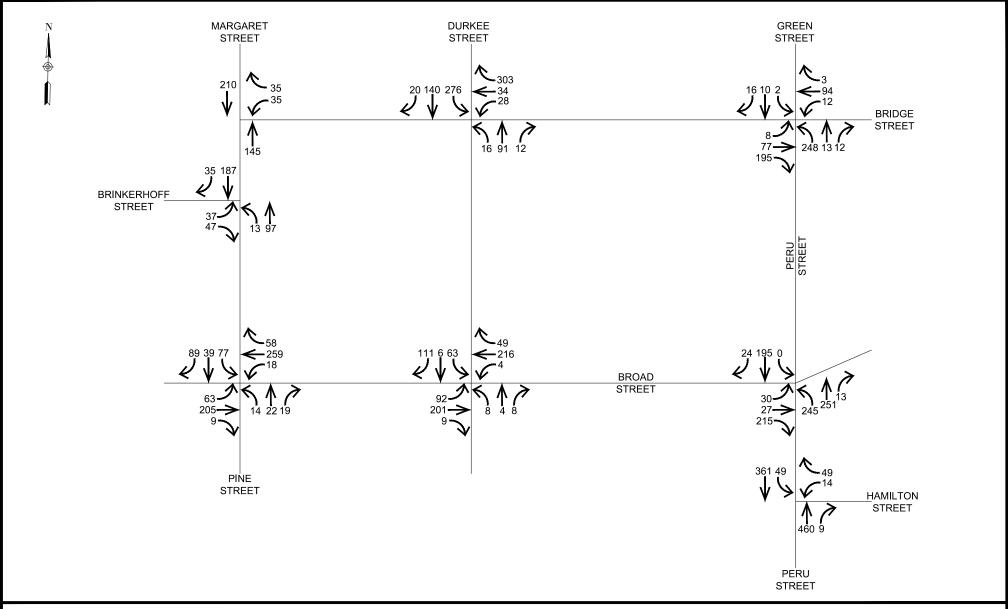
INTERSECTION **VOLUMES**

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 2

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CITY OF PLATTSBURGH GEIS

2019 MIDDAY EXISTING INTERSECTION **VOLUMES**

CITY OF PLATTSBURGH, CLINTON COUNTY

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П	FIG	. 3

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INTERSECTION **VOLUMES**

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 4

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8.0 CAPACITY ANALYSES PROCEDURES

Traffic impacts are measured by intersection capacity analyses, computed in accordance with procedures outlined in the Sixth Edition of the <u>Highway Capacity Manual (HCM)</u>, published by the Transportation Research Board. In general, analyses' results are a measure of the ability of an intersection to process vehicles. This is evaluated for each approach to the intersection as well as for the entire intersection. The analyses' results are identified as Levels of Service (LOS) which range from "A" through "F," with LOS "A" representing the least delays and LOS "F" representing longer delays or capacity deficient operations.

According to generally accepted practice, LOS "A," "B" and "C" reflect clearly acceptable conditions, LOS "D" reflects the existence of delays within a generally tolerable range, LOS "E" is generally only tolerated on minor movements and LOS "F" indicates typically undesirable delays often associated with breakdown conditions.

The parameters considered in the calculations include: the type of intersection control, the volumes on each approach, the distribution of vehicles by direction (left, through and right) and other factors including vehicle types, pedestrian movements and parking constraints. Roadway parameters relate to the geometry of the intersection, specifically, the number of lanes, the widths of lanes and lane-use considerations.

The computed LOS is defined in terms of the average control delay per vehicle for the peak 15-minute period within the peak one-hour period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, capital letters are used in this study to indicate the Levels-of-Service. The range of delay within each signalized level of service category are:

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (Seconds)
Α	Less than or equal to 10.0
В	Between 10.1 and 20.0
С	Between 20.1 and 35.0
D	Between 35.1 and 55.0
E	Between 55.1 and 80.0
F	Greater than 80.0

For unsignalized intersections, levels of service and delay are reported for the individual lane groups in that they provide a more meaningful representation of operating conditions than the overall intersection LOS and delay. Lower-case letters are used in this study to identify that the analysis refers to unsignalized intersections. The ranges of delay within each unsignalized level of service category are as follows:

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (Seconds)
а	Less than or equal to 10.0
b	Between 10.1 and 15.0
С	Between 15.1 and 25.0
d	Between 25.1 and 35.0
е	Between 35.1 and 50.0
f	Greater than 50.0

These delay ranges for the unsignalized level of service categories are less than those at signalized intersections because it is assumed that motorists will tolerate longer delays at a signalized intersection in exchange for guaranteed entry into the intersection in a definite period of time.

9.0 EXISTING TRAFFIC OPERATING CONDITIONS

The existing traffic volumes were compared with current roadway capacities using the Synchro, Version 10 software. The capacity analysis results for the Existing Conditions are summarized in Table 1. Printouts of the analyses are included in Appendix B.

Table 1: Level of Service, Existing Conditions

Intersection	Approach ¹	AM Peak	Midday Peak	PM Peak
Margaret Ct at Dridge Ct	WB I	b ² /11.0 ³	b/12.6	b/11.8
Margaret St at Bridge St	WB r	a/9.2	a/9.7	a/9.5
	EB l/r	A/8.5	B/11.4	B/10.1
Margarat St at Drinkarhoff St	NB I/t	A/7.1	A/6.7	A/6.5
Margaret St at Brinkerhoff St	SB t/r	A/7.8	A/6.6	A/6.7
	Overall ⁴	A/7.7	A/7.6	A/7.2
	EB I	D/41.5	C/29.3	C/33.5
	EB t/r	C/26.7	C/22.2	C/22.2
M 161 18 161	WB l/t/r	C/29.4	C/27.5	C/29.2
Margaret St at Broad St	NB l/t/r	B/10.4	B/10.4	B/12.0
	SB l/t/r	B/15.6	B/11.8	B/12.5
	Overall	C/25.2	C/21.5	C/22.9
	WB I/t	b/10.1	a/9.8	b/10.1
Durkoo St at Bridge St	WB r	c/16.3	b/12.7	c/20.4
Durkee St at Bridge St	NB t/r	b/10.2	a/9.9	b/12.2
	SB I/t	e/46.8	c/18.1	c/21.6
	EB I	a/8.4	a/8.1	a/8.1
	WB I	a/8.0	a/7.7	a/7.8
Durkee St at Broad St	NB l/t/r	c/20.8	c/15.9	c/16.3
	SB I	c/24.9	c/19.8	c/21.1
	SB t/r	b/11.6	b/11.2	b/11.1
	EB I/t	B/17.3	B/17.2	B/17.0
	EB r	A/0.9	A/1.0	A/1.0
	WB I	B/17.3	B/17.2	B/17.2
Peru St at Bridge St	WB t/r	B/17.1	B/17.0	B/17.4
i ciù stat biluge st	NB I/t	B/18.9	B/16.2	B/19.0
	NB r	A/0.0	A/0.1	A/0.0
	SB l/t/r	B/10.7	A/8.9	A/8.5
	Overall	B/11.6	B/11.6	B/13.0

Table 1 (continued)

8	,	,		
	EB I	D/52.3	D/52.2	D/52.1
	EB t/r	F/82.7	F/86.7	F/91.5
	WB l/t/r	C/22.7	C/27.0	C/22.2
Peru St at Broad St/Hamilton St	NB I	A/6.7	A/4.9	A/5.4
	NB t/r	B/11.3	B/10.5	B/11.7
	SB l/t/r	C/30.9	C/25.0	C/27.4
	Overall	C/27.8	C/28.3	C/29.9

Notes:

- 1. EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, I = left, t = thru, r = right.
- 2. LOS = Level of Service. Uppercase letters represent levels of service for signalized intersections. Lowercase letters represent levels-of-service for unsignalized intersections.
- 3. Delays are the average for each lane group in seconds per vehicle. For signalized intersections, the average delay per vehicle for the entire intersection is also included. For unsignalized intersections, the value represents the average delay per vehicle for the lane group experiencing the greatest delays.
- 4. Overall = the weighted average delay of all movements and the corresponding LOS.

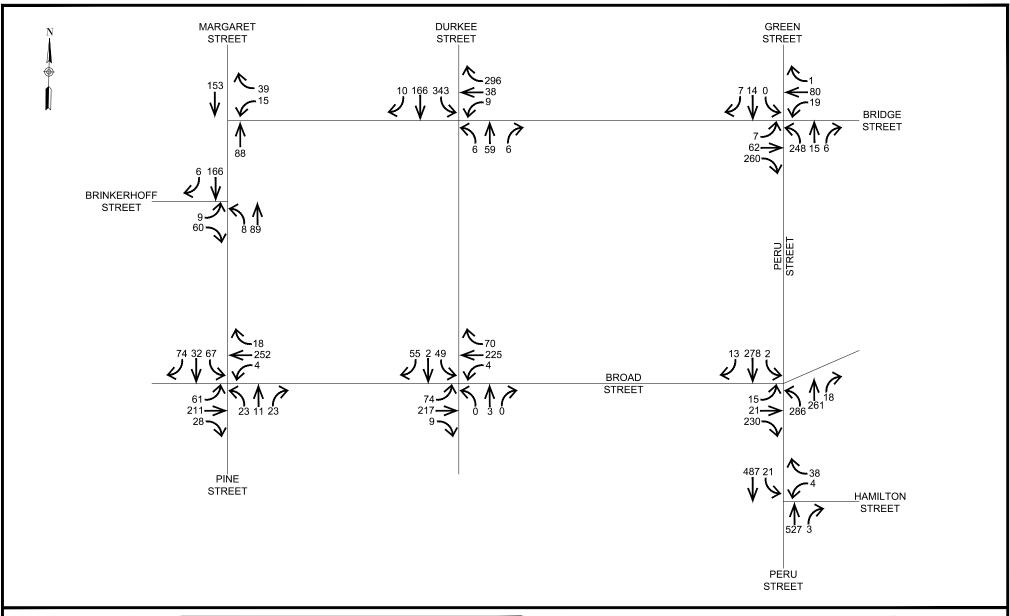
Table 1 indicates that all movements are operating at LOS "D" or better except for the southbound movement on Durkee Street at Bridge Street with LOS "e" conditions in the AM peak hour, and the eastbound right-turn movement on Broad Street at Peru Street with LOS "F" conditions in the three peak hours.

10.0 NO-BUILD TRAFFIC VOLUMES

In determining future traffic volumes, existing traffic volumes are projected forward to the Build-out Year using a generalized growth factor and accounting for other projects in the area. It is anticipated that the projects will be completed by 2022.

Based on available historical volume data from NYSDOT databases, traffic volumes have decreased over the past few years. However, to be conservative, a general growth rate of 0.5% per year was used for the No-Build conditions. There are no other developments of significance that are planned, approved, or pending approval near the project area which may generate traffic through the study area.

The No-Build volumes represent future traffic operating conditions without the proposed projects and are a benchmark against which potential project-related traffic impacts can be measured. The 2022 No-Build traffic volumes are shown on Figures 5, 6, and 7.



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CITY OF PLATTSBURGH GEIS

2022 AM NO-BUILD **INTERSECTION VOLUMES**

CITY OF PLATTSBURGH, CLINTON COUNTY

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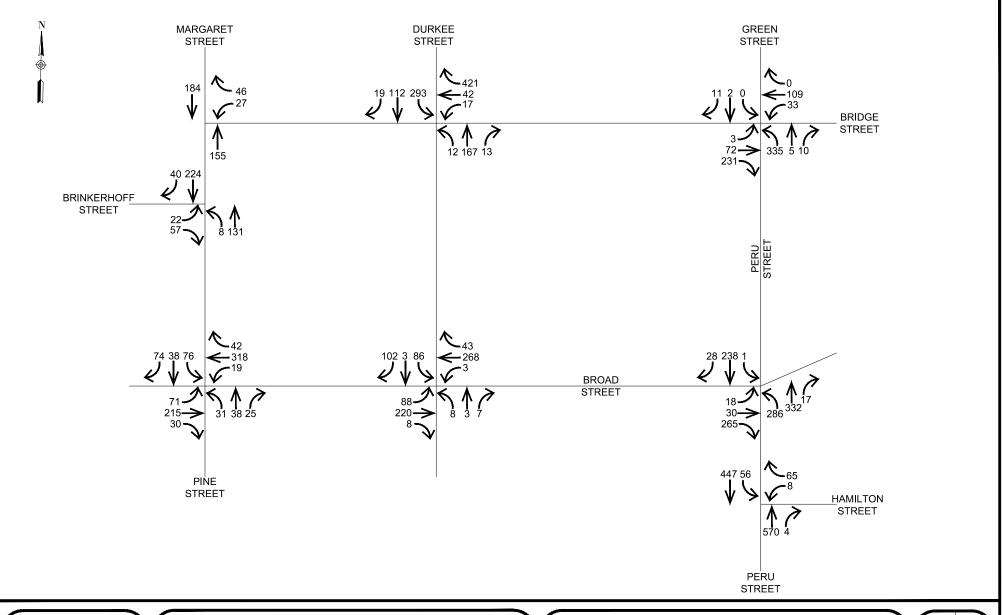
VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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CITY OF PLATTSBURGH GEIS

2022 PM NO-BUILD INTERSECTION **VOLUMES**

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 7

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11.0 NO-BUILD CAPACITY ANALYSIS RESULTS

The results of the analysis for the 2022 No-build conditions are summarized in Table 2.

Table 2: Level of Service, 2022 No-Build Conditions

Intersection	Approach ¹	AM Peak	Midday Peak	PM Peak
	WBI	b/11.1	b/12.7	b/11.9
Margaret St at Bridge St	WBr	a/9.3	a/9.7	a/9.5
	EB l/r	A/8.5	B/11.4	B/10.1
	NB l/t	A/7.1	A/6.7	A/6.6
Margaret St at Brinkerhoff St	SB t/r	A/7.8	A/6.7	A/6.7
	Overall ⁴	A/7.7	A/7.7	A/7.2
	EB l	D/41.6	C/30.0	C/34.4
	EB t/r	C/26.6	C/22.2	C/22.3
	WB l/t/r	C/29.3	C/27.7	C/29.5
Margaret St at Broad St	NB l/t/r	B/10.4	B/10.5	B/12.1
	SB l/t/r	B/15.8	B/11.9	B/12.6
	Overall	C/25.2	C/21.7	C/23.1
	WB I/t	b/10.2	a/9.9	b/10.2
	WBr	c/16.7	b/13.0	c/21.1
Durkee St at Bridge St	NB t/r	b/10.3	b/10.0	b/12.3
	SB I/t	f/50.6	c/18.7	c/22.5
	EB I	a/8.4	a/8.1	a/8.1
	WBI	a/8.0	a/7.7	a/7.8
Durkee St at Broad St	NB l/t/r	c/21.1	c/16.1	c/16.5
	SB I	d/25.5	c/20.0	c/21.5
	SB t/r	b/11.7	b/11.2	b/11.1
	EB I/t	B/17.3	B/17.3	B/17.0
	EB r	A/0.9	A/1.0	A/1.0
	WB I	B/17.3	B/17.2	B/17.2
Peru St at Bridge St	WB t/r	B/17.2	B/17.1	B/17.5
reid Stat Bridge St	NB l/t	B/19.1	B/16.4	B/19.2
	NB r	A/0.0	A/0.1	A/0.0
	SB l/t/r	B/10.7	A/8.9	A/8.5
	Overall	B/11.7	B/11.7	B/13.1
	EB l	D/52.3	D/52.3	D/52.1
	EB t/r	F/82.4	F/86.8	F/91.3
	WB l/t/r	C/22.4	C/26.7	C/22.0
Peru St at Broad St/Hamilton St	NB I	A/7.0	A/4.9	A/5.5
	NB t/r	B/11.4	B/10.6	B/11.7
	SB l/t/r	C/31.1	C/25.1	C/27.6
	Overall	C/28.2	C/28.5	C/30.1

Table 2 shows that the southbound movement of Durkee Street at Bridge Street experiences a drop in LOS from "e" to "f" conditions in the AM peak hour. Printouts of the analyses are also in Appendix B.

12.0 PROJECT-GENERATED TRAFFIC VOLUMES

Traffic expected to be generated by the proposed projects was determined as follows:

1. Durkee Lot Mixed-Use Development – The Durkee Lot Mixed-Use Development will displace the existing Durkee Street public parking lot; therefore, before adding the trips for this development the volumes from the existing lot were estimated and removed from the roadway network to develop 2022 No-build volumes without the existing Durkee Street lot. Figure C1 in Appendix C shows the Durkee Street lot volumes and Figures C2 through C4 show the No-build volumes without the existing Durkee Street Lot. These No-build volumes serve as the base network that proposed improvement projects are added to determine the potential for future impacts.

A Trip Generation Assessment was prepared by McFarland Johnson on July 29, 2019 for this project and the retail portion of the project consisted of 10,000 SF of floor space. The trip rates were updated for this study to account for an additional 3,400 SF of retail space and the total space was further defined as 7,250 SF of general retail use and 6,150 SF of restaurant use. Table 3 presents the trip generation estimates for this analysis. It is noted that no credits were taken for transit trips, pass-by trips, or internal trips.

	Land	AM	AM Peak Hour		Midday Peak Hour			PM Peak Hour		
Component	Use Code	In	Out	Total	In	Out	Total	In	Out	Total
Retail 7,250 SF	820	12	10	22	18	15	33	15	15	30
Restaurant 6,150 SF	932	49	37	86	72	72	144	56	51	107
Residential 115 units	220	18	46	64	32	38	70	45	32	77
Public Parking 50 Spaces	90	18	4	22	25	25	50	7	21	28
Total New Trips		97	97	194	147	150	297	123	119	242

Table 3: Durkee Lot Mixed-Use Generated Trips

The retail Midday trips were calculated using hourly distribution tables in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation*, 10^{th} Edition. Hourly distribution tables are not available for the residential and parking uses so the Midday trips were calculated using an average of the AM and PM trips. Figures C5 – C7 show the trip assignments for this development with Durkee Street remaining as two-way. Figures C13 – C15 show the trip assignments with Durkee Street changed to one-way northbound.

2. Durkee Street Reconfiguration and Streetscape Improvements – The Durkee Street reconfiguration will add 27 on-street parking spaces with Durkee Street remaining as two-way. For trip generation purposes it is assumed that these spaces would generate 20 new trips in the peak hours. As a one-way street, 43 on-street parking spaces would be added and it was assumed that 32 new trips would be generated during the peak hours.

- 3. Bridge Street Parking Improvements Six parking spaces will be added to Bridge Street with this improvement project. It is assumed that 4 new trips will be added during the peak hours.
- 4. Broad Street Parking Lot Expansion of this lot will add 22 parking spaces. It is assumed that 12 new trips will be added during the peak hours.
 - Figures C8 shows the trip assignments for the Durkee Street Reconfiguration, Bridge Street, and Broad Street projects with Durkee Street as two-way. Figure C 16 show the trip assignments with Durkee Street as one-way northbound.
- 5. Arnie Pavone Memorial Parking Plaza this project replaces the existing bank and its 32 parking spaces for a new 109-space public parking lot. Division Street will be abandoned with this project. Table 4 presents the trip generation estimates for this lot.

AM Peak Hour Midday Peak Hour **PM Peak Hour** Land Component Use Out Total Out Out Total In Total In Code **Public Parking** 90 39 9 48 27 27 54 15 45 60 109 Spaces

Table 4: Arnie Pavone Plaza Generated Trips

Two full-access driveways will be provided on Margaret Street with a one-way exit provided to Oak Street. Figure C9 shows the trip assignments.

13.0 BUILD TRAFFIC VOLUMES

The "Build" traffic volumes are the sum of the project generated traffic volumes and the No-Build without the existing Durkee Street lot traffic volumes. The Build traffic volumes for the study intersections are shown on Figures 8, 9, and 10 for Durkee Street as two-way, and Figures 11, 12, and 13 for Durkee Street as one-way.

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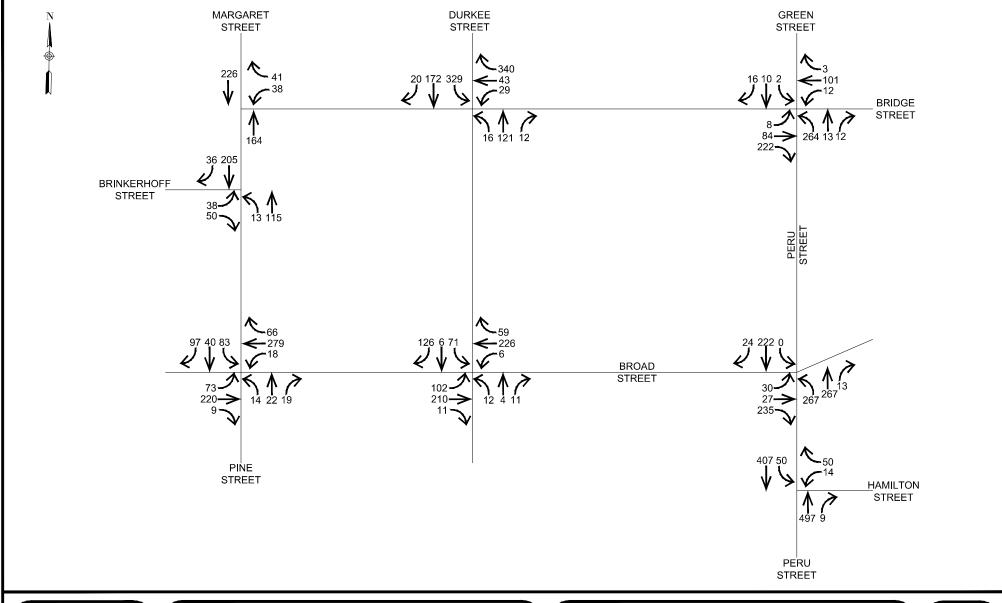
(DURKEE STREET 2-WAY) INTERSECTION VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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CITY OF PLATTSBURGH GEIS

2022 MIDDAY BUILD (DURKEE STREET 2-WAY) INTERSECTION VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 9

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(DURKEE STREET 2-WAY) INTERSECTION VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 10

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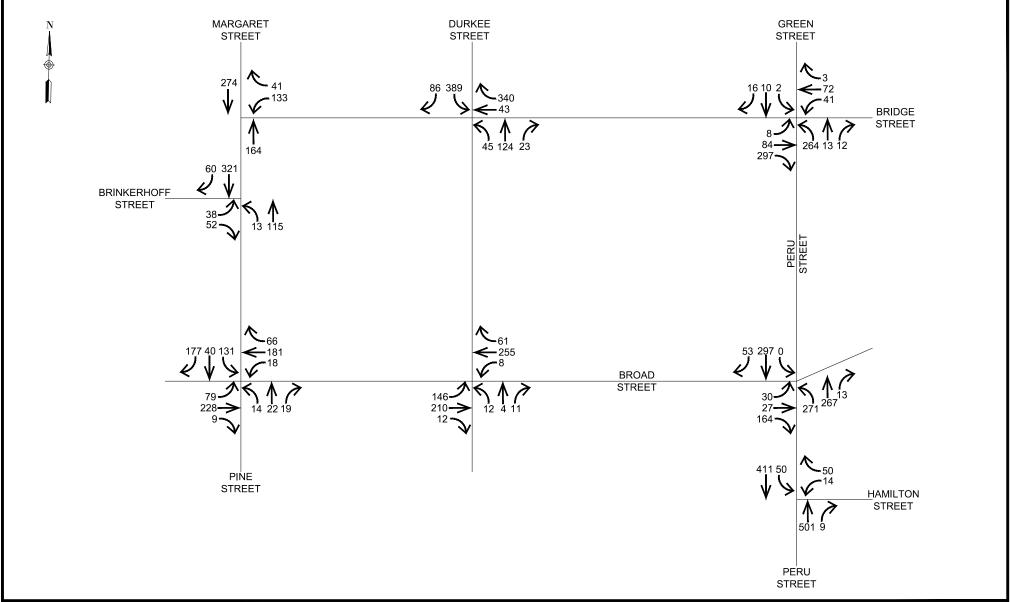
(DURKEE STREET 1-WAY) INTERSECTION VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. 12

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FIG. 13

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14.0 BUILD TRAFFIC OPERATING CONDITIONS

Analysis results for the 2022 Build conditions are summarized in Table 5 for Durkee Street remaining as two-way and Table 6 for Durkee Street as one-way northbound. Analysis printouts are in Appendix B.

Table 5: Level of Service, 2022 Build Conditions (Durkee Street 2-Way)

Intersection	Approach	AM Peak	Midday Peak	PM Peak
Managed Ct at Duidea Ct	WB I	b/11.5	b/13.2	b/12.2
Margaret St at Bridge St	WB r	a/9.4	a/9.9	a/9.6
	EB l/r	A/8.3	B/11.3	B/10.0
Managed Ct at Duinkanh off Ct	NB I/t	A/7.3	A/7.0	A/6.6
Margaret St at Brinkerhoff St	SB t/r	A/8.2	A/7.2	A/6.9
	Overall	A/7.9	A/7.9	A/7.3
	EB l	C/32.5	C/34.1	C/31.2
	EB t/r	C/21.7	C/22.3	C/22.7
	WB l/t/r	C/24.7	C/28.9	C/29.7
Margaret St at Broad St	NB l/t/r	B/11.9	B/10.6	B/12.2
	SB I/t/r	B/19.4	B/12.3	B/13.3
	Overall	C/22.6	C/22.8	C/22.9
	WB I/t	b/10.4	b/10.5	b/10.5
	WB r	c/18.6	c/15.7	c/23.5
Durkee St at Bridge St	NB t/r	b/10.9	b/11.1	b/12.6
	SB I/t	f/61.5	d/30.0	d/30.0
	EB I	a/8.4	a/8.2	a/8.2
	WB I	a/8.0	a/7.8	a/7.9
Durkee St at Broad St	NB l/t/r	c/22.1	c/17.6	c/18.4
	SB I	d/27.2	c/22.5	c/23.0
	SB t/r	b/11.9	b/11.5	b/11.2
	EB I/t	B/17.4	B/17.3	B/17.0
	EB r	A/0.9	A/1.0	A/1.0
	WB I	B/17.3	B/17.2	B/17.2
Peru St at Bridge St	WB t/r	B/17.3	B/17.2	B/17.7
Peru St at Bridge St	NB l/t	B/19.4	B/16.9	B/19.7
	NB r	A/0.0	A/0.1	A/0.1
	SB l/t/r	B/10.7	A/8.9	A/8.5
	Overall	B/11.8	B/11.7	B/13.2
	EB I	D/52.3	D/52.5	D/52.6
	EB t/r	F/82.0	F/85.9	F/91.4
	WB l/t/r	C/22.4	C/26.8	C/22.0
Peru St at Broad St/Hamilton St	NB I	A/7.6	A/5.1	A/5.7
	NB t/r	B/11.4	B/10.6	B/11.8
	SB l/t/r	C/31.7	C/26.1	C/28.2
	Overall	C/28.4	C/28.4	C/30.0

Table 6: Level of Service, 2022 Build Conditions (Durkee Street 1-Way)

Intersection	Approach	AM Peak	Midday Peak	PM Peak
M. ISI I D. I. SI	WBI	b/14.3	c/17.7	b/14.5
Margaret St at Bridge St	WB r	a/9.4	a/9.9	a/9.6
	EB l/r	A/8.3	B/11.2	B/10.0
Managed Stat Deigland off St	NB I/t	A/7.3	A/7.1	A/6.6
Margaret St at Brinkerhoff St	SB t/r	B/12.0	A/8.6	A/8.2
	Overall	B/10.3	A/8.7	A/8.1
	EB l	D/38.9	C/29.9	C/27.7
	EB t/r	C/27.1	C/24.3	C/24.6
	WB l/t/r	C/25.0	C/24.3	C/25.7
Margaret St at Broad St	NB l/t/r	B/10.4	A/9.7	B/11.1
	SB I/t/r	C/20.7	B/13.4	B/13.4
	Overall	C/24.5	C/20.1	C/20.4
	WBt	a/10.0	a/9.7	b/10.1
	WB r	c/18.2	c/15.7	c/22.9
Durkee St at Bridge St	NB t/r	b/11.2	b/11.7	b/13.9
	SB I/t	e/37.2	c/23.5	c/25.0
	EB I	a/8.7	a/8.4	a/8.3
	WB I	a/8.1	a/7.8	a/7.9
Durkee St at Broad St	NB l/t/r	c/24.6	c/17.6	c/15.4
	SB I			
	SB t/r			
	EB I/t	B/17.4	B/17.3	B/17.0
	EB r	A/0.9	A/1.0	A/1.0
	WB I	B/17.4	B/17.4	B/17.5
Peru St at Bridge St	WB t/r	B/17.1	B/16.5	B/17.3
reid Stat Bridge St	NB l/t	B/19.4	B/16.8	B/19.7
	NB r	A/0.0	A/0.1	A/0.1
	SB I/t/r	B/10.7	A/8.9	A/8.5
	Overall	B/11.0	B/10.8	B/12.4
	EB I	D/52.3	D/52.8	D/52.7
	EB t/r	F/85.8	F/93.7	F/96.0
	WB l/t/r	C/22.4	C/26.8	C/22.0
Peru St at Broad St/Hamilton St	NB I	A/9.5	A/5.9	A/6.5
	NB t/r	B/11.5	B/10.6	B/11.8
	SB I/t/r	D/35.7	C/29.2	C/31.6
	Overall	C/28.1	C/27.1	C/28.3

15.0 LEVEL OF SERVICE COMPARISON

To evaluate the potential traffic impact associated with the proposed projects, the No-Build and Build traffic operating conditions were compared. This comparison is summarized in Tables 7, 8, and 9.

Table 7: 2022 AM Level of Service Comparison

Intersection	Approach	No-Build	Build (2- Way)	Build (1- Way)
Margaret St at	WB I	b/11.1	b/11.5	b/14.3
Bridge St	WB r	a/9.3	a/9.4	a/9.4
	EB l/r	A/8.5	A/8.3	A/8.3
Margaret St at	NB I/t	A/7.1	A/7.3	A/7.3
Brinkerhoff St	SB t/r	A/7.8	A/8.2	B/12.0
	Overall	A/7.7	A/7.9	B/10.3
	EB I	D/41.6	C/32.5	D/38.9
	EB t/r	C/26.6	C/21.7	C/27.1
Margaret St at	WB l/t/r	C/29.3	C/24.7	C/25.0
Broad St	NB l/t/r	B/10.4	B/11.9	B/10.4
	SB l/t/r	B/15.8	B/19.4	C/20.7
	Overall	C/25.2	C/22.6	C/24.5
	WB I/t	b/10.2	b/10.4	a/10.0
	WB r	c/16.7	c/18.6	c/18.2
Durkee St at Bridge St	NB t/r	b/10.3	b/10.9	b/11.2
bridge 3t	SB I/t	f/50.6	f/50.6 f/61.5	
	EB I	a/8.4	a/8.4	a/8.7
5 1 6 .	WB I	a/8.0	a/8.0	a/8.1
Durkee St at Broad St	NB l/t/r	c/21.1	c/22.1	c/24.6
Broad St	SB I	d/25.5	d/27.2	
	SB t/r	b/11.7	b/11.9	
	EB I/t	B/17.3	B/17.4	B/17.4
	EB r	A/0.9	A/0.9	A/0.9
	WB I	B/17.3	B/17.3	B/17.4
Peru St at Bridge	WB t/r	B/17.2	B/17.3	B/17.1
St	NB I/t	B/19.1	B/19.4	B/19.4
	NB r	A/0.0	A/0.0	A/0.0
	SB I/t/r	B/10.7	B/10.7	B/10.7
	Overall	B/11.7	B/11.8	B/11.0
	EB I	D/52.3	D/52.3	D/52.3
	EB t/r	F/82.4	F/82.0	F/85.8
Peru St at Broad	WB I/t/r	C/22.4	C/22.4	C/22.4
St/Hamilton St	NB I	A/7.0	A/7.6	A/9.5
	NB t/r	B/11.4	B/11.4	B/11.5
	SB I/t/r	C/31.1	C/31.7	D/35.7
	Overall	C/28.2	C/28.4	C/28.1

Table 8: 2022 Midday Level of Service Comparison

Intersection	Approach	No-Build	Build (2- Way)	Build (1- Way)
Margaret St at	WB I	b/12.7	b/13.2	c/17.7
Bridge St	WB r	a/9.7	a/9.9	a/9.9
	EB l/r	B/11.4	B/11.3	B/11.2
Margaret St at	NB I/t	A/6.7	A/7.0	A/7.1
Brinkerhoff St	SB t/r	A/6.7	A/7.2	A/8.6
	Overall	A/7.7	A/7.9	A/8.7
	EB I	C/30.0	C/34.1	C/29.9
	EB t/r	C/22.2	C/22.3	C/24.3
Margaret St at	WB l/t/r	C/27.7	C/28.9	C/24.3
Broad St	NB l/t/r	B/10.5	B/10.6	A/9.7
	SB l/t/r	B/11.9	B/12.3	B/13.4
	Overall	C/21.7	C/22.8	C/20.1
	WB I/t	a/9.9	b/10.5	a/9.7
5	WB r	b/13.0	c/15.7	c/15.7
Durkee St at Bridge St	NB t/r	b/10.0	b/11.1	b/11.7
Bridge 3t	SB I/t	c/18.7	d/30.0	c/23.5
	EB l	a/8.1	a/8.2	a/8.4
Develope Chart	WB I	a/7.7	a/7.8	a/7.8
Durkee St at Broad St	NB l/t/r	c/16.1	c/17.6	c/17.6
Broad St	SB I	c/20.0	c/22.5	
	SB t/r	b/11.2	b/11.5	
	EB I/t	B/17.3	B/17.3	B/17.3
	EB r	A/1.0	A/1.0	A/1.0
	WB I	B/17.2	B/17.2	B/17.4
Peru St at Bridge	WB t/r	B/17.1	B/17.2	B/16.5
St	NB I/t	B/16.4	B/16.9	B/16.8
	NB r	A/0.1	A/0.1	A/0.1
	SB l/t/r	A/8.9	A/8.9	A/8.9
	Overall	B/11.7	B/11.7	B/10.8
	EB I	D/52.3	D/52.5	D/52.8
	EB t/r	F/86.8	F/85.9	F/93.7
	WB l/t/r	C/26.7	C/26.8	C/26.8
Peru St at Broad St/Hamilton St	NB I	A/4.9	A/5.1	A/5.9
St/Hailillton St	NB t/r	B/10.6	B/10.6	B/10.6
	SB l/t/r	C/25.1	C/26.1	C/29.2
	Overall	C/28.5	C/28.4	C/27.1

Table 9: 2022 PM Level of Service Comparison

			Build (2-	Build (1-
Intersection	Approach	No-Build	Way)	Way)
Margaret St at	WB I	b/11.9	b/12.2	b/14.5
Bridge St	WB r	a/9.5	a/9.6	a/9.6
	EB l/r	B/10.1	B/10.0	B/10.0
Margaret St at	NB l/t	A/6.6	A/6.6	A/6.6
Brinkerhoff St	SB t/r	A/6.7	A/6.9	A/8.2
	Overall	A/7.2	A/7.3	A/8.1
	EB l	C/34.4	C/31.2	C/27.7
	EB t/r	C/22.3	C/22.7	C/24.6
Margaret St at	WB l/t/r	C/29.5	C/29.7	C/25.7
Broad St	NB l/t/r	B/12.1	B/12.2	B/11.1
	SB I/t/r	B/12.6	B/13.3	B/13.4
	Overall	C/23.1	C/22.9	C/20.4
	WB I/t	b/10.2	b/10.5	b/10.1
Develope St. at	WB r	c/21.1	c/23.5	c/22.9
Durkee St at Bridge St	NB t/r	b/12.3	b/12.6	b/13.9
Briage of	SB I/t	c/22.5	d/30.0	c/25.0
	EB I	a/8.1	a/8.2	a/8.3
Duralisas Chart	WB I	a/7.8	a/7.9	a/7.9
Durkee St at Broad St	NB l/t/r	c/16.5	c/18.4	c/15.4
2.000.00	SB I	c/21.5	c/23.0	
	SB t/r	b/11.1	b/11.2	
	EB I/t	B/17.0	B/17.0	B/17.0
	EB r	A/1.0	A/1.0	A/1.0
	WB I	B/17.2	B/17.2	B/17.5
Peru St at Bridge	WB t/r	B/17.5	B/17.7	B/17.3
St	NB I/t	B/19.2	B/19.7	B/19.7
	NB r SB l/t/r	A/0.0 A/8.5	A/0.1	A/0.1
	Overall	B/13.1	A/8.5 B/13.2	A/8.5 B/12.4
	EB I	D/52.1	D/52.6	D/52.7
	EB t/r	F/91.3	F/91.4	F/96.0
Peru St at Broad	WB I/t/r	C/22.0	C/22.0	C/22.0
St/Hamilton St	NB I	A/5.5	A/5.7	A/6.5
	NB t/r	B/11.7	B/11.8	B/11.8
	SB l/t/r	C/27.6	C/28.2	C/31.6
	Overall	C/30.1	C/30.0	C/28.3

With Durkee Street as two-way, the tables show four instances of level of service drops (**bold**) for the Build condition with three of them occurring at the Durkee Street and Bridge Street intersection in the Midday peak hour. The largest increase in delay is about 12 seconds for the southbound approach and changes from "c" to "d" which is an acceptable level of service. No mitigation is needed. There is one instance of level of service improvement (*italics*).

There are five instances of level of service drops for Build conditions with Durkee Street as one-way. All delay increases are minimal at less than 5 seconds and no mitigation is needed. There are three instances of level of service improvements (*italics*), including the southbound approach of Durkee Street at Bridge Street that improves from "f" to "e" in the AM peak hour.

16.0 CRASH DATA

Plattsburgh Police Department provided crash data for the study intersections for the latest 3-year period ending August 21, 2019. The data revealed 28 crashes at the seven study intersections:

- a. Margaret Street at Bridge Street 1
- b. Margaret Street at Brinkerhoff Street 4
- c. Margaret Street at Broad Street/Pine Street 10
- d. Durkee Street at Bridge Street 2
- e. Durkee Street at Broad Street 3
- f. Peru Street at Bridge Street 3
- g. Peru Street at Broad Street 5

A review of the actual police reports for the 10 crashes at Margaret Street and Broad Street was performed to determine if there were certain types of crashes or patterns of crashes. The reports indicate that none of the crashes involved personal injury and all 10 were property damage only crashes; there were no fatalities. Four were rear-end crashes, 2 right-angle; and 1 each of rear-end, sideswipe, backing, and hitting a fixed object. There was no discernable pattern to the crashes.

17.0 CONCLUSIONS

The traffic analyses presented in the previous sections show that the proposed Downtown Area Improvement Projects will have minimal traffic impacts. No mitigation measures are needed.

Based on the analyses contained in this study, it is the considered professional opinion of The Chazen Companies that the proposed Downtown Area Improvement Projects will not have a significant adverse impact on traffic operating conditions on the roadway system.

Appendix A: Traffic Volume Data

Tue Sep 10, 2019

Full Length (6 AM-9 AM, 11:30 AM-2:30 PM, 3 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287



Leg		Margare	t St				Bridge S	St				Southeast	
Dire ction		Southbo	und				Westboo	und				North we st	bound
Time		R	T	U	App	Ped*	R	T	L	App	Pe d*	App	Pe d*
2019-09-	10 6:00AM	0	10	0	10	0	1	0	0	1	0	0	1
	6:15AM	2	20	0	22	0	0	3	1	4	1	0	2
	6:30AM	3	17	0	20	1	0	0	2	2	1	0	1
	6:45AM	0	20	0	20	1	3	1	0	4	1	0	2
Н	ourly Total	5	67	0	72	2	4	4	3	11	3	0	6
	7:00AM	1	5	0	6	1	2	0	2	4	1	0	0
	7:15AM	2	30	0	32	1	6	2	2	10	0	0	0
	7:30AM	2	36	0	38	0	4	0	6	10	4	0	0
	7:45AM	5	53	0	58	1	17	4	3	24	1	0	4
Н	ourly Total	10	124	0	134	3	29	6	13	48	6	0	4
	8:00AM	2	32	0	34	2	5	1	5	11	7	0	0
	8:15AM	0	25	0	25	4		0	4	8	6	0	1
	8:30AM	6	22	0	28	0		2	3	9	6	0	1
	8:45AM	5	38	0	43	2		1	3	12	2	0	0
H	ourly Total	13	117	0	130	8		4	15	40	21	0	2
	11:30 AM	5	47	0	52	6	4	1	5	10	6	0	2
	11:45 AM	9	52	0	61	1		2	5	14	8	0	7
Н	ourly Total	14	99	0	113	7		3	10	24	14	0	9
110	12:00PM	6	45	0	51	9			4	10	7	0	13
	12:15PM	8	56	0	64	7		3	12	21	9	0	7
	12:30PM	5	53	0	58	5		2	5	14	4	0	9
	12:30PM 12:45PM	6	56		62				13	23	11	0	7
.,,				0		3		1				-	
H	ourly Total	25	210	0	235	24	24	10	34	68	31	0	36
	1:00PM	7	36	0	43	5	8	4	2	14	11	0	10
	1:15PM	3	36	0	39	4			4	15	7	0	8
	1:30PM	5	33	0	38	2		3	1	11	7	0	2
	1:45PM	8	45	0	53	5		2	2	16	18	0	6
He	ourly Total	23	150	0	173	16	36	11	9	56	43	0	26
	2:00PM	8	55	0	63	5	5	6	7	18	14	0	2
	2:15PM	8	32	0	4 0	2	7	3	6	16	9	0	6
	2:30PM	0	0	0	0	0	0	0	0	0	0	0	0
Н	ourly Total	16	87	0	103	7	12	9	13	34	23	0	8
	3:00PM	17	54	0	71	7	9	2	7	18	15	0	8
	3:15PM	4	41	0	45	0	4	3	4	11	9	0	8
	3:30PM	9	45	0	54	4	6	1	8	15	10	0	10
	3:45PM	15	41	0	56	0	11	4	5	20	3	0	3
He	ourly Total	45	181	0	226	11	30	10	24	64	37	0	29
	4:00PM	3	43	0	46	4	13	4	9	26	9	0	6
	4:15PM	5	41	0	46	5	9	3	4	16	9	0	14
	4:30PM	6	57	0	63	3	7	3	5	15	5	0	3
	4:45PM	1	42	0	43	3	5	1	3	9	4	0	1
Н	ourly Total	15	183	0	198	15	34	11	21	66	27	0	24
	5:00PM	11	50	0	61	4	5	2	2	9	12	0	9
	5:15PM	6	49	0	55	1			7	15	3	0	4
	5:30PM	6	32	0	38	9			2	8	12	0	10
	5:45PM	10	45	0	55	6			7	10	6	0	6
H	ourly Total	33	176	0	209	20	14	10	18	42	33	0	29
	6:00PM	0	0	0	0	0			0	0	0	0	0
	ourly Total	0	0		0	0			0	0	0	0	0
11				_									
2/	Total	199	1394	0	1593	113		78	160	453	238	0	173
<u> </u>	Approach				-	-		17.2%		45.00/	-	-	-
	% Total	6.6%	46.1%	υ%	52.7%	-	7.1%	2.6%	5.3%	15.0%	-	0 %	-

Le g	Margare	t St				Bridge S	St				Southeast	t
Dire ction	Southbo	und				Westbou	ınd				North we s	tbound
Time	R	T	U	App	Pe d*	R	T	L	App	Pe d*	App	Pe d*
Lights	195	1375	0	1570	-	212	78	156	446	-	0	-
% Lights	98.0%	98.6%	0%	98.6%	-	98.6%	100%	97.5%	98.5%	-	-	-
Articulated Trucks and Single-Unit Trucks	4	16	0	20	-	3	0	4	7	-	0	-
% Articulated Trucks and Single-Unit Trucks	2.0%	1.1%	0%	1.3 %	-	1.4%	0%	2.5%	1.5 %	-	-	-
Buses	0	3	0	3	-	0	0	0	0	-	0	-
% Buses	0%	0.2%	0%	0.2%	-	0%	0%	0%	0 %	-	-	-
Pedestrians	-	-	-	-	110	-	-	-	-	233	-	163
% Pedestrians	-	-	-	-	97.3%	-	-	-	-	97.9%	-	94.2%
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	5	-	10
% Bicycles on Crosswalk	-	-	-	-	2.7%	-	-	-	-	2.1%	-	5.8%

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019

Full Length (6 AM-9 AM, 11:30 AM-2:30 PM, 3 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287



		1						
		Clinton St					Margaret St	
		Eastbound					Northbound	
	Ped*	App	Pe d*	App	U	L	T	Time
14	0	0	0	3	0	0	3	2019-09-10 6:00AM
34	0	0	1	8	0	1	7	6:15AM
32	0	0	0	10	0	0	10	6:30AM
34	2	0	0	10	0	3	7	6:45AM
114	2	0	1	31	0	4	27	Hourly Total
16	0	0	0	6	0	1	5	7:00AM
51	0	0	2	9	0	1	8	7:15AM
62	4	0	1	14	0	1	13	7:30AM
116	3	0	3	34	0	0	34	7:45AM
245	7	0	6	63	0	3	60	Hourly Total
7(1	0	2	25	0	1	24	8:00AM
4 6	0	0	0	13	0	0	13	8:15AM
55	2	0	2	18	0	0	18	8:30AM
82	6	0	2	27	0	1	26	8:45AM
253	9	0	6	83	0	2	81	6.43AM Hourly Total
95	11	0	4	33	0	3	30	11:30AM
106	13 24	0	10	31	0	3	28	11:45AM
201		0	14	64	0	6	58	Hourly Total
88	15	0	11	27	1	2	24	12:00PM
114	16	0	14	29	0	5	24	12:15PM
105	29	0	7	33	0	3	30	12:30PM
14 2	14	0	7	57	0	2	55	12:45PM
449	74	0	39	146	1	12	133	Hourly Total
97	12	0	6	40	0	5	35	1:00PM
82	10	0	4	28	0	1	27	1:15PM
75	17	0	4	26	0	5	21	1:30PM
10	11	0	1	32	0	1	31	1:45PM
355	50	0	15	126	0	12	114	Hourly Total
107	12	0	9	26	0	1	25	2:00PM
102	11	0	12	46	0	6	40	2:15PM
(0	0	0	0	0	0	0	2:30PM
209	23	0	21	72	0	7	65	Hourly Total
127	19	0	10	38	0	5	33	3:00PM
95	8	0	11	39	0	3	36	3:15PM
104	10	0	12	35	0	3	32	3:30PM
117	11	0	13	41	0	6	35	3:45PM
443	48	0	46	153	0	17	136	Hourly Total
96	14	0	7	24	0	1	23	4:00PM
90	3	0	7	28	0	2	26	4:15PM
116	3	0	8	38	0	1	37	4:30PM
8:	12	0	10	29	0	2	27	4.50FM 4:45PM
383	32	0	32		0	6		4:45PM Hourly Total
				119			113	
104	11	0	7	34	0	2	32	5:00PM
97	7	0	3	27	0	2	25	5:15PM
79	17	0	6	33	0	1	32	5:30PM
89	13	0	4	24	0	3	21	5:45PM
369	48	0	20	118	0	8	110	Hourly Total
(0	0	0	0	0	0	0	6:00PM
(0	0	0	0	0	0	0	Hourly Total
302	317	0	200	975	1	77	897	Total
_	-	-	-	-	0.1%	7.9%	92.0%	% Approach
	-1	0%	-	32.3%	0%	2.5%	29.7%	% Total

Leg		Margaret St					Clinton S	St	
Direction		Northbound					Eastbour	ıd	
Time		T	L	U	App	Pe d*	App	Ped*	Int
1	Lights	885	73	1	959	-	0	-	2975
% 1	Lights	98.7%	94.8%	100%	98.4 %	-	-	-	98.5%
Articulated Trucks and Single-Unit T	ruc ks	10	2	0	12	-	0	-	39
% Articulated Trucks and Single-Unit T	ruc ks	1.1%	2.6%	0%	1.2%	-	-	-	1.3%
1	Buses	2	2	0	4	-	0	-	7
% 1	Buses	0.2%	2.6%	0%	0.4 %	-	-	-	0.2%
Pedes	trians	-	-	-	-	196	-	300	
% Pedes	trians	-	-	-	-	98.0%	-	94.6%	-
Bicycles on Cros	sswalk	-	-	-	-	4	-	17	
% Bicycles on Cros	sswalk	-	-	-	-	2.0%	-	5.4%	-

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019

Full Length (6 AM-9 AM, 11:30 AM-2:30 PM, 3 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

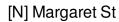
[W] Clinton St Total: 354 In: 0 Out: 354

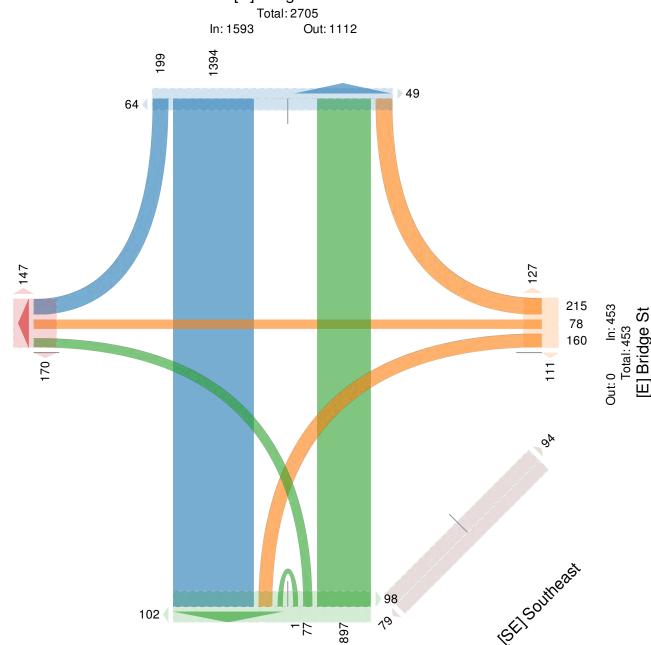
ID: 692664, Location: 44.69786, -73.45287

TRI-ST TE DATA

Coatesville, PA, 19320, US

Provided by: Tri-State Traffic Data, Inc. 184 Baker Road,





Out: 1555 In: 975 Total: 2530 [S] Margaret St

Tue Sep 10, 2019 AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians,

Bicycles on Crosswalk) All Movements

ID: 692664, Location: 44.69786, -73.45287



Leg	Margar	et St				Bridge S	St				Southeast	
Direction	Southb	ound				Westbox	ınd	Northwestbound				
Time	R	T	U	App	Pe d*	R	T	L	App	Pe d*	App	Pe d*
2019-09-10 7:15AM	2	30	0	32	1	6	2	2	10	0	0	0
7:30AM	2	36	0	38	0	4	0	6	10	4	0	0
7:45AM	5	53	0	58	1	17	4	3	24	1	0	4
8:00AM	2	32	0	34	2	5	1	5	11	7	0	0
Total	11	151	0	162	4	32	7	16	55	12	0	4
% Approach	6.8%	93.2%	0%	-	-	58.2%	12.7%	29.1%	-	-	-	-
% Total	3.7%	50.5%	0%	54.2%	-	10.7%	2.3%	5.4%	18.4 %	-	0%	-
PHF	0.550	0.712	-	0.698	-	0.471	0.438	0.667	0.573	-	-	-
Lights	11	148	0	159	-	32	7	16	55	-	0	-
% Lights	100%	98.0%	0%	98.1%	-	100%	100%	100%	100%	-	-	-
Articulated Trucks and Single-Unit Trucks	0	2	0	2	-	0	0	0	0	-	0	-
% Articulated Trucks and Single-Unit Trucks	0%	1.3%	0%	1.2 %	-	0%	0%	0%	0%	-	-	-
Buses	0	1	0	1	-	0	0	0	0	-	0	-
% Buses	0%	0.7%	0%	0.6%	-	0%	0%	0%	0%	-	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	12	-	4
% Pedestrians	-	-	-	-	75.0%	-	-	-	-	100%	-	100%
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	0
% Bicycles on Crosswalk	-	-	-	-	25.0%	-	-	-	-	0%	-	0%

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019 AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287



	Margaret St Northbound					Clinton S Eastboun		
Time	T	L	U	App	Ped*	Арр	Pe d*	Int
2019-09-10 7:15AM	8	1	0	9	2	0	0	51
7:30AM	13	1	0	14	1	0	4	62
7:45AM	34	0	0	34	3	0	3	116
8:00AM	24	1	0	25	2	0	1	70
Total	79	3	0	82	8	0	8	299
% Approach	96.3%	3.7%	0%	-	-	-	-	-
% Total	26.4%	1.0%	0%	27.4 %	-	0%	-	-
PHF	0.581	0.750	-	0.603	-	-	-	0.644
Lights	77	3	0	80	-	0	-	294
% Lights	97.5%	100%	0%	97.6%	-	-	-	98.3%
Articulated Trucks and Single-Unit Trucks	1	0	0	1	-	0	-	3
% Articulated Trucks and Single-Unit Trucks	1.3%	0%	0%	1.2%	-	-	-	1.0%
Buses	1	0	0	1	-	0	-	2
% Buses	1.3%	0%	0%	1.2 %	-	-	-	0.7%
Pedestrians	-	-	-	-	8	-	6	
% Pedestrians	-	-	-	-	100%	-	75.0%	-
Bicycles on Crosswalk	-	-	-	-	0	-	2	
% Bicycles on Crosswalk	-	-	-	-	0%	-	25.0%	-

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019

AM Peak (7:15 AM - 8:15 AM)

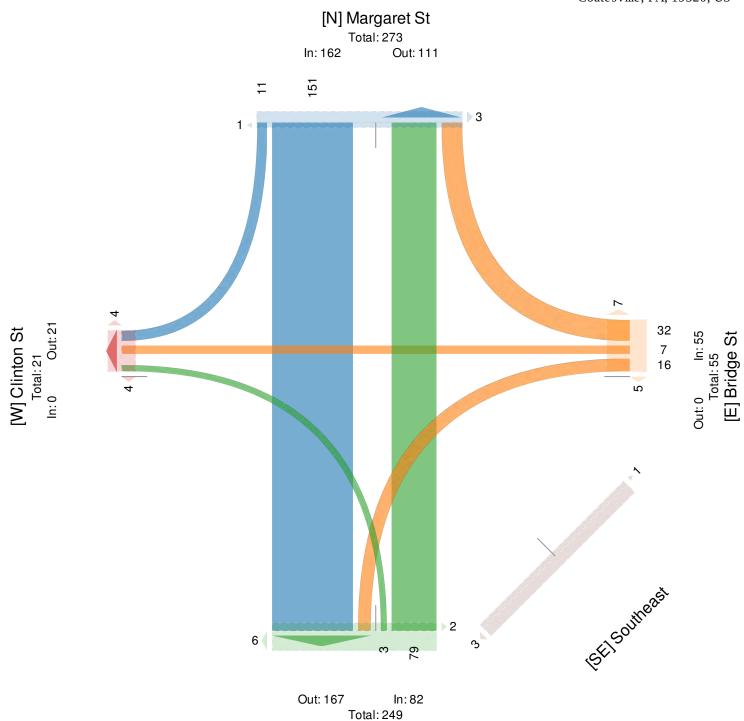
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287



Provided by: Tri-State Traffic Data, Inc. 184 Baker Road, Coatesville, PA, 19320, US



[S] Margaret St

Tue Sep 10, 2019
Midday Peak (12 PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 692664, Location: 44.69786, -73.45287



_ ~	Margare					Bridge S					Southeast	
Dire ction	Southbo	ound				Westbou	ınd				North we st	bound
Time	R	T	U	App	Pe d*	R	T	L	App	Pe d*	App	Pe d*
2019-09-10 12:00PM	6	45	0	51	9	2	4	4	10	7	0	13
12:15PM	8	56	0	64	7	6	3	12	21	9	0	7
12:30PM	5	53	0	58	5	7	2	5	14	4	0	9
12:45PM	6	56	0	62	3	9	1	13	23	11	0	7
Total	25	210	0	235	24	24	10	34	68	31	0	36
% Approach	10.6%	89.4%	0%	-	-	35.3%	14.7%	50.0%	-	-	-	-
% Total	5.6%	46.8%	0%	52.3%	-	5.3%	2.2%	7.6%	15.1%	-	0%	-
PHF	0.781	0.938	-	0.918	-	0.667	0.625	0.654	0.739	-	-	-
Lights	25	209	0	234	-	23	10	33	66	-	0	-
% Lights	100%	99.5%	0%	99.6%	-	95.8%	100%	97.1%	97.1%	-	-	-
Articulated Trucks and Single-Unit Trucks	0	1	0	1	-	1	0	1	2	-	0	-
% Articulated Trucks and Single-Unit Trucks	0%	0.5%	0%	0.4 %	-	4.2%	0%	2.9%	2.9%	-	-	-
Buses	0	0	0	0	-	0	0	0	0	-	0	-
% Buses	0%	0%	0%	0 %	-	0%	0%	0%	0 %	-	-	-
Pedestrians	-	-	-	-	23	-	-	-	-	31	-	36
% Pedestrians	-	-	-	-	95.8%	-	-	-	-	100%	-	100%
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	0
% Bicycles on Crosswalk	-	-	-	-	4.2%	-	-	-	-	0%	-	0%

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019
Midday Peak (12 PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 692664, Location: 44.69786, -73.45287



	Margaret St Northbound					Clinton St Eastbound		
Time	T	L	U	App	Pe d*	Арр	Pe d*	Int
2019-09-10 12:00PM	24	2	1	27	11	0	15	88
12:15PM	24	5	0	29	14	0	16	114
12:30PM	30	3	0	33	7	0	29	105
12:45PM	55	2	0	57	7	0	14	14 2
Total	133	12	1	146	39	0	74	449
% Approach	91.1%	8.2%	0.7%	-	-	-	-	-
% Total	29.6%	2.7%	0.2%	32.5%	-	0%	-	-
PHF	0.605	0.600	0.250	0.640	-	-	-	0.790
Lights	131	11	1	143	-	0	-	443
% Lights	98.5%	91.7%	100%	97.9%	-	-	-	98.7%
Articulated Trucks and Single-Unit Trucks	2	1	0	3	-	0	-	6
% Articulated Trucks and Single-Unit Trucks	1.5%	8.3%	0%	2.1%	-	-	-	1.3%
Buses	0	0	0	0	-	0	-	0
% Buses	0%	0%	0%	0 %	-	-	-	0%
Pedestrians	-	-	-	-	39	-	72	
% Pedestrians	-	-	-	-	100%	-	97.3%	-
Bicycles on Crosswalk		-	-	-	0	-	2	
% Bicycles on Crosswalk	-	-	-	-	0%	-	2.7%	-

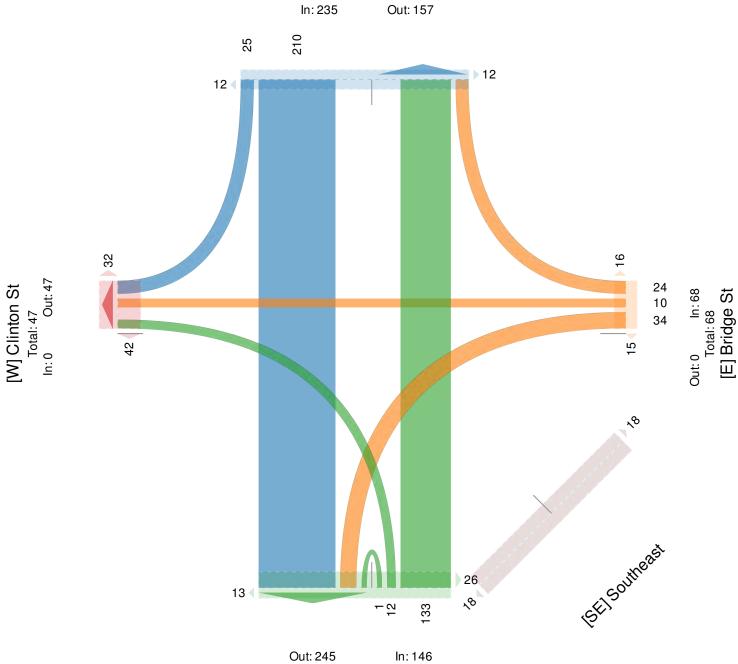
^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019
Midday Peak (12 PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 692664, Location: 44.69786, -73.45287



Provided by: Tri-State Traffic Data, Inc. 184 Baker Road, Coatesville, PA, 19320, US





Out: 245 In: 146 Total: 391 [S] Margaret St

Tue Sep 10, 2019 PM Peak (3 PM - 4 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287



Leg	Margare					Bridge S					Southeast	
Direction	Southbo					Westbou					North we st	
Time	R	T	U	App	Pe d*	R	T	L	App	Pe d*	App	Pe d*
2019-09-10 3:00PM	17	54	0	71	7	9	2	7	18	15	0	8
3:15PM	4	41	0	45	0	4	3	4	11	9	0	8
3:30PM	9	45	0	54	4	6	1	8	15	10	0	10
3:45PM	15	41	0	56	0	11	4	5	20	3	0	3
Total	45	181	0	226	11	30	10	24	64	37	0	29
% Approach	19.9%	80.1%	0%	-	-	46.9%	15.6%	37.5%	-	-	-	-
% Total	10.2%	40.9%	0%	51.0%	-	6.8%	2.3%	5.4%	14.4%	-	0%	-
PHF	0.662	0.838	-	0.796	-	0.682	0.625	0.750	0.800	-	-	-
Lights	42	179	0	221	-	30	10	21	61	-	0	-
% Lights	93.3%	98.9%	0%	97.8%	-	100%	100%	87.5%	95.3%	-	-	-
Articulated Trucks and Single-Unit Trucks	3	1	0	4	-	0	0	3	3	-	0	-
% Articulated Trucks and Single-Unit Trucks	6.7%	0.6%	0%	1.8%	-	0%	0%	12.5%	4.7%	-	-	-
Buses	0	1	0	1	-	0	0	0	0	-	0	-
% Buses	0%	0.6%	0%	0.4 %	-	0%	0%	0%	0 %	-	-	-
Pe de strians	-	-	-	-	10	-	-	-	-	36	-	27
% Pedestrians	-	-	-	-	90.9%	-	-	-	-	97.3%	-	93.1%
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	1	-	2
% Bicycles on Crosswalk	-	-	-	-	9.1%	-	-	-	-	2.7%	-	6.9%

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Tue Sep 10, 2019 PM Peak (3 PM - 4 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians,

Bicycles on Crosswalk) All Movements

ID: 692664, Location: 44.69786, -73.45287



Leg Direction		Margaret St Northbound					Clinton S Eastboun		
Time		Т	L	U	Арр	Pe d*	Арр	Pe d*	Int
2019-0	9-10 3:00PM	33	5	0	38	10	0	19	127
	3:15PM	36	3	0	39	11	0	8	95
	3:30PM	32	3	0	35	12	0	10	104
	3:45PM	35	6	0	41	13	0	11	117
	Total	136	17	0	153	46	0	48	443
	% Approach	88.9%	11.1%	0%	-	-	-	-	-
	% Total	30.7%	3.8%	0%	34.5%	-	0%	-	-
	PHF	0.944	0.708	-	0.933	-	-	-	0.872
	Lights	135	17	0	152	-	0	-	434
	% Lights	99.3%	100%	0%	99.3%	-	-	-	98.0%
Articulated Trucks and Single	-Unit Trucks	1	0	0	1	-	0	-	8
% Articulated Trucks and Single	-Unit Trucks	0.7%	0%	0%	0.7%	-	-	-	1.8%
	Buses	0	0	0	0	-	0	-	1
	% Buses	0%	0%	0%	0%	-	-	-	0.2%
	Pedestrians	-	-	-	-	46	-	46	
%	Pedestrians	-	-	-	-	100%	-	95.8%	-
	on Crosswalk	-	-	-	-	0	-	2	
% Bicycles of	on Crosswalk	-	-	-	-	0%	-	4.2%	-

^{*}Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

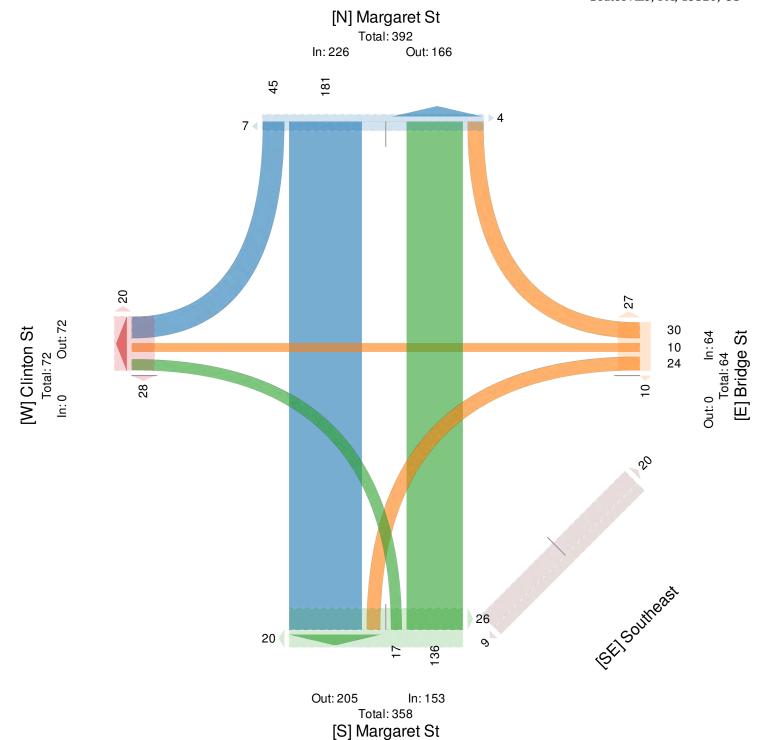
Tue Sep 10, 2019 PM Peak (3 PM - 4 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 692664, Location: 44.69786, -73.45287







Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, -73.453152

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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 1

						Τι	ırning	g Mov	veme	nt Da	ata							
			Brinker	rhoff St					9 - Margare					US 9 - Ma	argaret St			
O T			Easth	oound					Northbound	i				South	bound			
Start Time	Left	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
6:00 AM	1	0	0	0	0	1	1	3	0	2	4	15	1	0	0	0	16	21
6:15 AM	1	0	0	0	0	1	1	4	0	0	5	18	1	0	0	1	19	25
6:30 AM	2	3	0	0	0	5	0	9	0	0	9	22	0	0	0	0	22	36
6:45 AM	7	5	1	0	1	13	1	9	0	1	10	18	2	0	0	1	20	43
Hourly Total	11	8	. 1	0	1	20	3	25	0	3	28	73	4	0	0	2	77	125
7:00 AM	3	6	0	0	0	9	2	4	0	0	6	19	3	0	0	0	22	37
7:15 AM	3	6	0	0	2	9	4	11	0	1	15	29	0	0	0	1	29	53
7:30 AM	0	20	0	0	3	20	1	14	. 0	1	15	36	2	0	0	4	38	73
7:45 AM	4	28	2	0	1	34	3	53	0	0	56	68	2	0	0	1	70	160
Hourly Total	10	60	2	0	6	72	10	82	0	2	92	152	7	0	0	6	159	323
8:00 AM	1	5	1	0	3	7 7	3	12	. 0	2	15	26	0	0	0	2	26	48
8:15 AM	2	2 6	2	0	2	10	0	14	0	0	15 14	34 28	2	1	0	4	36 31	58 55
8:30 AM 8:45 AM	4	5	3	0	3	12	3	26	0	1	29	36	3	0	0	2	39	80
Hourly Total	11	18	7	0	9	36	7	65	1	3	73	124	7	1	0	9	132	241
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	6	15	2	0	2	23	3	20	1	3	24	42	9	4	0	5	55	102
11:45 AM	8	17	6	0	1	31	2	34	0	3	36	42	8	5	0	10	55	122
Hourly Total	14	32	8	0	3	54	5	54	1	6	60	84	17	9	0	15	110	224
12:00 PM	5	19	2	0	4	26	2	16	0	3	18	53	4	1	0	15	58	102
12:15 PM	7	7	6	0	4	20	4	23	0	2	27	36	6	0	0	20	42	89
12:30 PM	9	6	6	0	8	21	1	24	0	2	25	42	11	0	0	17	53	99
12:45 PM	8	11	6	0	4	25	4	20	1	0	25	59	6	0	0	13	65	115
Hourly Total	29	43	20	0	20	92	11	83	1	7	95	190	27	1	0	65	218	405
1:00 PM	10	6	3	0	2	19	2	30	. 0	0	32	44	. 8	0	0	11	52	103
1:15 PM	10	6	3	0	19	19	5	23	0	4	28	42	8	2	0	17	52	99
1:30 PM	10	9	5	1	4	25	0	14	0	0	14	36	7	0	0	20	43	82
1:45 PM	7	7	5	0	2	19	2	24	. 0	2	26	43	4	1		8	48	93
Hourly Total	37	28	16	1	27	82	9	91	0	6	100	165	27	3	0	56	195	377
2:00 PM	8	11	2	0	8	21	2	29	0	2	31	42		0		18	49	101
2:15 PM	5	6	2	0	6	13	2	36		1	38	42	5	0	0	16	47	98
2:30 PM *** BREAK ***	-	- 0	0	0	0	0	-	0	0	0	0	1 -	0	0	0	0	1	1 -
Hourly Total	13	17	4	0	14	34	4	65	0	3	69	85	12	0	0	34	97	200
3:00 PM	5	14	2	0	10	21	3	32	0	1	35	49	2	3	0	14	54	110
3:15 PM	6	10	4	0	9	20	2	21	0	1	23	37	7	0	0	11	44	87
3:30 PM	5	11	4	0	6	20	3	41	0	1	44	60	7	0	0	9	67	131
3:45 PM	7	17	3	0	8	27	0	30	0	0	30	51	11	1	1	10	64	121
Hourly Total	23	52	13	0	33	88	8	124	0	3	132	197	27	4	1	44	229	449
4:00 PM	6	6	1	0	13	13	2	36	0	4	38	63	8	0	0	11	71	122
4:15 PM	4	13	1	0	12	18	3	22	0	0	25	46	12	0	0	16	58	101
4:30 PM	9	16	1	0	19	26	4	32	0	0	36	49	4	0	0	10	53	115
4:45 PM	3	9	4	0	5	16	4	18	0	1	22	36	10	0	0	7	46	84
Hourly Total	22	44	7	0	49	73	13	108	0	5	121	194	34	0	0	44	228	422
5:00 PM	7	6	7	1	6	21	4	31	0	0	35	50	9	2	0	11	61	117
5:15 PM	3	5	4	0	7	12	4	28	0	0	32	47	11	0	0	11	58	102
5:30 PM	2	5	2	0	7	9	2	33	0	3	35	39	7	0	0	4	46	90
5:45 PM	3	10	1	0	6	14	3	22	1	0	26	40	3	2	0	9	45	85
Hourly Total	15	26	14	1	26	56	13	114	1	3	128	176	30	4	0	35	210	394
6:00 PM	2	5	1	0	8	8	1	31	0	0	32	30	11	0	0	5	41	81
6:15 PM	4	3	1	0	15	8	0	23	0	0	23	36	5	0	0	12	41	72
6:30 PM	2	11	3	0	6	16	3	20	0	0	23	37	3	2	0	17	42	81
6:45 PM	4	4	0	0	11	8	4	25	0	0	29	30	1	0	0	17	31	68
Hourly Total 7:00 PM	12 3	23 3	5 2	0	40 8	40 8	8	99 22	0	3	107 22	133 35	20 7	0	0	51 22	155 42	302 72
7:00 PM 7:15 PM	3	6	4	0	6	13	0	29	0	3	29	27	3	0	0	11	30	72
7:15 PM 7:30 PM	3	6	3	0	8	12	3	18	0	2	29	19	5	0	0	9	24	57
1.50 FIVI					U							13				J	24	

7:45 PM	6	6	1	0	6	13	1	17	0	0	18	19	3	0	0	12	22	53
Hourly Total	15	21	10	0	28	46	4	86	0	8	90	100	18	0	0	54	118	254
8:00 PM	5	4	1	0	5	10	1	18	0	0	19	13	3	0	0	0	16	45
8:15 PM	2	4	2	0	4	8	2	10	0	0	12	12	4	2	0	5	18	38
8:30 PM	4	1	1	0	4	6	0	14	0	3	14	13	3	3	0	2	19	39
8:45 PM	2	0	0	0	12	2	0	9	0	0	9	15	1	1	0	3	17	28
Hourly Total	13	9	4	0	25	26	3	51	0	3	54	53	11	6	0	10	70	150
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	225	381	111	2	281	719	98	1047	4	52	1149	1726	241	30	1	425	1998	3866
Approach %	31.3	53.0	15.4	0.3	-	-	8.5	91.1	0.3	-	-	86.4	12.1	1.5	0.1	-	-	-
Total %	5.8	9.9	2.9	0.1	-	18.6	2.5	27.1	0.1	-	29.7	44.6	6.2	0.8	0.0	-	51.7	-
Lights	217	376	107	2	-	702	91	1036	4	-	1131	1688	235	28	1	-	1952	3785
% Lights	96.4	98.7	96.4	100.0	-	97.6	92.9	98.9	100.0	-	98.4	97.8	97.5	93.3	100.0	-	97.7	97.9
Buses	0	2	0	0	-	2	1	2	0	-	3	8	1	0	0	-	9	14
% Buses	0.0	0.5	0.0	0.0	-	0.3	1.0	0.2	0.0	-	0.3	0.5	0.4	0.0	0.0	_	0.5	0.4
Trucks	1	2	1	0	-	4	4	6	0	-	10	18	0	0	0	-	18	32
% Trucks	0.4	0.5	0.9	0.0	-	0.6	4.1	0.6	0.0	-	0.9	1.0	0.0	0.0	0.0	-	0.9	0.8
Bicycles on Road	7	1	3	0	-	11	2	3	0	-	5	12	5	2	0	-	19	35
% Bicycles on Road	3.1	0.3	2.7	0.0	-	1.5	2.0	0.3	0.0	-	0.4	0.7	2.1	6.7	0.0	-	1.0	0.9
Bicycles on Crosswalk	-	-	-	-	24	-	-	-	-	1	-	-	-	-	-	13	-	-
% Bicycles on Crosswalk	-	-	-	-	8.5	-	-	-	-	1.9	-	-	-	-	-	3.1	-	-
Pedestrians	-	-	-	-	257	-	-	-	-	51	-	-	-	-	-	412	-	-
% Pedestrians	-	-	-	-	91.5	-	-	-	-	98.1	-	-	-	-	-	96.9	-	-

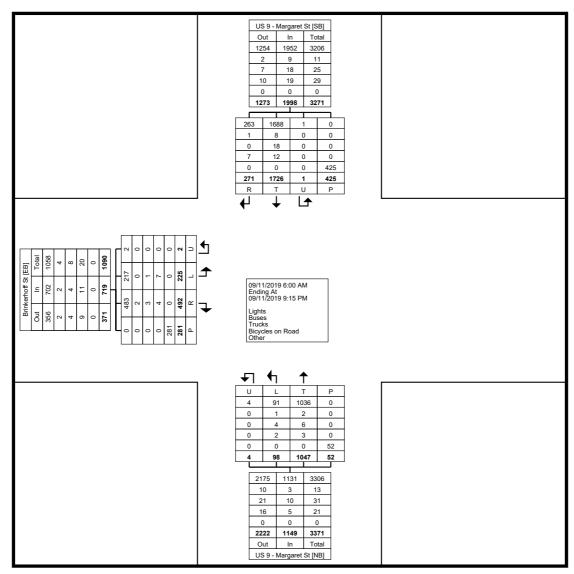


Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, -73.453152

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Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 3



Turning Movement Data Plot



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, - 73.453152

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Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

				ı aı	9	14104	7111011		aix i iO	u. D	4 LG (1		,					
			Brinke	rhoff St				US :	9 - Margare	et St				US 9 - Ma	argaret St			
			East	oound				1	Northbound	i				South	bound			
Start Time	Left	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:30 AM	0	20	0	0	3	20	1	14	0	1	15	36	2	0	0	4	38	73
7:45 AM	4	28	2	0	1	34	3	53	0	0	56	68	2	0	0	1	70	160
8:00 AM	1	5	1	0	3	7	3	12	0	2	15	26	0	0	0	2	26	48
8:15 AM	4	2	1	0	1	7	0	14	1	0	15	34	2	0	0	1	36	58
Total	9	55	4	0	8	68	7	93	1	3	101	164	6	0	0	8	170	339
Approach %	13.2	80.9	5.9	0.0	-	-	6.9	92.1	1.0	-	-	96.5	3.5	0.0	0.0	-	-	-
Total %	2.7	16.2	1.2	0.0	-	20.1	2.1	27.4	0.3	-	29.8	48.4	1.8	0.0	0.0	-	50.1	-
PHF	0.563	0.491	0.500	0.000	-	0.500	0.583	0.439	0.250	-	0.451	0.603	0.750	0.000	0.000	-	0.607	0.530
Lights	9	55	4	0	-	68	6	91	1	-	98	160	6	0	0	-	166	332
% Lights	100.0	100.0	100.0	-	-	100.0	85.7	97.8	100.0	-	97.0	97.6	100.0	-	-	-	97.6	97.9
Buses	0	0	0	0	-	0	0	2	0	-	2	3	0	0	0	-	3	5
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	2.2	0.0	-	2.0	1.8	0.0	-	-	-	1.8	1.5
Trucks	0	0	0	0	-	0	1	0	0	-	1	1	0	0	0	-	1	2
% Trucks	0.0	0.0	0.0	-	-	0.0	14.3	0.0	0.0	-	1.0	0.6	0.0	-	-	-	0.6	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	37.5	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	3	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	62.5	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, -73.453152

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 5

	US 9 - Margaret St [SB] Out In Total 100 166 266 2 3 5 0 1 1 1 0 0 0 0 0 0 0 0 102 170 272
Brinkerhoff St [EB] Out In Total 12 68 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	09/11/2019 7:30 AM Ending At 09/11/2019 8:30 AM Lights Buses Trucks Bicycles on Road Other U L T P 1 6 91 0
	0 0 2 0 0 1 0 0 0 0 0 0 0 0 0 3 1 7 93 3 1 7 93 3 220 98 318 3 2 5 1 1 2 0

Turning Movement Peak Hour Data Plot (7:30 AM)



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, - 73.453152

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 6

Turning Movement Peak Hour Data (12:30 PM)

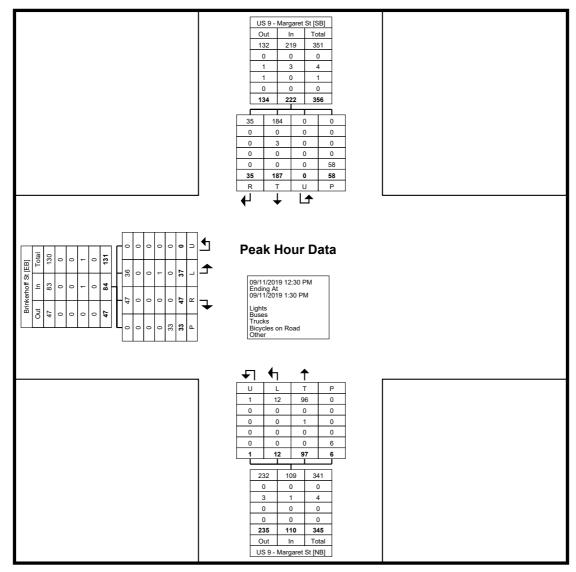
				IGII	9 .	VIO V O				11 Du	ια (ι.		v. <i>,</i>					
			Brinke	rhoff St				US	9 - Margare	et St				US 9 - Ma	argaret St			
			Eastl	bound					Northbound	i				South	bound			
Start Time	Left	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
12:30 PM	9	6	6	0	8	21	1	24	0	2	25	42	11	0	0	17	53	99
12:45 PM	8	11	6	0	4	25	4	20	1	0	25	59	6	0	0	13	65	115
1:00 PM	10	6	3	0	2	19	2	30	0	0	32	44	8	0	0	11	52	103
1:15 PM	10	6	3	0	19	19	5	23	0	4	28	42	8	2	0	17	52	99
Total	37	29	18	0	33	84	12	97	1	6	110	187	33	2	0	58	222	416
Approach %	44.0	34.5	21.4	0.0	-	-	10.9	88.2	0.9	-	-	84.2	14.9	0.9	0.0	-	-	-
Total %	8.9	7.0	4.3	0.0	-	20.2	2.9	23.3	0.2	-	26.4	45.0	7.9	0.5	0.0	-	53.4	-
PHF	0.925	0.659	0.750	0.000	-	0.840	0.600	0.808	0.250	-	0.859	0.792	0.750	0.250	0.000	-	0.854	0.904
Lights	36	29	18	0	-	83	12	96	1	-	109	184	33	2	0	-	219	411
% Lights	97.3	100.0	100.0	-	-	98.8	100.0	99.0	100.0	-	99.1	98.4	100.0	100.0	-	-	98.6	98.8
Buses	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	0	0	0	0	-	0	0	1	0	-	1	3	0	0	0	-	3	4
% Trucks	0.0	0.0	0.0	-	-	0.0	0.0	1.0	0.0	-	0.9	1.6	0.0	0.0	-	-	1.4	1.0
Bicycles on Road	1	0	0	0	-	1	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	2.7	0.0	0.0	-	-	1.2	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	3.0	-	-	-	-	0.0	-	-	-	-	-	5.2	_	-
Pedestrians	-	-	-	-	32	-	-	-	-	6	-	-	-	-	-	55	-	-
% Pedestrians	-	-	-	-	97.0	-	-	-	-	100.0	-	-	-	-	-	94.8	-	-



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, -73.453152

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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 7



Turning Movement Peak Hour Data Plot (12:30 PM)



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, - 73.453152

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 8

Turning Movement Peak Hour Data (3:30 PM)

	I		Prinko	rhoff St	9		j	110	9 - Margar		,,,,	i	,	HEO M	argaret St			I
									-						Ü			
Start Time				bound				- 1	Northbound	1					bound			
Start Time	Left	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
3:30 PM	5	11	4	0	6	20	3	41	0	1	44	60	7	0	0	9	67	131
3:45 PM	7	17	3	0	8	27	0	30	0	0	30	51	11	1	1	10	64	121
4:00 PM	6	6	1	0	13	13	2	36	0	4	38	63	8	0	0	11	71	122
4:15 PM	4	13	1	0	12	18	3	22	0	0	25	46	12	0	0	16	58	101
Total	22	47	9	0	39	78	8	129	0	5	137	220	38	1	1	46	260	475
Approach %	28.2	60.3	11.5	0.0	-	-	5.8	94.2	0.0	-	-	84.6	14.6	0.4	0.4	-	-	-
Total %	4.6	9.9	1.9	0.0	-	16.4	1.7	27.2	0.0	-	28.8	46.3	8.0	0.2	0.2	-	54.7	-
PHF	0.786	0.691	0.563	0.000	-	0.722	0.667	0.787	0.000	-	0.778	0.873	0.792	0.250	0.250	-	0.915	0.906
Lights	22	46	9	0	-	77	8	129	0	-	137	212	37	1	1	-	251	465
% Lights	100.0	97.9	100.0	-	-	98.7	100.0	100.0	-	-	100.0	96.4	97.4	100.0	100.0	-	96.5	97.9
Buses	0	0	0	0	-	0	0	0	0	-	0	3	0	0	0	-	3	3
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	1.4	0.0	0.0	0.0	-	1.2	0.6
Trucks	0	0	0	0	-	0	0	0	0	-	0	3	0	0	0	-	3	3
% Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	1.4	0.0	0.0	0.0	-	1.2	0.6
Bicycles on Road	0	1	0	0	-	1	0	0	0	-	0	2	1	0	0	-	3	4
% Bicycles on Road	0.0	2.1	0.0	-	-	1.3	0.0	0.0	-	-	0.0	0.9	2.6	0.0	0.0	-	1.2	0.8
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	_	-	-	10.3	_	-	-		0.0	-	-	-	-		4.3	-	-
Pedestrians	-	-	-	-	35	-	-	-		5	-	-	-	-		44	-	-
% Pedestrians	-	-	-	-	89.7	-	-	-	-	100.0	-	-	-	-	-	95.7	-	-



Plattsburgh, NY Margaret St & Brinkerhoff St Wednesday, September 11, 2019 Location: 44.696976, -73.453152

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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Brinkerhoff St Site Code: Plattsburgh, New York Start Date: 09/11/2019 Page No: 9

US 9 - Margaret St [SB] Total Out In 152 403 0 212 0 2 0 0 46 0 0 0 220 46 U **Peak Hour Data** 09/11/2019 3:30 PM Ending At 09/11/2019 4:30 PM Lights Buses Trucks Bicycles on Road Other 8 129 0 0 0 0 0 0 0 129 267 137 404 3 0 3 3 0 0 0 137 413 Total US 9 - Margaret St [NB]

Turning Movement Peak Hour Data Plot (3:30 PM)



Plattsburgh, NY Margaret St & Bridge St Wednesday, September 11, 2019 Location: 44.695271, -73.453755

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 1

	Broad St Broad St Westbound														me	nt [ı							I
																		Pine S orthbou							irgaret uthbou				
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Int. Tota I
6:00 AM	3	6	0	0	0	0	9	1	9	1	0	0	1	11	0	1	0	0	1	2	2	1	2	5	1	0	0	9	31
6:15 AM	5	9	3	2	0	3	19	3	13		1	0	0	18	0	0	1	0	0	1		1	6	6	0	0	0	13	51
6:30 AM	5	6 21	1 0	1 2	0	0	28	1	22 35	2	0	0	2	25 38	2	2	1 0	2	0	5 2	<u>5</u> 6	5 3		9 12	<u>0</u> 1	0	0	21	93
6:45 AM Hourly Total	16	42	4	 5	0	3	67	6	79	4	3	0	3	92	4	5	2	2	1	10	14	10	20	32	2	0	0	64	237
7:00 AM	1	22	1	0	0	0	24	0	37	4	1	0	0	42	5	2	1	0	0	7	8	4	4	5	0	0	2	13	87
7:15 AM	2	23	3	0	0	1	28	1	26	1	1	0	1	29	1	3	0	2	0	0	6	8	4	18	3	0	0	33	96
7:30 AM	9	41	7	2	0	2	59	0	63	2	0	0	0	65	11	1	4	2	0	11	18	10	8	16	0	0	1	34	176
7:45 AM	29	80	11	1	0	2	121	0	82	4	1	0	1	87	5	5	10	2	0	18	22	27	17	26	4	0	3	74	304
8:00 AM	17	166 59	<u>22</u> 5	0	0	5 1	232 81	2	208 58	11 3	3	0	0	223 66	22 4	<u>11</u> 5	15 0	<u>6</u> 0	0	36 5	<u>54</u> 	49 20	33 4	65 13	7	0	6	154 37	193
8:15 AM	5	28		0	0	_	35	2	42	3	2	0	1	49	3	0	3	1	0	4	_ 7	9	3	14	0	0	2	26	117
8:30 AM	5	38	2	0	0	2	45	2	48	8	3	0	1	61	2	3	2	1	0	1	8	13	2	10	1	0	0	26	140
8:45 AM	11	40	0	0	0	0	51	5	53	10	0	0	1	68	3	5	4	1	0	2	13	15	5	12	0	0	4	32	164
Hourly Total	38	165	9	0	0	4	212	11	201	24	8	0	3	244	12	13	9	3	0	12	37	57	14	49	1	0	7	121	614
*** BREAK *** 11:30 AM	- 16	- 49	3	 1	- 0	- 0	- 69	2	- 63	- 8	2	- 0	- 0	- 75	- 6	<u>-</u>	3	2	- 0	- 0	- 15	- 13	<u>-</u> 4	- 18	2	- 0	3	37	196
11:45 AM	18	45	1	_ <u>_</u>	0	0	65	1	61	8	0	0	1	70	1	3	0	1	0	7		22	8	27	1	0	4	58	198
Hourly Total	34	94	4	2	0	0	134	3	124	16	2	0	1	145	7	7	3	3	0	7	20	35	12	45	3	0	7	95	394
12:00 PM	15	39	3	0	0	2	57	1	73	10	0	0	0	84	1	10	4	0	0	4	15	19	7	22	1	0	5	49	205
12:15 PM	16	43	1	1	0	2	61	2	68	12	0	0	0	82	4	3	1	2	0	1	10	19	13	19	0	0	5	51	204
12:30 PM	13	55	0	1	0	1	69	3	56	15	2	0	2	76	5	6	6	0	0	15	17	24	9	26	3	0	4	62	224
12:45 PM	19	61	1	1	0	2	82	6	65	14	6	0	2	91	3	9	3	1	0	11	16	16	10	21	1	0	5	48	237
1:00 PM	63 15	198 46	5 4	<u>3</u> 0	0		269 65	12 7	262 72	51 7	8 2	0	0	333 88	13	28 4	14 3	3	0	31 8	<u>58</u> 12	78 18	39 7	88 18	<u>5</u> 1	0	19 5	210 44	209
1:15 PM	12	53	2	0	0	2	67	5	51	5	0	0	0	61	6	6	3	2	0	9	17	18	6	21	0	0	3	45	190
1:30 PM	8	47	2	0	0	1	57	4	71	10	2	0	1	87	3	9	2	5	0	3	19	12	8	16	2	0	0	38	201
1:45 PM	15	40	5	1	0	0	61	5	68	9	1	0	0	83	2	8	2	1	0	2	13	18	12	24	0	0	1	54	211
Hourly Total	50	186	13	1	0	4	250	21	262	31	5	0	1	319	13	27	10	11	0	22	61	66	33	79	3	0	9	181	811
2:00 PM	14	64	3	0	0	0	81	4	79	11	1	0	1	95	7	0			0	2	10	22	6	21		0	3	50	236
2:15 PM 2:30 PM	17 0	51 0	3 0	0	0	0	71 0	0	<u>56</u> 1	11 0	0	0	0	70 1	6	<u>4</u> 0	0	0	0	0	13 0	20 0	7	18 0	0	0	11	47 0	201
*** BREAK ***	-				-	-	-	-	-				-	<u>'</u>	-					-		-	-					-	<u> </u>
Hourly Total	31	115	6	0	0	0	152	5	136	22	3	0	2	166	13	4	4	2	0	4	23	42	13	39	3	0	14	97	438
3:00 PM	15	65	13	3	0	3	96	2	77	6	1	0	0	86	10	9	4	2	0	10	25	26	12	16	2	0	2	56	263
3:15 PM	17	49	6	0	0	5	72	8	79	10	1	0	1	98	8	11	4	2	0	5	25	17	6	17	1	0	7	41	236
3:30 PM	23	45	5	0	0	3	73	2	68	10	0	0	2	80	7	7	6	1	0	3	21	15	11	15	2	0	4	43	217
3:45 PM	16 71	63 222	28	3	0	7 18	83	5 17	82 306	34	4	0	3	97 361	6	10 37	6	8	0	5 23	25 96	18	8	18 66	7	0	19	46 186	251 967
4:00 PM	10	48	3	4	0	3	324 65	5	92	5	0	0	3	102	31 6	6	20 3	0	0	26	15	76 20		20		0	3	52	234
4:15 PM	14	41	3	1	0	0	59	11	74	10	0	0	3	95	5	10	5	5	0	12	25	17	5	15	1	0	2	38	217
4:30 PM	13	41	5	1	0	1	60	5	91	9	0	0	0	105	7	9	3	2	0	6	21	25	9	31	4	0	0	69	255
4:45 PM	16	61	11	0	0	1	88	4	79	7	0	0	0	90	0	5	4	1	0	8	10	16	11	19	0	0	4	46	234
Hourly Total	53	191	22	6	0	5	272	25	336	31	0	0	6	392	18	30	15	8	0	52	71	78	35	85	7	0	9	205	940
5:00 PM	4	53	8 2		0	2	66	15	61	6	0	0	1	82	13	15 3	7	2	0	5 9	37	15	15	17		0	0	48	233
5:15 PM 5:30 PM	9 5	61 43	8	0	0	3 1	72 56	5 8	<u>54</u> 49	10 6	0	0	0	70 63	5 13	12	0	3	0	6	15 28	15 14	11 14	15 18	1 2	0	5	42 48	199 195
5:45 PM	7	39	5	0	0	6	51	3	57	12	1	0	0	73	13	5	2	2	0	5	22	19	12	21	3	0	3	55	201
Hourly Total	25	196	23	1	0	12	245	31	221	34	2	0	3	288	44	35	13	10	0	25	102	63	52	71	7	0	10	193	828
6:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	422	1575	136	24	0	58	2157	132	2136	258	38	0	28	2564	177	197	105	56	1	222	536	554	288	619	45	0	100	1506	6763
Approach %	19.6	73.0	6.3	1.1	0.0	-		5.1	83.3	10.1	1.5	0.0			33.0	36.8	19.6	10.4	0.2	-		36.8	19.1	41.1	3.0	0.0	-		L-
Total %	6.2	23.3	2.0	0.4	0.0	-	31.9	2.0	31.6	3.8	0.6	0.0	-	37.9	2.6	2.9	1.6	0.8	0.0	-	7.9	8.2	4.3	9.2	0.7	0.0		22.3	_
Lights	412	1549	133	21	0	-	2115	129	2053	256	37	0	-	2475	165	193	103	55	1	-	517	544	280	610	44	0	-	1478	6585
% Lights		98.3	97.8		-		98.1	97.7	96.1	99.2	97.4	-	-	96.5	93.2	98.0	98.1	98.2	100.0	-	96.5	98.2		98.5	97.8	-	-	98.1	97.4
Buses % Buses	0.7	6 0.4	1.5	4.2	0		0.6	0.8	2.7	0.0	0.0	-	-	2.3	8 4.5	1.0	0.0	0.0	0.0	-	1.9	0.4	<u>5</u> 	0.2	0.0	0	-	0.5	1.3
/v Duscs	J U. /	∪.¬	1.0	7.4			0.0	0.0	1	0.0	0.0			2.0	7.0	1.0	0.0	0.0	0.0		1.0	U.7	1.7	٠.۷	0.0			0.0	1.5

Trucks	7	20	1	2	0	-	30	2	25	2	1	0	-	30	4	2	2	1	0	-	9	8	3	8	1	0	-	20	89
% Trucks	1.7	1.3	0.7	8.3	-	-	1.4	1.5	1.2	0.8	2.6	-	-	1.2	2.3	1.0	1.9	1.8	0.0	-	1.7	1.4	1.0	1.3	2.2	-	-	1.3	1.3
Bicycles on Crosswalk	i	-	-	-	-	8	-	-	-	-	-	-	0	1	i	-	-	-	-	14	-	-	-	-	-	-	9	-	-
% Bicycles on Crosswalk	1	-	-	-	-	13.8	-	-	-	-	-	-	0.0	,	1	-	-	-	-	6.3	-	-	-	-	-	-	9.0	-	-
Pedestrian s	-	-	-	-	-	50	-	-	-	-	-	-	28	-	-	-	-	-	-	208	-	-	-	-	-	-	91	-	-
% Pedestrian s	-	-	-	-	-	86.2	-	-	-	-	-	-	100.0		-	-	-	-	-	93.7	-	-	-	-	-	-	91.0	-	-

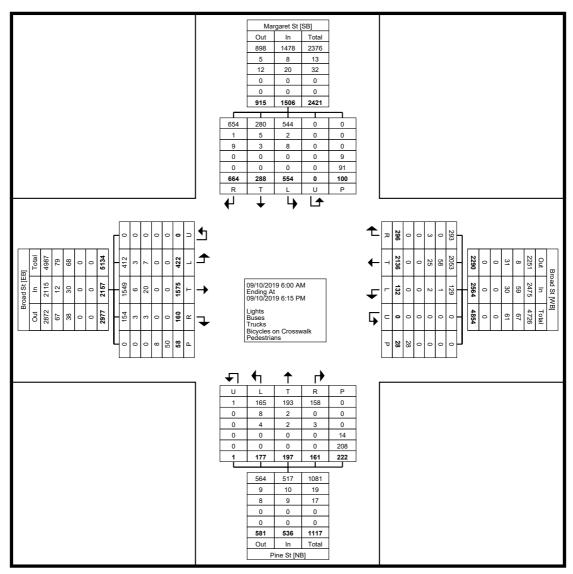


Plattsburgh, NY Margaret St & Bridge St Wednesday, September 11, 2019 Location: 44.695271, -73.453755

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 3



Turning Movement Data Plot



Plattsburgh, NY Margaret St & Bridge St Wednesday, September 11, 2019 Location: 44.695271, -73.453755 www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 4

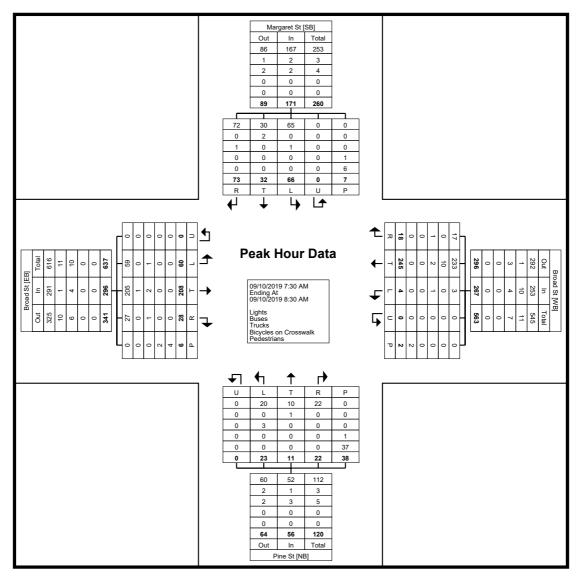
Turning Movement Peak Hour Data (7:30 AM)

	ranning wovernerit reak i													1 1															
	Broad St										road S	St					- 1	Pine S	t					Ma	argaret	St			
	Eastbound								Westbound								No	rthbou	ınd			Southbound							
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Int. Tota I
7:30 AM	9	41	7	2	0	2	59	0	63	2	0	0	0	65	11	1	4	2	0	11	18	10	8	16	0	0	1	34	176
7:45 AM	29	80	11	1	0	2	121	0	82	4	1	0	1	87	5	5	10	2	0	18	22	27	17	26	4	0	3	74	304
8:00 AM	17	59	5	0	0	1	81	2	58	3	3	0	0	66	4	5	0	0	0	5	9	20	4	13	0	0	1	37	193
8:15 AM	5	28	2	0	0	1	35	2	42	3	2	0	1	49	3	0	3	1	0	4	7	9	3	14	0	0	2	26	117
Total	60	208	25	3	0	6	296	4	245	12	6	0	2	267	23	11	17	5	0	38	56	66	32	69	4	0	7	171	790
Approach %	20.3	70.3	8.4	1.0	0.0	-	-	1.5	91.8	4.5	2.2	0.0	-	-	41.1	19.6	30.4	8.9	0.0	-	-	38.6	18.7	40.4	2.3	0.0	-	-	-
Total %	7.6	26.3	3.2	0.4	0.0	-	37.5	0.5	31.0	1.5	0.8	0.0	-	33.8	2.9	1.4	2.2	0.6	0.0	-	7.1	8.4	4.1	8.7	0.5	0.0	-	21.6	<u> </u>
PHF	0.51 7	0.650	0.568	0.375	0.000	-	0.612	0.500	0.747	0.750	0.500	0.000	-	0.767	0.523	0.550	0.425	0.625	0.000	-	0.636	0.611	0.471	0.663	0.250	0.000	-	0.578	0.650
Lights	59	205	25	2	0	-	291	3	233	11	6	0	-	253	20	10	17	5	0	-	52	65	30	68	4	0	-	167	763
% Lights	98.3	98.6	100.0	66.7	-	-	98.3	75.0	95.1	91.7	100.0	-	-	94.8	87.0	90.9	100.0	100.0	-	-	92.9	98.5	93.8	98.6	100.0	-	-	97.7	96.6
Buses	0	1	0	0	0	-	1	0	10	0	0	0	-	10	0	1	0	0	0	-	1	0	2	0	0	0	-	2	14
% Buses	0.0	0.5	0.0	0.0	-	-	0.3	0.0	4.1	0.0	0.0	-	-	3.7	0.0	9.1	0.0	0.0	-	-	1.8	0.0	6.3	0.0	0.0	-	-	1.2	1.8
Trucks	1	2	0	1	0	-	4	1	2	1	0	0	-	4	3	0	0	0	0	-	3	1	0	1	0	0	-	2	13
% Trucks	1.7	1.0	0.0	33.3	-	-	1.4	25.0	0.8	8.3	0.0	-	-	1.5	13.0	0.0	0.0	0.0	-	-	5.4	1.5	0.0	1.4	0.0	-	-	1.2	1.6
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	33.3	-	-	-	-	-	-	0.0	-	ı	-	-	-	-	2.6	-	1	-	-	-	-	14.3	-	-
Pedestrian s	-		-	-	-	4	-	-	-	-	-	-	2	_	-	-	-	-	-	37	-	-	-	-	-	-	6		-
% Pedestrian s	-	-	-	-	-	66.7	-	-	-	-	-	-	100.0	-	-	-	-	-	-	97.4	-	-	-	-	-	-	85.7		-



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Turning Movement Peak Hour Data Plot (7:30 AM)



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 6

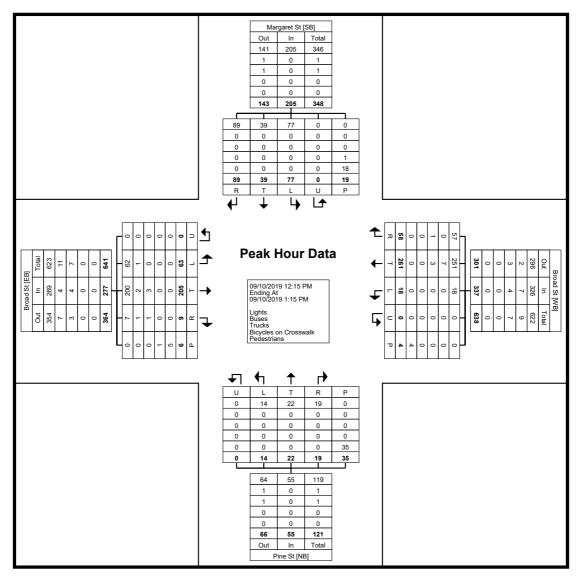
Turning Movement Peak Hour Data (12:15 PM)

	1								e.			٠			•	ч. <u>-</u>		•		• .	,								1
			Е	Broad S	St					Е	Broad S	St					ı	Pine S	t					Ma	argare	St			
			E	astbou	nd					W	estbou	nd					No	rthbou	ınd					So	uthbou	und			
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Int. Tota I
12:15 PM	16	43	1	1	0	2	61	2	68	12	0	0	0	82	4	3	1	2	0	1	10	19	13	19	0	0	5	51	204
12:30 PM	13	55	0	. 1	0	1	69	3	56	15	2	0	2	76	5	6	6	0	0	15	17	24	9	26	3	0	4	62	224
12:45 PM	19	61	1	1	0	2	82	6	65	14	6	0	2	91	3	9	3	1	0	11	16	16	10	21	1	0	5	48	237
1:00 PM	15	46	4	0	0	1	65	7	72	7	2	0	0	88	2	4	3	3	0	8	12	18	7	18	1	0	5	44	209
Total	63	205	6	3	0	6	277	18	261	48	10	0	4	337	14	22	13	6	0	35	55	77	39	84	5	0	19	205	874
Approach %	22.7	74.0	2.2	1.1	0.0	-	-	5.3	77.4	14.2	3.0	0.0	-	-	25.5	40.0	23.6	10.9	0.0	-	-	37.6	19.0	41.0	2.4	0.0	-	-	-
Total %	7.2	23.5	0.7	0.3	0.0	-	31.7	2.1	29.9	5.5	1.1	0.0	-	38.6	1.6	2.5	1.5	0.7	0.0	-	6.3	8.8	4.5	9.6	0.6	0.0	-	23.5	
PHF	0.82 9	0.840	0.375	0.750	0.000	-	0.845	0.643	0.906	0.800	0.417	0.000	-	0.926	0.700	0.611	0.542	0.500	0.000	-	0.809	0.802	0.750	0.808	0.417	0.000	-	0.827	0.922
Lights	62	200	6	1	0	-	269	18	251	48	9	0	-	326	14	22	13	6	0	-	55	77	39	84	5	0	-	205	855
% Lights	98.4	97.6	100.0	33.3	-	-	97.1	100.0	96.2	100.0	90.0	-	-	96.7	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	-	100.0	97.8
Buses	1	2	0	1	0	-	4	0	7	0	0	0	-	7	0	0	0	0	0	-	0	0	0	0	0	0	-	0	11
% Buses	1.6	1.0	0.0	33.3	-	-	1.4	0.0	2.7	0.0	0.0	-	-	2.1	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	1.3
Trucks	0	3	0	1	0	-	4	0	3	0	1	0	-	4	0	0	0	0	0	-	0	0	0	0	0	0	-	0	8
% Trucks	0.0	1.5	0.0	33.3	-	-	1.4	0.0	1.1	0.0	10.0	-	-	1.2	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.9
Bicycles on Crosswalk	-	-	-	-	-	1	-	- 1	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	16.7	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	5.3	-	-
Pedestrian s	-	-	-	-	-	5	-	-	-	-	-	-	4	-	-	-	-	-	-	35	-	-	-	-	-	-	18	_	-
% Pedestrian s	-	-	-	-	-	83.3	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	94.7	-	-



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 7



Turning Movement Peak Hour Data Plot (12:15 PM)



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Margaret St & Broad St Site Code: Start Date: 09/10/2019 Page No: 8

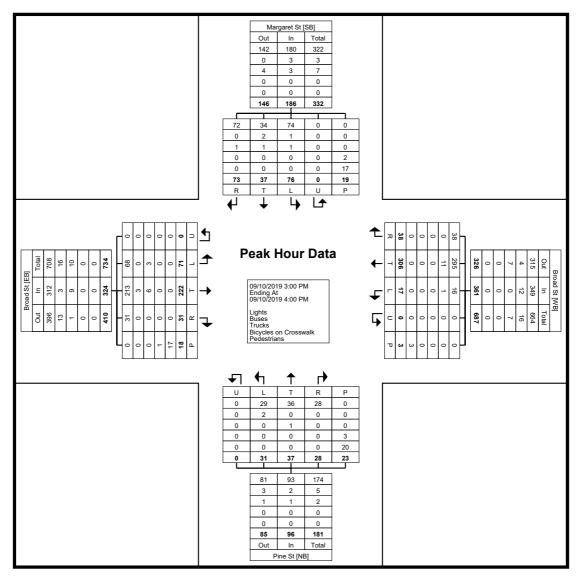
Turning Movement Peak Hour Data (3:00 PM)

			Е	Broad S	St					Е	road S	St					ı	Pine S	t		,			Ma	argaret	St			
			Ea	astbou	nd					W	estbou	nd					No	rthbou	ınd					So	uthbou	und			
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Tota I	Int. Tota I
3:00 PM	15	65	13	3	0	3	96	2	77	6	1	0	0	86	10	9	4	2	0	10	25	26	12	16	2	0	2	56	263
3:15 PM	17	49	6	0	0	5	72	8	79	10	1	0	1	98	8	11	4	2	0	5	25	17	6	17	1	0	7	41	236
3:30 PM	23	45	5	0	0	3	73	2	68	10	0	0	2	80	7	7	6	1	0	3	21	15	11	15	2	0	4	43	217
3:45 PM	16	63	4	0	0	7	83	5	82	8	2	0	0	97	6	10	6	3	0	5	25	18	8	18	2	0	6	46	251
Total	71	222	28	3	0	18	324	17	306	34	4	0	3	361	31	37	20	8	0	23	96	76	37	66	7	0	19	186	967
Approach %	21.9	68.5	8.6	0.9	0.0	-	-	4.7	84.8	9.4	1.1	0.0	-		32.3	38.5	20.8	8.3	0.0	-	-	40.9	19.9	35.5	3.8	0.0	-	-	-
Total %	7.3	23.0	2.9	0.3	0.0	-	33.5	1.8	31.6	3.5	0.4	0.0	-	37.3	3.2	3.8	2.1	0.8	0.0	-	9.9	7.9	3.8	6.8	0.7	0.0	-	19.2	
PHF	0.77 2	0.854	0.538	0.250	0.000	-	0.844	0.531	0.933	0.850	0.500	0.000	-	0.921	0.775	0.841	0.833	0.667	0.000	-	0.960	0.731	0.771	0.917	0.875	0.000	-	0.830	0.919
Lights	68	213	28	3	0	-	312	16	295	34	4	0	-	349	29	36	20	8	0	-	93	74	34	65	7	0	-	180	934
% Lights	95.8	95.9	100.0	100.0	-	-	96.3	94.1	96.4	100.0	100.0	-	-	96.7	93.5	97.3	100.0	100.0	-	-	96.9	97.4	91.9	98.5	100.0	-	-	96.8	96.6
Buses	0	3	0	0	0	_	3	1	11	0	0	0	-	12	2	0	0	0	0	-	2	1	2	0	0	0	-	3	20
% Buses	0.0	1.4	0.0	0.0		-	0.9	5.9	3.6	0.0	0.0	-	-	3.3	6.5	0.0	0.0	0.0	-	-	2.1	1.3	5.4	0.0	0.0		-	1.6	2.1
Trucks	3	6	0	0	0	-	9	0	0	0	0	0	-	0	0	1	0	0	0	-	1	1	1	1	0	0	-	3	13
% Trucks	4.2	2.7	0.0	0.0		-	2.8	0.0	0.0	0.0	0.0	-	-	0.0	0.0	2.7	0.0	0.0		-	1.0	1.3	2.7	1.5	0.0		-	1.6	1.3
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	5.6	-	-	-	-	-	-	0.0	-	-	-	-	-	-	13.0	-	-	-	-	-	-	10.5	-	-
Pedestrian s	-	-	-	-	-	17	-	-	-	-	-	-	3	-	-	-	-	-	-	20	-	-	-	-	-	-	17	-	-
% Pedestrian s	-	-	-	-	-	94.4	-	-	-	-	-	-	100.0	-	-	-	-	-	-	87.0	-	-	-	-	-	-	89.5	-	-



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Turning Movement Peak Hour Data Plot (3:00 PM)



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 1

Turning Movement Data

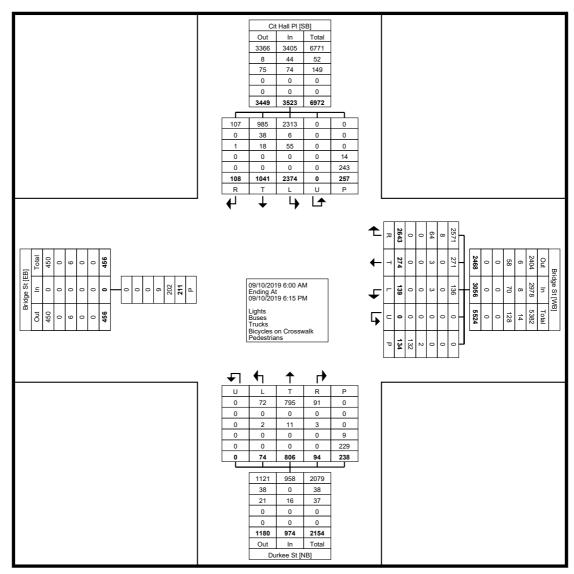
							I	urnır	ng Iv	love	men	t Dat	a								
	Bridg	ge St			Brid	ge St					Durk	kee St					Cit	Hall PI			
	Eastb	ound			West	bound					North	bound					Sout	hbound			
Start Time	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	0	0	2	14	0	1	16 16	0	5	1	0	0	6	16	7	0	0	0	23	45
6:15 AM	0	0	1	4	22	0	0	27	0	4	0	0	1	4	27	11	0	0	0	38	69
6:30 AM	0	0	1	<u>·</u> 1	30	0	1	32	0	.	0	0	0	<u>·</u> 1	59	11	0	0	1	70	103
6:45 AM	1	0	1	2	43	0	1	46	1	6	1	0	2	8	69	17	2	0	0	88	142
Hourly Total	1	0	3	9	109	0	3	121	1	16	2	0	3	19	171	46	2	0	1	219	359
7:00 AM	1	0	1	4	37	0	2	42	1	5	0	0	1	6	42	10	0	0	0	52	100
7:15 AM	2	0	1	-	54	0	5	60	2	14	1	0	2	17	81	19	1	0	2	101	178
7:30 AM	4	0	2		72	0	3	82	0	13	' _	0	1	14	88	45	<u>'</u>	0	1	138	234
7:45 AM	1	0	3	18	85	0	3	106	2	22		0	2	26	109	43	1	0	3	153	285
Hourly Total	8	0	7	35	248	0	13	290	5	54	4	0	6	63	320	117	7	0	6	444	797
8:00 AM	6	0	1		70	0	3		3	17	2	0	6	22	70	38	0	0	2	108	208
8:15 AM	4	0	3	4	65		0	72	1	6	1	0	4	8	71	38	3	0	5	112	192
	2		3						i												
8:30 AM		0		8 9	50 69	0	3 1	61 79	3	17 13	3	0	<u>0</u> 4	18	68 69	34 41	2	0	3	102 112	181 210
8:45 AM	1		1				7		7		7			19					1		
Hourly Total	13	0	8	28	254	0		290		53		0	14	67	278	151	5	0	11	434	791
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-		-	-		-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	9	0	3	8		0	3	88	3	32	2	0	2	37	62	23	2	0	13	87	212
11:45 AM	5	0	1	9	80	0	5	90	1	29	3	0	4	33	64	32	2	0	8	98	221
Hourly Total	14	0	4	17	157	0	8	178	4	61	5	0	6	70	126	55	4	0	21	185	433
12:00 PM	6	0	1	6	74	0	2	81	6	28	7	0	9	41	64	24	1	0	10	89	211
12:15 PM	4	0	8	13	80	0	10	101	3	22	3	0	11	28	66	38	- 6	0	14	110	239
12:30 PM	4	0	7	4	73	. 0	3	84	6	28	3	0	2	37	56	37	5	0	16	98	219
12:45 PM	2	0	6	12	73	0	4	91	4	25	1	0	6	30	76	33	5	0	11	114	235
Hourly Total	16	0	22	35	300	0	19	357	19	103	14	0	28	136	262	132	17	0	51	411	904
1:00 PM	10	0	7	6	77	0	3	90	3	16	5	0	6	24	78	32	5	0	17	115	229
1:15 PM	4	0	8	7	72	0	3	87	2	17	3	0	10	22	58	39	3	0	8	100	209
1:30 PM	6	0	6	7	81	0	6	94	1	24	4	0	9	29	60	36	3	0	13	99	222
1:45 PM	2	0	4	9	86	0	1	99	2	25	0	0	7	27	54	37	5	0	12	96	222
Hourly Total	22	0	25	29	316	0	13	370	8	82	12	0	32	102	250	144	16	0	50	410	882
2:00 PM	6	0	8	11	88	0	11	107	1	27	8	0	13	36	67	21	7	0	15	95	238
2:15 PM	6	0	8	8	82	. 0	6	98	1	21	. 7	. 0	10	29	73	32	. 8	. 0	10	113	240
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-				-		-				-		-				-		-
Hourly Total	12	0	16	19	170	. 0	17	205	2	48	15	0	23	65	140	53	15	0	25	208	478
3:00 PM	11	0	4	10	103	0	2	117	1	32	3	0	4	36	78	26	4	0	12	108	261
3:15 PM	11	0	5	4	95	0	9	104	3	31	1	0	11	35	68	35	4	0	10	107	246
3:30 PM	5	0	7	11	108	0	3	126	1	39	1_	0	10	41	65	21	4	0	7	90	257
3:45 PM	11	0	5	13	115	0	6	133	2	35	4	0	9	41	72	31	6	0	7	109	283
Hourly Total	38	0	21	38	421	0	20	480	7	137	9	0	34	153	283	113	18	0	36	414	1047
4:00 PM	9	0	5	10	103	0	9	118	7	. 54	3	0	16	64	69	26	10	. 0	12	105	287
4:15 PM	12	0	5	8	85	0	5	98	4	35	5	0	14	44	77	32	2	0	3	111	253
4:30 PM	7	0	4	12	112	0	7	128	1	41	1	0	12	43	72	21	3	0	2	96	267
4:45 PM	10	0	4	7	91	0	1	102	3	27	3	0	8	33	84	22	1	0	10	107	242
Hourly Total	38	0	18	37	391	0	22	446	15	157	12	0	50	184	302	101	16	0	27	419	1049
5:00 PM	18	0	3	6	77	0	5	86	2	34	9	0	22	45	69	41	1	0	3	111	242
5:15 PM	12	0	3	6	82	0	3	91	3	23	2	0	10	28	76	29	3	0	7	108	227
5:30 PM	8	0	7	9	65	0	0	81	0	23	3	0	8	26	53	28	2	0	8	83	190
5:45 PM	11	0	2	6	53	0	4	61	1	15	0	0	2	16	44	31	2	0	11	77	154
Hourly Total	49	0	15	27	277	0	12	319	6	95	14	0	42	115	242	129	. 8	0	29	379	813
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	211	0	139	274	2643	0	134	3056	74	806	94	0	238	974	2374	1041	108	0	257	3523	7553
Approach %	-	-	4.5	9.0	86.5	0.0	-		7.6	82.8	9.7	0.0	-		67.4	29.5	3.1	0.0	-		-
Total %	-	0.0	1.8	3.6	35.0	0.0	-	40.5	1.0	10.7	1.2	0.0	-	12.9	31.4	13.8	1.4	0.0	-	46.6	
Lights	-	0	136	271	2571	0	-	2978	72	795	91	0	-	958	2313	985	107	0	-	3405	7341
% Lights	-	-	97.8	98.9	97.3		-	97.4	97.3	98.6	96.8		-	98.4	97.4	94.6	99.1	-	-	96.7	97.2
Buses	-	0	0	0	8	0	-	8	0	0	0	0	-	0	6	38	0	0	-	44	52
% Buses	-	-	0.0	0.0	0.3		-	0.3	0.0	0.0	0.0		-	0.0	0.3	3.7	0.0		-	1.2	0.7

Trucks	-	0	3	3	64	0	-	70	2	11	3	0	-	16	55	18	1	0	-	74	160
% Trucks	-	-	2.2	1.1	2.4	-	-	2.3	2.7	1.4	3.2	-	-	1.6	2.3	1.7	0.9	-	-	2.1	2.1
Bicycles on Crosswalk	9	-	-	-	-	-	2	-	-	-	-	-	9	-	-	-	-	-	14	-	-
% Bicycles on Crosswalk	4.3	-	-	-	-	-	1.5	-	-	-	-	-	3.8	-	1	-	-	-	5.4	-	-
Pedestrians	202	-	-	-		-	132	-	-			-	229		-	-		-	243	-	-
% Pedestrians	95.7	-	-	-	-	-	98.5	-	-	-	-	-	96.2	-	-	-	-	-	94.6	-	-



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 3



Turning Movement Data Plot



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 4

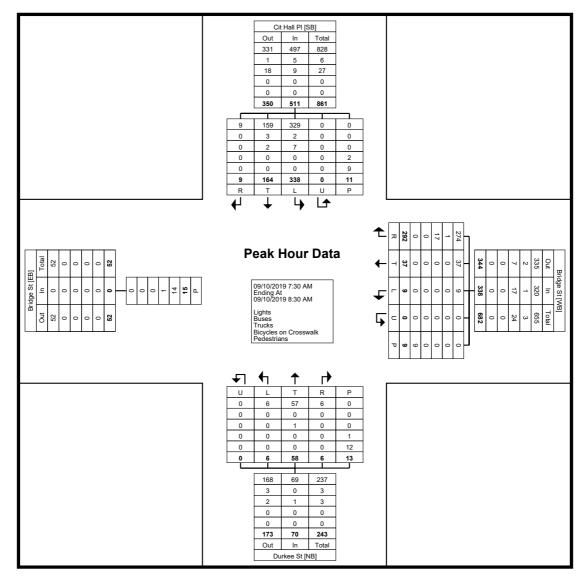
Turning Movement Peak Hour Data (7:30 AM)

						9		00		Juin		. – ч	·~ (.00 /							
	Brid	ge St			Brid	ge St					Durk	ee St	-				Cit F	lall Pl			
	Eastl	bound			West	bound			[North	bound					South	bound			
Start Time	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:30 AM	4	0	2	8	72	0	3	82	0	13	1	0	1	14	88	45	5	0	1	138	234
7:45 AM	1	0	3	18	85	0	3	106	2	22	2	0	2	26	109	43	1	0	3	153	285
8:00 AM	6	0	1	7	70	0	3	78	3	17	2	0	6	22	70	38	0	0	2	108	208
8:15 AM	4	0	3	4	65	0	0	72	1	6	1	0	4	8	71	38	3	0	5	112	192
Total	15	0	9	37	292	0	9	338	6	58	6	0	13	70	338	164	9	0	11	511	919
Approach %	-	_	2.7	10.9	86.4	0.0	-	-	8.6	82.9	8.6	0.0	-		66.1	32.1	1.8	0.0	-	-	
Total %	-	0.0	1.0	4.0	31.8	0.0	-	36.8	0.7	6.3	0.7	0.0	-	7.6	36.8	17.8	1.0	0.0	-	55.6	
PHF	-	0.000	0.750	0.514	0.859	0.000	-	0.797	0.500	0.659	0.750	0.000	-	0.673	0.775	0.911	0.450	0.000	-	0.835	0.806
Lights	-	0	9	37	274	0	-	320	6	57	6	0	-	69	329	159	9	0	-	497	886
% Lights	-	-	100.0	100.0	93.8	-	-	94.7	100.0	98.3	100.0	-	-	98.6	97.3	97.0	100.0	-	-	97.3	96.4
Buses	-	0	0	0	1	0	-	1	0	0	0	0	-	0	2	3	0	0	-	5	6
% Buses	-	-	0.0	0.0	0.3	-	-	0.3	0.0	0.0	0.0	_	-	0.0	0.6	1.8	0.0	-	-	1.0	0.7
Trucks	-	0	0	0	17	0	-	17	0	1	0	0	-	1	7	2	0	0	-	9	27
% Trucks	-	-	0.0	0.0	5.8	-	-	5.0	0.0	1.7	0.0	-	-	1.4	2.1	1.2	0.0	-	-	1.8	2.9
Bicycles on Crosswalk	1	-	-	-	-	-	0	-	-	_	-	-	1	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	6.7	-	-	-	-	-	0.0	-	-	-	-	-	7.7	-	-	-	-	-	18.2	-	-
Pedestrians	14	-	-	-	-	-	9	-	-	-	-	-	12	-	-	-	-	-	9	-	-
% Pedestrians	93.3	-	-	-	-	_	100.0	-	-	-	-	-	92.3	-	-	-	-	-	81.8	-	-



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 5



Turning Movement Peak Hour Data Plot (7:30 AM)



www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 6

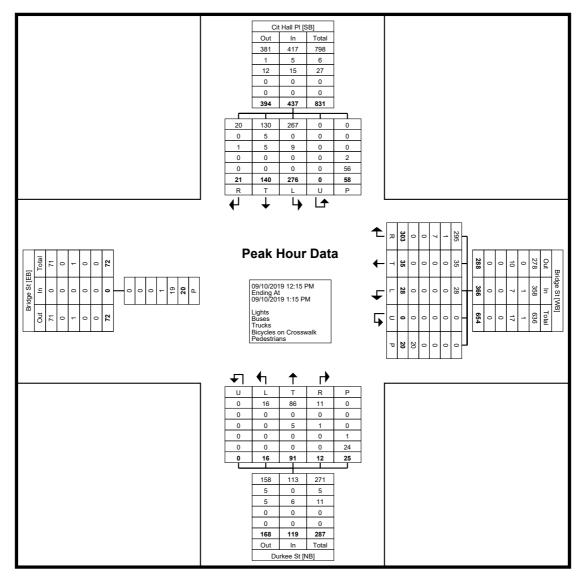
Turning Movement Peak Hour Data (12:15 PM)

								01110		Jan			∽ (· ·		,						
	Brid	ge St			Brid	ge St			[Durk	ee St					Cit F	lall Pl			
	Eastl	oound			West	bound			1		North	bound					South	bound			
Start Time	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
12:15 PM	4	0	8	13	80	0	10	101	3	22	3	0	11	28	66	38	6	0	14	110	239
12:30 PM	4	0	7	4	73	0	3	84	6	28	3	0	2	37	56	37	5	0	16	98	219
12:45 PM	2	0	6	12	73	0	4	91	4	25	1	0	6	30	76	33	5	0	11	114	235
1:00 PM	10	0	7	6	77	0	3	90	3	16	5	0	6	24	78	32	5	0	17	115	229
Total	20	0	28	35	303	0	20	366	16	91	12	0	25	119	276	140	21	0	58	437	922
Approach %	-	-	7.7	9.6	82.8	0.0	-	-	13.4	76.5	10.1	0.0	-	-	63.2	32.0	4.8	0.0	-	-	-
Total %	-	0.0	3.0	3.8	32.9	0.0	-	39.7	1.7	9.9	1.3	0.0	-	12.9	29.9	15.2	2.3	0.0	-	47.4	-
PHF	-	0.000	0.875	0.673	0.947	0.000	-	0.906	0.667	0.813	0.600	0.000	-	0.804	0.885	0.921	0.875	0.000	-	0.950	0.964
Lights	-	0	28	35	295	0	-	358	16	86	11	0	-	113	267	130	20	0	-	417	888
% Lights	-	-	100.0	100.0	97.4	-	-	97.8	100.0	94.5	91.7	-	-	95.0	96.7	92.9	95.2	-	-	95.4	96.3
Buses	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	5	0	0	-	5	6
% Buses	-	-	0.0	0.0	0.3	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.0	3.6	0.0	-	-	1.1	0.7
Trucks	-	0	0	0	7	0	-	7	0	5	1	0	-	6	9	5	1	0	-	15	28
% Trucks	-	-	0.0	0.0	2.3	-	-	1.9	0.0	5.5	8.3	-	-	5.0	3.3	3.6	4.8	-	-	3.4	3.0
Bicycles on Crosswalk	1	-	-	_	-	-	0	-	-	-	-	-	1	-	-	-	-	_	2	-	-
% Bicycles on Crosswalk	5.0	-	-	-	-	-	0.0	-	-	-	-	-	4.0	-	-	-	-	-	3.4	-	-
Pedestrians	19	-	-	-	-	-	20	-	-	-	-	-	24	-	-	-	-	-	56	-	-
% Pedestrians	95.0	-	-	-	-	_	100.0	-	-	-	-	-	96.0	-	-	-	-	-	96.6	-	-



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 7



Turning Movement Peak Hour Data Plot (12:15 PM)



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 8

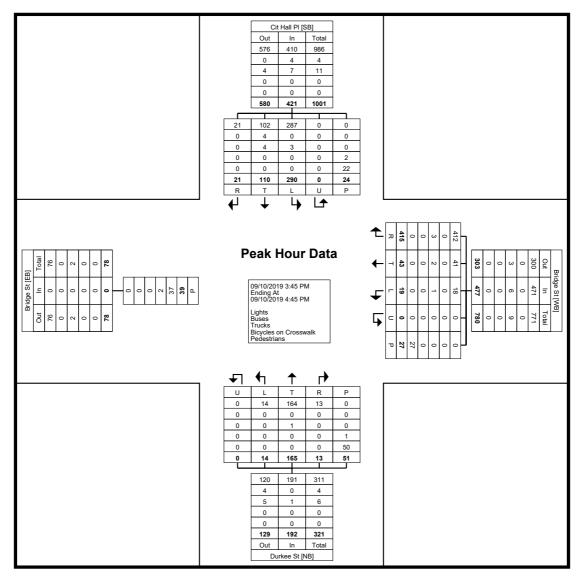
Turning Movement Peak Hour Data (3:45 PM)

						9		00		Juin		. – ч									
	Brid	ge St			Brid	ge St			[Durk	ee St					Cit F	lall Pl			
	Eastl	bound			West	bound			1		North	bound					South	bound			
Start Time	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
3:45 PM	11	0	5	13	115	0	6	133	2	35	4	0	9	41	72	31	6	0	7	109	283
4:00 PM	9	0	5	10	103	0	9	118	7	54	3	0	16	64	69	26	10	0	12	105	287
4:15 PM	12	0	5	8	85	0	5	98	4	35	5	0	14	44	77	32	2	0	3	111	253
4:30 PM	7	0	4	12	112	0	7	128	1	41	1	0	12	43	72	21	3	0	2	96	267
Total	39	0	19	43	415	0	27	477	14	165	13	0	51	192	290	110	21	0	24	421	1090
Approach %	-	-	4.0	9.0	87.0	0.0	-	-	7.3	85.9	6.8	0.0	-	-	68.9	26.1	5.0	0.0	-	-	-
Total %	-	0.0	1.7	3.9	38.1	0.0	-	43.8	1.3	15.1	1.2	0.0	-	17.6	26.6	10.1	1.9	0.0	-	38.6	-
PHF	-	0.000	0.950	0.827	0.902	0.000	-	0.897	0.500	0.764	0.650	0.000	-	0.750	0.942	0.859	0.525	0.000	-	0.948	0.949
Lights	-	0	18	41	412	0	-	471	14	164	13	0	-	191	287	102	21	0	-	410	1072
% Lights	-	-	94.7	95.3	99.3	-	-	98.7	100.0	99.4	100.0	-	-	99.5	99.0	92.7	100.0	-	-	97.4	98.3
Buses	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	4	0	0	-	4	4
% Buses	-	-	0.0	0.0	0.0	-	_	0.0	0.0	0.0	0.0		-	0.0	0.0	3.6	0.0		-	1.0	0.4
Trucks	-	0	1	2	3	0	-	6	0	1	0	0	-	1	3	4	0	0	-	7	14
% Trucks	-	-	5.3	4.7	0.7	-	-	1.3	0.0	0.6	0.0	-	-	0.5	1.0	3.6	0.0	-	-	1.7	1.3
Bicycles on Crosswalk	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	5.1	-	-	-	-	-	0.0	-	-	-	-	-	2.0	-	-	-	-	-	8.3	-	-
Pedestrians	37	-	-	-	-	-	27	-	-	-	-	-	50	-	-	-	-	-	22	-	-
% Pedestrians	94.9	-	-	-	-	-	100.0	-	-	-	-	-	98.0	-	-	-	-	-	91.7	-	-



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Durkee St & Bridge St Site Code: Start Date: 09/10/2019 Page No: 9



Turning Movement Peak Hour Data Plot (3:45 PM)



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Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Durkee St & Broad St Site Code: Start Date: 09/10/2019 Page No: 1

Turning Movement Data

							i		ΙU	rnın	g M	ove	mer	nt D	ata										
			Broa	ad St					Broa	ad St					Durk	ee St					Durke	ee St			I
			Easth	ound					West	oound					North	bound					South	oound			l
Start Time	Left	Thru	Right	_U-	Peds	App.	Left	Thru	Right	_U-	Peds	App.	Left	Thru	Right	_U-	Peds	App.	Left	Thru	Right	_U-	Peds	App.	_Int.
				Turn		Total				Turn		Total				Turn		Total				Turn		Total	Total
6:00 AM	3	5	0	0	0	8	0	11	2	0	0	13	0	0	0	0	0	0	4	0	1	0	0	5	26
6:15 AM	4	9	0	0	. 0	13	1	13	1_	0	. 0	15	0	0	0	0	1	0	2	0		0	0	9	37
6:30 AM	1	9	1	0	0	11	2	23	1	0	0	26	0	0	0	0	4	0	7	0	4	0	0	11	48
6:45 AM	8	20	3	0	1	31	1	27	9	0	0	37	0	0	1	0	3	1	6	0	11	0	0	17	86
Hourly Total	16	43	4	0	1	63	4	74	13	0	0	91	0	0	1	0	8	1	19	0	23	0	0	42	197
7:00 AM	11	12	0	0	0	23	0	29	3	0	0	32	1	0	0	0	3	1	3	0	9	0	2	12	68
7:15 AM	14	22	3	0	0	39	0	27	8	0	0	35	0	0	1	0	3	1	11	0	5	0	0	16	91
7:30 AM	14	46	2	0	4	62	2	57	10	0	1	69	0	0	0	0	10	0	5	2	21	0	1	28	159
7:45 AM	30	88	6	0	3	124	1	66	21	0	1	88	0	1	0	0	10	1	13	0	13	0	0	26	239
Hourly Total	69	168	11	0	7	248	3	179	42	0	2	224	1	1	1	0	26	3	32	2	48	0	3	82	557
8:00 AM	19	47	0	0	0	66	1	63	28	0	3	92	0	1	0	0	4	1	14	0	12	0	0	26	185
8:15 AM	10	30	1	0	0	41	0	36	10	0	0	46	0	1	0	0	0	1	16	0	10	0	0	26	114
8:30 AM	20	38	1	0	1	59	2	45	12	0	0	59	1	0	0	0	1	1	14	0	14	0	0	28	147
8:45 AM	21	44	3	0	0	68	1	53	15	0	0	69	4	0	0	0	3	4	13	2	15	0	2	30	171
Hourly Total	70	159	5	0	1	234	4	197	65	0	3	266	5	2	0	0	8	7	57	2	51	0	2	110	617
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9.00 AW *** BREAK ***			- 0				-		- 0								-						U		
	-	-			-	-		-		-	-	-	-			-		-	-	-		-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	24	43	0	0	0	67	1	50	11	0	0	62	1	1	2	0	2	4	9	1	14	0	5	24	157
11:45 AM	24	41	2	0	0	67	0	48	9	0	0	57	1	1_	0	0	1	2	21	0	32	0	2	53	179
Hourly Total	48	84	2	0	0	134	1	98	20	0	0	119	2	2	2	0	3	6	30	1	46	0	7	77	336
12:00 PM	20	43	0	0	1	63	0	54	15	0	0	69	0	1	1	0	3	2	11	2	21	0	3	34	168
12:15 PM	25	47	1	0	0	73	1	56	11	0	1	68	1	1	1	0	3	3	19	2	27	0	1	48	192
12:30 PM	25	53	2	0	0	80	2	58	16	0	3	76	0	1	2	0	4	3	19	3	26	0	3	48	207
12:45 PM	28	50	5	0	2	83	0	59	12	0	2	71	2	1	5	0	2	8	13	0	26	0	1	39	201
Hourly Total	98	193	8	0	3	299	3	227	54	0	6	284	3	4	9	0	12	16	62	7	100	0	8	169	768
1:00 PM	14	51	1	0	0	66	1	45	10	0	1	56	5	1	0	0	5	6	12	1	30	0	0	43	171
1:15 PM	20	50	2	0	1	72	1	44	10	0	1	55	0	2	0	0	1	2	19	0	25	0	1	44	173
1:30 PM	16	44	0	0	1	60	0	59	10	0	0	69	0	0	0	0	2	0	15	0	27	0	0	42	171
1:45 PM	25	45	0	0	1	70	0	66	8	0	0	74	2	1	2	0	5	5	15	1	26	0	4	42	191
Hourly Total	75	190	3	0	3	268	2	214	38	0	2	254	7	4	2	0	13	13	61	2	108	0	5	171	706
2:00 PM	27	62	2	0	2	91	0	59	5	0	0	64	1	1	2	0	3	4	18	0	24	0	1	42	201
2:15 PM	15	57	1	0	0	73	1	60	10	0	2	71	0	1	0	0	3	1	22	0	18	0	1	40	185
	0	0	0	0		0	0		0	0		0	0	0		0			0	0			-	0	
2:30 PM *** BREAK ***	-				0	-	-	0			0	-	-		0		0	0	-	-	0	0	0	-	0
						-																			
Hourly Total	42	119	3	0	2	164	1	119	15	0	_ 2	135	1	2	2	0	6	5	40	0	42	0	2	82	386
3:00 PM	32	61	0	0	0	93	0	72	11	0	2	83	0	0	1	0	7	1	13	0	18	0	3	31	208
3:15 PM	30	43	0	0	0	73	0	64	10	0	2	74	1	0	0	0	5	1	20	0	19	0	3	39	187
3:30 PM	23	43	1	0	0	67	0	63	10	0	. 0	73	1	0	0	0	2	1	16	0	24	0	3	40	181
3:45 PM	23	62	3	0	0	88	2	69	13	0	1	84	1	1_	1_	0	5	3	15	0	24	0	2	39	214
Hourly Total	108	209	4	0	0	321	2	268	44	0	5	314	3	1	2	0	19	6	64	0	85	0	11	149	790
4:00 PM	21	48	1	0	1	70	0	68	10	0	1	78	2	1	3	. 0	17	6	25	1	31	0	0	57	211
4:15 PM	23	53	1	0	1	77	0	58	6	0	2	64	3	1	2	0	4	6	24	2	28	0	0	54	201
4:30 PM	14	49	3	0	0	66	1	75	13	0	2	89	2	0	1	0	4	3	23	0	21	0	2	44	202
4:45 PM	16	71	0	0	0	87	0	63	12	0	2	75	3	4	2	0	2	9	14	0	26	0	3	40	211
Hourly Total	74	221	5	0	2	300	1	264	41	0	7	306	10	6	8	0	27	24	86	3	106	0	5	195	825
5:00 PM	21	54	0	0	1	75	0	51	11	0	0	62	3	2	2	0	4	7	33	0	29	0	2	62	206
5:15 PM	17	63	0	0	0	80	0	54	6	0	0	60	1	0	0	0	5	1	25	3	17	0	0	45	186
5:30 PM	17	48	1	0	0	66	2	44	7	0	0	53	2	2	2	0	2	6	14	4	20	0	1	38	163
5:45 PM	14	39	7	0	6	60	4	51	3	0	1	58	0	0	0	0	0	0	12	5	21	0	1	38	156
Hourly Total	69	204	8	0	7	281	6	200	27	0	1	233	6	4	4	0	11	14	84	12	87	0	4	183	711
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						-										-									
Grand Total	669	1590	53	0	26	2312	27	1840	359	0	28	2226	38	26	31	0	133	95	535	29	696	0	47	1260	5893
Approach %	28.9	68.8	2.3	0.0		-	1.2	82.7	16.1	0.0	-	-	40.0	27.4	32.6	0.0		-	42.5	2.3	55.2	0.0		-	-
Total %	11.4	27.0	0.9	0.0	-	39.2	0.5	31.2	6.1	0.0	-	37.8	0.6	0.4	0.5	0.0	-	1.6	9.1	0.5	11.8	0.0	-	21.4	-
Lights	661	1567	51	0	-	2279	27	1802	357	0	-	2186	37	24	30	0	-	91	522	28	649	0	-	1199	5755
% Lights	98.8	98.6	96.2			98.6	100.0	97.9	99.4	-		98.2	97.4	92.3	96.8		-	95.8	97.6	96.6	93.2	-		95.2	97.7
Buses	0	6	0	0	-	6	0	23	0	0	-	23	0	0	0	0	-	0	4	0	35	0	-	39	68
% Buses	0.0	0.4	0.0	-	-	0.3	0.0	1.3	0.0	-	-	1.0	0.0	0.0	0.0	-	-	0.0	0.7	0.0	5.0	-	-	3.1	1.2

Trucks	8	17	2	0	-	27	0	15	2	0	-	17	1	2	1	0	-	4	9	1	12	0	-	22	70
% Trucks	1.2	1.1	3.8	-	-	1.2	0.0	0.8	0.6	-	-	0.8	2.6	7.7	3.2	-	-	4.2	1.7	3.4	1.7	-	-	1.7	1.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	3.6	-	-	-	-	-	6.8	-	-	-	-	-	4.3	-	-
Pedestrians	-	-	-	-	26	-	-	-	-	-	27	-	-	-	-	-	124	-	-	-	-	-	45	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	96.4	-	-	-	-	-	93.2	-	-	-	-	-	95.7	-	-

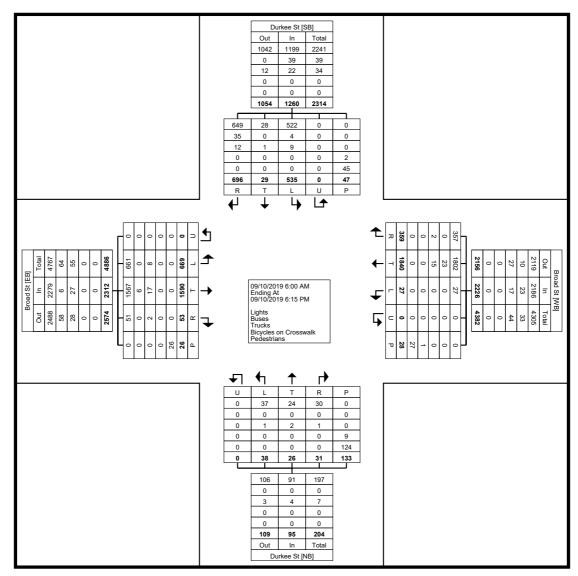


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Count Name: Durkee St & Broad St

Site Code: Start Date: 09/10/2019 Page No: 3



Turning Movement Data Plot



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Count Name: Durkee St & Broad St Site Code: Start Date: 09/10/2019 Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

			Broa	d St				•	Broa	ad St					Durk	ee St		,			Durk	ee St			1
			Eastb	ound					West	bound					North	bound					South	bound			
Start Time	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Int. Total
7:30 AM	14	46	2	0	4	62	2	57	10	0	1	69	0	0	0	0	10	0	5	2	21	0	1	28	159
7:45 AM	30	88	6	0	3	124	1	66	21	0	. 1	88	0	1	0	0	10	1	13	0	13	0	0	26	239
8:00 AM	19	47	0	0	0	66	1	63	28	0	3	92	0	1	0	0	4	1	14	0	12	0	0	26	185
8:15 AM	10	30	1	0	0	41	0	36	10	0	0	46	0	1	0	0	0	1	16	0	10	0	0	26	114
Total	73	211	9	0	7	293	4	222	69	0	5	295	0	3	0	0	24	3	48	2	56	0	1	106	697
Approach %	24.9	72.0	3.1	0.0	-	-	1.4	75.3	23.4	0.0	-	-	0.0	100.0	0.0	0.0	-	-	45.3	1.9	52.8	0.0	-	-	-
Total %	10.5	30.3	1.3	0.0	-	42.0	0.6	31.9	9.9	0.0	-	42.3	0.0	0.4	0.0	0.0	-	0.4	6.9	0.3	8.0	0.0	-	15.2	-
PHF	0.608	0.599	0.375	0.000	-	0.591	0.500	0.841	0.616	0.000	-	0.802	0.000	0.750	0.000	0.000	-	0.750	0.750	0.250	0.667	0.000	-	0.946	0.729
Lights	72	208	9	0	-	289	4	214	69	0	-	287	0	3	0	0	-	3	48	2	49	0	-	99	678
% Lights	98.6	98.6	100.0	-	-	98.6	100.0	96.4	100.0	-	-	97.3	-	100.0	-	-	-	100.0	100.0	100.0	87.5	-	-	93.4	97.3
Buses	0	1	0	0	-	1	0	6	0	0	-	6	0	0	0	0	-	0	0	0	4	0	-	4	11
% Buses	0.0	0.5	0.0	-	-	0.3	0.0	2.7	0.0	-	-	2.0	-	0.0	-	-	-	0.0	0.0	0.0	7.1	-	-	3.8	1.6
Trucks	1	2	0	0	-	3	0	2	0	0	-	2	0	0	0	0	-	0	0	0	3	0	-	3	8
% Trucks	1.4	0.9	0.0	-	-	1.0	0.0	0.9	0.0	-	-	0.7	-	0.0	-	-	-	0.0	0.0	0.0	5.4	-	-	2.8	1.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	8.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	7	-	-	-	-	-	5	-	-	-	-	-	22	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	91.7	-	-	-	-	-	100.0	-	-

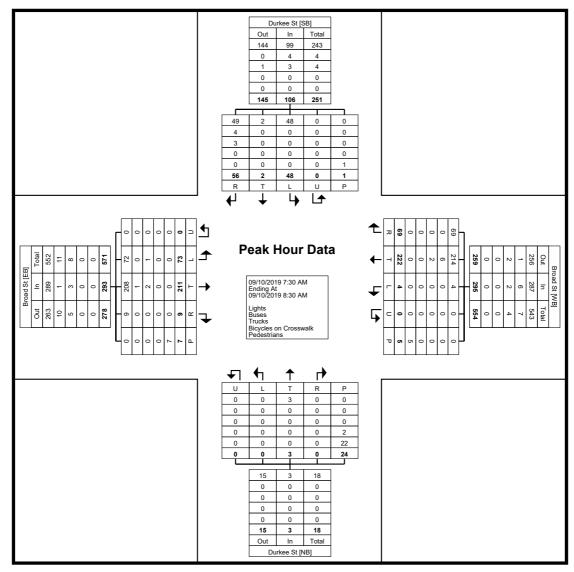


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Count Name: Durkee St & Broad St

Site Code: Start Date: 09/10/2019 Page No: 5



Turning Movement Peak Hour Data Plot (7:30 AM)



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Count Name: Durkee St & Broad St Site Code: Start Date: 09/10/2019 Page No: 6

Turning Movement Peak Hour Data (12:15 PM)

			Broa	d St					Broa	ad St					Durk	ee St		,			Durk	ee St			
			Easth	ound					Westl	oound					North	bound					South	bound			
Start Time	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Int. Total
12:15 PM	25	47	1	0	0	73	1	56	11	0	1	68	1	1	1	0	3	3	19	2	27	0	1	48	192
12:30 PM	25	53	2	0	0	80	2	58	16	0	3	76	0	1	2	0	4	3	19	3	26	0	3	48	207
12:45 PM	28	50	5	0	2	83	0	59	12	0	2	71	2	1	5	0	2	8	13	0	26	0	1	39	201
1:00 PM	14	51	1	0	0	66	1	45	10	0	1	56	5	1	0	0	5	6	12	1	30	0	0	43	171
Total	92	201	9	0	2	302	4	218	49	0	7	271	8	4	8	0	14	20	63	6	109	0	5	178	771
Approach %	30.5	66.6	3.0	0.0	-	-	1.5	80.4	18.1	0.0	-	-	40.0	20.0	40.0	0.0	-		35.4	3.4	61.2	0.0	-	-	-
Total %	11.9	26.1	1.2	0.0	-	39.2	0.5	28.3	6.4	0.0	-	35.1	1.0	0.5	1.0	0.0	-	2.6	8.2	0.8	14.1	0.0	-	23.1	-
PHF	0.821	0.948	0.450	0.000	-	0.910	0.500	0.924	0.766	0.000	-	0.891	0.400	1.000	0.400	0.000	-	0.625	0.829	0.500	0.908	0.000	-	0.927	0.931
Lights	91	198	9	0	-	298	4	214	49	0	-	267	8	3	8	0	-	19	60	6	102	0	-	168	752
% Lights	98.9	98.5	100.0	-	-	98.7	100.0	98.2	100.0	-	-	98.5	100.0	75.0	100.0	-	-	95.0	95.2	100.0	93.6	-	-	94.4	97.5
Buses	0	1	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	0	0	5	0	-	5	8
% Buses	0.0	0.5	0.0	-	-	0.3	0.0	0.9	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.0	0.0	4.6		-	2.8	1.0
Trucks	1	2	0	0	-	3	0	2	0	0	-	2	0	1	0	0	-	1	3	0	2	0	-	5	11
% Trucks	1.1	1.0	0.0	-	-	1.0	0.0	0.9	0.0		-	0.7	0.0	25.0	0.0		-	5.0	4.8	0.0	1.8		-	2.8	1.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	1	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	14	-	-	-	-	-	5	-	
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

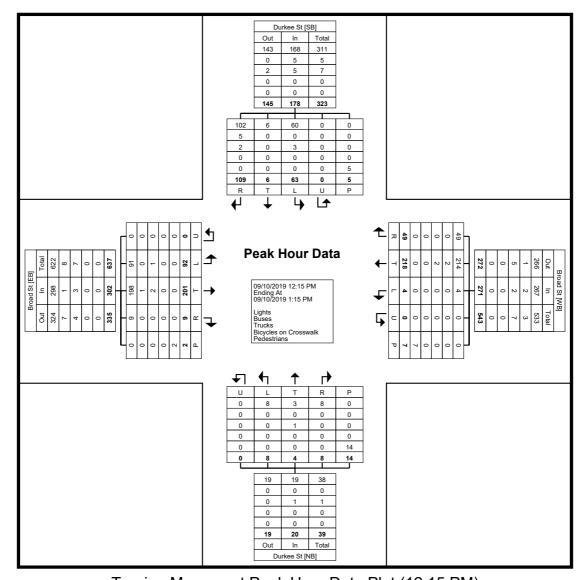


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Count Name: Durkee St & Broad St

Site Code: Start Date: 09/10/2019 Page No: 7



Turning Movement Peak Hour Data Plot (12:15 PM)



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Count Name: Durkee St & Broad St Site Code: Start Date: 09/10/2019 Page No: 8

Turning Movement Peak Hour Data (3:45 PM)

			Broa	d St				•	Broa	ad St					Durk	ee St		,			Durk	ee St			1
			Easth	ound					Westl	oound					North	bound					South	bound			
Start Time	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Left	Thru	Right	U- Turn	Peds	App. Total	Int. Total
3:45 PM	23	62	3	0	0	88	2	69	13	0	1	84	1	1	1	0	5	3	15	0	24	0	2	39	214
4:00 PM	21	48	1	0	1	70	0	68	10	0	1	78	2	1	3	0	17	6	25	1	31	0	0	57	211
4:15 PM	23	53	1	0	1	77	0	58	6	0	2	64	3	1	2	0	4	6	24	2	28	0	0	54	201
4:30 PM	14	49	3	0	0	66	1	75	13	0	2	89	2	0	1	0	4	3	23	0	21	0	2	44	202
Total	81	212	8	0	2	301	3	270	42	0	6	315	8	3	7	0	30	18	87	3	104	0	4	194	828
Approach %	26.9	70.4	2.7	0.0	-	-	1.0	85.7	13.3	0.0	-	-	44.4	16.7	38.9	0.0	-	-	44.8	1.5	53.6	0.0	-	-	-
Total %	9.8	25.6	1.0	0.0	-	36.4	0.4	32.6	5.1	0.0	-	38.0	1.0	0.4	0.8	0.0	-	2.2	10.5	0.4	12.6	0.0	-	23.4	-
PHF	0.880	0.855	0.667	0.000	-	0.855	0.375	0.900	0.808	0.000	-	0.885	0.667	0.750	0.583	0.000	-	0.750	0.870	0.375	0.839	0.000	-	0.851	0.967
Lights	81	210	8	0	-	299	3	268	42	0	-	313	8	3	7	0	-	18	85	3	99	0	-	187	817
% Lights	100.0	99.1	100.0	-	-	99.3	100.0	99.3	100.0	-	-	99.4	100.0	100.0	100.0	-	-	100.0	97.7	100.0	95.2	-	-	96.4	98.7
Buses	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	1	0	3	0	-	4	6
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.7	0.0	-	-	0.6	0.0	0.0	0.0	-	-	0.0	1.1	0.0	2.9	-	-	2.1	0.7
Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	1	0	2	0	-	3	5
% Trucks	0.0	0.9	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	1.1	0.0	1.9	-	-	1.5	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	30	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

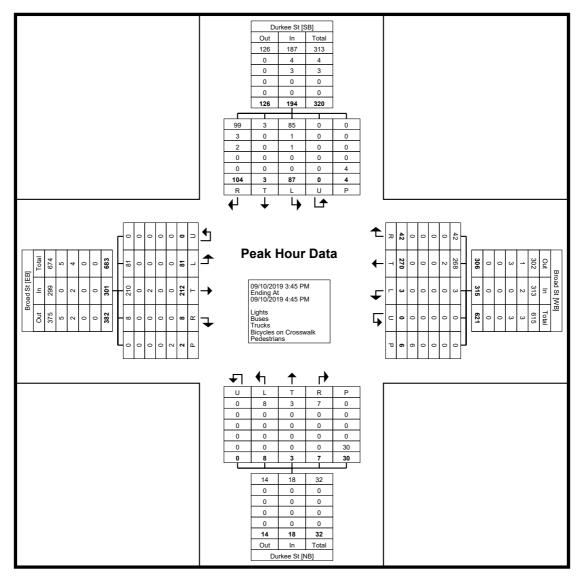


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Count Name: Durkee St & Broad St

Site Code: Start Date: 09/10/2019 Page No: 9



Turning Movement Peak Hour Data Plot (3:45 PM)



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019 Location: 44.69734, -73.449468

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Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 1

										Τι	ırniı	ng N	۷o۱	/em	ent	Da	ata											
				Bridge S						В	ridge S	St					I	Peru St						Gree				
Start			Ea	astbou	nd					W	estbou	nd					No	orthbou	nd					South	oound			
Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	U- Turn	Ped s	App. Total	Int. Total
6:00 AM	0	6	11	1	0	0	18	0	5	0	0	0	0	5	9	1	0	0	0	0	10	0	0	0	0	0	0	33
6:15 AM	0		16	7	0	0	27	2	9	0	0		0	11	18	0	0		0	1	18	0		0	0	0	1	57
6:30 AM	9	2	26 37	17	0	0	48 74	4	10	0	0	0	0	15	18 24	<u>2</u> 6	0	0 1	0	0	20	0	<u>0</u> 1	3	0	0	4	122
6:45 AM Hourly Total	12	14	90	<u>26</u> 51	0	0	167	7	12 36	1	0	0	0	13 44	69	9	0	1	0	1	31 79	1	2	3	0	0	6	296
7:00 AM	2	10	21	9	0	0	42	1	10	0	0	0	0	11	33	0	1	0	0	0	34	0	3	1	0	1	4	91
7:15 AM	3	12	25	35	0	0	75	2	16	0	0	0	2	18	45	0	3	0	0	0	48	0	2	1	0	1	3	144
7:30 AM	2	12	32	32	0	0	78	5	23	1	0	0	2	29	56	5	0	1	0	0	62	0	10	0	0	4	10	179
7:45 AM	2	23	46	39	0	0	110	2	26	0	0	0	0	28	78	5	2	0	0	1	85	0	11	2	0	0	3	226
Hourly Total	9	57	124	115	0	0	305	10	75	1	0	0	4	86	212	10	6	1	0	1	229	0	16	4	0	6	20	640
8:00 AM	1	15	34	23	0	0	73	6	16	0	0		2	23	57	1			0	0	59	0	0	3	0	2	3	158
8:15 AM	2	<u>11</u> 	31 32	19	0	0	63	5 4	14	0	0	0	0	19 24	53 41	4	1 4		0	0	59	0	2	2	0	1	5 4	146
8:30 AM 8:45 AM	3	15	23	24 27	0	0	68	5	20 18	0	0	0	3	23	50	2	2	0	0	0	51 54	1	3	5	0	2	9	146 154
Hourly Total	10	48	120	93	0	0	271	20	68	0	0	1	6	89	201	11	8	3	0	2	223	1	8	12	0	9	21	604
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	_		-	-	-	-	-	-	-	-	-	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	2	13	19	22	0	0	56	8	31	1	1	0	0	41	54	2	2	1	0	2	59	0	2	2	0	4	4	160
11:45 AM	2	13	25		0	0	62	5	19	0	0	0	6	24	66	0	1		0	0	67	0	4	3	0	10	7	160
Hourly Total 12:00 PM	2	26	<u>44</u> 21		0	0	118 68	13 7	50 23	0	1 0	0	6	65 30	120	3	3 2		0	3	126 60	0	6 6	5 2	0	14 5	11 8	320 166
12:00 PM	2	16 18	22	23	0	0	65	4	25	0	2	0	3	31	53 70	2	4	0	0	1	76	0	3	1	0	6	4	176
12:30 PM	4	18	18	23	0	0	63	3	19	0	0	0	2	22	59	1	1	0	0	0	61	1	5	4	0	6	10	156
12:45 PM	0	24	24	26	0	0	74	2	26	0	1	0	0	29	56	5	4	2	0	2	67	1	2	9	0	2	12	182
Hourly Total	8	76	85	101	0	0	270	16	93	0	3	0	7	112	238	11	11	4	0	6	264	2	16	16	0	19	34	680
1:00 PM	2	17	35	24	0	0	78	3	24	0	0	0	5	27	63	5	1	0	0	3	69	0	0	2	0	6	2	176
1:15 PM	0	16	16	20	0	1	52	3	21	0	0	0	0	24	58	0	2	0	0	2	60	0	5	2	0	4	7	143
1:30 PM	2	13	24	27	0	2	66	8	30	0	0	0	0	38	59	3	2		0	3	64	1	1	1	0	1	3	171
1:45 PM Hourly Total	5	10 56	16 91	23 94	0	3	50 246	18	103	0	0	0	7	32 121	72 252	9	<u>1</u> 6	1	0	0	75 268	1	9	5	0	12 23	3 15	160 650
2:00 PM	0	14	22	31	0	1	67	6	28	0	0	0	0	34	69	1	4	3	0	1	77	0	6	3	0	4	9	187
2:15 PM	2	21	27	24	0	0	74	5	27	0	0	0	0	32	64	5	4	1	0	4	74	0	3	1	0	2	4	184
2:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
Hourly Total	2	35	49	55	0	1	141	12	56	0	0	0	0	68	133	6	8	4	0	5	151	0	9	4	0	6	13	373
3:00 PM	0	22	25	25	0	0	72	3	27	0	0	0	2	30	74	0	4	0	0	1	78	0	1	12	0	7	13	193
3:15 PM	0	13	33	27	0	0	73	6	19	0	0	0	2	25	78	1	1	0	0	3	80	0	0	2	0	3	2	180
3:30 PM 3:45 PM	1	<u>14</u> 19	17 19	27 37	0	0	59 76	7	26 27	0	0	0	0	29 34	100 94	2	0	0	0	1	100 96	0	0	3	0	5 4	3	188
Hourly Total	2	68	94	116	0	1	280	19	99	0	0	0	4	118	346	3	5	0	0	6	354	0	1	17	0	19	18	770
4:00 PM	2	18	20	33	0	0	73	7	29	0	0	0	2	36	79	1	1	1	0	1	82	0	2	5	0	5	7	198
4:15 PM	0	15	41	24	0	0	80	5	25	0	0	0	0	30	65	0	2	3	0	3	70	0	0	1	0	1	1	181
4:30 PM	0	19	17	36	0	0	72	14	26	0	0	0	0	40	93	2	2	1	0	0	98	0	0	2	0	3	2	212
4:45 PM	1	20	30	24	0	0	75	8	28	0	0	0	0	36	68	0	1	_1_	0	0	70	0	0	1	0	1	1	182
Hourly Total	3	72	108	117	0	0	300	34	108	0	0	0	2	142	305	3	6	6	0	4	320	0	2	9	0	10	11	773
5:00 PM	1	20	26	26	0	0	73	11	23	0	0	0	0	34	59	1	1	_1_	0	0	62	0	0	0	0	0	0	169
5:15 PM	1		33	23	0	0	77	5	24	0	0		1	29	61	0	0	0	0	1	61	0	0	0	0	4	0	167
5:30 PM 5:45 PM	0	12 10	21 17	23 13	0	0	56 40	2	21 19	0	0	0	0	24 21	53 41	0		0	0	0	54 41	0	<u>0</u> 1	2	0	8	3	134
Hourly Total	2	62	97	85	0	1	246	20	87	1	0	0	2	108	214	1	2	1	0	2	218	0	1	2	0	16	3	575
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	57	514	902	871	0	6	2344	169	775	4	4	1	38	953	2090	65	55	22	0	37	2232	5	70	77	0	122	152	5681
Approach %	2.4	21.9	38.5	37.2	0.0	-	-	17.7	81.3	0.4	0.4	0.1	-	-	93.6	2.9	2.5	1.0	0.0	-	-	3.3	46.1	50.7	0.0	-	-	-
Total %	1.0	9.0	15.9	15.3	0.0	-	41.3	3.0	13.6	0.1	0.1	0.0	-	16.8	36.8	1.1	1.0	0.4	0.0	-	39.3	0.1	1.2	1.4	0.0	-	2.7	-
Lights	51	505	873	854	0		2283	168	765	4	2	1	-	940	2034	50	53	20	0		2157	5	49	70	0	-	124	5504
% Lights	89.5	98.2	96.8	98.0	-	-	97.4	99.4	98.7	100.0	50.0	100.0	-	98.6	97.3	76.9	96.4	90.9	-	-	96.6	100.0	70.0	90.9	-	-	81.6	96.9

Buses	0	0	2	4	0	-	6	0	1	0	0	0	-	1	9	0	0	0	0	-	9	0	0	0	0	-	0	16
% Buses	0.0	0.0	0.2	0.5	-	-	0.3	0.0	0.1	0.0	0.0	0.0	-	0.1	0.4	0.0	0.0	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.3
Trucks	6	9	27	13	0	-	55	1	9	0	2	0	-	12	47	15	2	2	0	-	66	0	21	7	0	-	28	161
% Trucks	10.5	1.8	3.0	1.5	-	-	2.3	0.6	1.2	0.0	50.0	0.0	-	1.3	2.2	23.1	3.6	9.1	-	-	3.0	0.0	30.0	9.1	-	-	18.4	2.8
Bicycles on Crosswalk	-	_	-	-	-	0	-	-	-	-	-	-	0	-	1	_	-	-	-	3	-	-	-	-	-	9	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	8.1	-	-	-	-	-	7.4	-	-
Pedestrian s	-	-	-	-	-	6	-	-	-	-	-	-	38	-	-	-	-	-	-	34	-	-	-	-	-	113	-	-
% Pedestrian s	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	91.9	-	-	-	-	-	92.6	-	-



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11,

Location: 44.69734, -73.449468

184 Baker Rd
Pennsylvania, United States 19320

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 3

Green St [SB] Out U ₾ 09/10/2019 6:00 AM Ending At 09/10/2019 6:15 PM Total 1524 Bicycles on Crosswalk Pedestrians R 1944 2157 4101

Turning Movement Data Plot

 Total



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019 Location: 44.69734, -73.449468

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

			В	ridge S	St				•	Е	Bridge S	St					1	Peru S	t	,				Gree	en St			
			Ea	astbou	nd					W	estbou	ınd					No	rthbou	nd					South	bound			
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	U- Turn	Ped s	App. Total	Int. Total
7:30 AM	2	12	32	32	0	0	78	5	23	1	0	0	2	29	56	5	0	1	0	0	62	0	10	0	0	4	10	179
7:45 AM	2	23	46	39	0	0	110	2	26	0	0	0	0	28	78	5	2	0	0	1	85	0	1	2	0	0	3	226
8:00 AM	1	15	34	23	0	0	73	6	16	0	0	1	2	23	57	1	1	0	0	0	59	0	0	3	0	2	3	158
8:15 AM	2	11	31	19	0	0	63	5	14	0	0	0	1	19	53	4	1	1	0	2	59	0	3	2	0	4	5	146
Total	7	61	143	113	0	0	324	18	79	1	0	1	5	99	244	15	4	2	0	3	265	0	14	7	0	10	21	709
Approach %	2.2	18.8	44.1	34.9	0.0	-	-	18.2	79.8	1.0	0.0	1.0	-	-	92.1	5.7	1.5	0.8	0.0	-	-	0.0	66.7	33.3	0.0	-	-	-
Total %	1.0	8.6	20.2	15.9	0.0	-	45.7	2.5	11.1	0.1	0.0	0.1	-	14.0	34.4	2.1	0.6	0.3	0.0	-	37.4	0.0	2.0	1.0	0.0	-	3.0	
PHF	0.87 5	0.663	0.777	0.724	0.000	-	0.736	0.750	0.760	0.250	0.000	0.250	-	0.853	0.782	0.750	0.500	0.500	0.000	-	0.779	0.000	0.350	0.583	0.000	-	0.525	0.784
Lights	6	58	143	108	0	-	315	17	78	1	0	1	-	97	231	10	4	2	0	-	247	0	7	5	0	-	12	671
% Lights	85.7	95.1	100.0	95.6	-	-	97.2	94.4	98.7	100.0	-	100.0	-	98.0	94.7	66.7	100.0	100.0	-	-	93.2	-	50.0	71.4	-	-	57.1	94.6
Buses	0	0	0	2	0	-	2	0	0	0	0	0	-	0	2	0	0	0	0	-	2	0	0	0	0	-	0	4
% Buses	0.0	0.0	0.0	1.8	-	-	0.6	0.0	0.0	0.0		0.0	-	0.0	0.8	0.0	0.0	0.0	-	-	8.0	-	0.0	0.0	-	-	0.0	0.6
Trucks	1	3	0	3	0	-	7	1	1	0	0	0	-	2	11	5	0	0	0	-	16	0	7	2	0	-	9	34
% Trucks	14.3	4.9	0.0	2.7		-	2.2	5.6	1.3	0.0	-	0.0	-	2.0	4.5	33.3	0.0	0.0	-	-	6.0	-	50.0	28.6		-	42.9	4.8
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	1	-	-	-	-	0.0	-	1	-	-	-	0.0	-	-
Pedestrian s	-	-	-	-	-	0	-	-	-	-	-	-	5	-	-	-	-	-	-	3	-	-	-	-	-	10	-	-
% Pedestrian s	-	-	-	-	-	-	-	-	_	_	-	_	100.0	-	-	_	_	-	-	100.0	-	1	-	-	-	100.0	-	-

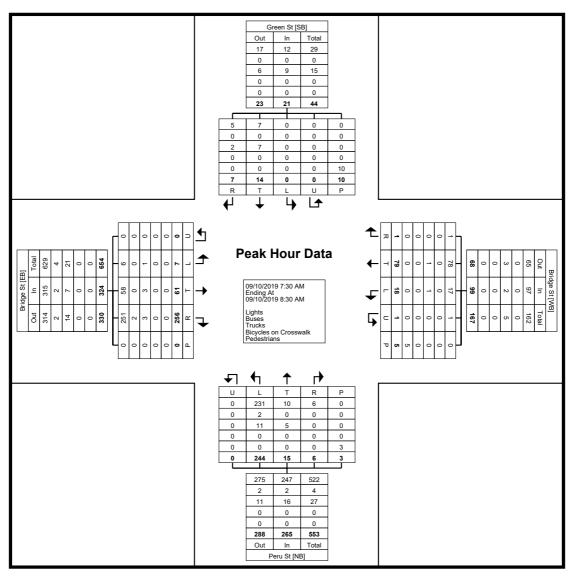


Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019

Location: 44.69734, -73.449468

184 Baker Rd
Pennsylvania United States 193

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 5



Turning Movement Peak Hour Data Plot (7:30 AM)



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019 Location: 44.69734, -73.449468

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 6

Turning Movement Peak Hour Data (1:30 PM)

			В	ridge S	St				_	E	Bridge S	St					1	\ Peru S	t	,				Gree	en St			ĺ
			E	astbou	nd					W	estbou	nd					No	orthbou	ınd					South	bound			ĺ
Start Time	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	Righ t on Red	U- Turn	Ped s	App. Total	Left	Thru	Righ t	U- Turn	Ped s	App. Total	Int. Total
1:30 PM	2	13	24	27	0	2	66	8	30	0	0	0	0	38	59	3	2	0	0	3	64	1	1	1	0	1	3	171
1:45 PM	1	10	16	23	0	0	50	4	28	0	0	0	2	32	72	1	1	1	0	0	75	0	3	0	0	12	3	160
2:00 PM	0	14	22	31	0	1	67	6	28	0	0	0	0	34	69	1	4	3	0	1	77	0	6	3	0	4	9	187
2:15 PM	2	21	27	24	0	0	74	5	27	0	0	0	0	32	64	5	4	1	0	4	74	0	3	1	0	2	4	184
Total	5	58	89	105	0	3	257	23	113	0	0	0	2	136	264	10	11	5	0	8	290	1	13	5	0	19	19	702
Approach %	1.9	22.6	34.6	40.9	0.0	-	-	16.9	83.1	0.0	0.0	0.0	-	-	91.0	3.4	3.8	1.7	0.0	-	-	5.3	68.4	26.3	0.0	-	-	-
Total %	0.7	8.3	12.7	15.0	0.0	-	36.6	3.3	16.1	0.0	0.0	0.0	-	19.4	37.6	1.4	1.6	0.7	0.0	-	41.3	0.1	1.9	0.7	0.0	-	2.7	
PHF	0.62 5	0.690	0.824	0.847	0.000	-	0.868	0.719	0.942	0.000	0.000	0.000	-	0.895	0.917	0.500	0.688	0.417	0.000	-	0.942	0.250	0.542	0.417	0.000	-	0.528	0.939
Lights	3	58	85	102	0	-	248	23	111	0	0	0	-	134	259	7	10	4	0	-	280	1	9	5	0	-	15	677
% Lights	60.0	100.0	95.5	97.1	-	-	96.5	100.0	98.2	-	-	-	-	98.5	98.1	70.0	90.9	80.0	-	-	96.6	100.0	69.2	100.0	-	-	78.9	96.4
Buses	0	0	2	0	0	-	2	0	0	0	0	0	-	0	1	0	0	0	0	-	1	0	0	0	0	-	0	3
% Buses	0.0	0.0	2.2	0.0	-	-	8.0	0.0	0.0	-	-	-	-	0.0	0.4	0.0	0.0	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.4
Trucks	2	0	2	3	0	-	7	0	2	0	0	0	-	2	4	3	1	1	0	-	9	0	4	0	0	-	4	22
% Trucks	40.0	0.0	2.2	2.9	-	-	2.7	0.0	1.8		-	-	-	1.5	1.5	30.0	9.1	20.0		-	3.1	0.0	30.8	0.0	-	-	21.1	3.1
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	1	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	12.5	-	- 1	-	-	-	10.5	-	-
Pedestrian s	-	-	-	-	-	3	-	-	-	-	-	-	2	-	-	-	-	-	-	7	-	-	-	-	-	17	-	-
% Pedestrian s	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	87.5	-	-	-	-	-	89.5	-	

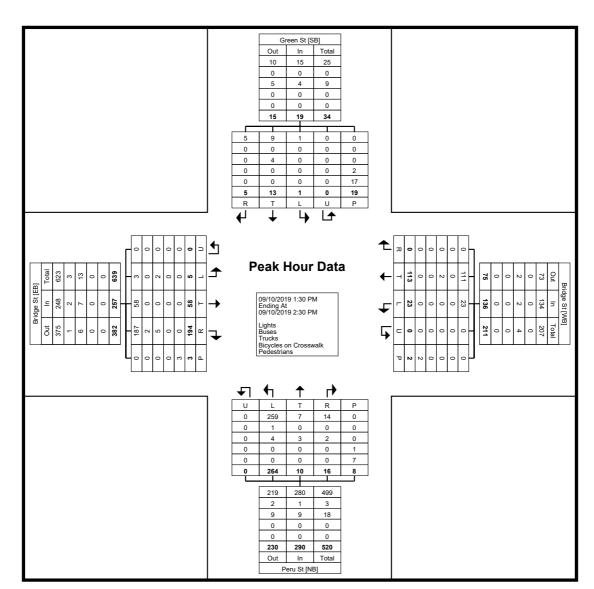


Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019

Location: 44.69734, -73.449468

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 7



Turning Movement Peak Hour Data Plot (1:30 PM)



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11, 2019 Location: 44.69734, -73.449468

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 8

Turning Movement Peak Hour Data (3:45 PM)

	1		Р	Bridge S	St			 I	9 ''		Bridge S			i	 			Peru S	. O .	,	·			Gree	n St			1
				astbou							estbou							orthbou						South				
Start			Riah	Righ	U-	Ped	Ann			Righ	Righ	U-	Ped	Ann			Righ	Righ	U-	Ped	Ann			Righ	U-	Ped	Ann	Int.
Time	Left	Thru	t	t on Red	Turn	S	App. Total	Left	Thru	t	t on Red	Turn	S	App. Total	Left	Thru	t	t on Red	Turn	S	App. Total	Left	Thru	t	Turn	S	App. Total	Total
3:45 PM	1	19	19	37	0	1	76	7	27	0	0	0	0	34	94	2	0	0	0	1	96	0	0	3	0	4	3	209
4:00 PM	2	18	20	33	0	0	73	7	29	0	0	0	2	36	79	. 1	1	. 1	0	1	82	0	2	5	0	5	7	198
4:15 PM	0	15	41	24	0	0	80	5	25	0	0	0	0	30	65	0	2	3	0	3	70	0	0	1	0	1	1	181
4:30 PM	0	19	17	36	0	0	72	14	26	0	0	0	0	40	93	2	2	1	0	0	98	0	0	2	0	3	2	212
Total	3	71	97	130	0	1	301	33	107	0	0	0	2	140	331	5	5	5	0	5	346	0	2	11	0	13	13	800
Approach %	1.0	23.6	32.2	43.2	0.0	-	-	23.6	76.4	0.0	0.0	0.0	-	-	95.7	1.4	1.4	1.4	0.0	-	-	0.0	15.4	84.6	0.0	-	-	-
Total %	0.4	8.9	12.1	16.3	0.0	-	37.6	4.1	13.4	0.0	0.0	0.0	-	17.5	41.4	0.6	0.6	0.6	0.0	-	43.3	0.0	0.3	1.4	0.0	-	1.6	
PHF	0.37 5	0.934	0.591	0.878	0.000	-	0.941	0.589	0.922	0.000	0.000	0.000	-	0.875	0.880	0.625	0.625	0.417	0.000	-	0.883	0.000	0.250	0.550	0.000	-	0.464	0.943
Lights	3	71	94	130	0	-	298	33	106	0	0	0	-	139	326	5	5	4	0	-	340	0	2	11	0	-	13	790
% Lights	100. 0	100.0	96.9	100.0	-	-	99.0	100.0	99.1	-	-	-	-	99.3	98.5	100.0	100.0	80.0	-	-	98.3	-	100.0	100.0	-	-	100.0	98.8
Buses	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	_	-		-	0.0	0.0	0.0	0.0	0.0		-	0.0	1	0.0	0.0		-	0.0	0.0
Trucks	0	0	3	0	0	-	3	0	1	0	0	0	-	1	5	0	0	1	0	-	6	0	0	0	0	-	0	10
% Trucks	0.0	0.0	3.1	0.0	-	-	1.0	0.0	0.9	-	-	-	-	0.7	1.5	0.0	0.0	20.0	-	-	1.7	1	0.0	0.0	-	-	0.0	1.3
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	ı	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	1	-	-	-	-	0.0	-	ı	-	-	-	0.0	-	-
Pedestrian s	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	5	-	-	-	-	-	13	-	-
% Pedestrian s	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	1	-	-	-	100.0	-	-



Plattsburgh, NY Bridge St & Peru St/Green St Wednesday, September 11,

Location: 44.69734, -73.449468

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995 Count Name: Bridge St & Peru St & Green St Site Code: Start Date: 09/10/2019 Page No: 9

Green St [SB] Total Out In U **Peak Hour Data** 09/10/2019 3:45 PM Ending At 09/10/2019 4:45 PM Lights Buses Trucks Bicycles on Crosswalk Pedestrians R

Turning Movement Peak Hour Data Plot (3:45 PM)

346 608 In Total



Plattsburgh, NY Broad St & Peru St Wednesday, September 11, 2019 Location: 44.695596, -73.44972

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St Site Code: Start Date: 09/10/2019 Page No: 1

Turning Movement Data

Sept Temp		l							I		ing	IVIO	/em	ent		a		ı							1
Part									ı					Peru St							Peru St				
Left True Regular				Е	astboun	ıd			West	bound			N	orthbour	nd					So	outhbour	nd			
Company Comp	Start Time	Left	Thru	Right			Peds	Арр.	Peds	App.	Left	Thru	Right			Peds	App.	Left	Thru	Right			Peds	App.	_Int.
0-19-14 1						Turn		lotal		lotai					Turn		lotai					Turn		lotai	lotal
Column C	6:00 AM	2	1	0	5	0	0	8	0	0	12	10	0	0	0	0	22	0	9	1	0	0	0	10	40
Mathematical Mat	6:15 AM	1	0	2	8	0	0	11	0	0	14	18	1	0	0	0	33	0	23	1	0	0	1	24	68
	6:30 AM	1	0	1	13	0	0	15	0	0	25	19	0	0	0	0	44	0	46	0	1	0	0	47	106
Trispan	6:45 AM	4	2	6	15	0	1	27	0	0	36	27	2	0	0	0	65	0	66	1	0	0	0	67	159
Teal	Hourly Total	8	3	9	41	0	1	61	0	0	87	. 74	3	0	0	. 0	164	0	144	3	1	0	1	148	373
Part	7:00 AM	1	3	5	7	0	2	16	0	0	31	34	3	0	0	0	68	0	31	1	0	0	0	32	116
Final Principal Principa	7:15 AM			14	14	0	0	32	0	0	34	48	3	0	0	0	85	0			0	0			174
	7:30 AM	2	7	17	24	0	0	50	0	. 0	68	62	6	1	0	0	137	0	71	1	0	0	0	72	259
BILDER MAIN	7:45 AM	8	6	49	33	0	0	96	0	0	84	84	6	0	0	0	174	1	90	4	0	0	0	95	365
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Hourly Total 25 19 90 129 0 1 263 0 0 283 336 17 0 0 1 636 0 214 25 6 0 2 245 1144 4:00 PM 1 3 45 39 0 0 88 0 0 69 76 1 0 0 0 146 1 54 8 1 0 0 64 298 4:15 PM 5 13 30 26 0 0 74 0 0 51 65 5 0 0 0 0 121 0 59 9 0 0 0 0 68 263 4:30 PM 3 9 38 24 0 0 74 0 0 85 91 7 0 0 0 183 0 59 4 0 0 0 0 68 263 4:5 PM 1 4 45 30 0 0 80 0 0 67 76 3 0 0 0 146 1 59 7 1 0 0 68 294 4:5 PM 1 4 45 30 0 0 80 0 0 67 76 3 0 0 0 146 1 59 7 1 0 0 68 294 4:5 PM 1 4 45 30 0 0 316 0 0 272 308 16 0 0 0 596 2 231 28 2 0 0 263 1175 5:00 PM 2 5 34 52 0 0 93 0 0 52 58 1 0 0 0 111 0 58 10 2 0 0 70 274 5:15 PM 4 8 37 37 0 0 86 0 0 55 60 0 1 1 0 0 116 0 57 4 0 0 0 61 263 5:30 PM 2 6 18 39 0 1 65 0 0 55 60 0 1 1 0 0 116 0 57 4 0 0 0 0 61 263 5:30 PM 2 6 18 39 0 1 65 0 0 55 60 0 1 1 0 0 116 0 57 4 0 0 0 0 61 263 5:30 PM 2 6 18 39 0 1 65 0 0 51 54 2 0 0 0 107 0 42 5 0 0 0 38 175 Hourly Total 11 23 102 152 0 1 288 0 0 0 210 212 4 1 0 0 1 427 0 189 24 3 0 0 0 38 175 Hourly Total 11 23 102 152 0 1 288 0 0 210 212 4 1 0 0 1 427 0 189 24 3 0 0 216 931 6:00 PM 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	3:30 PM	4	5	25	29	0	0	63	0	0	69	92	6	0	0	0	167	0	43	2	1	0	0	46	276
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4:15 PM 5 13 30 26 0 0 74 0 0 51 65 5 0 0 121 0 59 9 0 0 0 68 263 4:30 PM 3 9 38 24 0 0 74 0 0 85 91 7 0 0 0 183 0 59 4 0 0 0 63 320 4:45 PM 1 4 45 30 0 0 80 0 0 67 76 3 0 0 146 1 59 7 1 0 0 68 294 Hourly Total 10 29 158 119 0 0 316 0 0 272 308 16 0 0 596 2 231 28 2 0 0 263 1175 5:00 PM 2 5 34 52 0 0 93 0 0 55 60	Hourly Total	25	19	90	129	0	1	263	0	0	283	336	17	0	0	1	636	0	214	25	6	0	2	245	1144
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Hourly Total 10 29 158 119 0 0 316 0 0 272 308 16 0 0 0 596 2 231 28 2 0 0 263 1175 5:00 PM 2 5 34 52 0 0 93 0 0 55 58 1 0 0 0 0 111 0 58 10 2 0 0 70 274 5:15 PM 4 8 37 37 0 0 86 0 0 55 60 0 1 0 0 116 0 57 4 0 0 0 0 61 263 5:30 PM 2 6 18 39 0 1 65 0 0 51 54 2 0 0 0 107 0 42 5 0 0 0 0 47 219 5:45 PM 3 4 13 24 0 0 44 0 0 52 40 1 0 0 0 1 93 0 32 5 1 0 0 0 38 175 Hourly Total 11 23 102 152 0 1 288 0 0 210 212 4 1 0 0 1 427 0 189 24 3 0 0 216 931 6:00 PM 0 0 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	4:30 PM	3	9	38	24	0	0	74	0	0	85	91	7	0	0	0	183	0	59	4	0	0	0	63	320
5:00 PM 2 5 34 52 0 0 93 0 0 52 58 1 0 0 0 111 0 58 10 2 0 0 70 274 5:15 PM 4 8 37 37 0 0 86 0 0 55 60 0 1 0 0 116 0 57 4 0 0 0 61 263 5:30 PM 2 6 18 39 0 1 65 0 0 51 54 2 0 0 107 0 42 5 0 0 47 219 5:45 PM 3 4 13 24 0 0 44 0 0 52 40 1 0 0 32 5 1 0 0 38 175 Hourly Total 11 23 102 </td <td>4:45 PM</td> <td>1</td> <td>4</td> <td>45</td> <td>30</td> <td>0</td> <td>0</td> <td>80</td> <td>0</td> <td>0</td> <td>67</td> <td>76</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>146</td> <td>1</td> <td>59</td> <td>7</td> <td>1</td> <td>0</td> <td>0</td> <td>68</td> <td>294</td>	4:45 PM	1	4	45	30	0	0	80	0	0	67	76	3	0	0	0	146	1	59	7	1	0	0	68	294
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5:45 PM 3 4 13 24 0 0 44 0 0 52 40 1 0 0 1 93 0 32 5 1 0 0 38 175 Hourly Total 11 23 102 152 0 1 288 0 0 210 212 4 1 0 1 427 0 189 24 3 0 0 216 931 6:00 PM 0 0 1 0	5:15 PM	4	8	37	37	0	0	86	0	0	55	60	0	1	0	0	116	0	57	4	0	0	0	61	263
Hourly Total 11 23 102 152 0 1 288 0 0 210 212 4 1 0 1 427 0 189 24 3 0 0 216 931 6:00 PM 0 0 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	5:30 PM	2	6	18	39	0	1	65	0	0	51	54	2	0	0	0	107	0	42	5	0	0	0	47	219
6:00 PM 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0	5:45 PM	3	4	13	24	0	0	44	0	0	52	40	1	0	0	1	93	0	32	5	1	0	0	38	175
Grand Total 144 199 851 928 0 13 2122 4 0 2014 2121 108 6 0 4 4249 4 1845 183 20 0 5 2052 8423 Approach% 6.8 9.4 40.1 43.7 0.0 - - - - 47.4 49.9 2.5 0.1 0.0 -	Hourly Total	11	23	102	152	0	1	288	0	0	210	212	4	1	0	1	427	0	189	24	3	0	0	216	931
Approach % 6.8 9.4 40.1 43.7 0.0 - - - 47.4 49.9 2.5 0.1 0.0 - - - - - - 47.4 49.9 2.5 0.1 0.0 - - - - - - - 0.2 89.9 8.9 1.0 0.0 - <td>6:00 PM</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td>	6:00 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total % 1.7 2.4 10.1 11.0 0.0 - 25.2 - 0.0 23.9 25.2 1.3 0.1 0.0 - 50.4 0.0 21.9 2.2 0.2 0.0 - 24.4 - Lights 138 199 831 919 0 - 2087 - 0 1975 2056 107 6 0 - 4144 4 1778 181 20 0 - 1983 8214 6 1985 95.8 100.0 97.6 99.0 - 98.4 98.4 96.9 99.1 100.0 - 97.5 100.0 96.4 98.9 100.0 - 96.6 97.5 100.0 11 0 0 0 - 11 - 0 24 8 0 0 0 0 - 32 0 6 0 0 0 0 - 6 49	Grand Total	144	199	851	928	0	13	2122	4	0	2014	2121	108	6	0	4	4249	4	1845	183	20	0	5	2052	8423
Lights 138 199 831 919 0 - 2087 - 0 1975 2056 107 6 0 - 4144 4 1778 181 20 0 - 1983 8214 % Lights 95.8 100.0 97.6 99.0 - - 98.4 - - 98.1 96.9 99.1 100.0 - - 97.5 100.0 96.4 98.9 100.0 - - 96.6 97.5 Buses 0 0 11 0 0 - 111 - 0 24 8 0 0 0 - 30 0 0 - 6 49	Approach %	6.8	9.4	40.1	43.7	0.0	-		-		47.4	49.9	2.5	0.1	0.0	-	-	0.2	89.9	8.9	1.0	0.0			-
% Lights 95.8 100.0 97.6 99.0 - - 98.4 - - 98.1 96.9 99.1 100.0 - 97.5 100.0 96.4 98.9 100.0 - - 96.6 97.5 Buses 0 0 11 0 0 - 111 - 0 24 8 0 0 0 - 32 0 6 0 0 0 - 6 49	Total %	1.7	2.4	10.1	11.0	0.0	-	25.2	-	0.0	23.9	25.2	1.3	0.1	0.0	-	50.4	0.0	21.9	2.2	0.2	0.0	-	24.4	-
Buses 0 0 11 0 0 - 11 - 0 24 8 0 0 0 - 32 0 6 0 0 0 - 6 49		138	199	831	919	0	-	2087	-	0	1975	2056	107	6	0	-	4144	4	1778	181	20	0	-	1983	8214
				-	99.0		-	-	-			-	-			-	-		-	-				-	
% Buses 0.0 0.0 1.3 0.0 - 0.5 - - 1.2 0.4 0.0 0.0 - 0.8 0.0 0.3 0.0 0.0 - 0.3 0.6					-				-	-						-				-			-		
	% Buses	0.0	0.0	1.3	0.0	-	-	0.5	-	-	1.2	0.4	0.0	0.0	-	-	8.0	0.0	0.3	0.0	0.0	-	-	0.3	0.6

Trucks	6	0	9	9	0	-	24	-	0	15	57	1	0	0	-	73	0	61	2	0	0	-	63	160
% Trucks	4.2	0.0	1.1	1.0	-	-	1.1	-	-	0.7	2.7	0.9	0.0	-	-	1.7	0.0	3.3	1.1	0.0	-	-	3.1	1.9
Bicycles on Crosswalk		-	-	-	-	5	-	1	-	-	-	-	-	-	2		-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	-	38.5	-	25.0	-	-	-	-	-	-	50.0		-	-	-	-	-	60.0	-	-
Pedestrians	-	-	-	-	-	8	-	3	-	-	-	-	-	-	2		-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	61.5	-	75.0	-	-	-	-	-	-	50.0		-	-	-	-	-	40.0	-	-



184 Baker Rd

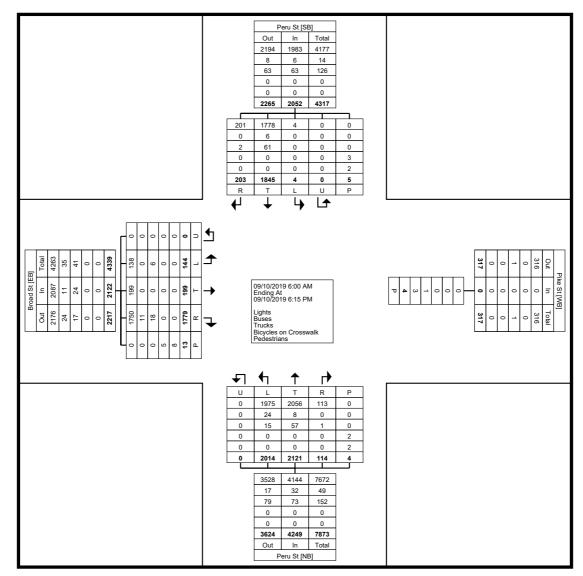
Plattsburgh, NY Broad St & Peru St Wednesday, September 11,

Location: 44.695596, -73.44972

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St

Site Code: Start Date: 09/10/2019 Page No: 3



Turning Movement Data Plot



Plattsburgh, NY Broad St & Peru St Wednesday, September 11, 2019 Location: 44.695596, -73.44972

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St Site Code: Start Date: 09/10/2019 Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

			1	Broad S	t		5	Pik	e St				Peru St		`		l '	'		Peru St				
			Е	astbour	nd			West	bound			N	orthbou	nd					Sc	uthbou	nd			
Start Time	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Int. Total
7:30 AM	2	7	17	24	0	0	50	0	0	68	62	6	1	0	0	137	0	71	1	0	0	0	72	259
7:45 AM	8	6	49	33	0	0	96	0	0	84	84	6	0	0	0	174	1	90	4	0	0	0	95	365
8:00 AM	3	4	27	31	0	0	65	0	0	85	54	2	1	0	0	142	1	57	7	0	0	0	65	272
8:15 AM	1	3	14	25	0	1	43	0	0	45	60	2	0	0	0	107	0	57	1	0	0	0	58	208
Total	14	20	107	113	0	1	254	0	0	282	260	16	2	0	0	560	2	275	13	0	0	0	290	1104
Approach %	5.5	7.9	42.1	44.5	0.0	-	-	-	-	50.4	46.4	2.9	0.4	0.0	-	-	0.7	94.8	4.5	0.0	0.0	-	-	-
Total %	1.3	1.8	9.7	10.2	0.0	-	23.0	-	0.0	25.5	23.6	1.4	0.2	0.0	-	50.7	0.2	24.9	1.2	0.0	0.0	-	26.3	-
PHF	0.438	0.714	0.546	0.856	0.000		0.661	-	0.000	0.829	0.774	0.667	0.500	0.000	-	0.805	0.500	0.764	0.464	0.000	0.000	-	0.763	0.756
Lights	13	20	106	112	0	-	251	-	0	275	242	16	2	0	-	535	2	264	12	0	0	-	278	1064
% Lights	92.9	100.0	99.1	99.1	-	-	98.8	-	-	97.5	93.1	100.0	100.0	-	-	95.5	100.0	96.0	92.3	-	-	-	95.9	96.4
Buses	0	0	1	0	0	-	1	-	0	7	1	0	0	0	-	8	0	2	0	0	0	-	2	11
% Buses	0.0	0.0	0.9	0.0	-	-	0.4	-	-	2.5	0.4	0.0	0.0	-	-	1.4	0.0	0.7	0.0	-	-	-	0.7	1.0
Trucks	1	0	0	1	0	-	2	-	0	0	17	0	0	0	-	17	0	9	1	0	0	-	10	29
% Trucks	7.1	0.0	0.0	0.9	-	-	8.0	1	-	0.0	6.5	0.0	0.0	-	-	3.0	0.0	3.3	7.7	-	-	-	3.4	2.6
Bicycles on Crosswalk	-	-	-	-		0	-	0	-	1	-	-	-	-	0		1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Plattsburgh, NY Broad St & Peru St Wednesday, September 11,

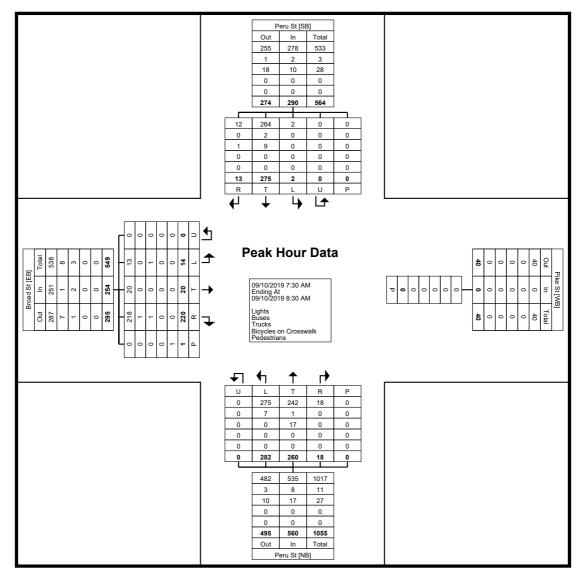
Location: 44.695596, -73.44972

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St

Site Code: Start Date: 09/10/2019 Page No: 5



Turning Movement Peak Hour Data Plot (7:30 AM)



Plattsburgh, NY Broad St & Peru St Wednesday, September 11, 2019 Location: 44.695596, -73.44972

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St Site Code: Start Date: 09/10/2019 Page No: 6

Turning Movement Peak Hour Data (1:30 PM)

		Broad St			Pik	e St	Peru St Peru St									l								
			Е	astbour	nd			West	oound			N	orthbou	nd					Sc	uthbou	nd			l
Start Time	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Int. Total
1:30 PM	5	3	16	29	0	0	53	0	0	61	61	3	0	0	0	125	0	52	5	2	0	0	59	237
1:45 PM	4	8	30	18	0	1	60	0	0	70	73	4	0	0	0	147	0	38	8	0	0	0	46	253
2:00 PM	5	8	37	32	0	0	82	0	0	54	64	5	0	0	0	123	0	60	6	0	0	0	66	271
2:15 PM	3	10	27	35	0	3	75	1	0	61	72	4	0	0	0	137	0	53	9	1	0	0	63	275
Total	17	29	110	114	0	4	270	1	0	246	270	16	0	0	0	532	0	203	28	3	0	0	234	1036
Approach %	6.3	10.7	40.7	42.2	0.0	-	-	-	-	46.2	50.8	3.0	0.0	0.0	-	-	0.0	86.8	12.0	1.3	0.0	-	-	-
Total %	1.6	2.8	10.6	11.0	0.0	-	26.1	-	0.0	23.7	26.1	1.5	0.0	0.0	-	51.4	0.0	19.6	2.7	0.3	0.0	-	22.6	
PHF	0.850	0.725	0.743	0.814	0.000	-	0.823	-	0.000	0.879	0.925	0.800	0.000	0.000	-	0.905	0.000	0.846	0.778	0.375	0.000	-	0.886	0.942
Lights	17	29	108	112	0	-	266	-	0	240	261	16	0	0	-	517	0	192	28	3	0	-	223	1006
% Lights	100.0	100.0	98.2	98.2	-	-	98.5	-	-	97.6	96.7	100.0	-	-	-	97.2	-	94.6	100.0	100.0	-	-	95.3	97.1
Buses	0	0	1	0	0	-	1	-	0	2	1	0	0	0	-	3	0	2	0	0	0	-	2	6
% Buses	0.0	0.0	0.9	0.0	-	-	0.4	-	-	0.8	0.4	0.0	-	-	-	0.6	-	1.0	0.0	0.0	-	-	0.9	0.6
Trucks	0	0	1	2	0	-	3	-	0	4	8	0	0	0	-	12	0	9	0	0	0	-	9	24
% Trucks	0.0	0.0	0.9	1.8		-	1.1	-	-	1.6	3.0	0.0		-	-	2.3	-	4.4	0.0	0.0	-	-	3.8	2.3
Bicycles on Crosswalk	-	-	-	-	-	1	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	25.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	3	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	75.0	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Plattsburgh, NY Broad St & Peru St Wednesday, September 11,

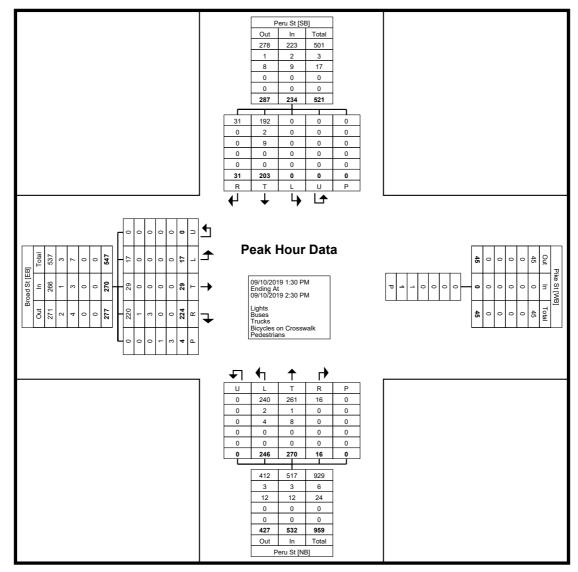
Location: 44.695596, -73.44972

184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St

Site Code: Start Date: 09/10/2019 Page No: 7



Turning Movement Peak Hour Data Plot (1:30 PM)



Plattsburgh, NY Broad St & Peru St Wednesday, September 11, 2019 Location: 44.695596, -73.44972

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Broad St & Peru St Site Code: Start Date: 09/10/2019 Page No: 8

Turning Movement Peak Hour Data (3:45 PM)

	1						···· · · ·	movement can real bata (c. 15 1 m)											r .					
			E	Broad S	t			Pik	e St				Peru St							Peru St				1
			Е	astbour	ıd			West	bound			N	orthbou	nd					So	uthbour	nd			l
Start Time	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U- Turn	Peds	App. Total	Int. Total
3:45 PM	9	5	20	32	0	0	66	0	0	77	94	4	0	0	0	175	0	63	6	0	0	1	69	310
4:00 PM	1	3	45	39	0	0	88	0	0	69	76	1	0	0	0	146	1	54	8	1	0	0	64	298
4:15 PM	5	13	30	26	0	0	74	0	0	51	65	5	0	0	0	121	0	59	9	0	0	0	68	263
4:30 PM	3	9	38	24	0	0	74	0	0	85	91	7	0	0	0	183	0	59	4	0	0	0	63	320
Total	18	30	133	121	0	0	302	0	0	282	326	17	0	0	0	625	1	235	27	1	0	1	264	1191
Approach %	6.0	9.9	44.0	40.1	0.0	-	-	-	-	45.1	52.2	2.7	0.0	0.0	-	-	0.4	89.0	10.2	0.4	0.0	-	-	-
Total %	1.5	2.5	11.2	10.2	0.0	-	25.4	-	0.0	23.7	27.4	1.4	0.0	0.0	-	52.5	0.1	19.7	2.3	0.1	0.0	-	22.2	-
PHF	0.500	0.577	0.739	0.776	0.000	-	0.858	-	0.000	0.829	0.867	0.607	0.000	0.000	-	0.854	0.250	0.933	0.750	0.250	0.000	-	0.957	0.930
Lights	17	30	132	120	0	-	299	-	0	280	321	17	0	0	-	618	1	232	27	1	0	-	261	1178
% Lights	94.4	100.0	99.2	99.2	-	-	99.0	-	-	99.3	98.5	100.0	-	-	-	98.9	100.0	98.7	100.0	100.0	-	-	98.9	98.9
Buses	0	0	1	0	0	-	1	-	0	2	0	0	0	0	-	2	0	0	0	0	0	-	0	3
% Buses	0.0	0.0	0.8	0.0	-	-	0.3	-	-	0.7	0.0	0.0	-	-	-	0.3	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Trucks	1	0	0	1	0	-	2	-	0	0	5	0	0	0	-	5	0	3	0	0	0	-	3	10
% Trucks	5.6	0.0	0.0	0.8	-	-	0.7	-	-	0.0	1.5	0.0	-	-	-	0.8	0.0	1.3	0.0	0.0	-	-	1.1	0.8
Bicycles on Crosswalk	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	-	0	-	0	-	•	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-



Plattsburgh, NY Broad St & Peru St Wednesday, September 11,

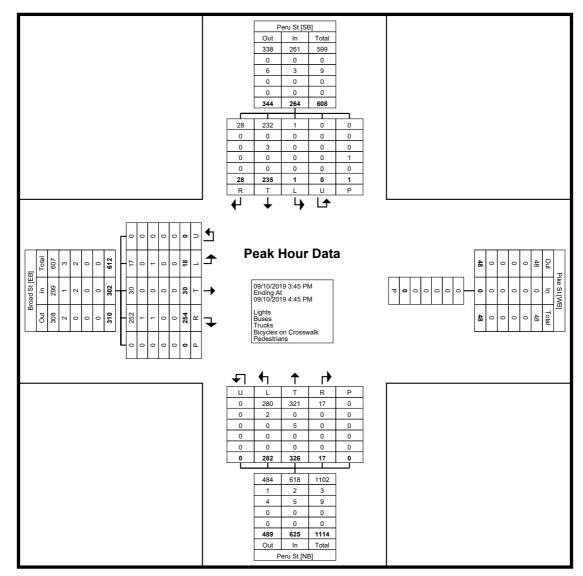
Location: 44.695596, -73.44972

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

184 Baker Rd

Count Name: Broad St & Peru St

Site Code: Start Date: 09/10/2019 Page No: 9



Turning Movement Peak Hour Data Plot (3:45 PM)

Appendix B: Capacity Analysis Worksheets



Intersection		LINE.	81 In			1 5 7
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻ	7	†	14014		<u>→</u>
Traffic Vol, veh/h	15	38	87	0	0	151
Future Vol, veh/h	15	38	87	Ö	0	151
Conflicting Peds, #/hr	8	4	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Stop	None	FIEC -	None	riee -	None
Storage Length	163	-		INOHE		INOLIG
Veh in Median Storage			0	-	-	0
Grade, %	0		0			0
Peak Hour Factor	64	64	64	64	64	64
The same of the same of	04		. 15,170			
Heavy Vehicles, %		0	1	2	2	2
Mvmt Flow	23	59	136	0	0	236
Major/Minor	Minor1	A	lajor 1	A	lajor2	
Conflicting Flow All	380	140	0	-		_
Stage 1	136	100	- 2	100		2
Stage 2	244	-	-			
Critical Hdwy	6.4	6.2	100	2	2	
Critical Hdwy Stg 1	5.4	-	_	- 8		-
Critical Hdwy Stg 2	5.4	NA .		_		_
Follow-up Hdwy	3.5	3.3		P _ 18		- 1
Pot Cap-1 Maneuver	626	913		0	-	10.00
					0	
Stage 1	895		-	0		-
Stage 2	801	2 2	-	0	0	2
Platoon blocked, %	001	040	-			-
Mov Cap-1 Maneuver	621	910	- 8			
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	895		-			11 :
Stage 2	795	-	-	-	-	-
Approach	WB	1000	NB	-	SB	J. Commission
HCM Control Delay, s	9.7	-41	0		0	
HCM LOS	A		U		U	
TOW LOO						
						0 1 7
Minor Lane/Major Mym	ţ	NBTW	BLn1V	/BLn2	SBT	1.54.5
Capacity (veh/h)	100		621	910		
HCM Lane V/C Ratio		-	0.038			
HCM Control Delay (s)			11	9.2	13-	
HCM Lane LOS		-	B	Α		
HCM 95th %tile Q(veh)	ilu o		0.1	0.2	1.0	

	•	•	1	†	Ų.	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations	W			र्स	1		
Traffic Volume (vph)	9	59	8	88	164	6	
Future Volume (vph)	9	59	8	88	164	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	11	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.97			1.00	1.00	1100	
Frt	0.883			1.00	0.995		
Flt Protected	0.993			0.996	0.000		
Satd. Flow (prot)	1736	Ō	0	1808	1713	0	
Flt Permitted	0.993			0.971	11.10		
Satd. Flow (perm)	1732	0	0	1762	1713	0	
Right Turn on Red		Yes		1102	11.10	Yes	
Satd. Flow (RTOR)	111	100			3		
Link Speed (mph)	30			30	30		
Link Distance (ft)	456			298	276		
Travel Time (s)	10.4			6.8	6.3		
Confl. Peds. (#/hr)	8	3	8	0.0	0.0	8	
Peak Hour Factor	0.53	0.53	0.53	0.53	0.53	0.53	
Heavy Vehicles (%)	0.33	0.00	14%	0.55	3%	0.55	
Adj. Flow (vph)	17	111	15	166	309	11	
Shared Lane Traffic (%)			10	100	309	KILE	
Lane Group Flow (vph)	128	0	0	181	320	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	14	ragiit	LEIL	0	0	Ngn	
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane	10			10	10		
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
Turning Speed (mph)	15	9	1.00	1.04	1.08	9	
Number of Detectors	15	9	10	2	2	9	
Detector Template	Left		Left	Thru	Thru		
	20		20		2.000		
Leading Detector (ft)				100	100		
Trailing Detector (ft)	0		0	_	0		
Detector 1 Position(ft)	0		0	0	0		
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel	~~		0.0	0.0	0.0		
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel					طالبات		
Detector 2 Extend (s)			_	0.0	0.0		
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9

GEIS 11/07/2019 AM Existing TRJ

	•	*	1	†	↓	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Permitted Phases	V 8817000 f. f.		2			7.1	
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0
Total Split (s)	19.0		24.0	24.0	24.0		23.0
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0
Lost Time Adjust (s)	0.0			0.0	0.0		
Total Lost Time (s)	4.0			4.0	4.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0
Recall Mode	None		Max	Max	Max		None
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	6.6			25.6	25.6		
Actuated g/C Ratio	0.16			0.64	0.64		
v/c Ratio	0.34			0.16	0.29		
Control Delay	8.5			7.1	7.8		
Queue Delay	0.0			0.0	0.0		
Total Delay	8.5			7.1	7.8		
LOS	Α			Α	Α		
Approach Delay	8.5			7.1	7.8		
Approach LOS	Α			Α	Α		
Intersection Summary	7 7 4	1			110		9 5 3
Area Type:	Other						
Cycle Length: 66							
Actuated Cycle Length: 4	0.1						
Natural Cycle: 50							
Control Type: Actuated-U	Incoordinated						
Maximum v/c Ratio: 0.34							
Intersection Signal Delay					ntersection		
ntersection Capacity Utilization 22.4%					CU Level	of Service	A
Analysis Period (min) 15							
Splits and Phases: 11:	Brinkerhoff &	Margare	st.				
opino and mases. 11.	Difficition &	margare	/L				

	J	→	•	•	-	1	1	†	1	1	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*5	(4		1	4			4	co Ti Utinadas
Traffic Volume (vph)	60	208	28	4	248	18	23	11	22	66	32	73
Future Volume (vph)	60	208	28	4	248	18	23	11	22	66	32	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		Ō	0		0	0		0	0		0
Storage Lanes	1		0	Ó		0	0		0	Ō		0
Taper Length (ft)	25			25			25		100	25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99	77		1.00			0.99			0.99	AUL
Frt		0.982			0.991			0.947			0.943	
Flt Protected	0.950				0.999			0.980			0.981	
Satd. Flow (prot)	1534	1756	0	0	1839	0	0	1686	0	0	1772	0
Flt Permitted	0.301	UIII =	197	XX	0.994	G211		0.850	X ne	(0),548141	0.861	
Satd. Flow (perm)	484	1756	0	0	1829	0	0	1459	0	0	1554	0
Right Turn on Red		4	Yes		W 199	Yes		1100	Yes		1004	No
Satd. Flow (RTOR)		7			4	100		34	100			110
Link Speed (mph)		30		1000	30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	7	0.0	38	38	0.0	7	6	0.0	2	2	9.1	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	2%	2%	0%	25%	5%	8%	13%	9%	0.03	2%	0.05	1%
Adj. Flow (vph)	92	320	43	6	382	28	35	17	34	102	49	112
Shared Lane Traffic (%)	32	020	70	Ų	002	20	00	1,7	J 1	102	43	112
Lane Group Flow (vph)	92	363	0	0	416	Ö	0	86	Ō	Õ	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	
Median Width(ft)	LOIL	8	rugiit	LOIL	8	ragin	Leit	0	Ngiii	Leit	0	Right
Link Offset(ft)		0			0			Ö	4.50.		0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								10			10	
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15	1.04	9	15	0.50	9	15	0.00	9	1.00	0.50	9
Number of Detectors	1	2		1	2	•	1	2	3	1	2	J
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	Ö		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		Cl+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel	OITEX	OIILX		CITEX	CITEX		CITEX	CITEX		CITEX	CITEX	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0						0.0		
Detector 2 Position(ft)	0.0	94		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Size(ft)		6			94 6			94			94	
								6 CLEv			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

GEIS 11/07/2019 AM Existing TRJ

Synchro 10 Report Page 1

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

GEIS 11/07/2019 AM Existing TRJ

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	*	-	7	1	4		4	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0		700	0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	ÑĀ		Perm	NA	
Protected Phases		4			8			2			6	10000
Permitted Phases	4			8			2			6	-	
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase					-					-		
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	of.
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag	-	_			-						~~	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)										11 OFF 14		
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.4	19.4			19.4			31.6			31.6	Sala
Actuated g/C Ratio	0.31	0.31			0.31			0.50			0.50	
v/c Ratio	0.62	0.67			0.74			0.12			0.34	
Control Delay	41.5	26.7			29.4			10.4			15.6	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	41.5	26.7			29.4			10.4			15.6	
LOS	Ď	C			Ĉ			В			В	
Approach Delay		29.7			29.4			10.4			15.6	
Approach LOS		Č			C			В			В	
Intersection Summary	11,191		11/9/1			HILL	147		12 5-2	WA I	Mark St.	53.0
Area Type:	Other								1, 7	VT		
Cycle Length: 96	4											

Actuated Cycle Length: 63.1

Natural Cycle: 70

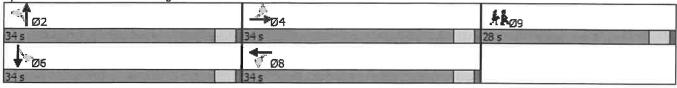
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection Capacity Utilization 50.1%

Intersection LOS: C
ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9		CITY OF	13,11		
Detector 2 Extend (s)						
Turn Type						
Protected Phases	9					
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	1.0					
Minimum Split (s)	28.0					
Total Split (s)	28.0					
Total Split (%)	29%					
Maximum Green (s)	24.0					
Yellow Time (s)	3.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)	-					
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	12.0					
Flash Dont Walk (s)	12.0					
Pedestrian Calls (#/hr)	10					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Intersection Summary	120 1 10	27 - 2 2 2 3	0.00	THE REAL PROPERTY.	11 - 150	
mo.coodon Camman)						

Intersection	STATE OF THE PARTY.	
Intersection Delay, s/veh	32.5	
Intersection LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4			4	
Traffic Vol, veh/h	0	0	0	9	37	292	6	58	6	338	164	10
Future Vol, veh/h	0	0	0	9	37	292	6	58	6	338	164	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	0	0	6	0	2	0	3	3	0
Mvmt Flow	0	0	0	11	46	360	7	72	7	417	202	12
Number of Lanes	0	0	0	0	1	1	0	1	0	0	1	0
Approach		Dally		WB	18	1130	NB	3300	231 4	SB	B	
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			0		
HCM Control Delay				15.5			10.2			46.8		
HCM LOS				C			В			E		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	9%	20%	0%	66%
Vol Thru, %	83%	80%	0%	32%
Vol Right, %	9%	0%	100%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	46	292	512
LT Vol	6	9	0	338
Through Vol	58	37	0	164
RT Vol	6	0	292	10
Lane Flow Rate	86	57	360	632
Geometry Grp	2	7	7	2
Degree of Util (X)	0.146	0.104	0.58	0.95
Departure Headway (Hd)	6.075	6.603	5.792	5.412
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	542	620	670
Service Time	4.139	4.356	3.544	3.451
HCM Lane V/C Ratio	0.146	0.105	0.581	0.943
HCM Control Delay	10.2	10.1	16.3	46.8
HCM Lane LOS	В	В	C	E
HCM 95th-tile Q	0.5	0.3	3.7	13.4

Internación												
Intersection	3.7				3-7-		7		15-5		THE ST	
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4		7	1>	
Traffic Vol, veh/h	73	214	9	4	222	69	0	3	0	48	2	54
Future Vol, veh/h	73	214	9	4	222	69	0	3	0	48	2	54
Conflicting Peds, #/hr	1	0	24	24	0	1	7	0	5	5	0	7
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	1	- 2	None			None		3	None	17 7 8		None
Storage Length	-	-	-	-	-	-	-	-		145	-	-
Veh in Median Storage	9,# -	0		170	0			0			Ö	
Grade, %	-	0	-	-	0	-	-	0	-	-	Ö	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	1		0	Ō	4	0	0	0	0	0	0	12
Mvmt Flow	100	T recent	12	5	304	95	0	4	0	66	3	74
The second second			1- 44			~	(64)					
Major/Minor	Major1	01 1 1/		Major2	11/20		Minor1	()	-	Minor2		
Conflicting Flow All	400	0	0	329	0	0	930	933	328	869	892	360
Stage 1	400			020		0	523	523	320	363	363	300
Stage 2	· · · · · · ·			11 = 131	-	-	407	410		506	529	
Critical Hdwy	4.11	UU, E	8	4.1	THE Y	-	7.1	6.5	6.2	7.1	6.5	6.32
Critical Hdwy Stg 1	721		-	7.1	- 1		6.1	5.5	0.2	6.1	5.5	0.02
Critical Hdwy Stg 2				E/700.00			6.1	5.5	7#1	6.1	5.5	11 ² (2)
Follow-up Hdwy	2.209		-	2.2		-	3.5	4	3.3	3.5	4	3.408
Pot Cap-1 Maneuver	1164			1242			250	268	718	274	283	663
Stage 1	1104	K H		1272		120	541	534	710	660	628	003
Stage 2	-		-				625	599		552	530	
Platoon blocked, %	- 3			3		- 3	023	000	- 0.5	JUZ	200	(5)
Mov Cap-1 Maneuver	1163			1209	-	- 1	195	232	695	246	245	657
Mov Cap-1 Maneuver	1103	=		1209		-	195	232	090	246	245	007
Stage 1	-	-		U	-		472	466		591	624	
Stage 2		-			-		545	595		488	462	
Staye Z		76		4		-	545	บชอ	- 5.	400	402	-
Annroach	EB	2000	SI E	WB	0.00	100	NB			SB		21.111
Approach												
HCM Control Delay, s	2.1			0.1			20.8			17.7		
HCM LOS							С			С		
Minor Long Military N	i	NITTO J	EDI	FRT		NA/SY	MODE	WDD	551	001 A		
Minor Lane/Major Mvm	Ţ	NBLn1	EBL	EBT	EBR	WBL	WBT		SBLn1			
Capacity (veh/h)		232	1163		*	1209			246	620		
HCM Lane V/C Ratio			0.086	-	-	0.005	-	-	0.267			
HCM Control Delay (s)		20.8	8.4	0		8	0		24.9	11.6		
HCM Lane LOS		С	Α	Α		Ā	Α	-	С	В		
HCM 95th %tile Q(veh)		0.1	0.3	*		0	•	180	1	0.4		

	۶	→	*	•	+	4	4	†	P	-		→
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ન	7	ሻ	\$			4	7		43-	at home and of a fair
Traffic Volume (vph)	7	61	256	19	79	1	244	15	6	0	14	7
Future Volume (vph)	7	61	256	19	79	1	244	15	6	0	14	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	Ö		50	40	- 10	0	Ö		115	0		0
Storage Lanes	0		1	1		Ö	0		1	0		0
Taper Length (ft)	25		- 141	25		21-	25			25	-	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.99	1.00
Frt			0.850		0.999			1.00	0.850		0.955	
Flt Protected		0.995	0.000	0.950	0.000			0.955	0.000		0.333	15 1
Satd. Flow (prot)	0	1666	1615	1589	1754	0	0	1645	1615	0	1176	0
Flt Permitted		0.970	1010	0.701	1704			0.719	1013	· ·	1110	
Satd. Flow (perm)	0	1624	1615	1173	1754	0	0	1237	1615	0	1176	0
Right Turn on Red		1027	Yes	1175	1707	Yes		1237	Yes	U	1170	Yes
Satd. Flow (RTOR)			328		1	100			80		9	169
Link Speed (mph)		30	320		30			30	80		30	
Link Distance (ft)		714			322			641			189	
No.		16.2			7.3			14.6	_			
Travel Time (s)		10.2			1.3		4	14.0			4.3	4
Confl. Peds. (#/hr)	0.70	0.70	0.70	0.70	0.70	0.70	1	0.70	0.70	0.70	0.70	0.70
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	14%	5%	0%	6%	1%	0%	5%	33%	0%	0%	50%	29%
Adj. Flow (vph)	9	78	328	24	101	1	313	19	8	0	18	9
Shared Lane Traffic (%)		07	000	5.1	400			000	-			
Lane Group Flow (vph)	0	87	328	24	102	0	0	332	8	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											171	
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15	May 1	9	15	o 1 100	9	15		9
Number of Detectors	. 1	2	1	1	2		1	2	1	1	_ 2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel								***				

Lane Group Ø9 Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	40
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Fit Protected	
Satd. Flow (prot)	
Fit Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	7
Detector 2 Channel	_

GEIS 11/07/2019 AM Existing TRJ

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	•	-	*	1	—	4	4	Ť	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	W.
Turn Type	Perm	NA	custom	Perm	NÃ		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2	_	2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase											-	
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0	MIN TO THE	0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	100
Walk Time (s)									_			
Flash Dont Walk (s)												13
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	52.6	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.93	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.16	0.22	0.06	0.17			0.49	0.01		0.04	
Control Delay		17.3	0.9	17.3	17.1			18.9	0.0		10.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.3	0.9	17.3	17.1			18.9	0.0		10.7	
LOS		В	Ā	B	В			B	Α		В	
Approach Delay		4.3			17.2			18.5			10.7	
Approach LOS		Ã			В			В			B	131
Interception Commons						33.0	V 1000	V	X 1 10		THE CO.	

Intersection Summary

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.49 Intersection Signal Delay: 11.6

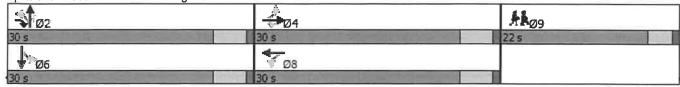
Intersection Capacity Utilization 55.9%

Analysis Period (min) 15

! Phase conflict between lane groups.

Intersection LOS: B ICU Level of Service B

Splits and Phases: 3: Peru & Bridge



GEIS 11/07/2019 AM Existing

TRJ

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Lane Group	Ø9		A 1-	J. T. T. T. T.	-325.5	-11 -11 -11	- 170 m 15
Detector 2 Extend (s)	21						
Turn Type							
Protected Phases	9						
Permitted Phases	3.						
Detector Phase							
Switch Phase							
Minimum Initial (s)	1.0						
Minimum Split (s)	22.0						
Total Split (s)	22.0						
Total Split (%)	27%						
Maximum Green (s)	18.0						
Yellow Time (s)	3.0						
All-Red Time (s)	1.0						
Lost Time Adjust (s)	-						
Total Lost Time (s)							
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0						
Recall Mode	None						
Walk Time (s)	8.0						
Flash Dont Walk (s)	10.0						
Pedestrian Calls (#/hr)	5						
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS							
Approach Delay							
Approach LOS					-1 -1 77		
Intersection Summary		1 25 1	THE RESERVE		7 7 -	THE PERSON	-21 15
into coolori commany							

	۶	-	*	1	4	4	4	†	1	1	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	f _a		22.500		100	ሻ	4	planter and the	and handed	43-	obganist No. (1
Traffic Volume (vph)	15	21	226	0	0	0	282	256	18	2	274	13
Future Volume (vph)	15	21	226	0	0	0	282	256	18	2	274	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0	12 - 1	0	60		0	0	-9	0
Storage Lanes	1		0	0		0	1		Ō	Ö		0
Taper Length (ft)	25			25		77	25			25	3 - 5-11	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.863	1.00	KAN1500	1.00	1.00	1.00	0.990	1.00	1.00	0.994	1.00
Fit Protected	0.950	0.000					0.950	0.000			U.007	
Satd. Flow (prot)	1574	1530	0	0	0	0	1652	1707	0	Õ	1813	0
FIt Permitted	0.950	1000	· ·	U	U	U	0.405	1701	U	U	0.998	U
Satd. Flow (perm)	1574	1530	Õ	0	Ô	0	704	1707	Ò	0	1810	0
Right Turn on Red	1014	1000	Yes	U	U	Yes	704	1701	Yes	U	1010	
Satd. Flow (RTOR)		283	100			169		3	168		2	Yes
		30			30			30				
Link Speed (mph)											30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)	0.70	14.9	0.70	0.70	5.8	0.70	0.70	3.1	0.70	à ===	14.6	TIL
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	7%	0%	0%	2%	2%	2%	2%	7%	0%	0%	4%	8%
Adj. Flow (vph)	20	28	297	0	0	0	371	337	24	3	361	17,
Shared Lane Traffic (%)					_		~~ ~~				11 48474	
Lane Group Flow (vph)	20	325	0	0	0	0	371	361	0	0	381	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	Ö	0					0	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel					HNES							
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94					4 10	94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						Cl+Ex			CI+Ex	
Detector 2 Channel		J						J. LA			V. ⊢∧	
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
тапт турс	i Cilii	INA					pm+pt	INA		T CITI	NΑ	

Lane Group	Ø1	Ø3	V 7 - 1	11 21 11	11111	11.50	1 -10 -1	012	
Lane Configurations									
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Storage Length (ft)									
Storage Lanes									
Taper Length (ft)									
Lane Util. Factor				54 A					
Frt									
Flt Protected									
Satd. Flow (prot)									J. 1611
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)									
Link Distance (ft)									
Travel Time (s)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									-10
Shared Lane Traffic (%)									
Lane Group Flow (vph)									
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									
Number of Detectors									
Detector Template									144
Leading Detector (ft)									
Trailing Detector (ft)									11 2 1
Detector 1 Position(ft)									
Detector 1 Size(ft)									HILLY D
Detector 1 Type									
Detector 1 Channel									
Detector 1 Extend (s)									
Detector 1 Queue (s)									
Detector 1 Delay (s)									
Detector 2 Position(ft)									
Detector 2 Size(ft)									
Detector 2 Type									
Detector 2 Channel									
Detector 2 Extend (s)									
Turn Type									

	*	-	*	1	-	*	1	†	1	1	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	Transfer	4		. o 1898			5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	17.0	17.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	7 12 1
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	400
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					95.2	95.2			65.2	
Actuated g/C Ratio	0.17	0.17					0.66	0.66			0.45	
v/c Ratio	0.07	0.65					0.59	0.32			0.46	
Control Delay	52.3	16.3					6.0	2.8			30.1	
Queue Delay	0.0	66.3					0.7	0.5			0.8	
Total Delay	52.3	82.7					6.7	3.2			30.9	
LOS	D	F					Ā	A			С	
Approach Delay		80.9						5.0			30.9	
Approach LOS		F						Ā			С	
Intersection Summary	13/11	112		30.7							0.01	1000

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 143.6

Natural Cycle: 90

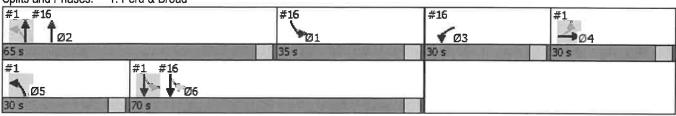
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86 Intersection Signal Delay: 29.7

Intersection Signal Delay: 29.7 Intersection LOS: C Intersection Capacity Utilization 58.5% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

	1	1	†	-	1	1			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	the first of the state of the
Lane Configurations	· Y		†	-manufact backs and	\$1000 1000	4		200	
Traffic Volume (vph)	4	37	519	3	21	479			
Future Volume (vph)	4	37	519	3	21	479			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.877		0.999			100			
Fit Protected	0.995		1011			0.998			
Satd. Flow (prot)	1824	0	3259	0	0	1765			
FIt Permitted	0.995					0.950			
Satd. Flow (perm)	1824	0	3259	0	0	1680			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	49								
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3	5 1		3.1			
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	4%		1 1 7	
Adj. Flow (vph)	5	49	683	4	28	630			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	54	0	687	0	0	658			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15		10	mi.		10			
Link Offset(ft)	Ó		Ō			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane									
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9		9	15				
Number of Detectors	Ĩ		2		Ĩ.	2			
Detector Template	Left		Thru		Left	Thru			
Leading Detector (ft)	20		100		20	100			
Trailing Detector (ft)	0		0		0	0			
Detector 1 Position(ft)	Ō		0		0	Ō			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex			
Detector 1 Channel					-				
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)			94			94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Channel									
Detector 2 Extend (s)			0.0			0.0			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2		<u> </u>	6	4	5	
Permitted Phases					6				
Detector Phase	3		2		1	6			

	1	*	†	1	-	1			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	300
Switch Phase				2002 11011	W 1801 1801 W 1	77.10			
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	17.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.0		95.2			65.2			
Actuated g/C Ratio	0.08		0.66			0.45			
v/c Ratio	0.27		0.32			0.86			
Control Delay	22.7		11.3			35.7			
Queue Delay	0.0		0.0			0.0			
Total Delay	22.7		11.3			35.7			
LOS	C		В			D			
Approach Delay	22.7		11.3			35.7			
Approach LOS	C		В			D			
Intersection Summary	12,000		1553		1 7 -			- 15	
Агеа Туре:	Other								
Cycle Length: 160									
Actuated Cycle Length:	143 6								

Actuated Cycle Length: 143.6

Natural Cycle: 90

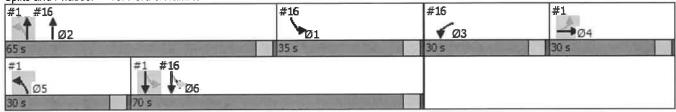
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 60.6% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Peru & Hamilton

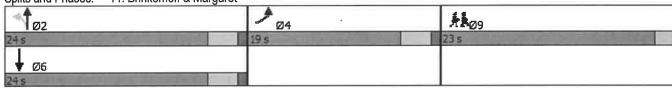


gurations veh/h veh/h Peds, #/hr ol lized ngth ian Storag	Stop 163	WBR 35 35 24 Stop None 79 4	NBT 145 145 0 Free	NBR 0 0 0 Free None	SBL 0 0 0 Free	\$BT 210 210 0 Free
Jveh gurations veh/h veh/h Peds, #/hr bl lized ngth ian Storag Factor cles, %	WBL 35 35 39 Stop 163 e, # 0 0 79	35 35 24 Stop None	145 145 0 Free	0 0 0 Free None	0 0 0 Free	210 210 0
veh/h veh/h Peds, #/hr bl lized ngth ian Storag Factor cles, %	35 35 39 Stop 163 e, # 0 0 79	35 35 24 Stop None	145 145 0 Free	0 0 0 Free None	0 0 0 Free	210 210 0
veh/h veh/h Peds, #/hr bl lized ngth ian Storag Factor cles, %	35 35 39 Stop 163 e, # 0 0 79	35 35 24 Stop None	145 145 0 Free	0 0 0 Free None	0 0 0 Free	210 210 0
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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	
Lane Configurations	*/	Fire hilling, magazithale.	AAA OO AAAA AAA AAA	4	1>	- man abi		
Traffic Volume (vph)	37	47	13	97	187	35		
Future Volume (vph)	37	47	13	97	187	35		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.93	1,00	1.00	1.00	0.99	1.00		
Frt Frt	0.925			1.00	0.979			
FIt Protected				0.004	0.919			
F	0.978	~		0.994	4000	•		
Satd. Flow (prot)	1800	0	0	1810	1688	0		
Flt Permitted	0.978		7	0.968				
Satd. Flow (perm)	1698	0	0	1755	1688	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	52				15			
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276			
Travel Time (s)	10.4			6.8	6.3			
Confl. Peds. (#/hr)	58	6	33		7 / 25	33		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%		
Adj. Flow (vph)	41	52	14	108	208	39		
Shared Lane Traffic (%)		02	17	100	200	00		
Lane Group Flow (vph)	93	0	0	122	247	0		
Enter Blocked Intersection	No	No						
			No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	14			0	Ō		to delicate the second	
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane			A	~				
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
Turning Speed (mph)	15	9	15			9		
Number of Detectors	1		1	2	2			
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	Ō		0	0	0			
Detector 1 Position(ft)	0		0	0	0			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CÎ+Ex	CI+Ex			
Detector 1 Channel	OI LLX		OI L	OI LEX	OI. LA			
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
			0.0				Communication of the	
Detector 1 Queue (s)	0.0			0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)	,			0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2	6		9	

	*	*	*	1	1	1			
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	7311 8 1	- 15 1
Permitted Phases		F 1	2					N. T	
Detector Phase	4		2	2	6				
Switch Phase									
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0		
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0		
Total Split (s)	19.0		24.0	24.0	24.0		23.0		
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%		
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0		
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0		
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0		
Lost Time Adjust (s)	0.0			0.0	0.0				
Total Lost Time (s)	4.0			4.0	4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0		
Recall Mode	None		Max	Max	Max		None		
Walk Time (s)							10.0		
Flash Dont Walk (s)							5.0		
Pedestrian Calls (#/hr)							10		
Act Effct Green (s)	6.7			28.9	28.9		-		
Actuated g/C Ratio	0.16			0.71	0.71				
v/c Ratio	0.27			0.10	0.21				
Control Delay	11.4			6.7	6.6				
Queue Delay	0.0			0.0	0.0				
Total Delay	11.4			6.7	6.6				
LOS	В			Ā	Α				
Approach Delay	11.4			6.7	6.6				
Approach LOS	В			Α	Α				
Intersection Summary								-	
Area Type:	Other								
Cycle Length: 66									
Actuated Cycle Length: 40	.7								
Natural Cycle: 45									
Control Type: Actuated-Un	coordinated								
Maximum v/c Ratio: 0.27									
Intersection Signal Delay:					ntersection				
Intersection Capacity Utiliz	ation 28.0%			I	CU Level o	of Service	Α		
Analysis Period (min) 15									

Splits and Phases: 11: Brinkerhoff & Margaret



	J	→	*	1	←	*	4	†	1	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	7-			43-			4	2000000		4	-
Traffic Volume (vph)	63	205	9	18	259	58	14	22	19	77	39	89
Future Volume (vph)	63	205	9	18	259	58	14	22	19	77	39	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0		0	0		0
Storage Lanes	1		Ō	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00			0.99			0.99			0.99	
Frt		0.994			0.977			0.953			0.941	
Fit Protected	0.950				0.997			0.988			0.982	
Satd. Flow (prot)	1534	1761	0	0	1836	0	0	1832	0	0	1791	0
Flt Permitted	0.346				0.977			0.931			0.881	
Satd. Flow (perm)	551	1761	0	0	1796	0	0	1723	0	0	1603	0
Right Turn on Red			Yes		200	Yes	5.00		Yes			Yes
Satd. Flow (RTOR)		2			11			21			42	
Link Speed (mph)		30			30			30	1100		30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19		35	35		19	6		4	4	= 0711	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	33%	0%	4%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	68	223	10	20	282	63	15	24	21	84	42	97
Shared Lane Traffic (%)		To ATTEN .		, and			ma.			2.5		
Lane Group Flow (vph)	68	233	Ő	0	365	Ō	0	60	0	0	223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	770 00	8			8			0			0	202
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	_	1	2	_	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	1 110
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		Õ	0		0	Ō	
Detector 1 Position(ft)	0	0		0	Ö		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel							11133					
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	IN TO	94		- Line	94		15/	94		VIVE B	94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		1										

Lane Group	Ø9	
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		II SI POLITICAL
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
FIt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%) Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		- 4
Detector 2 Channel		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)	diene Mr.	0.0			0.0			0.0	3.00		0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6	372	
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase							-	_				
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	-c
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag					* -						3.2	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	18.0	18.0			18.0			31.7			31.7	
Actuated g/C Ratio	0.29	0.29			0.29			0.51			0.51	
v/c Ratio	0.42	0.45			0.69			0.07			0.26	
Control Delay	29.3	22.2			27.5			10.4			11.8	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	29.3	22.2			27.5			10.4			11.8	
LOS	С	C			С			В		1 1 21 1	В	1
Approach Delay		23.8			27.5			10.4			11.8	
Approach LOS		C			Ċ			В			B	0.94
Intersection Summary	1.00		ан ј. В		Sell by	4.16	Regiles	5/2		Burt 19		TAR S
A Time!	Other						2.00				- 10	100

Area Type: Other

Cycle Length: 96

Actuated Cycle Length: 61.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69 Intersection Signal Delay: 21.5 Intersection Capacity Utilization 57.9%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9		45.6		- 1-50	W. J. Sa	
Detector 2 Extend (s)							
Turn Type							
Protected Phases	9						
Permitted Phases							
Detector Phase							
Switch Phase							
Minimum Initial (s)	1.0						
Minimum Split (s)	28.0						
Total Split (s)	28.0			100			
Total Split (%)	29%						
Maximum Green (s)	24.0						
Yellow Time (s)	3.0						
All-Red Time (s)	1.0						
Lost Time Adjust (s)	-						
Total Lost Time (s)							
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0						
Recall Mode	None						
Walk Time (s)	12.0						
Flash Dont Walk (s)	12.0						
Pedestrian Calls (#/hr)	10						
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS							
Approach Delay							
Approach LOS							
		U 55				4 2 G	
Intersection Summary			-	1 2 6 1	Transfer or the second		

Intersection	d la l	ALL S					MP	arain.	100		200	37.0
Intersection Delay, s/veh	14.7											
Intersection LOS	В											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4		100,101	4	
Traffic Vol, veh/h	0	0	0	28	34	303	16	91	12	276	140	20
Future Vol. veh/h	0	0	0	28	34	303	16	91	12	276	140	20

ITAIIIC VOI, VEII/IT	U	U	U	40	34	303	10	91	12	2/0	140	20.
Future Vol, veh/h	0	0	0	28	34	303	16	91	12	276	140	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	0	0	3	0	6	8	3	7	5
Mvmt Flow	0	0	0	29	35	316	17	95	13	288	146	21
Number of Lanes	0	Ō	0	Ō	1	1	0	1	0	0	1	0
Approach	. 7	Sept 1	4.7	WB	1435	Chami	NB	11		SB	11-1	77114
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB			1447			WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				. 1			2			0		
HCM Control Delay				12.2			9.9			18.1		
HCM LOS				В			Α			С		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	S. TU
Vol Left, %	13%	45%	0%	63%	
Vol Thru, %	76%	55%	0%	32%	
Vol Right, %	10%	0%	100%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	119	62	303	436	
LT Vol	16	28	<u>0</u>	276	
Through Vol	91	34	0	140	
RT Vol	12	0	303	20	
Lane Flow Rate	124	65	316	454	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.192	0.113	0.469	0.664	
Departure Headway (Hd)	5.572	6.29	5.352	5.262	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	643	570	672	686	
Service Time	3.608	4.022	3.083	3.288	
HCM Lane V/C Ratio	0.193	0.114	0.47	0.662	
HCM Control Delay	9.9	9.8	12.7	18.1	
HCM Lane LOS	A	A	В	C	
HCM 95th-tile Q	0.7	0.4	2.5	5	

Intersection	CON TRAIN		353		bila	-21	1					40
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Secretary Section	43			4	- North All Ale		4		ሻ	7>	
Traffic Vol, veh/h	92	201	9	4	216	49	8	4	8		6	111
Future Vol, veh/h	92	201	9	4	216	49	8	4	8		6	111
Conflicting Peds, #/hr	5	0	14	14	0	5	2	0	7	7	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop		Stop	Stop
RT Channelized	1100	1100	None	1100	1100	None	Olop	Clop	None	Otop	Clop	None
Storage Length	-			-		110110			-	145	-	110110
Veh in Median Storage	e.# -	0			Ö	Į.		0		170	0	
Grade, %	J, 11	0	-	_	Ö			Ö	-	=	0	_
Peak Hour Factor	93	93	93	93	93	93	93	93	93		93	93
Heavy Vehicles, %	1	2	0	0	2	0	0	25	0	5	0	6
Mymt Flow	99	216	10	4	232	53	9	4	9		6	119
	00	210	ijŸ	7		00	J	, T	J	- 00	J	110
Major/Minor	Majord			Ania-2			Aine-A			Miner 5		
	Major1	^		Major2			Minor1	704		Minor2	746	000
Conflicting Flow All	290	0	0	240	0	0	764	731	242	705	710	266
Stage 1		•					433	433	1	272	272	1.54
Stage 2	4 4 2	-	-	7.7	-	_	331	298	-	433	438	-
Critical Hdwy	4.11	=		4.1			7.1	6.75	6.2	7.15	6.5	6.26
Critical Hdwy Stg 1				-	-	-	6.1	5.75		6.15	5.5	
Critical Hdwy Stg 2	0.000			-	I Vel	+	6.1	5.75	-		5.5	0.074
Follow-up Hdwy	2.209	_	-	2.2		-	3.5	4.225	3.3	3.545	4	3.354
Pot Cap-1 Maneuver	1278	141	-	1339		2	323	322	802	347	361	763
Stage 1	-	-	_	-	-	-	605	544	7	727	688	-
Stage 2		-			1	= 1	687	627		595	582	
Platoon blocked, %	4070	-	-	4040		-		000	700	011	001	
Mov Cap-1 Maneuver	1272		-	1318	- 5		245	286	783	311	321	758
Mov Cap-2 Maneuver		-	-	-	_		245	286	-	311	321	-
Stage 1			150.0		٠		543	487		659	682	
Stage 2		_	-	-	-		570	621		527	521	
	-											
Approach	EB		Marie I	WB	1-2	133	NB	10.00	4	SB	THOUSE.	Livit
HCM Control Delay, s	2.5	75		0.1			15.9			14.2		
HCM LOS							C			В		
To Bour &												
Minor Lane/Major Mym	nt N	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR 9	SBLn1	SBLn2	13.1	
Capacity (veh/h)		352	1272			1318			311	709		PP 18
HCM Lane V/C Ratio		0.061				0.003			0.218			
HCM Control Delay (s)		15.9	8.1	Ö		7.7	0	THE STATE	19.8	11.2		
HCM Lane LOS		C	A	Ā	72	A	A		C	В		
HCM 95th %tile Q(veh)	1 5 8	0.2	0.3			0			0.8	0.6		
TOW COUL MINO GOVERN		V.Z	0.0			U			0.0	0.0		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	77	'n	}			ર્ન	7		44	
Traffic Volume (vph)	8	77	195	12	94	3	248	13	12	2	10	16
Future Volume (vph)	8	77	195	12	94	3	248	13	12	2	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		0	0		115	0	1135	
Storage Lanes	0		1	1		Ö	0		1	Ô		0
Taper Length (ft)	25			25			25			25		8,20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97	0.99	1.00			1.00	0.98		0.99	
Frt			0.850		0.996				0.850		0.923	
Fit Protected		0.996		0.950				0.955			0.997	
Satd. Flow (prot)	0	1705	1553	1685	1730	0	0	1696	1252	0	1445	0
FIt Permitted		0.975		0.699	5.19.	721	NI SERÎN	0.715			0.986	
Satd. Flow (perm)	0	1665	1512	1225	1730	0	0	1264	1223	0	1429	0
Right Turn on Red	w.		Yes			Yes	Dine in		Yes	u A		Yes
Satd. Flow (RTOR)			205		2				80		17	100
Link Speed (mph)		30			30			30	1400		30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	19	1012	8	8	1.0	19	3	1110	2	2	1.0	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	40%	0%	4%	0%	2%	0%	2%	30%	29%	0%	31%	0%
Adj. Flow (vph)	8	81	205	13	99	3	261	14	13	2	11	17
Shared Lane Traffic (%)			T.F.E.			-		-		_		
Lane Group Flow (vph)	Ō	89	205	13	102	0	ō	275	13	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0		- Fan M	10	13		0		2011	0	i ugii.
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											27,0	
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15	اراند	9	15	u Wi	9	15		9
Number of Detectors	1	2	1	1	2	_	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	Ö	0	0	0		Ó	0	0	0	0	
Detector 1 Position(ft)	0	0	Ö	0	Ö		0	Ō	0	Ō	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	1. 1.	94	0.0	7.0	94			94	0.0	0.0	94	- 32-
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex		J. C.	CI+Ex			CI+Ex			Cl+Ex	
Detector 2 Channel		G, 16/1			er en			J. L.			OI - EA	

Lane <u>Group</u>	<u>Ø</u> 9	 AND I		1000	120	T Bay		0
Lane Configurations								
Traffic Volume (vph)								
Future Volume (vph)								
Ideal Flow (vphpl)								
Lane Width (ft)								
Storage Length (ft)								
Storage Lanes								
Taper Length (ft)								
Lane Util. Factor								
Ped Bike Factor								W.
Frt								
Flt Protected								70.7
Satd. Flow (prot)								
Flt Permitted								
Satd. Flow (perm)								
Right Turn on Red								1
Satd. Flow (RTOR)								
Link Speed (mph)								
Link Distance (ft)								
Travel Time (s)								
Confl. Peds. (#/hr)								
Peak Hour Factor								
Heavy Vehicles (%)								
Adj. Flow (vph)								
Shared Lane Traffic (%)								
Lane Group Flow (vph)								
Enter Blocked Intersection								
Lane Alignment								
Median Width(ft)								
Link Offset(ft)							100	
Crosswalk Width(ft)								
Two way Left Turn Lane								
Headway Factor								
Turning Speed (mph)								
Number of Detectors								
Detector Template								
Leading Detector (ft)								
Trailing Detector (ft)								
Detector 1 Position(ft)								
Detector 1 Size(ft)								
Detector 1 Type								
Detector 1 Channel								
Detector 1 Extend (s)								
Detector 1 Queue (s)								
Detector 1 Delay (s)								
Detector 2 Position(ft)								
Detector 2 Size(ft)								
Detector 2 Type								
Detector 2 Channel								
		 	 					_

	*	-	*	1	4—	•	4	†	-	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)	Tang 1	0.0	110	0 10	0.0		, - , ,	0.0			0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	30
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag			-					~ -				
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)				—.								
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.15	0.16	0.03	0.17			0.40	0.02		0.04	
Control Delay		17.2	1.0	17.2	17.1			16.2	0.1		8.9	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.2	1.0	17.2	17.1			16.2	0.1		8.9	
LOS		В	A	В	В			В	Ā		Α	
Approach Delay		5.9	_	-	17.1			15.5			8.9	
Approach LOS		A	VIII.		В			В			A	19, 19

Intersection Summary

Агеа Туре:

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Other

Maximum v/c Ratio: 0.40 Intersection Signal Delay: 11.6 Intersection Capacity Utilization 52.9%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge

₩ 02		A kog
30 s	30 s	22 s
Ø 6	₹ Ø8	
30 s	30 s	

GEIS 11/07/2019 Midday Existing TRJ

Lane Group	Ø9	25 8 1 1 1		100	Control Co
Detector 2 Extend (s)					
Turn Type					
Protected Phases	9				
Permitted Phases					
Detector Phase					T of the city
Switch Phase					
Minimum Initial (s)	1.0				
Minimum Split (s)	22.0				
Total Split (s)	22.0				
Total Split (%)	27%				
Maximum Green (s)	18.0				-15 H-177
Yellow Time (s)	3.0				
All-Red Time (s)	1.0				
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0				
Recall Mode	None				
Walk Time (s)	8.0				
Flash Dont Walk (s)	10.0				
Pedestrian Calls (#/hr)	5				
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					- 1 E (8)
Total Delay					
LOS					
Approach Delay					
Approach LOS		 11 13 31	A = = 171-27		
ntersection Summary		 Sala Bulley		4.5 17 /2	

	۶	→	*	1	+	4	1	†	1	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	4					ሻ	1>	and best pass of features		4	-3.42
Traffic Volume (vph)	30	27	215	Ö	0	0	245	251	13	Õ	195	24
Future Volume (vph)	30	27	215	0	0	Ö	245	251	13	0	195	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		Ō	0		0	60		Ō	Ō	-	0
Storage Lanes	1		Õ	Õ		0	1		Ö	0		0
Taper Length (ft)	25			25		1341	25			25		. 12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						3500	1.00	1.00			1.00	
Frt		0.867					-	0.993			0.985	
Fit Protected	0.950						0.950					
Satd. Flow (prot)	1685	1511	0	0	0	0	1636	1771	0	0	1787	0
FIt Permitted	0.950			1-11			0.515				20 110	
Satd. Flow (perm)	1685	1511	0	0	0	0	884	1771	0	0	1787	0
Right Turn on Red	N 10		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		211						2			5	1.723
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	1
Confl. Peds. (#/hr)							4	4	1	1		4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%	3%	3%	0%	0%	5%	0%
Adj. Flow (vph)	32	29	229	0	0	0	261	267	14	0	207	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	258	0	0	0	0	261	281	Ō	Ō	233	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	3
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane					The state of						100,000	
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2		1	2	31
Detector Template	Left	Thru					Left	Thru		Left	Thru	3,
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	Ō	Ō					0	Ö		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	Cl+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel										OI - ZX	OI LX	
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94					0.0	94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex				1500		CI+Ex			CI+Ex	
Detector 2 Channel		OI LX						O. LX			OI. LA	

Lane Group	Ø1	Ø3		91.5		E requel	
Lane Configurations							
Traffic Volume (vph)							
Future Volume (vph)							
Ideal Flow (vphpl)							172
Lane Width (ft)							
Storage Length (ft)							
Storage Lanes							
Taper Length (ft)							
Lane Util. Factor							
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)							
Flt Permitted							
Satd. Flow (perm)							
Right Turn on Red							
Satd. Flow (RTOR)							
Link Speed (mph)							
Link Distance (ft)							
Travel Time (s)							
Confl. Peds. (#/hr)							
Peak Hour Factor							
Heavy Vehicles (%)							
Adj. Flow (vph)							
Shared Lane Traffic (%)							
Lane Group Flow (vph)							
Enter Blocked Intersection							
Lane Alignment							
Median Width(ft)							
Link Offset(ft)							
Crosswalk Width(ft)							
Two way Left Turn Lane					N Section		
Headway Factor							
Turning Speed (mph)							
Number of Detectors							
Detector Template							
Leading Detector (ft)							
Trailing Detector (ft)							
Detector 1 Position(ft)							
Detector 1 Size(ft)							
Detector 1 Type							
Detector 1 Channel							
Detector 1 Extend (s)							
Detector 1 Queue (s)							
Detector 1 Delay (s)							
Detector 2 Position(ft)							N Comment
Detector 2 Size(ft)							
Detector 2 Type							
Detector 2 Channel							

	→	-	*	1	←	4	4	†	-	1	Į.	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)	-	0.0						0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA			NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					91.7	91.7			65.3	
Actuated g/C Ratio	0.18	0.18					0.65	0.65			0.47	
v/c Ratio	0.11	0.58					0.38	0.24			0.28	
Control Delay	52.2	17.9					4.4	3.3			25.0	
Queue Delay	0.0	68.8					0.5	0.7			0.0	
Total Delay	52.2	86.7					4.9	4.0			25.0	
LOS	D	F					Α	Ā			C	
Approach Delay		82.9						4.5			25.0	
Approach LOS		F						Ā			Ĉ	
Intersection Summary	ALC: U		-78	1000	47-	HALL	10.05	1 3 5	Tale		Tiell	182

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 140.1

Natural Cycle: 90

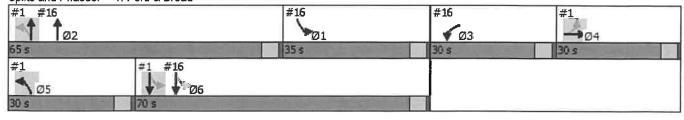
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58 Intersection Signal Delay: 30.3 Intersection Capacity Utilization 53.0%

Intersection LOS: C ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3	
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	3	
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	10.0	12.0	
Minimum Split (s)	15.0	17.0	
Total Split (s)	35.0	30.0	
Total Split (%)	22%	19%	
Maximum Green (s)	30.0	25.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	1.0	1.0	
Lost Time Adjust (s)		·	
Total Lost Time (s)			
Lead/Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	
Recall Mode	None	None	
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Intersection Summary		100	

	*	4	1	1	-				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Lane Configurations	W	a promotion de la forma de la	†	***************************************	ale Alemine	न	***	in Solds	
Traffic Volume (vph)	14	49	460	9	49	361			
Future Volume (vph)	14	49	460	9	49	361			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.895		0.997			219,5			
Flt Protected	0.989					0.994			
Satd. Flow (prot)	1850	0	3412	0	0	1810			
FIt Permitted	0.989	185		N III		0.886			
Satd. Flow (perm)	1850	0	3412	0	0	1613			
Right Turn on Red	A 1 7 1	Yes		Yes	F1-4-1	Total Inc.			
Satd. Flow (RTOR)	52		1	100					
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3			3.1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%			
Adj. Flow (vph)	15	52	489	10	52	384			
Shared Lane Traffic (%)			EU B	NULLE	UE MAN				
Lane Group Flow (vph)	67	0	499	0	0	436			
Enter Blocked Intersection	No.	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15	, ugit	10	r agric	Lon	10			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane	10		10			10			
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9	1,01	9	15	1.04			
Number of Detectors	1		2		1	2			
Detector Template	Left		Thru		Left	Thru			
Leading Detector (ft)	20		100		20	100			
Trailing Detector (ft)	0		0		0	0			
Detector 1 Position(ft)	Ö		0		0	Ò			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex			
Detector 1 Channel	OILLX		OI. LX		OI LX	OITEX			
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			entra entra de la composición del composición de la composición de la composición de la composición del composición de la composición del composición de la composición del co
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	0.0		94		0.0	94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Channel			CITEX			CITEX			
Detector 2 Extend (s)			0.0			0.0			
Turn Type	Prot		NA		nm.int	NA			
Protected Phases	3		2		pm+pt	NA 6	4	5	
Permitted Phases	3				6	O	4	Ö	
Detector Phase	3		2		1	e			
Detector Filase	<u> </u>				I	6			

	1	*	†	1	1	1					
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	Language .		
Switch Phase						-					
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0			
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0			
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0			
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%			
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0			
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0		0.0			0.0					
Total Lost Time (s)	5.0		5.0			5.0					
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes			
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0			
Recall Mode	None		Max		None	Max	Max	None			
Act Effct Green (s)	12.1		91.7			65.3					
Actuated g/C Ratio	0.09		0.65			0.47					
v/c Ratio	0.33		0.22			0.58					
Control Delay	27.0		10.5			25.6					
Queue Delay	0.0		0.0			3.5					
Total Delay	27.0		10.5			29.1					
LOS	С		В			С					
Approach Delay	27.0		10.5			29.1					
Approach LOS	C		В			С					
Intersection Summary		No. 1					. Lybe	4-95		1 - 4 B	P
Area Type:	Other										
Cycle Length: 160											
Actuated Cycle Length: 1	40.1										
Natural Cycle: 90											
Control Type: Actuated-U	ncoordinated										

Control Type: Actuated-Uncoordinated

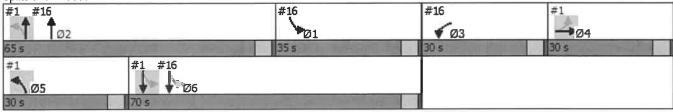
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 19.7

Intersection Capacity Utilization 57.2%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Peru & Hamilton



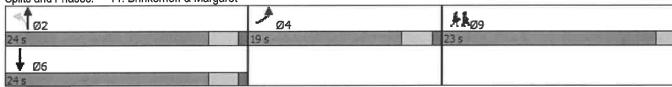
-						
Intersection		-	11.30			
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
200000000000000000000000000000000000000				NDI	SDL	
Lane Configurations	77	7	452		0	404
Traffic Vol, veh/h	27	45	153	0	0	181
Future Vol, veh/h		45	153	0	0	181
Conflicting Peds, #/hr	46	11	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	100	None	-	None		None
Storage Length	163	_	-	-		-
Veh in Median Storage			0			0
Grade, %	.0	-	0	-	-	0
Peak Hour Factor	87	87	87	92	92	87
Heavy Vehicles, %	0	0	1	2	2	1
Mvmt Flow	31	52	176	0	0	208
				-		Notice,
Major/Minor	Minor1	a	Лајог1	Ā	Aniero	
			-		/lajor2	
Conflicting Flow All	430	187	0	-	-	-
Stage 1	176			A S		11 8
Stage 2	254		-	-	-	-
Critical Hdwy	6.4	6.2				•
Critical Hdwy Stg 1	5.4	-		-	-	-
Critical Hdwy Stg 2	5.4	(*)			+	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	586	860		0	0	100
Stage 1	859	-	-	0	0	-
Stage 2	793	- 3		0	0	. 11 (2)
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	560	851	10	18.		- 1
Mov Cap-2 Maneuver	560	-		_	-	
Stage 1	859		-41	1112		14
Stage 2	758	-	-			
Stage 2	750	-			-	
THE RESERVE						11.2
Approach	WB		NB		SB	17
HCM Control Delay, s	10.4		0	THE R	0	
HCM LOS	В					
1.0	7	Almmi	(D)	m	OPT	
Minor Lane/Major Mvm	t	NBIM	BLn1V		SBT	-
Capacity (veh/h)			560	851		
HCM Lane V/C Ratio		-	0.055		-	
HCM Control Delay (s)			11.8	9.5		
HCM Lane LOS			В	Α	-	
HCM 95th %tile Q(veh)	a N	#	0.2	0.2		

	*	7	4	†	↓	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø 9	1000
Lane Configurations	**			र्स	- ↑			
Traffic Volume (vph)	22	56	8	129	221	39		
Future Volume (vph)	22	56	8	129	221	39		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.95	1.00	1.00	1.00	0.99	1.00		
Frt	0.903			1.00	0.980			
Flt Protected	0.986			0.997	0.300			
Satd. Flow (prot)	1739	Ô	0	1831	1680	0		
Fit Permitted		U	U		1000	Ū		
	0.986		Ö	0.984	4000			
Satd. Flow (perm)	1690	0	0	1803	1680	0		
Right Turn on Red	20	Yes			* 4	Yes		
Satd. Flow (RTOR)	62			5-	14		The light was to be a light of the light of	
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276			
Travel Time (s)	10.4			6.8	6.3			
Confl. Peds. (#/hr)	46	5	39			39		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Heavy Vehicles (%)	0%	2%	0%	0%	2%	3%		
Adj. Flow (vph)	24	62	9	142	243	43		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	86	0	0	151	286	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	14			0	0			
Link Offset(ft)	0			0	Õ			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane	10			10	10			
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
Turning Speed (mph)	15	9	15	1.07	1.00	9		1100
Number of Detectors	1	3	1	2	2	9		
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)					0			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex			
Detector 1 Channel			`					
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			135
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)				0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2	6		9	

GEIS 11/07/2019 PM Existing Synchro 10 Report TRJ Page 1

	À	1	4	†	↓	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Permitted Phases			2	W X			
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0
Total Split (s)	19.0		24.0	24.0	24.0		23.0
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0
Lost Time Adjust (s)	0.0			0.0	0.0		
Total Lost Time (s)	4.0			4.0	4.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0
Recall Mode	None		Max	Max	Max		None
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	6.5			29.3	29.3		
Actuated g/C Ratio	0.16			0.72	0.72		
v/c Ratio	0.26			0.12	0.24		
Control Delay	10.1			6.5	6.7		
Queue Delay	0.0			0.0	0.0		
Total Delay	10.1			6.5	6.7		
LOS	В			A	Α		
Approach Delay	10.1			6.5	6.7		
Approach LOS	В			Α	Α		
Intersection Summary	-57-7						
Area Type:	Other						
Cycle Length: 66							
Actuated Cycle Length: 40	0.9						
Natural Cycle: 50							
Control Type: Actuated-U	ncoordinated						
Maximum v/c Ratio: 0.26					2 31 B		
Intersection Signal Delay:					ntersection		
Intersection Capacity Utiliz	zation 26.2%			10	CU Level of	of Service	Α
Analysis Period (min) 15							

Splits and Phases: 11: Brinkerhoff & Margaret



	۶	→	*	1	•	4	4	†	~	1	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	75	1≽			4			4			4	
Traffic Volume (vph)	70	212	30	19	313	41	31	37	25	75	37	73
Future Volume (vph)	70	212	30	19	313	41	31	37	25	75	37	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	Ŏ		0	0		0	0	F1 - 144	0
Storage Lanes	1		0	Ö		0	0		Ō	0		0
Taper Length (ft)	25			25			25	10.9		25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		4-1-3	0.98	100
Frt		0.981			0.985			0.964			0.947	
FIt Protected	0.950				0.997			0.983			0.980	
Satd. Flow (prot)	1504	1729	0	0	1850	0	0	1791	0	0	1732	0
FIt Permitted	0.318				0.976	1 15	- 11 17	0.886	F 5.5.	d v Y	0.858	
Satd. Flow (perm)	497	1729	0	0	1809	0	0	1604	0	0	1514	0
Right Turn on Red	242 111		Yes	1000		Yes			Yes			Yes
Satd. Flow (RTOR)		8	, , ,		7			20	. 00		35	100
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19	0.0	23	23		19	18	0.0	3	3	0.1	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	0%	6%	4%	0%	6%	3%	0%	2%	8%	2%
Adj. Flow (vph)	76	230	33	21	340	45	34	40	27	82	40	79
Shared Lane Traffic (%)	10	200	, o		0,10	10	-	10	21	02	70	13
Lane Group Flow (vph)	76	263	0	0	406	Õ	0	101	Ō	0	201	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Loit	8	rugin	LOIL	8	rugire	Loit	0	rugiit	Loit	0	ragin
Link Offset(ft)		0			0			Ő			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		15 To									10	
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15	1.01	9	15	0.00	9	15	0.00	9	15	0.00	9
Number of Detectors	1	2		1	2		1	2	•	1	2	J
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	Ö		0	0		Ö	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	Cl+Ex		CI+Ex	CI+Ex	
Detector 1 Channel	OITEX	OITLX		OITEX	OILLX		CITEX	CITEX		CITEX	CITEX	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Detector 2 Position(ft)	0.0	94		0.0	94		0.0	94		0.0	0.0	
		6			6			6			94	
Detector 2 Size(ft)		CI+Ex			Cl+Ex			CI+Ex				
Detector 2 Type Detector 2 Channel		CITEX			CITEX			CITEX			CI+Ex	
Detector 2 Charmer												

Lane Group	Ø 9	11.		11 1 1 1 1	
Lane Configurations					
Traffic Volume (vph)			4		
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					- 11 (11 11 1
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
FIt Protected					
Satd. Flow (prot)					
Flt Permitted	-,,				
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					

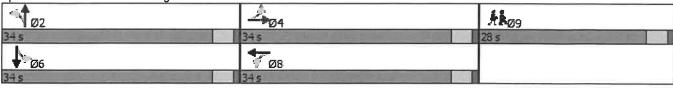
	*	-	1	*	-	1	1	†	1	1	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	11.		0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	ÑA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6	_	
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase											_	
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												-8-
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.1	19.1			19.1			31.6			31.6	
Actuated g/C Ratio	0.30	0.30			0.30			0.50			0.50	
v/c Ratio	0.50	0.50			0.73			0.12			0.26	N 100
Control Delay	33.5	22.2			29.2			12.0			12.5	
Queue Delay	0.0	0.0	7		0.0			0.0			0.0	
Total Delay	33.5	22.2			29.2			12.0			12.5	
LOS	Ĉ	C			C			В			В	
Approach Delay		24.8			29.2			12.0			12.5	
Approach LOS		C			Ċ			В			В	4
Intersection Summary			11 11/01	153.00		WE J		1 - 1950		T= _103/	-11. 71	
Area Type:	Other							1.00	THE P			
Cycle Length: 96												
Actuated Cycle Length: 62	8											
Natural Cycle: 65												
Control Type: Actuated-Un	coordinated											

Maximum v/c Ratio: 0.73 Intersection Signal Delay: 22.9 Intersection Capacity Utilization 57.3%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	
Detector 2 Extend (s)		
Turn Type		
Protected Phases	9	
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	
Minimum Split (s)	28.0	
Total Split (s)	28.0	
Total Split (%)	29%	
Maximum Green (s)	24.0	
Yellow Time (s)	3.0	
All-Red Time (s)	1.0	
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	12.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	10	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
Los		
Approach Delay		
Approach LOS		
Intersection Summary	ULLES THE	

Intersection		Market Land Appendix to the World State of the Control of the Cont
Intersection Delay, s/veh	18.9	
Intersection LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4		Mr. A.M.	4	0.50.0
Traffic Vol, veh/h	0	0	0	17	41	415	12	165	13	289	110	19
Future Vol, veh/h	Ô	Ő	Õ	17	41	415	12	165	13	289	110	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	5	5	1	0	1	0	1	4	Ō
Mvmt Flow	0	0	0	18	43	437	13	174	14	304	116	20
Number of Lanes	0	0	0	0	1	1	0	1	0	0	1	0
Approach				WB	The state of	100	NB	11.11	1911 5	SB	TIE	
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			0		10.0
HCM Control Delay				19.1			12.2			21.6		
HCM LOS				C			В			С		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	W 155 2 B Y
Vol Left, %	6%	29%	0%	69%	
Vol Thru, %	87%	71%	0%	26%	
Vol Right, %	7%	0%	100%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	190	58	415	418	
LT Vol	12	17	0	289	
Through Vol	165	41	Ō	110	
RT Vol	13	0	415	19	
Lane Flow Rate	200	61	437	440	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.335	0.111	0.692	0.706	
Departure Headway (Hd)	6.034	6.56	5.7	5.777	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	592	545	633	625	
Service Time	4.106	4.317	3.456	3.834	
HCM Lane V/C Ratio	0.338	0.112	0.69	0.704	
HCM Control Delay	12.2	10.1	20.4	21.6	
HCM Lane LOS	В	В	C	C	
HCM 95th-tile Q	1.5	0.4	5.5	5.7	

-												
Intersection	41741		5 11	B. Ti	3.709	- H					200	36 4
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		. 1924	4		۲	f)	
Traffic Vol, veh/h	87		8	3	265	42	8		7		3	
Future Vol, veh/h	87		8	3	265	42	8		7		3	
Conflicting Peds, #/hr	4		30	30	0	4	2	-	6	17.5	0	
Sign Control	Free		Free	Free	Free	Free	Stop	Stop	Stop	_	Stop	Stop
RT Channelized	1100				-		-	-	None		Clop	None
Storage Length		_	-			-	_	_	-	145	-	110110
Veh in Median Storage	e.# -	0			0			Ö	11 5.		0	
Grade, %	-			-	Ö	-	-	0	-		0	_
Peak Hour Factor	97		97	97	97	97	97		97		97	97
Heavy Vehicles, %	0	1	0	Ō	1	0	0		0		0	5
Mymt Flow	90	224	8	3	273	43	8	3	7		3	103
MAUICLION	30	224	0	J	210	40	0	J	- 1	00	3	103
Major/Minor	Major1	4 1 4 5		Мајог2	E 188		Minori		1711 - 1	Minor2		117
Conflicting Flow All	320	0	0	262	0	0	794	764	264	724	747	301
Stage 1	020						438	438	201		305	001
Stage 2	-	-	_	-	_ = 5	_	356	326		419	442	30
Critical Hdwy	4.1			4.1			7.1	6.5	6.2	7.12	6.5	6.25
Critical Hdwy Stg 1	-		_		-	-	6.1	5.5	0.2	4 14	5.5	0.20
Critical Hdwy Stg 2	-	-				*	6.1	5.5		6.12	5.5	
Follow-up Hdwy	2.2	_		2.2			3.5	4	3.3	3.518	4	3.345
Pot Cap-1 Maneuver	1251	17 - 12	_	1314		1	308	336	780	341	344	732
Stage 1	1501			1017		-	601	582	700	705	666	102
Stage 2	_	(1) 7/1		ne fig			666	652	UL J-	612	580	
Platoon blocked, %	- 5		1110 3	18		- II - 350	000	002	-	012	500	MIN S
Mov Cap-1 Maneuver	1246			1270	1,110	1	237	296	749	310	303	728
Mov Cap-2 Maneuver	1240		·	12/0	15		237	296	-	310	303	120
Stage 1	- X-				-		532	516	-	644	661	_
		*	TV.				566			77.01.		*
Stage 2				_		-	ססכ	647		549	514	
Approach	EB	r us	4	WB		lu-	NB	II.UUS	FEN	SB	3,8	S L 3
HCM Control Delay, s	2.3			0.1			16.3			15.6	1	
HCM LOS	2.0			0.1			C			13.0 C		
TIGINI LOG												
Minor Lane/Major Mym	i i	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1	SBLn2		
Capacity (veh/h)		338	1246						310	699		TOU.
HCM Lane V/C Ratio		0.055		-		0.002			0.283			
HCM Control Delay (s)		16.3	8.1	0		7.8	0		21.1	11.1		
HCM Lane LOS		10.3 C	A	A		Α.	A		C	В		
HCM 95th %tile Q(veh)		0.2	0.2			0			1.1	0.5		
LIOM SOUL WINE Office II)		0.2	0.2			U	-	0 -5	li l	0.0		

	1	-	•	1	←	4	1	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	ሻ	f			4	7		4	
Traffic Volume (vph)	3	71	228	33	107	Ō	330	5	10	- 0	2	11
Future Volume (vph)	3	71	228	33	107	0	330	5	10	0	2	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		0	0		115	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98	0.99			De la	1.00	0.98		0.98	
Frt			0.850						0.850		0.884	
Flt Protected		0.998		0.950				0.953				
Satd. Flow (prot)	0	1770	1568	1685	1756	0	0	1716	1346	0	1539	0
Flt Permitted		0.991		0.706				0.719				
Satd. Flow (perm)	0	1756	1530	1243	1756	0	0	1293	1315	0	1539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			243						80		12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	13	1.0	5	5		13	1		2	2	112	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	3%	0%	1%	0%	2%	0%	20%	0%	0%	0%
Adj. Flow (vph)	3	76	243	35	114	0	351	5	11	Ö	2	12
Shared Lane Traffic (%)												15
Lane Group Flow (vph)	0	79	243	35	114	0	0	356	11	0	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		Ó			10			0		1,72,72	0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15	MILLI I	9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	-171	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel					-							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			ĈI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

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Lane <u>G</u> roup	<u>Ø9</u>
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

	•	-	*	1	4	*	4	†	-	1	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm		ÑA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase				-							-	
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	4 7
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	W-118
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)		-2										
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.13	0.19	0.08	0.19			0.51	0.01		0.02	(L-1)
Control Delay		17.0	1.0	17.2	17.4			19.0	0.0		8.5	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.0	1.0	17.2	17.4			19.0	0.0		8.5	
LOS		В	A	В	В			В	Α		Α	
Approach Delay		4.9	_	_	17.4			18.4			8.5	
Approach LOS		Α			B			В	V = 17 II		A	

Intersection Summary

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51 Intersection Signal Delay: 13.0 Intersection Capacity Utilization 54.7%

Intersection Capacity Utilization 54./
Analysis Period (min) 15

! Phase conflict between lane groups.

Intersection LOS: B

Splits and Phases: 3: Peru & Bridge

\$ 1ø2	-\$-24	A\$ @9
30 s	30 s	22.5
₽ Ø6	₹ Ø8	
30 s	30 s	

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Lane Group	Ø9		La III		35 7	July 10			Tu i	150
Detector 2 Extend (s)										
Turn Type										
Protected Phases	9									
Permitted Phases										
Detector Phase										334
Switch Phase										
Minimum Initial (s)	1.0									
Minimum Split (s)	22.0									
Total Split (s)	22.0									
Total Split (%)	27%									
Maximum Green (s)	18.0									
Yellow Time (s)	3.0									
All-Red Time (s)	1.0									
Lost Time Adjust (s)										
Total Lost Time (s)										
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0									
Recall Mode	None									
Walk Time (s)	8.0									
Flash Dont Walk (s)	10.0									
Pedestrian Calls (#/hr)	5									
Act Effct Green (s)										
Actuated g/C Ratio										
v/c Ratio										
Control Delay										
Queue Delay										112
Total Delay										
LOS										
Approach Delay										
Approach LOS										4.5
Intersection Summary		Cu Prop		SITTLE			4.	5		

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	J	- ≽	*	•	•	*	4	†	1	-	\	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	75	1					ሻ	f)	day and Pales on		4	
Traffic Volume (vph)	18	30	261	0	0	0	282	327	17	1	234	28
Future Volume (vph)	18	30	261	0	0	0	282	327	17	1	234	28
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60		0	Ō		0
Storage Lanes	1		0	0		Ō	1		0	0		Ö
Taper Length (ft)	25			25			25			25		21/
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00											HAILES
Frt		0.865						0.993			0.986	
FIt Protected	0.950						0.950					
Satd. Flow (prot)	1589	1534	0	0	0	0	1668	1790	0	0	1857	0
Flt Permitted	0.950						0.475				0.999	11.54
Satd. Flow (perm)	1584	1534	0	0	0	0	834	1790	0	0	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		234						2	_		4	3
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	D 50
Confl. Peds. (#/hr)	1											
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	0%	2%	2%	2%	1%	2%	0%	0%	1%	0%
Adj. Flow (vph)	19	32	281	0	0	0	303	352	18	1	252	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	313	0	0	0	0	303	370	0	0	283	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					_1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	_0	0					0	Ō		_0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	Cl+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						. 6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø1	Ø3	(V)
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
FIt Protected			
Satd. Flow (prot)			
FIt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			W.
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			_
Lane Alignment		والمراوا القريب الأربي المداد والمراوا الأرب الأرب المراوا الأوارا المراوا المراوا المراوا	_
Median Width(ft)			-
Link Offset(ft)			
Crosswalk Width(ft)			_
Two way Left Turn Lane			
Headway Factor			_
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			HI
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			Ti Ai
Detector 2 Channel			
- DOGOGO Z ORIGINIO			_

	۶	→	*	1	←	4	1	†	~	1	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0				and the A		0.0	and the second		0.0	
Turn Type	Perm	NA					pm+pt	ŇĀ		Perm	NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6	*	
Detector Phase	4	4					5	2		6	6	46
Switch Phase											•	
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	- 15
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0		anness.	0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	41 3
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.0	25.0					92.9	92.9			65.0	
Actuated g/C Ratio	0.17	0.17					0.64	0.64			0.45	
v/c Ratio	0.07	0.68					0.46	0.32			0.34	
Control Delay	52.1	23.5		15.00			5.0	3.7			27.4	
Queue Delay	0.0	68.0					0.4	0.6			0.0	
Total Delay	52.1	91.5					5.4	4.3			27.4	
LOS	D	F					Α	Α			Ĉ	
Approach Delay		89.3						4.8			27.4	
Approach LOS		F						A			С	
Intersection Summary	0 20 1	13-19	THE PL	100	10-16/19	18m.	1000		Sug	934		100
Area Type:	Other											
Cycle Length: 160												

Actuated Cycle Length: 144.9

Natural Cycle: 90

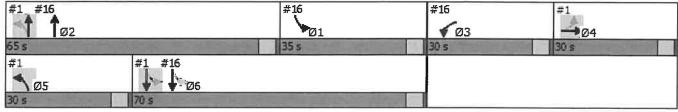
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75 Intersection Signal Delay: 31.5 Intersection Capacity Utilization 62.5%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3
Detector 2 Extend (s)		
Turn Type		apple.
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		-,51
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		310

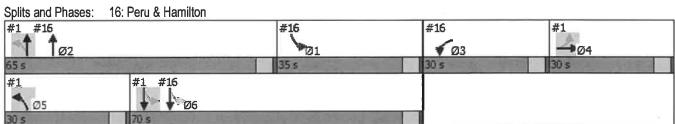
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	1	1	†	1	1	1					
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	T 177 C 20	7 7 150	1000
Lane Configurations	74	20 20.00	† p		alayana 1111 ah	4	-	a t in t. Valenn			
Traffic Volume (vph)	8	64	562	4	55	440					
Future Volume (vph)	8	64	562	4	55	440					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	15	12	11	11	12	11					
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00					5-63
Frt	0.881	1,00	0.999			1120					
Flt Protected	0.994					0.994					
Satd. Flow (prot)	1830	0	3418	0	0	1810					
Flt Permitted	0.994		20 0 120	أدد		0.869					
Satd. Flow (perm)	1830	0	3418	0	0	1582					
Right Turn on Red	1000	Yes	A	Yes		1002					
Satd. Flow (RTOR)	69	100		100							
Link Speed (mph)	30		30			30					
Link Distance (ft)	339		147			136					
Travel Time (s)	7.7		3.3			3.1					2 - 1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93					
Heavy Vehicles (%)	0.00	0%	2%	0.50	0%	1%					21.77
Adj. Flow (vph)	9	69	604	4	59	473					
Shared Lane Traffic (%)		00	004	-	33	710					
Lane Group Flow (vph)	78	0	608	0	0	532					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Right	Left	Left					
Median Width(ft)	15	Ngiit	10	ragni	Leit	10					
Link Offset(ft)	Ő		0			0					
Crosswalk Width(ft)	16		16			16					
Two way Left Turn Lane	10		10			io					
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04				6 5 7 0	
Turning Speed (mph)	15	9	1.04	9	1.00	1.04					
Number of Detectors	1	9	2	3	1	2	AVI. JA				
Detector Template	Left		Thru		Left	Thru					
Leading Detector (ft)	20		100		20	100					
Trailing Detector (ft)	0		0		0	0					
Detector 1 Position(ft)	0		Ô		0	0					
<u></u>	20		6	1000	20						
Detector 1 Size(ft)						6 CI+Ex					
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CITEX					
Detector 1 Channel	0.0		0.0		0.0	0.0					SUE
Detector 1 Extend (s)	0.0		0.0			0.0					
Detector 1 Queue (s)			41 740		0.0	0.0					
Detector 1 Delay (s)	0.0		0.0		0.0	0.0					N. Y.
Detector 2 Position(ft)			94			94					
Detector 2 Size(ft)			6 CLIEV			6 CLEV					
Detector 2 Type			CI+Ex			CI+Ex					
Detector 2 Channel			0.0			0.0					
Detector 2 Extend (s)	B .		0.0			0.0					
Turn Type	Prot		NA		pm+pt	NA					
Protected Phases	3		2		1	6	4	5			
Permitted Phases	10 Style=				6	W 11-					
Detector Phase	3		2		1	6					

	1	1	†	-	-	1	_		
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Switch Phase	Service Season	12 12	cross-services	waste in					
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0	The state of the s
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.0		92.9			65.0			
Actuated g/C Ratio	0.08		0.64			0.45			
v/c Ratio	0.36		0.28			0.75			
Control Delay	22.2		11.7			33.9			
Queue Delay	0.0		0.0			4.1			
Total Delay	22.2		11.7			38.0			
LOS	C		В			D			
Approach Delay	22.2		11.7			38.0			
Approach LOS	С		В			D			
Intersection Summary				HILE.	-37		bidel	1000	THE RESERVE THE PARTY OF THE PA
Area Type:	Other						-1.11		
Cycle Length: 160	~ .~								
Actuated Cycle Length: 1	44.9								
Natural Cycle: 90									
Control Type: Actuated-U	Incoordinated								
Maximum v/c Ratio: 0.75									
Intersection Signal Delay	: 23.9			lr.	tersectio	n LOS: C			
Intersection Capacity Util				Ĩ	CU Level	of Service	С		
Analysis Period (min) 15				19114					







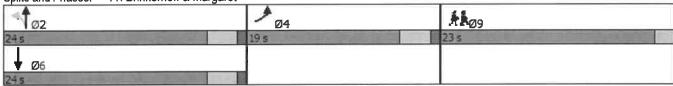
Intersection		4			N. II	
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	*1	7	1			†
Traffic Vol, veh/h	15	39	88	0	0	153
Future Vol, veh/h	15	39	88	0	0	153
Conflicting Peds, #/hr		4	0	Ō	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	1.5	None		None	KI P	None
Storage Length	163	-	_	-	-	-
Veh in Median Storag			0	•	1	0
Grade, %	0	-	0	-	-	
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	0	1	2	2	2
Mvmt Flow	23	61	138	0	0	239
Major/Minor	Minor1	N	/lajor1	Ñ	Major2	
Conflicting Flow All	385	142	0	-	_	
Stage 1	138	4	-	- 21		1 1 2
Stage 2	247	-	-	-	-	-
Critical Hdwy	6.4	6.2				
Critical Hdwy Stg 1	5.4	-	-	_	-	-
Critical Hdwy Stg 2	5.4		U. A			
Follow-up Hdwy	3.5	3.3	-			-
Pot Cap-1 Maneuver	622	911		0	0	
Stage 1	894	-	-	0	0	-
Stage 2	799		1	0	0	2
Platoon blocked, %			-		•	-
Mov Cap-1 Maneuver	617	908				
Mov Cap-2 Maneuver	617		-	-	-	-
Stage 1	894	N e	Ħ	*		
Stage 2	793		-	-	-	-
Approach	WB	100	NB	4 700	SB	Turi
	9.8		0		0	
HCM Control Delay, s HCM LOS	9.0 A		U		U	
TIOWI LOS	^					
Minor Lane/Major Mvn	nt	NBTW	BLn1W	VBLn2	SBT	<u> </u>
Capacity (veh/h)			617	908		
HCM Lane V/C Ratio		-	0.038		-	
HCM Control Delay (s)			11.1	9.3		
HCM Lane LOS		-	В	A	-	
HCM 95th %tile Q(veh)	100	0.1	0.2		

	1	•	1	†	ļ	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	
Lane Configurations	W		simula juri	न	7>	sk Salkele When		
Traffic Volume (vph)	9	60	8	89	166	6		
Future Volume (vph)	9	60	8	89	166	6		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.97	1100	1.00	1.00	1.00	1.00		
Frt	0.883			1.00	0.995			
Flt Protected	0.994			0.996	0.000			
Satd. Flow (prot)	1738	Ó	0	1809	1713	0		
Flt Permitted	0.994	· ·	Ū.	0.971	11 10	· ·		
Satd. Flow (perm)	1734	0	0	1762	1713	Õ		
Right Turn on Red	1704	Yes	·	1702	17 10	Yes		
Satd. Flow (RTOR)	113	103			3	163		
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276			
Travel Time (s)	10.4			6.8	6.3			
Confl. Peds. (#/hr)	8	3	8	0.0	0.5	8		
Peak Hour Factor	0.53	0.53	0.53	0.53	0.53	0.53		
Heavy Vehicles (%)	0.55	0.55	14%	0.55	3%	0.53		
Adj. Flow (vph)	17	113	15	168	313	11		
Shared Lane Traffic (%)	17	113	10	100	313	- 11		
Lane Group Flow (vph)	130	0	0	183	324	0		
Enter Blocked Intersection	No	No	0 No	No	No	No		
			many .			0.00		
Lane Alignment	Left 14	Right	Left	Left	Left Ö	Right		
Median Width(ft)				0				
Link Offset(ft)	0 16			0	0			
Crosswalk Width(ft)	10			16	16			
Two way Left Turn Lane	0.00	4.00	4.00	4.04	4 00°	4.00		_
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
Turning Speed (mph)	15	9	15	•	ä	9		
Number of Detectors	1		1	2	2			
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)	0		0	0	Ö			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	11.15	0.0	0.0	0.0			
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)				0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2	6		9	

GEIS 11/07/2019 AM No-Build TRJ

	•	1	4	1	↓	4	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Permitted Phases			2			3 100	
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0
Total Split (s)	19.0		24.0	24.0	24.0		23.0
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0
Lost Time Adjust (s)	0.0			0.0	0.0		
Total Lost Time (s)	4.0			4.0	4.0		
Lead/Lag							
Lead-Lag Optimize?			14. 944				
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0
Recall Mode	None		Max	Max	Max		None
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	6.6			25.4	25.4		
Actuated g/C Ratio	0.17			0.64	0.64		
v/c Ratio	0.34			0.16	0.30		
Control Delay	8.5			7.1	7.8		
Queue Delay	0.0			0.0	0.0		
Total Delay	8.5			7.1	7.8		
LOS	A			A	Ā		
Approach Delay	8.5			7.1	7.8		
Approach LOS	Α			Α	Α		
Intersection Summary						3-3-	e i hu
Area Type:	Other						
Cycle Length: 66							
Actuated Cycle Length: 39	.9						
Natural Cycle: 50							
Control Type: Actuated-Un	coordinated						
Maximum v/c Ratio: 0.34							
Intersection Signal Delay:					tersection		
Intersection Capacity Utiliz	ation 22.5%			10	CU Level o	of Service	Α
Analysis Period (min) 15							

Splits and Phases: 11: Brinkerhoff & Margaret



	۶	→	*	1	←	4	1	1	~	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	75	f		Indiana at	4		and the	4		and the de land	4	dilitania
Traffic Volume (vph)	61	211	28	4	252	18	23	11	23	67	32	74
Future Volume (vph)	61	211	28	4	252	18	23	11	23	67	32	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0	THE RES	Ö	0	Dell'S I S	0
Storage Lanes	1		Ō	0		0	Ō		0	Õ		0
Taper Length (ft)	25			25			25			25		100
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99			1.00	-)	18 -	0.99	A live		0.99	
Frt		0.982			0.991			0.946			0.942	
Flt Protected	0.950				0.999			0.980			0.981	
Satd. Flow (prot)	1534	1756	0	0	1839	0	0	1685	0	0	1770	0
FIt Permitted	0.301				0.994		, i	0.850	1		0.860	
Satd. Flow (perm)	484	1756	0	0	1829	0	0	1459	0	0	1550	0
Right Turn on Red		1100	Yes		1020	Yes		1100	Yes		1000	No
Satd. Flow (RTOR)		7	100		4	100		35	100			140
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0	1115 1115		9.0			3.8			9.1	
Confl. Peds. (#/hr)	7	0.0	38	38	0.0	7	6	0.0	2	2	9.1	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	2%	2%	0%	25%	5%	8%	13%	9%	0.00	2%	0%	1%
Adj. Flow (vph)	94	325	43	6	388	28	35	17	35	103	49	114
Shared Lane Traffic (%)	01	020	10		000	20				100	- 70	117
Lane Group Flow (vph)	94	368	0	0	422	0	0	87	Ō	Ō	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Lon	8	rugiit	Lon	8	Tagire	LOIL	0	rugin	LOIL	0	ragin
Link Offset(ft)		0			Ö			Ŏ			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					NE D						10	
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15	0.00	9	15	0.00	9	15	0.00	9
Number of Detectors	1	2		1	2	0	1	2		1	2	3
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		Ö	0		0	0	
Detector 1 Size(ft)	20	6	NO. IS	20	6		20	6		20	6	
Detector 1 Type	CI+Ex	Cl+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel	OITEX	OITEX		OFFEX	OITEX		OITEX	OIILX		CITEX	CITEX	100
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	0.0	94		0.0	94		0.0	94		0.0	94	
Detector 2 Size(ft)		6			6			6			6	
		CI+Ex			CI+Ex			Cl+Ex				
Detector 2 Type Detector 2 Channel		CITEX			CITEX			CITEX			CI+Ex	

Lane Group	Ø9	Trible!	9-0	· Chi	100	13.1	1 Ma	J. J. Bri
Lane Configurations								
Traffic Volume (vph)								
Future Volume (vph)								
Ideal Flow (vphpl)								
Lane Width (ft)								
Storage Length (ft)								
Storage Lanes								
Taper Length (ft)								
Lane Util. Factor								
Ped Bike Factor								
Frt								
Flt Protected								
Satd. Flow (prot)								
FIt Permitted								
Satd. Flow (perm)								
Right Turn on Red								
Satd. Flow (RTOR)								
Link Speed (mph)								
Link Distance (ft)								
Travel Time (s)								
Confl. Peds. (#/hr)								
Peak Hour Factor								
Heavy Vehicles (%)								
Adj. Flow (vph)								
Shared Lane Traffic (%)								
Lane Group Flow (vph)								
Enter Blocked Intersection								
Lane Alignment								
Median Width(ft)								
Link Offset(ft)								
Crosswalk Width(ft)								
Two way Left Turn Lane								
Headway Factor								
Turning Speed (mph)								
Number of Detectors								
Detector Template								
Leading Detector (ft)								
Trailing Detector (ft)								
Detector 2 Position(ft)								
Detector 2 Size(ft)								
Detector 2 Type								
Detector 2 Channel								
Detector Template Leading Detector (ft) Trailing Detector (ft) Detector 1 Position(ft) Detector 1 Size(ft) Detector 1 Type Detector 1 Channel Detector 1 Extend (s) Detector 1 Delay (s) Detector 2 Position(ft) Detector 2 Size(ft)								

Lane Group	Ø9	4 117	1 To 1 To 1		RIDE			
Detector 2 Extend (s)					 7.	100	- 154	
Turn Type								
Protected Phases	9							
Permitted Phases								
Detector Phase								
Switch Phase								
Minimum Initial (s)	1.0							
Minimum Split (s)	28.0							
Total Split (s)	28.0							
Total Split (%)	29%							
Maximum Green (s)	24.0							
Yellow Time (s)	3.0							
All-Red Time (s)	1.0							
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0							
Recall Mode	None							
Walk Time (s)	12.0							
Flash Dont Walk (s)	12.0							
Pedestrian Calls (#/hr)	10							
Act Effct Green (s)								
Actuated g/C Ratio								
//c Ratio								
Control Delay								
Queue Delay								
Total Delay								
OS								
Approach Delay								
Approach LOS								
ntersection Summary	- 81 -				-	To		77.01
ntersection outlinary		Mary Carlot		100	14			

Permitted Phases		J	-	1	1	←	*	4	†	-	-	↓	1
Turn Type	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	Detector 2 Extend (s)	· · ·	0.0			0.0			0.0			0.0	
Protected Phases		Perm	NĀ		Perm	NA		Perm	NA		Perm	NA	
Detector Phase 4 4 8 8 2 2 6 6	Protected Phases		4			8			2			6	
Switch Phase Minimum Initial (s)	Permitted Phases	4	_		8			2					
Minimum Initial (s)	Detector Phase	4	4		8	8		2	2		6	6	
Minimum Split (s) 18.0 18.0 18.0 18.0 18.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	Switch Phase		***										
Total Split (s) 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0	Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Total Split (s) 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0	Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (%)		34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Maximum Green (s) 30.0 <td></td> <td>35.4%</td> <td>35.4%</td> <td></td> <td>35.4%</td> <td>35.4%</td> <td></td> <td>35.4%</td> <td>35.4%</td> <td></td> <td>35.4%</td> <td>35.4%</td> <td></td>		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Yellow Time (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0			30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Ali-Red Time (s) 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0		1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)		0.0	0.0			0.0			0.0			0.0	
Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) 3.0 3.		4.0	4.0			4.0			4.0			4.0	
Lead-Lag Optimize? Vehicle Extension (s) 3.0 3		-											
Vehicle Extension (s) 3.0 3.1 6.2 3.1 3.1 6.2 3.1 3.1 6.2 3.1 6.2 3.1 6.2 9.3 10.4 15.8 10.2 9.2 9.2 3.0 <td></td>													
Recall Mode		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Flash Dont Walk (s) Pedestrian Calls (#hr) Act Effet Green (s) 19.8 19.8 19.8 19.8 31.6 31.6 Actuated g/C Ratio 0.31 0.31 0.31 0.50 0.50 y/c Ratio 0.63 0.67 0.74 0.12 0.35 Control Delay 41.6 26.6 29.3 10.4 15.8 Queue Delay 0.0 0.0 0.0 0.0 0.0 Total Delay 41.6 26.6 29.3 10.4 15.8 LOS DC C C B B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum w/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Recall Mode	None	None		None	None		Max	Max		Max	Max	
Flash Dont Walk (s) Pedestrian Calls (#hr) Act Effet Green (s) 19.8 19.8 19.8 19.8 31.6 31.6 Actuated g/C Ratio 0.31 0.31 0.31 0.50 0.50 y/c Ratio 0.63 0.67 0.74 0.12 0.35 Control Delay 41.6 26.6 29.3 10.4 15.8 Queue Delay 0.0 0.0 0.0 0.0 0.0 Total Delay 41.6 26.6 29.3 10.4 15.8 LOS DC C C B B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum w/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Walk Time (s)												
Pedestrian Calls (#/hr) Act Effct Green (s) 19.8 19.8 19.8 31.6 31.6 Actuated g/C Ratio 0.31 0.31 0.31 0.50 0.50 \(\begin{align*} \psi \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \													
Actuated g/C Ratio 0.31 0.31 0.31 0.31 0.50 0.50 v/c Ratio 0.63 0.67 0.74 0.12 0.35 Control Delay 41.6 26.6 29.3 10.4 15.8 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 41.6 26.6 29.3 10.4 15.8 LOS DC C BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB													
Actuated g/C Ratio 0.31 0.31 0.31 0.50 0.50 0.50 v/c Ratio 0.63 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.67 0.74 0.12 0.35 0.74 0.74 0.12 0.35 0.74 0.74 0.12 0.35 0.74 0.12 0.35 0.74 0.12 0.12 0.35 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12	Act Effct Green (s)	19.8	19.8			19.8			31.6			31.6	
v/c Ratio 0.63 0.67 0.74 0.12 0.35 Control Delay 41.6 26.6 29.3 10.4 15.8 Queue Delay 0.0 0.0 0.0 0.0 Total Delay 41.6 26.6 29.3 10.4 15.8 LOS D C C B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C C B B Intersection Summary B B B B Actuated Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection LOS: C Intersection LOS: C		0.31	0.31			0.31			0.50			0.50	
Queue Delay 0.0 0.0 0.0 0.0 0.0 Total Delay 41.6 26.6 29.3 10.4 15.8 LOS D C C B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B Intersection Summary B B B Area Type: Other Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection LOS: C Intersection LOS: C	v/c Ratio	0.63	0.67			0.74			0.12			0.35	
Total Delay 41.6 26.6 29.3 10.4 15.8 LOS D C C B B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Control Delay	41.6	26.6			29.3			10.4			15.8	
Total Delay 41.6 26.6 29.3 10.4 15.8 LOS D C C B B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Queue Delay	0.0	0.0			0.0			0.0			0.0	
LOS D C C B B Approach Delay 29.6 29.3 10.4 15.8 Approach LOS C C B B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C		41.6	26.6			29.3			10.4			15.8	
Approach LOS C C B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C		D	С			Č			В			В	
Approach LOS C C B B Intersection Summary Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Approach Delay		29.6			29.3			10.4			15.8	
Area Type: Other Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Approach LOS		С			C			В			В	
Cycle Length: 96 Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Intersection Summary	- 1	- 1		4	U TELE				/ 138	1.67		
Actuated Cycle Length: 63.5 Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C		Other						11111					
Natural Cycle: 70 Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Cycle Length: 96												
Control Type: Actuated-Uncoordinated Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Actuated Cycle Length: 6	3.5											
Maximum v/c Ratio: 0.74 Intersection Signal Delay: 25.2 Intersection LOS: C	Natural Cycle: 70												
Intersection Signal Delay: 25.2 Intersection LOS: C	Control Type: Actuated-U	ncoordinated											
	Maximum v/c Ratio: 0.74												
Intersection Capacity Utilization 50.7% ICU Level of Service A	Intersection Signal Delay:	25.2			- 1	ntersection	LOS: C						
	Intersection Capacity Utili	zation 50.7%)		10	CU Level	of Service	eΑ					
Analysis Period (min) 15	Analysis Period (min) 15												

Splits and Phases: 6: Pine/Margaret & Broad

1 ₀₂	<u> </u>	£ kø9	
34 s	34 s	28 s	200
↓ **ø6	₹ Ø8		
345	34 s		

Intersection	TURNEY	
Intersection Delay, s/veh	34.7	
Intersection LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4			4	
Traffic Vol, veh/h	0	0	0	9	38	296	6	59	6	343	166	10
Future Vol, veh/h	Õ	Ō	0	9	38	296	6	59	ē	343	166	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	0	0	6	0	2	0	3	3	0
Mvmt Flow	0	Ö	0	11	47	365	7	73	7	423	205	12
Number of Lanes	0	0	0	0	1	Ĩ	0	1	0	0	1	0
Approach	V	19.2	4.1	WB	1.47.17.		NB		1119	SB		7785
Opposing Approach							\$B			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			0		
HCM Control Delay				15.8			10.3			50.6		
HCM LOS				C			В			F		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	
Vol Left, %	8%	19%	0%	66%	
Vol Thru, %	83%	81%	0%	32%	
Vol Right, %	8%	0%	100%	2%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	71	47	296	519	
LT Vol	6	9	0	343	
Through Vol	59	38	Ö	166	
RT Vol	6	0	296	10	
Lane Flow Rate	88	58	365	641	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.149	0.107	0.591	0.968	
Departure Headway (Hd)	6.118	6.635	5.825	5.437	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	583	539	618	666	
Service Time	4.187	4.391	3.581	3.477	
HCM Lane V/C Ratio	0.151	0.108	0.591	0.962	
HCM Control Delay	10.3	10.2	16.7	50.6	
HCM Lane LOS	В	В	C	F	
HCM 95th-tile Q	0.5	0.4	3.9	14.2	

Intersection	1 - 3 -	the se		4.8	1000	1 1 1 1 1	200	107	1 - 2 -		11/2	
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	LUL	4	LDI	IIDL	4	TIDIN	INDL	4		T	1	ODIX
Traffic Vol, veh/h	74	217	9	4	225	70	Ö			7	9	55
Future Vol, veh/h	74	217	9	4	225	70	0				2	55
Conflicting Peds, #/hr	1	0	an estad	24	0	1	7				0	7
Sign Control	Free	Free	Free	Free	Free	Free	Stop				Stop	Stop
RT Channelized	1100	1100	None	1166	1100	None	Stop -		None	Stop -		None
Storage Length			None	_		INONE	_	-	NOIL	145	-	MOHE
Veh in Median Storage	e.# -	0			0			0	-		0	
Grade, %	·, # -	Ö	-		0	-	-	Ö	_		0	
Peak Hour Factor	73	73	73	73	73	73	73	73	73		73	73
Heavy Vehicles, %	1	1	0	0	4	0	0	0	13		0	12
Mymt Flow	101	297	12	5	308	96	0	4	Ö		3	75
MAHITLIOM	101	291	12	3	300	90	ū	4	ŭ	07	3	10
Major/Minor	Major1			Major2	41 /2	N. S. H.	Minor1	2 30	100	Minor2	6 211	5-30
Conflicting Flow All	405	0	0	333	0	0	941	944	332	879	902	364
Stage 1			- 1	4	1	2	529	529		367	367	-
Stage 2	-			-	-	-	412	415	-	512	535	- 100
Critical Hdwy	4.11			4.1		1 V.	7.1	6.5	6.2		6.5	6.32
Critical Hdwy Stg 1				_	-		6.1	5.5	-	6.1	5.5	
Critical Hdwy Stg 2			VE L		2 2		6.1	5.5		6.1	5.5	-
Follow-up Hdwy	2.209		_	2.2	-	-	3.5	4	3.3	3.5	4	3.408
Pot Cap-1 Maneuver	1159			1238			245	264	714	270	280	659
Stage 1	-	-	-	-	_	-	537	530	-	657	626	-
Stage 2	-		4		7	1	621	596		548	527	1 2
Platoon blocked, %		-	_		_		72	300		V-10	VL,	
Mov Cap-1 Maneuver	1158			1205	-		190	228	691	242	242	653
Mov Cap-2 Maneuver	-	-	- 11		_	15	190	228	-	242	242	-
Stage 1	I FIN	-1-	-		B.		467	461		587	622	*
Stage 2	_	_	_		_		540	592	_	483	458	-
							3,0			100	.00	
Approach	EB			WB	ALC: Y	(cal	NB		1,34	SB		
HCM Control Delay, s	2.1			0.1	HITT		21.1			18.1	10 1	
HCM LOS							С			C		
	ı r	var r	energy.			v.15	DIWE IS		222	221 2		
Minor Lane/Major Mvm	<u>t 1</u>	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1			173.3
Capacity (veh/h)		228	1158		-				242	616		
HCM Lane V/C Ratio			0.088	-	-	0.005			0.277			
HCM Control Delay (s)		21.1	8.4	0		8	0	(2)	25.5	11.7		
HCM Lane LOS		С	Α	Α	-	Α	Α	-	D	В		
HCM 95th %tile Q(veh)		0.1	0.3		() *)	0			1.1	0.4		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		र्स	7	ሻ	7>			ન	7	1	4	I be blest to
Traffic Volume (vph)	7	62	260	19	80	1	248	15	6	0	14	7
Future Volume (vph)	7	62	260	19	80	1	248	15	6	Ö	14	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40	MATERIAL PROPERTY.	0	0		115	0	EUUU	0
Storage Lanes	0		1	1		Ö	0		1	Ö		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Frt			0.850		0.999			1.00	0.850		0.955	
Fit Protected		0.995	0.000	0.950	0.000			0.955	0.000		0.555	
Satd. Flow (prot)	0	1666	1615	1589	1754	0	0	1646	1615	0	1176	0
Flt Permitted		0.970	1010	0.700	17.04	· ·	0	0.718	1013		1170	
Satd. Flow (perm)	0	1624	1615	1171	1754	0	0	1235	1615	0	1176	0
Right Turn on Red	U .	1024	Yes	1171	1754	Yes	U	1233	Yes	U	11/0	0
			333		1	162			80		^	Yes
Satd. Flow (RTOR) Link Speed (mph)		30	333		1 30			30	00		9	
		714			322			-			30	
Link Distance (ft)								641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	2000
Confl. Peds. (#/hr)	0.70	0.70	0.70	0.70	0.70	0.70	1	0.70	0.70	0.70	0.70	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	14%	5%	0%	6%	1%	0%	5%	33%	0%	0%	50%	29%
Adj. Flow (vph)	9	79	333	24	103	1	318	19	8	0	18	9
Shared Lane Traffic (%)			200		101						==	
Lane Group Flow (vph)	0	88	333	24	104	0	0	337	8	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		_ 1	2	1	.1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	Cl+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane <u>Group</u>	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
FIt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type Detector 2 Channel	
DECECTOR & CHAINIE	

Synchro 10 Report Page 2

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0		-	0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	118
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		_	0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	-
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)	-							_				
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	52.6	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.93	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.16	0.22	0.06	0.17			0.50	0.01		0.04	
Control Delay		17.3	0.9	17.3	17.2			19.1	0.0		10.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.3	0.9	17.3	17.2			19.1	0.0		10.7	
LOS		В	Α	В	В			В	Ā		В	1.00
Approach Delay		4.3			17.2			18.7	====		10.7	
Approach LOS		Α			В			В			В	PER

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.50 Intersection Signal Delay: 11.7 Intersection Capacity Utilization 56.1%

Analysis Period (min) 15

! Phase conflict between lane groups.

Intersection LOS: B
ICU Level of Service B

Splits and Phases: 3: Peru & Bridge

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30 s	30 s	22.5
₩ Ø6	₹ ø8	
30 s	30 s	

GEIS 11/07/2019 AM No-Build

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Synchro 10 Report Page 3

Lane Group	Ø9	The Real Property lies	 F 5 H	UIA_	
Detector 2 Extend (s)					
Turn Type					
Protected Phases	9				
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0				
Minimum Split (s)	22.0				
Total Split (s)	22.0				
Total Split (%)	27%				
Maximum Green (s)	18.0				
Yellow Time (s)	3.0				
All-Red Time (s)	1.0				
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0				
Recall Mode	None				
Walk Time (s)	8.0				
Flash Dont Walk (s)	10.0				
Pedestrian Calls (#/hr)	5				
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS			- P III .		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	\$	Attuator	- 1 5-5ast	, photobakkosk see		*	4	are common to the common to th		4	
Traffic Volume (vph)	15	21	230	0	0	0	286	261	18	2	278	13
Future Volume (vph)	15	21	230	0	Ō	0	286	261	18	2	278	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	Ó		0	60	1000	0	0	IIWL P	0
Storage Lanes	1		0	0		0	1		0	Ő		0
Taper Length (ft)	25			25			25		at in the	25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00				1.00	
Frt		0.863						0.990			0.994	
FIt Protected	0.950						0.950					
Satd. Flow (prot)	1574	1530	0	0	0	0	1652	1707	0	0	1812	0
FIt Permitted	0.950						0.402		TE IT		0.998	
Satd. Flow (perm)	1574	1530	0	0	0	0	698	1707	0	0	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		289	-			-		3	,		2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	7%	0%	0%	2%	2%	2%	2%	7%	0%	0%	4%	8%
Adj. Flow (vph)	20	28	303	Ō	Ō	0	376	343	24	3	366	17
Shared Lane Traffic (%)	AND ST		10 00000								17.7.1	7.52
Lane Group Flow (vph)	20	331	0	0	0	0	376	367	0	0	386	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	9_)
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	4	9	15		9	15		9
Number of Detectors	1	2					1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	Ci+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø1	Ø3	ALC: U	0	Land.	
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Ped Bike Factor						
Frt						
FIt Protected						
Satd. Flow (prot)						
FIt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						-,-
Link Distance (ft)						
Travel Time (s)						
Confl. Peds. (#/hr)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						4 4
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type Detector 2 Channel						
DOGOGOT & OHATING			 		 	

Synchro 10 Report Page 2

	۶	-	*	1	—	*	4	†	1	-	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	2 7 81 6.1.	B 79				0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					12.0	9.0		10.0	10.0	
Minimum Split (s)	17.0	17.0					17.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					95.2	95.2			65.2	
Actuated g/C Ratio	0.17	0.17					0.66	0.66			0.45	
v/c Ratio	0.07	0.66					0.60	0.32			0.47	
Control Delay	52.3	16.3					6.2	2.8			30.3	
Queue Delay	0.0	66.1					0.7	0.4			0.8	
Total Delay	52.3	82.4					7.0	3.2			31.1	
LOS	D	F					Α	A			С	
Approach Delay		80.7						5.1			31.1	
Approach LOS		F						Á			C	

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 143.6

Natural Cycle: 100

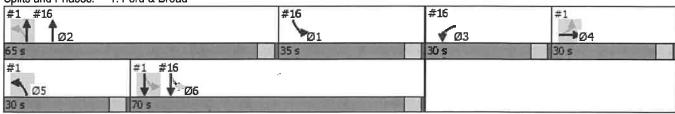
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 29.8 Intersection LOS: C
Intersection Capacity Utilization 59.2% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad

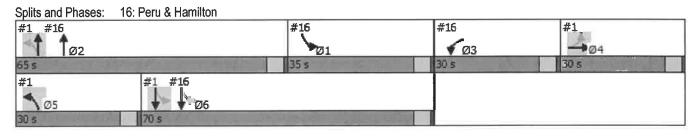


GEIS 11/07/2019 AM No-Build Synchro 10 Report TRJ Page 3

Lane Group	Ø1	Ø3		1 15	The state of	A start was a second of the second		A series of the
Detector 2 Extend (s)	1751111	- 14		- ,	7.7			
Turn Type								
Protected Phases	1	3						
Permitted Phases								
Detector Phase								
Switch Phase	and a							
Minimum Initial (s)	10.0	12.0						
Minimum Split (s)	15.0	26.0						
Total Split (s)	35.0	30.0						
Total Split (%)	22%	19%						
Maximum Green (s)	30.0	25.0						
Yellow Time (s)	4.0	4.0						
All-Red Time (s)	1.0	1.0						
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?	Yes	Yes						
Vehicle Extension (s)	3.0	3.0						
Recall Mode	None	None						
Act Effct Green (s)								
Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								
Intersection Summary		F 1731	1000	0.5			The state of the s	the state of the s

	1	•	†	1	1	↓				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	Property and the second	100
Lane Configurations	14	a t and	†	5 6460 Ave. 457		4	- Alexander	1000		
Traffic Volume (vph)	4	38	527	3	21	487				
Future Volume (vph)	4	38	527	3	21	487				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Width (ft)	15	12	11	11	12	11				
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00				
Frt	0.877	1100	0.999	0.00	1.00	1.00				
Flt Protected	0.995					0.998				
Satd. Flow (prot)	1824	0	3259	0	0	1765				
Flt Permitted	0.995		0200			0.950				
Satd. Flow (perm)	1824	0	3259	0	0	1680				
Right Turn on Red	1021	Yes	0200	Yes		1000				
Satd. Flow (RTOR)	50			100						
Link Speed (mph)	30		30			30				
Link Distance (ft)	339		147			136				
Travel Time (s)	7.7		3.3			3.1				Smith
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76				
Heavy Vehicles (%)	0%	0%	7%	0%	0%	4%				
Adj. Flow (vph)	5	50	693	4	28	641				
Shared Lane Traffic (%)		- 00	000		20	041				
Lane Group Flow (vph)	55	0	697	0	0	669				
Enter Blocked Intersection	No	No	No	No	No	No				
Lane Alignment	Left	Right	Left	Right	Left	Left				
Median Width(ft)	15	rugite	10	rugitt	LOIL	. 10				
Link Offset(ft)	0		0			0				
Crosswalk Width(ft)	16		16			16				
Two way Left Turn Lane	10		10			10				
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			THE RESERVE THE PARTY OF THE	
Turning Speed (mph)	15	9	1.04	9	15	1.04				
Number of Detectors	1		2		1	2				
Detector Template	Left		Thru		Left	Thru				
Leading Detector (ft)	20		100		20	100				
Trailing Detector (ft)	0		0		0	0				
Detector 1 Position(ft)	Ö		0		0	0				
Detector 1 Size(ft)	20		6		20	6				
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex				DO!
Detector 1 Channel	OLILEX		OirEx		OITLA	OLILLA				
Detector 1 Extend (s)	0.0		0.0		0.0	0.0				
Detector 1 Queue (s)	0.0		0.0		0.0	0.0				
Detector 1 Delay (s)	0.0		0.0		0.0	0.0				
Detector 2 Position(ft)	0.0		94		<u>0.</u> 0	94				
Detector 2 Size(ft)			6			6				
Detector 2 Type			Cl+Ex			Cl+Ex				
Detector 2 Channel			OITEX			CITEX				
Detector 2 Extend (s)			0.0			0.0				
Turn Type	Prot		NA		pm+pt	NA				
Protected Phases	3		2		ριπτμι 1	6	4	5		
Permitted Phases	3				6	U	4	J		
Detector Phase	3		2		1	6				
Detector Filase	<u> </u>				1	0				

	-	1	†	100	-	1				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5		
Switch Phase										
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	12.0		
Minimum Split (s)	26.0		14.0		15.0	15.0	17.0	17.0	100 00000	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0		
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%		
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0		
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0		
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0				
Total Lost Time (s)	5.0		5.0			5.0				
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		
Recall Mode	None		Max		None	Max	Max	None		
Act Effct Green (s)	12.0		95.2			65.2				
Actuated g/C Ratio	0.08		0.66			0.45				
v/c Ratio	0.28		0.32			0.88				
Control Delay	22.4		11.4			37.0				
Queue Delay	0.0		0.0			0.0				
Total Delay	22.4		11.4			37.0				
LOS	С		В			D				
Approach Delay	22.4		11.4			37.0				
Approach LOS	С		В			D				
Intersection Summary		DIE!	JOS AS	1 1/2	- 1			W LA TE		10 -
Area Type:	Other	-	P. 15							
Cycle Length: 160										
Actuated Cycle Length: 1	43.6									
Natural Cycle: 100										
Control Type: Actuated-U	ncoordinated									
Maximum v/c Ratio: 0.88										
Intersection Signal Delay:	23.9			l	ntersectio	n LOS: C				
Intersection Capacity Utili				Į.	CU Level	of Service	В			
Analysis Period (min) 15										
5										

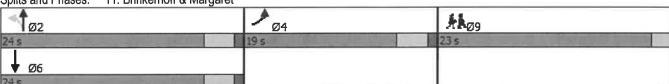


R : #						
Intersection					12/15/2	10/11
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	ሻ	and the same	†	134535 15 15	0.72	^
Traffic Vol, veh/h	36	35	147	0	0	213
Future Vol, veh/h	36	35	147	Ö	Ō	213
Conflicting Peds, #/hr		24	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	Otop	None	1100	None	- 1	None
Storage Length	163	-	_	-	_	IVOIIC
Veh in Median Storag			0			0
Grade, %	0, # 0		0			0
Peak Hour Factor	79	79	79	79	79	79
the same with afternoon to be in the same	3	4	2	2	10.00	1
Heavy Vehicles, % Mvmt Flow	46	44	186	0	0	270
MAUITLIOM	40	44	100	U	Ū	2/0
Major/Minor	Minor1	Å	lajor1	N	/ajor2	-
Conflicting Flow All	495	210	0	-	-	
Stage 1	186	210		741		1
Stage 2	309	- 11-20	-	-		-
Critical Hdwy	6.43	6.24		THE A	1571	-
Critical Hdwy Stg 1	5.43	0.24	-	11 15 50		
	5.43		أراد			-
Critical Hdwy Stg 2		2 226	•	-		- 2
Follow-up Hdwy	3.527	National Co., 17	_	_	-	
Pot Cap-1 Maneuver	532	825	-	0	0	
Stage 1	843			0	0	-
Stage 2	742		-	0	0	
Platoon blocked, %			-			
Mov Cap-1 Maneuver	512	806				U.S.
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	843	(*)				
Stage 2	715	-	-	-	-	-
Approach	WB	TOTAL .	NID	10.0	CD	
Approach			NB		SB	- 15
HCM Control Delay, s	11.2		0		0	
HCM LOS	В					
Minor Lane/Major Mvn	nt	NRTW	BLn1V	VBI n2	SBT	0.00
Capacity (veh/h)		HOIN	512	806	- 100	
HCM Lane V/C Ratio			0.089			
LINIVILABLE VIV. ISSUU		-	v.008	0.000	-	
			127	0.7		
HCM Control Delay (s)		. Pro-5	12.7	9.7		
			12.7 B 0.3	9.7 A 0.2		

	×	*	4	†	↓	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations	14	On the latest the late		4	1>	And the second of	
Traffic Volume (vph)	38	48	13	98	190	36	
Future Volume (vph)	38	48	13	98	190	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	11	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.93		1,00	1.00	0.99	.,,,,	
Frt	0.925				0.978		
Fit Protected	0.978			0.994			
Satd. Flow (prot)	1800	0	0	1810	1686	0	
FIt Permitted	0.978			0.968	1000		
Satd. Flow (perm)	1698	0	0	1755	1686	0	
Right Turn on Red	1000	Yes	0	1700	1000	Yes	
Satd. Flow (RTOR)	53	100			15	100	
Link Speed (mph)	30			30	30		
Link Distance (ft)	456			298	276		
Travel Time (s)	10.4			6.8	6.3		
Confl. Peds. (#/hr)	58	6	33	0.0	0.0	33	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0.90	0.50	0.90	1%	2%	0.90	
Adj. Flow (vph)	42	53	14	109	211	40	
Shared Lane Traffic (%)	42	55	14	108	211	40	
Lane Group Flow (vph)	95	0	0	123	251	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left		Left	Left	Left	7 Mary 12	Carrie Hillians - 131 - 1975
Median Width(ft)	14	Right	LEIL	Len 0	0	Right	
Link Offset(ft)	0				0		
process and an advantage of the contract of th	16			0 16	16		
Crosswalk Width(ft) Two way Left Turn Lane	10			10	10		
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
	15	9	1.00	1.04	1.09	9	
Turning Speed (mph) Number of Detectors	10	9	10	2	2	9	
				Thru			
Detector Template	Left 20		Left 20	100	Thru 100		
Leading Detector (ft)							
Trailing Detector (ft)	0		0	0	0		
Detector 1 Position(ft)	0		0	0	0		
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel	0.0		0.0	0.0	0.0		
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel					-		
Detector 2 Extend (s)				0.0	0.0		
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9

	۶	1	*	†	↓	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	1000
Permitted Phases			2					3 -
Detector Phase	4		2	2	6			
Switch Phase				- 307				
/linimum Initial (s)	5.0		5.0	5.0	5.0		1.0	
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0	
Total Split (s)	19.0		24.0	24.0	24.0		23.0	
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%	
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0	
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0	
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0	
ost Time Adjust (s)	0.0			0.0	0.0			
Total Lost Time (s)	4.0			4.0	4.0			
_ead/Lag								
_ead-Lag Optimize?								
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None		Max	Max	Max		None	
Walk Time (s)							10.0	
Flash Dont Walk (s)							5.0	
Pedestrian Calls (#/hr)							10	
Act Effct Green (s)	6.7			28.8	28.8			
Actuated g/C Ratio	0.17			0.71	0.71			
//c Ratio	0.28			0.10	0.21			
Control Delay	11.4			6.7	6.7			
Queue Delay	0.0			0.0	0.0			
Total Delay	11.4			6.7	6.7			
LOS	В			A	Ä			
Approach Delay	11.4			6.7	6.7			
Approach LOS	В			A	A			
ntersection Summary	T 12 T1	10-11						
Area Type:	Other							
Cycle Length: 66								
actuated Cycle Length: 40.	6							
Natural Cycle: 45								
Control Type: Actuated-Und	coordinated							
Maximum v/c Ratio: 0.28								
ntersection Signal Delay: 7	.7			Ir	tersection	LOS: A		
Intersection Capacity Utiliza				ĪĊ	CU Level o	f Service	A	
Analysis Period (min) 15	-							

Splits and Phases: 11: Brinkerhoff & Margaret



	Þ	→	*	1	-	1	4	†	-	1	\	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	7-			4		-	4	A0.5 *	anomalate door	4	stacklade has a
Traffic Volume (vph)	64	208	9	18	263	59	14	22	19	78	40	90
Future Volume (vph)	64	208	9	18	263	59	14	22	19	78	40	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0	1 1 11 1	0	0		0
Storage Lanes	1		Ō	Ō		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00	7.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Frt	0.00	0.994			0.977			0.953			0.941	
FIt Protected	0.950	0.001			0.997			0.988			0.982	
Satd. Flow (prot)	1534	1761	0	0	1836	0	0	1832	0	0	1791	0
Fit Permitted	0.342				0.977			0.931		U	0.880	U U
Satd. Flow (perm)	545	1761	0	0	1796	0	0	1723	0	0	1602	0
Right Turn on Red	040	1701	Yes	U	1730	Yes		1723	Yes	U	1002	Yes
Satd. Flow (RTOR)		2	100		11	100		21	162		42	res
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			7.00	
Travel Time (s)		6.0			9.0			3.8			401	
Confl. Peds. (#/hr)	19	0.0	35	35	9.0	19	6	3.0	A	4	9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	6	0.00	4	4	0.00	6
L		2%	33%			4 -14	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2% 70	4		0%	4%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	70	226	10	20	286	64	15	24	21	85	43	98
Shared Lane Traffic (%)	70	000	0	•	070		_	00	•	•		- 23
Lane Group Flow (vph)	70	236	0	0	370	0	0	60	0	0	226	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8			8			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	4.00	4.04	1.00	4.00								
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15	in the miss	9	15		9	15		9	15		9
Number of Detectors	_ 1	2		. 1	2		1	2		_ 1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	Õ		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		_ 6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel								_				

Lane Group	Ø9	37.3	THE RESERVE	- 1	J. Carrie	
Lane Configurations						
Traffic Volume (vph)						WITH I
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						100
Lane Util. Factor						
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Confl. Peds. (#/hr)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type Detector 1 Channel						
L						
Detector 1 Extend (s) Detector 1 Queue (s)						
Detector 1 Delay (s) Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						-
Detector 2 Channel						
- Delector 2 Originier				 	 	

	1	-	7	1	•	*		†	1	-	1	1
Lane Group	EBL	EBT	ĒBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)	THE STREET	0.0			0.0			0.0			0.0	- many fire and an
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	P Z
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	0.18
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		-	0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag		2.22									-	
Lead-Lag Optimize?												0691
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)											_	
Flash Dont Walk (s)												1910
Pedestrian Calls (#/hr)												
Act Effct Green (s)	18.1	18.1			18.1			31.7			31.7	
Actuated g/C Ratio	0.29	0.29		-	0.29			0.51			0.51	
v/c Ratio	0.44	0.46			0.69			0.07			0.27	
Control Delay	30.0	22.2			27.7			10.5			11.9	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	30.0	22.2			27.7			10.5			11.9	
LOS	C	C			C			B			В	s. Full
Approach Delay		24.0			27.7			10.5			11.9	
Approach LOS		C			Č			B			В	
Intersection Summary	The All	DE L	Sapr 3			والأبوه فا	7. 11.			- 71	- 19	
Area Type:	Other											
Cycle Length: 96	_											

Actuated Cycle Length: 61.9

Natural Cycle: 65

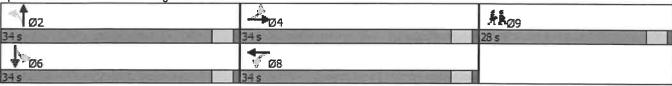
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69 Intersection Signal Delay: 21.7 Intersection Capacity Utilization 58.4%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



<u>-</u>						
Lane Group	Ø9				13	
Detector 2 Extend (s)						
Turn Type						
Protected Phases	9					19-14
Permitted Phases						
Detector Phase						
Switch Phase	_					
Minimum Initial (s)	1.0					
Minimum Split (s)	28.0					
Total Split (s)	28.0					
Total Split (%)	29%					
Maximum Green (s)	24.0					
Yellow Time (s)	3.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	12.0					
Flash Dont Walk (s)	12.0					بيالي
Pedestrian Calls (#/hr)	10					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						4
Approach Delay						
Approach LOS						
Intersection Summary	13, 1 5, 5	Sele L	500 7	17.5	4 5 7	

Intersection		
Intersection Delay, s/veh	15.1	
Intersection LOS	С	

Movement	ÉBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4			4	- Andrew San San San
Traffic Vol, veh/h	0	0	0	29	35	308	16	92	12	280	142	20
Future Vol, veh/h	0	0	0	29	35	308	16	92	12	280	142	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	0	0	3	0	6	8	3	7	5
Mvmt Flow	0	0	0	30	36	321	17	96	13	292	148	21
Number of Lanes	0	0	0	0	1	1	0	1	0	0	1	0
Approach	1.29			WB		478	NB			SB	- 15 W	
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			Ô		
HCM Control Delay				12.5			10			18.7		
HCM LOS				В			Ā			C		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	A HOLL BALL
Vol Left, %	13%	45%	0%	63%	
Vol Thru, %	77%	55%	0%	32%	
Vol Right, %	10%	0%	100%	5%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	120	64	308	442	
LT Vol	16	29	0	280	
Through Vol	92	35	0	142	
RT Vol	12	0	308	20	
Lane Flow Rate	125	67	321	460	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.195	0.117	0.479	0.676	
Departure Headway (Hd)	5.609	6.316	5.377	5.288	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	640	568	671	686	
Service Time	3.646	4.049	3.11	3.314	
HCM Lane V/C Ratio	0.195	0.118	0.478	0.671	
HCM Control Delay	10	9.9	13	18.7	
HCM Lane LOS	Α	Α	В	C	
HCM 95th-tile Q	0.7	0.4	2.6	5.3	

Intersection	14.	1953		0-128	7118		100		1	STATE OF THE STATE	1100	11,000
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		A	4		*	1>	
Traffic Vol, veh/h	93	203		4	219	50	8	4	8		6	113
Future Vol, veh/h	93	203	9	4	219	50	8	4	8		6	113
Conflicting Peds, #/hr	5	0	14	14	0	5	2	0	7	7	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		14-	None	-	-	None			None		1178	None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storage	,# -	0			0			0	-	- E	0	
Grade, %	-	0		-	0	-	-	0	-	-	Õ	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	2	0	Ö	2	0	0	25	0		0	6
Mvmt Flow	100	218	10	4	235	54	9	4	9	69	6	122
Major/Minor N	Major1	1.51		viajor2	W.E		Vinor1	11-10	الراس	Minor2	150	
Conflicting Flow All	294	0	0	242	0	0	773	739	244	712	717	269
Stage 1	100			180		100	437	437	Y		275	
Stage 2	-	-	-	-	-	-	336	302	-		442	
Critical Hdwy	4.11			4.1	*		7.1	6.75	6.2	7.15	6.5	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.75	+	6.15	5.5	
Critical Hdwy Stg 2				1		-	6.1	5.75	-	6.15	5.5	12
Follow-up Hdwy	2.209	-	-	2.2	-	-	3.5	4.225	3.3	3.545	4	3.354
Pot Cap-1 Maneuver	1273	- 120	No.	1336			319	319	800	344	358	760
Stage 1	-	-	-	-	-	-	602	542	-	725	686	-
Stage 2	100	3					682	625		592	580	370
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1267		1 2	1315			240	283	781	308	318	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	283	-	308	318	
Stage 1	(*)					-	539	485	3 12	657	680	-
Stage 2	-	-	-	-	-	-	563	619	-	524	519	-
Approach	EB	إعادا		WB	5,5 12	Lewis !	NB	E Trans	E.n.E.	SB	-1-00	
HCM Control Delay, s	2.5	170	1 51	0.1	11,01		16.1			14.3	WIL	
HCM LOS							С			В		
Minor Lane/Major Mvmt	t N	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1	SBLn2		34 11 11
Capacity (veh/h)	THE	347	1267			1315			308	706	7. 11	110
HCM Lane V/C Ratio		0.062	0.079	-	-	0.003	_		0.223	0.181		
HCM Control Delay (s)		16.1	8.1	0		7.7	Ö	7.0	20	11.2		
HCM Lane LOS		C	A	A	_	Ā	Ā	-	Ċ	В		
HCM 95th %tile Q(veh)		0.2	0.3		121	0	t of		0.8	0.7		
Account of the second of the s						1150				7.0		

<u> </u>	J	→	*	1	←	*	1	†	1	1	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ની	7	ሻ	ĵ»			4	7		4	
Traffic Volume (vph)	8	78	198	12	95	3	252	13	12	2	10	16
Future Volume (vph)	8	78	198	12	95	3	252	13	12	2	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40	H M II	0	Ō	MI PIL	115	0	10	0
Storage Lanes	0		1	1		Ö	0		1	0		0
Taper Length (ft)	25			25	Agrille		25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	0.97	0.99	1.00	1.00	1.00	1.00	0.98	1.00	0.99	1.00
Frt		1.00	0.850	0.00	0.996			1.00	0.850		0.923	
FIt Protected		0.996	0.000	0.950	0.550			0.955	0.000		0.923	
Satd. Flow (prot)	0	1706	1553	1685	1730	0	0	1696	1252	0	1445	0
Fit Permitted	U	0.975	1000	0.699	1730	U	U		1202	U		0
	^		4540		4700	0	^	0.715	4000	_	0.986	
Satd. Flow (perm)	0	1666	1512	1225	1730	0	0	1264	1223	0	1429	0
Right Turn on Red			Yes			Yes			Yes		4.0	Yes
Satd. Flow (RTOR)			208		2			00	80		17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)	100	16.2	47 4		7.3		- 11-1	14.6			4.3	
Confl. Peds. (#/hr)	19	1979 2000 11	8	8		19	3		2	2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	40%	0%	4%	0%	2%	0%	2%	30%	29%	0%	31%	0%
Adj. Flow (vph)	8	82	208	13	100	3	265	14	13	2	11	17
Shared Lane Traffic (%)	_	Mark Bart 1			~ ~~		,					
Lane Group Flow (vph)	0	90	208	13	103	Ö	0	279	13	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												100
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	HE!M
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	Ö	0	0		0	0	0	0	0	360
Detector 1 Position(ft)	0	0	0	0	0		0	0	Ō	0	Ō	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel									11/10			
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	2011
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	0.0	94	0.0	0.0	94		0.0	94	0.0	0.0	94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		OI, LX			OI. LX			OLITA			OITEX	

Lane Group	Ø9	2 19 31	11 14 54	1000	
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					

	•	-	1	1	•	*	*	†	-	1	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0	22131		0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6	-	
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase											-	
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	1 4
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	,000
Lead/Lag											v	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	SUA!
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.16	0.16	0.03	0.17			0.41	0.02		0.04	
Control Delay		17.3	1.0	17.2	17.1			16.4	0.1		8.9	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	20
Total Delay		17.3	1.0	17.2	17.1			16.4	0.1		8.9	
LOS		В	Α	В	В			В	Ã		Α	
Approach Delay		5.9		_	17.1			15.7			8.9	
Approach LOS		Α			В			В			Ā	1813

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

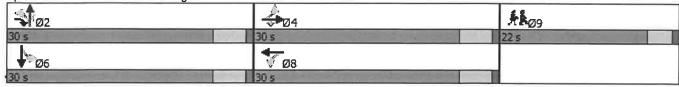
Maximum v/c Ratio: 0.41 Intersection Signal Delay: 11.7 Intersection Capacity Utilization 53.1%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge



GEIS 11/07/2019 Midday No-build

TRJ

Lane Group	Ø 9	1.07	10.00	-	v			100	100	
Detector 2 Extend (s)	220				H					
Turn Type										
Protected Phases	9									
Permitted Phases										
Detector Phase										V IF
Switch Phase										
Minimum Initial (s)	1.0									
Minimum Split (s)	22.0									
Total Split (s)	22.0									
Total Split (%)	27%									
Maximum Green (s)	18.0									
Yellow Time (s)	3.0									
All-Red Time (s)	1.0									
Lost Time Adjust (s)										
Total Lost Time (s)										
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0									
Recall Mode	None									
Walk Time (s)	8.0									
Flash Dont Walk (s)	10.0									20
Pedestrian Calls (#/hr)	5									
Act Effct Green (s)										
Actuated g/C Ratio										
v/c Ratio										
Control Delay										
Queue Delay										
Total Delay										
LOS Anna ach Balay										
Approach LOS										
Approach LOS				T-1						
Intersection Summary	115015	1 -	4.00	1.00		1 1 (d)	25		V	u = J

	1	→	*	1	←	4	*	†	1	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ች	4		non-bande de "Est"de	chart of		ሻ	13-		,am1566g*431	43-	1000000
Traffic Volume (vph)	30	27	218	0	0	0	249	255	13	0	198	24
Future Volume (vph)	30	27	218	0	0	0	249	255	13	0	198	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55	,,,	0	0		Ö	60		0	Õ	12	0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.867					1.00	0.993			0.985	
Flt Protected	0.950	0.007					0.950	0.555			0.500	
Satd. Flow (prot)	1685	1511	0	0	0	0	1636	1771	0	0	1787	0
Fit Permitted	0.950	1911	U	U	U	U	0.511	1771	U	U	1/0/	0
	1685	1511	0	0	0	0	877	1771	^	^	4707	0
Satd. Flow (perm) Right Turn on Red	1000	1911	Yes	U	U		0//	1771	0	0	1787	0
		213	Tes			Yes		0	Yes			Yes
Satd. Flow (RTOR)		30			20			30			5	
Link Speed (mph)					30						30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1	24-7		14.6	
Confl. Peds. (#/hr)	- 22.	=	127			11:	4		1	1		4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%	3%	3%	0%	0%	5%	0%
Adj. Flow (vph)	32	29	232	0	0	0	265	271	14	0	211	26
Shared Lane Traffic (%)											18 1890 1789	
Lane Group Flow (vph)	32	261	0	0	0	0	265	285	0	0	237	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel		OFFER						Oli LV			OIILA	

Lane <u>Group</u>	Ø1	Ø3		10 TO	
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
FIt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor			E 15 2 35		
Heavy Vehicles (%)					
Adj. Flow (vph) Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					

	1	-	7	1	—	*	1	†	1	1	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			-			0.0			0.0	
Turn Type	Perm	ÑΑ					pm+pt	NA			NA	
Protected Phases		4					5	2			6	110
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0	Chi		5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					91.8	91.8			65.3	
Actuated g/C Ratio	0.18	0.18					0.65	0.65			0.47	
v/c Ratio	0.11	0.59					0.38	0.25			0.28	
Control Delay	52.3	18.1					4.5	3.3			25.1	
Queue Delay	0.0	68.8					0.4	0.7			0.0	
Total Delay	52.3	86.8					4.9	4.0			25.1	10111
LOS	Ď	F					Ã	A			C	
Approach Delay		83.1						4.4			25.1	
Approach LOS		F						Α			C	

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 140.2

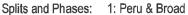
Natural Cycle: 90

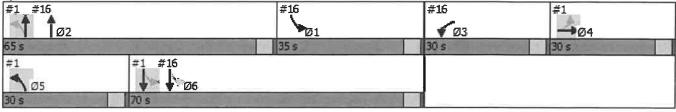
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 30.3 Intersection LOS: C Intersection Capacity Utilization 53.5% ICU Level of Service A

Analysis Period (min) 15





Lane Group	Ø1	Ø3
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		_
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		r ISI
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effet Green (s)		
Actuated g/C Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary	70.1	

	1	*	†	-	1	Į.				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5		
Lane Configurations	W		† }	* home "(in section)		र्स				
Traffic Volume (vph)	14	50	467	9	50	366				
Future Volume (vph)	14	50	467	9	50	366				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				1341387
Lane Width (ft)	15	12	11	11	12	11				
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00				
Frt	0.895	3112	0.997			100				
Flt Protected	0.989					0.994				RITURE LIKE
Satd. Flow (prot)	1850	0	3412	0	0	1810				
Flt Permitted	0.989					0.884				
Satd. Flow (perm)	1850	0	3412	0	0	1609				
Right Turn on Red		Yes	JEWY III	Yes	, II = , II S					
Satd. Flow (RTOR)	53	1.00	1	100						
Link Speed (mph)	30		30			30				
Link Distance (ft)	339		147			136				
Travel Time (s)	7.7		3.3			3.1				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%				
Adj. Flow (vph)	15	53	497	10	53	389				
Shared Lane Traffic (%)										
Lane Group Flow (vph)	68	0	507	0	0	442				
Enter Blocked Intersection	No	No	No	No	No	No				
Lane Alignment	Left	Right	Left	Right	Left	Left				
Median Width(ft)	15	ragin	10	rugin	LOIL	10				
Link Offset(ft)	0		0			0				
Crosswalk Width(ft)	16		16			16				
Two way Left Turn Lane	10		10			10				
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04				
Turning Speed (mph)	15	9	1.04	9	15	1.07				
Number of Detectors	1		2	la E	1	2				
Detector Template	Left		Thru		Left	Thru				
Leading Detector (ft)	20		100		20	100				
Trailing Detector (ft)	0		0		0	0				NAME OF TAXABLE
Detector 1 Position(ft)	0		0		0	0				
Detector 1 Size(ft)	20		6		20	6				
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	Cl+Ex				
Detector 1 Channel	CITEX		CITEX		CITEX	CITEX				
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			THE RESERVE	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0				
Detector 1 Delay (s)	0.0		0.0		0.0	0.0				
Detector 2 Position(ft)	0.0		94		0.0	94				
Detector 2 Size(ft)			6			6				
Detector 2 Type			CI+Ex			Cl+Ex				
			CITEX			CITEX				
Detector 2 Channel			0.0			0.0				
Detector 2 Extend (s)	Prot				nm±nt					
Turn Type Protected Phases	Prot 3		NA 2		pm+pt	NA 6	4	5		A FIRST
Protected Phases Permitted Phases	3				1	Ö	4	ð		
	2		0		6	6				
Detector Phase	3		2		1	6				

	1	1	†	-	1	\$			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Switch Phase									
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.1		91.8			65.3			
Actuated g/C Ratio	0.09		0.65			0.47			
v/c Ratio	0.33		0.23			0.59			
Control Delay	26.7		10.6			25.9			
Queue Delay	0.0		0.0			3.5			
Total Delay	26.7		10.6			29.4			
LOS	C		В			C			
Approach Delay	26.7		10.6			29.4			
Approach LOS	С		В			C			
Intersection Summany		K (0) -	170	12,000		30.00	400	10 10 1	A R. WILLIAM R. D. L.

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 140.2

Natural Cycle: 90

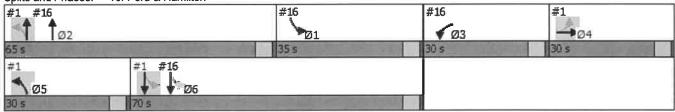
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59 Intersection Signal Delay: 19.8 Intersection Capacity Utilization 57.7%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Peru & Hamilton

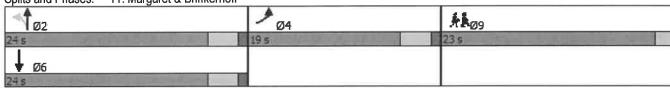


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Intersection	di uni	الماتال	A = 11	7.0		1 5.00
Int Delay, s/veh	1.8					
Movement	WBL	WDD	NBT	NBR	SBL	CDT
		WBR		INBK	SBL	SBT
Lane Configurations	7	7	455			†
Traffic Vol, veh/h	27	46	155	0	0	184
Future Vol, veh/h	27	46	155	0	0	184
Conflicting Peds, #/hr	46	11	0	0	0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	= =	None	-	None	-	None
Storage Length	163	-	-	-	-	
Veh in Median Storage		4	0			0
Grade, %	0	_	0	-	-	0
Peak Hour Factor	87	87	87	92	92	87
Heavy Vehicles, %	0	0	1	2	2	1
Mvmt Flow	31	53	178	0	0	211
		2 5.	- 1		-	511
en e Par					W HARL	
	Minor1		Major1		Лајог2	
Conflicting Flow All	435	189	0	-	-	-
Stage 1	178	*		•		
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.4	6.2			- 12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	: .	100	300	-
Follow-up Hdwy	3.5	3.3		-	-	
Pot Cap-1 Maneuver	582	858		0	0	
Stage 1	858	-	-	Ô	Ö	
Stage 2	791			0	0	10
Platoon blocked, %	191			U	U	ž.
	EEC	040				
Mov Cap-1 Maneuver	556	849	•			
Mov Cap-2 Maneuver	556	-	-	-	-	-
Stage 1	858	*		:=(0	*	
Stage 2	756	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	10.4		0		0	
HCM LOS			Ų		U	
TION LOS	В					
Minor Lane/Major Mvm	it	NBTW	/BLn1V	VBLn2	SBT	
Capacity (veh/h)	THE P	1	556	849	-	11 (2)
HCM Lane V/C Ratio		- 1	0.056		-,	
HCM Control Delay (s)			11.9	9.5	_	
HCM Lane LOS			В	Α.	-	
HCM 95th %tile Q(veh)			0.2	0.2		
TOW SOUT WHE CALVELL	5 11		0.2	0.2	•	

	*	>	1	†	↓	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	Charles of the Control
Lane Configurations	W	And have not as	- 11	4	1	distinguished a	- Address - Addr	
Traffic Volume (vph)	22	57	8	131	224	40		THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW
Future Volume (vph)	22	57	8	131	224	40		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.95	21.20		1.00	0.99			
Frt	0.902				0.980			
Fit Protected	0.986			0.997				
Satd. Flow (prot)	1737	0	0	1831	1680	0		
Flt Permitted	0.986			0.984				
Satd. Flow (perm)	1689	0	0	1803	1680	0		1000000
Right Turn on Red		Yes			,,,,,	Yes		
Satd. Flow (RTOR)	63		776.		14			
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276			
Travel Time (s)	10.4			6.8	6.3			
Confl. Peds. (#/hr)	46	5	39	0.0	0.0	39		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Heavy Vehicles (%)	0%	2%	0%	0%	2%	3%		A CONTRACTOR OF STREET
Adj. Flow (vph)	24	63	9	144	246	44		
Shared Lane Traffic (%)				177	240	77		
Lane Group Flow (vph)	87	0	0	153	290	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	14	ragin	LOIL	0	0	ragnt		
Link Offset(ft)	0			Ö	Ö			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane	10			10	10			
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
Turning Speed (mph)	15	9	15	1.04	1.00	9		
Number of Detectors	1	3	13	2	2	9		
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	.100	0			
Detector 1 Position(ft)	0		Ö	Ö	Ö			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex			
Detector 1 Channel	OITEX		OILLX	OLITY	OLILEX			
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)	0.0		0.0	94	94			
Detector 2 Size(ft)				6	6			1 2 2 1 2 1
				Cl+Ex	CI+Ex			
Detector 2 Type Detector 2 Channel				CITEX	CITEX			
Detector 2 Extend (s)				0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases			LAIIII	2			0	
FIOLECTED FINASES	4				6		9	

	*	*	1	†	↓	1			
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	J	
Permitted Phases	0.00 (0.00		2						
Detector Phase	4		2	2	6				
Switch Phase				- 115					
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0		
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0		
Total Split (s)	19.0		24.0	24.0	24.0		23.0		
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%		
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0		
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0		
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0		
Lost Time Adjust (s)	0.0			0.0	0.0				
Total Lost Time (s)	4.0			4.0	4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0		
Recall Mode	None		Max	Max	Max		None		
Walk Time (s)							10.0		
Flash Dont Walk (s)							5.0		
Pedestrian Calls (#/hr)							10		
Act Effct Green (s)	6.5			29.3	29.3				
Actuated g/C Ratio	0.16			0.72	0.72				
v/c Ratio	0.26			0.12	0.24				
Control Delay	10.1			6.6	6.7				
Queue Delay	0.0			0.0	0.0				
Total Delay	10.1			6.6	6.7				
LOS	В			Α	Α				
Approach Delay	10.1			6.6	6.7				
Approach LOS	В			Α	Α				
Intersection Summary	1 4 5	130		100		-	100		
Area Type:	Other								
Cycle Length: 66									
Actuated Cycle Length: 40).9								
Natural Cycle: 50									
Control Type: Actuated-Ur	ncoordinated								
Maximum v/c Ratio: 0.26									
Intersection Signal Delay:	7.2			Ir	tersection	LOS: A			
Intersection Capacity Utiliz				IC	CU Level o	of Service	Α		
Analysis Period (min) 15				_					

Splits and Phases: 11: Margaret & Brinkerhoff



	1	→	*	1	4-	4	4	†	/	1	ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ነ	1>		0.100000	4			44	6 at 10 the an	abassas bassas	4	Land Million S
Traffic Volume (vph)	71	215	30	19	318	42	31	38	25	76	38	74
Future Volume (vph)	71	215	30	19	318	42	31	38	25	76	38	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		Ō	0		0	0		0
Storage Lanes	1		0	0		0	Ō		Ö	Ō		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99		1700	0.98	1100
Frt	0.00	0.981			0.985			0.964			0.947	
Fit Protected	0.950				0.997			0.984			0.980	
Satd. Flow (prot)	1504	1729	0	0	1850	0	0	1793	0	0	1732	0
Flt Permitted	0.313	1120			0.977			0.886	1		0.857	
Satd. Flow (perm)	489	1729	0	0	1811	0	0	1604	0	0	1512	0
Right Turn on Red	100	1120	Yes		1011	Yes		1004	Yes		1012	Yes
Satd. Flow (RTOR)		8	100		7	100		20	100		35	103
Link Speed (mph)		30	-07.6		30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19	0.0	23	23	0.0	19	18	3.0	3	3	ð. I	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	0%	6%	4%	0.32	6%	3%	0.92	2%	8%	2%
Adj. Flow (vph)	77	234	33	21	346	46	34	41	27	83	41	80
Shared Lane Traffic (%)	- 17	204	วัว	21	340	40	34	41	21	03	41	00
Lane Group Flow (vph)	77	267	0	0	413	Õ	Ô	102	Ö	0	204	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	,
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Wan-	Left	Left	No
Median Width(ft)	Leit	8	rigiii	Leit	8	rigin	reit	0	Right	Leit	Len 0	Right
Link Offset(ft)		0			0			0			0	2000
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		10			10			10			10	100
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	1.20	1.04	9	1.00	0.90	9	1.00	0.90	9	1.00	0.90	
Number of Detectors	1	2	9	1	2	9	1	2	9		2	9
Detector Template	Left	Thru		Left	Thru		Left	Thru		1 Left	-	
Leading Detector (ft)	20	100		20	100		20	100			Thru	
Trailing Detector (ft)	0	0		ŽŪ	0		0	0		20	100	
	0	0		0	0		0			0	0	
Detector 1 Position(ft)	20	6		20	6		20	0		0	0 6	
Detector 1 Size(ft)	CI+Ex				Cl+Ex			Cl+Ex		20		
Detector 1 Type	CITEX	Cl+Ex		CI+Ex	CITEX		CI+Ex	CITEX		CI+Ex	Cl+Ex	
Detector 1 Channel	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø9	THE JOHN	- 15	100	
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment			1500		
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					
- Dototoi E onamioi			 		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8	-		2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0		v . ···s	0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag											-	
Lead-Lag Optimize?											117-11-1	-0.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)							**					
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.3	19.3			19.3			31.6			31.6	
Actuated g/C Ratio	0.31	0.31			0.31			0.50			0.50	
v/c Ratio	0.52	0.50			0.74			0.13			0.26	
Control Delay	34.4	22.3			29.5			12.1			12.6	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	34.4	22.3			29.5			12.1			12.6	
LOS	Ċ	Č			С			В			В	
Approach Delay		25.0			29.5			12.1			12.6	
Approach LOS		C			Č			В			В	

Area Type: Other

Cycle Length: 96

Actuated Cycle Length: 63
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74 Intersection Signal Delay: 23.1 Intersection Capacity Utilization 57.9%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	The Real Property lies		- V W V	- 10	The Real Property lies
Detector 2 Extend (s)						
Turn Type						
Protected Phases	9					
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	1.0					
Minimum Split (s)	28.0					
Total Split (s)	28.0					
Total Split (%)	29%					
Maximum Green (s)	24.0					
Yellow Time (s)	3.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?					177 113	5
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	12.0					
Flash Dont Walk (s)	12.0					
Pedestrian Calls (#/hr)	10					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						12 10 10 10 10
Total Delay LOS						
Approach Delay						
Approach LOS						
Intersection Summary						

Intersection			120				THE WAY		THE PERSON			1,50
Intersection Delay, s/veh	19.5											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations					र्स	7		4			4	
Traffic Vol, veh/h	0	0	0	17	42	421	12	167	13	293	112	19
Future Vol, veh/h	0	0	0	17	42	421	12	167	13	293	112	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.9
Heavy Vehicles, %	2	2	2	5	5	1	0	1	0	1	4	(
Mvmt Flow	0	0	0	18	44	443	13	176	14	308	118	20
Number of Lanes	Ō	0	0	0	1	1	0	1	0	0	1	(
Approach	77781	N III	1000	WB		1237	NB	Marrie	-3.53	SB	4100	100
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB			****			WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB			_		
Conflicting Lanes Right				1			2			0		
HCM Control Delay				19.8			12.3			22.5		
HCM LOS				C			В			C		
(p. com value)				=								
Lane	10/12/19/19	NBLn1	WBLn1	WBLn2	SBLn1	GRAY.	5015	V. etc.				1 36
Vol Left, %		6%	29%	0%	69%							
Vol Thru, %		87%	71%	0%	26%							
Vol Right, %		7%	0%	100%	4%							
Sign Control		Stop	Stop	Stop	Stop							
Traffic Vol by Lane		192	59	421	424							
_T Vol		12	17	0	293							
Through Vol		167	42	0	112							
RT Vol		13	0	421	19							
ane Flow Rate		202	62	443	446							
Geometry Grp		2	7	7	2						The same	
Degree of Util (X)		0.341	0.114	0.705	$0.7\bar{2}$							
Departure Headway (Hd)			6.588	5.73	5.808							
		0.077	0.000									
Convergence, Y/N		6.077 Yes	Yes	Yes	Yes							
Convergence, Y/N		Yes	Yes	Yes								
Convergence, Y/N Cap		Yes 588	Yes 543	Yes 629	620							
Convergence, Y/N Cap Service Time		Yes 588 4.151	Yes 543 4.347	Yes 629 3.489	620 3.867							
Convergence, Y/N Cap Service Time HCM Lane V/C Ratio		Yes 588 4.151 0.344	Yes 543 4.347 0.114	Yes 629 3.489 0.704	620 3.867 0.719							
Convergence, Y/N Cap Service Time		Yes 588 4.151	Yes 543 4.347	Yes 629 3.489	620 3.867							

Intersection	15.8	170	1, 13						7-	7.	. 75.	7,300.
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4		7	1}→	
Traffic Vol, veh/h	88	220		3	268	43	8		7		3	
Future Vol, veh/h	88	220	-	3	268	43	8		7	100.00	3	7 181
Conflicting Peds, #/hr	4			30	0		2		6		0	
Sign Control	Free	Free		Free	Free	Free	Stop		Stop	-	Stop	Stop
RT Channelized						- 21.5	0.00		None		Olop -	None
Storage Length	_		-	-	_	-		_		145	-	-
Veh in Median Storage	e.# -	0			0	1		0	-		0	
Grade, %	-	0	-		Õ	_	-	0	_		0	_
Peak Hour Factor	97	97	97	97	97	97	97	97	97		97	97
Heavy Vehicles, %	0	1	0	0	1	Ō	Õ		0		0	5
Mymt Flow	91	227	8	3	276	44	8	3	7		3	105
Manual Town	01			v	210	77	ŏ	2		03	J	100
Major/Minor	Major1		11.14	Major2	107.10		Minor1	100	- Ja	Minor2	1930	
Conflicting Flow All	324	0	0	265	0	0	803	773	267		755	304
Stage 1	<u> </u>			1 4			443	443		000	308	-
Stage 2	-	-	-	-	-		360	330	-	424	447	-
Critical Hdwy	4.1	i.e	17.0	4.1			7.1	6.5	6.2		6.5	6.25
Critical Hdwy Stg 1	-	-			_	-	6.1	5.5	0.2	6.12	5.5	0.20
Critical Hdwy Stg 2	(e)						6.1	5.5		6.12	5.5	
Follow-up Hdwy	2.2	-	-	2.2		_	3.5	4		3.518	4	3.345
Pot Cap-1 Maneuver	1247	74		1311	100	-	304	332	777	337	340	729
Stage 1	-	-			_	_	598	579	'	702	664	123
Stage 2			1.8		AT X		662	649	1 3	608	577	
Platoon blocked, %		-	2/2		-		302	UTU		500	UII	
Mov Cap-1 Maneuver	1242			1267		N .	232	292	746	306	299	725
Mov Cap-2 Maneuver	-	_	-	-	-80	-	232	292	740	306	299	120
Stage 1		-		780			529	513		641	659	-
Stage 2	_			_		_	560	644	_	545	511	
La							500	UTT	- 7 ,	U40	511	سنرير
Approach	EB	Jan	y	WB	(8)	UE SI	NB	L. E.	Ser M	SB		U Ba
HCM Control Delay, s	2.3		11,11	0.1			16.5	1177		15.8		
HCM LOS				- WANTE			C			C		
Minor Lane/Major Mvm	nt N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR 9	SBLn1	SBLn2		
Capacity (veh/h)		332	1242	-			-		306	697		
HCM Lane V/C Ratio		0.056	0.073	_		0.002	_	-	0.29			
HCM Control Delay (s)		16.5	8.1	0		7.8	0		21.5	11.1		
HCM Lane LOS		C	A	A	-	A	A		C	В		
HCM 95th %tile Q(veh)		0.2	0.2		- 1/2	0	^		1.2	0.5		
TOM COM TOME ON VOIL		0.2	V. <u>Z</u>		-	U	1 1		1.2	0.0		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	ሻ	1			4	7		4	
Traffic Volume (vph)	3	72	231	33	109	0	335	5	10	0	2	11
Future Volume (vph)	3	72	231	33	109	Ö	335	5	10	0	2	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		0	0		115	0		0
Storage Lanes	Ö		1	1		0	Ö		1 10	Ö		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	0.98	0.99	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00
Frt		1.00	0.850	0.55				1.00	0.850		0.884	
Flt Protected		0.998	0.000	0.950				0.953	0.000		0.004	7
Satd. Flow (prot)	0	1770	1568	1685	1756	0	0	1716	1346	^	1520	^
Flt Permitted	U	0.991	1000	0.705	1700	U	U	0.719	1340	0	1539	0
			4500		4750	^	_		4045		4500	
Satd. Flow (perm)	0	1756	1530	1241	1756	0	0	1293	1315	0	1539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			246						80		12	
Link Speed (mph)		30			30			30			30	_ ndg
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	13		5	5	nemen and marin	13	1		2	2		1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	3%	0%	1%	0%	2%	0%	20%	0%	0%	0%
Adj. Flow (vph)	3	77	246	35	116	0	356	5	11	0	2	12
Shared Lane Traffic (%)										-		
Lane Group Flow (vph)	0	80	246	35	116	0	0	361	11	0	14	0
Enter Blocked Intersection	No	Ño	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0		_	0	<u>.u.</u> ;
Link Offset(ft)		0		7 1/24	0	H 317		0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											UEN,	
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	100
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	Õ	0	Ō		0	Ō	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	Ö	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		Ž0	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	Cl+Ex	
	CITEX	CITEX	CITEX	CITEX	CITEX		CITEX	CITEX	CITEX	CITEX	UITEX	
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane <u>Grou</u> p	Ø9	(= -5-1)	2 10 10		
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					1 1 1 1 1 2
Frt					
Fit Protected					
Satd. Flow (prot)					
FIt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					17
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0		*	0.0	25		0.0			0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8	-		2	-	2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)			****						* .			
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.13	0.19	0.08	0.19			0.51	0.01		0.02	
Control Delay		17.0	1.0	17.2	17.5			19.2	0.0		8.5	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.0	1.0	17.2	17.5			19.2	0.0		8.5	
LOS		В	A	В	В			В	A		A	Al .
Approach Delay		4.9			17.4			18.6	: <u>-</u>		8.5	
Approach LOS		A			В			В			A	
					3/21						350001	

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51 Intersection Signal Delay: 13.1 Intersection Capacity Utilization 54.8%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge

औ ø2	-\$-04	£kø9
30 s	30 s	22 s
Ø6	₹ øs	
30 s	30 s	

GEIS 11/07/2019 PM No-Build

TRJ

Lane Group	Ø9		10 2 6 6 6
Detector 2 Extend (s)			4 - 4 - 4 - 4 - 4
Turn Type			
Protected Phases	9		THE RESERVE OF
Permitted Phases			
Detector Phase		1000	
Switch Phase			
Minimum Initial (s)	1.0		
Minimum Split (s)	22.0		
Total Split (s)	22.0		
Total Split (%)	27%		
Maximum Green (s)	18.0		
Yellow Time (s)	3.0		
All-Red Time (s)	1.0		
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0		
Recall Mode	None		
Walk Time (s)	8.0		
Flash Dont Walk (s)	10.0		
Pedestrian Calls (#/hr)	5		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS	45		
Approach Delay			
Approach LOS			
Intersection Summary	11 -11 - 1		751

	*	-	*	1	←	4	1	†	~	1	ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	75	1→	-		- Abbelland	•	শ	1	U.S.de Variances		4	
Traffic Volume (vph)	18	30	265	0	0	0	286	332	17	1	238	28
Future Volume (vph)	18	30	265	0	0	0	286	332	17	1	238	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60		0	0	LI BU	0
Storage Lanes	1		0	Ō		0	1		0	0		0
Taper Length (ft)	25		II STEP	25		1115	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		X 313	William.			يناتن					
Frt		0.865						0.993			0.986	
Flt Protected	0.950						0.950	Lilay II			0.000	
Satd. Flow (prot)	1589	1534	0	0	0	0	1668	1790	0	0	1857	0
FIt Permitted	0.950		1, 5, 5,				0.471	1700	الباء الل	2 N IV	0.999	388
Satd. Flow (perm)	1584	1534	0	0	0	0	827	1790	0	0	1855	0
Right Turn on Red		- 1001	Yes			Yes		1700	Yes		1000	Yes
Satd. Flow (RTOR)		238				100		2	100		4	100
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)	1	17.0			0.0			V. !			14.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	0.30	2%	2%	2%	1%	2%	0.93	0%	1%	0.93
Adj. Flow (vph)	19	32	285	Ö	0	0	308	357	18	1	256	30
Shared Lane Traffic (%)	10	02	200	. <u>v</u>	Ų		300	201	10	100	200	30
Lane Group Flow (vph)	19	317	0	Ö	Ō	Ō	308	375	Ō	Ō	287	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	LOIL	10	1 digit	LOIL	10	rugit	Lon	10	ragin	LOIL	10	raging
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane								To sen fin			10	
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	1.00	9	15	1.00	9	15		9	15	1.00	9
Number of Detectors	1	2	ų,	10			1	2		1	2	J,
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	Ö	Ö					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	Cl+Ex	CI+Ex					CI+Ex	CI+Ex		Cl+Ex	CI+Ex	
Detector 1 Channel	CITEX	CITEX					CITEX	CITEX		CITEX	CITEX	
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
/	0.0	0.0					0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0								0.0	0.0	
Detector 1 Delay (s)	U.U	94					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		6						94			94	
Detector 2 Size(ft)		-						6 CUEv			6 CL Fu	
Detector 2 Type Detector 2 Channel		CI+Ex						CI+Ex			CI+Ex	

Lane Group	Ø1	Ø3	
Lane Configurations			_
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft) Lane Util. Factor			
Ped Bike Factor			
Frt			
Fit Protected			
Satd. Flow (prot) FIt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			_

	A	->	*	1	-	•	1	†	1	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	ÑBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0						0.0		blum blab.	0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	ÑÃ	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.0	25.0					93.1	93.1		_	65.0	
Actuated g/C Ratio	0.17	0.17	8				0.64	0.64			0.45	
v/c Ratio	0.07	0.69					0.46	0.33			0.34	
Control Delay	52.1	23.5					5.0	3.7			27.6	
Queue Delay	0.0	67.8					0.5	0.6			0.0	
Total Delay	52.1	91.3					5.5	4.3			27.6	
LOS	D	F					Ā	Α			Ċ	
Approach Delay		89.1					WH 10	4.8			27.6	
Approach LOS		F						A			Ċ	

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 145.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

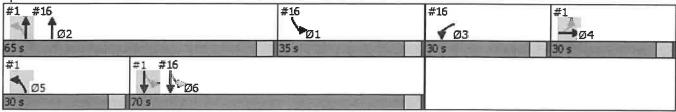
Maximum v/c Ratio: 0.77 Intersection Signal Delay: 31.5

Intersection Capacity Utilization 63.2%

Analysis Period (min) 15

Intersection LOS: C
ICU Level of Service B

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3		T. II V. II.
Detector 2 Extend (s)	וש	100		12 -12 1 -1
Turn Type				
Protected Phases	1	3		
Permitted Phases		J		
Detector Phase				
Switch Phase				
Minimum Initial (s)	10.0	12.0		
Minimum Split (s)	15.0	17.0		
	35.0	30.0		
Total Split (s) Total Split (%)	22%	19%		
Maximum Green (s)	30.0	25.0		
Yellow Time (s)	4.0	4.0		
All-Red Time (s)	1.0	1.0		
Lost Time Adjust (s)	1.0	1.0		
Total Lost Time (s)				
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		
Recall Mode	None	None		
Act Effct Green (s)	None	INOUG		
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Intersection Summary		19 mil	المراجع والمراجع المراجع	

 GEIS 11/07/2019 PM No-Build
 Synchro 10 Report

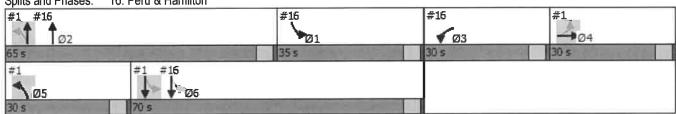
 TRJ
 Page 4

	1	4	†	-	-	Į.				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5		45.71
Lane Configurations	14		†			4		ands have hardering		
Traffic Volume (vph)	8	65	570	4	56	447				
Future Volume (vph)	8	65	570	4	56	447				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Width (ft)	15	12	11	11	12	11				
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			See and the second	
Frt	0.880	75.	0.999							
Fit Protected	0.994					0.994				
Satd. Flow (prot)	1828	0	3418	0	0	1810				
Flt Permitted	0.994			شتت	The Late	0.867				
Satd. Flow (perm)	1828	0	3418	0	0	1578				
Right Turn on Red		Yes	W	Yes	wii Š	1010				
Satd. Flow (RTOR)	70	100		100						
Link Speed (mph)	30		30			30				
Link Distance (ft)	339		147			136				
Travel Time (s)	7.7		3.3			3.1				
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				
Heavy Vehicles (%)	0%	0%	2%	0.50	0.50	1%				
Adj. Flow (vph)	9	70	613	4	60	481				
Shared Lane Traffic (%)		70	010		00	701			STATE OF THE RESERVE	
Lane Group Flow (vph)	79	0	617	0	0	541				
Enter Blocked Intersection	No	No	No	No	No	No				
Lane Alignment	Left	Right	Left	Right	Left	Left				
Median Width(ft)	15	ragat	10	right	Leit	10				
Link Offset(ft)	0		0			0				
Crosswalk Width(ft)	16		16			16				
Two way Left Turn Lane	10		10			10				
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04				
Turning Speed (mph)	15	9	1.04	9	1.00	1.04			S THAT I SEE THE ON	SLA
Number of Detectors	1	9	2	3	1	2				
Detector Template	Left		Thru		Left	Thru				
Leading Detector (ft)	20		100		20	100				
Trailing Detector (ft)	0		0		0	0	W 10 III			
Detector 1 Position(ft)	0		0		0	0				
	20		6		20	6				
Detector 1 Size(ft) Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	Cl+Ex				
Detector 1 Type Detector 1 Channel	CITEX		CI+EX		CITEX	CITEX				
Detector 1 Extend (s)	0.0		0.0		0.0	n n				
the state of the s	0.0		0.0		0.0	0.0				
Detector 1 Queue (s)	0.0		0.0		0.0	0.0				
Detector 1 Delay (s)	0.0		94		0.0					1 = 1 11
Detector 2 Position(ft)						94				
Detector 2 Size(ft)			6			6				
Detector 2 Type			CI+Ex			CI+Ex				
Detector 2 Channel			0.0			0.0				
Detector 2 Extend (s)	D1		0.0			0.0				
Turn Type	Prot		NA		pm+pt	NA				
Protected Phases	3		2		1	6	4	5		
Permitted Phases	The Late of the La				6					
Detector Phase	3		2		1	6				

	1	1	1	-	-	•					
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5		400	EU Y
Switch Phase								71.1			-,, -
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0			
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0			
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0			
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%			
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0			
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0		0.0			0.0					
Total Lost Time (s)	5.0		5.0			5.0					
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes			
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0			
Recall Mode	None		Max		None	Max	Max	None			
Act Effct Green (s)	12.0		93.1			65.0					
Actuated g/C Ratio	0.08		0.64			0.45					
v/c Ratio	0.37		0.28			0.77					
Control Delay	22.0		11.7			34.8					
Queue Delay	0.0		0.0			3.9					
Total Delay	22.0		11.7			38.7					
LOS	C		В			D					
Approach Delay	22.0		11.7			38.7					
Approach LOS	С		В			D					
Intersection Summary			Teve II	J. Tarrell					15, 1-5	1 51	
Area Type:	Other			1,7			31.				
Cycle Length: 160											
Actuated Cycle Length: 14	45.1										
Natural Cycle: 90											
Control Type: Actuated-U	ncoordinated										
Maximum v/c Ratio: 0.77	-										
Intersection Signal Delay:	24.2			lı İı	ntersectio	n LOS: C					
Intersection Capacity Utiliz				Ī	CU Level	of Service	С				
A L L. D L L d											

Splits and Phases: 16: Peru & Hamilton

Analysis Period (min) 15



2022 Build Conditions

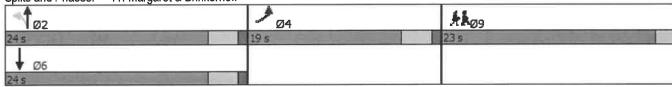
Durkee Street Two-Way

=						
Intersection			2 124			1000
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
A 100 0 -				INBK	SBL	
Lane Configurations	7	7	†	^	^	400
Traffic Vol, veh/h	20	41	101	0	0	168
Future Vol, veh/h	20	41	101	0	0	168
Conflicting Peds, #/hr	8	4	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	6.14	None		None		None
Storage Length	163	-	-	-	-	-
Veh in Median Storage	e, # 0	7	0			0
Grade, %	0	-	Ō	-	-	0
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	0	1	2	2	2
Mvmt Flow	31	64	158	0	0	263
	01	<u>0</u> -	100	0	V	200
		_				
Major/Minor	Minor1	- N	lajor1	, A	/lajor2	
Conflicting Flow All	429	162	0	-	-	-
Stage 1	158		-	40		
Stage 2	271	_		_	-	_
Critical Hdwy	6.4	6.2	MIT.	- 35.		
Critical Hdwy Stg 1	5.4	V	_	_	_	
Critical Hdwy Stg 2	5.4				918H.	
	3.5		-			
Follow-up Hdwy		3.3	-	-	-	
Pot Cap-1 Maneuver	587	888	-	0	0	2
Stage 1	875	-	-	0	0	-
Stage 2	779		-	0	0	
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	582	885				
Mov Cap-2 Maneuver	582	-	-	-		-
Stage 1	875			-	-	
Stage 2	773	-	-	_	_	_
W	275705		772		-	
Approach	WB	_000	NB		SB	
HCM Control Delay, s	10.1		0		0	
HCM LOS	В					
Minoriana/Major Mayor	1	AIDTIA	(D) - 414	VDI0	CDT	_
Minor Lane/Major Mvm	Ţ	MRIAN	BLn1V		SBT	
Capacity (veh/h)		-	582	885	-	
HCM Lane V/C Ratio		-	0.054		-	
HCM Control Delay (s)			11.5	9.4		
HCM Lane LOS		-	В	Α	-	
HCM 95th %tile Q(veh)			0.2	0.2		
-0.7						

	<i>></i>	7		† .	Ţ	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations	N/		INDL	4	4	ODIT	20
Traffic Volume (vph)	9	65	8	101	186	6	
Future Volume (vph)	9	65	8	101	186	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	1300	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00	1.00			1.00	
	0.97			1.00	1.00		
Frt Flt Protected	0.881			0.000	0.996		
	0.994	Õ	0	0.996	4745		
Satd. Flow (prot)	1734	Õ	0	1811	1715	0	
FIt Permitted	0.994	•		0.972	4745	•	
Satd. Flow (perm)	1730	0	0	1766	1715	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	123			. 11 . 1	2		
Link Speed (mph)	30			30	30		
Link Distance (ft)	456			298	276		
Travel Time (s)	10.4			6.8	6.3		
Confl. Peds. (#/hr)	8	3	8			8	
Peak Hour Factor	0.53	0.53	0.53	0.53	0.53	0.53	
Heavy Vehicles (%)	0%	0%	14%	0%	3%	0%	
Adj. Flow (vph)	17	123	15	191	351	11	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	140	0	0	206	362	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	14			0	0		
Link Offset(ft)	0			0	Ŏ		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane				-			
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
Turning Speed (mph)	15	9	15			9	
Number of Detectors	1	200	1	2	2		
Detector Template	Left		Left	Thru	Thru		
Leading Detector (ft)	20		20	100	100		
Trailing Detector (ft)	0		0	0	0		
Detector 1 Position(ft)	Ŏ		0	0	0		
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel	OI, FY		OI LX	OI. LY	OLITA		
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		Ų.Ų	94	94		
Detector 2 Position(ft)							
Detector 2 Size(ft)				6 CHE	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel				0.0	6.0		
Detector 2 Extend (s)			_	0.0	0.0		
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9

	1	7	1	†	1	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	
Permitted Phases			2					
Detector Phase	4		2	2	6			
Switch Phase								
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0	
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0	
Total Split (s)	19.0		24.0	24.0	24.0		23.0	
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%	
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0	
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0	
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0	
Lost Time Adjust (s)	0.0			0.0	0.0			
Total Lost Time (s)	4.0			4.0	4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None		Max	Max	Max		None	
Walk Time (s)							10.0	
Flash Dont Walk (s)							5.0	
Pedestrian Calls (#/hr)							10	
Act Effct Green (s)	6.6			24.9	24.9			
Actuated g/C Ratio	0.17			0.63	0.63			
v/c Ratio	0.36			0.19	0.33			
Control Delay	8.3			7.3	8.2			
Queue Delay	0.0			0.0	0.0			
Total Delay	8.3			7.3	8.2			
LOS	Α			A	Α			
Approach Delay	8.3			7.3	8.2			
Approach LOS	Α			A	Α			
Intersection Summary	1-6-	- 125	15				1	-
Area Type:	Other							
Cycle Length: 66								
Actuated Cycle Length: 39	.5							
Natural Cycle: 55								
Control Type: Actuated-Un	coordinated							
Maximum v/c Ratio: 0.36								
Intersection Signal Delay:	7.9			lı	ntersection	LOS: A		
Intersection Capacity Utiliz				10	CU Level o	of Service	Α	
Analysis Period (min) 15				_				

Splits and Phases: 11: Margaret & Brinkerhoff



	۶	→	V	*	4-	4	4	Ť	1	-	Į.	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	1→		an abstraction of	4	and harrings.	annual timbers and be	4			4	anne desi
Traffic Volume (vph)	76	210	28	4	267	28	23	11	23	68	32	76
Future Volume (vph)	76	210	28	4	267	28	23	11	23	68	32	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		Ô	0		0	0		0
Storage Lanes	1		Ó	0		0	0		Ō	ō		Ō
Taper Length (ft)	25			25			25			25		2 1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99			1.00			0.99		7 7 7 7	0.99	
Frt	100	0.982			0.987			0.946			0.942	
Flt Protected	0.950				0.999			0.980			0.981	
Satd. Flow (prot)	1534	1756	0	0	1829	0	0	1685	0	0	1770	0
FIt Permitted	0.341				0.995			0.842	N. bu	4 14 70	0.855	
Satd. Flow (perm)	548	1756	0	0	1821	0	0	1445	0	0	1541	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		7			6	4. 7,7		35				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	7		38	38	5.5	7	6		2	2		6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	2%	2%	0%	25%	5%	8%	13%	9%	0%	2%	0%	1%
Adj. Flow (vph)	117	323	43	6	411	43	35	17	35	105	49	117
Shared Lane Traffic (%)					-	-						2111
Lane Group Flow (vph)	117	366	0	0	460	0	0	87	0	0	271	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	THE WOLLD	8	9		8	_0		0	,3		0	
Link Offset(ft)		0			0			0			0	FIGUR.
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											10	100
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	7,81
Detector 1 Type	Cl+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		Cl+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel								a				

-	2/3
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor Frt	
Fit Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft) Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

Lane Group	Ø9		Jan L	39 61	1900	T. San F.
Detector 2 Extend (s)	18 Ipola I					N. STEEL
Turn Type						
Protected Phases	9					
Permitted Phases						
Detector Phase					- 65 a.U.	44.00
Switch Phase						
Minimum Initial (s)	1.0					
Minimum Split (s)	28.0					
Total Split (s)	28.0					
Total Split (%)	29%					
Maximum Green (s)	24.0					
Yellow Time (s)	3.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	12.0					
Flash Dont Walk (s)	12.0					
Pedestrian Calls (#/hr)	10					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Intersection Summary		1 3 11 34	Marin and	W. 1 12	ATTENDED	Em.

	*	-	1	1	←	4	4	†	1	-	+	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0	100		0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	27.2	27.2			27.2			30.9			30.9	
Actuated g/C Ratio	0.39	0.39			0.39			0.44			0.44	
v/c Ratio	0.55	0.54			0.65			0.13			0.40	
Control Delay	32.5	21.7			24.7			11.9			19.4	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	32.5	21.7			24.7			11.9			19.4	
LOS	Ç	C			Č			В			В	
Approach Delay		24.3			24.7			11.9			19.4	
Approach LOS		С			C			В			В	
Intersection Summary	1.00	ولا تالت	1				2 T.Y.A.	111881	100	90		
Area Type:	Other											
Cycle Length: 96												
Actuated Cycle Length: 7	0.5											
Natural Cycle: 80		**										
Control Type: Actuated-L												
Maximum v/c Ratio: 0.65												
Intersection Signal Delay	: 22.6				ntersectio	4.0						
Intersection Capacity Util	ization 52.3%	1		K	CU Level	of Service	e A					
Analysis Daried (min) 15												

Splits and Phases: 6: Pine/Margaret & Broad

Analysis Period (min) 15

↑ø2	⊸ Ø4	# k ø9	
45	34 s	28 s	Part of the
↓ **ø6	₹ Ø8		
45	34 s	STATE STATE OF THE	

Intersection	Show of I	
Intersection Delay, s/veh	40.5	
Intersection LOS	E	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					न	7		4		- 10 to 10 t	4	
Traffic Vol, veh/h	0	Q	0	9	43	311	6	79	6	365	153	10
Future Vol, veh/h	Ō	Ó	Ö	9	43	311	6	79	6	365	153	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	0	0	6	0	2	Ö	3	3	0
Mvmt Flow	0	Õ	0	11	53	384	7	98	7	451	189	12
Number of Lanes	Ô	0	0	Ô	1	1	0	1	Ō	Ō	1	Ō
Approach		300-	Mary III	WB	. 3-70	W == 1	NB		Date:	SB	1317	500
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			0		
HCM Control Delay				17.4			10.9			61.5		
HCM LOS				C			В		111 611	F		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	11 4 1
Vol Left, %	7%	17%	0%	69%	
Vol Thru, %	87%	83%	0%	29%	
Vol Right, %	7%	0%	100%	2%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	91	52	311	528	
LT Vol	6	9	0	365	
Through Vol	79	43	0	153	
RT Vol	6	0	311	10	
Lane Flow Rate	112	64	384	652	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.196	0.12	0.635	1.01	
Departure Headway (Hd)	6.265	6.751	5.95	5.576	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Сар	568	529	603	652	
Service Time	4.347	4.52	3.718	3.626	
HCM Lane V/C Ratio	0.197	0.121	0.637	1	
HCM Control Delay	10.9	10.4	18.6	61.5	
HCM Lane LOS	В	В	C	F	
HCM 95th-tile Q	0.7	0.4	4.5	16	

ntersection							- 11	N.	1977			11112
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		1 / 41	4	100000	3 = 31.6	4	W. W. L. L. L.	ሻ	1>	F-100-0-11
Traffic Vol, veh/h	66		17	7	235	61	1	3	0	59	2	69
Future Vol, veh/h	66		17	7	235	61	1	3	Ō	59	2	69
Conflicting Peds, #/hr	1	0	24	24	0	1	7	0	5	5	0	7
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		-	None			None			None		-	None
Storage Length	-	-		-	-	-	-	-		145	-	-
Veh in Median Storag	e,# -	0		*	0			0			0	(4)
Grade, %	-		-	-	0	-	-	Ó	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	1	1	0	0	4	0	0	0	0	0	0	12
Mvmt Flow	90	297	23	10	322	84	1	4	0	81	3	95
								-				
Major/Minor	Major1			Major2	250	2 10	Vinor1		1 1 2 2 - 1	Minor2		100
Conflicting Flow All	407	0	0	344	0	0	953	940	338	881	909	372
Stage 1	107		-	-		-	513	513	-	385	385	012
Stage 2	-	-	_	-	_		440	427		496	524	_
Critical Hdwy	4.11			4.1		-	7.1	6.5	6.2	7.1	6.5	6.32
Critical Hdwy Stg 1		-	-	-	_	_	6.1	5.5	0,2	6.1	5.5	0.02
Critical Hdwy Stg 2		145					6.1	5.5		6.1	5.5	7 11 75
Follow-up Hdwy	2.209	_	-	2.2	-	-	3.5	4	3.3	3.5	4	3.408
Pot Cap-1 Maneuver	1157	-		1226			241	266	709	269	277	652
Stage 1		_	-			-	548	539	100	642	614	-
Stage 2		7 = 2	1 2	Æ.			600	589		559	533	
Platoon blocked, %		_	-		-	-						
Mov Cap-1 Maneuver	1156			1193		-	181	231	686	242	241	646
Mov Cap-2 Maneuver		-	-	-	-	-	181	231	-	242	241	-
Stage 1			111	- 1	11 12	1002	483	475		580	607	21
Stage 2	-	-		-			500	582	-	499	470	
							Y E	, iii				
Approach	EB	0 54 5	1	WB	-1116	800	NB			SB	4-15	415 U.S
HCM Control Delay, s	1.8	OTHER D		0.2		1778	22.1			18.8		THE
HCM LOS							C			C		
										العا		
Minor Lane/Major Mym	nt	NBLn1	EBL	EBT	EBR	WBL	WBT	WRR 9	SBLn1	SBI n2		
Capacity (veh/h)	17	216	1156			1193	***	11011	242	617		
HCM Lane V/C Ratio		0.025	0.078	-	-	0.008	-		0.334			
HCM Control Delay (s)		22.1	8.4	0	_	8	0	-	27.2	11.9		
HCM Lane LOS		C	Α.4	A		A	A	_	21.2 D	В		
HCM 95th %tile Q(veh)	1	0.1	0.3	^	7.	0	^		1.4	0.6		
TOTAL COULT TOUR ON VOIL	<i>I_</i>	0.1	0.0		1	U	153	153	1.7	0.0		

	*	-	*	•	←	4	1	†	~	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	75	1>			4	7		4	
Traffic Volume (vph)	7	69	273	19	88	1	254	15	6	0	14	7
Future Volume (vph)	7	69	273	19	88	1	254	15	6	0	14	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	Õ		50	40	2,041	0	0		115	0	HEN II	0
Storage Lanes	0		1	1		0	0		110	0		0
Taper Length (ft)	25			25			25		_	25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Frt			0.850		0.999			1.00	0.850		0.955	
Fit Protected		0.995	0.000	0.950	0.000			0.955	0.000		0.500	
Satd. Flow (prot)	0	1667	1615	1589	1754	0	0	1646	1615	0	1176	0
Flt Permitted		0.972	1013	0.694	17.54		U	0.718	1015	U	1170	U
Satd. Flow (perm)	0	1629	1615	1161	1754	0	0	1236	1615	0	1176	0
Right Turn on Red	U	1029	Yes	1101	1734	Yes	U	1230		U	11/0	
			350		4	162			Yes		_	Yes
Satd. Flow (RTOR)		30	300		1 30			30	80		9	
Link Speed (mph)					322						30	
Link Distance (ft)		714						641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	0.70	0.70	0.70	0.70	0.70	0.70	1	0.70	0.70	0.70	:	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	14%	5%	0%	6%	1%	0%	5%	33%	0%	0%	50%	29%
Adj. Flow (vph)	9	88	350	24	113	1	326	19	8	0	18	9
Shared Lane Traffic (%)		127				-		2.2			Please to a	
Lane Group Flow (vph)	0	97	350	24	114	0	0	345	8	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			Ō			0	
Link Offset(ft)		0			0			Ö			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	_11	_ 2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel											-~	

Lane Group	Ø9	11, 100		15- 11	1 1 1 1 1 2 2 3 3
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
deal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
FIt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					

	•	-	*	1	4	*	4	†	-	1	Ţ	*
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	custom	Perm	ÑA		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase										_		
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	199
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	52.6	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.93	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.17	0.23	0.06	0.19			0.51	0.01		0.04	
Control Delay		17.4	0.9	17.3	17.3			19.4	0.0		10.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.4	0.9	17.3	17.3			19.4	0.0		10.7	
LOS		В	Α	В	В			В	Α		В	
Approach Delay		4.5			17.3			19.0			10.7	
Approach LOS		Α			В			В			В	

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51 Intersection Signal Delay: 11.8 Intersection Capacity Utilization 56.9%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge

\$Îø2	2 04	Ak@9				
30 s	30 s	22 s				
Ø6	₹ Ø8					
30 s	30 s					

GEIS 11/07/2019 AM Build 2-way Durkee

Lane Group	Ø9	11-11-11	11.50	diam'r.	1000	11111	The state of	
Detector 2 Extend (s)				777	THE WAY	F E (6)		Z.
Turn Type								
Protected Phases	9							
Permitted Phases								
Detector Phase								
Switch Phase								
Minimum Initial (s)	1.0							
Minimum Split (s)	22.0							
Total Split (s)	22.0							
Total Split (%)	27%							
Maximum Green (s)	18.0			V., 1				
Yellow Time (s)	3.0							
All-Red Time (s)	1.0							
Lost Time Adjust (s)								_
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0							
Recall Mode	None							
Walk Time (s)	8.0							-
Flash Dont Walk (s)	10.0 5	1,51,						
Pedestrian Calls (#/hr)	3							
Act Effct Green (s) Actuated g/C Ratio								
v/c Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								
		11 1- 11 11	F 15 15					
Intersection Summary	N. P. S. C. S.							-19

	۶	→	*	1	←	*	4	†	1	1	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ĵ.					*1	7.			4	
Traffic Volume (vph)	15	21	240	0	0	Ō	290	267	18	2	291	13
Future Volume (vph)	15	21	240	0	0	0	290	267	18	2	291	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60		0	0		0
Storage Lanes	1		0	Ō		0	1		0	Ō		0
Taper Length (ft)	25			25			25			25		- T. V
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							1.00	JUNE D			1.00	
Frt		0.862						0.990			0.994	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1574	1529	0	0	0	0	1652	1706	0	0	1812	0
FIt Permitted	0.950						0.391				0.998	
Satd. Flow (perm)	1574	1529	0	0	0	0	679	1706	0	0	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		301						2			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)							1	2.1				1
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	7%	0%	0%	2%	2%	2%	2%	7%	0%	0%	4%	8%
Adj. Flow (vph)	20	28	316	0	0	Ō	382	351	24	3	383	17
Shared Lane Traffic (%)	===			_	-		527					
Lane Group Flow (vph)	20	344	0	0	0	0	382	375	0	Õ	403	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10	13	2011	10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane		M. Gerry J.		7 1	HERM			100 17				
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	er julid	9	15		9	15		9	15	MX	9
Number of Detectors	1	2	-			Ξ.	1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	= 01
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	100
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel											In LX	
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94					0.0	94		0.0	94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel		JI. LA						J L			OI, LV	

Lane Group	Ø1	Ø3	 E L PIII	8.77	- Buch	V Di al
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Confl. Peds. (#/hr)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Detector 2 Position(ft)						
Detector 2 Size(ft)						
Detector 2 Type						
Detector 2 Channel						

	*	-	*	1	—	1	1	†	-	-		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0					F	0.0	THE LOW		0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0		-	0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	SUIT
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					95.2	95.2		_	65.2	
Actuated g/C Ratio	0.17	0.17					0.66	0.66			0.45	Na le
v/c Ratio	0.07	0.67					0.62	0.33			0.49	
Control Delay	52.3	16.4					6.7	2.9			30.8	
Queue Delay	0.0	65.5					0.8	$0.\overline{4}$			0.9	
Total Delay	52.3	82.0					7.6	3.4			31.7	
LOS	Ď	F					Α	A			С	
Approach Delay		80.3						5.5			31.7	
Approach LOS		F						Ā			С	
Intersection Summary	1-3194	NOTE:	400	TOWN.	350	17 -	COTTON	2/11/43	7.0	11153	S NH	-03
Area Type:	Other											
Cycle Length: 160												

Actuated Cycle Length: 143.6

Natural Cycle: 110

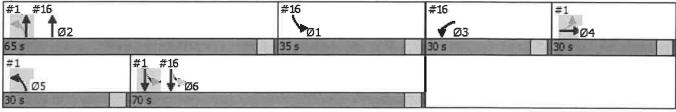
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 30.3 Intersection Capacity Utilization 60.7%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

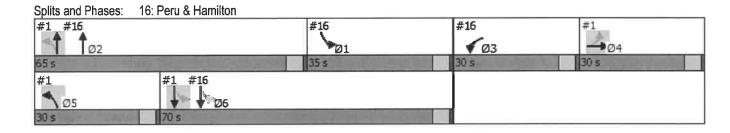
Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3
Detector 2 Extend (s)		
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase	a 1900 - 97960	
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary	Yan e	

	1	*	†	1	1	Ţ			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	S' THE RES
Lane Configurations	**	ager seem to a bank offer	†	and annotate date on	Man my many Africa	4	at to .		
Traffic Volume (vph)	4	38	529	3	21	510			
Future Volume (vph)	4	38	529	3	21	510			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.877	1100	0.999	0.00	1.00	1,00			
Flt Protected	0.995		0.000			0.998			
Satd. Flow (prot)	1824	0	3259	0	0	1765			
Flt Permitted	0.995				N I	0.952			
Satd. Flow (perm)	1824	0	3259	0	0	1684			
Right Turn on Red	Tarana da	Yes	0200	Yes					
Satd. Flow (RTOR)	50	100		100					
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3			3.1			
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	4%			
Adj. Flow (vph)	5	50	696	4	28	671			
Shared Lane Traffic (%)			000	MM -	20	071			
Lane Group Flow (vph)	55	0	700	0	0	699			
Enter Blocked Intersection	No	No	No	No	No	No			A STATE OF THE PARTY OF THE PAR
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15	rugiit	10	rugiit	LOIL	10			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane	10		10			10			
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9	1.01	9	15	1.01			
Number of Detectors	1		2		1	2			
Detector Template	Left		Thru		Left	Thru			
Leading Detector (ft)	20		100		20	100			
Trailing Detector (ft)	0		0		0	0			
Detector 1 Position(ft)	0		Ö		0	0			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex			
Detector 1 Channel	OITEX		OI. LX		OI. LX	OI · LX			
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	0.0		94		0.0	94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Channel			OITEX			OITEX			
Detector 2 Extend (s)			0.0			0.0			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2		Pilitpt 1	6	4	5	
Permitted Phases			-, 1		6	U			
Detector Phase	3		2		1	6			
Detector Filase	J					Ü			

	1	4	†	-	-	1				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	A STATE OF THE STA	
Switch Phase										75
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0		
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0		
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0		
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%		
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0		
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0		
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0				
Total Lost Time (s)	5.0		5.0			5.0				
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		
Recall Mode ,	None		Max		None	Max	Max	None		
Act Effct Green (s)	12.0		95.2			65.2				
Actuated g/C Ratio	0.08		0.66			0.45				
v/c Ratio	0.28		0.32			0.91				
Control Delay	22.4		11.4			41.0				
Queue Delay	0.0		0.0			0.0				
Total Delay	22.4		11.4			41.0				
LOS	C		В			D				
Approach Delay	22.4		11.4			41.0				
Approach LOS	С		В			D				
Intersection Summary	ا بيان رال	1						13-		1 y 5 y 2
Area Type:	Other					10-10	- 1			
Cycle Length: 160										
Actuated Cycle Length: 14	43.6									
Natural Cycle: 110										
Control Type: Actuated-U	ncoordinated									
Maximum v/c Ratio: 0.91										
Intersection Signal Delay:	26.1					n LOS: C				
Intersection Capacity Utiliz	zation 62.2%			IC	CU Level	of Service	В			
Analysis Period (min) 15										



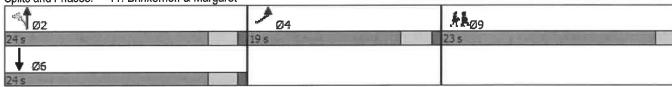
Intersection	J)k	11,23	100		LL.	Tall
Int Delay, s/veh	1.9					
Movement		WDD	NIDT	NDD	CDI	CDT
	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	*	7	↑	0		1
Traffic Vol, veh/h	38	41	164	0	0	226
Future Vol, veh/h	38	41	164	0	0	226
Conflicting Peds, #/hr	39	24	_ 0	0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	16	None	- 1-	None	-	None
Storage Length	163	-	-	-	-	-
Veh in Median Storag	rando essa		0	-	150	0
Grade, %	0	-	Ō	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	3	4	2	2	2	1
Mvmt Flow	48	52	208	0	0	286
to a constant				_		
VA I NO	-	i i				
	Minor1		Major1		Major2	
Conflicting Flow All	533	232	0	-	-	-
Stage 1	208	-				3
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.43	6.24				
Critical Hdwy Stg 1	5.43	-		-		-
Critical Hdwy Stg 2	5.43	-		-		
Follow-up Hdwy	and the same	3.336		-		_
Pot Cap-1 Maneuver	506	802		0	0	
Stage 1	824	002		0	0	-
Stage 2	730	-		0	0	-9
	130	-	-	Ü	U	
Platoon blocked, %	407	704	-			-
Mov Cap-1 Maneuver	487	784	-		•	- 5
Mov Cap-2 Maneuver	487	-	-	-	-	
Stage 1	824			21 = 1		*
Stage 2	703		-	-	-	-
Approach	WB	BISL	NB	191	SB	1 4 5
44	11.5		0		0	
HCM LOS			U		0	
HCM LOS	В					
Minor Lane/Major Mvn	nt	NBTW	/BLn1V	VBLn2	SBT	
Capacity (veh/h)			487	784		57
HCM Lane V/C Ratio			0.099			
HCM Control Delay (s)		F.St.	13.2	9.9		
HCM Lane LOS			13.2 B	Ā		
HCM 95th %tile Q(veh			0.3	0.2		
HOW SOM WHILE CHIVEN)		0.5	U.Z		

	1	•	4	†	\downarrow	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations	W	• • • • • • • • • • • • • • • • • • • •	bacamatan).	न	1>	lu-	
Traffic Volume (vph)	38	50	13	115	205	36	
Future Volume (vph)	38	50	13	115	205	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	11	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.93	1.00	1.00	1.00	0.99	1.00	
Frt	0.923			1.00	0.980		
Fit Protected	0.979			0.995	0.000		
Satd. Flow (prot)	1797	Ö	Ö	1811	1690	0	
Flt Permitted	0.979	Ų	Ů	0.970	1030	U	
Satd. Flow (perm)	1699	0	0	1760	1690	0	
	1099	Yes	U	1700	טפסו	Yes	
Right Turn on Red	EC	res			4.4	res	
Satd. Flow (RTOR)	56	111-11-11		00	14		
Link Speed (mph)	30			30	30		
Link Distance (ft)	456			298	276		
Travel Time (s)	10.4	-		6.8	6.3	-	
Confl. Peds. (#/hr)	58	6	33			33	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	
Adj. Flow (vph)	42	56	14	128	228	40	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	98	0	0	142	268	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	14			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
Turning Speed (mph)	15	9	15			9	
Number of Detectors	Ĩ		1	2	2		
Detector Template	Left		Left	Thru	Thru		
Leading Detector (ft)	20		20	100	100		
Trailing Detector (ft)	0		0	0	0		
Detector 1 Position(ft)	0		0	0	0		THE RESERVE OF THE PARTY OF THE
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	- 2	
Detector 2 Position(ft)	0.0		0.0	94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel				OI LX	OI-EX		
				0.0	0.0		
	Drot		Darm				
			Leilli	· · · · · · · · · · · · · · · · · · ·			0
Detector 2 Extend (s) Turn Type Protected Phases	Prot 4		Perm	0.0 NA 2	0.0 NA 6		9

	<i>></i>	7	1	†	↓	1					
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	VIII.	J. of the	. 11 1 1 1 2	
Permitted Phases			2						100	12"	
Detector Phase	4		2	2	6						
Switch Phase											
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0				
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0				
Total Split (s)	19.0		24.0	24.0	24.0		23.0				
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%				
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0				
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0				
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0				
Lost Time Adjust (s)	0.0			0.0	0.0						
Total Lost Time (s)	4.0			4.0	4.0						
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0				
Recall Mode	None		Max	Max	Max		None				
Walk Time (s)							10.0				
Flash Dont Walk (s)							5.0				
Pedestrian Calls (#/hr)							10				
Act Effct Green (s)	6.8			27.6	27.6						
Actuated g/C Ratio	0.16			0.65	0.65						
v/c Ratio	0.29			0.12	0.24						
Control Delay	11.2			7.0	7.2						
Queue Delay	0.0			0.0	0.0						
Total Delay	11.2			7.0	7.2						
LOS	В			A	Α						
Approach Delay	11.3			7.0	7.2						
Approach LOS	В			A	Α						
Intersection Summary							S 7.			27 10	1100 250
Area Type:	Other										
Cycle Length: 66											
Actuated Cycle Length: 42	2.4										
Natural Cycle: 45	13.									77.00	
Control Type: Actuated-Ur	ncoordinated										
Maximum v/c Ratio: 0.29											
Intersection Signal Delay:					ntersection						
Intersection Capacity Utiliz	zation 29.1%			10	CU Level o	of Service	Α				
Analysis Period (min) 15											

Splits and Phases: 11: Brinkerhoff & Margaret

Analysis Period (min) 15



	*	→	*	•	←	•	1	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Tr.	f _a			4			4			4	
Traffic Volume (vph)	73	220	9	18	279	66	14	22	19	83	40	97
Future Volume (vph)	73	220	9	18	279	66	14	22	19	83	40	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0		0	0		0.
Storage Lanes	1		0	Ō		0	Ō		Õ	0		0
Taper Length (ft)	25			25			25		mi	25		William .
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00			0.99			0.99			0.98	
Frt		0.994			0.975			0.953			0.940	
Flt Protected	0.950				0.997			0.988			0.981	
Satd. Flow (prot)	1534	1763	0	0	1832	0	0	1832	0	0	1787	0
FIt Permitted	0.322				0.978			0.929		18 716	0.878	105-31
Satd. Flow (perm)	513	1763	0	0	1794	0	0	1720	0	0	1596	0
Right Turn on Red			Yes			Yes			Yes		1000	Yes
Satd. Flow (RTOR)		2			12			21	,00		43	1,00
Link Speed (mph)		30			30			30			30	1000
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19		35	35		19	6	0.0	4	4		6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	33%	0%	4%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	79	239	10	20	303	72	15	24	21	90	43	105
Shared Lane Traffic (%)		-5-2	15.					= :	==:		10	100
Lane Group Flow (vph)	79	249	0	0	395	Ö	Ö	60	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	www.	8			8	3_		0			0	. "3"
Link Offset(ft)		Ó		11-7	Ō		6.4	0		Sec VI	0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											-10	
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	-	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	Ö		0	0		0	0		Ō	Ō	
Detector 1 Position(ft)	0	0		0	0		0	0		0	Ö	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	1
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94		AL INC.	94			94		-,7161	94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel		-			-							

Lane <u>Group</u>	<u>Ø</u> 9	21				FIELD C
Lane Configurations						
Traffic Volume (vph)				- 77		
Future Volume (vph)						
Ideal Flow (vphpl)			17.00			
Lane Width (ft)						
Storage Length (ft)						
Storage Lanes						
Taper Length (ft)						
Lane Util. Factor						
Ped Bike Factor						
Frt						
FIt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Confl. Peds. (#/hr)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 2 Channel						**
Detector 1 Type Detector 1 Channel Detector 1 Extend (s) Detector 1 Queue (s) Detector 1 Delay (s) Detector 2 Position(ft) Detector 2 Size(ft) Detector 2 Type Detector 2 Channel						

	*	-	7	1	-	*	4	†	-	\	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	ÑΑ	
Protected Phases		4	1 1 11		8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	307
Switch Phase					_						-	
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		-	0.0		***	0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag					-			_				
Lead-Lag Optimize?										7 141		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)											11.	
Pedestrian Calls (#/hr)												
Act Effct Green (s)	18.6	18.6			18.6			31.7			31.7	
Actuated g/C Ratio	0.30	0.30			0.30			0.51			0.51	
v/c Ratio	0.52	0.47			0.73			0.07			0.29	
Control Delay	34.1	22.3			28.9			10.6			12.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	34.1	22.3			28.9			10.6			12.3	
LOS	C	C			C			В			В	
Approach Delay		25.2			28.9			10.6			12.3	
Approach LOS		Ċ			C			В			В	
Intersection Summary			.51-51	115.1	Je Ji k	. <u>1</u> /5010			LUI A	La de la		
Area Type:	Other											

Cycle Length: 96

Actuated Cycle Length: 62.4

Natural Cycle: 65

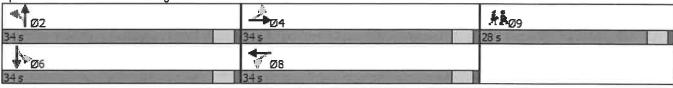
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73 Intersection Signal Delay: 22.8 Intersection Capacity Utilization 61.0%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	
Detector 2 Extend (s)		
Turn Type		
Protected Phases	9	
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	
Minimum Split (s)	28.0	
Total Split (s)	28.0	
Total Split (%)	29%	
Maximum Green (s)	24.0	
Yellow Time (s)	3.0	
All-Red Time (s)	1.0	
Lost Time Adjust (s)	-	
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	12.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	10	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary	318	

EBL

EBT

Movement

SBT

SBL

SBR

Intersection	4 27 7 7 10	
Intersection Delay, s/veh	21.6	
Intersection LOS	C	

WBT

WBR

NBL

NBT

NBR

EBR WBL

Lane Configurations					4	7		4			4	
Traffic Vol, veh/h	0	0	0	29	43	340	16	121	12	329	172	20
Future Vol, veh/h	0	0	Õ	29	43	340	16	121	12	329	172	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	0	0	3	Ö	6	8	3	7	5
Mvmt Flow	Ō	0	0	30	45	354	17	126	13	343	179	21
Number of Lanes	0	0	0	0	1	1	0	1	0	0	1	0
Approach	- 100	NE I	7 31	WB			NB		U T	SB	OIL LIKE	
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB					
Conflicting Lanes Right				1			2			0		
HCM Control Delay				14.8			11.1			30		
HCM LOS				В			В			D		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	40%	0%	63%
Vol Thru, %	81%	60%	0%	33%
Vol Right, %	8%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	72 29	340	521
LT Vol	16	29	0	329
Through Vol	121	43	0	172
RT Vol	12	0	340	20
Lane Flow Rate	155	75	354	543
Geometry Grp	2	7	7	2
Degree of Util (X)	$0.25\overline{7}$	0.138	0.563	0.832
Departure Headway (Hd)	5.954	6.642	5.726	5.516
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	601	539	627	657
Service Time	4.015	4.396	3.479	3.557
HCM Lane V/C Ratio	0.258	0.139	0.565	0.826
HCM Control Delay	11.1	10.5	15.7	30
HCM Lane LOS	В	В	C	D
HCM 95th-tile Q	1	0.5	3.5	9

Intersection	4.1.1			VIV.				O.L.	5	Hors		100
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	and the same		4	Addition to the same of the sa	and the Hamales	4		*	4	Touch to him a con-
Traffic Vol, veh/h	102	210		6	226	59	12		11	71	6	126
Future Vol, veh/h	102	210	11	6	226	59	12	4	11	71	6	126
Conflicting Peds, #/hr	5	0	14	14	0	5	2	0	7	7	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None			None			None	E		None
Storage Length	-	-	-	-	-	-	-	-	-	145		-
Veh in Median Storage	e,# -	0		-	0			0	- 5	7.	0	
Grade, %	-	Ō	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	2	0	0	2	0	0	25	0	5	0	6
Mvmt Flow	110	226	12	6	243	63	13	4	12	76	6	135
Major/Minor	Major1	7 1 1	THE STATE	Major2	1,0		Minor1	10/15	12, 1	Minor2		. 019
Conflicting Flow All	311	0	0	252	0	0	825	789	253	759	764	282
Stage 1		11, 3	4	7.5		- 2	466	466		292	292	4
Stage 2	-	-	-	-	-	-	359	323	-	467	472	-
Critical Hdwy	4.11	-	550	4.1	-		7.1	6.75	6.2	7.15	6.5	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.75		****	5.5	-
Critical Hdwy Stg 2				1	-		6.1	5.75	6		5.5	
Follow-up Hdwy	2.209	-		2.2	-	-	3.5	4.225	3.3		4	3.354
Pot Cap-1 Maneuver	1255			1325		-	294	298	791	319	336	747
Stage 1	-	-	-	-	-	-	581	526	-	710	675	-
Stage 2	-	- 12	a milew				663	611		570	562	
Platoon blocked, %		-			-			W. 100 W. 100				
Mov Cap-1 Maneuver	1249	S 180		1304			213	260	773	281	294	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	213	260	-	281	294	-
Stage 1	-						514	465	H 113.	635	668	
Stage 2	-	-		-	-	-	532	604	-	495	497	-
Approach	EB			WB	old i		NB	STEEL	48	SB	167 1	
HCM Control Delay, s	2.6			0.2			17.6			15.3		W.
HCM LOS							C			C		
Minor Lane/Major Mvm	it i	IBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1	SBLn2	- 5	
Capacity (veh/h)	177	314	1249		-	1304		-	281	694		11
HCM Lane V/C Ratio		0.092			-	0.005	-	-	0.272	THE R. LEWIS CO., LANSING		
HCM Control Delay (s)		17.6	8.2	0		7.8	0	11	22.5	11.5		
HCM Lane LOS		C	Ā	Ä	_	Ā	Ä	-	C	B		
HCM 95th %tile Q(veh)		0.3	0.3			0			1.1	0.8		
to		,,,								3.5		

	۶	-	*	1	←	•	4	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	7	7	1>			स	7		4	
Traffic Volume (vph)	8	84	222	12	101	3	264	13	12	2	10	16
Future Volume (vph)	8	84	222	12	101	3	264	13	12	2	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		Ō	0		115	Ō	84.4	0
Storage Lanes	0		1	1		0	0		1	0		Ō
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97	0.99	1.00	11 5 5		1.00	0.98		0.99	
Frt			0.850		0.996				0.850		0.923	
Fit Protected		0.996		0.950				0.955			0.997	gv.I
Satd. Flow (prot)	0	1709	1553	1685	1730	0	0	1697	1252	0	1445	0
Flt Permitted		0.976		0.695	771	11 %	0. 150	0.714	-41	15, 1	0.985	2 3
Satd. Flow (perm)	0	1671	1512	1218	1730	0	0	1263	1223	0	1427	0
Right Turn on Red			Yes			Yes			Yes	770C 100		Yes
Satd. Flow (RTOR)			234		2				80		17	. 00
Link Speed (mph)		30	4		30			30	11 101		30	DV-DV
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	12
Confl. Peds. (#/hr)	19	: 112	8	8		19	3		2	2	1.0	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	40%	0%	4%	0%	2%	0%	2%	30%	29%	0%	31%	0%
Adj. Flow (vph)	8	88	234	13	106	3	278	14	13	2	11	17
Shared Lane Traffic (%)					,,,,,							1.2
Lane Group Flow (vph)	0	96	234	13	109	0	Ö	292	13	Ō	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			Ō			Ō	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												7.10
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	Ī	1	2		1	2	Ĩ	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	Ö	Ö	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	Ō	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	3 51
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel				F 1 1 1 2								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94		Charles 1	94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex	1420		CI+Ex			CI+Ex	
Detector 2 Channel												

Lane <u>Gro</u> up	Ø9		S. V.	Laurin .	14.11	E	-	Military.
Lane Configurations								
Traffic Volume (vph)								Ext.
Future Volume (vph)								
Ideal Flow (vphpl)								25 1
Lane Width (ft)								
Storage Length (ft)								100
Storage Lanes								
Taper Length (ft)	-							
Lane Util. Factor								
Ped Bike Factor								
Frt								
Flt Protected								
Satd. Flow (prot)								
Flt Permitted								
Satd. Flow (perm)								
Right Turn on Red								
Satd. Flow (RTOR)								
Link Speed (mph)				0.1				
Link Distance (ft)								
Travel Time (s)								
Confl. Peds. (#/hr)								
Peak Hour Factor								
Heavy Vehicles (%)								
Adj. Flow (vph)								17 11 1
Shared Lane Traffic (%)								
Lane Group Flow (vph)								
Enter Blocked Intersection								
Lane Alignment								
Median Width(ft)								
Link Offset(ft)								
Crosswalk Width(ft)								
Two way Left Turn Lane								
Headway Factor								
Turning Speed (mph)								40.00
Number of Detectors								
Detector Template								
Leading Detector (ft)								
Trailing Detector (ft)								
Detector 1 Position(ft)								
Detector 1 Size(ft)								
Detector 1 Type								
Detector 1 Channel								
Detector 1 Extend (s)								
Detector 1 Queue (s)								
Detector 1 Delay (s)								
Detector 2 Position(ft)								
Detector 2 Size(ft)								
Detector 2 Type								12 1 13
Detector 2 Channel								

	•	->	*	1	←	Ł	1	Ť	1	1	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6	•	
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase									_			
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	1100
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag											Ace	
Lead-Lag Optimize?										NT ALE	100	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	1 Sec.
Walk Time (s)					-							
Flash Dont Walk (s)											35,124	1.17
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.17	0.18	0.03	0.18			0.43	0.02		0.04	
Control Delay		17.3	1.0	17.2	17.2			16.9	0.1		8.9	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.3	1.0	17.2	17.2			16.9	0.1		8.9	
Los		В	À	В	B			В	Ā		Α	
Approach Delay		5.8			17.2			16.2			8.9	
Approach LOS		Α			В			В			A	- X18

Intersection Summary

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.43 Intersection Signal Delay: 11.7 Intersection Capacity Utilization 54.6%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge

1 Ø2	€04	£\$@9
30 s	30 s	22 s
₽ Ø6	▼ Ø8	
30 s	30 s	

Lane Group	Ø9	S - 2 - 2 -		13.00	1, 11	34,000	10.00	100
Detector 2 Extend (s)				AT				
Turn Type								
Protected Phases	9							
Permitted Phases								
Detector Phase								
Switch Phase								
Minimum Initial (s)	1.0							
Minimum Split (s)	22.0							
Total Split (s)	22.0							
Total Split (%)	27%							
Maximum Green (s)	18.0							
Yellow Time (s)	3.0							
All-Red Time (s)	1.0							
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0							
Recall Mode	None							
Walk Time (s)	8.0							
Flash Dont Walk (s)	10.0							
Pedestrian Calls (#/hr)	5							
Act Effct Green (s)								
Actuated g/C Ratio								
Control Delay								
Queue Delay								
Total Delay								
LOS								
Approach Delay								
Approach LOS								
					_			
Intersection Summary		التار ويتنادي				8 7 1 2 1		

	*	→	*	•	←	4	4	†	~	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f					7	7>			4	- 4-47
Traffic Volume (vph)	30	27	235	0	0	Ō	267	267	13	0	222	24
Future Volume (vph)	30	27	235	0	Ō	0	267	267	13	Ö	222	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60	8 15 1	0	0		0
Storage Lanes	1		0	0		Ō	1		0	0		0
Taper Length (ft)	25			25		A	25		100	25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						MU TO	1.00	1.00	1.00	1100	1.00	1.00
Frt		0.866					11.00	0.993			0.987	
Flt Protected	0.950						0.950	0.000			0.001	
Satd. Flow (prot)	1685	1509	0	0	0	0	1636	1771	0	0	1790	0
FIt Permitted	0.950	1000				=1,	0.487				Lag Elec	
Satd. Flow (perm)	1685	1509	0	0	0	0	836	1771	0	0	1790	0
Right Turn on Red			Yes			Yes		PLE	Yes		1100	Yes
Satd. Flow (RTOR)		230	100			100		2	100		4	100
Link Speed (mph)		30			30			30		7.000	30	S 7
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)					0.0		4	0.1	- 1	1	14.0	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%	3%	3%	0%	0%	5%	0,04
Adj. Flow (vph)	32	29	250	0.	0	0	284	284	14	0	236	26
Shared Lane Traffic (%)		= =	200				201	201		, o	200	20
Lane Group Flow (vph)	32	279	Ö	0	Ō	0	284	298	Ö	Ō	262	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	-	10			10			10			10	1 1911
Link Offset(ft)		0			0			Ō			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane											11 1/5	
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	_				1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	2117
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					Õ	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												- 1
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø1	Ø3	
Lane Configurations			_
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
FIt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			=10
Confl. Peds. (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			ш
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			_
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			buci
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			-
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			_

	*	-	*	1	+	1	4	1	-	1		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA			NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	100 0
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	9-10
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	1,1414
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					92.6	92.6			65.3	
Actuated g/C Ratio	0.18	0.18					0.66	0.66			0.46	
v/c Ratio	0.11	0.61					0.42	0.26			0.31	
Control Delay	52.5	18.0					4.7	3.2			26.1	
Queue Delay	0.0	67.9					0.4	0.7			0.0	
Total Delay	52.5	85.9					5.1	3.9			26.1	
LOS	D	F					A	A			С	
Approach Delay		82.5						4.5			26.1	
Approach LOS		F						Ā			С	
Intersection Summary	12.17	150		1.5				1. 7.5.		1,48	1,-12,1	

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 140.9

Natural Cycle: 90

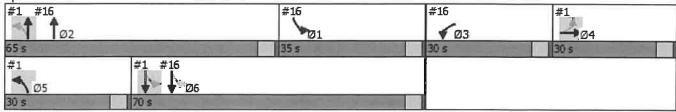
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 30.4 Intersection LOS: C
Intersection Capacity Utilization 56.5% ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3
Detector 2 Extend (s)	*	
Turn Type		
Protected Phases	1	3
Permitted Phases		•
Detector Phase		
Switch Phase		
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary	E* 11 -	

	1	4	†	1	-	*			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Lane Configurations	14	complete Market	† 1>			4	10,000	ohamama	
Traffic Volume (vph)	14	50	497	9	50	407			
Future Volume (vph)	14	50	497	9	50	407			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.895	1.00	0.997	0.00	1.00	1.00			-3113 3 3 1 3 1 3 1 1 3 1 1
Fit Protected	0.989		0.007			0.995			
Satd. Flow (prot)	1850	0	3412	0	0	1811			
Fit Permitted	0.989	Ů	J+12	J	· ·	0.887			
Satd. Flow (perm)	1850	0	3412	0	0	1615			
	1000		3412		U	פוסו			14
Right Turn on Red	<i>E</i> 2	Yes	1	Yes	11-7/				
Satd. Flow (RTOR)	53		1			0.0			
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3			3.1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%			
Adj. Flow (vph)	15	53	529	10	53	433			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	68	0	539	0	0	486			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15		10			10			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane									
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9		9	15				
Number of Detectors	1		2		1	2			
Detector Template	Left		Thru		Left	Thru			
Leading Detector (ft)	20		100		20	100			
Trailing Detector (ft)	0		Ō		0	Ō			
Detector 1 Position(ft)	0		0		0	0			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex			
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	0.0		94		0,0	94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Type Detector 2 Channel			OITEX			OITEX			
Detector 2 Extend (s)			0.0			0.0			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2		μπτρι 1	6	4	5	
Permitted Phases	J		4			O	4	Ü	
	3		0		6	0			
Detector Phase	<u> </u>		2		1	6			

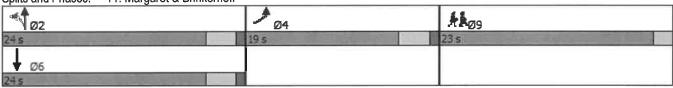
	1	1	1	1	1	Ţ			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Switch Phase		H H							
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.1		92.6			65.3			
Actuated g/C Ratio	0.09		0.66			0.46			
v/c Ratio	0.33		0.24			0.65			
Control Delay	26.8		10.6			27.4			
Queue Delay	0.0		0.0	H		2.7			
Total Delay	26.8		10.6			30.1			
LOS	C		В			Ĉ			
Approach Delay	26.8		10.6			30.1			
Approach LOS	C	TE	В			C	T III		
Intersection Summary		100	TYLE		ul y			PHY.	HAND BUTTON
Area Type:	Other								
Cycle Length: 160									
Actuated Cycle Length: 1	40.9		W		4				
Natural Cycle: 90									
Control Type: Actuated-U									
Maximum v/c Ratio: 0.65									
Intersection Signal Delay:			4 1 5 1		ntersection				
Intersection Capacity Utili	ization 60.7%			IC	CU Level of	of Service	В		
Analysis Period (min) 15									ATTENDED TO THE STREET
Splits and Phases: 16:	Peru & Hamilt	ton							
#1_ #16			3	#16			#16		#1
T Tø2				101			√ Ø:	3	→ Ø4
65 s	CONTRACTOR OF THE PARTY OF THE			35 s	I DO	1919	30 s	D1 8 1	30 s

III) A	9,	I , L	v V-1		
1.9					
	MOD	MOT	NDD	CDI	COT
	Territoria Control	- Contract	NBK	SBL	SBT
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WB	1780	NB		SB	المحروا
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t	NBTW		17 1 10	SBT	
		534	835		
	1 to 1 to 1				
	-)	0.062	0.069	-	
	-	0.062	0.069		
		WBL WBR 29 50 29 50 46 11 Stop Stop - None 163 87 87 0 0 87 87 0 0 33 57 Minor1 M 466 202 191 275 6.4 6.2 5.4 5	WBL WBR NBT 29 50 166 29 50 166 46 11 0 Stop Stop Free None 163 0 87 87 87 0 0 - 0 87 87 87 0 0 1 33 57 191 Minor1 Major1 466 202 0 191 - 275 6.4 6.2 - 5.4	WBL WBR NBT NBR 29 50 166 0 29 50 166 0 46 11 0 0 Stop Stop Free Free None - None - None 163	WBL WBR NBT NBR SBL 29 50 166 0 0 29 50 166 0 0 46 11 0 0 0 Stop Stop Free Free Free None - None - 0 - 0 - - 87 87 87 92 92 0 0 1 2 2 33 57 191 0 0 466 202 0 - - 191 - - - - 275 - - - - 54 - - - - 554 - - - - 559 844 - 0 0 776 - 0 0 846 - - <

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø 9
Lane Configurations	14	initials on	State beat 5	4	1>	pirt missels	14 min
Traffic Volume (vph)	22	60	8	142	241	40	
Future Volume (vph)	22	60	8	142	241	40	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	11	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.95	27.7	= 1111	1.00	0.99		
Frt	0.901				0.981		
FIt Protected	0.987			0.997			
Satd. Flow (prot)	1736	0	0	1831	1683	0	
Flt Permitted	0.987			0.984	1000		
Satd. Flow (perm)	1689	0	Ŏ	1804	1683	0	
Right Turn on Red	1000	Yes		1001	1000	Yes	
Satd. Flow (RTOR)	66	100			13	100	
Link Speed (mph)	30			30	30		
Link Distance (ft)	456			298	276		
Travel Time (s)	10.4			6.8	6.3		
Confl. Peds. (#/hr)	46	5	39	0.0	0.0	39	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	
Heavy Vehicles (%)	0.31	2%	0.31	0.31	2%	3%	
Adj. Flow (vph)	24	66	9	156	265	44	All the same of th
Shared Lane Traffic (%)	24	00	3	130	203	44	
Lane Group Flow (vph)	90	0	0	165	309	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left		Left	Left	Left	_	
Median Width(ft)	14	Right	LEIL	0	Leit	Right	
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane	10			10	10		
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
Turning Speed (mph)	15	9	15	1.04	1.03	9	
Number of Detectors	10	9	1	2	2	9	
	Left				Thru		
Detector Template	20		Left 20	Thru 100	100		
Leading Detector (ft)	0						
Trailing Detector (ft)			0	0	0		
Detector 1 Position(ft)	20		0		_		
Detector 1 Size(ft)			20	6 CI+Ex	6 CI+Ex		
Detector 1 Type Detector 1 Channel	CI+Ex		CI+Ex	CITEX	CITEX		
APR	0.0		0.0	0.0	0.0		
Detector 1 Extend (s)	0.0		787	0.0	0.0		
Detector 1 Queue (s)			0.0				
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				CILEY CLEV	6 CHEV		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel				0.0	0.0		
Detector 2 Extend (s)	Donat		Da	0.0	0.0		
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9

	A	-	*	Ť	ļ	1			
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	1	w
Permitted Phases			2					117 - 1	
Detector Phase	4		2	2	6				
Switch Phase									
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0		
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0		
Total Split (s)	19.0		24.0	24.0	24.0		23.0		
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%		
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0		
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0		
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0		
Lost Time Adjust (s)	0.0			0.0	0.0				
Total Lost Time (s)	4.0			4.0	4.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0		
Recall Mode	None		Max	Max	Max		None		
Walk Time (s)							10.0		
Flash Dont Walk (s)							5.0		
Pedestrian Calls (#/hr)							10		
Act Effct Green (s)	6.5			29.1	29.1				
Actuated g/C Ratio	0.16			0.71	0.71				
v/c Ratio	0.27			0.13	0.26				
Control Delay	10.0			6.6	6.9				
Queue Delay	0.0			0.0	0.0				
Total Delay	10.0			6.6	6.9				
LOS	Α			Α	Α				
Approach Delay	10.0			6.6	6.9				
Approach LOS	Α			Α	Α				
Intersection Summary	hade of		- 1	Bur	W 34	100			20
Area Type:	Other								
Cycle Length: 66									
Actuated Cycle Length: 40	1.7								
Natural Cycle: 50									
Control Type: Actuated-Un	ncoordinated								
Maximum v/c Ratio: 0.27		- 14							
Intersection Signal Delay:	7.3				tersection				
Intersection Capacity Utiliz	ation 27.6%			K	CU Level o	of Service	Α		
Analysis Period (min) 15				-					

Splits and Phases: 11: Margaret & Brinkerhoff



	*	\rightarrow	•	1	+	1	4	†	1	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ϋ́	₽			4			4			4	
Traffic Volume (vph)	63	226	30	19	320	45	31	38	25	91	38	84
Future Volume (vph)	63	226	30	19	320	45	31	38	25	91	38	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0		0	0		0
Storage Lanes	1		Ö	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99			0.99			0.98	- 50
Frt		0.982			0.984			0.964			0.947	
Fit Protected	0.950				0.997			0.984			0.979	
Satd. Flow (prot)	1504	1731	0	0	1848	0	0	1793	0	0	1733	0
FIt Permitted	0.311				0.976			0.880		TI	0.844	
Satd. Flow (perm)	486	1731	0	0	1807	0	0	1594	0	0	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7	-		7			20			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19		23	23		19	18		3	3		18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	0%	6%	4%	0%	6%	3%	0%	2%	8%	2%
Adj. Flow (vph)	68	246	33	21	348	49	34	41	27	99	41	91
Shared Lane Traffic (%)								*				
Lane Group Flow (vph)	68	279	0	0	418	0	0	102	Ō	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8			8			0		•	0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel							and the					
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø9	Total Control		1000	
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
ideal Flow (vphpi)					
Lane Width (ft)					
Storage Length (ft)		3			
Storage Lanes					
Taper Length (ft)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					
Detector 1 Channel					
Detector 1 Extend (s)					
Detector 1 Queue (s)					
Detector 1 Delay (s)					
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type Detector 2 Channel					

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	MILL
Turn Type	Perm	NA		Perm	NĀ		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase					_							
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	19
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0	-1-1		4.0			4.0	
Lead/Lag											-	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)								-				
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.5	19.5			19.5			31.6			31.6	
Actuated g/C Ratio	0.31	0.31			0.31			0.50			0.50	
v/c Ratio	0.46	0.52			0.74	M TF		0.13			0.30	
Control Delay	31.2	22.7			29.7			12.2			13.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	31.2	22.7			29.7			12.2			13.3	
LOS	C	C			C			В			В	
Approach Delay		24.4			29.7			12.2			13.3	
Approach LOS		C			Ċ			В			В	1.1
Intersection Summary	-1743	المثبي			í.		1130			SECTION	A. Jan	500
Area Type:	Other										President Control	
Cycle Length: 96												
Actuated Cycle Length: 63	3.2											
Natural Cycle: 65												
Control Type: Actuated-U	ncoordinated											

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74 Intersection Signal Delay: 22.9 Intersection Capacity Utilization 60.7%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9		
Detector 2 Extend (s)		الرقائي فالمتاك المراق وورسات فالمناف والم	
Turn Type			
Protected Phases	9		
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0		
Minimum Split (s)	28.0		
Total Split (s)	28.0		
Total Split (%)	29%		
Maximum Green (s)	24.0		
Yellow Time (s)	3.0		
All-Red Time (s)	1.0		
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0		
Recall Mode	None		
Walk Time (s)	12.0		
Flash Dont Walk (s)	12.0		
Pedestrian Calls (#/hr)	10		
Act Effct Green (s)			51111
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			¥
Approach Delay			
Approach LOS			
Intersection Summary	E 10 1 1 1 7 7		111
THE SOURCES HOLDER			

Intersection Delay, s/veh	23.6				
Intersection LOS	C				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					स	7		4			4	
Traffic Vol, veh/h	0	0	0	17	50	428	12	164	13	326	130	19
Future Vol, veh/h	0	0	0	17	50	428	12	164	13	326	130	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	5	5	1	Ö	1	Ö	1	4	0
Mvmt Flow	0	0	0	18	53	451	13	173	14	343	137	20
Number of Lanes	0	Õ	0	0	1	1	0	1	0	0	1	0
Approach	1		10111	WB	VIII TO	R. T. L.	NB	DE L. III	100	SB	KILL-	
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left				NB						WB		
Conflicting Lanes Left				1			0			2		
Conflicting Approach Right				SB			WB			_		
Conflicting Lanes Right				1			2			0		
HCM Control Delay				21.7			12.6			30		
HCM LOS				C			В			D		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	6%	25%	0%	69%
Vol Thru, %	87%	75%	0%	27%
Vol Right, %	7%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	67	428	475
LT Vol	12	17	0	326
Through Vol	164	50	0	130
RT Vol	13	0	428	19
Lane Flow Rate	199	71	451	500
Geometry Grp	2	7	7	2
Degree of Util (X)	0.345	0.132	0.737	0.816
Departure Headway (Hd)	6.25	6.732	5.89	5.877
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	571	530	613	615
Service Time	4.339	4.502	3.66	3.944
HCM Lane V/C Ratio	0.349	0.134	0.736	0.813
HCM Control Delay	12.6	10.5	23.5	30
HCM Lane LOS	В	В	C	D
HCM 95th-tile Q	1.5	0.5	6.4	8.3

Intersection						100		712	100	700		118	
Int Delay, s/veh	4.9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR		SBT	SBR	A DESTRUCTION OF
Lane Configurations		4			4			4		7	1>		
Traffic Vol, veh/h	99	234	9	4	269	53	15		10	79	3	98	
Future Vol, veh/h	99	234	9	4	269	53	15	3	10	79	3	98	
Conflicting Peds, #/hr	4	0	30	30	0	4	2	0	6	6	0	2	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized			None			None		-	None		7.	None	
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-	
Veh in Median Storage,	# -	0	-	- 5	0			0			0		
Grade, %	-	0	-		0	-	_	0	-	_	0	-	
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97	
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0		0	5	
Mvmt Flow	102	241	9	4	277	55	15	3	10	81	3	101	
Major/Minor N	lajor1	-2		Мајог 2		1	Vinor1		W 200	Minor2			
Conflicting Flow All	336	0	0	280	0	0	847	824	282	1 2 112 112 2000	801	311	
Stage 1	330		0	200	0	0	480	480	202	- 1.2	317	311	
Stage 2	- 1	-	105		10.5		367	344		462	484		
Critical Hdwy	4.1			4.1			7.1	6.5	6.2		6.5	6.25	
Critical Hdwy Stg 1	T. I			T. I			6.1	5.5	0.2	- 1-	5.5	0.20	
Critical Hdwy Stg 2	(4)			*	10 A	73.1	6.1	5.5	X .	â 4ā	5.5		
Follow-up Hdwy	2.2	-		2.2	_	_	3.5	4	3.3		4	3.345	
Pot Cap-1 Maneuver	1235	2	1 1	1294	2	2	284	310	762	313	320	722	
Stage 1	-	-	_	-	_		571	558	102	694	658	122	
Stage 2	- 21	2		11.5	100		657	640		580	555		
Platoon blocked, %			_		-	-	00.	0.10		000	000		
	1230	200	0.00	1251		3/	216	269	732	280	277	718	
Mov Cap-2 Maneuver	-	-	-	-	_		216	269	-	280	277	7 10	
Stage 1	7 i.e.	10.16					499	488		625	653		
Stage 2	-	-	-	_		_	558	635	_	510	485	-	
							300	400		310	100		
pproach	EB	5.0	1.19-7	WB	G. 19		ΝB		NAS I	SB	وبطريا		Villager Arthur
HCM Control Delay, s HCM LOS	2.4			0.1			18.4 C			16.4 C			
Minor Lane/Major Mvmt	N	BLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1	SBLn2		12 30	A THE SAN THE
Capacity (veh/h)		297	1230			1251		(*)	280	686			
ICM Lane V/C Ratio			0.083	- 02		0.003	-	_		0.152			
CM Control Delay (s)	H	18.4	8.2	0		7.9	0	*	23	11.2			
			94 -19										
ICM Lane LOS		С	Α	Α	-	Α	Α	-	С	В			

	1	\rightarrow	*	1	←	4	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		स	7	ሻ	1			र्स	7		4	
Traffic Volume (vph)	3	73	247	33	121	Ö	348	5	15	0	2	11
Future Volume (vph)	3	73	247	33	121	Ö	348	5	15	0	Ž	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		0	0		115	0		0
Storage Lanes	0		1	1		0	0		1	Ō		0
Taper Length (ft)	25			25			25			25		2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.98	0.99		1100	11.00	1.00	0.98	1.00	0.98	1.00
Frt			0.850	77.					0.850		0.884	
FIt Protected	B 24 12	0.998	15-4-17	0.950	1,51	No. Feet		0.953	0.000		0.004	
Satd. Flow (prot)	0	1770	1568	1685	1756	0	0	1716	1346	0	1539	0
FIt Permitted		0.990	1000	0.704	- 1100		MERI	0.719	1010		1000	
Satd. Flow (perm)	0	1754	1530	1239	1756	0	0	1293	1315	0	1539	0
Right Turn on Red			Yes	1200	1100	Yes		1200	Yes		1000	Yes
Satd. Flow (RTOR)			263			1.00			80		12	103
Link Speed (mph)		30	100		30			30			30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	13	1012	5	5	1.0	13	1	1 1.0	2	2	7.0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	3%	0%	1%	0%	2%	0%	20%	0%	0%	0%
Adj. Flow (vph)	3	78	263	35	129	0	370	5	16	0	2	12
Shared Lane Traffic (%)				2.5								17
Lane Group Flow (vph)	Ō	81	263	35	129	Ō	0	375	16	0	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0	_W_		0	
Link Offset(ft)		0			0			0			0	100
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane										TELEVIE		
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	-	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	Ō	Õ	0	0	
Detector 1 Position(ft)	0	0	Õ	0	0		Ö	0	0	0	Õ	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	1-11
Detector 1 Type	CI+Ex	CI+Ex	Cl+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	Cl+Ex	CI+Ex	
Detector 1 Channel												11.8
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø9		25-16-17	
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)		1 1 2 0		
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Peak Hour Factor			Mary July	
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type Detector 2 Channel				
Detector 2 Channel				

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)	I was to	0.0			0.0	I I FI F		0.0			0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm		ÑA	
Protected Phases	81 . K	4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	- "
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		-	0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	11 14
Lead/Lag								1 66	commenter :		_	
Lead-Lag Optimize?	BILL OF											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)										-		
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.13	0.20	0.08	0.21			0.53	0.02		0.02	
Control Delay		17.0	1.0	17.2	17.7			19.7	0.1		8.5	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	are or
Total Delay		17.0	1.0	17.2	17.7			19.7	0.1		8.5	
LŌS		В	Ā	В	В			В	A		Α	11 13
Approach Delay		4.8			17.6			18.9			8.5	
Approach LOS	35 T -	A			В			В			Ā	-1
Intersection Summary		عبرايلا	"- "		V 390				1 201		Frak	
Area Type:	Other											9.0

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53 Intersection Signal Delay: 13.2

Intersection Capacity Utilization 55.8%

Analysis Period (min) 15

! Phase conflict between lane groups.

Intersection LOS: B

ICU Level of Service B

Splits and Phases: 3: Peru & Bridge



GEIS 11/07/2019 PM Build w/Durkee 2-way

Synchro 10 Report Page 3

Lane Group	Ø9	
Detector 2 Extend (s)		
Turn Type		
Protected Phases	9	
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	
Minimum Split (s)	22.0	
Total Split (s)	22.0	
Total Split (%)	27%	
Maximum Green (s)	18.0	
Yellow Time (s)	3.0	
All-Red Time (s)	1.0	
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	8.0	
Flash Dont Walk (s)	10.0	
Pedestrian Calls (#/hr)	5	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary	S. Deller	

	۶	→	*	1	←	1	1	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f					75	1>	and deliner receipt	-	4	
Traffic Volume (vph)	23	30	270	0	0	0	298	345	17	1	254	28
Future Volume (vph)	23	30	270	0	0	Ó	298	345	17	1	254	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60		0	Ö		0
Storage Lanes	1		0	0		0	1		0	Ö		0
Taper Length (ft)	25			25			25			25		Tie F
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00										3 5	
Frt		0.865						0.993			0.987	
Flt Protected	0.950						0.950				والأثاث	
Satd. Flow (prot)	1589	1534	0	0	0	0	1668	1790	0	0	1859	0
Flt Permitted	0.950						0.457				0.999	100
Satd. Flow (perm)	1584	1534	0	0	0	0	802	1790	0	0	1857	0
Right Turn on Red	10710		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		242						2			4	
Link Speed (mph)		30			30			30			30	HIE
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9	11 11		5.8			3.1			14.6	
Confl. Peds. (#/hr)	1	1.00										
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	0%	2%	2%	2%	1%	2%	0%	0%	1%	0%
Adj. Flow (vph)	25	32	290	0	Ō	0	320	371	18	1	273	30
Shared Lane Traffic (%)									:=			,
Lane Group Flow (vph)	25	322	0	0	0	0	320	389	0	Ő	304	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10		18	10			10	_0_
Link Offset(ft)		0			Ō			0			Ö	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2		1	2	
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	Ö	0					0	0		0	0	
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	- 21-
Detector 2 Channel												

Lone Črous	Ø1	Ø3
Lane Group	101	
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft) Lane Util. Factor		
Ped Bike Factor		
Frt		
FIt Protected		
Satd. Flow (prot)		
Fit Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		

	*	-	•	1	-	4	4	Ť	*	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase							~					
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	and the
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	100
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		100			None	Max		Max	Max	0
Act Effct Green (s)	25.0	25.0					93.8	93.8			65.0	
Actuated g/C Ratio	0.17	0.17					0.64	0.64			0.45	100
v/c Ratio	0.09	0.70					0.49	0.34			0.37	
Control Delay	52.6	23.7					5.2	3.6			28.2	6841
Queue Delay	0.0	67.7					0.5	0.6			0.0	
Total Delay	52.6	91.4					5.7	4.2			28.2	. 117.17
LOS	D	F					Ã	Ā			Ċ	
Approach Delay		88.6						4.9			28.2	
Approach LOS		F						Α			С	
Intersection Summary		SUSISI	term!	11/201 11	100	11.74	100	Barber .		WIF I		
Area Type:	Other											
Cycle Length: 160										150/17		
Actuated Cycle Length: 1	45.8											
Natural Cycle: 100												100

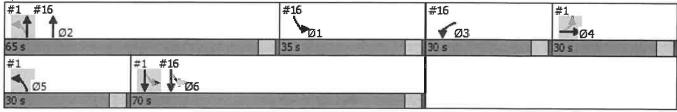
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80 Intersection Signal Delay: 31.5 Intersection Capacity Utilization 65.1%

Intersection LOS: C ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3	15 11		100	15 15	
etector 2 Extend (s)							
Furn Type							
Protected Phases	1	3					
Permitted Phases							
Detector Phase							
Switch Phase							
Minimum Initial (s)	10.0	12.0					
Minimum Split (s)	15.0	17.0					
Total Split (s)	35.0	30.0					
Total Split (%)	22%	19%					
Maximum Green (s)	30.0	25.0					
Yellow Time (s)	4.0	4.0					
All-Red Time (s)	1.0	1.0					
Lost Time Adjust (s)							
Total Lost Time (s)							
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Vehicle Extension (s)	3.0	3.0					
Recall Mode	None	None					
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS							
Approach Delay							
Approach LOS							
Intersection Summary	11116	4-11		7 7 7			

	1	*	†	1	>	ţ			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	311 (3) 31
Lane Configurations	W		†			ની			
Traffic Volume (vph)	8	65	595	4	56	468			
Future Volume (vph)	8	65	595	4	56	468			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.880		0.999		_				
FIt Protected	0.994					0.995			
Satd. Flow (prot)	1828	0	3418	0	0	1811			
FIt Permitted	0.994		72.811			0.867			
Satd. Flow (perm)	1828	0	3418	0	0	1578			
Right Turn on Red		Yes	SK IER	Yes					
Satd. Flow (RTOR)	70								
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3			3.1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93			
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%			
Adj. Flow (vph)	9	70	640	4	60	503			
Shared Lane Traffic (%)			-12.0						
Lane Group Flow (vph)	79	0	644	0	0	563			
Enter Blocked Intersection	No	No	No	No	No	No			A CONTRACTOR OF THE PARTY OF TH
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15	ragin	10	rugin		10			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane	.10		10			10			
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9	1.07	9	15	1.04			
Number of Detectors	1		2		1	2			
Detector Template	Left		Thru		Left	Thru			The second secon
Leading Detector (ft)	20		100		20	100			The state of the s
Trailing Detector (ft)	0		0		0	0			
Detector 1 Position(ft)	0		0		0	Ö			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		Cl+Ex		CI+Ex	Cl+Ex			
Detector 1 Channel	OITEX		OIILX		OITEX	OIILX			
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	0.0		94		0.0	94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Channel			OITEX			CITEX			
			0.0			0.0			
Detector 2 Extend (s) Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2		рштрі 1	6	4	5	
Permitted Phases	J				6	Ū	4	3	
•	2		0		427	C			
Detector Phase	3		2		1	6			

	4	1	T	1	-	*			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Switch Phase									
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.0		93.8			65.0			
Actuated g/C Ratio	0.08		0.64			0.45			
v/c Ratio	0.37		0.29			0.80			
Control Delay	22.0		11.8			36.4			
Queue Delay	0.0		0.0			2.8			
Total Delay	22.0		11.8			39.2			
LOS	C		В			D			
Approach Delay	22.0		11.8			39.2			
Approach LOS	C		В			D			

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Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 145.8

Natural Cycle: 100

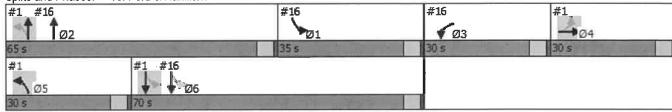
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80 Intersection Signal Delay: 24.5 Intersection Capacity Utilization 66.8%

Intersection LOS: C
ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 16: Peru & Hamilton



2022 Build Conditions

Durkee Street One-Way

-						
Intersection	100			I DEX		- 336
Int Delay, s/veh	3.6					
	WBL	WBR	NBT	NBR	SBL	SBT
Movement			10.00.00.00	NDK	SBL	
Lane Configurations	"	7	†	ã		†
Traffic Vol, veh/h	88	41	101	0	0	219
Future Vol, veh/h	88	41	101	0	0	219
Conflicting Peds, #/hr		4	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	V=	None	-	None	-	None
Storage Length	163	-	-	-	-	-
Veh in Median Storag		-	0			0
Grade, %	0	-		-	-	0
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	0	0	1	2	2	2
Mymt Flow	138	64	158	Ö	0	342
		F.1.		-	**	
N. D.	- M - 1				4 . 4	
Major/Minor	Minor1		Major1	, A	Najor2	
Conflicting Flow All	508	162	0	_	-	-
Stage 1	158			1612		
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.4	6.2	1112			
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-			*	
Follow-up Hdwy	3.5	3.3		-	-	-
Pot Cap-1 Maneuver	528	888	-	0	0	
Stage 1	875	-	-	Ö	0	
Stage 2	718	-	0.3	0	0	
Platoon blocked, %	7.10			U	Ų	
	E24	885				
Mov Cap-1 Maneuver						fi.
Mov Cap-2 Maneuver		-	-		-	-
Stage 1	875	m .				*
Stage 2	712	-	-		_	-
Approach	WB		NB		SB	L E V
HCM Control Delay, s		The little	0		0	
HCM LOS	В		-		117	
			7.44 V			
Minor Lane/Major Mvn	nt	NBTW	/BLn1V		SBT	
Capacity (veh/h)			524	885		
HCM Lane V/C Ratio		-	0.262	0.072		
HCM Control Delay (s))		14.3	9.4		
HCM Lane LOS			В	A	-	
HCM 95th %tile Q(veh)	- 1	1	0.2		
romo <u>al</u> ion						

	۶	7	1	†	1	1		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	-3.0
Lane Configurations	N	***	Township Account	4	13			
Traffic Volume (vph)	9	67	8	101	272	19		
Future Volume (vph)	9	67	8	101	272	19		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	JAJ, MIK.	
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.97	1.00	1.00	1.00	1.00	1.00		
Frt	0.881			1.00	0.991			
Flt Protected	0.994			0.996	0.001			
Satd. Flow (prot)	1733	0	Ō	1811	1706	0		
Flt Permitted	0.994	0	0	0.961	1,00	Ų.		
Satd. Flow (perm)	1730	Ō	0	1747	1706	Ö		
Right Turn on Red	1700	Yes	· ·	1777	1700	Yes		
Satd. Flow (RTOR)	126	103			5	163		
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276			
Travel Time (s)	10.4			6.8	6.3			
Confl. Peds. (#/hr)	8	3	8	0.0	0.5	8		
Peak Hour Factor	0.53	0.53	0.53	0.53	0.53	0.53		
Heavy Vehicles (%)	0.33	0.55	14%	0.55	3%	0.33		
Adj. Flow (vph)	17	126	15	191	513	36		
Shared Lane Traffic (%)	17	120	10	181	313	30		
Lane Group Flow (vph)	143	0	0	206	549	0		
Enter Blocked Intersection	No	No	No	No	No No	No		
			Left					
Lane Alignment Median Width(ft)	Left 14	Right	Leit	Left	Left	Right		
	0			0	0			
Link Offset(ft)	16			16	16			
Crosswalk Width(ft)	10			10	10			
Two way Left Turn Lane Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
C				1.04	1.09			
Turning Speed (mph) Number of Detectors	15	9	15	0	0	9		
	1		1	Z Thru	2 Thru			
Detector Template	Left 20		Left	Thru	Thru			
Leading Detector (ft)			20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)			0	0	0			
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex			
Detector 1 Channel	0.0		äá	0.0	0.0			
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	201	0.0	0.0	0.0			
Detector 2 Position(ft)				94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex			
Detector 2 Channel								
Detector 2 Extend (s)	<u> </u>		_	0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2	6		9	

	▶	*	1	†	Ţ	1				
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	. lo Nu	200	21 1112
Permitted Phases			2							
Detector Phase	4		2	2	6					
Switch Phase			. 35		1 Jay 1					
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0			
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0			
Total Split (s)	19.0		24.0	24.0	24.0		23.0			
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%			
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0			
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0			
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0			
Lost Time Adjust (s)	0.0			0.0	0.0					
Total Lost Time (s)	4.0			4.0	4.0					
Lead/Lag								18 117 11		
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0			
Recall Mode	None		Max	Max	Max		None			
Walk Time (s)	110110		111001	111431		1117	10.0			
Flash Dont Walk (s)							5.0			
Pedestrian Calls (#/hr)	1 7 18						10			
Act Effct Green (s)	6.6			24.7	24.7					
Actuated g/C Ratio	0.17			0.63	0.63		1.41			
v/c Ratio	0.36			0.19	0.51					
Control Delay	8.3			7.3	12.0					
Queue Delay	0.0			0.0	0.0					
Total Delay	8.3			7.3	12.0					
LOS	A			Ā	В					
Approach Delay	8.3			7.3	12.0					
Approach LOS	Α			A	12.0 B					
<u> </u>	Λ				-					
Intersection Summary	0.0			15 2	1 0					2.00
Area Type:	Other									
Cycle Length: 66	•									il
Actuated Cycle Length: 39	.3									
Natural Cycle: 60								17 19		
Control Type: Actuated-Un	coordinated									
Maximum v/c Ratio: 0.51				TW.	,					
Intersection Signal Delay:					tersection					
Intersection Capacity Utiliz	ation 27.1%			10	CU Level of	of Service	Α	-		
Analysis Period (min) 15										





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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	4			44			4	-		4	the matrix of
Traffic Volume (vph)	76	211	28	4	198	23	23	11	23	127	32	125
Future Volume (vph)	76	211	28	4	198	23	23	11	23	127	32	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0	10	0	0	10	0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Frt	0.55	0.982			0.986			0.946			0.941	
Flt Protected	0.950	0.302			0.999			0.980			0.978	
Satd. Flow (prot)	1534	1756	0	0	1825	0	0	1685	0	0	1760	0
Flt Permitted	0.373	1730		0	0.993	U	U	0.808	U	U	0.818	U
Satd. Flow (perm)	599	1756	0	0	1813	0	0	1388	0	0	1470	0
Right Turn on Red	233	1730	Yes	U	1013	Yes	U	1300	Yes	0	1470	0
		7	165			res		25	res			No
Satd. Flow (RTOR)					6			35			00	
Link Speed (mph)		30			30			30			30	E 9
Link Distance (ft)		266			396			169			401	
Travel Time (s)	_	6.0	00	00	9.0			3.8			9.1	
Confl. Peds. (#/hr)	7		38	38		7	6		2	2		6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	2%	2%	0%	25%	5%	8%	13%	9%	0%	2%	0%	1%
Adj. Flow (vph)	117	325	43	6	305	35	35	17	35	195	49	192
Shared Lane Traffic (%)							=			-		
Lane Group Flow (vph)	117	368	0	0	346	0	0	87	0	0	436	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8			8			0			0	
Link Offset(ft)		0			0			0			0	S
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	Ö	
Detector 1 Position(ft)	0	0		0	0		Ō	Ō		Ō	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	2 1 1
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel					15.57					- SI N		
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	-11-1
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	J. S	94			94		C. P. S.	94			94	11.5
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			Cl+Ex	
Detector 2 Channel		72						2				

Lane Group	Ø9		10.50	
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				1 9 5
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type Detector 1 Channel				
Detector 1 Extend (s) Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type Detector 2 Channel				
Detector 2 Origination			 	

	J.	\rightarrow	*	*	-		1	Ť	1	-	¥	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0		1	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	1 334
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	19.3	19.3			19.3			31.6			31.6	
Actuated g/C Ratio	0.31	0.31			0.31			0.50			0.50	
v/c Ratio	0.64	0.68			0.62			0.12			0.59	1 1-1
Control Delay	38.9	27.1			25.0			10.4			20.7	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	38.9	27.1			25.0			10.4			20.7	
LOS	D	C			С			В			C	
Approach Delay		30.0			25.0			10.4			20.7	
Approach LOS		C			С			В	7,		C	44

Intersection Summary

Area Type: Other

Cycle Length: 96

Actuated Cycle Length: 63.1

Natural Cycle: 90

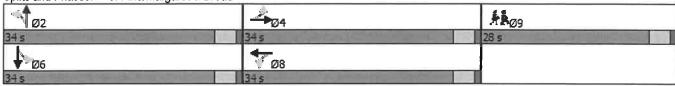
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68 Intersection Signal Delay: 24.5 Intersection Capacity Utilization 57.6%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	UT C			5.00	IJZ, T. T.
Detector 2 Extend (s)							
Turn Type							
Protected Phases	9						
Permitted Phases							
Detector Phase							
Switch Phase							
Minimum Initial (s)	1.0						
Minimum Split (s)	28.0						
Total Split (s)	28.0						
Total Split (%)	29%						
Maximum Green (s)	24.0						
Yellow Time (s)	3.0						
All-Red Time (s)	1.0						
Lost Time Adjust (s)							
Total Lost Time (s)							
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0						
Recall Mode	None						
Walk Time (s)	12.0						
Flash Dont Walk (s)	12.0						
Pedestrian Calls (#/hr)	10						
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS			-, , , , , , , ,		4		
Approach Delay							
Approach LOS							
Intersection Summary		10,1151-12,155.5	The state of	42, 63		2	

Intersection		The second secon
Intersection Delay, s/veh	26.3	
Intersection LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					†	7		4			4	
Traffic Vol, veh/h	0	0	0	0	45	309	17	87	16	399	0	67
Future Vol, veh/h	0	Ō	0	0	45	309	17	87	16	399	0	67
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	0	0	6	0	2	0	3	3	0
Mvmt Flow	0	Ö	0	0	56	381	21	107	20	493	0	83
Number of Lanes	0	Õ	0	0	1	1	0	1	0	0	1	Õ
Approach	N HILL	10.4 11	- 177	1 10	WB	BUILD	NB	T-Y-Tk	11 12	SB	1116	12/11
Opposing Approach							SB			NB		
Opposing Lanes					0		1			1		
Conflicting Approach Left					NB		~			WB		
Conflicting Lanes Left					1		0			2		
Conflicting Approach Right					SB		WB					
Conflicting Lanes Right					1		2			0		
HCM Control Delay					17.2		11.2			37.2		
HCM LOS					C		В			E		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	BL II E
Vol Left, %	14%	0%	0%	86%	
Vol Thru, %	72%	100%	0%	0%	
Vol Right, %	13%	0%	100%	14%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	120	45	309	466	
LT Vol	17 87	0	0	399	
Through Vol	87	45	Ō	0	
RT Vol	16	0	309	67	
Lane Flow Rate	148	56	381	575	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.25	0.101	0.627	0.889	
Departure Headway (Hd)	6.076	6.523	5.915	5.565	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	588	548	607	650	
Service Time	4.15	4.283	3.675	3.616	
HCM Lane V/C Ratio	0.252	0.102	0.628	0.885	
HCM Control Delay	11.2	10	18.2	37.2	
HCM Lane LOS	В	A	C	E	
HCM 95th-tile Q	1	0.3	4.4	10.8	

Intersection		II DE		-		P. 13	100		-7-10-2			
Int Delay, s/veh	1.9	- 3								100	11.1.57	
<u> </u>				/19/		F. Inch	1.176-11		312-1	ACCURATE A		242
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	407	4		_	4			4		-		
Traffic Vol, veh/h	127	217	19	7	235	73	1	3	0	0	0	0
Future Vol, veh/h	127	217	19	7	235	73	1	3	0	0	0	0
Conflicting Peds, #/hr	1	_ 0	24	24	0	_ 1	7	0	5	5	0	7
Sign Control	Free		Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	- 74	-	None	-		None		- n e	None			None
Storage Length	-	-	-	-					-			-
Veh in Median Storage	e,# -				0			0			16965	11.10
Grade, %		0	-	-	0		-	0		_	0	
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	1	1	0	0	4	0	0	0	0	0	0	12
Mvmt Flow	174	297	26	10	322	100	1	4	0	0	0	0
Major/Minor	Major1	UUI	5. UF	Мајог2	400		Minor1	, A 4	11 1741	Cto 11	1,011	= 1
Conflicting Flow All	423	0	0	347	0	0	1081	1125	339			
Stage 1	720			017			682	682	000			
Stage 2	- 15	-		- 124		-	399	443				
Critical Hdwy	4.11			4.1			6.4	6.5	6.2			
Critical Hdwy Stg 1	7,11		-	7.1	-		5.4	5.5	0.2			
Critical Hdwy Stg 2	_		_			-	5.4	5.5				
Follow-up Hdwy	2.209	-		2.2	_		3.5	3.5	3.3			
Pot Cap-1 Maneuver	1142		-	1223		-	243	207	708			
Stage 1	1142		-	1223	_		506	453	700			
Stage 2		-	-			-	682	579				
Platoon blocked, %	99/ 5			13.8			002	5/9				
	1142	_	-	1190	-	-	100	^	685			
Mov Cap-1 Maneuver			-	•		5	189	0			- 10	
Mov Cap-2 Maneuver	_	-	-			-	189	0				
Stage 1		-	*	*		*	396	0				
Stage 2		-	-		-	_	677	0				
	ováll a											
Approach	EB	TA	1.0	WB	51.5	Eq.	NB			1110	- 3	1 40
HCM Control Delay, s	3.1			0.2			24.6					
HCM LOS							C					
Minor Lane/Major Mym	nt i	VBLn1	EBL	EBT	EBR	WBL	WBT	WBR	1000	100		E D
Capacity (veh/h)		189	1142	-	- LOIN	1190	AADI	TYDIX				
HCM Lane V/C Ratio		-	0.152	1.1		0.008						
HCM Control Delay (s)		24.6	8.7	-		8.1	٠					
HCM Lane LOS				0	•		0					
		0.1	A	Α	-	Α	Α	_				
HCM 95th %tile Q(veh)		0.1	0.5	*	- •	0						

	۶	→	•	1	4	*	1	†	<i>></i>	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	*	ĵ»			र्स	7		4	
Traffic Volume (vph)	7	69	330	28	79	1	254	15	6	0	14	7
Future Volume (vph)	7	69	330	28	79	1	254	15	6	0	14	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0		50	40		. O	0	الأحالة	115	0	10	0
Storage Lanes	Ō		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25		. 8	25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1,00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Frt			0.850		0.999			1.00	0.850		0.955	
Fit Protected		0.995	0.000	0.950	0.555			0.955	0.000		0.955	
Satd. Flow (prot)	0	1667	1615	1589	1754	0	0	1646	404E		4470	
Fit Permitted	· ·	0.973	1013	0.694	1704	U	U		1615	0	1176	0
	0		1015	OT 3	4754	0		0.718	4045		4470	
Satd. Flow (perm)	0	1630	1615	1161	1754	0	0	1236	1615	0	1176	0
Right Turn on Red			Yes			Yes			Yes	L 2 111 _		Yes
Satd. Flow (RTOR)			423		1				80		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	14%	5%	0%	6%	1%	0%	5%	33%	0%	0%	50%	29%
Adj. Flow (vph)	9	88	423	36	101	1	326	19	8	0	18	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	Ō	97	423	36	102	0	0	345	8	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0		-	0	.0.
Link Offset(ft)		0			0			0			Ō	1 171
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												1. 3
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15	11.00	9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		Ö	Ő	0	0	0	
Detector 1 Position(ft)	0	Ö	0	Ö	0		Ŏ	0	ō	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel	OIILX	OITEX	OITEX	CITEX	CITEX		CITEX	CITEX	CITEX	CITEX	CITEX	
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
	0.0	0.0		0.0					0.0	0.0	0.0	
Detector 1 Queue (s)		-	0.0	_	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

	Lettered			
Lane Group	Ø9	Bury VI	wa	
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Storage Length (ft)				7 4 4
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Fit Protected				
Satd. Flow (prot) Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft) Trailing Detector (ft)				5 18
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				1 2
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				- A 10
Detector 2 Channel				

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	custom	Perm	ÑΑ		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase									1			
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	9 1
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?					1 1000							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)							_	****				
Flash Dont Walk (s)												V
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	52.6	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.93	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.17	0.28	0.09	0.17			0.51	0.01		0.04	111 = 3
Control Delay		17.4	0.9	17.4	17.1			19.4	0.0		10.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.4	0.9	17.4	17.1			19.4	0.0		10.7	
LOS		В	Α	В	В			В	Ā		В	
Approach Delay		4.0			17.2			19.0	***		10.7	
Approach LOS		Ā		100	В			В			В	
ntorcootion Cummoru	100	VIII III	172	1131111					-			

Intersection Summary

Area Type: Other

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

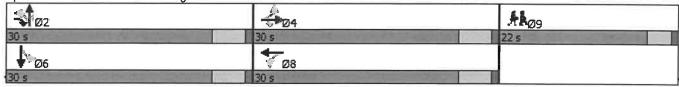
Maximum v/c Ratio: 0.51 Intersection Signal Delay: 11.0 Intersection Capacity Utilization 60.4%

Intersection LOS: B
ICU Level of Service B

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge



GEIS 11/07/2019 AM Build 1-way Durkee

Synchro 10 Report Page 3

Lane Group	Ø9	C	10 21	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	74.4	
Detector 2 Extend (s)						
Turn Type						
Protected Phases	9					
Permitted Phases						
Detector Phase						1 1 1 1 1 1 1 1 1 1
Switch Phase						
Minimum Initial (s)	1.0					
Minimum Split (s)	22.0					
Total Split (s)	22.0					
Total Split (%)	27%					
Maximum Green (s)	18.0					
Yellow Time (s)	3.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						- 2 - 1
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	5					
Act Effct Green (s)						
Actuated g/C Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Intersection Summary	213 1 9 3	THE PARTY NAMED IN				und I Soul

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		7-	and the fall-boson of the			- manaka la *** ant	ሻ	1→	v 3-1-2-22	and the state of the latest	43-	
Traffic Volume (vph)	15	21	181	0	Ö	0	293	267	18	2	348	22
Future Volume (vph)	15	21	181	0	0	0	293	267	18	2	348	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0	- N. F.	0	60	. III I-I	0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25		To date	25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						u = III	1.00			02000	1.00	1.00
Frt		0.866					11.00	0.990			0.992	
Fit Protected	0.950						0.950	0.000			0.002	
Satd. Flow (prot)	1574	1536	0	0	0	0	1652	1706	0	0	1806	0
Flt Permitted	0.950	1000					0.339	1100			0.998	
Satd. Flow (perm)	1574	1536	0	0	0	0	589	1706	0	0	1803	0
Right Turn on Red	1071	1000	Yes			Yes	000	1700	Yes		1000	Yes
Satd. Flow (RTOR)		227	100			100		2	103		2	100
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)		1,7.0			0.0		1	JI			14.0	1
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	7%	0.70	0.70	2%	2%	2%	2%	7%	0.76	0.70	4%	8%
Adj. Flow (vph)	20	28	238	0	0	0	386	351	24	3	458	29
Shared Lane Traffic (%)	20	20	230	ō	Ŭ	U	300	331	24	J	400	29
Lane Group Flow (vph)	20	266	Ò	Ö	0	0	386	375	Ö	0	490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	- 4 - 1	Left	Left	No
Median Width(ft)	Len	10	rigit	Leit	10	rigiit	Leit	10	Right	Leit	10	Right
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16			16			Ö			0 16	
Two way Left Turn Lane		10			10			U			10	
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	1.09	1.08	9	1.00	1.00	9	1.09	1.04	1.00	1.00	1.00	
Number of Detectors	1	2	9	13		9	1	2	9		2	9
Detector Template	Left	Thru					Left	Thru		1 Left		
	20	100						100			Thru	
Leading Detector (ft) Trailing Detector (ft)	0	W-					20 0			20	100	
	0	0						0		0	0	Toy
Detector 1 Position(ft)	20	6					0 20	0 6		0	0	
Detector 1 Size(ft)										20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	
Detector 2 Channel												

Lane Group	Ø1	Ø3
Lane Configurations	-	
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph) Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		

	•	-	*	1	•	4	4	†	1	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			THE R			0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
Protected Phases		4					5	2			6	= 80.1
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase							**					
Minimum Initial (s)	12.0	12.0					17.0	9.0		5.0	5.0	
Minimum Split (s)	23.0	23.0					22.0	33.0		10.0	10.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0				3	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					95.2	95.2			65.2	
Actuated g/C Ratio	0.17	0.17					0.66	0.66			0.45	1 8 6
v/c Ratio	0.07	0.58					0.67	0.33			0.60	
Control Delay	52.3	16.4					8.1	2.8			33.9	
Queue Delay	0.0	69.5					1.4	0.4			1.8	
Total Delay	52.3	85.8					9.5	3.2			35.7	
LOS	D	F					Ā	A			D	
Approach Delay		83.5						6.4			35.7	X X
Approach LOS		F						A			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 143.6

Natural Cycle: 110

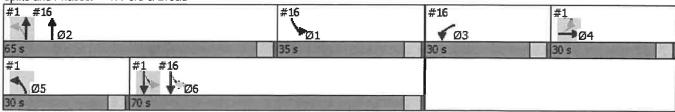
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91
Intersection Signal Delay: 30.1
Intersection Capacity Utilization 60.8%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



retector 2 Extend (s) urn Type rotected Phases ermitted Phases elector Phase witch Phase linimum Initial (s) Ilinimum Split (s) otal Split (s) otal Split (s) inimum Green (s) ellow Time (s) II-Red Time (s) otal Lost Time (s) ead/Lag ead-Lag Optimize? rehicle Extension (s) ctuated g/C Ratio for	Lane Group	Ø1	Ø3	1247		1-1-1-13		The Park of the Land of the La	The Park Control of the Control of t	The second secon	the figure of the second secon
urn Type rotected Phases ermitted Phases elector Phase witch Phase linimum Initial (s) 10.0 12.0 linimum Split (s) 17.0 17.0 otal Split (s) 35.0 30.0 otal Split (%) 22% 19% laximum Green (s) 30.0 25.0 ellow Time (s) 4.0 4.0 Il-Red Time (s) 1.0 1.0 ost Time Adjust (s) otal Lost Time (s) ead/Lag Lag Lead ead-Lag Optimize? Yes Yes ehicle Extension (s) 3.0 3.0 lecall Mode None None ct Effct Green (s) ctuated g/C Ratio /c Ratio control Delay queue Delay otal Delay OS		21	~~								
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linimum Initial (s) Inimum Split (s) Inimum Sp	Detector Phase										
Ilinimum Split (s) 17.0 17.0 otal Split (s) 35.0 30.0 otal Split (%) 22% 19% laximum Green (s) 30.0 25.0 ellow Time (s) 4.0 4.0 il-Red Time (s) 1.0 1.0 ost Time Adjust (s) otal Lost Time (s) ead/Lag Lead ead-Lag Optimize? Yes Yes ehicle Extension (s) 3.0 3.0 ecall Mode None ot Effct Green (s) ctuated g/C Ratio //c Ratio control Delay otal Delay otal Delay OS	Switch Phase										
otal Split (s) 35.0 30.0 otal Split (%) 22% 19% laximum Green (s) 30.0 25.0 ellow Time (s) 4.0 4.0 Il-Red Time (s) 1.0 1.0 ost Time Adjust (s) otal Lost Time (s) ead/Lag Lag Lead ead-Lag Optimize? Yes Yes ehicle Extension (s) 3.0 3.0 lecall Mode None None ct Effct Green (s) ctuated g/C Ratio /c Ratio control Delay queue Delay otal Delay OS	Minimum Initial (s)										
otal Split (%) daximum Green (s) dellow Time (s) ellow Time (s) dellow Time (s) dellow Time (s) do dellow Time (s) ellow Time (s) do dellow Time (s) do dello	Minimum Split (s)										
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ellow Time (s) 4.0 4.0 II-Red Time (s) 1.0 1.0 ost Time Adjust (s) otal Lost Time (s) ead/Lag Lag Lead ead-Lag Optimize? Yes Yes ehicle Extension (s) 3.0 3.0 decall Mode None None ct Effct Green (s) ctuated g/C Ratio for Ratio control Delay queue Delay otal Delay OS	Total Split (%)										
II-Red Time (s) ost Time Adjust (s) otal Lost Time (s) ead/Lag Lag Lead ead-Lag Optimize? ehicle Extension (s) decall Mode None None ot Effct Green (s) ctuated g/C Ratio for Ratio for Ratio for Rotor Delay dueue Delay otal Delay OS	Maximum Green (s)										
ost Time Adjust (s) otal Lost Time (s) ead/Lag	Yellow Time (s)										
otal Lost Time (s) ead/Lag	All-Red Time (s)	1.0	1.0								
ead/Lag Detimize? Yes Yes ehicle Extension (s) 3.0 3.0 lecall Mode None None ct Effct Green (s) ctuated g/C Ratio /c Ratio control Delay lueue Delay otal Delay OS											
ead-Lag Optimize? ehicle Extension (s) decall Mode None None None ct Effct Green (s) ctuated g/C Ratio control Delay dueue Delay otal Delay OS	Total Lost Time (s)										
tehicle Extension (s) 3.0 3.0 tecall Mode None None Ct Effet Green (s) tectuated g/C Ratio (c) Ratio Control Delay tueue Delay otal Delay OS	Lead/Lag										
ct Effct Green (s) ctuated g/C Ratio /c Ratio control Delay dueue Delay otal Delay OS	Lead-Lag Optimize?										
ct Effct Green (s) ctuated g/C Ratio /c Ratio control Delay tueue Delay otal Delay OS	Vehicle Extension (s)										
ctuated g/C Ratio /c Ratio control Delay dueue Delay otal Delay OS	Recall Mode	None	None								
/c Ratio control Delay queue Delay otal Delay OS	Act Effct Green (s)										
control Delay Queue Delay otal Delay OS	Actuated g/C Ratio										
otal Delay OS	v/c Ratio										
otal Delay OS	Control Delay										
OS	Queue Delay										
	Total Delay										
www.aah Dalay	LOS										
	Approach Delay										
pproach LOS	Approach LOS										
tersection Summary	Intersection Summary			100	П,	11/10	The State of the	The State of the State of	The same of the sa	The state of the s	The same of the sa

	1	•	†	*	-	↓			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	Carlo Land
Lane Configurations	W	- interests	†		to be always to a	4		2000.00	
Traffic Volume (vph)	4	38	540	3	21	508			
Future Volume (vph)	4	38	540	3	21	508			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	11	11	12	11			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			
Frt	0.877		0.999	-:					
FIt Protected	0.995					0.998			
Satd. Flow (prot)	1824	0	3259	0	0	1765			
Flt Permitted	0.995					0.951			
Satd. Flow (perm)	1824	0	3259	0	0	1682			
Right Turn on Red		Yes	0200	Yes	CT Tak				
Satd. Flow (RTOR)	50	100		125					
Link Speed (mph)	30		30			30			
Link Distance (ft)	339		147			136			
Travel Time (s)	7.7		3.3			3.1			
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76			
Heavy Vehicles (%)	0.70	0.70	7%	0.70	0.70	4%			
Adj. Flow (vph)	5	50	711	4	28	668			
Shared Lane Traffic (%)		50	111		20	000			
Lane Group Flow (vph)	55	0	715	0	0	696			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	15	ragin	10	ragiit	Len	10			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane	10		10			10			
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04			
Turning Speed (mph)	15	9	1.07	9	15	1.04			
Number of Detectors	1		2		1	2			
Detector Template	Left		Thru		Left	Thru			
Leading Detector (ft)	20		100		20	100			
Trailing Detector (ft)	0		0		0	0			
Detector 1 Position(ft)	0		Ö		0	Ö			
Detector 1 Size(ft)	20		6		20	6			
Detector 1 Type	CI+Ex		Cİ+Ex		CI+Ex	CI+Ex		101	
Detector 1 Channel	OLITY		OLILLA		OIILX	OIIL			
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	0.0		94		0.0	94			
Detector 2 Size(ft)			6			6			
Detector 2 Type			CI+Ex			CI+Ex			
Detector 2 Channel			OITEX			OITEX			
Detector 2 Extend (s)			0.0			0.0			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2		1 pini+pi	6	4	5	
Permitted Phases	3		4		6		4	J	
Detector Phase	3		2		1	6			
Detector Filase	ა					0			

	1	1	†	1	-	Ţ			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	10 - 11 - 63 - 50
Switch Phase					T 12.	1000			
Minimum Initial (s)	12.0		9.0		10.0	5.0	12.0	17.0	
Minimum Split (s)	17.0		33.0		17.0	10.0	23.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.0		95.2			65.2			
Actuated g/C Ratio	0.08		0.66			0.45			
v/c Ratio	0.28		0.33			0.91			
Control Delay	22.4		11.5			35.7			
Queue Delay	0.0		0.0			0.0			
Total Delay	22.4		11.5			35.7			
LOS	C		В			Ď			
Approach Delay	22.4		11.5			35.7			
Approach LOS	C		В			D			
Intersection Summary	NA PORT					Holy	41,	3- 11	
Area Type:	Other				TEL - II		-15.5%		
Cycle Length: 160									
Actuated Cycle Length: 1	143.6								
Natural Cycle: 110									

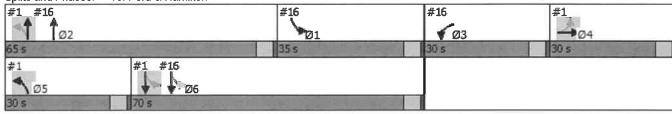
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 23.4 Intersection Capacity Utilization 62.1%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

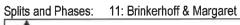
Splits and Phases: 16: Peru & Hamilton

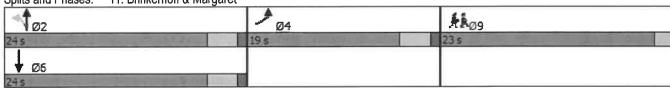


Intersection						7
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T	77	†	IADIX	CDL	1
Traffic Vol, veh/h	133	41	164	0	Ō	274
Future Vol, veh/h	133	41	164	Ö	0	274
Conflicting Peds, #/hr	39	24	0	0	0	0
Sign Control RT Channelized	Stop	Stop	Free	Free	Free	Free
arrived to the control of the	400	None		None		None
Storage Length	163	-	-	-	-	-
Veh in Median Storag		10.00	0			0
Grade, %	0		0	-	-	.0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	3	4	2	2	2	1
Mvmt Flow	168	52	208	Ö	0	347
The second secon	-					
Major/Mines	Minor1	1	doiced		laiana	Dec II
			Major 1		/lajor2	1000
Conflicting Flow All	594	232	0	-	-	-
Stage 1	208			100		
Stage 2	386		-	-	-	-
Critical Hdwy	6.43	6.24		-		
Critical Hdwy Stg 1	5.43		-	-	-	-
Critical Hdwy Stg 2	5.43			(#)	-	
Follow-up Hdwy	3.527	3.336	-	-	-	-
Pot Cap-1 Maneuver	466	802		0	0	2
Stage 1	824	-		Ö	0	
Stage 2	685		- 2	Ō	0	-
Platoon blocked, %	000	- 20	300			-
Mov Cap-1 Maneuver	449	784		11,12		
Mov Cap-1 Maneuver	449	104	- 30		_	
225			-		_	-
Stage 1	824		•		•	
Stage 2	660		-	-		-
11 1 2 2 1 1 1 3 3 1						
Approach	WB	10.38	NB	1 - 8	SB	
HCM Control Delay, s	15.9		0		0	
HCM LOS	[3.9		V		U	
TIOIVI LOO						
Minor Lane/Major Mvn	nt	NBTW	BLn1V	VBLn2	SBT	the state
Capacity (veh/h)			449	784	-	111
HCM Lane V/C Ratio			0.375			
HCM Control Delay (s)	11.		17.7	9.9		
HCM Lane LOS			,,,,	Α.	-	
HCM 95th %tile Q(veh			1.7			100
LICINI ADILI WILLE MIANE)	*	1.1	0.2	9 20	

	•	V	1	1	Ţ	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations	W		And have been been been been been been been be	4	†		
Traffic Volume (vph)	38	52	13	115	321	60	
Future Volume (vph)	38	52	13	115	321	60	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	14	12	12	11	10	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	0.93	1.00	1.00	1.00	0.99	1.00	
Frt	0.922			1.00	0.979		
Fit Protected	0.979			0.995	0.010		
Satd. Flow (prot)	1794	0	Ō	1811	1688	0	
Flt Permitted	0.979	Ų	<u> </u>	0.960	1000	U	
Satd. Flow (perm)	1698	0	Ô	1744	1688	0	
Right Turn on Red	1030	Yes	ō	1177	1000	Yes	
Satd. Flow (RTOR)	58	162			15	168	
Link Speed (mph)	30			30	30		
	456			480	276		
Link Distance (ft) Travel Time (s)	10.4			298	6.3		S. L. S.
	10.4	-	22	0.8	0.3	33	
Confl. Peds. (#/hr) Peak Hour Factor		6	33	0.00	0.00		
	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	
Adj. Flow (vph)	42	58	14	128	357	67	
Shared Lane Traffic (%)	400			4.10			
Lane Group Flow (vph)	100	0	0	142	424	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	14			0	0		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane						_	
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00	
Turning Speed (mph)	15	9	15		_	9	
Number of Detectors	1		1	2	2		
Detector Template	Left		Left	Thru	Thru		
Leading Detector (ft)	20		20	100	100		
Trailing Detector (ft)	0		0	0	0		
Detector 1 Position(ft)	0		0	0	Õ		
Detector 1 Size(ft)	20		20	6	6		
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			27.	94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				CI+Ex	CI+Ex		
Detector 2 Channel							
Detector 2 Extend (s)				0.0	0.0		
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4		TOTT	2	6		9

	<i>></i>	*	1	1	ļ	4		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	
Permitted Phases	To the		2					
Detector Phase	4		2	2	6			
Switch Phase								
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0	
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0	
Total Split (s)	19.0		24.0	24.0	24.0		23.0	
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%	
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0	
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0	
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0	
Lost Time Adjust (s)	0.0			0.0	0.0			
Total Lost Time (s)	4.0			4.0	4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None		Max	Max	Max		None	
Walk Time (s)							10.0	
Flash Dont Walk (s)							5.0	
Pedestrian Calls (#/hr)							10	
Act Effct Green (s)	6.8			27.5	27.5			
Actuated g/C Ratio	0.16			0.65	0.65			
v/c Ratio	0.30			0.13	0.38			
Control Delay	11.2			7.1	8.6			
Queue Delay	0.0			0.0	0.0			
Total Delay	11.2			7.1	8.6			
LOS	В			A	A			
Approach Delay	11.2			7.1	8.6			
Approach LOS	В			Α	Α			
Intersection Summary		T. S		Harris .	-1 -0		1 1 1	
Area Type:	Other							
Cycle Length: 66				4 -44				
Actuated Cycle Length: 42	2.3							
Natural Cycle: 55								
Control Type: Actuated-U	ncoordinated							
Maximum v/c Ratio: 0.38								
Intersection Signal Delay:			Intersection LOS: A					
Intersection Capacity Utili	zation 33.3%			I	CU Level o	of Service	Α	
Analysis Period (min) 15								





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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	-			4			4			4	
Traffic Volume (vph)	79	228	9	18	181	66	14	22	19	131	40	177
Future Volume (vph)	79	228	9	18	181	66	14	22	19	131	40	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0		0	0	Literation in the	0
Storage Lanes	1		Ō	0		0	0		0	Ô		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00			0.99			0.99			0.98	I A UST
Frt		0.994			0.966			0.953			0.931	
Flt Protected	0.950	11 15 5			0.997			0.988			0.982	100
Satd. Flow (prot)	1534	1764	0	0	1813	0	0	1832	0	0	1768	0
FIt Permitted	0.424				0.968			0.910			0.864	-
Satd. Flow (perm)	673	1764	0	0	1757	0	0	1685	0	0	1552	0
Right Turn on Red		- 1.0	Yes			Yes			Yes		3 1	Yes
Satd. Flow (RTOR)		2			18			21			57	
Link Speed (mph)		30			30			30			30	Ti.
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	
Confl. Peds. (#/hr)	19	0.0	35	35	0.0	19	6		4	4	21,	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	33%	0%	4%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	86	248	10	20	197	72	15	24	21	142	43	192
Shared Lane Traffic (%)			, ,					.=.		1,12	10	102
Lane Group Flow (vph)	86	258	0	0	289	0	Ō	60	Ó	0	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		8	1 1.9.11	20.0	8	1 119.11		0	i digiti	LOIL	0	rugin
Link Offset(ft)		0			0			0			Ö	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15		9	15	1151 1	9	15		9	15	0.00	9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	0.1
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		- 0	0		0	0	15%
Detector 1 Position(ft)	0	Ő		Ō	0		0	Ö		0	Ö	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	Cl+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel					THE RESERVE		OI - LX	OT-EX		OI · LX	OI L	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	3 4 H	94		0.0	94		0.0	94		0.0	94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	100
Detector 2 Channel		OI.FV		V 1 1 1 1 1 1	OI. LX			OI , LX			OITEX	

Lane Group	Ø9	10. d 10.			
Lane Configurations	100				
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Lane Width (ft)					
Storage Length (ft)					
Storage Lanes					
Taper Length (ft) Lane Util. Factor					
Ped Bike Factor					
Frt					
FIt Protected					
Satd. Flow (prot)					
Fit Permitted					
Satd. Flow (perm)					
Right Turn on Red					-11
Satd. Flow (RTOR)					
Link Speed (mph)					
Link Distance (ft)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)				THE VIEW A	
Shared Lane Traffic (%)					
Lane Group Flow (vph)		* " , , , , , , , , ,			
Enter Blocked Intersection					
Lane Alignment					
Median Width(ft)					
Link Offset(ft)					
Crosswalk Width(ft)					
Two way Left Turn Lane					
Headway Factor					
Turning Speed (mph)					
Number of Detectors					
Detector Template					
Leading Detector (ft)					_
Trailing Detector (ft)					
Detector 1 Position(ft)					
Detector 1 Size(ft)					
Detector 1 Type					-
Detector 1 Channel					
Detector 1 Extend (s)					-
Detector 1 Queue (s)					
Detector 1 Delay (s)					-
Detector 2 Position(ft)					
Detector 2 Size(ft)					
Detector 2 Type					
Detector 2 Channel					_

	*	→	1	-	- 🔍	4	†	1	1	Ţ	1
Lane Group	EBL	EBT	EBR W	BL WE	T WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0		0	.0	~ ;	0.0			0.0	
Turn Type	Perm	NA	Pe	rm N	Α	Perm	NA		Perm	NA	
Protected Phases		4			8		2			6	- 3 -
Permitted Phases	4			8		2			6		
Detector Phase	4	4		8	8	2	2		6	6	
Switch Phase		-				-					
Minimum Initial (s)	14.0	14.0	14	1.0 14	0	12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0	18	3.0 18	0	16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0	34	.0 34	0	34.0	34.0		34.0	34.0	132
Total Split (%)	35.4%	35.4%	35.4	% 35.4	%	35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0	30	0.0 30	Ō	30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0 3	Ó	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	A FIN YE	.0 1	0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0	0		0.0			0.0	
Total Lost Time (s)	4.0	4.0		4	0		4.0			4.0	
Lead/Lag					100						
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	(3.0	0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	No	ne Nor	е	Max	Max		Max	Max	
Walk Time (s)					-						
Flash Dont Walk (s)											100
Pedestrian Calls (#/hr)											
Act Effct Green (s)	16.7	16.7		16	7		31.7			31.7	
Actuated g/C Ratio	0.28	0.28		0.2	8		0.52			0.52	
v/c Ratio	0.46	0.53		0.5	8		0.07			0.45	
Control Delay	29.9	24.3		24	3		9.7			13.4	
Queue Delay	0.0	0.0		0.	0		0.0			0.0	
Total Delay	29.9	24.3		24.	3		9.7			13.4	
LOS	C	C			Ĉ		Ā			В	
Approach Delay		25.7		24.	3		9.7			13.4	
Approach LOS		C			Ċ _		A			В	
Intersection Summary		To be	15/4/6	1456	8 516	1000	Y SEL	SUBJE!	WI CH	Unit S	

Area Type: Other

Cycle Length: 96

Actuated Cycle Length: 60.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58 Intersection Signal Delay: 20.1 Intersection Capacity Utilization 64.9%

Intersection LOS: C ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	A	1000	J	
Detector 2 Extend (s)	103				
Turn Type					
Protected Phases	9				
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0				
Minimum Split (s)	28.0				
Total Split (s)	28.0				
Total Split (%)	29%				
Maximum Green (s)	24.0				
Yellow Time (s)	3.0				
All-Red Time (s)	1.0				
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0				
Recall Mode	None				
Walk Time (s)	12.0				
Flash Dont Walk (s)	12.0				
Pedestrian Calls (#/hr)					
Act Effct Green (s)					
Actuated g/C Ratio					
v/c Ratio					
Control Delay					
Queue Delay					
Total Delay					
LOS					
Approach Delay					
Approach LOS	T 80 177				
Intersection Summary	122 1 21				

Intersection	100 110 11	
Intersection Delay, s/veh Intersection LOS	18.2	
Intersection LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					4	7		4			4	- solven and a state of
Traffic Vol, veh/h	0	0	0	0	43	340	45	124	23	389	0	86
Future Vol, veh/h	Ō	Õ	0	Ō	43	340	45	124	23	389	0	86
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	0	0	3	0	6	8	3	7	5
Mymt Flow	0	0	0	0	45	354	47	129	24	405	0	90
Number of Lanes	0	0	0	0	1	1	0	1	0	0	1	0
Approach				1 F 1	WB	1, 11	NB	11 1-9 12	- 1	SB		200
Opposing Approach							SB			NB		
Opposing Lanes					0		1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1		0			2		
Conflicting Approach Right					SB		WB					
Conflicting Lanes Right					1		2			0		
HCM Control Delay					15		11.7			23.5		
HCM LOS					В		В			Ċ		

Lane	NBLn1	WBLn1	WBLn2	SBLn1	THE RESERVE TO SERVE THE RESERVE TO SERVE THE RESERVE
Vol Left, %	23%	0%	0%	82%	
Vol Thru, %	65%	100%	0%	0%	
Vol Right, %	12%	0%	100%	18%	
Sign Control	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	192	43	340	475	
LT Vol	45	0	0	389	
Through Vol	124	43	0	0	
RT Vol	23	0	340	86	
Lane Flow Rate	200	45	354	495	
Geometry Grp	2	7	7	2	
Degree of Util (X)	0.323	0.08	0.564	0.754	
Departure Headway (Hd)	5.814	6.394	5.735	5.485	
Convergence, Y/N	Yes	Yes	Yes	Yes	
Cap	616	559	627	658	
Service Time	3.874	4.147	3.487	3.531	
HCM Lane V/C Ratio	0.325	0.081	0.565	0.752	
HCM Control Delay	11.7	9.7	15.7	23.5	
HCM Lane LOS	B	Α	С	C	
HCM 95th-tile Q	1.4	0.3	3.5	6.9	

-												
Intersection		1 3 4		300	111 6	4	N/III		1 1 1		U G	
int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	- A0004-7000	4	711 44 411	/******	4	and Comment		4		ሻ	ĵ»	
Traffic Vol, veh/h	146		11	8	255	61	12	4	11	Ö	0	0
Future Vol, veh/h	146		11	8	255	61	12	4	11	0	0	0
Conflicting Peds, #/hr			14	14	0	5	2	0	7	7	0	2
Sign Control	Free	770	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None		-112	None			None	I VISI		None
Storage Length	-	-	-	-	-	-	-	-	-	145	-	-
Veh in Median Storag	e,# -	Ö		VV Je	0			0	NI V		0	+
Grade, %	-	0	-		0	-	-	Ō	-	-	Õ	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	2	0	0	2	0	0	25	0	5	0	6
Mvmt Flow	157	226	12	9	274	66	13	4	12	0	0	0
						_						
Major/Minor	Major 1	0.00		viajor2	3		Minor1	VIV -		Minor2	5. 10	
Conflicting Flow All	345	0	0	252	0	0	887	923	253	891	896	314
Stage 1	J-4J			202	-		560	560	200	330	330	314
Stage 2	1 1	100	.08		-		327	363		561	566	. 18
Critical Hdwy	4.11		- 12	4.1	*	-	7.1	6.75	6.2	7.15	6.5	6.26
Critical Hdwy Stg 1	7,11		40	T. 1	_	-	6.1	5.75	0.2	6.15	5.5	0.20
Critical Hdwy Stg 2	7#				160	- 2	6.1	5.75		6.15	5.5	#
Follow-up Hdwy	2.209	-	-	2.2	_	-	3.5	4.225	3.3	3.545	4	3.354
Pot Cap-1 Maneuver	1220	-		1325	-	- 0	267	247	791	260	282	717
Stage 1	-	-				-	516	475	-	677	649	
Stage 2				-	-		690	586		507	511	
Platoon blocked, %		-			-	_				~~'	7 1	
Mov Cap-1 Maneuver	1214	11.	-	1304		V. F	231	204	773	219	233	712
Mov Cap-2 Maneuver		-	-		_	_	231	204	-	219	233	
Stage 1			- (*)				432	398		573	640	14
Stage 2			-	-	-	-	682	578	¥	417	428	-
VE TENENT I										e des		
Approach	ĒB	0.500	2	WB	11 11 25,	11.23	NB	0	9,10	SB		
HCM Control Delay, s	3.3			0.2	1210		17.6			0		
HCM LOS	0.0			0.2			C			A		
TION LOO												
Minor Lane/Major Myn	nt	NBLn1	EBL	ÉBT	EBR	WBL	MIDT	MPD	BLn1	201 -2		
	iil .						WBT	WOK S	DDLN I	ODLIIZ		71
Capacity (veh/h)		315	1214	•			10.		-			
HCM Control Polov (c)		0.092		_	-	0.007	-		0	-		
HCM Long LOS		17.6	8.4	0	-	7.8	0	*	0	0		
HCM OF the %tillo O(yoh	į.	0.3	0.4	A	•	A	A	1 72	A	Α		
HCM 95th %tile Q(veh).	0.3	0.4			0		16	-	-		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		स	7	ሻ	4			र्स	7		4	
Traffic Volume (vph)	8	83	283	41	71	3	260	13	12	2	10	16
Future Volume (vph)	8	83	283	41	71	3	260	13	12	2	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	0	FINE	50	40		0	0		115	0	15 1112	0
Storage Lanes	0		1	1		0	0		1	Õ		Ō
Taper Length (ft)	25			25			25			25		- 1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.97	0.99	1.00			1.00	0.98		0.99	
Frt			0.850		0.994				0.850		0.923	
Fit Protected		0.996		0.950				0.955			0.997	
Satd. Flow (prot)	0	1709	1553	1685	1726	0	0	1697	1252	0	1445	0
FIt Permitted		0.978		0.695				0.714			0.986	
Satd. Flow (perm)	0	1674	1512	1218	1726	0	0	1263	1223	0	1429	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			298		3				80		17	-
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	
Confl. Peds. (#/hr)	19		8	8		19	3		2	2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	40%	0%	4%	0%	2%	0%	2%	30%	29%	0%	31%	0%
Adj. Flow (vph)	8	87	298	43	75	3	274	14	13	2	11	17
Shared Lane Traffic (%)											-	,,
Lane Group Flow (vph)	0	95	298	43	78	0	0	288	13	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1_	_ 2	1	1	2		1	_ 2	1	_ 1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			_6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Lane <u>Group</u>	Ø9	200	And the last of the last	0-2, 12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Fit Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel			- 1 B	
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)		7 7 7	THE REAL PROPERTY.	1-11-1
Detector 2 Size(ft)				
Detector 2 Type Detector 2 Channel				
Detector 2 Charmer			 	

	<i>•</i>	-	*	1	-	*	1	†	-	1	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0	da mai li limati mi la		0.0	
Turn Type	Perm	NA	custom	Perm	NA		Perm	NĀ	Perm	Perm	NA	
Protected Phases		4	2!		8			2		1,37	6!	5
Permitted Phases	4		4	8			2		2	6	-	
Detector Phase	4	4	2	8	8		2	2	2	6	6	77/
Switch Phase												
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0	. *	0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag		_										
Lead-Lag Optimize?												335 3
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	
Walk Time (s)												
Flash Dont Walk (s)									G. J. Paris			F 68
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.16	0.23	0.10	0.13			0.42	0.02		0.04	1
Control Delay		17.3	1.0	17.4	16.5			16.8	0.1		8.9	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.3	1.0	17.4	16.5			16.8	0.1		8.9	
LOS		B	A	В	В			В	A		Ā	
Approach Delay		5.0			16.8			16.1	4300		8.9	
Approach LOS		Ā			B			В			Ā	
											-	

Intersection Summary

Area Type:

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42 Intersection Signal Delay: 10.8

Intersection LOS: B Intersection Capacity Utilization 58.4% ICU Level of Service B

Other

Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 3: Peru & Bridge

औ ø2	\$ 04	£\$.09
30 s	30 s	22 s
₽ ®6	▼ Ø8	
30 s	30 s	THE RESERVE THE PERSON NAMED IN

GEIS 11/07/2019 Midday Build Durkee 1-way TRJ

Synchro 10 Report Page 3

A COLOR	Ø9		
Lane Group	พล		
Detector 2 Extend (s)			1- 1-
Turn Type	_		
Protected Phases	9		
Permitted Phases			
Detector Phase			1171
Switch Phase			
Minimum Initial (s)	1.0		L
Minimum Split (s)	22.0		
Total Split (s)	22.0		
Total Split (%)	27%		
Maximum Green (s)	18.0		100
Yellow Time (s)	3.0		
All-Red Time (s)	1.0		
Lost Time Adjust (s)			
Total Lost Time (s)		والمراط المتنا والمراط والمراط والمسار والمسار كالأمراج والمساور	
Lead/Lag			
Lead-Lag Optimize?			-100
Vehicle Extension (s)	3.0		
Recall Mode	None		131
Walk Time (s)	8.0		
Flash Dont Walk (s)	10.0		
Pedestrian Calls (#/hr)	5		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Intersection Summary	20 17 19		DAIS

	۶	→	*	1	←	•	1	†	1	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1>					*	7.			4	
Traffic Volume (vph)	31	28	165	0	Õ	Ō	266	264	13	0	283	54
Future Volume (vph)	31	28	165	0	0	0	266	264	13	0	283	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		0	0		0	60		0	0		0
Storage Lanes	1		Ö	Ō		0	1		0	Õ		0
Taper Length (ft)	25			25		i meri	25			25		III III II
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	Total Co						1.00	1.00			1.00	1100
Frt		0.872						0.993			0.979	
Fit Protected	0.950						0.950				0.070	
Satd. Flow (prot)	1685	1520	0	0	0	0	1636	1771	0	0	1778	0
Fit Permitted	0.950		-4 F I	W 2	7, VI	4.1	0.398	A		- 7//		-
Satd. Flow (perm)	1685	1520	0	0	0	0	683	1771	0	0	1778	0
Right Turn on Red			Yes			Yes		W III	Yes	- L		Yes
Satd. Flow (RTOR)		156	100			100		2	100		7	100
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)		1110			0.0		4	0.1	1	1	17.0	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%	3%	3%	0%	0%	5%	0.54
Adj. Flow (vph)	33	30	176	0	0	0	283	281	14	0	301	57
Shared Lane Traffic (%)	00	- 00	110				200	201	17	.,	001	01
Lane Group Flow (vph)	33	206	0	0	0	0	283	295	0	0	358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Lon	10	1 digit	LOIL	10	rugiit	Lon	10	ragin	LOIL	10	rugiit
Link Offset(ft)		Ō			0			0			0	
Crosswalk Width(ft)		16			16			0			16	
Two way Left Turn Lane	277 170										10	100
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	1100	9	15	HOLD DE	9	15	1.00	1.00
Number of Detectors	1	2	<u>.</u>	10			1	2		1	2	J
Detector Template	Left	Thru					Left	Thru		Left	Thru	
Leading Detector (ft)	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	Ö	
Detector 1 Position(ft)	0	0					0	0		0	Ö	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	Ci+Ex		CI+Ex	CI+Ex	
Detector 1 Channel	OITEX	OI LX					OILLX	OILX		OITEX	GITEX	
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0					0.0	0.0		0.0	0.0	N HE
Detector 2 Position(ft)	0.0	94					0.0	94		0.0	94	
Detector 2 Size(ft)		6						6			94	
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel		CITEX						CITEX			CI+Ex	
Detector 2 Chainlei												

Lane Group	Ø1	Ø3	C William	N -19	200	1	Fig. 1	5.70	
Lane Configurations				_					
Traffic Volume (vph)									
Future Volume (vph)									
Ideal Flow (vphpl)									
Lane Width (ft)									
Storage Length (ft)									=1 , , , ,
Storage Lanes									
Taper Length (ft)									no Ja
Lane Util. Factor									
Ped Bike Factor									1000
Frt									
Flt Protected									
Satd. Flow (prot)									
Flt Permitted									
Satd. Flow (perm)									
Right Turn on Red									
Satd. Flow (RTOR)									
Link Speed (mph)					2.1				
Link Distance (ft)									
Travel Time (s)									
Confl. Peds. (#/hr)									
Peak Hour Factor									
Heavy Vehicles (%)									
Adj. Flow (vph)									
Shared Lane Traffic (%)									
Lane Group Flow (vph)									111111
Enter Blocked Intersection									
Lane Alignment									
Median Width(ft)									
Link Offset(ft)									
Crosswalk Width(ft)									
Two way Left Turn Lane									
Headway Factor									
Turning Speed (mph)									17-4
Number of Detectors									
Detector Template									
Leading Detector (ft)									
Trailing Detector (ft)	1000								
Detector 1 Position(ft)									
Detector 1 Size(ft)									
Detector 1 Type									
Detector 1 Channel									
Detector 1 Extend (s)									
Detector 1 Queue (s)									- 17 - 19 .
Detector 1 Delay (s)									
Detector 2 Position(ft)									
Detector 2 Size(ft)									
Detector 2 Type									
Detector 2 Channel									

	•	-	7	1	+	1	4	†	-	1	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0						0.0			0.0	* ***
Turn Type	Perm	ŇA					pm+pt	NA			NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase							, ,	**			1001	
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	- 1
Lost Time Adjust (s)	0.0	0.0					0.0	0.0		1.0	0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max			1.0		None	Max		Max	Max	
Act Effct Green (s)	25.1	25.1					93.3	93.3		7.77	65.4	
Actuated g/C Ratio	0.18	0.18					0.66	0.66			0.46	
v/c Ratio	0.11	0.52					0.47	0.25			0.43	
Control Delay	52.8	20.3					5.3	3.2			28.6	
Queue Delay	0.0	73.3					0.6	0.7			0.6	
Total Delay	52.8	93.7					5.9	3.8			29.2	
LOS	D	F					Ā	A			C	
Approach Delay	F 41 (01 (0)	88.0					U LW	4.9			29.2	62/04/11
Approach LOS		F						A			C	
Intersection Summary	A P			3 22				Night.	1 10 10	31 1	62 - 2	
Area Type:	Other											
Cycle Length: 160												
Actuated Cycle Length: 14	1.6											

Actuated Cycle Length: 141.6

Natural Cycle: 90

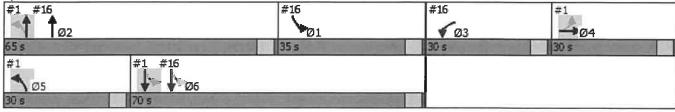
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66 Intersection Signal Delay: 29.2 Intersection Capacity Utilization 57.1%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3	
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	3	
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	10.0	12.0	
Minimum Split (s)	15.0	17.0	
Total Split (s)	35.0	30.0	
Total Split (%)	22%	19%	
Maximum Green (s)	30.0	25.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	1.0	1.0	
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	A CONTRACTOR OF THE CONTRACTOR
Recall Mode	None	None	
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Intersection Summary			FIRE COLUMN TO SERVICE AND A SERVICE OF THE SECTION

	1	4	†	1	1	1				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	1 3 7 7	TO COLOR
Lane Configurations	14	All limbs	†		-	स	about 1	Abb Ta . strang		
Traffic Volume (vph)	14	50	501	9	50	411		- 00 -		
Future Volume (vph)	14	50	501	9	50	411				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				17.2
Lane Width (ft)	15	12	11	11	12	11				
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			T- 1 0 7 5	
Frt	0.895	1144	0.997		7.5-2					
FIt Protected	0.989					0.995				
Satd. Flow (prot)	1850	0	3412	0	0	1811				
FIt Permitted	0.989			u, i,	W-H	0.887				
Satd. Flow (perm)	1850	0	3412	0	0	1615				
Right Turn on Red	1 - 11 4	Yes		Yes		1010				10 10 10 10 10
Satd. Flow (RTOR)	53	100	1	100						
Link Speed (mph)	30		30			30				
Link Distance (ft)	339		147			136				
Travel Time (s)	7.7		3.3			3.1				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				
Heavy Vehicles (%)	0%	0%	2%	0%	0.54	1%		1.7		
Adj. Flow (vph)	15	53	533	10	53	437				
Shared Lane Traffic (%)	VIII III	33	000	10	00	707				STATE AND ADDRESS.
Lane Group Flow (vph)	68	0	543	0	0	490				
Enter Blocked Intersection	No	No	No	No	No	No				
Lane Alignment	Left	Right	Left	Right	Left	Left				
Median Width(ft)	15	ragint	10	ragiit	Leit	10				
Link Offset(ft)	0		0			Ò				
Crosswalk Width(ft)	16		16			16				
Two way Left Turn Lane	10		10			10				
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04				
Turning Speed (mph)	15	9	1.04	9	1.50	1.04				
Number of Detectors	1	3	2	9	1	2				
Detector Template	Left		Thru		Left	Thru				
Leading Detector (ft)	20		100		20	100				
Trailing Detector (ft)	0		0		0	0				
Detector 1 Position(ft)	0		Ö		0	0				
Detector 1 Size(ft)	20		6		20	6				
Detector 1 Type	Cl+Ex		Cl+Ex		CI+Ex	CI+Ex				
Detector 1 Channel	CITEX		CITEX		CITEX	CITEX			i - Vive ii -	151-15
Detector 1 Extend (s)	0.0		0.0		0.0	0.0				
Detector 1 Queue (s)	0.0		0.0	70.7	0.0	0.0		A 1777		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0				
Detector 2 Position(ft)	0.0		94		0.0	94				
Detector 2 Size(ft)			6			6				
			CI+Ex							
Detector 2 Type Detector 2 Channel			CITEX			CI+Ex				
			0.0			0.0				
Detector 2 Extend (s)	Dest		0.0		nm ! = l	0.0				
Turn Type	Prot		NA		pm+pt	NA				
Protected Phases	3		2		1	6	4	5		
Permitted Phases	No Fall		^		6					
Detector Phase	3		2		1	6				

	1		Ť	P	1	#				
Lane Ĝroup	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5		
Switch Phase			- Family	.2 1 20 4 40						
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0		
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0		
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0		
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%		
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0		
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0		1
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0				
Total Lost Time (s)	5.0		5.0			5.0				
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0		
Recall Mode	None		Max		None	Max	Max	None		
Act Effct Green (s)	12.1		93.3			65.4				
Actuated g/C Ratio	0.09		0.66			0.46				
v/c Ratio	0.33		0.24			0.66			10000	
Control Delay	26.8		10.6			23.3				
Queue Delay	0.0		0.0			0.5				
Total Delay	26.8		10.6			23.9				
LOS	С		В			С				
Approach Delay	26.8		10.6			23.9				
Approach LOS	Ċ		В	1111		C				
Intersection Summary	N. 51			11 1-15	M.	171-35		1000		34 1
Area Type:	Other									
Cycle Length: 160										
Actuated Cycle Length: 14	1.6									
Natural Cycle: 90										
Control Type: Actuated-Ur	ncoordinated									
Maximum v/c Ratio: 0.66										
Intersection Signal Delay:	17.5				ntersectio					
Intersection Capacity Utiliz				Ī	CU Level	of Service	В			
Analysis Period (min) 15										
Splits and Phases: 16: F	Peru & Hamil	ton								
#1 #16	GIU & HAIIIII	iOH .	T-	£16			#16		#1	

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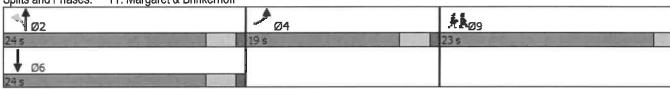
#1 #16

ntersection						r Ph.
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	7	7	†	HOIL	ODL	↑
Traffic Vol, veh/h	108	52	165	0	0	
Future Vol, veh/h	108	52	165	0	0	238 238
				0	0	
Conflicting Peds, #/hr	46	11	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	112	None	-	None		None
Storage Length	163	-		-	-	-
Veh in Median Storage			0			0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	92	92	87
Heavy Vehicles, %	0	0	1	2	2	1
Mvmt Flow	124	60	190	0	0	274
			-			
Major/Mina-	Win and	T.	Anical		A-1	
	Minor1		/lajor1		/lajor2	
Conflicting Flow All	510	201	0		•	-
Stage 1	190			-		
Stage 2	320	-	-	-	-	-
Critical Hdwy	6.4	6.2		-	-	
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-				11 9
Follow-up Hdwy	3.5	3.3		-	-	-
Pot Cap-1 Maneuver	527	845		Ô	0	
Stage 1	847	0.10	_	Õ	ō	-
Stage 2	741			0	0	2
	/ *	-	-	Ų	Ü	
Platoon blocked, %	504	000	_			-
Mov Cap-1 Maneuver	504	836	n soite	8		Ti.
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	847	7 .			•	
Stage 2	708	-	-	-	-	
Approach	WB	100	NB	Marie .	SB	3.75
The state of the s	12.9	-1731	0	1	0	
HCM Control Delay, s	11000		U		U	
HCM LOS	В					
Minor Lane/Major Mvm	t	NBTW	BLn1V	VBLn2	SBT	100
Capacity (veh/h)			504	836	-	1 5
HCM Lane V/C Ratio			0.246			
er with a second					-	
HCM Control Delay (s)			14.5	9.6	2	
HCM Lane LOS			В	A	-	
HCM 95th %tile Q(veh)		, VI	1	0.2		

	۶	•	4	Ť	↓	4		
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9	
Lane Configurations	**		Amount or most	र्स	- ↑			
Traffic Volume (vph)	22	60	8	141	335	64		
Future Volume (vph)	22	60	8	141	335	64		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	14	12	12	11	10	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor	0.95	1100	1100	1.00	0.99	1100		
Frt	0.901			1.00	0.978			
FIt Protected	0.987			0.997	0.070			
Satd. Flow (prot)	1736	0	0	1831	1675	0		
Flt Permitted	0.987	ŭ	U	0.980	1010	U		
Satd. Flow (perm)	1689	0	Ō	1797	1675	0		
	1009		U	1191	1073			
Right Turn on Red	cc	Yes			ÄĖ	Yes		
Satd. Flow (RTOR)	66		Total s	20	15			
Link Speed (mph)	30			30	30			
Link Distance (ft)	456			298	276		And the meather of the latest	
Travel Time (s)	10.4		-7-	6.8	6.3			
Confl. Peds. (#/hr)	46	5	39			39		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Heavy Vehicles (%)	0%	2%	0%	0%	2%	3%		
Adj. Flow (vph)	24	66	9	155	368	70		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	90	0	0	164	438	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	14			0	0			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane	_							
Headway Factor	0.92	1.00	1.00	1.04	1.09	1.00		
Turning Speed (mph)	15	9	15			9		
Number of Detectors	Ĩ		1	2	2	MI THE		
Detector Template	Left		Left	Thru	Thru			
Leading Detector (ft)	20		20	100	100			
Trailing Detector (ft)	0		0	0	0			
Detector 1 Position(ft)	ō		0	Ö	0	11111		
Detector 1 Size(ft)	20		20	6	6			
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex			
Detector 1 Channel	OI LA		OI. LX	OI- LA	OI LA			
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)	0.0		0.0	94	94			
Detector 2 Size(ft)				6	6			
Detector 2 Type				CI+Ex	CI+Ex		-151-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Detector 2 Channel				0.0	0.0			
Detector 2 Extend (s)	D (D	0.0	0.0			
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2	6		9	

	1	7	4	4	ţ	1	
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0		1.0
Minimum Split (s)	9.0		9.0	9.0	9.0		23.0
Total Split (s)	19.0		24.0	24.0	24.0		23.0
Total Split (%)	28.8%		36.4%	36.4%	36.4%		35%
Maximum Green (s)	15.0		20.0	20.0	20.0		21.0
Yellow Time (s)	3.0		3.0	3.0	3.0		2.0
All-Red Time (s)	1.0		1.0	1.0	1.0		0.0
Lost Time Adjust (s)	0.0			0.0	0.0		
Total Lost Time (s)	4.0			4.0	4.0		
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0
Recall Mode	None		Max	Max	Max		None
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	6.5			29.1	29.1		
Actuated g/C Ratio	0.16			0.71	0.71		
v/c Ratio	0.27			0.13	0.36		
Control Delay	10.0			6.6	8.2		
Queue Delay	0.0			0.0	0.0		
Total Delay	10.0			6.6	8.2		
LOS	Ā			Ā	·A		
Approach Delay	10.0			6.6	8.2		
Approach LOS	Α			Α	A		
Intersection Summary	7 1		10 8				17 1
Area Type:	Other						
Cycle Length: 66							
Actuated Cycle Length: 4	0.7						
Natural Cycle: 55			11-1-	- 18			
Control Type: Actuated-U	ncoordinated						
Maximum v/c Ratio: 0.36							
Intersection Signal Delay:					tersection		
Intersection Capacity Utili	zation 34.0%			10	CU Level o	of Service	Α
Analysis Period (min) 15							

Splits and Phases: 11: Margaret & Brinkerhoff



2	۶	→	*	1	←	*	4	†	~	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4			4			4			4	
Traffic Volume (vph)	63	224	30	19	222	45	31	38	25	121	38	149
Future Volume (vph)	63	224	30	19	222	45	31	38	25	121	38	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	8	11	12	12	13	12	12	13	12	12	13	12
Storage Length (ft)	75		0	0		0	0		0	Ò		0
Storage Lanes	1		0	0		0	0		0	Ō		Ō
Taper Length (ft)	25			25	77.5		25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.99			0.99			0.99	. II 'S		0.98	11, 1077
Frt		0.982			0.979			0.964			0.935	
Fit Protected	0.950				0.997			0.984			0.981	26.
Satd. Flow (prot)	1504	1731	0	0	1837	0	0	1793	0	0	1712	0
Flt Permitted	0.399				0.968			0.858			0.845	
Satd. Flow (perm)	622	1731	0	0	1781	0	0	1556	0	0	1472	0
Right Turn on Red		STO I	Yes	T1 14		Yes			Yes			Yes
Satd. Flow (RTOR)		7			10			20			51	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			396			169			401	
Travel Time (s)		6.0			9.0			3.8			9.1	- 20
Confl. Peds. (#/hr)	19		23	23		19	18	0.0	3	3	V. !	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	0%	6%	4%	0%	6%	3%	0%	2%	8%	2%
Adj. Flow (vph)	68	243	33	21	241	49	34	41	27	132	41	162
Shared Lane Traffic (%)			- 00						41	102	-	102
Lane Group Flow (vph)	68	276	0	0	311	0	0	102	Ō	Õ	335	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	Loit	8	rugiit	LOIL	8	rugit	LOIL	0	rugin	LOIL	0	Taging
Link Offset(ft)		Ö			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								10			10	
Headway Factor	1.20	1.04	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.96	1.00
Turning Speed (mph)	15	1.01	9	15	0.00	9	15	0.00	9	1.00	0.00	9
Number of Detectors	1	2	Y.	1	2	_	1	2		1	2	3
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	4000
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	Ō	0		0	Ö		0	0		0	0	
Detector 1 Position(ft)	Ö	0		Ö	0		Ö	Ö		0	0	
Detector 1 Size(ft)	20	6	1, 1,	20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel	OITEX	OITEX		OIILX	CITEX		OITEX	OITEX		CITEX	CITEX	
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
	0.0	0.0		0.0	0.0		0.0	0.0		man.		
Detector 1 Delay (s) Detector 2 Position(ft)	0.0	94		0.0	94		0.0	94		0.0	0.0	
		6			6			94			94	
Detector 2 Size(ft)		CI+Ex			-							
Detector 2 Type Detector 2 Channel		CITEX			CI+Ex			Cl+Ex			CI+Ex	

Lane Group	Ø 9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Fit Protected	
Satd. Flow (prot)	
FIt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft) Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	

	•	-	V	1	-	•	4	1	1	-	*	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	ÑΑ		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		16.0	16.0		16.0	16.0	
Total Split (s)	34.0	34.0		34.0	34.0		34.0	34.0		34.0	34.0	-1-1
Total Split (%)	35.4%	35.4%		35.4%	35.4%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		200	0.0		127	0.0			0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?											TT S	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	1	None	None		Max	Max		Max	Max	
Walk Time (s)					200					111001	177601	
Flash Dont Walk (s)									7.75		W. E. Y	
Pedestrian Calls (#/hr)												
Act Effct Green (s)	17.0	17.0			17.0			31.7			31.7	
Actuated g/C Ratio	0.28	0.28			0.28			0.52			0.52	
v/c Ratio	0.39	0.56			0.62			0.12			0.42	
Control Delay	27.7	24.6			25.7			11.1			13.4	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	27.7	24.6			25.7			11.1			13.4	
LOS	C	C			С			В			В	
Approach Delay		25.2			25.7			11.1			13.4	
Approach LOS		C			C			В			В	
The second of th												

Intersection Summary

Area Type: Other

Cycle Length: 96

Actuated Cycle Length: 60.7

Natural Cycle: 65

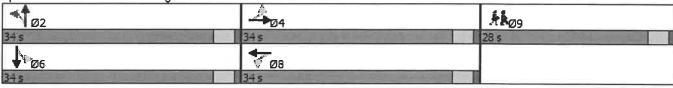
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.62 Intersection Signal Delay: 20.4 Intersection Capacity Utilization 62.7%

Intersection LOS: C
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Pine/Margaret & Broad



Lane Group	Ø9	766
Detector 2 Extend (s)		
Turn Type		
Protected Phases	9	
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	
Minimum Split (s)	28.0	
Total Split (s)	28.0	
Total Split (%)	29%	
Maximum Green (s)	24.0	
Yellow Time (s)	3.0	
All-Red Time (s)	1.0	
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)	12.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	10	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		1 7
Total Delay		
LOS		
Approach Delay		
Approach LOS		-
Intersection Summary		

Intersection			1 - 11								454	
Intersection Delay, s/veh	21.3											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					<u></u>	7 :		4		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4	
Traffic Vol, veh/h	0	0	0	0	50	427	41	173	28	368	0	69
Future Vol, veh/h	Ō	0	0	0	50	427	41	173	28	368	0	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	5	5	1	0	1	0	1	4	0
Mvmt Flow	0	0	0	0	53	449	43	182	29	387	0	73
Number of Lanes	0	0	0	Ō	1	1	0	1	0	0	1	0
Approach	Later 1	A MA			WB	100	NB	N. I. S.	20 14	SB	1	
Opposing Approach							SB			NB		
Opposing Lanes					0		1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1		0			2		
Conflicting Approach Right					SB		WB					
Conflicting Lanes Right					1		2			0		
HCM Control Delay					21.6		13.9			25		
HCMLOC					0		D			~		

C

В

0 25 C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	0%	0%	84%
Vol Thru, %	71%	100%	0%	0%
Vol Right, %	12%	0%	100%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	50	427	437
LT Vol	41	0	Ö	368
Through Vol	173	50	0	0
RT Vol	28	0	427	69
Lane Flow Rate	255	53	449	460
Geometry Grp	2	7	7	2
Degree of Util (X)	0.434	0.097	0.729	0.754
Departure Headway (Hd)	6.129	6.618	5.836	5.897
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	583	538	616	612
Service Time	4.221	4.394	3.612	3.973
HCM Lane V/C Ratio	0.437	0.099	0.729	0.752
HCM Control Delay	13.9	10.1	22.9	25
HCM Lane LOS	B 2.2	В	C	C
HCM 95th-tile Q	2.2	0.3	6.2	6.7

HCM LOS

Intersection	18	7			1,50		E P	197	7915		1 3 1173	
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	13000.00	The state of the s	4		B 65 1000	4		- 10.4		4 10 10 10 10 10
Traffic Vol, veh/h	124	234	12	4	270	52	15	3	10	0	0	0
Future Vol, veh/h	124	234	12	4	270	52	15		10	Ō	Ō	Ö
Conflicting Peds, #/hr	4	0	30	30	Ö	4	2		6	6	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None	+		None			None			None
Storage Length	-	-	-	-	-		-	-	-	-	_	
Veh in Median Storage	# -	0	100	-	Ö	*		0			16965	240
Grade, %		0	-	-	0			0	_	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	2	Ö	5
Mvmt Flow	128	241	12	4	278	54	15	3	10	0	0	0
					****		de saren.	1000		-		
Major/Minor	Vajor1	c 35		Vlajor2	7 6	A. III	Minor1	-12			i n	
Conflicting Flow All	336	0	0	283	0	0	848	877	283			
Stage 1	Y .	3			-		533	533	-			
Stage 2		-	-	-	_	-	315	344				
Critical Hdwy	4.1		- 1 mar	4.1			6.4	6.5	6.2			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-			
Critical Hdwy Stg 2	-	-		+		500	5.4	5.5	- 12			
Follow-up Hdwy	2.2	-	_	2.2	-	-	3.5	4	3.3			
Pot Cap-1 Maneuver	1235			1291		- 2	334	289	761			
Stage 1			-	-	-	-	593	528	-			
Stage 2			0 1	-11:			744	640	-			
Platoon blocked, %		-	-		-		***					
Mov Cap-1 Maneuver	1235			1248	#		282	0	731			
Mov Cap-2 Maneuver	_	-	-	-		-	282	Ö	-			
Stage 1	18		-			(m)	502	0	100			
Stage 2	-	-	-	-	-	-	743	0	-			
Approach	EB		Lance Co	WB	100	BIY	NB	Half.			1911	7.00
HCM Control Delay, s	2.8	4		0.1	W.		15.4					
HCM LOS							С					
							12.1					
Minor Lane/Major Mvm	t N	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	1818	1160		7 17
Capacity (veh/h)		374	1235		-	1248				4-1		
HCM Lane V/C Ratio		0.077			_	0.003	-	-				
HCM Control Delay (s)		15.4	8.3	0	(*)	7.9	0	*				
HCM Lane LOS		C	Α	Ã	-	A	Ā	-				
HCM 95th %tile Q(veh)		0.2	0.3	-	4	0	:=1	-				
						1-6-						

	۶		*	1		•	1	†	~	1	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ન	7	*	4			4	7		4	Construent American
Traffic Volume (vph)	3	73	302	51	99	0	348	5	15	0	2	11
Future Volume (vph)	3	73	302	51	99	0	348	5	15	0	2	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	10	10	12	11	11	12	12	10	12
Storage Length (ft)	Ō		50	40		0	0		115	0		0
Storage Lanes	Ö		1	1		0	0		1	Ö		0
Taper Length (ft)	25		75.00	25		·	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00	0.98	0.99	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00
Frt		1.00	0.850	0.00				1.00	0.850		0.884	
Fit Protected		0.998	0.000	0.950				0.953	0.000		0.004	
Satd. Flow (prot)	0	1770	1568	1685	1756	0	0	1716	1346	0	1539	0
Fit Permitted		0.991	1000	0.704	1730	0	· ·	0.719	1040	0	1008	-
Satd. Flow (perm)	0	1756	1530	1239	1756	0	0	1293	1315	0	1539	0
Right Turn on Red		1750	Yes	1200	1130	Yes	0	1290	Yes		1008	Yes
Satd. Flow (RTOR)			321			162			80		12	165
Link Speed (mph)		30	321		30			30	00		30	
Link Distance (ft)		714			322			641			189	
Travel Time (s)		16.2			7.3			14.6			4.3	-
Confl. Peds. (#/hr)	13	10.2	5	5	1.3	13	1	14.0	2	2	4.3	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.04		2	0.04	0.04
L	0.94	0.94	3%	0.94	1%		2%	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3	78	321	54	105	0%	370	0% 5	20%	0%	0%	0%
Adj. Flow (vph)	Ş	/0	321	04	100	U	3/0	Э	16	0	2	12
Shared Lane Traffic (%)	Ď.	81	321	F4	105	Ō		075	40	-	1.7	~
Lane Group Flow (vph)	0			. 54			0	375	16	0	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)	N- 14	0			0			0		100	0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.04	4.04	4.00	4.00	4.00	4.00
Headway Factor	1.00	1.09	1.00	1.09	1.09	1.00	1.04	1.04	1.00	1.00	1.09	1.00
Turning Speed (mph)	15	_	9	15		9	15	0	9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0		0.0	0.0				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94		100	94			94			94	4841
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												

Long Črous	Ø9		
Lane Group	25		
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft) Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Fit Permitted			
Satd. Flow (perm)			
Right Turn on Red			7 7 7 7 7 7
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			The State of the S
Confl. Peds. (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			100
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			111
Detector 1 Size(ft)			- N - N - N -
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			5 15
Detector 1 Queue (s) Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
COLORD & CHAINE			

	<i>></i>	→	*	1	-	1	4	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0	. THIS	AHA	0.0	18
Turn Type	Perm	NA	custom	Perm	NA		Perm	NA	Perm		NA	
Protected Phases		4	2!		8			2			6!	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	4	4	2	8	8		2	2	2	6	6	
Switch Phase					*							
Minimum Initial (s)	19.0	19.0	12.0	19.0	19.0		12.0	12.0	12.0	14.0	14.0	
Minimum Split (s)	24.0	24.0	23.0	24.0	24.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	36.6%	36.6%	36.6%	36.6%	36.6%		36.6%	36.6%	36.6%	36.6%	36.6%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		_	0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag				-								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	Max	None	None		Max	Max	Max	None	None	2-1
Walk Time (s)							-		-			
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.6	45.5	19.6	19.6			30.8	30.8		30.8	
Actuated g/C Ratio		0.35	0.80	0.35	0.35			0.54	0.54		0.54	
v/c Ratio		0.13	0.24	0.13	0.17			0.53	0.02		0.02	134
Control Delay		17.0	1.0	17.5	17.3			19.7	0.1		8.5	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		17.0	1.0	17.5	17.3			19.7	0.1		8.5	
LOS		В	A	В	В			В	A		A	HOLE I
Approach Delay		4.3		_	17.4			18.9			8.5	
Approach LOS		Ā		YVI	В			В			Ā	
Intersection Summary	L Service	1146		F.A		Bus !	Y il				- 2/3/	10
Area Type:	Other								Yellow			

Cycle Length: 82

Actuated Cycle Length: 56.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53 Intersection Signal Delay: 12.4

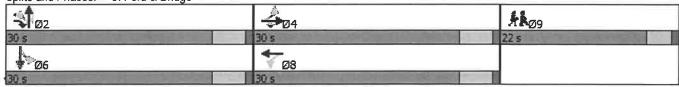
Intersection Capacity Utilization 59.2%

Analysis Period (min) 15

! Phase conflict between lane groups.

Intersection LOS: B
ICU Level of Service B

Splits and Phases: 3: Peru & Bridge



GEIS 11/07/2019 PM Build w/Durkee 1-way

Synchro 10 Report

Lane Ĝroup	Ø9	AND RESIDENCE AND RESIDENCE AND RESIDENCE AND RESIDENCE AND RESIDENCE AND RESIDENCE AND RESIDENCE AND RESIDENCE	-
Detector 2 Extend (s)	200		
Turn Type			
Protected Phases	9		. 7
Permitted Phases			
Detector Phase			1.7
Switch Phase			
Minimum Initial (s)	1.0		
Minimum Split (s)	22.0		
Total Split (s)	22.0		
Total Split (%)	27%		
Maximum Green (s)	18.0		
Yellow Time (s)	3.0		
All-Red Time (s)	1.0		
Lost Time Adjust (s)			
Total Lost Time (s)			11 71 7
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0		
Recall Mode	None		
Walk Time (s)	8.0		
Flash Dont Walk (s)	10.0	تعريفات بالمراد فأسان ماليان بمشارح فالمساع والمتال	
Pedestrian Calls (#/hr)	5		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay Total Delay			
LOS			
Approach Delay			
Approach LOS			
Intersection Summary			

	۶	→	*	1	4	4	4	†	1	/	Į.	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4					ሻ	1₃	and the same to		4	
Traffic Volume (vph)	23	30	191	0	0	0	298	345	17	1	326	28
Future Volume (vph)	23	30	191	Ö	0	Ō	298	345	17	1	326	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12	10	11	12	12	12	12
Storage Length (ft)	55		Ō	0	-11	0	60		0	0		0
Storage Lanes	1		0	0		0	1		0	Ö		0
Taper Length (ft)	25			25		e Sur	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00										1100	1.00
Frt		0.870						0.993			0.989	
Fit Protected	0.950						0.950	0.000			0.000	
Satd. Flow (prot)	1589	1543	0	0	0	0	1668	1790	0	0	1862	0
FIt Permitted	0.950	10.0					0.400	1700			0.999	
Satd. Flow (perm)	1584	1543	0	0	0	0	702	1790	0	0	1860	0
Right Turn on Red	1001	1010	Yes			Yes	702	1100	Yes		1000	Yes
Satd. Flow (RTOR)		171	100			103		2	103		3	1 63
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		654			255			136			641	
Travel Time (s)		14.9			5.8			3.1			14.6	
Confl. Peds. (#/hr)	1	14.0			0.0			0.1			14.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0.33	0.93	2%	2%	2%	1%	2%	0.93	0.93	1%	0.93
Adj. Flow (vph)	25	32	205	0	0	0	320	371	18	1	351	30
Shared Lane Traffic (%)	25	32	200	Ų	Ū	ū	320	3/ 1	10		331	SU
Lane Group Flow (vph)	25	237	0	0	0	ō	320	389	0	Ó	382	Ō
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	0 No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left		Left	Left	
Median Width(ft)	Leit	10	right	Leit	10	Rigitt	Leit	10	Right	Len	10	Right
Link Offset(ft)		0			0			0		1		
Crosswalk Width(ft)		16			16			0			0 16	
Two way Left Turn Lane		10			10			U			10	
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00	1.09	1.04	1.00	1.00	4.00	4.00
	1.09	1.09	1.00	1.00	1.00	9	1.09	1.04	_		1.00	1.00
Turning Speed (mph) Number of Detectors	15	2	9	10		9	_	2	9	15	^	9
Detector Template	Left	Thru					1	2 Th		1	2	
Leading Detector (ft)							Left	Thru		Left	Thru	
	20	100					20	100		20	100	
Trailing Detector (ft)	0	0					0	0		0	0	0.5
Detector 1 Position(ft)	0	0					0	0		0	0	
Detector 1 Size(ft)	20	6					20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex					CI+Ex	CI+Ex		CI+Ex	Cl+Ex	
Detector 1 Channel	0.0	0.0					0.0	0.0				
Detector 1 Extend (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0					0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	- 3				0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		CI+Ex						CI+Ex			CI+Ex	4. 1
Detector 2 Channel												

Section 1
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T R S To

	1	-	*	1	←	4	4	†	~	-	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0						0.0		11	0.0	
Turn Type	Perm	NA					pm+pt	NA		Perm	NA	
Protected Phases		4					5	2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4					5	2		6	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0					17.0	9.0		10.0	10.0	
Minimum Split (s)	23.0	23.0					22.0	14.0		15.0	15.0	
Total Split (s)	30.0	30.0					30.0	65.0		70.0	70.0	
Total Split (%)	18.8%	18.8%					18.8%	40.6%		43.8%	43.8%	
Maximum Green (s)	25.0	25.0					25.0	60.0		65.0	65.0	
Yellow Time (s)	4.0	4.0					4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0					0.0	0.0			0.0	
Total Lost Time (s)	5.0	5.0					5.0	5.0			5.0	
Lead/Lag	Lag	Lag					Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes					Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0					3.0	3.0		3.0	3.0	
Recall Mode	Max	Max					None	Max		Max	Max	
Act Effct Green (s)	25.0	25.0					94.5	94.5			65.0	
Actuated g/C Ratio	0.17	0.17					0.65	0.65			0.44	
v/c Ratio	0.09	0.59					0.52	0.34			0.46	
Control Delay	52.7	23.0					5.8	3.6			30.7	
Queue Delay	0.0	72.9					0.8	0.5			0.9	
Total Delay	52.7	96.0					6.5	4.2			31.6	
LOS	Ď	F					A	A			C	
Approach Delay		91.8						5.2			31.6	
Approach LOS		F						Α			С	
Intersection Summary	Turbout 1		Sell	12 16 1						718 S.M.	MILH	30 10
Area Type:	Other											

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 146.5

Natural Cycle: 90

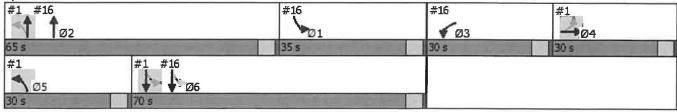
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80 Intersection Signal Delay: 29.4 Intersection Capacity Utilization 64.0%

Intersection LOS: C ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Peru & Broad



Lane Group	Ø1	Ø3
Detector 2 Extend (s)	1,0000,000,000	
Turn Type		
Protected Phases	1	3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	10.0	12.0
Minimum Split (s)	15.0	17.0
Total Split (s)	35.0	30.0
Total Split (%)	22%	19%
Maximum Green (s)	30.0	25.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		-11/60

	1	*	†	1	1	Ţ				
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	10.73 12	1000
Lane Configurations)\pf	A. marken lake	†	lab.	is also inclined.	4		And add Eastern		
Traffic Volume (vph)	8	65	595	4	56	461				
Future Volume (vph)	8	65	595	4	56	461				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Lane Width (ft)	15	12	11	11	12	11				
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00			1000	
Frt	0.880		0.999			= =:				
Flt Protected	0.994					0.995				
Satd. Flow (prot)	1828	0	3418	0	0	1811				
Flt Permitted	0.994					0.865				1,100,100,000
Satd. Flow (perm)	1828	0	3418	0	0	1575				
Right Turn on Red		Yes		Yes						
Satd. Flow (RTOR)	70			<u>.</u>						
Link Speed (mph)	30		30			30				
Link Distance (ft)	339		147			136				
Travel Time (s)	7.7		3.3			3.1				R. INC. IN
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%				OF CALL STREET
Adj. Flow (vph)	9	70	640	4	60	496				
Shared Lane Traffic (%)		7 7 100								
Lane Group Flow (vph)	79	0	644	0	0	556				
Enter Blocked Intersection	No	No	No	No	No	No				
Lane Alignment	Left	Right	Left	Right	Left	Left				
Median Width(ft)	15		10			10				
Link Offset(ft)	0		0			0				
Crosswalk Width(ft)	16		16			16				
Two way Left Turn Lane										
Headway Factor	0.88	1.00	1.04	1.04	1.00	1.04				
Turning Speed (mph)	15	9		9	15					
Number of Detectors	1		2		1	2		The state of the s		
Detector Template	Left		Thru		Left	Thru				
Leading Detector (ft)	20		100		20	100			S. C. L.	
Trailing Detector (ft)	0		0		0	0				
Detector 1 Position(ft)	0		0		0	0				
Detector 1 Size(ft)	20		6		20	6				
Detector 1 Type	CI+Ex		CI+Ex		CI+Ex	CI+Ex				
Detector 1 Channel										
Detector 1 Extend (s)	0.0		0.0		0.0	0.0				
Detector 1 Queue (s)	0.0		0.0		0.0	0.0				
Detector 1 Delay (s)	0.0		0.0		0.0	0.0				
Detector 2 Position(ft)			94			94				
Detector 2 Size(ft)			6			6				
Detector 2 Type			CI+Ex			CI+Ex				
Detector 2 Channel										
Detector 2 Extend (s)			0.0			0.0				
Turn Type	Prot		NA		pm+pt	NA				
Protected Phases	3		2		1	6	4	5		
Permitted Phases					6					
Detector Phase	3		2		1	6				

	1	1	•	-	1	4			
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4	Ø5	
Switch Phase						75		17	i
Minimum Initial (s)	12.0		9.0		10.0	10.0	12.0	17.0	
Minimum Split (s)	17.0		14.0		15.0	15.0	23.0	22.0	
Total Split (s)	30.0		65.0		35.0	70.0	30.0	30.0	
Total Split (%)	18.8%		40.6%		21.9%	43.8%	19%	19%	
Maximum Green (s)	25.0		60.0		30.0	65.0	25.0	25.0	
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.0		5.0			5.0			
Lead/Lag	Lead		Lead		Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	
Recall Mode	None		Max		None	Max	Max	None	
Act Effct Green (s)	12.0		94.5			65.0			
Actuated g/C Ratio	0.08		0.65			0.44			
v/c Ratio	0.37		0.29			0.80			
Control Delay	22.0		11.8			30.5			
Queue Delay	0.0		0.0			0.0			
Total Delay	22.0		11.8			30.5			
LOS	C		В			C			
Approach Delay	22.0		11.8			30.5			
Approach LOS	С		В		All	C			
Intersection Summary				Trail !	14.	ix of	-3,-		
Area Type:	Other								

Area Type: Cycle Length: 160

Actuated Cycle Length: 146.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

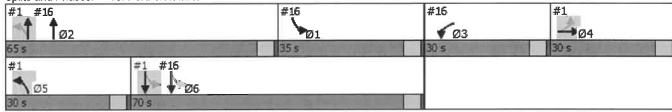
Maximum v/c Ratio: 0.80

Intersection Signal Delay: 20.6 Intersection Capacity Utilization 66.4%

Analysis Period (min) 15

Intersection LOS: C ICU Level of Service C

Splits and Phases: 16: Peru & Hamilton



Appendix C: Project Trip Assignments

Printed:

Date

Counts\FIGS_C1-C16\FIG-C1_91922-00_DURKEE-EXIST.dwg

GEIS\TRANS\Intersection

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- Phone: (845) 454-3980 North Country Office: 20 Elm Street (Suite 110) Glens Falls, New York 12801 Phone: (518) 812-0513

Counts\FIGS_C1-C16\FIG-C2_91922-00_AM-NO-BUILD-NO-DURKEE

Plattsburgh GEIS\TRANS\Intersection

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Z: \projects\91900-91999\91922.00

- 547 River Street Troy, New York 12180 Phone: (518) 273-0055
- Westchester NY Office: 1 North Broadway, Suite 803 Phone: (914) 997-8510

Nashville, Tennessee 37212 Phone: (615) 380-1359

Chattanooga Tennessee Office: 1426 Williams Street (Suite 12 White Plains, New York 10601 Chattanooga, Tennessee 37408 Phone: (423) 241-6575

DURKEE LOT VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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	9192	
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Ш	FIG.	C2

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LANDSCAPE ARCHITECTURE, CO., D.P.C.

Office Locations:

Counts\FIGS_C1-C16\FIG-C3_91922-00_MIDDAY-NO-BUILD-NO-DURKEE.

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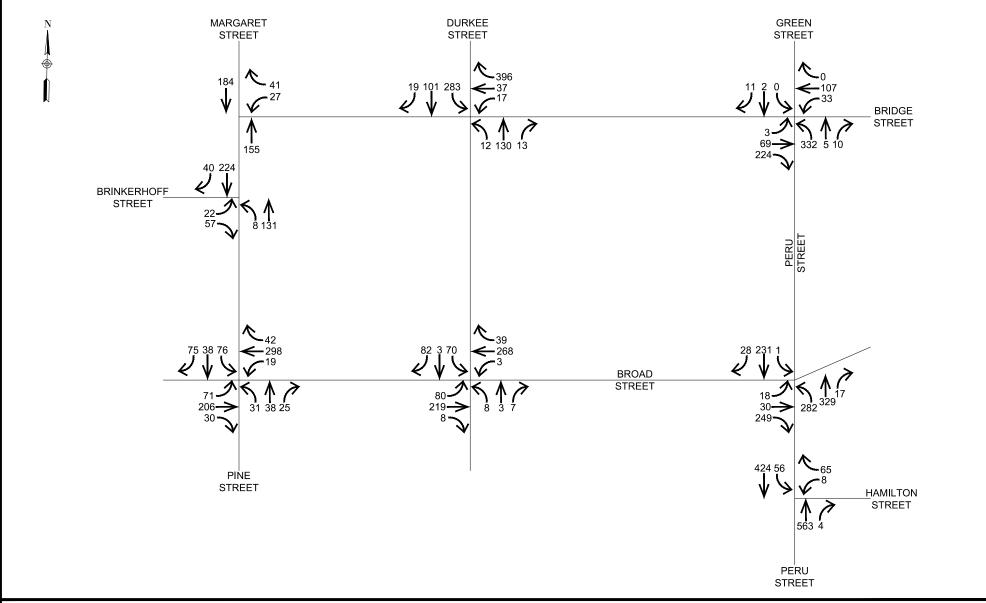
2022 MIDDAY NO-BUILD WITHOUT DURKEE LOT VOLUMES

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. C3

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2022 PM NO-BUILD WITHOUT **DURKEE LOT VOLUMES**

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Counts\FIGS_C1-C16\FIG-C5_91922-00_AM-PEAK-DURKEE-LOT-2

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DURKEE LOT MIXED-USE DEV. (2-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. C5

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Office Locations:

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TRIP ASSIGNMENT - MIDDAY PEAK **DURKEE LOT MIXED-USE DEV.** (2-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. C6

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DURKEE LOT MIXED-USE DEV. (2-WAY DURKEE STREET)

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FIG. C7

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Date

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PARKING (2-WAY DURKEE STREET)

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FIG. C8

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FIG. C9

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BRIDGE STREET

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AM DURKEE STREET 1-WAY DIVERSIONS

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FIG. C10

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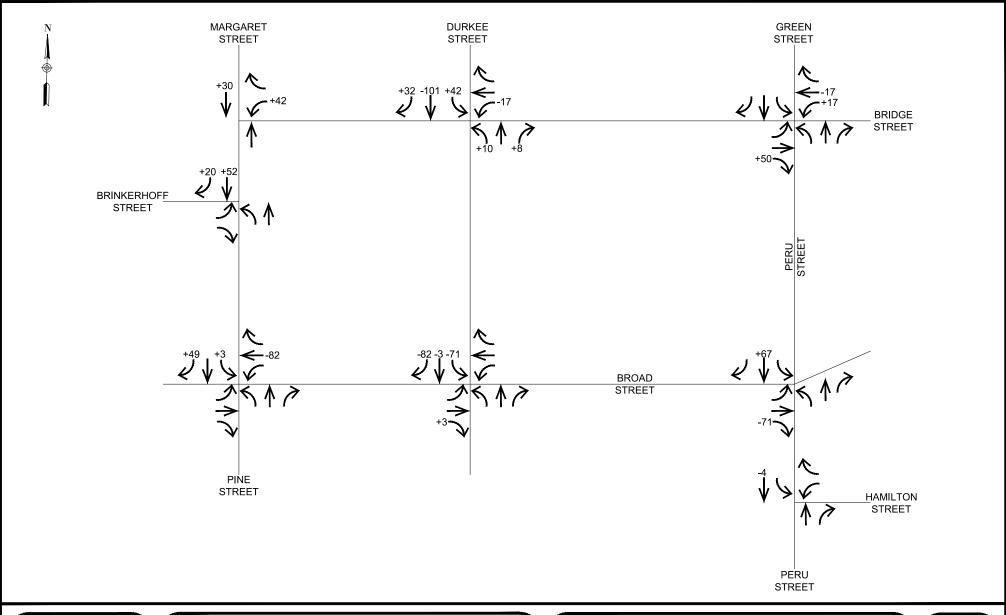
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FIG. C11

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FIG. C12

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DURKEE LOT MIXED-USE DEV. (1-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

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FIG. C13

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- 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980
- North Country Office: 20 Elm Street (Suite 110) Glens Falls, New York 12801 Phone: (518) 812-0513

Counts\FIGS_C1-C16\FIG-C14_91922-00_MIDDAY-PEAK-DURKEE-LOT-

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- 547 River Street Troy, New York 12180 Phone: (518) 273-0055
- Westchester NY Office: 1 North Broadway, Suite 803 Phone: (914) 997-8510

2416 21st Ave S. (Suite 103) Nashville, Tennessee 37212 Phone: (615) 380-1359

Chattanooga Tennessee Office: 1426 Williams Street (Suite 12 White Plains, New York 10601 Chattanooga, Tennessee 37408 Phone: (423) 241-6575

DURKEE LOT MIXED USED DEV. (1-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

	_	
ı	design CR	chked TJ
	date 11/11/19	scale NTS
	project r 9192	

FIG. C14

sheet no.

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Office Locations:

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- ☐ Hudson Valley Office: 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980
- North Country Office: 20 Elm Street (Suite 110) Glens Falls, New York 12801 Phone: (518) 812-0513
- ☐ Capital District Office: 547 River Street Troy, New York 12180 Phone: (518) 273-0055
- Westchester NY Office: 1 North Broadway, Suite 803 Phone: (914) 997-8510

Nashville Tennessee Office: 2416 21st Ave S. (Suite 103) Nashville, Tennessee 37212 Phone: (615) 380-1359

Chattanooga Tennessee Office: 1426 Williams Street (Suite 12 White Plains, New York 10601 Chattanooga, Tennessee 37408 Phone: (423) 241-6575

TRIP ASSIGNMENT - PM PEAK **DURKEE LOT MIXED USE DEV.** (1-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

1	design CR	chked TJ
	date 11/11/19	scale NTS
	project r 9192	
ı	sheet no	

FIG. C15

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- Phone: (845) 454-3980
- North Country Office: 20 Elm Street (Suite 110) Glens Falls, New York 12801 Phone: (518) 812-0513

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- Phone: (518) 273-0055
- Westchester NY Office: 1 North Broadway, Suite 803 Phone: (914) 997-8510

Phone: (615) 380-1359

Chattanooga Tennessee Office: 1426 Williams Street (Suite 12) White Plains, New York 10601 Chattanooga, Tennessee 37408 Phone: (423) 241-6575

PARKING (1-WAY DURKEE STREET)

CITY OF PLATTSBURGH, CLINTON COUNTY

ı	design CR	chked TJ
	date 11/11/19	scale NTS
	project no. 91922.01	

FIG. C16

Appendix D: Fiscal Information

Application for Financial Assistance

County of Clinton Industrial Development Agency (CCIDA) 190 Banker Road, Suite 500 Plattsburgh, NY 12901 infoatIDAs@gmail.com

A nonrefundable administrative application fee of \$1500 must be submitted at the time of the application, of which, \$750 will be applied to the project's closing cost. Checks may be made payable to: **The County of Clinton IDA**.

Please submit one (1) electronic copy and two (2) hard copies of the application (and any attachments) and SEQR (if applicable) to the address above. Include the check with the hard copies.

ALL APPLICATIONS <u>MUST BE</u> SUBMITTED TWO WEEKS PRIOR TO THE REGULAR SCHEDULED CCIDA MEETING

For a copy of the meeting schedule as well as the Uniform Tax Exempt Policy (UTEP) go to www.clintoncountvida.com

Application Updated: 7/2016

Note to Applicant:

The information requested by this application is necessary to determine the eligibility of your project for Clinton County Industrial Development Agency (CCIDA) benefits. Please answer all questions, inserting "none" or "not applicable" where appropriate. If you are providing an estimate, please indicate by inserting "est." after the figure. Attach additional sheets if more space is needed for a response than provided.

Please submit two (2) hard copies of the application (and any attachments) and SEQR (if applicable) to CCIDA, 137 Margaret Street, Suite 209, Plattsburgh, NY 12901 ATTN: Executive Director. In addition, please send an electronic version of the entire application and SEQR (if applicable) as well as all attachments to infoatIDAs@gmail.com. Include within the hardcopy, a check made payable to the County of Clinton Industrial Development Agency in the amount of \$1500. Submissions must be made two (2) weeks prior to the regular scheduled meetings of the CCIDA (2nd Monday of each month unless otherwise noted).

Upon submission of this application to the CCIDA, the application becomes a public document. Be advised that any action brought before the CCIDA is public information. All agendas are issued and posted on the CCIDA's website seven (7) days prior to Board meetings. If there is information that the applicant feels is of a proprietary nature, please identify as such, and that information will be treated confidentially to the extent permitted by the law.

By signing and submitting this application, the Applicant acknowledges that it has received a copy of the CCIDA's Uniform Tax Exempt Policy (UTEP) and all other policies mentioned. Policies can be obtained at www.clintoncountvida.com.

A project financed through the CCIDA involves the preparation and execution of significant legal documents. These documents not only comply with New York State law but also conform to CCIDA policies in effect at time of closing (all policies are posted on the website). Please consult with an attorney before signing any documents in connection with the proposed project.

The applicant will receive an engagement letter from the CCIDA's legal counsel. The applicant will then be asked to sign the engagement letter acknowledging it understands that the project is responsible for <u>all CCIDA</u> legal costs related to the project, including when the project is reconveyed. In addition, should the project not close and legal services have been rendered by the CCIDA legal counsel, the applicant will still be responsible for those costs.

If the project requires a public hearing, a representative from the applicant's organization is required to be present. A date will be coordinated by the CCIDA's legal counsel and/or Executive Director. If you have any questions regarding the application or the process, feel free to contact the CCIDA's Executive Director at (518) 565-4600 or infoatIDAs@gamil.com.

PART I: Project Information

PROJECT'S CCIDA APPLICATION # ____(Official Use)

Section A: Assistance

	TAROLD CHILLY	
Type of Financial Assist	ance Requested - [Ch	eck One]
Straight Lease - [] Bond Financing - [Both -[]	Other - []
If "Other," Explain:		
Type of Benefits Project is	Seeking – [Check All	that Apply]
Real Estate Exemption/ Sales Tax Exemption — PILOT - * *Note: If applicant is seeking bonds, a PILOT and/or additional information will be required in Part II of the	exemption from sales on	Tax-Exempt Other - [] Bonds - [] d/or mortgage recording tax
If Other, Explain:		

Section B: Background

Company Name: Print Platsburg! LIC
Company Point of Contact: Toda Currley
Address: 621 Columbia St. Ext. Ochoes My 12047
Phone Number: 630 785-9000 Cxt. 126
Point of Contact's e-mail: TCurley & the prime companies. Com
Company Website: While Prime companies. Com
Company NAICS Code: 336 116
Employer Identification Number (EIN):

2.) Business Type [Check One]:
Private or Public Corporation
If Public, on what exchange is it listed?
[] Subchapter S
[] Sole Proprietorship
[] General Partnership
[] Limited Partnership
Limited Liability Company/Partnership
[] DISC
[] Not-for-profit
[] Other:
State of Incorporation (if applicable): Which was a state of Incorpora
rime (in paner is an experience of full service real estate contains. For over 35 years firme Cos has led the industry in affering a facilities of real estate a hospitality exvices. They include facilitation, commercial and residential real estate liquidations as and equality delations, but and managing grand up projects to include over as established sub-distributed over as the include over as liquidations of sub-distributed over a construction of the projects of part of Calcumber of Marriott. In addition, Prime afficient with Caldwell Banker time Properties posterial and commercial real estate.
3a.) Will the project move its facility from another location in New York to Clinton County? Yes [] or No. (2)
3b.) Will the project result in the abandonment of an existing facility in New York? Yes [] or No. 2
3c.) If "Yes" to 3a and/or 3b, is the reason for moving to another location in the state to remain competitive in your industry or the state? Yes [] or Ne []
If "Yes," please explain

4.) Applicant's Stockholders, Directors and Officers (or Partners):

Stockholders/Directors/Officers	Name	Address	Business Affiliation/Percentage Ownership
•	CONTRACTOR	The state of the s	29/1 29/1

- 4a.) Has anyone on this list been convicted of a Felony? Yes [] or No [] If "Yes," Explain:
- 4b.) Has anyone on this list filed Bankruptcy? Yes [] or No. If "Yes," Explain:

5.) Applicant's Counsel, Accountant and Bank References:

Applicant's Counsel
Name: Kandall S. Heart Firm: Whiterian, Osterian & Hanna LLP Address: Che Commerce Plaza 19th, floor Albany NY 12206 Phone: 378487-7740
Firm: Whiterian Osterian & Hanna LLP
Address: Che Commerce Plaza 19th, Hoor Albany NV 12206
Phone: 3/8-487-7740
Phone: 578487-7740 E-mail: r bluch @ Woh.Com Applicant's Accountant Name: Liwrence +Jarva 21001
Applicant's Accountant
Name: Liwrence Harvazinii
rum: blavazinski a nilontanje lip
Phone De Malacette 15144
Firm: Harvazinski & Montanye Lift Address 43 British American Blvd Phone: 576-421-7185 E-mail: LW 4067 & aol. Com
Dallan. Liv 400 1 to 001. Cont
Bank Name: Mat Dank Reference(s)
Address: 327 Great Dake Died Albani AN 12203
Phone: 578 11/11, 8741
Bank Name: Mrt Banil Address: 327 Great Oaks Blvd Albany Ny 12203 Phone: 578-464-8241 Website: Www. Mtb. Com
The Bolton

6.) Project Type [C	heck All that Apply]:		
[] Manufacturing [] Wind Farm [Residential	[] Warehousing Commercial [] Recreation	[] R & D Retail [] Adaptive Reuse	[] Tax-Exempt Medical [] Other
[] Small Alternative Energy	[] Distributive Service	[] Tourism Destination Facility	[] Industrial (includes pollution control)
*See CCIDA 1	Eligible Project Policy f	or definitions www.clir	toncountvida.com
If "Other," please exp	lain:		
 Wi phy Is the continuous or th	Il the project's facility by tomers who visit the pro- li the project's facility by visically visit the facility's o If "Yes" to either of be devoted to said under project a critical part numunity? Yes [] the project been endors the local municipal gove	posed facility? Yes [] e used in providing ser ? Yes [] or No [] of the above, how much use? TBb of a larger, planned de No Downtown Re sed by the local munici rming body? Yes No	vices to customers who TBD of the project's facility will velopment in the VITALIZATION INTEGRATION pal chief executive officer TO []
 Is the project located in a former Empire Zone? Yes [] or No [] Is the project located in a Distressed Census track (based on the latest decennial Census)? Yes M or No [] Opportunity Zone. (*Census Track Data Available at www.census.pov) 			es[] or No[] (based on the latest Unity Zone
6b.) Tourism D	Destination Facility Proje	ects:	

- Will the project attract and/or service a significant number of Tourists that come from outside the economic development region (ED Region Includes: Clinton, Essex, Franklin, Hamilton, St. Lawrence, Jefferson and Lewis Counties)? Yes [] or No []
 - o If Yes, attach market analysis that demonstrates said attraction
- Is the project linked to other Tourism Facility Destinations in Clinton County? Yes [] or No []
- Will the project agree to pay sales tax and occupancy taxes related to the operation of the facility? Yes [] or No []

• If not operated by a not-for-profit, will the project agree to pay real estate taxes and/or PILOT payments on said facility? Yes or No []

7.) Scope of Project [Check All that Apply]:

	Construction of a new building
	Acquisition of land
	[] Acquisition of existing building
	[] Renovations to existing building
	[] Construction of addition to existing building
	[] Acquisition of machinery and/or equipment
	[] Installation of machinery and/or equipment
	[] Other (specify)
	7a.) Have you filled out any environmental assessment forms with other government entities? Yes [] or No X (If "yes," attach)
	7b.) Has SEQR already been commenced by a lead government agency? Yes [] or No X (If yes, please attach)
	*Note: All projects involving construction, expansion or modification of an existing site <u>must fill</u> out <u>Part III - SEQR</u> of this application. If SEQR has already been determined and approved by the municipality please attached to Part III of this application.
all of the	plain your proposed project in detail. This description should include explanation of the activities/operations which will occur due to this project; the location (address) as map data of the site; the dimensions of new/modifications building(s) & type of uction. Also attach photo of the site, preliminary plans, sketches and/or floor plans of sed project:
The P	Proposed development includes, 114 +- market rale apartments,
Comme	Line furnished corporate apartments, by Execustry 10,000 3
37.0	Lin furnished corporate apartments, by Execustry 10,000 3. 4. 4- of

f "Yes," Explain:	· ·
f "Yes," Explain: O) On-site Utiliti Type:	es and Providers:
f "Yes," Explain:	•
proposed project?	· ·
proposed project?	
(K) is there now	or does the applicant believe there will be significant opposition to the
	U = U
gul pment	and other building equipment
29vipment,	thruck, furniture, fixtures equipment, HVAC
Maintenacce	equipment - Lawn Mower and other Maintenauce druck, furniture, fixtures equipment, HVAC and other building equipment
inventory of said	equipment when one becomes available.
B(j) List the majo	r equipment to be acquired as part of the project. Please provide a detailed
If yes, attach copy	y or describe participation:
8(i) Is there a pur	chase option or other legal or common control in the project? Yes [] for No []
(If yes, attach a c	ору)
8(h) Is there an e	xisting or proposed lease for this project? Yes [] or No []
(O)	ict Project is located in: City of Platts burgh
8(g) School Distr	ict Project is located in:
8(f) Municipality	ruse of the site and/or building: Farking Lof Project is located in: City of Plattsburgh
	of the site or building: frime Platts burgh, LLC
	sification of the Project: PUD
	addination of the state of the first
	ompletion Date: 2002

Section C: Project Costs

10.) What is the estimated Total Project Cost? (Note: More in-depth information will be required in Part II of this application)

Category	Costs
Land - lelah + 1 5 Building File () () ()	\$ -2250
Bulinment	18 /4, LiD 111
Other	- H) 3 - BU (11) -
	Total: \$ 23 2m

If citing "Other," Explain:

10(a) Both Clinton County and the CCIDA have policies that encourage the use of local labor. Is the applicant willing to consider the use of local labor? Yes or No []

11.) Financing Sources:

11(a) State the sources reasonably necessary for the financing of the Project site, the construction of the proposed buildings and the acquisition and installation of any machinery and equipment necessary or convenient in connection therewith, and including any utilities, access roads or appurtenant facilities, using the following categories:

Description of Sources	Amount
Private Sector Financing	\$ 16.430,000
Public Sector	, , , ,
Federal Programs	\$
State Programs	\$ 4,000,000
Local Programs	\$
Applicant Equity	\$ 2270 000
Other (specify, e.g., tax credits)	
	\$
	\$
	\$
TOTAL AMOUNT OF PROJECT FINANCING SOURCES	\$ 22,700 000

Yes; No If yes, indicate particulars.	y been made by the applicant
A-1	
11(c) Amount of loan requested: \$; Maturity requested: vears,	
11(d) Has a commitment for financing been received as of whom?	this application date, and if so, from
Yes; No X Institution Name:	
11(e) Provide name and telephone number of the person we	may contact.
Name: Todal Curky Phone: 51	8-785-9000 Et. 126
11(f) The percentage of Project costs to be financed from equal the following: /5 %	public sector sources is estimated to
11(g) The total amount estimated to be borrowed to finance \$_16_430_000	the Project is equal to the following:

*Note: Attach an outline of the financing package that is expected to be utilized for this project including dollar amounts and funding sources

Section D: Employment Information

12.) Employment Impact

12(a) Indicate the number of people presently employed at the Project site and the additional number that will be employed at the Project site at the end of the first and second years after the Project has been completed, using the tables below for (1) employees of the Applicant, (2) independent contractors, and (3) employees of independent contractors. (Do not include construction workers). Also indicate below the number of workers employed at the Project site representing newly created positions as opposed to positions relocated from other project sites of the applicant. Such information regarding relocated positions should also indicate whether such positions are relocated from other project sites financed by obligations previously issued by the Agency.

TYPE OF EMPLOYMENT **Employees of Applicant** Professional or Skilled Semi-Skilled Un-Skilled Totals Managerial Present Full Time Present Part Time Present Seasonal First Year Full Time First Year Part Time First Year Seasonal Second Year Full Time Second Year Part Time Second Year Seasonal

		EMPLOYI			
	Professional or Managerial	Skilled	Semi-Skilled	Un-Skilled	Totals
Present Full Time					
Present Part Time					
Present Seasonal	Cleaners, Landson Plumbers, Electro HVAC Techs, et	capers	Show removed		

First Year Full Time	
First Year Part Time	
First Year Seasonal	
Second Year Full Time	
Second Year Part Time	
Second Year Seasonal	

	TYPE OF Employees of In	EMPLOYN dependent (MENT Contractors	TBD	
	Professional or Managerial	Skilled	Semi-Skilled	Un-Skilled	Totals
Present Full Time					
Present Part Time					
Present Seasonal					
First Year Full Time					
First Year Part Time					
First Year Seasonal		İ			
Second Year Full Time					
Second Year Part Time					
Second Year Seasonal					

B. Indicate below (1) the estimated salary and fringe benefit averages or ranges and (2) the estimated number of employees residing in the North Country Economic Development Region for all the jobs at the Project site, both retained and created, listed in the tables described in subsection A above for each of the categories of positions listed in the chart below.

	RELATED EMPLOYMENT INFORMATION Professional or			
	Managerial	Skilled	Semi-Skilled	Un-Skilled
Estimated Salary and Fringe Benefit Averages or Ranges				
Estimated Number of Employees Residing in the North Country Economic Development Region ¹				

C. Please describe the projected timeframe for the creation of any new jobs with respect to the undertaking of the Project:

Site Manager, Leasing assistant Maintenance fechnicians, and Seasonal Maintenance. All positions will begin in year 1 of project (2021).

* FTE: Any combination of (2) two or more part-time jobs that when combined together, constitute the equivalent of a job of at least 35 hours per week.

¹ The North Country Economic Development Region consists of the following counties: Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, and St. Lawrence.

Section E: Representations and Certification by Applicant [Indextormal content of the Applicant of the Appl

Application; that he/she has read the foregoing Application and knows the content thereof, that the same is true to his/her knowledge.

Deponent further says that the reason this verification is made by the deponent and not by the Applicant is because the said Applicant is a legal entity - corporation/partnership/limited liability company - as opposed to an actual person. The grounds of the deponent's belief relative to all matters in said Application which are not upon his/her own personal knowledge are investigations which deponent has caused to be made concerning the subject matter of the Application as well as acquired by the deponent in the course of his/her duties, as an officer and from the books and papers of the Applicant.

On behalf of said Applicant, deponent acknowledges and agrees that the Applicant shall be and is responsible for all costs incurred by the County of Clinton Industrial Development Agency (hereinafter referred to as the "Agency") acting on behalf of the attached application whether or not the application, the project it describes, the attendant negotiations and financial assistance is carried to successful conclusion. If, for any reason whatsoever, the Applicant fails to conclude or consummate necessary negotiations or fails to act within a reasonable or specified period of time to take reasonable, proper, or requested action or withdraws, abandons, cancels, or neglects that application (or if in cases of bonds the Agency or the Applicant are unable to find buyers willing to purchase the total bond issue requested), then, and in that event, upon presentation of invoice, the Applicant shall pay to the Agency, its agents or assigns all actual costs involved in conduct of the application, up to that date and time, including fees of Agency counsel. A nonrefundable filing fee of \$1,500 is required with this application, of which, \$750 will be applied to the project closing costs (Make check payable to: County of Clinton IDA). Upon successful closing of the transaction and/or sale of the required bond issue, the Applicant shall pay to the Agency an administrative fee set by the Agency not to exceed an amount equal to .75% of the total benefited transaction. The cost incurred by the Agency and paid by the Applicant, including the Agency's counsel and the administrative fee, may be considered as a cost of the project and included as part of the resultant transaction. The Applicant should also be aware that the Applicant is responsible for all fees and legal costs incurred by the Agency for re-conveyance of titles at the end of the project. The Agency reserves the right to visit the project site on an annual basis during the benefit period.

Arence Financial Assistance Required for Project. The Project would not be undertaken but for the Financial Assistance provided by the Agency or, if the Project could be undertaken without the Financial Assistance provided by the Agency, then the Project should be undertaken by the Agency for the following reasons:

Relocation or Abandonment . The provisions of subdivision one of Section 862 of the General Municipal Law will not be violated if Financial Assistance is provided for the Project.

Compliance with Article 18-A of the New York General Municipal Law. The applicant confirms and hereby acknowledges that as of the date of this application, the applicant is in substantial complaince with all provisions of

Article 18-A of the New York General Munucipal Law, including, but not not limited to, the provision of Section 859-a and Section 862(1) thereof.

Compliance with Federal. State, and Local Laws. The applicant is in substantial compliance with applicable local, state, and federal tax, worker protection, and environmental laws, rules, and regulations.

False or Misleading Information. The applicant understands that the submission of any knowingly false or knowingly misleading information may lead to the immediate termination of any Financial Assistance and the reimbursement of an amount equal to all or part of any tax exemptions claimed by reason of Agency involvement in the Project.

Absence of Conflicts of Interest. The applicant acknowledges that the members, officers and employees of the Agency are listed on the Agency's website. No member, officer or employee of the Agency has an interest, whether direct or indirect, in any transaction contemplated by this Application, except as hereinafter described:

Additional Information. Additional information regarding the requirements noted in this Application and other requirements of the Agency is included the Agency's Policy Manual which can be accessed at http://www.clintoncountyida.com/.

I affirm under penalty of perjury that all statements made on this application are true, accurate and complete to the best of my knowledge.

(CEO/President of Company)

NOTARY

Sworn to before me this

SHERRY A. GRAVES

Notary Public. State of New York No. 01GR6160397 **Qualified in Albany County** Commission Expires June 27, 2019

Note to Applicant:

The 2013 New York State Budget, enacted on March 28, 2013, established new recordkeeping, reporting, and recapture requirements for industrial development agency projects that receive New York State ("NYS") sales tax exemptions, including projects granted assistance by County of Clinton Industrial Development Agency ("CCIDA").

These new NYS sales tax recording and reporting requirements for industrial development agency projects include the following requirements:

- CCIDA must keep records of the amount of sales tax benefits provided to each project and make those records available to NYS upon request.
- CCIDA must report to NYS, within 30 days after providing financial assistance to a
 particular project, the amount of sales tax benefits expected to be provided to such
 project.
- CCIDA must post on the internet and make available without charge copies of its resolutions and project agreements.

The legislation now requires that CCIDA to recapture NYS sales tax benefits where:

- 1. The project is not entitled to receive those benefits;
- The exemptions exceed the amount authorized by CCIDA, or are claimed for unauthorized property or services; or
- The project operator failed to use property or services in the manner required by its agreements with CCIDA.

What this means for CCIDA Projects:

- Companies requesting a sales tax exemption from CCIDA must include in their
 application the value of the savings they anticipate receiving. Note that the new
 regulations require that CCIDA must recapture any benefit that exceeds the amount listed
 in a company's application. Accordingly, please ensure that you provide a realistic
 estimate of the sales tax exemptions which you are requesting.
- Projects subject to recapture must remit payment within 20 days of a request from CCIDA.
- All project agreements and resolutions will now be publicly available on CClDA's website.
- CCIDA's policy has always been to allow project operators to request certain information
 be redacted if the project can demonstrate that its release would result in substantial harm
 to the project's competitive position.

^{*}Note: Per the CCIDA UTEP, all Project receiving sales tax henefits are required to submit their ST-340s or risk losing said benefit.

PART II: COST BENEFIT ANALYSIS

Please answer all questions either by filling in blanks or by attachment

SECTION F - FINANCING STRUCTURE:

1. Tax-Exempt Financing Requested [Check	all that Apply]
	Straight Lease Transaction
	Tax-Exempt Bonds
	Sales Tax Exemption Until completion date
	Mortgage Tax Abatement
	Real Property Tax Abatement/PILOT
	Other - Explain:
2. Based on the CCIDA's UTEP PILOT methodology used by the applicant to determ	Scoring Criteria (see attachment C); indicate the
project is engine for (if applicable):	nine the Type of real property tax abatement the III [] Deviation ((check one))
Type I[] Type II[] Type Describe:	

	SEE ATTACHED
A. Amount of Bonds Sought:	\$,
B. Value of Sales Tax Exemption Sought	\$
C. Value of Real Property Tax Exemption Sought	
	\$
D. Value of Mortgage Recording Tax	
Exemption Sought (Clinton County MRT = 1%; as of 9/1/13)	\$

SECTION H - PROJECTED PROJECT INVESTMENT:

٩.		Land-Related Costs	
	1.	Land acquisition	\$
2	2.	Site preparation	\$
3	3.	Landscaping	\$
4	4.	Utilities and infrastructure development	\$
:	5.	Access roads and parking development	\$
(6.	Other land-related costs (describe)	\$

Durkee Street Development Project

Pilot	Year/Tax Year
	Year 1/2020
	Year 2/2021
	Year 3/2022
	Year 4/2023
	Year 5/2024
	Year 6/2025
	Year 7/2026
	Year 8/2027
	Year 9/2028
	Year 10/2029
	Year 11/2030
	Year 12/2031
	Year 13/2032
	Year 14/2033
	Year 15/2034
	Year 16/2035
	Year 17/2036
	Year 18/2037
	Year 19/2038
	Year 20/2039
	TOTAL

Prime Proposed PILOT
\$0
\$0
\$0
\$125,400
\$125,400
\$145,400
\$145,400
\$145,400
\$145,400
\$145,400
\$178,200
\$178,200
\$178,200
\$178,200
\$178,200
\$201,000
\$201,000
\$201,000
\$201,000
\$201,000
\$2,873,800

Below are the terms we proposed for the PILOT for this project. IDA will also provide an exemption from the mortgage recording tax for this project as well as an exemption on state and local sales tax on building materials. The PILOT will provide for no payments for 3 years from date of issuance of a Certificate of Occupancy. In years 4-10, the PILOT payment will be \$1,100 per apartment before increasing to \$1,300 per apartment for years to 11 to 15 and \$1,500 per unit in years 16 to 20. The ground floor retail space will be tax exempt for five years as an an incentive to attract retail users followed by a payment of \$2 per square foot for years 6 to 10 and \$3 per square foot in years 11 to 20.

Plean See page 21 B. **Building-Related Costs** 1. Acquisition of existing structures 2. Renovation of existing structures 3. New construction costs 4. Electrical systems \$ 5. Heating, ventilation and air conditioning 6. Plumbing 7. Other building-related costs (describe) \$ Machinery and Equipment Costs C. 1. Production and process equipment 2. Packaging equipment 3. Warehousing equipment 4. Installation costs for various equipment 5. Other equipment-related costs (describe) D. Furniture and Fixture Costs 1. Office furniture \$ 2. Office equipment \$ 3. Computers 4. Other furniture-related costs (describe)

P	W. U. G. V. G.	Please	see	page.	21
E.	Working Capital Costs			. 0	
1.	Operation costs	\$			
2.	Production costs	\$			
3.	Raw materials	\$			
4.	Debt service	\$			
5.	Relocation costs	\$			
6.	Skills training	\$			
7.	Other working capital-related costs (describe)	\$			
F.	Professional Service Costs				-
1.	Architecture and engineering	\$			
2.	Accounting/legal	\$			
3.	Other service-related costs (describe)	\$			
G.	Other Costs				
1.	Mortgage Amount not included in above costs	\$			
2.		\$			

H.	Summary of Expenditures	
1.	Total Land Related Costs	\$ 2,250,000
2.	Total Building Related Costs	\$ 16 000,000
3.	Total Machinery and Equipment Costs	- \$
4.	Total Furniture and Fixture Costs	\$ 200,000
5.	Total Working Capital Costs	\$ 250.000
6.	Total Professional Service Costs	\$ 2.585,000
7.	Total Other Costs (Interest Reserve)	\$ 1,415,000
	TOTAL PROJECT (COSTS \$ 22 700,000
i. P	SECTION I - PROJECTED CONSTRUCTION lease provide estimates of total construction jobs a	
Year	Construction Jobs	Construction Jobs
	(Annual wages and benefits \$40,000 and under)	(Annual wages and benefits over \$40,000)
Curren	at Year	
Year 1		
Year 2		
Year 3		
Year 4		
Year 5		

Please provide estimates of total annual wages and benefits of total construction jobs at the Project:

Year	Total Annual Wages and	Estimated Additional
	Benefits	NYS Income Tax
Current Year	\$	
Year 1	\$	\$
Year 2	\$	\$
Year 3	\$ 	\$
Year 4	\$	\$
Year 5	\$	\$

SECTION J - PROJECTED PERMANENT EMPLOYMENT IMPACT:

1. Please provide estimates of total existing permanent jobs (FTE) to be preserved or retained as a result of the Project: FTE: Any combination of (2) two or more part-time jobs that when combined together, constitute the equivalent of a job of at least 35 hours per week.

Year	Existing Jobs	Existing Jobs
	(Annual wages and benefits \$40,000 and under)	(Annual wages and benefits over \$40,000)
Current Year		
Year 1		
Year 2	1	
Year 3		
Year 4		
Year 5		

2. Please provide estimates of total new permanent jobs (FTE) to be created at the Project:

Year New Jobs A New Jobs

(Annual wages and benefits \$40,000 and under)

Year 1

Year 2

Year 3

Year 5

3. Please provide estimates of total annual wages and benefits of total permanent construction jobs at the Project:

Year		Total Annual Wages and Benefits	Estimated Additional
-			NYS Income Tax
Current Year	\$	\$	
Year 1	\$	\$	
Year 2	\$	<u> </u>	
Year 3	\$	\$	
Year 4	\$	\$	
Year 5	\$	\$	

37 7 3 01 111	Unknown at this til	ne
New Job Skills	Number of Positions Created	Wage Rate
	_	

SECTION K - PROJECTED OPERATING IMPACT:

1. Please provide estimates for the impact of Project operating purchases and sales:

	_	•	- 1
Additional Purchases (1st year following project completion)			
			\$
Additional Sales Tax Paid on			
Additional Purchases			
			\$
Estimated Additional Sales (1st full year			
following project completion			
			\$
Estimated Additional Sales Tax to be			
collected on additional sales (1st full			
year following project completion)			\$

2. Please provide estimates for impacts of other economic benefits expected to be produced as a result of the Project not mentioned in this application:

Provide Market rate housing in the downtown area where 114 New households will sprind their disposable income engaging with downtown retailers. Also providing opportunities for additional retail loffice Commercial businesses to be located downtown.

CBA QUESTIONNAIRE CERTIFICATION

I certify that I have prepared the responses provided in this Questionnaire.

I affirm under penalty of perjury that all statements made in this Questionnaire are true, accurate and complete to the best of my knowledge.

I understand that the foregoing information and attached documentation will be relied upon, and constitute inducement for, the Agency in providing financial assistance to the Project. I certify that I am familiar with the Project and am authorized by the Company to provide the foregoing information, and such information is true and complete to the best of my knowledge. I further agree that I will advise the Agency of any changes in such information, and will answer any further questions regarding the Project prior to the closing.

Date Signed: Morch 72, 2019.

Name of Person Completing Project Questionnaire on behalf of the Company.

Name: Todo Carley

Title: Member

Phone Number: 518 755-9000 x126

Signature:

APPLICATION ATTACHMENT A:

Acknowledgements and Yearly Filings

As a condition to issuing financial assistance to the applicant the County of Clinton Industrial Development Agency is required by the New York State Comptroller's office to obtain the following supplementary information <u>yearly</u> for the duration of the transaction:

- 1. Outstanding balance at beginning and end of year and principal payments made during year.
- 2. The current interest rate for bonds (for adjustable rate bonds the rate at the end of the year is needed).
- 3. Current year tax exemptions for county, local (towns) and school taxes.
- 4. PILOT (Payment in lieu of taxes) payments made each year to county, local and school taxing authorities.
- Documentation and affidavits regarding the use of local construction workers in the construction phase of the Project. See Use of Local Labor Policy and Attachment D of this application.
- Once project is authorized, report the number of full-time, part-time and seasonal workers employed in terms of FTE (as defined in this application).
- Submit NY-45 Form (with employee identification blacked-out) showing 4Q monthly data regarding salary and employment levels. Also include an average salary.

In addition to the above, in reporting the first year the CCIDA need:

- 1. An amortization schedule showing the planned principal reduction each year for the life of the issue.
- 2. The amount exempted for:
 - (a) sales tax
 - (b) mortgage recording tax
- 3. Each year of construction Sale tax and documents (ST-60, ST-340, ST-123, etc.).

This information is required by January 31st of each succeeding year and shall be submitted in writing to the County of Clinton Industrial Development Agency, 190 Banker Road, Suite 500, Plattsburgh, NY 12901. (Fax: 518-562-2232)

We have reviewed, understand and will comply with the above, as required by the New York State Comptroller's Office.

Name: Tops Curles

Title: Membe

Date: 3/22/19

County Of Clinton IDA

and

Clinton County Capital Resource Corporation Fee Schedule:

Adopted: 5/13/13 Revised 3/21/16 Revised 2/13/17

Туре	Cost	Description
Application Fee	\$1500	The Agency or Corporation will charge a nonrefundable administrative application fee for finance transactions equal to \$1500 upon submission of an application by a project. \$750 is a non-refundable administrative fee. The remaining \$750 will be applied to the project's closing costs.
Fee Issuances for Bonds, Refinancing or Straight Lease Transactions	.75 of 1%	The Agency or Corporation will charge said fee on the total benefited project costs. Such fee shall be payable upon the successful conclusion of the sale of obligations (bonds) or upon the execution and delivery of the documents providing financial assistance (straight lease not involving bonds). Fees shall be applied towards administrative costs to the Agency or Corporation and are non-refundable.
Modification/Amendment Transactions Fees	\$500	The Agency or Corporation will charge a nonrefundable modification/amendment transaction fee per instance (post-closing) equal to \$500 upon the submission of a letter to the Agency or Corporation explaining in detail the requested action to modify or amend existing documents previously executed by the Agency or Corporation. Fees shall be applied towards administrative costs to the Agency or Corporation and are non-refundable.
Reconveyance of a Straight Lease Fees Not Involving New Financial Assistance	\$500	The Agency or Corporation will charge a nonrefundable reconveyance administrative fee for straight lease transactions. The project is responsible for paying all legal costs and/or other third party costs incurred by the Agency or Corporation on behalf of the project. Fees shall be applied towards administrative costs to the Agency or Corporation and are non-refundable
Special Meeting Fee	\$500	The Agency or Corporation will charge a nonrefundable administrative fee for a special meeting of the IDA or CRC held at the project's request.
Legal Fees	Varies	The project is responsible for paying all legal costs and/or other third party costs incurred by the Agency or Corporation on behalf of the project. Fees shall be applied towards administrative costs to the Agency or Corporation and are non-refundable.

^{*}The Agency Board reserves the right to determine and impose other administrative fees on Agency projects in consideration for financial assistance being granted by the Agency and/or the costs incurred by the Agency. The Agency may provide for a different application fee and/or a different administrative fee for a particular project by resolution duly adopted by the Agency Board.

APPLICATION ATTACHMENT D

CONSTRUCTION EMPLOYMENT AGREEMENT

construction emextension of fir "Project"), that benefiting prequested below estimate of the employment is g	ployment opportunancial assistance of the private entities show as a way to proving the pr	tities for residents of the Agency for L. L. The wide employ New Y wide local construction of construction of construction the Company, its roject, the Company	of Clinton County, it the project which (the "Company") un ork State residents on opportunities. The ion jobs to be creat general contractor, of shall, if requested in names and business	New York and in is the subject of iderstands that it is and agrees to prone Company also add through Agencial through Agencian individual vendo by the Agency, sul	Agency") to promote consideration of the this application (the this application agrees to provide any assistance, whether ors.
	ne lathu entaine for contract those later in the prime	companies co	Contractor: Representative: Mailing Address: Phone: Email:	or if determined: :	
Construction star Construction Phase or Process Dated	(estimated)? Duration of Construction Phase	# to be employed	Construction Phase or Process Name of Applic Printed Name an	Curley-n	# to be employed

Pioneer Bank

Prime Management Lit.C:
621.Columba SI:
621.Columba SI:
621.Columba SI:
720.Columba SI:
720.Co

PAY TO THE ORDER OF

County of Clinton Industrial Development Agency

190 Banker Road, Suite 500 Plattsburgh, NY 12901

\$1,500.00***

03/20/2019

Mae Rex

Q:J

DATE:03/20/2019 CK#:645 TOTAL:\$1,500.00** BANK:prm-operating pioneer(prm-op2) PAYEE:County of Clinton Industrial Development Agency(ccida)

Property Address - Code

Prime Management LLC - prm

Invoice - Date

IDA Application - 03/19/19

Description

IDA Application

1,500.00

1,500.00

Amount

¥.

COUNTY OF CLINTON INDUSTRIAL DEVELOPMENT AGENCY

UNIFORM TAX EXEMPTION POLICY

SECTION 1. PURPOSE AND AUTHORITY. Pursuant to Section 874(4)(a) of Title One of Article 18-A of the General Municipal Law (the "Act"), County of Clinton Industrial Development Agency (the "Agency") is required to establish a uniform tax exemption policy applicable to the provision of any financial assistance of more than one hundred thousand dollars to any project. This uniform tax-exemption policy was adopted pursuant to a resolution enacted by the members of the Agency on March 22, 1995, and modified pursuant to resolutions enacted by the members of the Agency on January 21, 1997, March 29, 1999 and readopted on February 14, 2011.

SECTION 2. DEFINITIONS. All words and terms used herein and defined in the Act shall have the meanings assigned to them in the Act, unless otherwise defined herein or unless the context or use indicates another meaning or intent. The following words and terms used herein shall have the respective meanings set forth below, unless the context or use indicates another meaning or intent:

- (A) "Administrative Fee" shall mean a charge imposed by the Agency to an Applicant or project occupant for the administration of a project.
- (B) "Affected Tax Jurisdiction" means, with respect to a particular project, the County and each Municipality or School District in which such project is located which will fail to receive real property tax payments which would otherwise be due with respect to such project due to a Tax Exemption obtained by reason of the involvement of the Agency in such project, unless the Affected Tax Jurisdictions shall agree in writing to add or subtract additional governmental entities thereto.
- (C) "Agency Fee" shall mean the normal charges imposed by the Agency on an Applicant or a project occupant to compensate the Agency for the Agency's participation in a project. The term "Agency Fee" shall include not only the Agency's normal application fee and the Agency's normal Administrative Fee, but also may include (1) reimbursement of the Agency's expenses, (2) rent imposed by the Agency for use of the property of the Agency, and (3) other similar charges imposed by the Agency.
 - (D) "Applicant" shall mean an applicant for financial assistance.
- (E) "Applicant Project" shall mean a project which is undertaken by the Agency for the benefit of an Applicant which either (1) has been or will be financed by the issuance by the Agency of bonds, notes or other evidences of indebtedness with respect thereto or (2) is a straight lease transaction which the Agency has determined to undertake pursuant to the Lease Policy.
 - (F) "County" shall mean the County of Clinton.

- (G) "Lease Policy" shall mean the lease policy approved by resolution of the members of the Agency on January 21, 1997, pursuant to which the Agency set forth the circumstances under which the Agency will consider undertaking a straight-lease transaction.
 - (H) "Municipality" shall mean each city, town and village located within the County.
- (I) "Non-Applicant Project" means a project which is undertaken by the Agency for the benefit of the Agency, and shall not include an Applicant Project.
- (J) "Pilot" or "Payment in Lieu of Tax" shall mean any payment made to the Agency or an Affected Tax Jurisdiction equal to all or a portion of the real property taxes or other taxes which would have been levied by or on behalf of an Affected Tax Jurisdiction with respect to a project but for Tax Exemption obtained by reason of the involvement of the Agency in such project, but such term shall not include Agency Fees.
 - (K) "School District" shall mean each school district located within the County.
- (L) "Tax Exemption" shall mean any financial assistance granted to a project which is based upon all or a portion of the taxes which would otherwise be levied and assessed against a project but for the involvement of the Agency in such project.
- (M) "Uniform Tax Exemption Worksheet" means the Uniform Tax Exemption Work Sheet, a copy of which is attached to this Uniform Tax Exemption Policy as Exhibit A hereto.
- SECTION 3. GENERAL PROVISIONS. (A) <u>General Policy</u>. The general policy of the Agency is to grant Tax Exemption as hereinafter set forth to (1) any Applicant Project and (2) any Non-Applicant Project.
- (B) Exceptions. The Agency reserves the right to deviate from such policy in special circumstances. In determining whether special circumstances exist to justify such a deviation, the Agency may consider the magnitude of the deviation sought and the factors which might make the project unusual, which factors might include but not be limited to the following factors: (1) the magnitude and/or importance of any permanent private sector job creation and/or retention related to the proposed project in question; (2) whether the Affected Tax Jurisdictions will be reimbursed by the project occupant if such project does not fulfill the purposes for which Tax Exemption was granted; (3) the impact of such project on existing and proposed businesses and/or economic development projects; (4) the amount of private sector investment generated or likely to be generated by such project; (5) demonstrated public support for such project; (6) the estimated value of the Tax Exemptions requested; and (7) the extent to which such project will provide needed services and/or revenues to the Affected Tax Jurisdictions. In addition, the Agency may consider the other factors outlined in Section 874(4)(a) of the Act.

- (C) <u>Application</u>. No request for a Tax Exemption relating to an Applicant Project shall be considered by the Agency unless an application (with a cost/benefit analysis) and environmental assessment form are filed with the Agency on the forms prescribed by the Agency pursuant to the rules and regulations of the Agency. Such application shall contain the information requested by the Agency, including a description of the proposed project and of each Tax Exemption sought with respect to the project, the estimated value of each Tax Exemption sought with respect to the project, the estimated date of completion of the project, and whether such financial assistance is consistent with this part.
- (D) Notice to Affected Tax Jurisdictions. No request for approval of an Applicant Project by the Agency which involves the issuance of bonds, notes or other evidences of indebtedness with respect thereto or any other application for Tax Exemptions or other financial assistance which may aggregate more than \$100,000, or which involves a proposed deviation from the provisions of this Uniform Tax Exemption Policy, shall be given final approval by the Agency unless and until (1) the Agency has sent written notice of said request to each Affected Tax Jurisdiction, and (2) has given each Affected Tax Jurisdiction a reasonable opportunity, both in writing and in person, to be heard by the Agency with respect to the proposed request. With respect to Non-Applicant Projects, the Agency shall comply with the provisions of Section 859-a of the Act, to the extent applicable. In addition, the Agency shall comply with all other notice provisions contained in the Act relative thereto.

SECTION 4. SALES AND USE TAX EXEMPTION. (A) General. State law provides that purchases of tangible personal property by the Agency or by an agent of the Agency, and purchases of tangible personal property by a contractor for incorporation into or improving, maintaining, servicing or repairing real property of the Agency, are exempt from sales and use taxes imposed pursuant to Article 28 of the Tax Law. The Agency has a general policy of abating sales and use taxes applicable (1) only to the initial acquisition, construction and/or equipping of an Applicant Project and (2) to any Non-Applicant Project. The Agency has no requirement for imposing a payment in lieu of tax arising from the exemption of an Applicant Project from sales and/or use taxes applicable to the initial acquisition, construction and/or equipping of such project, except (1) as described in subsection (E) below or (2) in the circumstance where (a) an Applicant Project is offered sales and use tax exemption on the condition that a certain event (such as the issuance of bonds by the Agency with respect to the project) occur by a certain date and (b) such event does not occur, in which case the Agency may require that the Applicant make payments in lieu of sales and use taxes equal to the amount of tax which otherwise may have been due to the New York State Department of Taxation and Finance.

- (B) <u>Period of Exemption</u>. Except as set forth in subsection (A) above, the period of time for which a sales and use tax exemption shall be effective (the "Tax Exemption Period") shall be determined as follows:
 - (1) <u>General</u>. Unless otherwise determined by the Agency, the sales and use tax exemption for an Applicant Project shall be for the Tax Exemption Period commencing with

the issuance by the Agency of bonds, notes or other evidences of indebtedness with respect to such project, or the execution and delivery by the Agency of a lease agreement relating to such project pursuant to the Lease Policy, and ending on the date of completion of the project. The Tax Exemption Period for a Non-Applicant Project shall extend for such period of time as the Agency shall determine.

- (2) <u>Early Commencement</u>. The Tax Exemption Period for an Applicant Project may, at the discretion of the Agency, commence earlier than the date of issuance by the Agency of the Agency's bonds, notes or other evidences of indebtedness relating to the project, provided that (a) the Agency has complied with the requirements of Section 859-a of the Act, (b) the Agency thereafter adopts a resolution determining to commence such period earlier, (c) the Applicant agrees to the conditions of such resolution and supplies to the Agency the materials required to be supplied to the Agency thereunder, and (d) the Chairman or Executive Director of the Agency acknowledges satisfaction of all conditions to the granting of such Tax Exemption set forth in such resolution.
- (3) Normal Termination. The Tax Exemption Period for an Applicant Project will normally end upon the completion of such project. On construction projects, the Agency and the Applicant shall agree on the estimated date of completion of the project, and the sales and use tax exemption shall cease on the earlier of (a) the actual date of completion of the project or (b) the date which is six (6) months after the estimated date of completion of such project. On non-construction projects, the Agency and the Applicant shall agree on the estimated date of completion of the project, and the sales and use tax exemption shall cease on the earlier of (a) the actual date of completion of the project or (b) the date which is three (3) months after the estimated date of completion of the project. If the Agency and the Applicant shall fail to agree on a date for completion of the project, the Agency shall on notice to the Applicant make the determination on the basis of available evidence.
- (4) <u>Later Termination</u>. The Agency, for good cause shown, may adopt a resolution extending the period for completion of the project and/or extending the Tax Exemption Period.
- (C) <u>Items Exempted</u>. The sales and use tax exemption granted by the Agency with respect to an Applicant Project shall normally extend only to the following items acquired during the Tax Exemption Period described in subsection (B) above:
 - (1) improvements to and items incorporated into the real property;
 - (2) tangible personal property, including furniture, furnishings and equipment used to initially equip the project or otherwise forming part of the project, if purchased by the Applicant as agent of the Agency;
 - (3) the rental of tools and other items necessary for the construction and/or equipping of the project, if rented by the Applicant as agent of the Agency; and

- (4) office supplies, fuel and similar items consumed in the process of acquiring, constructing and/or equipping the project, if purchased by the Applicant as agent of the Agency.
- (D) <u>Items Not Exempted</u>. A sales and use tax exemption with respect to an Applicant Project shall not be granted by the Agency for the following:
 - (1) purchases occurring beyond the Tax Exemption Period described in subsection (B) above;
 - (2) repairs, replacements or renovations of the project, unless such repairs, replacements or renovations constitute major capital-type expenses approved by the Agency as a separate project in the manner contemplated by the Act; or
 - (3) operating expenses, unless such operating expenses constitute major capital-type expenses approved by the Agency as a separate project in the manner contemplated by the Act.
- (E) <u>Percentage of Exemption</u>. Unless otherwise determined by resolution of the Agency, the sales and use tax exemption shall be equal to one hundred percent (100%) of the sales and/or use taxes that would have been levied if the project were not exempt by reason of the Agency's involvement in the project. If an exemption of less than one hundred percent (100%) is determined by the Agency to be applicable to a particular Applicant Project, then the Applicant shall be required to pay a Pilot to the Agency equal to the applicable percentage of sales and/or use tax liability not being abated. The Agency shall remit such Pilot, within thirty (30) days of receipt thereof by the Agency, to the Affected Tax Jurisdictions in accordance with Section 874(3) of the Act.
- (F) <u>Confirmation Letter</u>. The final act of granting a sales and/or use tax exemption by the Agency shall be confirmed by the execution by an authorized officer of the Agency of a confirmation letter by the Agency. Such confirmation letter may either be in the form of a letter for the duration of the anticipated construction period relating to the project (where the sales and use tax exemption is permanent, because the Agency is satisfied that any conditions precedent to such sales and use tax exemption, such as the issuance of bonds or the execution of a lease agreement by the Agency, have been satisfied) or a letter having a shorter duration (where such sales and use tax exemption is tentative, because there remain conditions precedent to such sales and use tax exemption which have not been satisfied). Each such confirmation letter shall describe the scope and term of the sales and use tax exemption being granted.
- (G) <u>Required Filings</u>. The New York State Department of Taxation and Finance requires that proper forms and supporting materials be filed with a vendor to establish a purchaser's entitlement to a sales and use tax exemption. For example, TSB-M-87(7) outlines the materials that must be filed to establish entitlement to a sales and use tax exemption as an "agent" of the Agency. It is the

responsibility of the Applicant and/or project occupant to ensure that the proper documentation is filed with each vendor to obtain any sales and use tax exemptions authorized by the Agency.

- (H) Required Reports and Records. Pursuant to Section 874(B) of the Act, the Applicant and/or project occupant is required to annually file with the New York State Department of Taxation and Finance a statement of the value of all sales and use tax exemptions claimed under the Act by the Applicant and/or the project occupant and/or all agents, subcontractors and consultants thereof. The project documents shall require that (1) a copy of such statement will also be filed with the Agency and (2) that the project occupant shall maintain, for a period ending seven (7) years after the last purchase made under the sales and use tax exemption, and make available to the Agency at the request of the Agency, detailed records which shall show the method of calculating the sales and use tax exemption benefit granted by the Agency.
- SECTION 5. MORTGAGE RECORDING TAX EXEMPTION. (A) General. State law provides that mortgages recorded by the Agency are exempt from mortgage recording taxes imposed pursuant to Article 11 of the Tax Law. The Agency has a general policy of abating mortgage recording taxes for the initial financing obtained from the Agency with respect to each project with respect to which the Agency issues debt which will be secured by a mortgage upon real property. In instances where the initial financing commitment provides for a construction financing of the Agency to be replaced by a permanent financing of the Agency immediately upon or shortly after the completion of the project, the Agency's general policy is to abate the mortgage recording tax on both the construction financing and the permanent financing.
- (B) <u>Refinancing</u>. In the event that the Agency retains title to a project, it is the general policy of the Agency to abate mortgage recording taxes on any debt issued by the Agency for the purpose of refinancing prior debt issued by the Agency, and on any modifications, extensions and renewals thereof, so long as the Agency Fees relating to same have been paid. A refinancing of an Applicant Project shall not result in (1) any real property tax exemption beyond the fifteen (15) year period described in Section 7(D)(1) hereof or (2) any additional sales and use tax exemptions with respect to said project.
- (C) <u>Non-Agency Projects</u>. In the event that the Agency does not hold title to a project, it is the policy of the Agency not to join in a mortgage relating to that project and not to abate any mortgage recording taxes relating to that project.
- (D) <u>Non-Agency Financings</u>. Occasionally, a situation will arise where the Agency holds title to a project, the project occupant needs to borrow money for its own purposes (working capital, for example), and the lender will not make the loan to the project occupant without obtaining a fee mortgage as security. In such instances, the policy of the Agency is to consent to the granting of such mortgage and to join in such mortgage, so long as the following conditions are met:

- (1) the documents relating to such proposed mortgage make it clear that the Agency is not liable on the debt, and that any liability of the Agency on the mortgage is limited to the Agency's interest in the project;
- (2) the granting of the mortgage is permitted under any existing documents relating to the project, and any necessary consents relating thereto have been obtained by the project occupant; and
 - (3) the payment of the Agency Fee relating to same.
- (E) <u>Exemption Affidavit</u>. The act of granting a mortgage recording tax exemption by the Agency is confirmed by the execution by an authorized officer of the Agency of an exemption affidavit relating thereto.
- (F) <u>Pilot Payments</u>. If the Agency is a party to a mortgage that is not to be granted a mortgage recording tax exemption by the Agency (a "non-exempt mortgage"), then the Applicant and/or project occupant or other person recording same shall pay the same mortgage recording taxes with respect to same as would have been payable had the Agency not been a party to said mortgage (the "normal mortgage tax"). Such mortgage recording taxes are payable to the County Clerk of the County, who shall in turn distribute same in accordance with law. If for any reason a non-exempt mortgage is to be recorded and the Agency is aware that such non-exempt mortgage may for any reason be recorded without the payment of the normal mortgage tax, then the Agency shall prior to executing such non-exempt mortgage collect a Pilot equal to the normal mortgage tax and remit same within thirty (30) days of receipt by the Agency to the Affected Tax Jurisdictions in accordance with Section 874(3) of the Act.
- SECTION 6. REAL ESTATE TRANSFER TAXES. (A) Real Estate Transfer Tax. Article 31 of the Tax Law provides for the imposition of a tax upon certain real estate transfers. Section 1405(b)(2) of the Tax Law provides that transfers into the Agency are exempt from such tax, and the New York State Department of Taxation and Finance has ruled that transfers of property by the Agency back to the same entity which transferred such property to the Agency are exempt from such tax. The general policy of the Agency is to impose no payment in lieu of tax upon any real estate transfers to or from the Agency.
- (B) Real Property Transfer Gains Tax. Article 31-B of the Tax Law provides for the imposition of a tax upon gains derived from the transfer of certain real estate in New York State. Certain transfers are exempt from such tax. It is the policy of the Agency to comply with the law, and to file the appropriate documentation with the New York State Department of Taxation and Finance to obtain preclearance by that department for any documents transferring real property to or from the Agency.

- (C) <u>Required Filings</u>. It shall be the responsibility of the Applicant and/or project occupant to ensure that all documentation necessary relative to the real estate transfer tax and the real estate transfer gains tax are timely filed with the appropriate officials.
- SECTION 7. REAL ESTATE TAX EXEMPTION. (A) General. Pursuant to Section 874 of the Act and Section 412-a of the Real Property Tax Law, property owned by or under the jurisdiction or supervision or control of the Agency is exempt from general real estate taxes (but not exempt from special assessments and special ad valorem levies). However, it is the general policy of the Agency that, notwithstanding the foregoing, every non-governmental project will be required to enter into a payment in lieu of tax agreement (a "Pilot Agreement"), either separately or as part of the project documents. Such Pilot Agreement shall require payment of Pilot payments in accordance with the provisions set forth below.
- (B) Pilot Requirement. Unless the Applicant and/or project occupant and the Agency shall have entered into a Pilot Agreement acceptable to the Agency, the project documents shall provide that the Agency will not file a New York State Department of Taxation and Finance, Division of Equalization and Assessment Form EA-412-a (an "Exemption Form") with respect to the project, and the project documents shall provide that the Applicant and/or the project occupant shall be required to make Pilot payments in such amounts as would result from taxes being levied on the project by the Affected Tax Jurisdictions if the project were not owned by or under the jurisdiction or supervision or control of the Agency. The project documents shall provide that, if the Agency and the Applicant and/or project occupant have entered into a Pilot Agreement, the terms of the Pilot Agreement shall control the amount of Pilot payments until the expiration or sooner termination of such Pilot Agreement.
- (C) Required Filings. As indicated in subsection (B) above, pursuant to Section 874 of the Act and Section 412-a of the Real Property Tax Law, no real estate tax exemption with respect to a particular project shall be effective until an Exemption Form is filed with the assessor of each Affected Tax Jurisdiction. Once an Exemption Form with respect to a particular project is filed with a particular Affected Tax Jurisdiction, the real property tax exemption for such project does not take effect until (1) a tax status date for such Affected Tax Jurisdiction occurs subsequent to such filing, (2) an assessment roll for such Taxing Jurisdiction is finalized subsequent to such tax status date, (3) such assessment roll becomes the basis for the preparation of a tax roll for such Affected Tax Jurisdiction, and (4) the tax year to which such tax roll relates commences.
- (D) <u>Pilot Agreement</u>. Unless otherwise determined by resolution of the Agency, all Pilot Agreements shall satisfy the following general conditions:
 - (1) <u>Determination of Full Assessment:</u> With respect to a project including new construction, the general policy of the Agency is to take title to (or a leasehold interest in) said project, and to file an Exemption Form providing that the appropriate officer or officers of the respective Affected Tax Jurisdictions in which such project is located (each, an "Assessor") will determine the interim assessments of such project as construction progresses thereon

> (each, an "Interim New Assessment") and a final assessment thereof (the "Final New Assessment") when construction is completed. With respect to a project including existing buildings, the general policy of the Agency is to either avoid taking title to (or a leasehold interest in) such existing buildings, or, if such is not possible, to include the existing assessment on such buildings (the "Existing Assessment", and collectively with the Interim New Assessment, the "Full Assessment", and collectively with the Final New Assessment, the "Final Full Assessment"). Once the Final Full Assessment is fixed, the Final Full Assessment shall be frozen and used as the basis of taxation of the project for the initial period (the "Initial Period") applicable to the project pursuant to paragraph (2) below. During the Initial Period, the Applicant shall pay real estate Pilot payments determined in each tax year as follows: (a) first, determine the assessment of the new construction portion of the project for such tax year (the "Current New Assessment"), which assessment shall be a percentage of the Final New Assessment determined by subtracting the percentage of abatement applicable to such year (as determined pursuant to paragraph (2) below) from 100%; (ii) next, determine the assessment of the project for such tax year (the "Current Pilot Assessment") by adding the Current New Assessment to the Existing Assessment; and (iii) finally, determine the Pilot payment payable to with respect to the project to each Affected Tax Jurisdiction by multiplying the Current Pilot Assessment by the applicable tax rate of the such Affected Tax Jurisdiction. Once the Initial Period has ended, the Applicant will pay real estate Pilot payments determined in each tax year as follows: multiply the Final Full Assessment by the applicable tax rate of the such Affected Tax Jurisdiction.

- (2) <u>Amount of Abatement</u>: Each project shall be scored by the Agency on the basis of the Uniform Tax Exemption Worksheet. Based upon the score achieved by a particular project as determined by the Agency, said project shall be entitled to the following benefits:
 - (a) <u>Category 1:</u> If a project scores 6 points or less, (i) the Initial Period shall be ten years, and (ii) the percentage of exemption in each tax year shall be zero.
 - (B) <u>Category 2:</u> If a project scores more than 6 points but less than 12 points, (i) the Initial Period shall be ten years, and (ii) the percentage of exemption in each tax year shall be as set forth in the following table:

Tax Year	Percentage of Exemption
1	50%
2	45%
3	40%
4	35%
	· ·

5	30%
6	25%
7	20%
8	15%
9	10%
10	5%
11 and thereafter	0%

(B) <u>Category 3:</u> If a project scores 12 points or more, and if the project beneficiary agrees not to contest either the Existing Assessment or the Full New Assessment until at least the sixteenth (16th) tax year, then (i) the Initial Period shall be fifteen years, and (ii) the percentage of exemption in each tax year shall be as set forth in the following table:

Tax Year	Percentage of Exemption
1 to 5	100%
6	50%
7	45%
8	40%
9	35%
10	30%
11	25%
12	20%
13	15%
14	10%
15	5%

16	0%
and thereafter	

(3) Reduction for Failure to Achieve Goals: If the Agency's approval of a particular project is predicated upon achievement by the project of certain minimum goals (such as creating and maintaining certain minimum employment levels), the Pilot Agreement may provide for the benefits provided thereby to the project to be reduced or eliminated if, in the sole judgment of the Agency, the project has failed to fulfill such minimum goals. Except as otherwise provided by resolution of the Agency, all real estate Pilot payments are to be paid to the County Treasurer of Clinton County for distribution to the Affected Tax Jurisdictions. Upon expiration of the Initial Period as aforesaid, the assessment of the project shall revert to a normal assessment (i.e., the project will be assessed as if the project were owned by the Applicant and not by the Agency). Also, any addition to the project shall be assessed normally as aforesaid, unless such addition shall be approved by the Agency as a separate project following notice and a public hearing as described in Section 859-a of the Act. Other than fixing the Final Assessment for the Initial Period as aforesaid, the general policy of the Agency is to not provide the Applicant and/or project occupant with any abatement, other than abatements allowed under the Real Property Tax Law.

- (4) Special District Taxes. As indicated above, the Agency is not exempt from special assessments and special ad valorem levies, and accordingly these amounts are not subject to abatement by reason of ownership of the Project by the Agency. The Pilot Agreement shall make this clear and shall require that all such amounts be directly paid by the Applicant and/or project occupant. However, Applicants and project occupants should be aware that the courts have ruled that an Agency-sponsored project is also eligible to apply for an exemption from special district taxes pursuant to Section 485-b of the Real Property Tax Law. If an Applicant or project occupant desires to obtain an exemption from special district taxes pursuant to said Section 485-b, it is the responsibility of the Applicant and/or project occupant to apply for same at its sole cost and expense.
- (5) <u>Payee</u>. Unless otherwise determined by resolution of the Agency, all Pilot payments payable to an Affected Tax Jurisdiction shall be assessed, billed and collected by the County Treasurer. Pursuant to Section 874(3) of the Act, such Pilot payments shall be remitted to each Affected Tax Jurisdiction within thirty (30) days of receipt.
- (6) Enforcement. An Affected Tax Jurisdiction which has not received a Pilot payment due to it under a Pilot Agreement may exercise its remedies under Section 874(6) of the Act. In addition, such Affected Tax Jurisdiction may petition the Agency to exercise whatever remedies that the Agency may have under the project documents to enforce payment and, if such Affected Tax Jurisdiction indemnifies the Agency and agrees to pay the Agency's costs incurred in connection therewith, the Agency may take action to enforce the Pilot Agreement.
- (E) Real Property Appraisals. Since the policy of the Agency stated in subsection (C)(1) is to base the value of a project for payment in lieu of tax purposes on a valuation of such project performed by the respective Assessors, normally a separate real property appraisal is not required. However, the Agency may require the submission of a real property appraisal if (1) the Assessor of any particular Affected Tax Jurisdiction requires one or (2) if the valuation of the project for payment in lieu of tax purposes is based on a value determined by the Applicant or by someone acting on behalf of the Applicant, rather than by an Assessor of an Affected Tax Jurisdiction or by the Agency. In lieu of an appraisal, the Agency may require that an Applicant submit to the Agency and each Assessor a certified enumeration of all project costs. If the Agency requires the submission of a real property appraisal, such appraisal shall be prepared by an independent MAI certified appraiser acceptable to the Agency.
- SECTION 8. PROCEDURES FOR DEVIATION. (A) General. In the case where the Agency may determine to deviate from the provisions of this Uniform Tax Exemption Policy pursuant to the provisions of Section 3(B) hereof, the Agency may deviate from the provisions hereof, provided that:
 - (1) the Agency adopts a resolution (a) setting forth, with respect to the proposed deviation, the amount of the proposed Tax Exemption, the amount and nature of the proposed Pilot, the duration of the proposed Tax Exemption and of the proposed Pilot and whether or not

a Tax Exemption of any kind shall be granted, (b) indicating the reasons for the proposed deviation and (c) imposing such terms and conditions thereon as the Agency shall deem just and proper; and

- (2) as provided in Section 3(C) hereof, the Agency shall give prior written notice of the proposed deviation from this Uniform Tax Exemption Policy to each Affected Tax Jurisdiction, setting forth therein a general description of the proposed deviation and the reasons therefor. Whenever possible, the Agency shall give such notice to each Affected Tax Jurisdiction at least thirty (30) days prior to the consideration by the Agency of the final resolution determining to proceed with such proposed deviation from this Uniform Tax Exemption Policy.
- (B) <u>Agency-Owned Projects</u>. Where a project (1) constitutes a Non-Applicant Project, (2) is otherwise owned and operated by the Agency or (3) has been acquired by the Agency for its own account after a failure of a project occupant, such project may at the option of the Agency be exempted by the Agency from all taxes, to the extent provided in Section 874(1) and (2) of the Act.
- (C) <u>Unusual Projects</u>. Where a project is unusual in nature and requires special considerations related to its successful operations as demonstrated by appropriate evidence presented to the Agency, the Agency may consider the granting of a deviation from the established exemption policy in accordance with the procedures provided in Section 3(B) and Section 8(A) hereof. The Agency may authorize a minimum payment in lieu of tax or such other arrangement as may be appropriate.

SECTION 9. ANNUAL REVIEW OF POLICY. At least annually, the Agency shall review this tax exemption policy to determine relevance, compliance with law, effectiveness, and shall adopt any modifications or changes that it shall deem appropriate. The Executive Director shall be responsible for conducting an annual review of this tax exemption policy and for an evaluation of the internal control structure established to ensure compliance with the tax exemption policy, which review shall be submitted to the Agency for consideration by the Agency.

EXHIBIT A

UNIFORM TAX EXEMPTION WORKSHEET

IJ	LEP	$\mathbf{E}\mathbf{X}$	HI	RI'	ТΑ

CCIDA Uniform Tax Exemption Revision

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Variable /	Permanent	% of	# of	Local Business Impact	Educational	Value of Real	Totals:
	Payroll	Average	Potential	and/or	Benefits	Property	
	Level in	County	Spin-off	Community Investment			
	Terms of #	Wage	Jobs	-	Reviewing		
	of Jobs	/h =		Reviewing	appropriate		
	Created	(\$37,493 in		appropriate	levels/year		
		2009)		level yearly			
/ Threshold	T .1	4 . 1 7.70/	T .1		Y 1 1 1		
Level 1	Less than	At least 75%	Less than	Need for local industry/services	Low level such	Φ 5 001 Φ1 5 106	
(4 • 0	100 jobs	for <u>new</u> jobs	100	is low e.g. insurance, banking,	as school visits/	\$500k-\$1.5x10 ⁶	
(1 point)	within 5		verifiable	trucking	school-to-work		
	years		Spin off jobs	Dalama ta Chamban			
	100 200		100.00	Belong to Chamber	~· · ·		
Level 2	100 - 300	At least	100-300	Use local industrial suppliers &	Limited	Φ1.7.7.0	
	jobs	100% for	verifiable	services/raw materials/parts	Support/	\$1.5 - 5.0	
		<u>new</u> jobs	Spin off jobs	Or	Learn to Earn	x 10 ⁶	
(2 points)				Reuse abandoned facility	Internships		
					underwrite		
					facilities or		
					programs	** • • • • • • • • • • • • • • • • • •	
Level 3	300+ jobs	At least	300+	Demonstrate synergy with local	Major support	$$5.0 \times 10^6 +$	
	within 5	150% for	verifiable	services, suppliers and	to schools and		
	years	<u>new</u> jobs	Spin off jobs	manufacturers	colleges		
				Or	Scholarships		
(3 points)				Reclaim brownfield/adaptive	(NMSQT);		
				re-use of facilities.	internships;		
					sponsorships underwrite		
Totals:					faculty \$10,000		
i otais:							

Scoring

6 points or less - Category 1 benefits

7-11 points - Category 2 benefits

12 points or more - Category 3 benefits

COUNTY OF CLINTON INDUSTRIAL DEVELOPMENT AGENCY (THE "AGENCY")

UNIFORM CRITERIA FOR THE EVALUATION OF PROJECTS POLICY

- SECTION 1. PURPOSE AND JUSTIFICATION. (A) The purpose of this Policy is to provide the uniform criteria to be utilized by County of Clinton Industrial Development Agency (the "Agency") to evaluate and select projects from each category of eligible projects for which the Agency can provide financial assistance.
- (B) The Agency was created pursuant to Section 895-f of Title 2 of Article 18-A of the General Municipal Law and Title 1 of Article 18-A the General Municipal Law (collectively, the "Act") for the purpose of promoting employment opportunities for, and the general prosperity and economic welfare of, residents of the County and the State of New York (the "State"). Under the Act, the Agency was created in order to advance the job opportunities, health, general prosperity, and economic welfare of the residents of Clinton County, New York (the "County") and of the State.
- (C) Chapter 563 of the Laws of 2015, effective June 15, 2016 (the "Reform Legislation"), requires each industrial development agency to adopt an assessment of all material information included in connection with an application for financial assistance, as necessary to afford a reasonable basis for the decision by an industrial development agency to provide financial assistance for a project.
- SECTION 2. ELIGIBLE PROJECT CATEGORIES. (A) Pursuant to the Agency's Eligible Project Policy, the Agency may provide financial assistance to the following categories of projects: (1) Industrial Project, (2) Warehousing Project, (3) Research Project, (4) Tax-Exempt Project, (5) Small Alternate Energy Projects, (6) Wind Farm Projects (collectively with Small Alternate Energy Projects, the "Energy Projects"), and (7) Commercial Projects.
- SECTION 3. UNIFORM CRITERIA. (A) The following general uniform criteria will apply to all categories of eligible projects: (1) Extent to which a project will create or retain jobs; (2) Estimated value of tax exemptions; (3) Amount of private sector investment; (4) Likelihood of project being accomplished in a timely fashion; (5) Extent of new revenue provided to local taxing jurisdictions; (6) Any additional public benefits; and (7) Local labor construction jobs.
- (B) The following additional criteria apply to Warehousing, Research, and Energy Projects: (1) Wage rates (above median for County); (2) In County Purchases (% of purchases from local vendors); (3) Supports local businesses or clusters; (4) Retention or flight risk; and (5) Provides capacity to meet County demand or shortage.
- (C) The following additional criteria apply to Commercial Projects: (1) Regional wealth creation (% of sales/customers outside of the County); (2) Located in a highly distressed census tract; (3) Alignment with local planning and development efforts; (4) Promotes walkable community areas; (5) Elimination or reduction in blight; (6) Proximity/support of regional tourism attractions/facilities; (7) Local or County official support; (8) Building or site has historic designation; and (9) Provides brownfield remediation.
- SECTION 4: REMOVAL OR ABANDONMENT. If the proposed project involves the removal or abandonment of a facility or plant within the state, the Agency will notify the chief executive officer or officers of the municipality or municipalities in which the facility or plant was located.

SECTION 5. EFFECTIVE DATE. This policy shall be effective with respect to any project undertaken by the Agency after the date of approval of this Policy.

Appendix E: Historic and Cultural Information

PHASE 1A ARCHAEOLOGICAL SURVEY

PROPOSED MIXED USE DEVELOPMENT DURKEE STREET CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK

Prepared for

McFarland-Johnson, Inc. 80 Railroad Place, Suite 402 Saratoga Springs, New York 12866

Prepared by

Curtin Archaeological Consulting, Inc. 61 Rowland Street Ballston Spa, New York 12020 (518) 884-7105

Report Authors:

Edward V. Curtin, Ph.D. Kirsten Dymond, B.A.

June 2019

MANAGEMENT SUMMARY

SHPO Project Review Number:

Involved State and Federal Agencies: SEQR, City of Plattsburgh

Phase of Survey: Phase 1A

Location Information

Location: Parking area on Durkee Street between Broad and Bridge streets and along the

Saranac River

Minor Civil Division: Plattsburgh

County: Clinton

Survey Area

Length: 172 m (566 ft) Width: 88 m (289 ft)

Number of Acres Surveyed: 3.2 ac (1.3 ha)

USGS 7.5 Minute Quadrangle Map: Plattsburgh

Archaeological Survey Overview

Number and Interval of Shovel Tests: n/a

Number and Size of Units: n/a Width of Plowed Strips: n/a

Surface Survey Transect Interval: n/a

Results of Archaeological Survey

Number and Name of Prehistoric Sites: n/a Number and Name of Historic Sites: n/a

Number and Name of Sites Recommended for Phase II/Avoidance: n/a

Results of Architectural Survey

Number of buildings/structures/cemeteries within Project Area: 0 Number of buildings/structures/cemeteries adjacent to Project Area: 0

Number of previously determined NR Listed or Eligible

buildings/structures/cemeteries/districts: 6

Report Authors: Edward V. Curtin, Ph.D. and Kirsten Dymond, B.A.

Report Date: June 2019

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INTRODUCTION

Project Location and Description

Curtin Archaeological Consulting, Inc. has been retained by McFarland-Johnson, Inc. to conduct a Phase 1A archaeological survey for the proposed mixed-use development in the parking lot at the southwest corner of Durkee and Bridge Streets, City of Plattsburgh, Clinton County, New York. The general project location is shown in Figure 1. The Area of Potential Effect (APE) is shown in Figures 2-4.

The Phase 1A archaeological survey addendum was conducted to meet the procedures and information requirements of all federal, state and local regulatory processes. The report content and format follow the standards adopted by the New York State Archaeological Council (NYAC) and recommended by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP).

Purpose and Scope of Work

The purpose of this Phase 1A archaeological survey is to assess the archaeological sensitivity of the project's APE and to identify conditions such as indications of prior disturbance within the project APE. The scope of work for this undertaking includes: (1) assessment of the environmental setting and indications of prior disturbance; (2) compilation and interpretation of background information including a site file search and map research; and (3) a report of findings with recommendations.

ENVIRONMENTAL SETTING

The project APE is located in an urban setting along the Saranac River within the City of Plattsburgh. The greatest elevation is about 128 ft above mean sea level (amsl), and varies only about 10 feet lower toward the top of the riverbank, although it drops off steeply to the river at more or less 100 ft amsl (the river crosses the 100 ft contour at the Bridge Street bridge).

Only one soil type is mapped within the APE. It is described as Urban Land, or land covered by buildings and concrete (Table 1, Figure 3). Based upon the setting and information contained in archaeological surveys of nearby areas, it is likely that preconstruction soil, if undisturbed, were composed of sandy beach or glacial outwash deposits. Given the elevation of the project site above the river, paleosols within alluvial soil deposits may be limited or absent.

Table 1: Soil Descriptions (USDA 1993)

Name (symbol)	Soil Horizon Depth cm(in)	Color	Texture	Slope %	Drainage	Landform
Urban Land (Un)	n/a	n/a	n/a	0-8	n/a	Asphalt, concrete, buildings, and other impervious materials

The Geoengineering report prepared for this project provided a model stratigraphic profile of fill and former topsoil over alluvial sand (clayey sand and gravel) over glacial till (Terracon 2019). Depths varied by location, but the fill above former topsoil layer varied from 4 to 24.5 feet thick.

The Saranac River adjacent to the project site differs from the drowned stream-wetland locations of the Lake Champlain basin that Haviland and Power (1994) have discussed. This is because the Saranac in this stretch is cutting through upland deposits and its elevation appears to be too high to have been affected by the mid-Holocene isostatic and lake level adjustments that made such areas as Otter Creek in Vermont attractive to Archaic period hunters and

gatherers. However, the riverside location may have attracted precontact period Native Americans to seasonal fishing camps.

SITE FILES RESEARCH

The archaeological site files of the New York State Museum (NYSM) and the Office of Parks, Recreation, and Historic Preservation (OPRHP), both maintained by OPRHP, were reviewed in order to identify whether archaeological resources have been reported previously within or adjacent to the project boundaries. Twenty-four previously recorded sites occur within a one-mile radius. They include sites with standing structures as well as other historic and precontact (prehistoric) period sites. These sites are identified in Table 2. The closest of these sites to the APE are NYSM site 3085 and 7172, recorded as a village site and traces of occupation, respectively. These appear to be vaguely recorded, old reports from the early 20th century (Parker 1922).

Some of the historic period sites indicate the industrial context near the mouth of the Saranac River with the occurrence of forge and furnace sites sch as Weston's and Platts'. Other sites indicate the larger setting in an early part of Plattsburgh, with civic and commercial sites nearby. Finally, some of the sites (such as the forts to the south) indicate the military importance of the lower Saranac River -Lake Champlain setting in the War of 1812 and later.

Table 2: Archaeological Site File Search Results

NYSOPRHP Site #	Additional Site #	Distance to APE m(ft)	Time Period	Site Type	National Register
01940.000350	Old Clinton County Courthouse	167(548)	Built in 1889	Standing structure	Undetermined
01940.001277	Strand Theater	186(610)	1924-present	Still standing theater	Listed
01940.000348	Sperry's Tavern	541(1775)	Ca. 1800	Standing altered structure	Undetermined
01940.000004	Public Hanging Grounds	683(2241)	Constructed 1812	Courtyard	Undetermined
01940.000349	Hunter's Tavern	500(1640)	Ca. 1800	Standing structure	Undetermined
01940.000351	Riverside Cemetery	710(2329)	1814 (war of 1812)	Gravestones from the battle of Plattsburgh	Undetermined
01940.000355		460(1509)	19 th and perhaps 18 th C.	Industrial/ma nufacturing complex	Undetermined
01940.001093	PAFB VOQ Area (archaeological site)	737(2418)	C. 19 th C.	Plattsburgh Air Force Base	Not eligible
01940.001204	War of 1812 Military Hospital	762(2500)	Original 1812- 1814 rebuilt in 1816-late 19 th C.	Limestone slabs below surface	Undetermined
01940.001203	War of 1812 Store Houses	782(2565)	1812-1814 to late 19 th C.	Limestone slabs below surface	Undetermined
01940.000358	Weston's Forge & Norton Furnace	95(312)	Forge 1845- 1902; Furnace 1877-1890s	No info	Undetermined

NYSOPRHP Site #	Additional Site #	Distance to APE m(ft)	Time Period	Site Type	National Register
01940.000357	Platt's Forge(HAA 96-9)	242(794)	1798-prior 1820	No info	Undetermined
01940.001125	Riverwalk Historic Site	267(876)	19 th Century	Buried evidence	Undetermined
01940.000354	Village Site-shore North of Saranac River	829(2720)	No info	Village Site	Undetermined
01940.000347	Boynton Farm	1412(4633)	prior 1814- present	Charles C. Platt House	Undetermined
01940.001187	Site of Clinton Dynamite Co. Plant	1156(3793)	1884-1886	Foundation visible with 30' hole from explosion	Undetermined
01940.001126	Footbridge Historic Site	1358(4455)	early 19 th C.	Buried evidence	Undetermined
01940.000018	Fort Brown	870(2854)	Summer 1814-?	Historic marker	Listed
01940.000352	Fort Moreau-AFB	920(3018)	Summer 1814-?	Historic Marker, no visible evidence	Eligible
01940.000353	Fort Scott-AFB	1014(3327)	Summer 1814-1870s?	Historic Marker, no visible evidence	Undetermined
	NYSM 3085	0	No info	Village	
	NYSM 7175	924(3031)	No info	Trail	
	NYSM 7172	0	No info	Traces of occupation	
	NYSM 3083	1149(3770)	No info	Village or Camps	

PREVIOUS ARCHAEOLOGICAL RESEARCH

Archaeological surveys have not been performed previously in the project APE. The following are previous archaeological surveys identified in the vicinity.

Black Drake Consulting

2001 Phase 1A Cultural Resources Survey, Pond Street River Bank Reconstruction, City of Plattsburgh, Clinton County, New York.

Hartgen Archeological Associates, Inc.

2009 Phase IA Literature Review and Phase IB Archeological Field Reconnaissance, Multi-use path, George Angell Drive to Saranac Street, City of Plattsburgh, Clinton County, New York.

Morgan, Julie

1995 Archeological Survey of Plattsburgh Air Force Base, Clinton County, New York.

Skelly and Loy, Inc.

2001 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Geomorphology Report, PIN 7752.31.

2001 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Historic Resource Survey and Determination of Eligibility Report, PIN 7752.31.

2002 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Phase I Archaeology, PIN 7752.31.

U.S. Army Corps of Engineers

2017 Phase I Archaeological Resource Investigation PFC Harold P Lynch U.S. Army Reserve Center (NY054) U.S. Army Reserve, 99th Regional Support Command, Plattsburgh, Clinton County, New York.

The closest of these surveys was conducted by Black Drake in 2001. That project site is south of Bridge Street and directly across the river from the current APE. This survey found that the project site would have been archaeologically sensitive, but the section adjacent to the river was built land, and the rest had been thoroughly disturbed by later construction.

NATIONAL REGISTER OF HISTORIC PLACES SITES

The project site is adjacent or near to three National Register listed historic districts or properties. These are identified in Table 3. The closest of these is the Downtown Plattsburgh Historic District.

Table 3: National Register of Historic Places

NR#	Description	Address	Distance m(ft)
01940.00133 2	Downtown Plattsburgh Historic District	Plattsburgh, NY	7(24)
90NR00182	D & H Railroad Complex	Plattsburgh, NY	158(518)
90NR 00189	The Point Historic District	Plattsburgh, NY	141(463)

HISTORIC MAP RESEARCH

The following maps, ordered chronologically, were consulted to identify possible historic sites. Where possible, maps were rectified using GIS software. Historic map coverage is inclusive for the years 1779 to 1949. 15' USGS maps have not been included as they do not show sufficient detail for interpretation given the conventions used to depict urban areas.

The following maps are presented here as figures. The figure numbers are included in Table 4. Spatial distortions in the underlying historic maps may be apparent in comparison to the APE outline once rectified.

Table 4: Historic Maps

Map Date	Reference	Name/Other in PA
1779	A Chorographical Map of the Province of New York,	n/a
	Claude J. Sauthier (Figure 5)	
1814	Plan of the Siege of Plattsburg, and Capture of the	possibly one or two
	British Fleet on Lake Champlain (Figure 6)	buildings
1829	Map of the County of Clinton, David H. Burr (Figure 7)	n/a
1856	Georeferenced Map of Clinton Co., New York, A	minimum of 12 buildings
	Ligowsky (Figure 8)	
1869	Georeferenced Map of Plattsburgh, Clinton Co., New	minimum of 8 buildings
	York, Beers (Figure 9)	
1884	Georeferenced Sanborn Insurance Map (Figure 10)	minimum of 15 buildings
1891	Georeferenced Sanborn Insurance Map (Figure 11)	minimum of 20 buildings
1896	Georeferenced Sanborn Insurance Map (Figure 12)	minimum of 18 buildings

Map Date	Reference	Name/Other in PA
1899	Bird's eye view of Plattsburgh, Burleigh (Figure 13)	minimum of 12 buildings
1902	Georeferenced Sanborn Insurance Map (Figure 14)	minimum of 18 buildings
1909	Georeferenced Sanborn Insurance Map (Figure 15)	minimum of 15 buildings
1918	Georeferenced Sanborn Insurance Map (Figure 16)	minimum of 16 buildings
1927	Georeferenced Sanborn Insurance Map (Figure 17 a&b)	minimum of 21 buildings
1927-1949	Georeferenced Sanborn Insurance Map (Figure 18 a&b)	minimum of 19 buildings

MAP-DOCUMENTED STRUCTURES

The 1779 Sauthier map shows no structures in the vicinity of the project site. Given the frontier location, it is likely that it would them if significant structures existed. Certain sites established some years earlier, the house and mill of Count Charles de Fredenburgh, may have been destroyed by fire prior to the construction of this map. The 1814 map is associated with the War of 1812 land-based siege of Plattsburgh and Battle of Lake Champlain. It shows a bridge in the current Bridge Street bridge location and a string of buildings on Bridge Street that may have extended into the APE. The events commemorated in this map are described below in a short section on the September 6-11, 1814 British attacks on Plattsburgh.

The 1829 Burr map is schematic and shows limited detail, but it clearly shows that the APE was in the early 19th century village setting of Plattsburgh. The 1856 map shows the APE in the process of filling in with structures due to urban growth. A building is shown hanging over the river in the location of what was or would become a woolen mill next to the bridge. This map may conceptualize a millrace or other works on the river below the building superstructure. Changes in the shoreline discernable on the 1869 map suggest that a covered mill race had been constructed in this area. The 1869 Beers atlas shows the industrial and commercial development within the APE, with a woolen mill on the river near the bridge, other milling structures on the river to the south, commercial buildings at the corner of Durkee and Bridge, and residences on Durkee in the south part of the APE.

The Sanborn insurance maps available for 1884-1949 and the Burleigh 1891 perspective drawing provide considerable additional detail. Before describing the Sanborn maps it is worth mentioning that the Burleigh drawing appears to depict a covered mill race leading into and under the large factory on the riverbank next to the bridge. This was the location of the woolen mill. In the Burleigh drawing, the shoreline adjacent to the factory appears to be protected by a wall. A wall in this location is illustrated in Photos 1-3 in Appendix B.

The trend shown by the Sanborn maps is for patterns of growth, change, transformation, and sometimes total replacement in the industrial and commercial areas of the APE, as well as an increase in the number of dwellings along Durkee Street and the replacement over time of dwellings by commercial buildings. The early mill site on the river by the bridge was replaced by later mill construction and eventually it was destroyed by fire (referred to as a "fire wreck" on the 1918 map). It had last functioned as the United Shirt Collar Company (ca 1909). Sometime around the turn of the 20th century, the large sawmill to its south was replaced by a different building (Carroll's Excelsior Mills). This also was gone by 1918. The 1918 map also shows a substantial change, apparently a hardening of the shoreline, south of the fire wreck and in the vicinity of the former sawmill, where a wheel house is drawn and the shore has been configured with straight lines and right-angled corners, and a double line perhaps representing a new wall protecting the shore. During the rest of the early 20th century these industrial sites remained vacant while space filled in elsewhere with new and larger buildings extending from Durkee Street toward the river. In addition, the shoreline in the southern part of the APE was filled over and extended out over former river. The filling eventually continued to the present-day shoreline configuration. A comparison of the APE boundary to shoreline on the various historic maps illustrates the filling process, which seems to have filled in the south section first and eventually encompassed the northern area after the final map date (1949).

THE ROLE OF THE PROJECT LOCATION IN THE SEPTEMBER 1814 ATTACKS UPON PLATTSBURGH

The bridge now immediately northeast of the project location has been constructed upon the site of an old wooden bridge referred to as the lower bridge by Palmer (1886). The lower bridge was one of three potential crossings of the Saranac River during the September 6-11, 1814 Battle of Plattsburgh, the others being the upper bridge located farther upriver, and the ford near Pike's Cantonment, still farther upriver. Palmer (1886) has provided a detailed history of this battle; a brief summary focused on the lower bridge and its vicinity, including the project site, is included here.

As the British force some 13,000 strong advanced by land toward Plattsburgh, the American defending force of somewhat less than 6,000 moved back and consolidated into the military installation on the east side of the Saranac where Forts Moreau, Scott, and Brown were located, along with a military hospital, blockhouse, military stores, and artillery batteries. As they did so they tore up the planks from the lower bridge and used them to construct breastworks on the east side of the bridge. Here they took up positions to defend the crossing. The bridge frame remained standing and crossable by precarious scaling under fire, if anyone so dared. Although wading across the shallow river was possible, part of the defensibility of this location involved the tall, steep riverbanks. Over the course of the fighting the Americans "fired hot shot" into 15-16 buildings across the river so that the British could not use them for cover (Palmer 1886:196). From the description this would have included any buildings within the APE.

The three crossings were successfully defended by the Americans for several days and the lower bridge defense was never breached, although eventually on September 11, while a fierce naval battle was raging in the bay, British troops made it across the river at Pike's Cantonment, well upstream from the project location. From here the British pushed part of the American force southward toward a possible avenue of retreat at the bridge across the Salmon River. However, the British dropped their pursuit and retreated upon hearing the news of their navy's defeat in the bay. The British consolidated their forces in camps defended by artillery as the day of the 11th ended, and began a retreat northward under cover of dark at 9:00 PM, avoiding the sort of Pyrrhic victory in which they might have routed the American army and destroyed the Plattsburgh military installation, but lost half of their troops during that effort and the subsequent retreat northward under duress from American reinforcements. It is worth noting that the defense of Plattsburgh, the related American victory on the lake, and the withdrawal of the British army on September 11-12, 1814 led to the Treaty of Ghent, signed on December 24, 1814, ending the War of 1812.

To note succinctly the role of the project location during the 1814 battle, it was essential to the defense of the lower bridge crossing site, providing a steep riverbank and a cleared firing zone between the river and British positions in more defensible locations in the Village of Plattsburgh.

SOIL BORINGS AND GEOTECHNICAL SUMMARY ANALYSIS

Four soil borings were conducted for the project site by Terracon (2019). The present summary is provided for implications that this study has for this archaeological survey and its recommendations. The locations where the borings were performed appear to be keyed to building wall positions in the conceptual drawings.

The two northern most soil brings were placed at, or in close proximity to the planned northern building. They found no evidence of buried (former) topsoil, and identified 24 feet of fill near the bridge, and 11.5 feet of fill to the south. The finding of fill resting on probable boulders (Boring B-1) or sand and gravel (Boring B-2) indicates a lack of sensitivity for the occurrence of intact archaeological sites. The surprising 24' of fill at Boring B-1 may indicate substantial prior

removal of mill-related features. Boring B-1 appears to be too far west to have hit the mill race of the woolen mill.

The two southernmost soil boring each found buried former topsoil layers, at a depth of 13 feet in B-3, and at a depth of 4 feet in B-4. Materials such as brick, glass, wood, ceramic, etc. were not recorded in these former topsoil layers, unlike the finding of such items in reported fill. The age and nature of the reported former topsoils are unknown, but further comments are warranted based upon their locations and depths. Boring B-3 found a buried topsoil relatively deep at 13 feet. Its position 9 feet deeper than the former topsoil at B-4 indicates that it may have been at the foot of the steep slope along the old riverbank. Scaled measurement to place this location on the 1918 Sanborn map confirms that this location is on the former edge of the river. This location likely was within the dynamic, high energy environment subject to erosion as well as deposition, and therefore may have been an unstable environment for historic or precontact period occupation. Also, while the river was immediately to the east, it is likely that the area to the west was severely disturbed because it would have been in the construction area of the mill race that powered the saw and woolen mills to the north.

Boring B-4 found a former topsoil at a depth of 4 feet, conceivably on the elevated area behind the riverbank. A review of the Sanborn maps indicates that this was an open-air. backyard of a tenement building in 1909, but that this site was extensively disturbed when the tenement building was razed and the Clark Textile Co. and a livery were built by 1918. When the Clark Textile building was constructed, it occupied much of the tenement's north-south footprint and actually a substantially wider east-west footprint. Estimation of the B-4 soil boring location on the 1918 map places it near but probably just outside of the south wall of the Clark Textile building, possibly in an undisturbed area, but so close it may have been disturbed by construction. Later, more massive buildings replaced the Clark building and covered the location of the soil boring: this change is seen on the 1927 and 1949 Sanborn maps. The later buildings are labeled "Wholesale Hardware", shown in 1927, and "Factory Building" in 1949. There may have been continuity in the pilastered steel frame construction of these buildings, but additions and changes also are evident from 1927-1949. Stairs and a brick enclosed elevator ("BE") depicted on the 1949 map indicates that this was a substantial building presumably requiring a substantial foundation, while the provision of steam heat powered by an oil burner (also noted on the 1949 map) suggests there may have been a basement or partial basement and sub-floor piping. It is difficult to place an old, surviving former topsoil in this sequence of construction and site disturbance, but it is possible that after buildings were razed a topsoil developed before nearly 4 feet of fill was placed over it.

PRIOR DISTURBANCE

The APE has been disturbed previously by the construction and razing of buildings, and eventually the paving over of the razed site and the construction of the present-day farmers market building. The initial, identifiable episode of razing was the destruction of buildings by the Americans during the 1814 battle. This would have involved buildings fronting on Bridge Street, if they reached so far as the APE (Durkee Street did not yet exist, and the 1814 map illustrating the battle shows this area mostly vacant). Later building and razing cycles occurred during the 19th and 20th centuries, culminating in the removal of all buildings from the APE, the construction of a parking lot, and the installation of the Farmer's Market building. In addition, Sanborn maps show a waterline crossing the APE.

While previous disturbance may have extended to the basement floor level of some buildings, its extent is unknown between buildings. At the same time, the pattern of multiple building episodes and the later construction of larger buildings on the sites of earlier buildings may have resulted in a pervasive pattern of prior disturbance. The geoengineering report found an absence of former topsoil below fill in the north part of the project site. Former topsoils were found in the south part of the site under fill depths of 4 and 13 feet. The presence of buried

topsoil does not by itself change the evaluation of an extensively disturbed archaeological context, as the former topsoil locations may, in large measure, be disturbed themselves.

ARCHAEOLOGICAL SENSITIVITY

The APE is in a riverine location that would be considered sensitive for the occurrence of precontact period sites, except for the extensive prior disturbance. Also, the corner of Durkee and Bridge Streets would be considered sensitive the occurrence of early 19th century sites, again except for prior disturbance. It is also noted that the riverside area within the APE is built land over the river. In the south of the APE the old riverbank before extensive filling is estimated to be about 110 feet east of Durkee St. Looking north, the old riverbank position is difficult to know due to mill construction pre-dating the Sanborn maps. However, later changes are indicated by the outline of the APE on the various Sanborn maps. The fill is positioned over the site of an island that appears on various Sanborn maps (but disappears by 1918, before filling in this area). The island is not shown on earlier maps and given the high energy environment of the water course, and the island's disappearance by 1918, the island location is not considered to be archaeologically sensitive.

PHASE 1A SUMMARY AND RECOMMENDATIONS

A complete and comprehensive Phase 1A archaeological survey has been conducted. Without taking into account prior disturbance, the APE's riverside location is considered sensitive for the occurrence or precontact period archaeological sites, a contested War of 1812 firing zone, and 19th century commercial, industrial, and residential sites.

However, prior disturbance has been extensive. It may include the 1814 destruction by fire of structures that bordered or were just inside the northwest corner of the APE. It certainly includes multiple construction, razing and rebuilding cycles extensively across the APE. This is addressed with specificity below in relation to proposed buildings and parking. More generally, one of the deeper prior disturbances near the old river channel would have been the construction of the covered millrace. Based upon various map information, this race likely would have occupied much of the area near the original riverbank, including the ca 1884 woolen mill near Bridge Street and the sawmill to the south of this. Minimally this would have involved much of the northern side of the APE near the original riverbank. At the same time, it is noted that some of the stonework associated with the mill complex may be present along the current riverbank just south of the bridge. The apparent stone wall partly faced with concrete may be a feature of the mill era, although alternatively it may be part of a more recent retaining wall.

<u>Parking</u> essentially would be a retained function of much of the APE. The depth of fill, which ranges from 4 to 24.5 feet in different places based upon soil boring records, would prevent potential impacts from the continued parking function or reconstruction of the parking lot.

The north building would front Durkee and Bridge Streets; a swimming pool may be constructed behind the Bridge Street wing. Soil borings indicate that the depth of fill here is from 11.5-24.5 feet. No indications of former topsoils buried below fill were noted. This result showing no former topsoil is considered to provide confirmatory evidence of the prior disturbance that has been inferred from the sequence of multiple construction and demolition episodes.

The south building also has two wings, one fronting on Durkee Street and the other oriented perpendicular to Durkee on the south side of the east-west centerline of the APE. Soil boring B-3 at the east end of the north wing showed a fill depth of 13 feet over a former topsoil. This appears to have been placed near the pre-fill riverside at the foot of a steep riverbank or on its lower slope. The soil boring B-4 placed at the south end of the west wing found four feet of fill covering a former topsoil. The shallow fill depth seems anomalous in comparison to the deep fills found in other soil borings, but perhaps the native soils have been removed deep in the northern

soil borings (B-1 and B-2), while it is easily inferred that Soil Boring B-3 was placed beyond the old river bank through deep fill soils. The B-3 former topsoil environmental situation is considered dynamic and potentially unstable, probably not sensitive for archaeological site occurrence. The information provided by Soil Boring B-4 has been evaluated carefully with respect to the multiple construction episodes in this area, in order to determine whether a substantial remnant of undisturbed ground may be present. The result of this evaluation indicates that it is not likely that an important archaeological site could be preserved in this part of the APE, despite the anomaly of a former topsoil buried under relatively shallow fill.

As a result of the careful evaluation of the data provided in this report, the following recommendations are made:

- Additional archaeological investigation is not warranted.
- Caution is recommended to not disturb the stone wall along the river just south of Bridge Street, as this may be part of a 19th century mill race or other structure of historic age. It is noted that plans for this location appear to be for a riverside border of green space that will have trees, grass, and sidewalk that appear not to threaten an impact to the wall.
- A historic marker noting appropriate specifics of the 1814 battle in the vicinity of the bridge should be placed where pedestrians will be able to see and read it with a reasonably good view of the present-day bridge as a proxy for the 1814 bridge.

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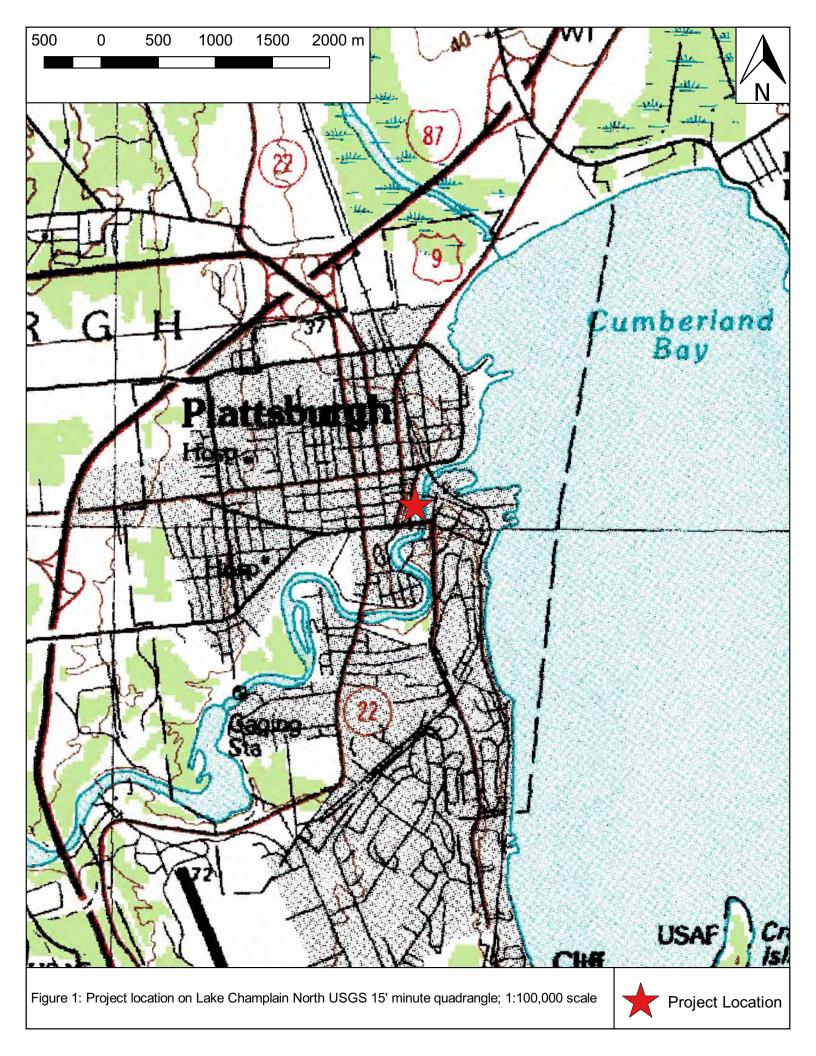
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Terracon

2019 Preliminary Geotechnical Engineering Report, Mixed Use Development, Plattsburgh, New York. Terracon Consultants-NY, Inc., Dba Dente Group, Watervliet, New York.

United States Department of Agriculture (USDA) 1993 Soil Survey of Clinton County, New York.

APPENDIX A: FIGURES



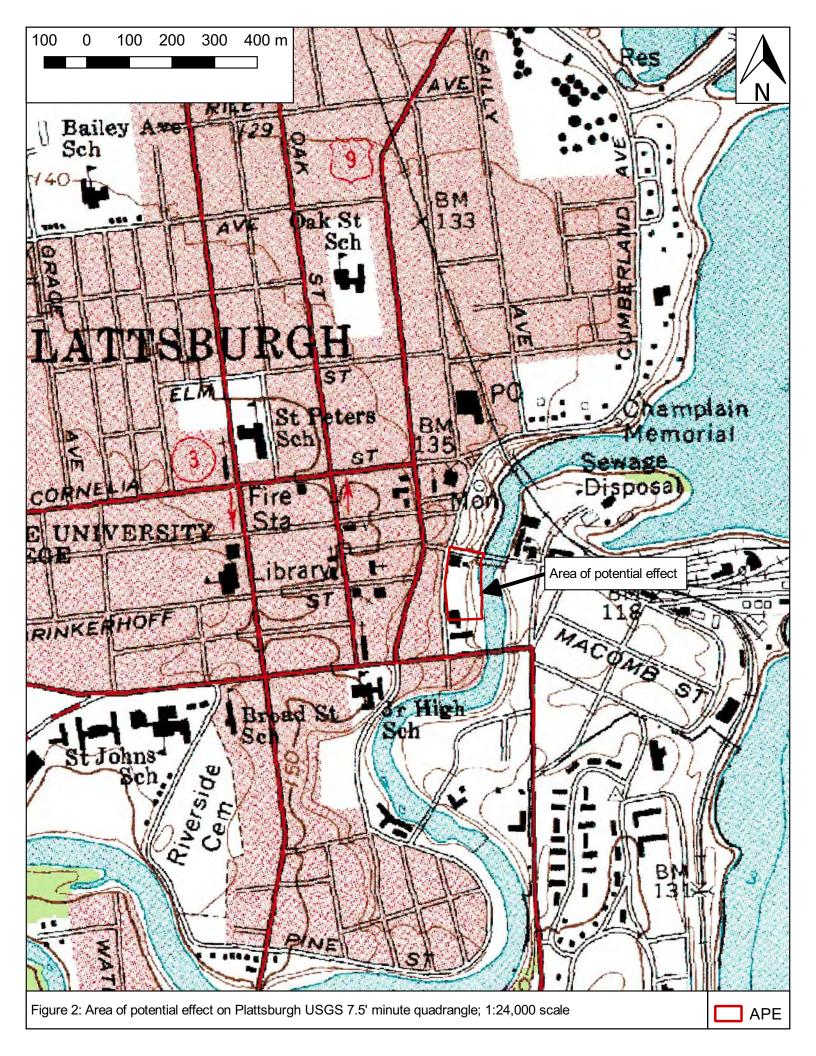






Figure 4: Orthoimagery showing existing conditions with photo angles

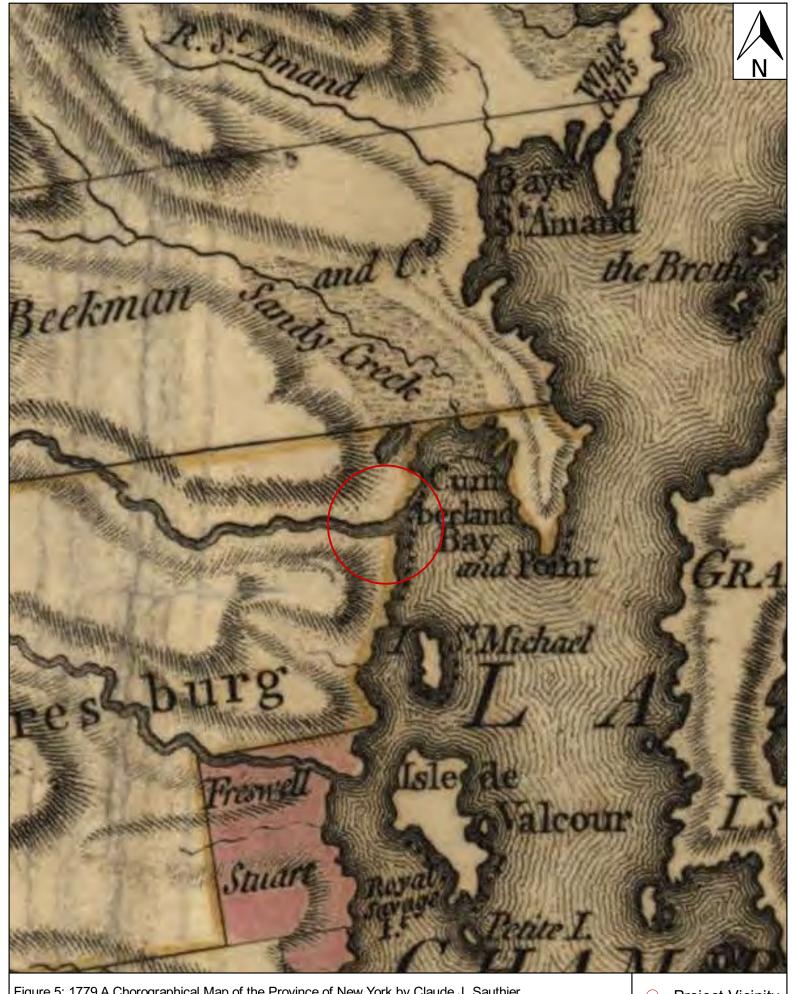
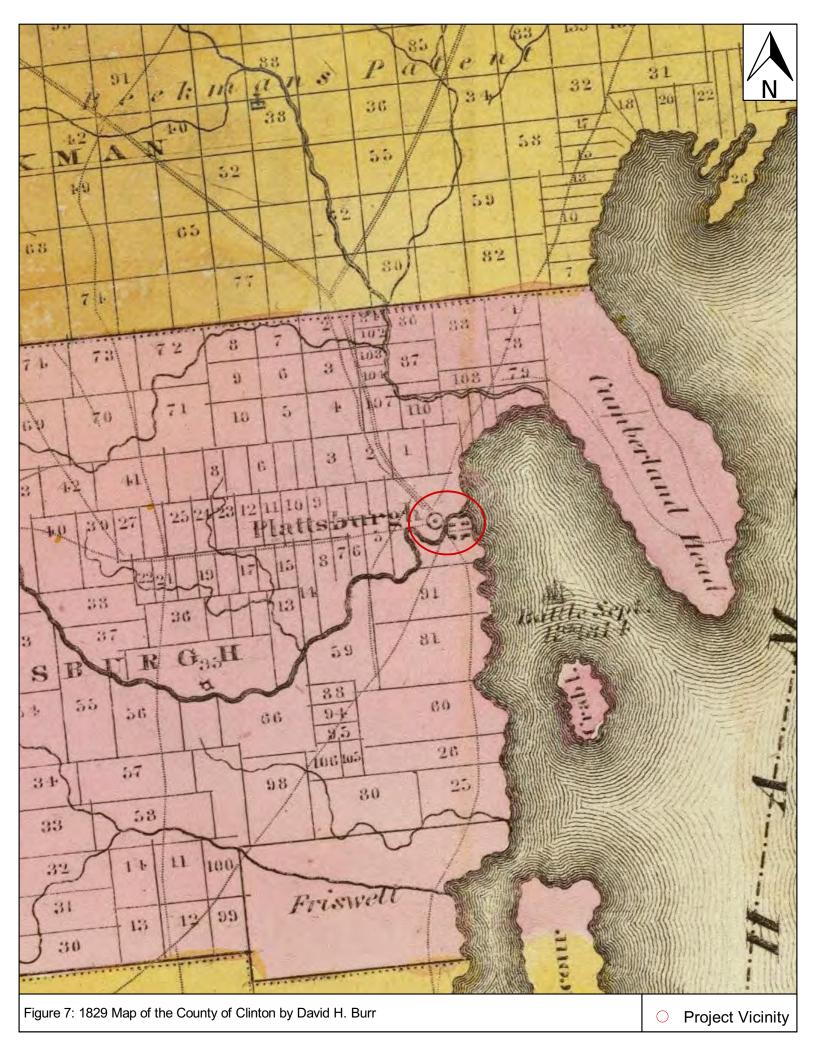


Figure 5: 1779 A Chorographical Map of the Province of New York by Claude J. Sauthier



Figure 6: 1814 Plan of the Siege of Plattsburg, and Capture of the British Fleet on Lake Champlain



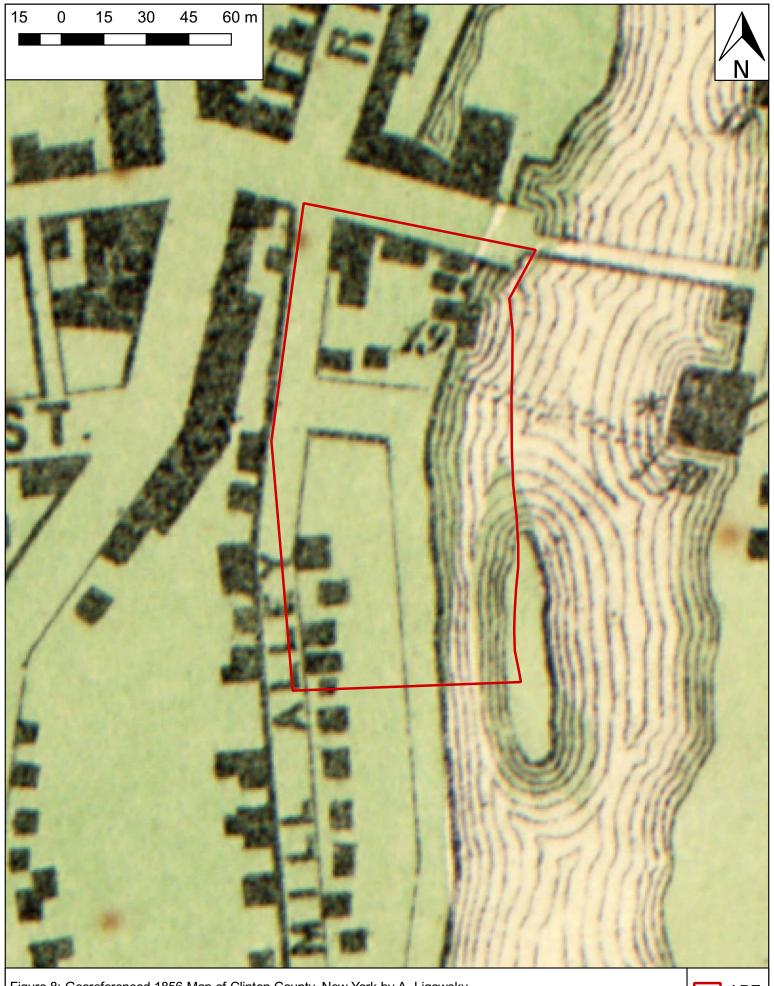


Figure 8: Georeferenced 1856 Map of Clinton County, New York by A. Ligowsky

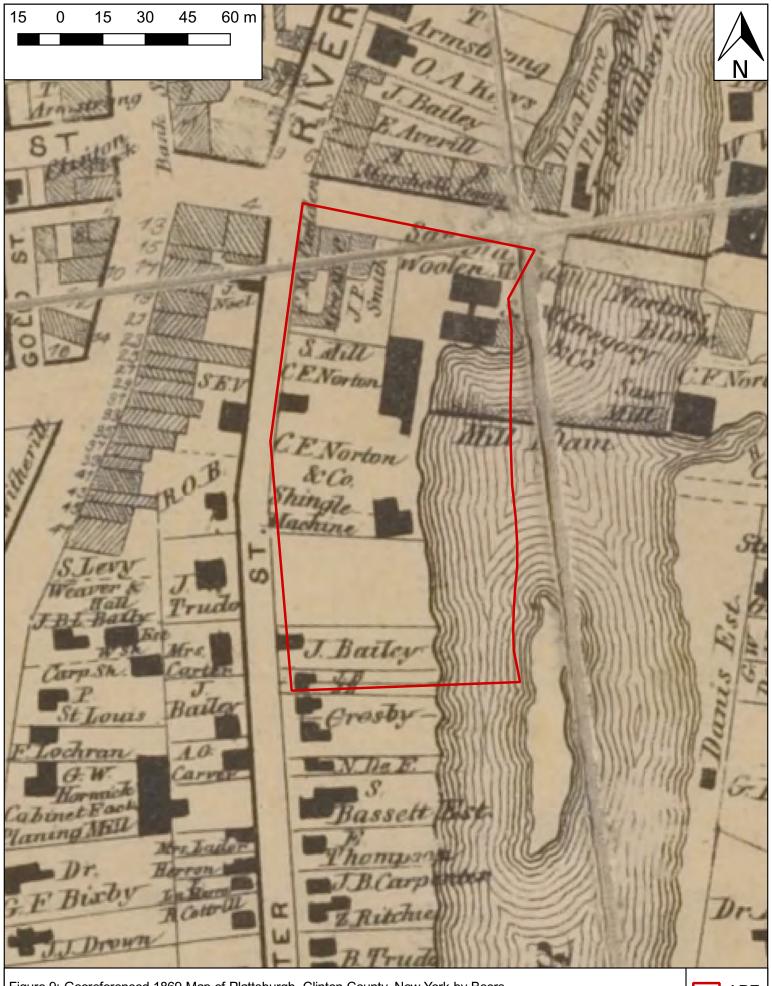


Figure 9: Georeferenced 1869 Map of Plattsburgh, Clinton County, New York by Beers

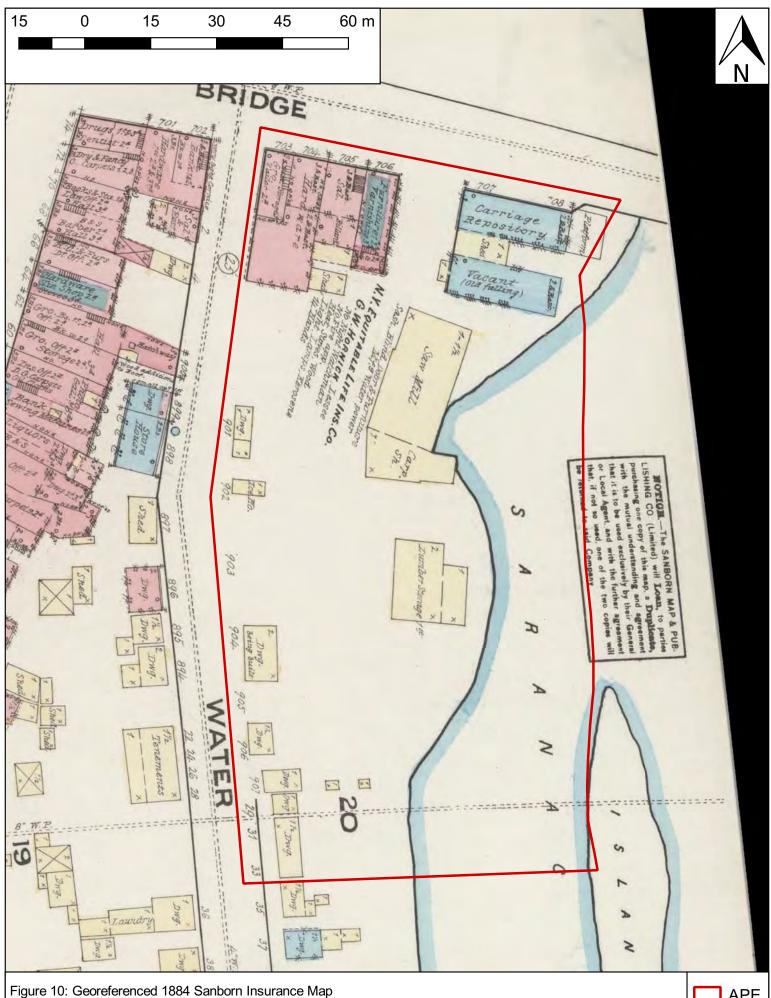


Figure 10: Georeferenced 1884 Sanborn Insurance Map

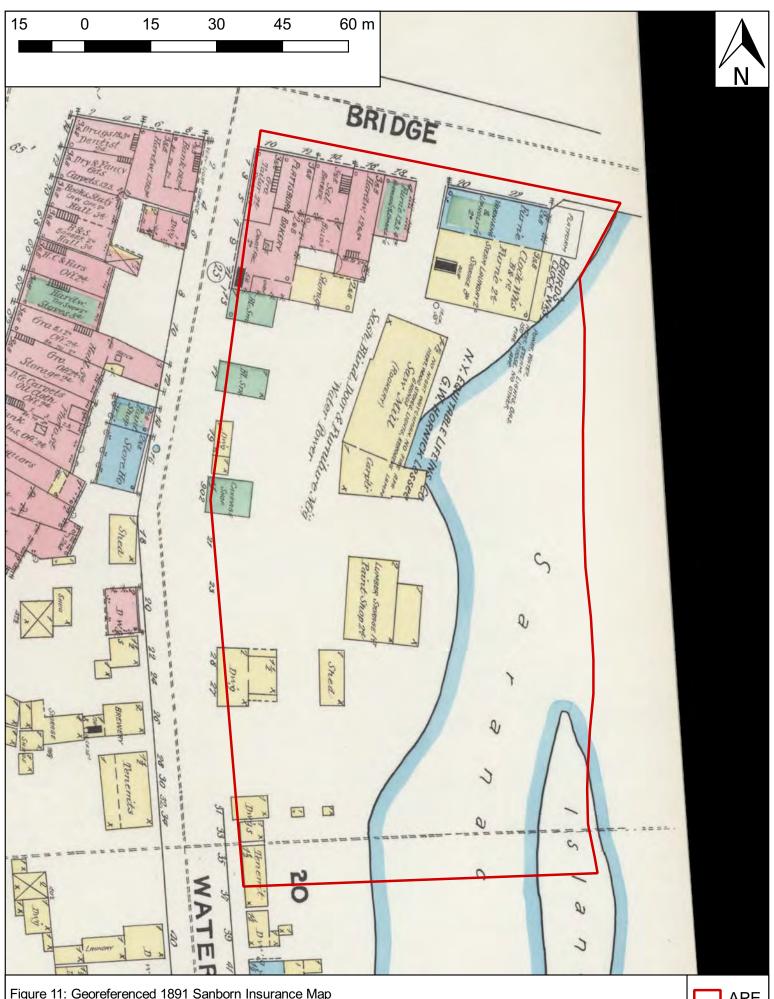


Figure 11: Georeferenced 1891 Sanborn Insurance Map

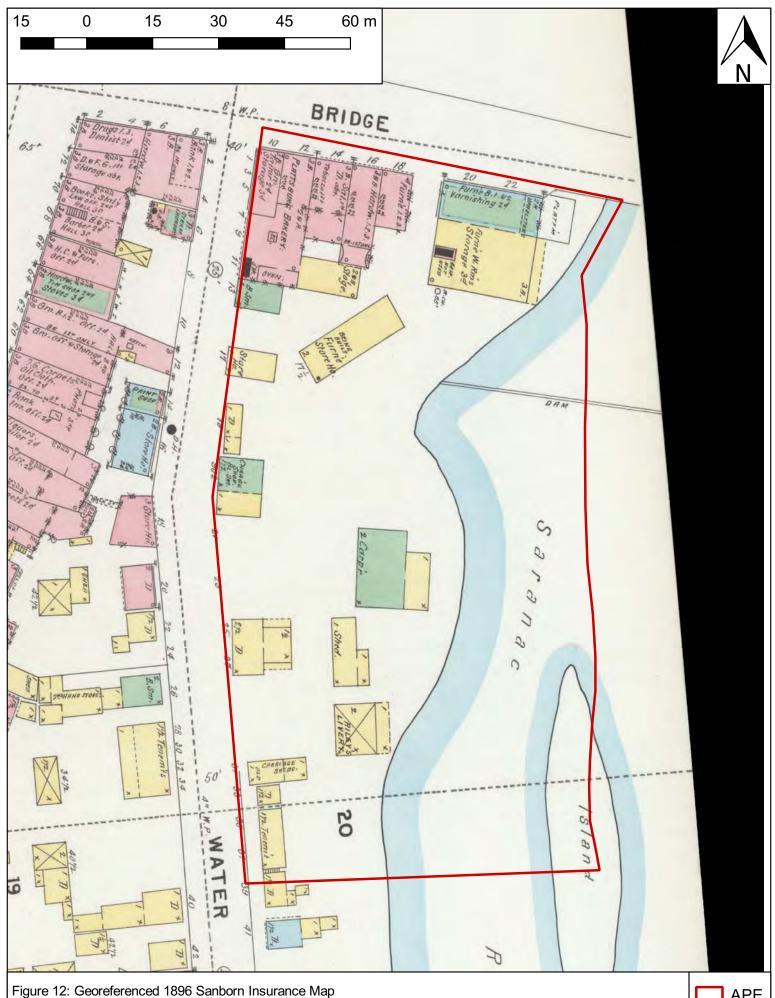


Figure 12: Georeferenced 1896 Sanborn Insurance Map

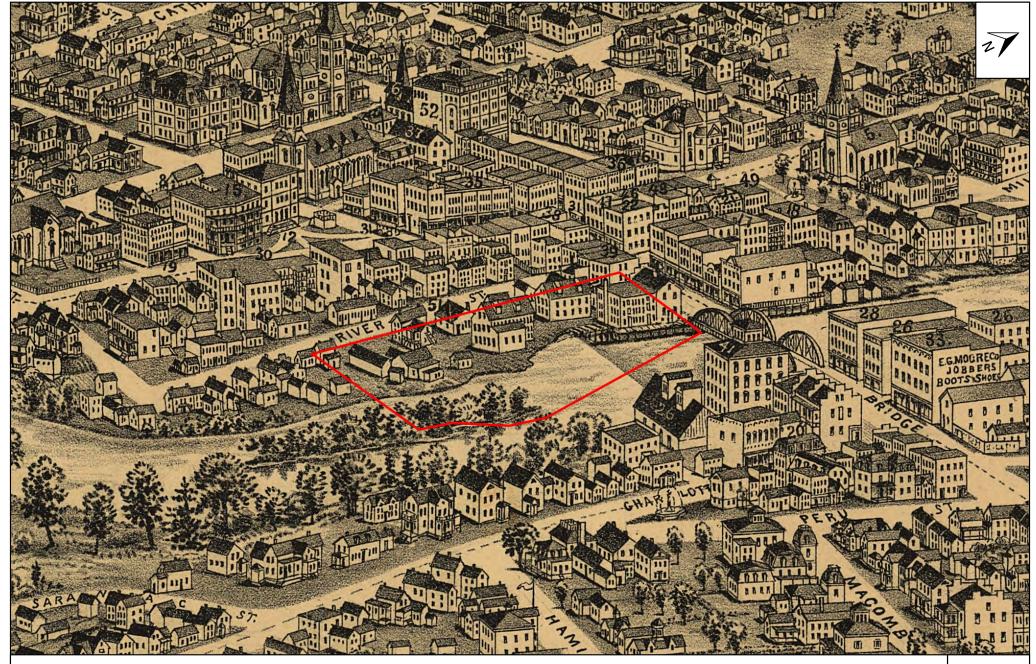
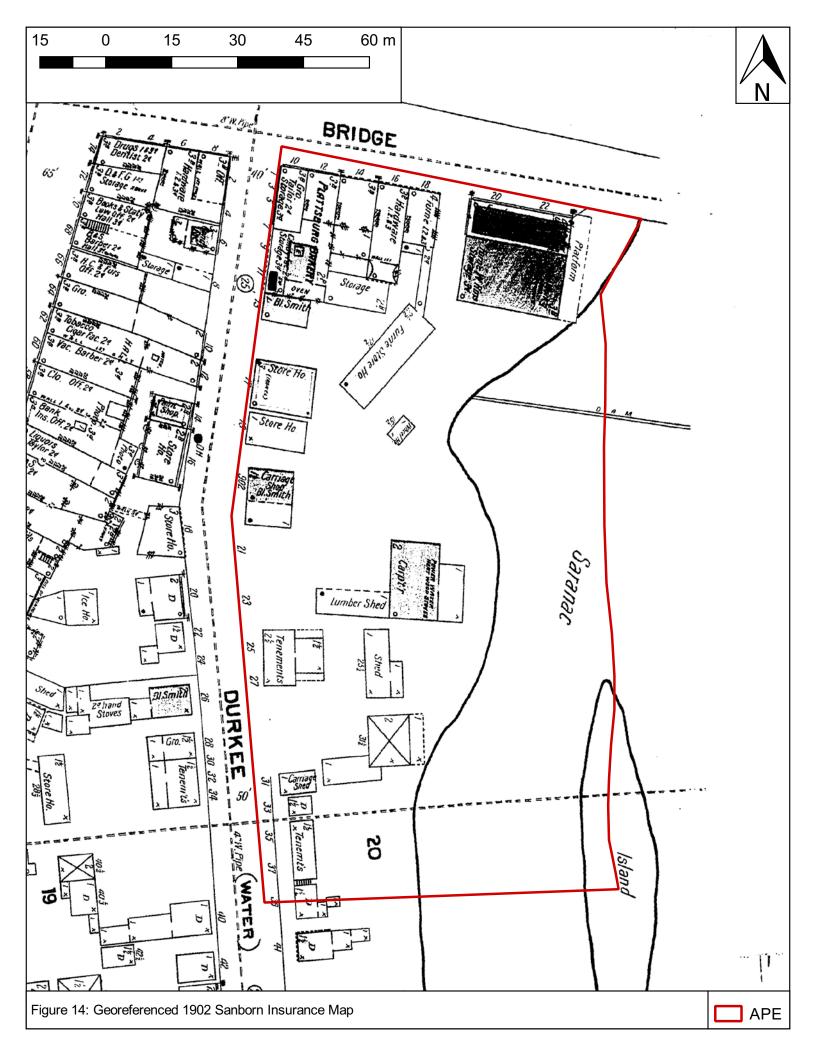
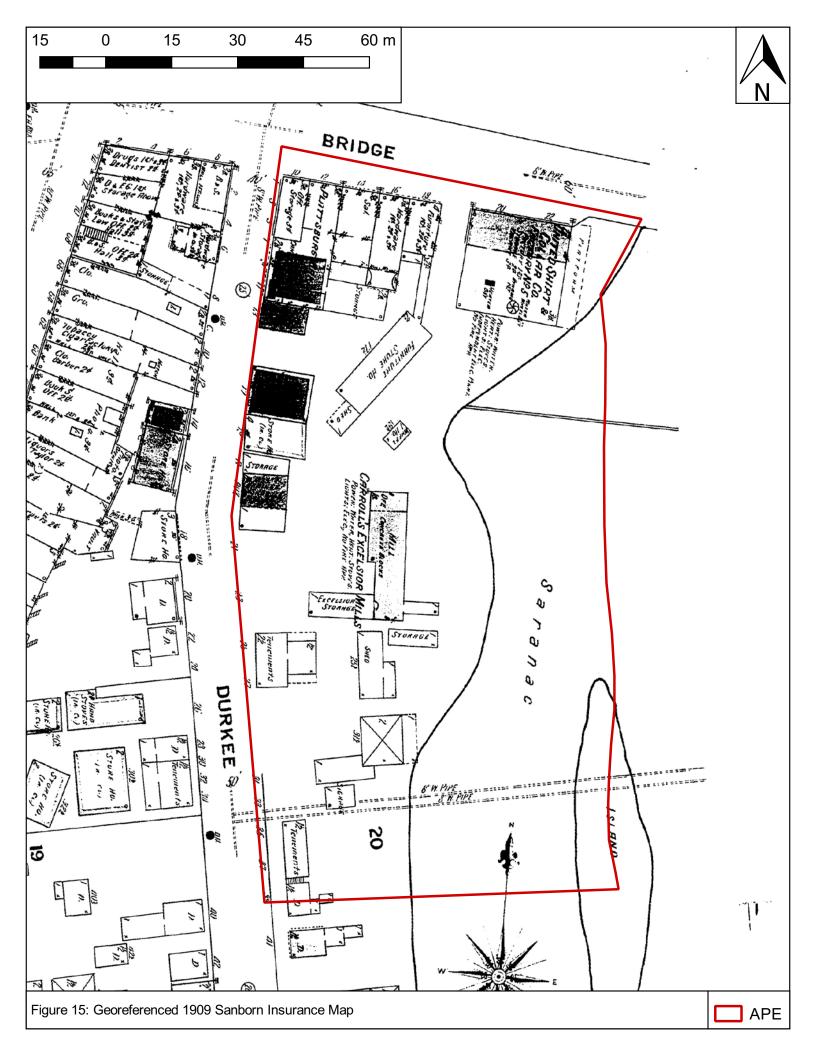
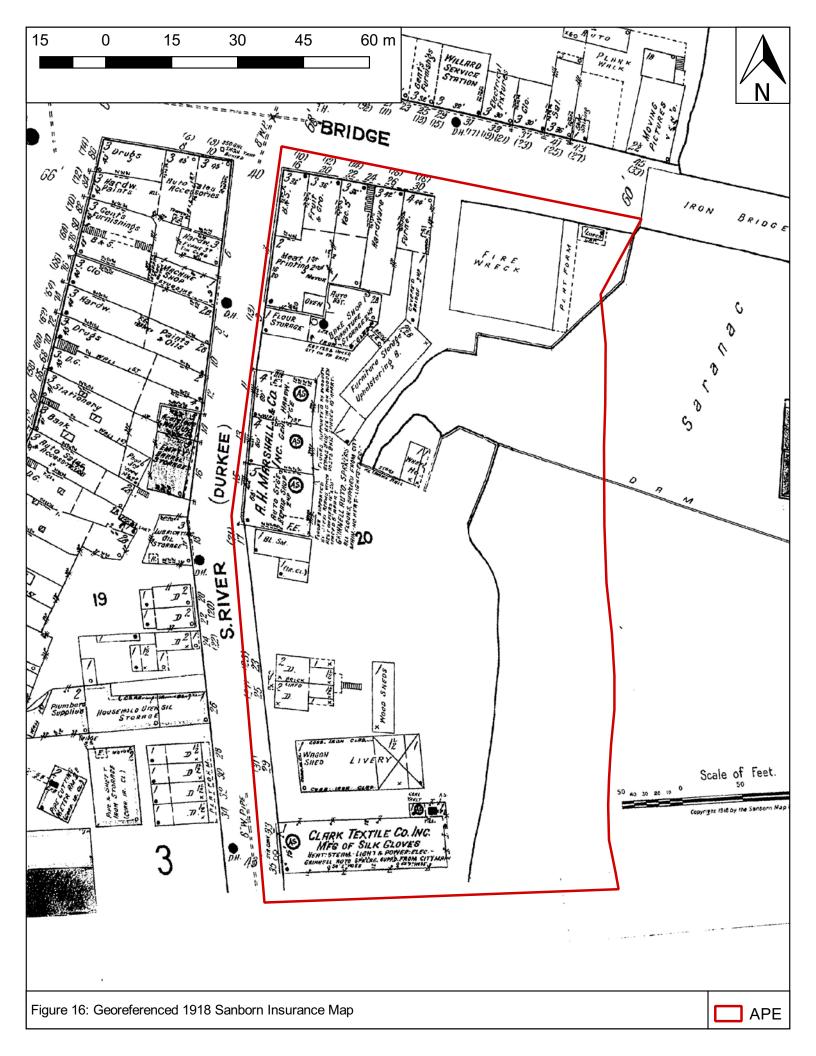
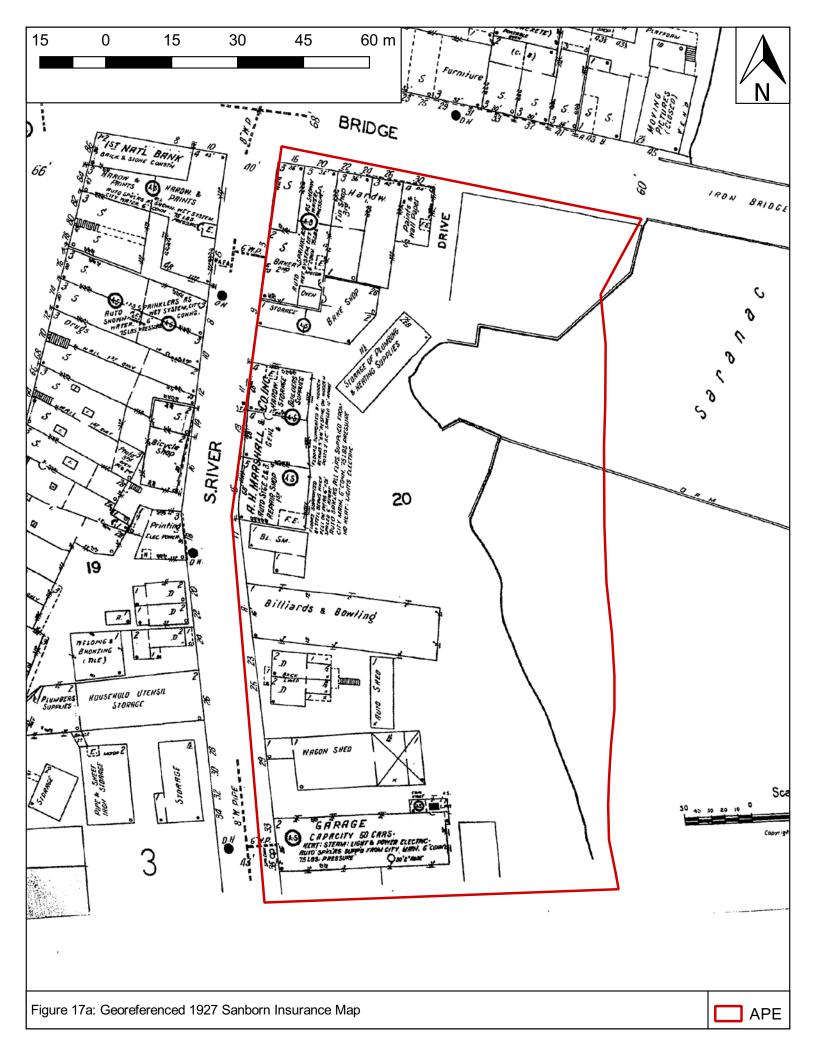


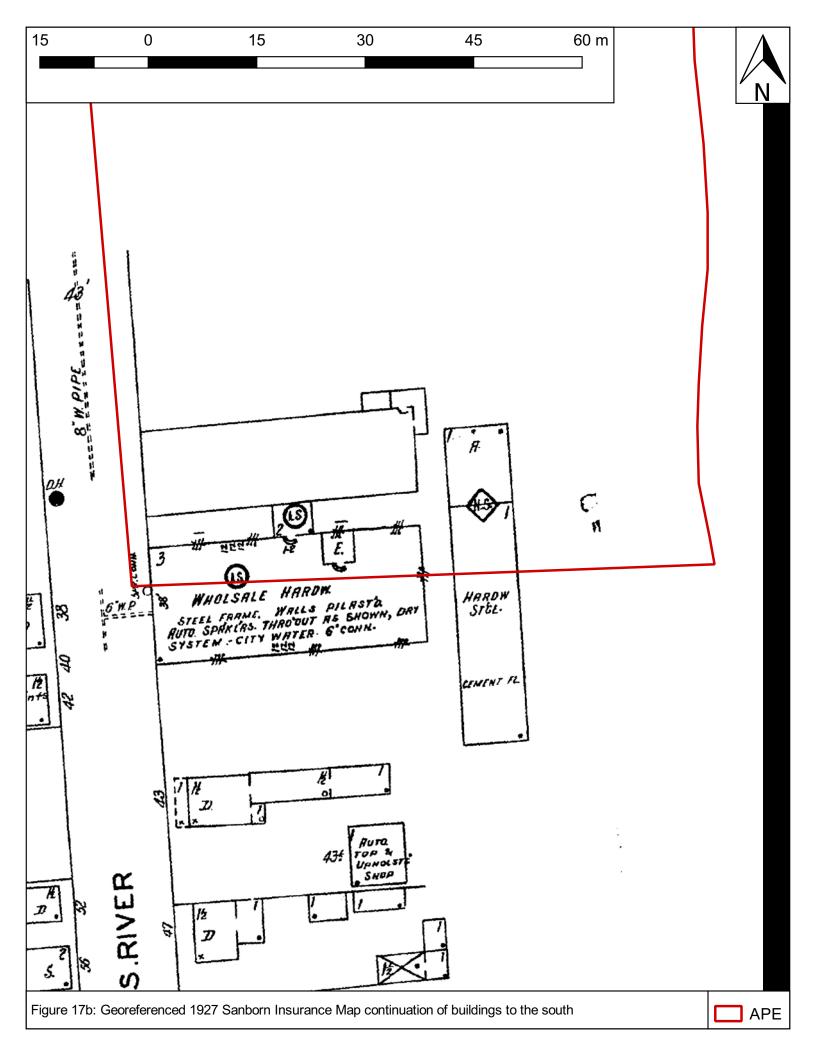
Figure 13: 1899 Plattsburgh bird's eye view by Burleigh

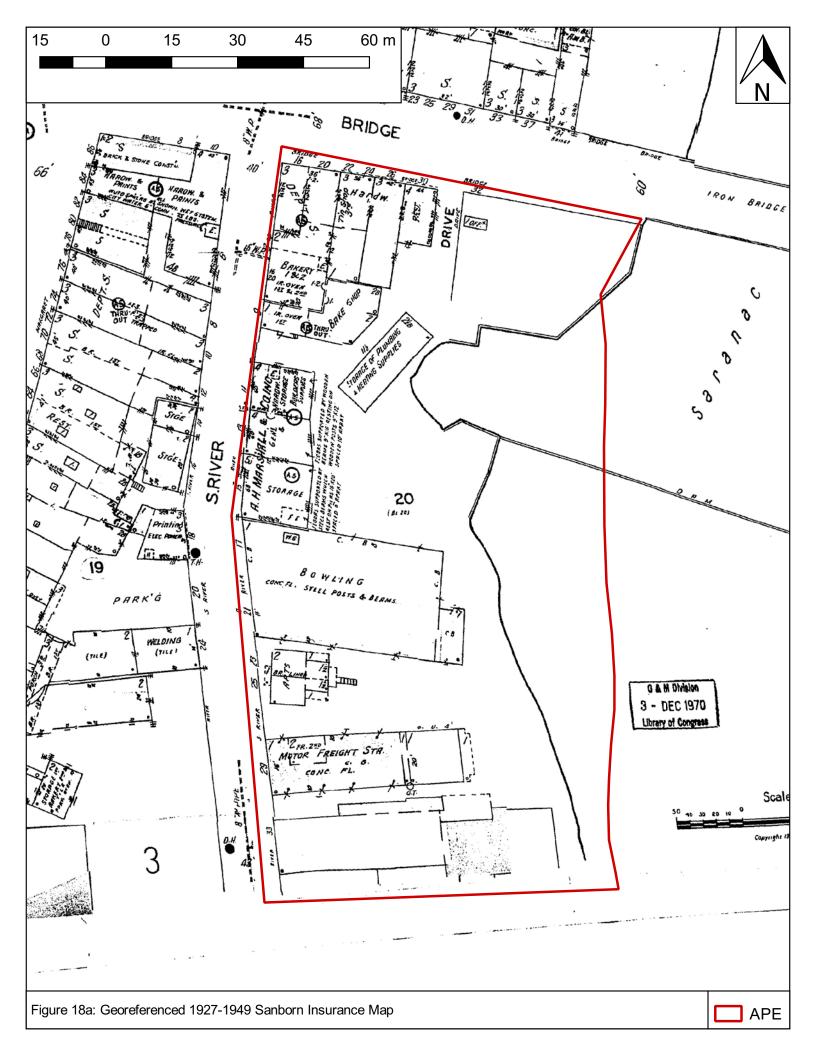


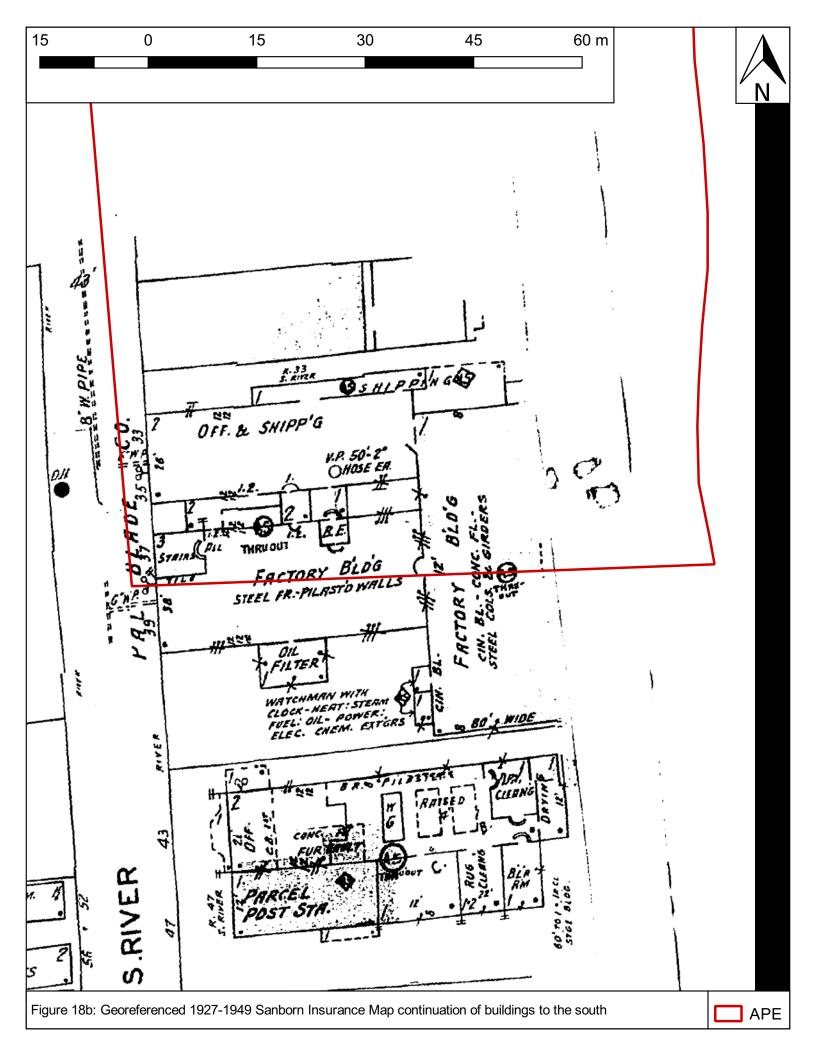












APPENDIX B: PHOTOS



Photo 1: Looking west/southwest at the concrete wall along the riverbank by the bridge. The APE is in the background.



Photo 2: A close of the same view in Photo 1.



Photo 3: Looking west, showing that stone and concrete juxtaposed: the concrete appears to cover a stone wall.



Photo 4: Looking northeast at the Bridge Street bridge over the Saranac. The terrace on the other side of the river was included in the Black Drake 2001 survey cited in the present report text.



Photo 5: View looking northwest at the buildings across Bridge Street



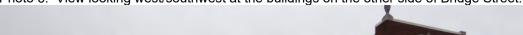




Photo 7: Looking south/southwest at the buildings on Durkee Street opposite the APE.



Photo 8: Looking north/northwest at the buildings on Durkee Street.



Photo 9: Looking southeast at the Excellus building south of the APE.



Photo 10: Looking southwest at the buildings across Durkee Street from the Excellus building.



Photo 11: Looking southeast at the parking structure south of the APE.



Photo 12: Looking northwest across the APE from the parking structure.



Photo 13: Looking northeast across the APE from the parking structure; farmers market building on the right.



Photo 14: Looking north/northwest at the filled area along the river.



Photo 15: Looking west at the filled area along the river. The filled area may extend to about the first row of cars.



Photo 16: Looking west/northwest at the north end of the parking lot. The former woolen mill and shirt collar factory site is in the grassy area to the right.

1.0 PROJECT DESCRIPTION

1.1 Introduction

The City of Plattsburgh is undertaking revitalization efforts that will result in several downtown area improvement Projects, some of which have already been specifically proposed and some of which are in the conceptual stage (collectively, the "Projects") as described below.

Four of these Projects (marked below with an asterisks ^(*)) are included in the City's Downtown Revitalization Initiative (the "DRI"), an initiative funded by New York State ("NYS") to improve the vitality of urban centers throughout the state. The City of Plattsburgh was selected as a Phase 1 DRI community, securing \$10 million in public funding for the DRI Projects identified above and others outside the scope of the DGEIS, "because strong and sustainable job growth in the region has increased the demand for housing and retail opportunities in the downtown. Under the DRI, Plattsburgh will build on recent investments, including a new municipal marina, streetscape improvements, and renovation of historic buildings to create a vibrant downtown that serves the needs of local employees, residents, students and visitors. The focus will be on mixed-use infill development, a greater variety of retail and housing, expansion of the successful Farmers' Market, and providing an enhanced connection to the waterfront." The intent of the DRI is to advance downtown revitalization through transformative housing, economic development, and transportation and community projects that will attract and retain residents, visitors and businesses - creating dynamic neighborhoods where tomorrow's workforce will want to live, work, and raise a family.

Many of the Projects identified as receiving DRI funding are also anticipated to receive additional funding from other sources. Alternatively, some Projects were not proposed as part of the DRI and will be funded using alternative sources. The Projects are as follows:

- Durkee Lot mixed use development (DLMUD)*
 - O A multi-story mixed use development that will require a Special Use Permit from the City's Zoning Board of Appeals. The development will also require City Planning Board approval for amendments to an existing Planned Unit Development and Site Plan approval. Termination of the pre-existing General Municipal Law ("GML") Redevelopment Plan for the City's downtown area and its related tax incentive will need to be completed by the Common Council. The proposed mixed-use development would contain approximately 114 apartments, 10,000 square feet of commercial space, two surface parking lots, and a large, underground parking garage. Fifty public parking spaces would also be provided in the surface parking lots as part of the development. The proposed project is located at the Durkee Street Municipal Parking Lot (DSMPL) located at 22 Durkee Street. The proposed development encompasses approximately 2.8 acres and is located on a portion of tax parcel 207.20-7-15. A second tax parcel, 207.20-7-14, was recently merged with parcel 207.20-7-

¹ "Downtown Revitalization Initiative, North Country – Plattsburgh." New York State Downtown Revitalization Initiative. *New York State*. https://www.ny.gov/downtown-revitalization-initiative/north-country-plattsburgh. Webpage accessed July 23, 2019.

15 and the proposed development will occupy a portion of the former footprint of tax parcel 207.20-7-14;

Saranac Riverwalk*

- Complementing the Durkee Street Redevelopment, the City is also undertaking design and construction of a Riverwalk along the Saranac River. The Riverwalk will be located on tax parcel 207.20-7-15 and be located at the top of the western bank of the Saranac River between Bridge and Broad Streets. It will be replacing an existing wooden boardwalk that sits on the western bank of the Saranac River along the eastern edge of the DSMPL. The Project will contain a walkway with an overlook and landscape plantings that will accommodate pedestrians and bicycles. It will connect to MacDonough Park to the north via a crosswalk over Bridge Street and path, and to the Saranac River Trail to the south via a path to be constructed between the Gateway Office Building and Broad Street that will connect to the existing sidewalk at the intersection of Broad and Durkee Streets;
- Durkee Street reconfiguration and streetscape improvements*
 - Reconfiguration of Durkee Street from two-way to one-way, northbound traffic with streetscape improvements (wider sidewalks, street tree plantings, pedestrian lighting, transformer art covers) and the establishment of 43 additional public parking spaces (angled and parallel on-street parking) on Durkee Street between Broad and Bridge Streets;
- Bridge Street parking improvements
 - Streetscape improvements (street tree plantings, pedestrian lighting) and approximately six new parallel, public, on-street parking spaces along the south side of Bridge Street between Durkee Street and the Veterans Memorial Bridge;
- Arnie Pavone Memorial Parking Plaza (APMPP)
 - The former Glens Falls National Bank branch located at 25 Margaret Street is considered a suitable area for public parking improvements. The construction of the APMPP would require the demolition of this building on tax parcel 207.19-3-15 (0.73 acres), which was purchased by the City in 2018. The City is currently evaluating bids for the abatement and demolition of the existing on-site bank structure and the development of a 109-space municipal parking lot. This Project will necessitate the abandonment of an adjacent, little-used City street (Division Street) and the incorporation of that street's former footprint into the APMPP;
- Westelcom Park improvements*
 - o Improvements are proposed to the existing Westelcom Park, now referred to as the Arts Park, located across the street from the DSMPL on tax parcels 207.82-1-12, 207.82-1-13, 207.82-1-14, and 207.82-1-15 totaling approximately 0.55 acres in size. The redesign will result in a multi-tiered Arts Park which will include sculpture areas, multiple water features, a plaza, bicycle infrastructure, and pedestrian walking areas with landscaping throughout. The existing 15-inch sewer line will be replaced and relocated within the project site with a new 15-inch sewer line to facilitate the proposed design;
- Expansion and reconfiguration of the Broad Street Municipal Parking Lot

- The 57-space parking lot is located on a 0.72-acre part of tax parcel 207.20-7-15 to the south
 of Broad Street between Durkee Street and the Saranac River. The proposed improvements
 include minor expansion and restriping of the existing lot to accommodate 21 additional
 parking spaces;
- Relocation of the Plattsburgh Farmers' and Crafters' Market (PFCM) to 26 Green Street
 - The City proposes to relocate the PFCM to a single, surplus structure located at 26 Green Street that previously housed operations of the Plattsburgh Municipal Lighting Department.

The proposed Project requires the approvals and permits identified in Table 1 in Section 1.3. Figure 1 identifies the various project sites.

1.2 Approvals

The following approvals are being sought in connection with the proposed action, including:

Table 1: Required Approvals and Permits

Agency	Project	Approval/Permit
City of Plattsburgh Common Council	All Projects	SEQRA Determination
	Durkee Lot Mixed Use Development	 Termination of the pre-existing GML Redevelopment Plan for the downtown area and its related tax incentive.
	Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street	Abandonment of Division Street
2. City of Plattsburgh Planning Board	Durkee Lot Mixed Use Development	 Site Plan Approval (§360) Planned Unit Development (PUD) (§ 360-21)

Agency	1	Project	Approval/Permit
		Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements; Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street; Westelcom Park (Arts Park) improvements; Expansion and reconfiguration of the Broad Street Municipal parking lot; Relocation of the Plattsburgh Farmers' and Crafters' Market from the Durkee lot to the Harborside area.	Advisory Opinion for all Projects listed
3.	City of Plattsburgh Zoning Board of Appeals	Durkee Lot Mixed Use Development	• Special Use Permit (§ 360-31)
4.	Clinton County Planning Board	Durkee Lot Mixed Use Development; Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements; Demolition of the former Glens Falls National Bank branch on Margaret Street and construction of the Arnie Pavone Memorial Parking Plaza with the associated abandonment of Division Street; Westelcom Park improvements; Expansion and reconfiguration of the Broad Street Municipal parking lot;	General Municipal Law Referral (§12B- 239)
5.	Clinton County Industrial Development Agency	Durkee Lot Mixed Use Development	 Payment in Lieu of Taxes (PILOT) approval
6.	Clinton County Highway Department	Durkee Lot Mixed Use Development; Saranac Riverwalk; Durkee Street reconfiguration and streetscape improvements; Bridge Street parking improvements	 Highway Work Permit for Non-Utility Work Highway Work Permit for Utility Work

Agency	Project	Approval/Permit
7. New York Departme Environm Conserva ("DEC")	ent of ental	SPDES General Permit GP-0-15-002 For Stormwater Discharges From Construction Activities
	Other projects	• SPDES General Permit GP-0-15-002 For Stormwater Discharges From Construction Activities
8. New York Departme Transport (NYSDOT)	ent of Bridge Street cation	ixed Use Development; parking improvements • Highway Work Permit
9. New York Office of Recreatio Historic Preservat (NYSOPRI	Parks, n and	Consultation pursuant to Section 14.09

1.3 Historic and Cultural Resource Information by Project Site

According to the NYSOPHRP Cultural Resource Information System (CRIS) Map, several project sites are located within the Downtown Plattsburgh Historic District (DPHD), except for the Durkee Lot Mixed Use Development Project, Saranac Riverwalk, Broad Street Parking Lot and the former MLD building at 26 Green Street. The DLMUD and Saranac Riverwalk may be considered to be substantially contiguous to the DPHD. All of the sites are located within an area that is considered to be sensitive for archaeologically sensitive resources, see Figure 2.

1.3.1 Durkee Lot Mixed Use Development

A Phase 1A Archaeological Survey (Phase 1A) was completed for the project site in June 2019², see Attachment 1. The Area of Potential Effect (APE) for the analysis included the DLMUD project site. According to the Phase 1A Report, the riverside area within the APE has been extensively filled and previously disturbed by the construction and razing of buildings, and the paving over of the razed site and the construction of the present-day farmers market building. The initial, identifiable episode of razing was the destruction of buildings by the Americans during the September 1814 attacks on Plattsburgh. The APE is in a riverine location that would be considered sensitive for the occurrence of precontact period sites,

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² Curtin Archaeological Consulting, Inc. *Phase 1A Archaeological Survey: Proposed Mixed Use Development Durkee Street*. June 2019.

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except for the extensive prior disturbance. Similarly, the corner of Durkee and Bridge Streets would be considered sensitive, except for prior disturbance, for the occurrence of early 19th century sites, such as the construction of the covered millrace. Based upon various map information sources, this race likely would have occupied much of the area near the original riverbank, including the circa 1884 woolen mill near Bridge Street and the sawmill to the south of this.

Later building and razing cycles occurred during the 19th and 20th centuries as well, culminating in the removal of all buildings from the APE, the construction of a parking lot, and the installation of the Farmer's Market building. In addition, Sanborn maps show a waterline crossing the APE. Accordingly, surface soils within the APE are comprised of urban land soils, or land covered by buildings and concrete.

To further assess the archaeological sensitivity of the site, soil borings conducted as part of the geotechnical analysis were analyzed in the Phase 1A (see Attachment 1). Four soil borings (located at proposed wall positions for the future building) were analyzed. The two northern most soil brings were placed at, or in close proximity to the planned building. No evidence of buried (former) topsoil was found. Twenty-four feet (FT) of fill was identified near Veteran's Bridge, and 11.5 FT of fill to the south. The finding of fill resting on probable boulders (Boring B-1) or sand and gravel (Boring B-2) indicates a lack of sensitivity for the occurrence of intact archaeological sites. The 24 FT of fill at Boring B-1 may indicate substantial prior removal of mill-related features. Boring B-1 appears to be too far west to have hit the mill race of the woolen mill.

The two southernmost soil borings identified buried former topsoil layers, at a depth of 13 FT in B-3, and at a depth of four FT in B-4. The Boring B-3 position, at nine FT deeper than the former topsoil found at Boring B-4, indicates that the Boring B-3 position may have been at the foot of the steep slope along the old riverbank. This location on the old riverbank would have been subject to erosion as well as deposition; and therefore, would have been an unstable environment for historic or precontact period occupation. This area was likely severely disturbed because it would have been in the construction area of the mill race that powered the former saw and woolen mills to the north. Boring B-4 identified a former topsoil at a depth of four FT on the elevated area by the riverbank in an area that supported a long sequence of construction and site disturbance indicating that important archaeological material is unlikely to have been preserved despite the anomaly of a former topsoil buried under relatively shallow fill.

The pattern of multiple building episodes and the later construction of larger buildings on the sites of earlier buildings is anticipated to have resulted in a pervasive pattern of prior disturbance. Based on the borings, there is an absence of former topsoil below fill in the north part of the project site. Former topsoils were found in the south part of the site under fill depths of four and 13 FT. The presence of buried topsoil does not by itself change the evaluation of an extensively disturbed archaeological context, as the former topsoil locations may, in large measure, be disturbed themselves. Therefore, the Phase 1A recommended that additional archaeological investigation is not warranted.

The report included two additional recommendations:

 Caution is recommended to not disturb the stone wall along the river just south of Bridge Street, as this may be part of a 19th century mill race or other structure of historic age.

- No impacts to the stone wall are anticipated to occur as part of the Saranac Riverwalk or DLMUD projects.
- A historic marker noting appropriate specifics of the 1814 battle in the vicinity of the bridge should be placed where pedestrians will be able to see and read it with a reasonably good view of the present-day bridge as a proxy for the 1814 bridge.
 - o This recommendation is currently under consideration.

1.3.2 Saranac Riverwalk

See the discussion provided above in Section 1.3.1 for the DLMUD. The Riverwalk is located east of the proposed DLMUD near to the eastern edge of the Saranac River. The site is not located within the DPHD. The Saranac Riverwalk, a pedestrian trail comprised of a wooden boardwalk and paved area, forms the eastern border of the Durkee Lot along the Saranac River. The proposed project will improve the existing boardwalk by widening the path to a ten-foot wide, multi-use path made from a durable pavement type that is stormwater-friendly, supports ADA accessibility and bicycle use and that includes an overlook, benches, bicycle infrastructure, LED lighting and landscape plantings. The proposed Saranac Riverwalk is currently in a conceptual design phase and will be further considered as part of the advisory review undertaken by the Planning Board during which specific details such as materials, plantings, and lighting are determined. See Attachment 2 for the conceptual site plan.

1.3.3 Durkee Street Reconfiguration and Streetscape Improvements

The Durkee Street Reconfiguration and Streetscape improvement project will occur wholly within the existing right-of-way, an area that has been previously disturbed. The site is not located within the DPHD. Two buildings, located at 17 and 31 Durkee Street, are listed as eligible for listing on the National and State Register of Historic Places. No changes to water, wastewater or stormwater utilities are proposed as part of the project. Lighting will utilize existing electrical infrastructure. See Attachment 3 for the conceptual site plan.

1.3.4 Bridge Street Parking Improvements

The Durkee Street Reconfiguration and Streetscape improvement project will occur wholly within the existing right-of-way, an area that has been previously disturbed. The site is not located within the DPHD. Veterans Bridge and several of the buildings located on the north side of the street are listed as eligible for listing on the National and State Registers of Historic Places (21, 25-31 and 33 Bridge Street). No changes to water, wastewater or stormwater utilities are proposed as part of the project. Lighting will utilize existing electrical infrastructure. See Attachment 4 for the conceptual site plan.

1.3.5 Arnie Pavone Memorial Parking Lot

The former Glens Falls National Bank branch located at 25 Margaret Street is proposed for redevelopment with a 109 surface parking lot that would entail the demolition of the existing, vacant Glens Falls National Bank building built in 1967. This Project will necessitate the abandonment of an adjacent, little-used City

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street (Division Street) and the incorporation of that street's former footprint into the APMPP, see Attachment 5.

The building is a two-story, masonry construction with a flat roof and a basement. The building is proposed to be demolished but the basement would remain in place. The exterior walls of the basement will be removed 36 inches below grade. Alternately, the basement may be demolished with the crushed concrete left in place.

The former Glens Falls National Bank building and proposed APMPL site are located within the Downtown Plattsburgh Historic District (DPHD), which is eligible for listing on the National and State Register of Historic Places. The Former Glens Falls National Bank building is not listed as a contributing resource. According to NYSOPRHP, the district was,

"previously identified by SHPO as a potential historic district, the Downtown Plattsburgh Historic District meets Criteria A and C at the local level in the areas of architecture, commerce, and community planning and development. The district is architecturally and historically significant as a largely intact city business core, reflecting the growth and development of Plattsburgh as a regional commercial hub and industrial center from the early nineteenth to the mid-twentieth century. Preliminary boundaries were drawn based on the available desktop resources. The district is roughly bounded by Cornelia Street to the north, City Hall Place, the Saranac River, and Durkee Street to the east, Broad Street to the south, and Oak Street to the west. Further investigation would be required in order to identify all contributing and non-contributing resources. The district includes primarily commercial, institutional and religious buildings that were designed in a variety of styles including Greek Revival, Italianate, Colonial Revival, Renaissance Revival, and Art Deco. Attached commercial masonry buildings are primarily found along Clinton, Margaret and Bridge Streets. Key buildings that are listed in the National Register include: the Paul Marshall House on Cornelia Street, City Hall on City Hall Place, Clinton County Courthouse Complex on Margaret Street, the First Presbyterian Church and Strand Theater on Brinkerhoff Street, and the St. John the Baptist Roman Catholic Church and Rectory at the corner of Broad and Margaret Streets. The downtown district also includes the MacDonough Monument and Park located along the Saranac River, and Trinity Park between Trinity Place and Court Street."

The project site is located adjacent to the Strand Center for the Arts, located at 23 Brinkerhoff Street, which is eligible for listing on the National and State Registers of Historic Places and the Strand Theater, which is listed on the National and State Registers of Historic Places. The building(s) that formerly occupied (now demolished) Westelcom/Arts Park, located at 32-48 Margaret Street, were considered a contributing resource (prior to its demolition in the mid-1990s) within the eligible DPHD as are the buildings located at 20 and 24 Margaret Streets. Both resources are located directly across the street from the proposed APMPP.

Therefore, given that the former Glens Falls National Bank building is not identified as a contributing resource within the eligible DPHD the proposed demolition is not anticipated to result in adverse impacts to historic resources. In addition, the site is currently partially comprised of paved area for parking and street use. The proposed conversion of the building and landscaped area into additional parking area is

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not anticipated to result in adverse indirect effects on the eligible DPHD or the listed resources located nearby. The site is included within an area that is considered to be archaeologically sensitive according to CRIS. However, the site has undergone prior disturbance related to the existing two-story building with a basement and associated parking; therefore, no adverse impacts to archaeological resources are anticipated to occur.

1.3.6 Westelcom/Arts Park

Westelcom Park is located midway between Durkee and Margaret Streets on a 0.55 acre parcel comprised of four tax parcels (207.82-1-12, 207.82-1-13, 207.82-1-14, and 207.82-1-15). The Park provides a pedestrian connection between the Durkee Street Public Parking Lot and the Strand Center Theatre and features lawn area, benches, picnic areas and a stage used for occasional music and variety shows. The site is considered to be sensitive for archaeological resources and is located within the Downtown Plattsburgh Historic District, which is eligible for listing on the National and State Registers of Historic Places and is included as a site that is eligible for listing on the Registers. The proposed redesign will result in a multi-tiered Arts Park which will include sculpture areas, multiple water features, a plaza, bicycle infrastructure, and pedestrian walking areas with landscaping throughout. In a July 3, 2019 letter (see Attachment 6), NYSOPRHP stated that "Based upon review of the plans dated 01/25/2019 it is the SHPO's opinion the proposed project will have No Adverse Effect on historic or archaeological resources." Since this time, the project has been modified to include the replacement and relocation of the existing 15-inch sewer line within the park project site to facilitate the proposed design. Based on the prior disturbance of this site, including the razing of buildings, the proposed replacement and relocation of the sewer line is not anticipated to result in adverse impacts to archaeological resources.

1.3.7 Broad Street Parking Lot

The existing Broad Street parking lot is being proposed for expansion and reconfiguration. The existing 57-space is located on a 0.72-acre part of tax parcel 207.20-7-15 to the south of Broad Street between Durkee Street and the Saranac River. The site is not adjacent or contiguous to buildings or sites listed on the State or National Registers of Historic Places. The proposed improvements include expansion and restriping of the existing lot to accommodate 21 additional parking spaces, see Figure 1. The proposed project to expand an existing off-street surface parking area would cause soil disturbance to an area that is characterized by urban fill (Un) (Figure 2 in Attachment 7).

As shown in the 1943 topographic, the land area currently occupied by the Broad Street parking lot does not exist. By 1949, the area appears to have been filled (Figure 3) forming the area currently occupied by the parking lot. By 1968, the land area had been expanded further into the Saranac River, see Figure 4. As shown in the 1964 image, the area was clear of vegetation but not yet developed. By 1994, the current Broad Street Municipal Lot occupies the site (Figure 4).

The site is included within an area that is considered to be archaeologically sensitive according to CRIS. However, the existing parking lot and proposed expansion area are located on land area that is anticipated to be comprised of urban fill. Therefore, no adverse impacts to archaeological resources are anticipated to occur. The site is not included within the DPHD and there are no National or State Register of Historic Places Eligible or Listed resources on or located substantially contiguous to the site. Therefore, no impacts to historic resources would occur as part of the project to expand the existing parking lot.

September 30, 2019

1.3.8 Plattsburgh Farmers' and Crafters' Market Relocation to 26 Green Street

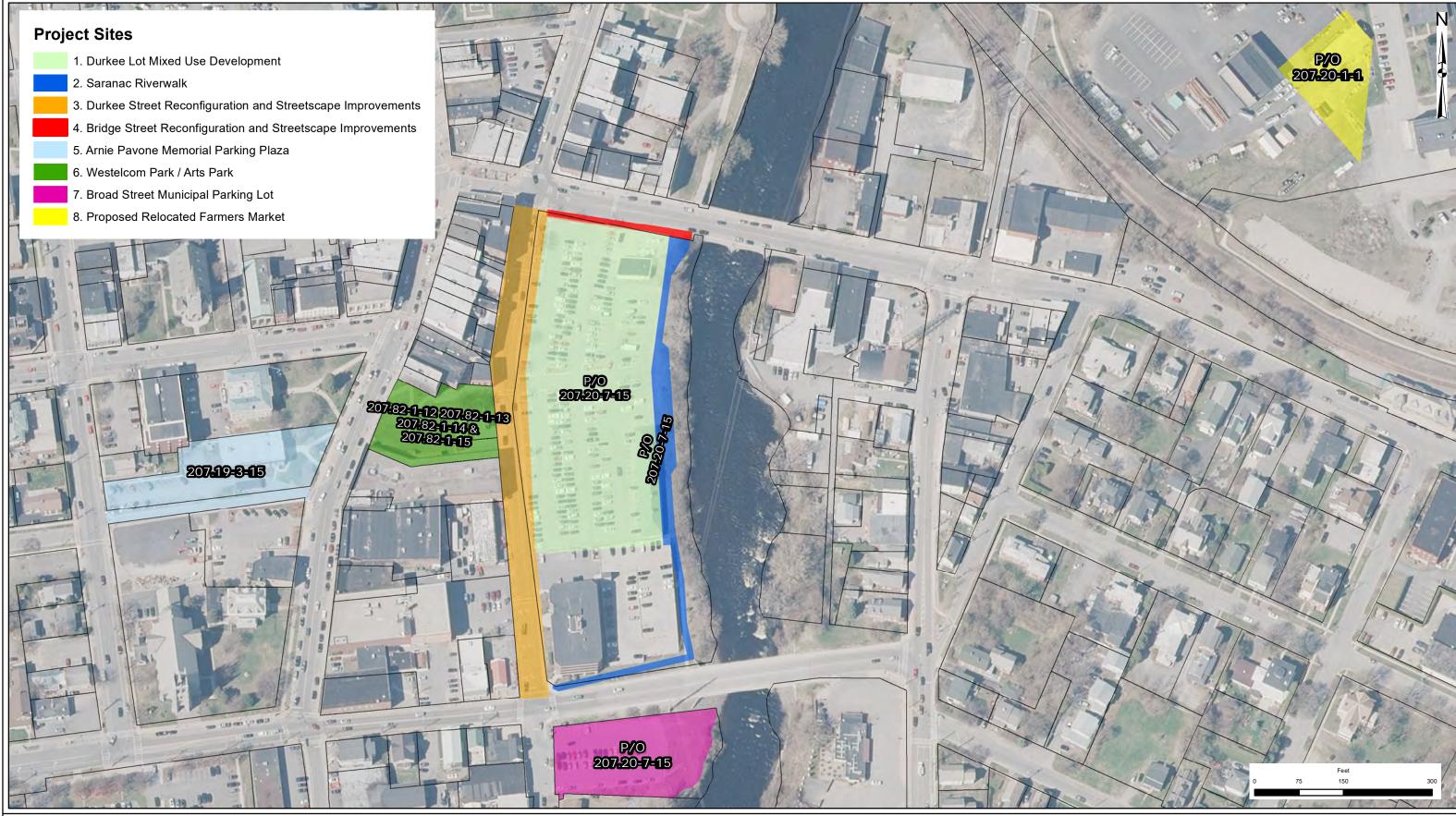
The City proposes to relocate the Plattsburgh Farmers' and Crafters' Market (PFCM) from its current location to 26 Green Street in the City's Harborside area. The site is anticipated to become part of a larger Master Plan considering future development along the harbor, which is being pursued through funding as part of a 2019 consolidated funding application by the City.

The building proposed for the relocated PFCM is a slab-on-grade metal framed building with metal siding and a sloped metal roof. This building is part of a group of buildings that comprise the Municipal Lighting Department campus all of which (including 26 Green Street, USN 01940.001366) were classified as not eligible for listing on the State Historic Register by NYSOPHRP on September 12, 2019. The existing paved area providing access from Green Street will be reconfigured to provide parking and passive open space, including a pavilion area. The 26 Green Street building, and other MLD buildings, are not included in the National and State Register Listed D & H Railroad Complex (90NR00182) but are included within an area that is considered to be archaeologically sensitive according to CRIS. See Attachment 8 for more information.

The land on which the MLD Building is located does not appear to exist until after 1931, see Figure 1. By 1939, the land area used for the present building had been created using urban fill. In 1956, buildings associated with the MLD campus appear, including the MLD Building located at 26 Green Street being considered for the relocation of the PFCM, see Figure 2. The MLD Building is obvious in a 1964 aerial, see Figure 3.

In 2003, an archaeological survey (03PR05681) was conducted for the harborside area. The survey does not identify any resources associated with the historic railyard on the MLD campus in the area of the 26 Green Street building. As part of the correspondence related to the survey, SHPO requested additional archaeological testing of the area identified as "non-rail yard lands" in the survey. The 26 Green Street MLD Building appears to be located far east and inland of the two islands identified in the 1852 Bevan Map, 1856 Ligowsky map and 1869 Beers Map (Maps 4, 5, and 6 in the document). The reconfiguration of existing paved parking area would not result in ground disturbance. Therefore, no adverse impacts to archaeological resources are anticipated to occur as part of the planned relocation of the PFCM to the MLD 26 Green Street building. See Attachment 8 for more information.

Figures





CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

Dutchess County Office: 21 Fox Street Poughkeepsie, NY. 12601 Phone: (845) 454-3980 Capital District Office: 547 River Street Troy, NY. 12180 Phone: (518) 237-0055 North Country Office: 20 Elm Street Glens Falls, NY. 12801 Phone: (518) 812-0513

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Clinton County, New York

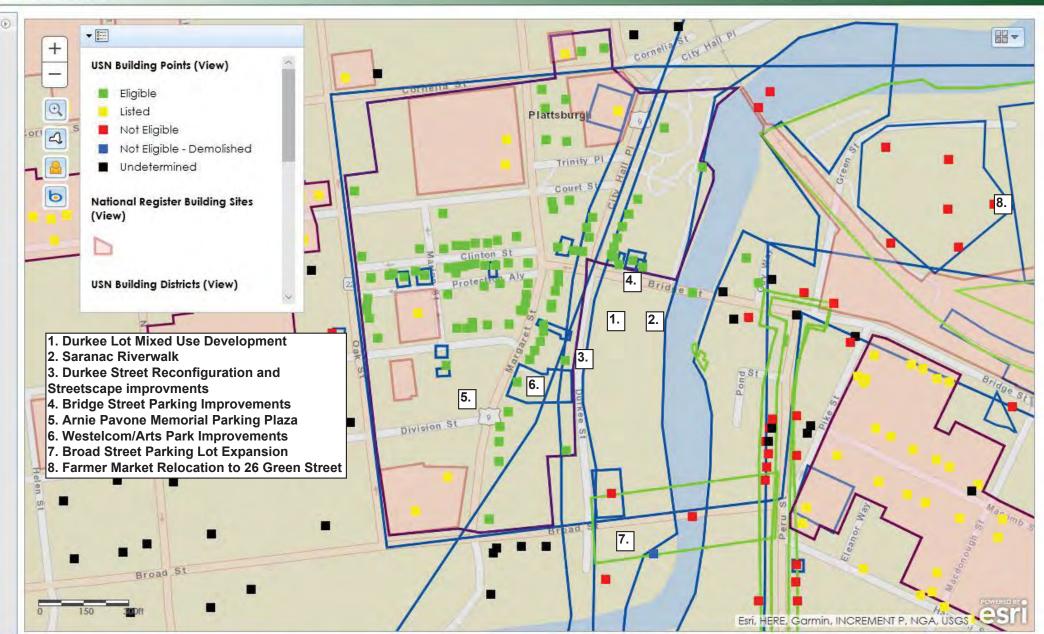
Source: Clinton County 2019 Online Tax Parcel Datbase
"https://services3.arcgis.com/33FPYaVQYNa7sFJ5/arcgis/rest/services/Parcels/FeatureServer" Accessed 13 September 2019;
NYS Department of Transportation 2008 Roads Dataset; NYS Office of Technology 2016 orthophoto imagery

HOME

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SEARCH)

COMMUNICATE



















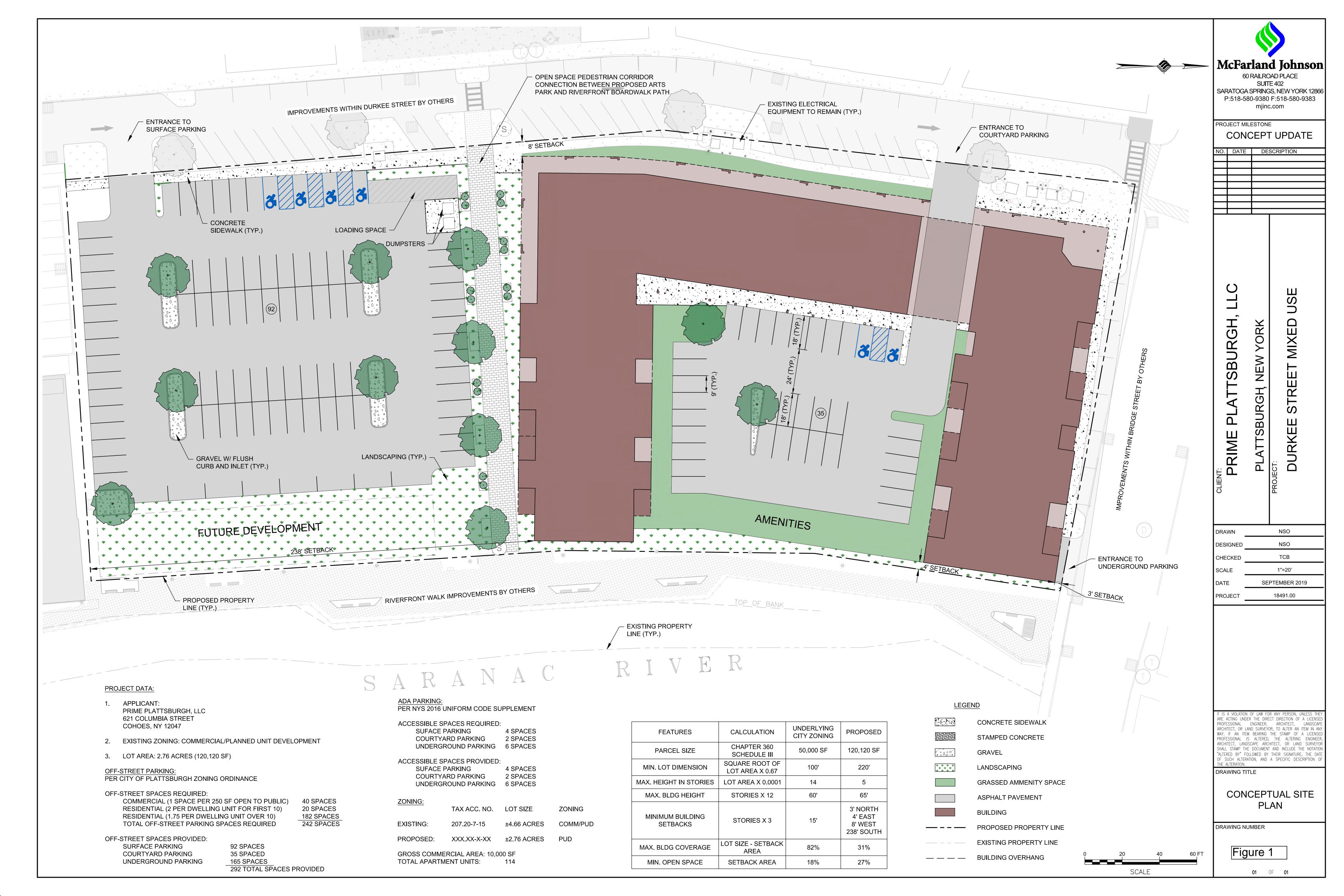


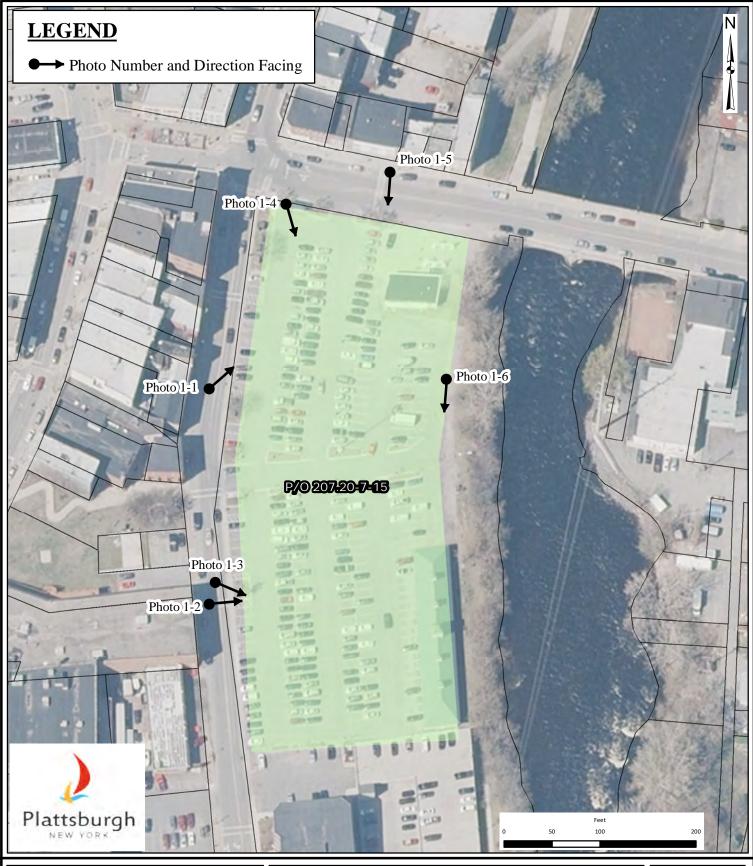




9/26/2019

Attachment 1 Durkee Lot Mixed Use Development







Dutchess County Office: 21 Fox Street, Poughkeepsie, NY 12601 Phone: (845) 454-3980

Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

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LANDSCAPE ARCHITECTS Phone: (518) 812-0513

City of Plattsburgh Downtown Area Improvement Projects Durkee Lot Mixed Use Development

Clinton County, New York

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 100 feet
Project:	91922.00
Figure:	2













PHASE 1A ARCHAEOLOGICAL SURVEY

PROPOSED MIXED USE DEVELOPMENT DURKEE STREET CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK

Prepared for

McFarland-Johnson, Inc. 80 Railroad Place, Suite 402 Saratoga Springs, New York 12866

Prepared by

Curtin Archaeological Consulting, Inc. 61 Rowland Street Ballston Spa, New York 12020 (518) 884-7105

Report Authors:

Edward V. Curtin, Ph.D. Kirsten Dymond, B.A.

June 2019

MANAGEMENT SUMMARY

SHPO Project Review Number:

Involved State and Federal Agencies: SEQR, City of Plattsburgh

Phase of Survey: Phase 1A

Location Information

Location: Parking area on Durkee Street between Broad and Bridge streets and along the

Saranac River

Minor Civil Division: Plattsburgh

County: Clinton

Survey Area

Length: 172 m (566 ft) Width: 88 m (289 ft)

Number of Acres Surveyed: 3.2 ac (1.3 ha)

USGS 7.5 Minute Quadrangle Map: Plattsburgh

Archaeological Survey Overview

Number and Interval of Shovel Tests: n/a

Number and Size of Units: n/a Width of Plowed Strips: n/a

Surface Survey Transect Interval: n/a

Results of Archaeological Survey

Number and Name of Prehistoric Sites: n/a Number and Name of Historic Sites: n/a

Number and Name of Sites Recommended for Phase II/Avoidance: n/a

Results of Architectural Survey

Number of buildings/structures/cemeteries within Project Area: 0 Number of buildings/structures/cemeteries adjacent to Project Area: 0

Number of previously determined NR Listed or Eligible

buildings/structures/cemeteries/districts: 6

Report Authors: Edward V. Curtin, Ph.D. and Kirsten Dymond, B.A.

Report Date: June 2019

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INTRODUCTION

Project Location and Description

Curtin Archaeological Consulting, Inc. has been retained by McFarland-Johnson, Inc. to conduct a Phase 1A archaeological survey for the proposed mixed-use development in the parking lot at the southwest corner of Durkee and Bridge Streets, City of Plattsburgh, Clinton County, New York. The general project location is shown in Figure 1. The Area of Potential Effect (APE) is shown in Figures 2-4.

The Phase 1A archaeological survey addendum was conducted to meet the procedures and information requirements of all federal, state and local regulatory processes. The report content and format follow the standards adopted by the New York State Archaeological Council (NYAC) and recommended by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP).

Purpose and Scope of Work

The purpose of this Phase 1A archaeological survey is to assess the archaeological sensitivity of the project's APE and to identify conditions such as indications of prior disturbance within the project APE. The scope of work for this undertaking includes: (1) assessment of the environmental setting and indications of prior disturbance; (2) compilation and interpretation of background information including a site file search and map research; and (3) a report of findings with recommendations.

ENVIRONMENTAL SETTING

The project APE is located in an urban setting along the Saranac River within the City of Plattsburgh. The greatest elevation is about 128 ft above mean sea level (amsl), and varies only about 10 feet lower toward the top of the riverbank, although it drops off steeply to the river at more or less 100 ft amsl (the river crosses the 100 ft contour at the Bridge Street bridge).

Only one soil type is mapped within the APE. It is described as Urban Land, or land covered by buildings and concrete (Table 1, Figure 3). Based upon the setting and information contained in archaeological surveys of nearby areas, it is likely that preconstruction soil, if undisturbed, were composed of sandy beach or glacial outwash deposits. Given the elevation of the project site above the river, paleosols within alluvial soil deposits may be limited or absent.

Table 1: Soil Descriptions (USDA 1993)

Name (symbol)	Soil Horizon Depth cm(in)	Color	Texture	Slope %	Drainage	Landform
Urban Land (Un)	n/a	n/a	n/a	0-8	n/a	Asphalt, concrete, buildings, and other impervious materials

The Geoengineering report prepared for this project provided a model stratigraphic profile of fill and former topsoil over alluvial sand (clayey sand and gravel) over glacial till (Terracon 2019). Depths varied by location, but the fill above former topsoil layer varied from 4 to 24.5 feet thick.

The Saranac River adjacent to the project site differs from the drowned stream-wetland locations of the Lake Champlain basin that Haviland and Power (1994) have discussed. This is because the Saranac in this stretch is cutting through upland deposits and its elevation appears to be too high to have been affected by the mid-Holocene isostatic and lake level adjustments that made such areas as Otter Creek in Vermont attractive to Archaic period hunters and

gatherers. However, the riverside location may have attracted precontact period Native Americans to seasonal fishing camps.

SITE FILES RESEARCH

The archaeological site files of the New York State Museum (NYSM) and the Office of Parks, Recreation, and Historic Preservation (OPRHP), both maintained by OPRHP, were reviewed in order to identify whether archaeological resources have been reported previously within or adjacent to the project boundaries. Twenty-four previously recorded sites occur within a one-mile radius. They include sites with standing structures as well as other historic and precontact (prehistoric) period sites. These sites are identified in Table 2. The closest of these sites to the APE are NYSM site 3085 and 7172, recorded as a village site and traces of occupation, respectively. These appear to be vaguely recorded, old reports from the early 20th century (Parker 1922).

Some of the historic period sites indicate the industrial context near the mouth of the Saranac River with the occurrence of forge and furnace sites sch as Weston's and Platts'. Other sites indicate the larger setting in an early part of Plattsburgh, with civic and commercial sites nearby. Finally, some of the sites (such as the forts to the south) indicate the military importance of the lower Saranac River -Lake Champlain setting in the War of 1812 and later.

Table 2: Archaeological Site File Search Results

NYSOPRHP Site #	Additional Site #	Distance to APE m(ft)	Time Period	Site Type	National Register
01940.000350	Old Clinton County Courthouse	167(548)	Built in 1889	Standing structure	Undetermined
01940.001277	Strand Theater	186(610)	1924-present	Still standing theater	Listed
01940.000348	Sperry's Tavern	541(1775)	Ca. 1800	Standing altered structure	Undetermined
01940.000004	Public Hanging Grounds	683(2241)	Constructed 1812	Courtyard	Undetermined
01940.000349	Hunter's Tavern	500(1640)	Ca. 1800	Standing structure	Undetermined
01940.000351	Riverside Cemetery	710(2329)	1814 (war of 1812)	Gravestones from the battle of Plattsburgh	Undetermined
01940.000355		460(1509)	19 th and perhaps 18 th C.	Industrial/ma nufacturing complex	Undetermined
01940.001093	PAFB VOQ Area (archaeological site)	737(2418)	C. 19 th C.	Plattsburgh Air Force Base	Not eligible
01940.001204	War of 1812 Military Hospital	762(2500)	Original 1812- 1814 rebuilt in 1816-late 19 th C.	Limestone slabs below surface	Undetermined
01940.001203	War of 1812 Store Houses	782(2565)	1812-1814 to late 19 th C.	Limestone slabs below surface	Undetermined
01940.000358	Weston's Forge & Norton Furnace	95(312)	Forge 1845- 1902; Furnace 1877-1890s	No info	Undetermined

NYSOPRHP Site #	Additional Site #	Distance to APE m(ft)	Time Period	Site Type	National Register
01940.000357	Platt's Forge(HAA 96-9)	242(794)	1798-prior 1820	No info	Undetermined
01940.001125	Riverwalk Historic Site	267(876)	19 th Century	Buried evidence	Undetermined
01940.000354	Village Site-shore North of Saranac River	829(2720)	No info	Village Site	Undetermined
01940.000347	Boynton Farm	1412(4633)	prior 1814- present	Charles C. Platt House	Undetermined
01940.001187	Site of Clinton Dynamite Co. Plant	1156(3793)	1884-1886	Foundation visible with 30' hole from explosion	Undetermined
01940.001126	Footbridge Historic Site	1358(4455)	early 19 th C.	Buried evidence	Undetermined
01940.000018	Fort Brown	870(2854)	Summer 1814-?	Historic marker	Listed
01940.000352	Fort Moreau-AFB	920(3018)	Summer 1814-?	Historic Marker, no visible evidence	Eligible
01940.000353	Fort Scott-AFB	1014(3327)	Summer 1814-1870s?	Historic Marker, no visible evidence	Undetermined
	NYSM 3085	0	No info	Village	
	NYSM 7175	924(3031)	No info	Trail	
	NYSM 7172	0	No info	Traces of occupation	
	NYSM 3083	1149(3770)	No info	Village or Camps	

PREVIOUS ARCHAEOLOGICAL RESEARCH

Archaeological surveys have not been performed previously in the project APE. The following are previous archaeological surveys identified in the vicinity.

Black Drake Consulting

2001 Phase 1A Cultural Resources Survey, Pond Street River Bank Reconstruction, City of Plattsburgh, Clinton County, New York.

Hartgen Archeological Associates, Inc.

2009 Phase IA Literature Review and Phase IB Archeological Field Reconnaissance, Multi-use path, George Angell Drive to Saranac Street, City of Plattsburgh, Clinton County, New York.

Morgan, Julie

1995 Archeological Survey of Plattsburgh Air Force Base, Clinton County, New York.

Skelly and Loy, Inc.

2001 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Geomorphology Report, PIN 7752.31.

2001 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Historic Resource Survey and Determination of Eligibility Report, PIN 7752.31.

2002 Clinton County, New York, U.S. Route 9 (U.S. Avenue and Peru Street) Reconstruction, Phase I Archaeology, PIN 7752.31.

U.S. Army Corps of Engineers

2017 Phase I Archaeological Resource Investigation PFC Harold P Lynch U.S. Army Reserve Center (NY054) U.S. Army Reserve, 99th Regional Support Command, Plattsburgh, Clinton County, New York.

The closest of these surveys was conducted by Black Drake in 2001. That project site is south of Bridge Street and directly across the river from the current APE. This survey found that the project site would have been archaeologically sensitive, but the section adjacent to the river was built land, and the rest had been thoroughly disturbed by later construction.

NATIONAL REGISTER OF HISTORIC PLACES SITES

The project site is adjacent or near to three National Register listed historic districts or properties. These are identified in Table 3. The closest of these is the Downtown Plattsburgh Historic District.

Table 3: National Register of Historic Places

NR#	Description	Address	Distance m(ft)
01940.00133 2	Downtown Plattsburgh Historic District	Plattsburgh, NY	7(24)
90NR00182	D & H Railroad Complex	Plattsburgh, NY	158(518)
90NR 00189	The Point Historic District	Plattsburgh, NY	141(463)

HISTORIC MAP RESEARCH

The following maps, ordered chronologically, were consulted to identify possible historic sites. Where possible, maps were rectified using GIS software. Historic map coverage is inclusive for the years 1779 to 1949. 15' USGS maps have not been included as they do not show sufficient detail for interpretation given the conventions used to depict urban areas.

The following maps are presented here as figures. The figure numbers are included in Table 4. Spatial distortions in the underlying historic maps may be apparent in comparison to the APE outline once rectified.

Table 4: Historic Maps

Map Date	Reference	Name/Other in PA
1779	A Chorographical Map of the Province of New York,	n/a
	Claude J. Sauthier (Figure 5)	
1814	Plan of the Siege of Plattsburg, and Capture of the	possibly one or two
	British Fleet on Lake Champlain (Figure 6)	buildings
1829	Map of the County of Clinton, David H. Burr (Figure 7)	n/a
1856	Georeferenced Map of Clinton Co., New York, A	minimum of 12 buildings
	Ligowsky (Figure 8)	
1869	Georeferenced Map of Plattsburgh, Clinton Co., New	minimum of 8 buildings
	York, Beers (Figure 9)	
1884	Georeferenced Sanborn Insurance Map (Figure 10)	minimum of 15 buildings
1891	Georeferenced Sanborn Insurance Map (Figure 11)	minimum of 20 buildings
1896	Georeferenced Sanborn Insurance Map (Figure 12)	minimum of 18 buildings

Map Date	Reference	Name/Other in PA
1899	Bird's eye view of Plattsburgh, Burleigh (Figure 13)	minimum of 12 buildings
1902	Georeferenced Sanborn Insurance Map (Figure 14)	minimum of 18 buildings
1909	Georeferenced Sanborn Insurance Map (Figure 15)	minimum of 15 buildings
1918	Georeferenced Sanborn Insurance Map (Figure 16)	minimum of 16 buildings
1927	Georeferenced Sanborn Insurance Map (Figure 17 a&b)	minimum of 21 buildings
1927-1949	Georeferenced Sanborn Insurance Map (Figure 18 a&b)	minimum of 19 buildings

MAP-DOCUMENTED STRUCTURES

The 1779 Sauthier map shows no structures in the vicinity of the project site. Given the frontier location, it is likely that it would them if significant structures existed. Certain sites established some years earlier, the house and mill of Count Charles de Fredenburgh, may have been destroyed by fire prior to the construction of this map. The 1814 map is associated with the War of 1812 land-based siege of Plattsburgh and Battle of Lake Champlain. It shows a bridge in the current Bridge Street bridge location and a string of buildings on Bridge Street that may have extended into the APE. The events commemorated in this map are described below in a short section on the September 6-11, 1814 British attacks on Plattsburgh.

The 1829 Burr map is schematic and shows limited detail, but it clearly shows that the APE was in the early 19th century village setting of Plattsburgh. The 1856 map shows the APE in the process of filling in with structures due to urban growth. A building is shown hanging over the river in the location of what was or would become a woolen mill next to the bridge. This map may conceptualize a millrace or other works on the river below the building superstructure. Changes in the shoreline discernable on the 1869 map suggest that a covered mill race had been constructed in this area. The 1869 Beers atlas shows the industrial and commercial development within the APE, with a woolen mill on the river near the bridge, other milling structures on the river to the south, commercial buildings at the corner of Durkee and Bridge, and residences on Durkee in the south part of the APE.

The Sanborn insurance maps available for 1884-1949 and the Burleigh 1891 perspective drawing provide considerable additional detail. Before describing the Sanborn maps it is worth mentioning that the Burleigh drawing appears to depict a covered mill race leading into and under the large factory on the riverbank next to the bridge. This was the location of the woolen mill. In the Burleigh drawing, the shoreline adjacent to the factory appears to be protected by a wall. A wall in this location is illustrated in Photos 1-3 in Appendix B.

The trend shown by the Sanborn maps is for patterns of growth, change, transformation, and sometimes total replacement in the industrial and commercial areas of the APE, as well as an increase in the number of dwellings along Durkee Street and the replacement over time of dwellings by commercial buildings. The early mill site on the river by the bridge was replaced by later mill construction and eventually it was destroyed by fire (referred to as a "fire wreck" on the 1918 map). It had last functioned as the United Shirt Collar Company (ca 1909). Sometime around the turn of the 20th century, the large sawmill to its south was replaced by a different building (Carroll's Excelsior Mills). This also was gone by 1918. The 1918 map also shows a substantial change, apparently a hardening of the shoreline, south of the fire wreck and in the vicinity of the former sawmill, where a wheel house is drawn and the shore has been configured with straight lines and right-angled corners, and a double line perhaps representing a new wall protecting the shore. During the rest of the early 20th century these industrial sites remained vacant while space filled in elsewhere with new and larger buildings extending from Durkee Street toward the river. In addition, the shoreline in the southern part of the APE was filled over and extended out over former river. The filling eventually continued to the present-day shoreline configuration. A comparison of the APE boundary to shoreline on the various historic maps illustrates the filling process, which seems to have filled in the south section first and eventually encompassed the northern area after the final map date (1949).

THE ROLE OF THE PROJECT LOCATION IN THE SEPTEMBER 1814 ATTACKS UPON PLATTSBURGH

The bridge now immediately northeast of the project location has been constructed upon the site of an old wooden bridge referred to as the lower bridge by Palmer (1886). The lower bridge was one of three potential crossings of the Saranac River during the September 6-11, 1814 Battle of Plattsburgh, the others being the upper bridge located farther upriver, and the ford near Pike's Cantonment, still farther upriver. Palmer (1886) has provided a detailed history of this battle; a brief summary focused on the lower bridge and its vicinity, including the project site, is included here.

As the British force some 13,000 strong advanced by land toward Plattsburgh, the American defending force of somewhat less than 6,000 moved back and consolidated into the military installation on the east side of the Saranac where Forts Moreau, Scott, and Brown were located, along with a military hospital, blockhouse, military stores, and artillery batteries. As they did so they tore up the planks from the lower bridge and used them to construct breastworks on the east side of the bridge. Here they took up positions to defend the crossing. The bridge frame remained standing and crossable by precarious scaling under fire, if anyone so dared. Although wading across the shallow river was possible, part of the defensibility of this location involved the tall, steep riverbanks. Over the course of the fighting the Americans "fired hot shot" into 15-16 buildings across the river so that the British could not use them for cover (Palmer 1886:196). From the description this would have included any buildings within the APE.

The three crossings were successfully defended by the Americans for several days and the lower bridge defense was never breached, although eventually on September 11, while a fierce naval battle was raging in the bay, British troops made it across the river at Pike's Cantonment, well upstream from the project location. From here the British pushed part of the American force southward toward a possible avenue of retreat at the bridge across the Salmon River. However, the British dropped their pursuit and retreated upon hearing the news of their navy's defeat in the bay. The British consolidated their forces in camps defended by artillery as the day of the 11th ended, and began a retreat northward under cover of dark at 9:00 PM, avoiding the sort of Pyrrhic victory in which they might have routed the American army and destroyed the Plattsburgh military installation, but lost half of their troops during that effort and the subsequent retreat northward under duress from American reinforcements. It is worth noting that the defense of Plattsburgh, the related American victory on the lake, and the withdrawal of the British army on September 11-12, 1814 led to the Treaty of Ghent, signed on December 24, 1814, ending the War of 1812.

To note succinctly the role of the project location during the 1814 battle, it was essential to the defense of the lower bridge crossing site, providing a steep riverbank and a cleared firing zone between the river and British positions in more defensible locations in the Village of Plattsburgh.

SOIL BORINGS AND GEOTECHNICAL SUMMARY ANALYSIS

Four soil borings were conducted for the project site by Terracon (2019). The present summary is provided for implications that this study has for this archaeological survey and its recommendations. The locations where the borings were performed appear to be keyed to building wall positions in the conceptual drawings.

The two northern most soil brings were placed at, or in close proximity to the planned northern building. They found no evidence of buried (former) topsoil, and identified 24 feet of fill near the bridge, and 11.5 feet of fill to the south. The finding of fill resting on probable boulders (Boring B-1) or sand and gravel (Boring B-2) indicates a lack of sensitivity for the occurrence of intact archaeological sites. The surprising 24' of fill at Boring B-1 may indicate substantial prior

removal of mill-related features. Boring B-1 appears to be too far west to have hit the mill race of the woolen mill.

The two southernmost soil boring each found buried former topsoil layers, at a depth of 13 feet in B-3, and at a depth of 4 feet in B-4. Materials such as brick, glass, wood, ceramic, etc. were not recorded in these former topsoil layers, unlike the finding of such items in reported fill. The age and nature of the reported former topsoils are unknown, but further comments are warranted based upon their locations and depths. Boring B-3 found a buried topsoil relatively deep at 13 feet. Its position 9 feet deeper than the former topsoil at B-4 indicates that it may have been at the foot of the steep slope along the old riverbank. Scaled measurement to place this location on the 1918 Sanborn map confirms that this location is on the former edge of the river. This location likely was within the dynamic, high energy environment subject to erosion as well as deposition, and therefore may have been an unstable environment for historic or precontact period occupation. Also, while the river was immediately to the east, it is likely that the area to the west was severely disturbed because it would have been in the construction area of the mill race that powered the saw and woolen mills to the north.

Boring B-4 found a former topsoil at a depth of 4 feet, conceivably on the elevated area behind the riverbank. A review of the Sanborn maps indicates that this was an open-air. backyard of a tenement building in 1909, but that this site was extensively disturbed when the tenement building was razed and the Clark Textile Co. and a livery were built by 1918. When the Clark Textile building was constructed, it occupied much of the tenement's north-south footprint and actually a substantially wider east-west footprint. Estimation of the B-4 soil boring location on the 1918 map places it near but probably just outside of the south wall of the Clark Textile building, possibly in an undisturbed area, but so close it may have been disturbed by construction. Later, more massive buildings replaced the Clark building and covered the location of the soil boring: this change is seen on the 1927 and 1949 Sanborn maps. The later buildings are labeled "Wholesale Hardware", shown in 1927, and "Factory Building" in 1949. There may have been continuity in the pilastered steel frame construction of these buildings, but additions and changes also are evident from 1927-1949. Stairs and a brick enclosed elevator ("BE") depicted on the 1949 map indicates that this was a substantial building presumably requiring a substantial foundation, while the provision of steam heat powered by an oil burner (also noted on the 1949 map) suggests there may have been a basement or partial basement and sub-floor piping. It is difficult to place an old, surviving former topsoil in this sequence of construction and site disturbance, but it is possible that after buildings were razed a topsoil developed before nearly 4 feet of fill was placed over it.

PRIOR DISTURBANCE

The APE has been disturbed previously by the construction and razing of buildings, and eventually the paving over of the razed site and the construction of the present-day farmers market building. The initial, identifiable episode of razing was the destruction of buildings by the Americans during the 1814 battle. This would have involved buildings fronting on Bridge Street, if they reached so far as the APE (Durkee Street did not yet exist, and the 1814 map illustrating the battle shows this area mostly vacant). Later building and razing cycles occurred during the 19th and 20th centuries, culminating in the removal of all buildings from the APE, the construction of a parking lot, and the installation of the Farmer's Market building. In addition, Sanborn maps show a waterline crossing the APE.

While previous disturbance may have extended to the basement floor level of some buildings, its extent is unknown between buildings. At the same time, the pattern of multiple building episodes and the later construction of larger buildings on the sites of earlier buildings may have resulted in a pervasive pattern of prior disturbance. The geoengineering report found an absence of former topsoil below fill in the north part of the project site. Former topsoils were found in the south part of the site under fill depths of 4 and 13 feet. The presence of buried

topsoil does not by itself change the evaluation of an extensively disturbed archaeological context, as the former topsoil locations may, in large measure, be disturbed themselves.

ARCHAEOLOGICAL SENSITIVITY

The APE is in a riverine location that would be considered sensitive for the occurrence of precontact period sites, except for the extensive prior disturbance. Also, the corner of Durkee and Bridge Streets would be considered sensitive the occurrence of early 19th century sites, again except for prior disturbance. It is also noted that the riverside area within the APE is built land over the river. In the south of the APE the old riverbank before extensive filling is estimated to be about 110 feet east of Durkee St. Looking north, the old riverbank position is difficult to know due to mill construction pre-dating the Sanborn maps. However, later changes are indicated by the outline of the APE on the various Sanborn maps. The fill is positioned over the site of an island that appears on various Sanborn maps (but disappears by 1918, before filling in this area). The island is not shown on earlier maps and given the high energy environment of the water course, and the island's disappearance by 1918, the island location is not considered to be archaeologically sensitive.

PHASE 1A SUMMARY AND RECOMMENDATIONS

A complete and comprehensive Phase 1A archaeological survey has been conducted. Without taking into account prior disturbance, the APE's riverside location is considered sensitive for the occurrence or precontact period archaeological sites, a contested War of 1812 firing zone, and 19th century commercial, industrial, and residential sites.

However, prior disturbance has been extensive. It may include the 1814 destruction by fire of structures that bordered or were just inside the northwest corner of the APE. It certainly includes multiple construction, razing and rebuilding cycles extensively across the APE. This is addressed with specificity below in relation to proposed buildings and parking. More generally, one of the deeper prior disturbances near the old river channel would have been the construction of the covered millrace. Based upon various map information, this race likely would have occupied much of the area near the original riverbank, including the ca 1884 woolen mill near Bridge Street and the sawmill to the south of this. Minimally this would have involved much of the northern side of the APE near the original riverbank. At the same time, it is noted that some of the stonework associated with the mill complex may be present along the current riverbank just south of the bridge. The apparent stone wall partly faced with concrete may be a feature of the mill era, although alternatively it may be part of a more recent retaining wall.

<u>Parking</u> essentially would be a retained function of much of the APE. The depth of fill, which ranges from 4 to 24.5 feet in different places based upon soil boring records, would prevent potential impacts from the continued parking function or reconstruction of the parking lot.

The north building would front Durkee and Bridge Streets; a swimming pool may be constructed behind the Bridge Street wing. Soil borings indicate that the depth of fill here is from 11.5-24.5 feet. No indications of former topsoils buried below fill were noted. This result showing no former topsoil is considered to provide confirmatory evidence of the prior disturbance that has been inferred from the sequence of multiple construction and demolition episodes.

The south building also has two wings, one fronting on Durkee Street and the other oriented perpendicular to Durkee on the south side of the east-west centerline of the APE. Soil boring B-3 at the east end of the north wing showed a fill depth of 13 feet over a former topsoil. This appears to have been placed near the pre-fill riverside at the foot of a steep riverbank or on its lower slope. The soil boring B-4 placed at the south end of the west wing found four feet of fill covering a former topsoil. The shallow fill depth seems anomalous in comparison to the deep fills found in other soil borings, but perhaps the native soils have been removed deep in the northern

soil borings (B-1 and B-2), while it is easily inferred that Soil Boring B-3 was placed beyond the old river bank through deep fill soils. The B-3 former topsoil environmental situation is considered dynamic and potentially unstable, probably not sensitive for archaeological site occurrence. The information provided by Soil Boring B-4 has been evaluated carefully with respect to the multiple construction episodes in this area, in order to determine whether a substantial remnant of undisturbed ground may be present. The result of this evaluation indicates that it is not likely that an important archaeological site could be preserved in this part of the APE, despite the anomaly of a former topsoil buried under relatively shallow fill.

As a result of the careful evaluation of the data provided in this report, the following recommendations are made:

- Additional archaeological investigation is not warranted.
- Caution is recommended to not disturb the stone wall along the river just south of Bridge Street, as this may be part of a 19th century mill race or other structure of historic age. It is noted that plans for this location appear to be for a riverside border of green space that will have trees, grass, and sidewalk that appear not to threaten an impact to the wall.
- A historic marker noting appropriate specifics of the 1814 battle in the vicinity of the bridge should be placed where pedestrians will be able to see and read it with a reasonably good view of the present-day bridge as a proxy for the 1814 bridge.

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Haviland, William A. and Marjory W. Power

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1886 History of Lake Champlain, 1609-1814. Facsimile of 3rd edition, 1886-1889. Purple Mountain Press, Fleischmann's, New York.

Parker, Arthur C.

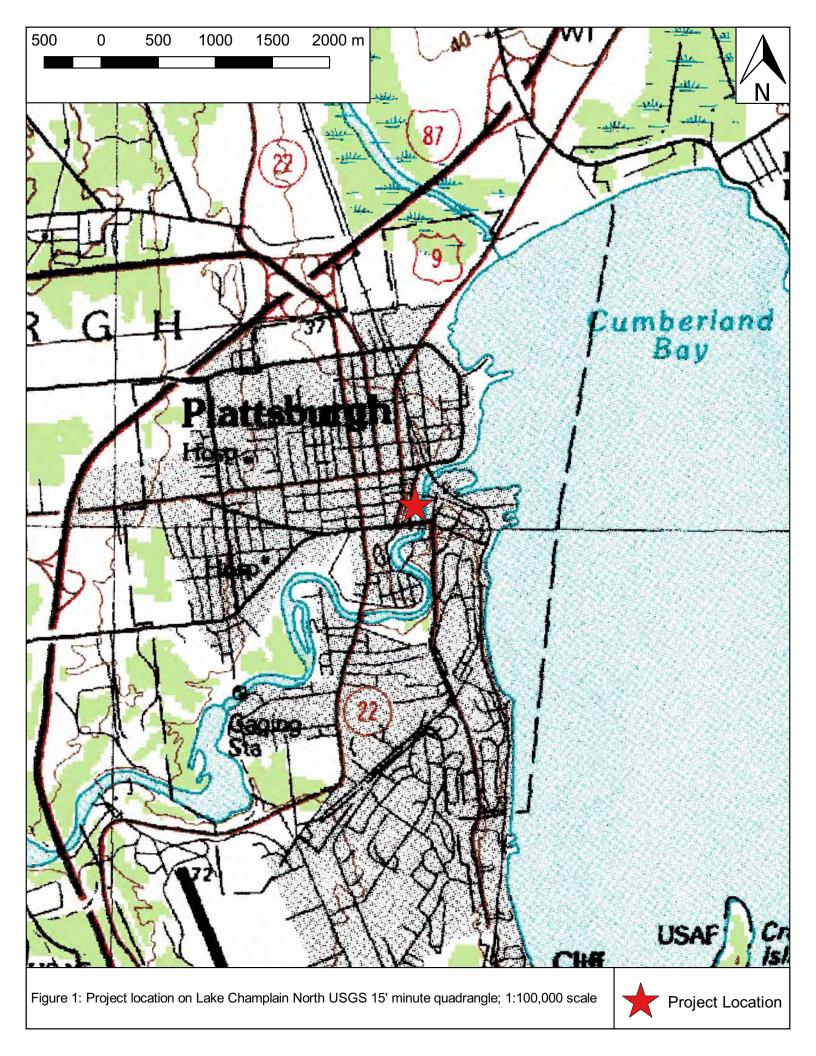
1922 *The Archeological History of New York.* New York State Museum Bulletins 235-238, Albany.

Terracon

2019 Preliminary Geotechnical Engineering Report, Mixed Use Development, Plattsburgh, New York. Terracon Consultants-NY, Inc., Dba Dente Group, Watervliet, New York.

United States Department of Agriculture (USDA) 1993 Soil Survey of Clinton County, New York.

APPENDIX A: FIGURES



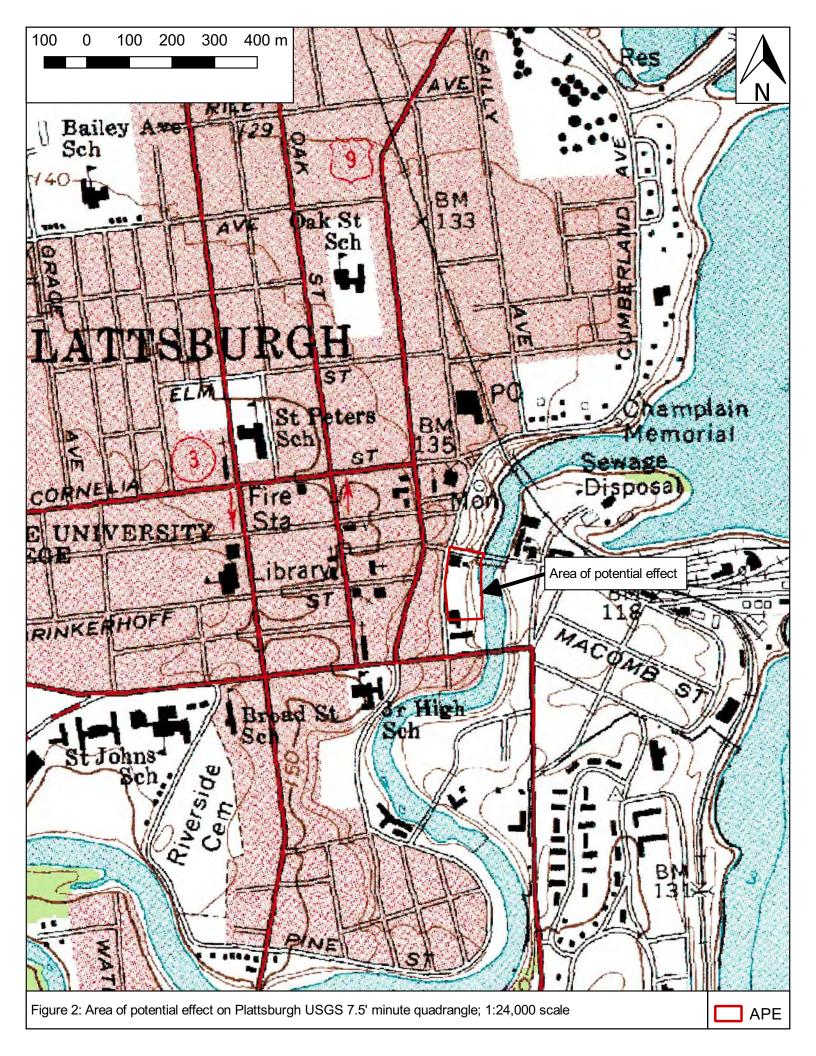






Figure 4: Orthoimagery showing existing conditions with photo angles

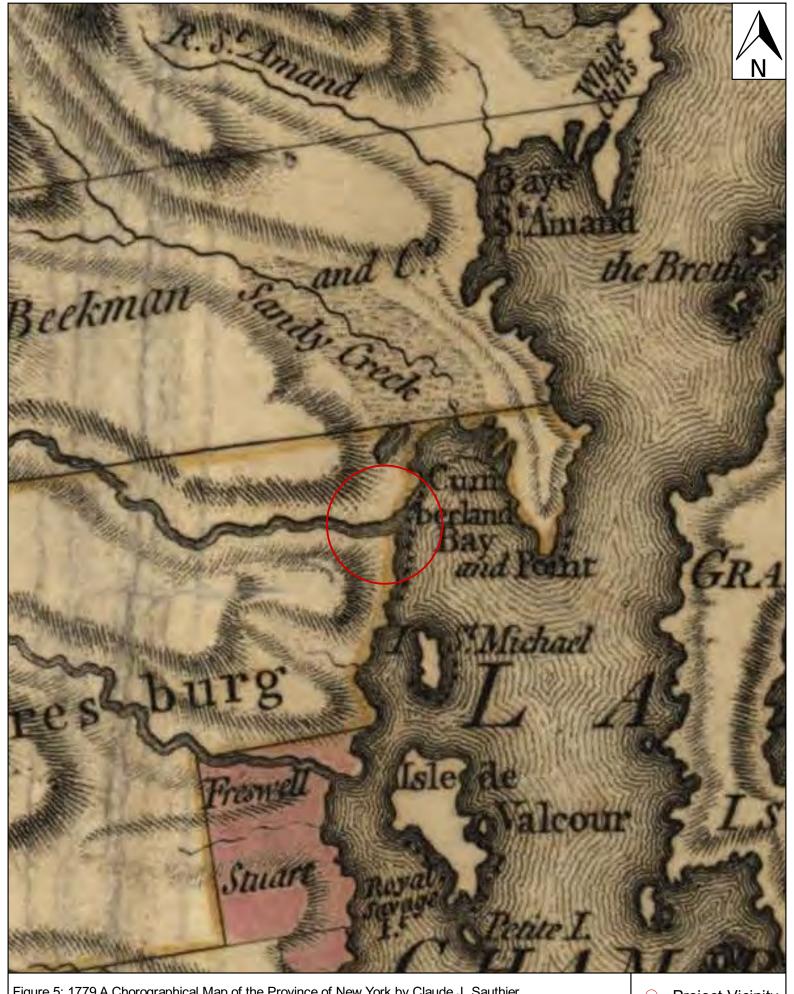
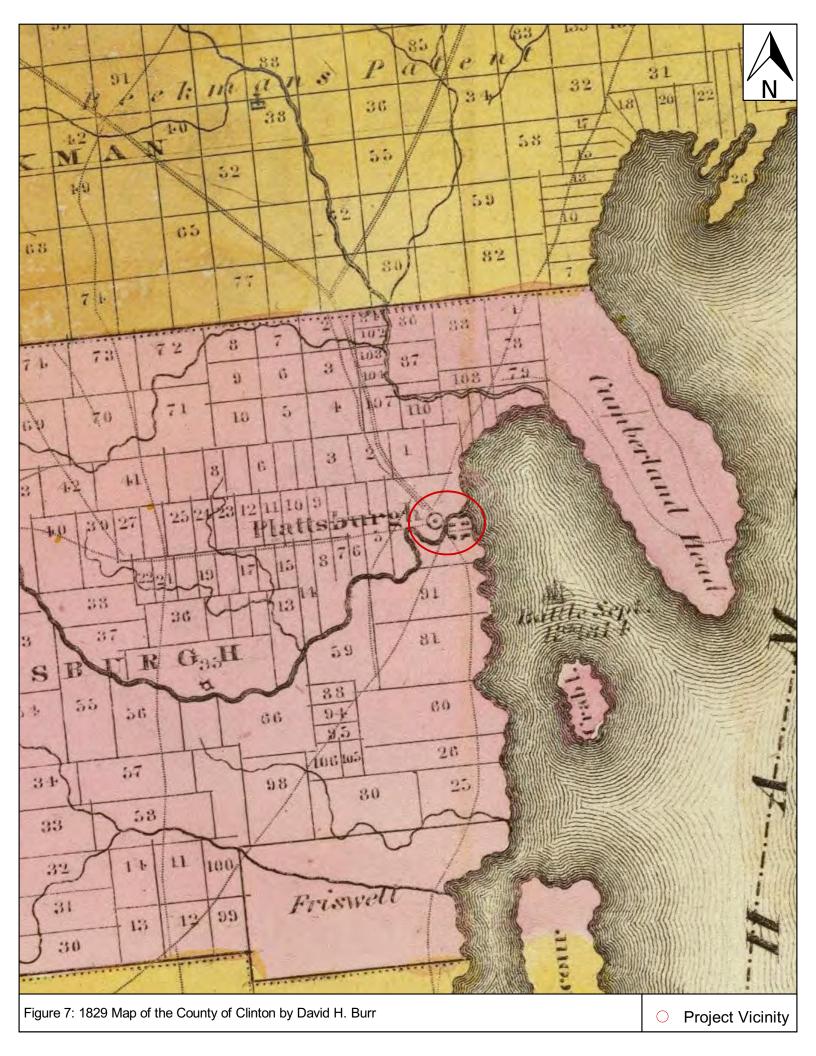




Figure 6: 1814 Plan of the Siege of Plattsburg, and Capture of the British Fleet on Lake Champlain



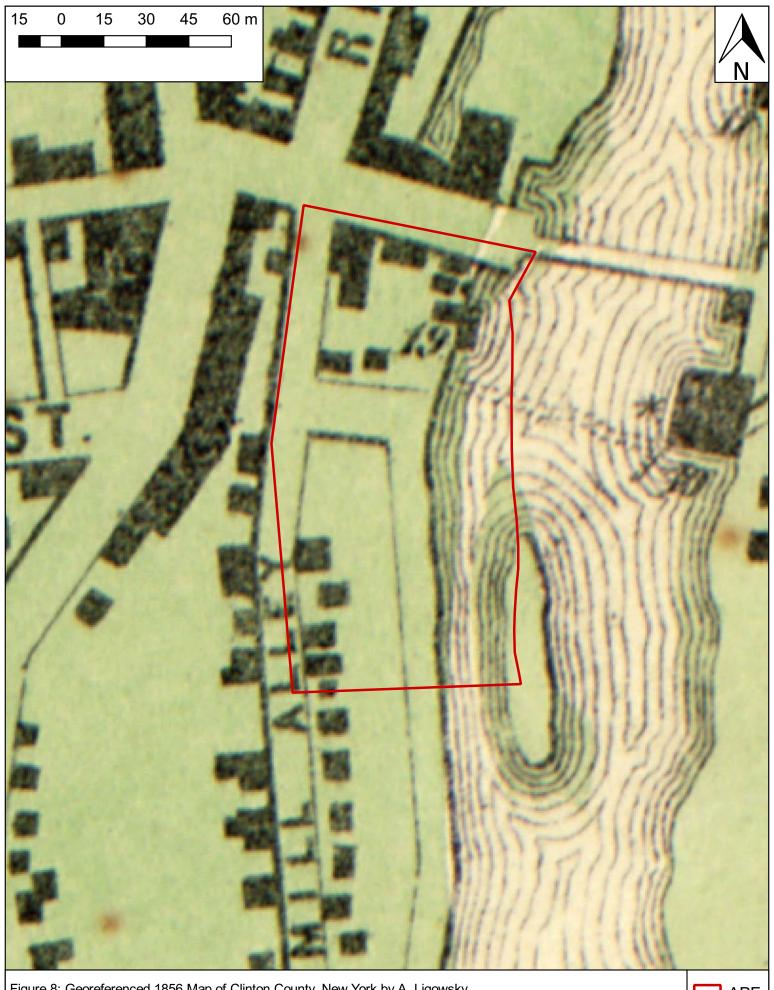


Figure 8: Georeferenced 1856 Map of Clinton County, New York by A. Ligowsky



Figure 9: Georeferenced 1869 Map of Plattsburgh, Clinton County, New York by Beers

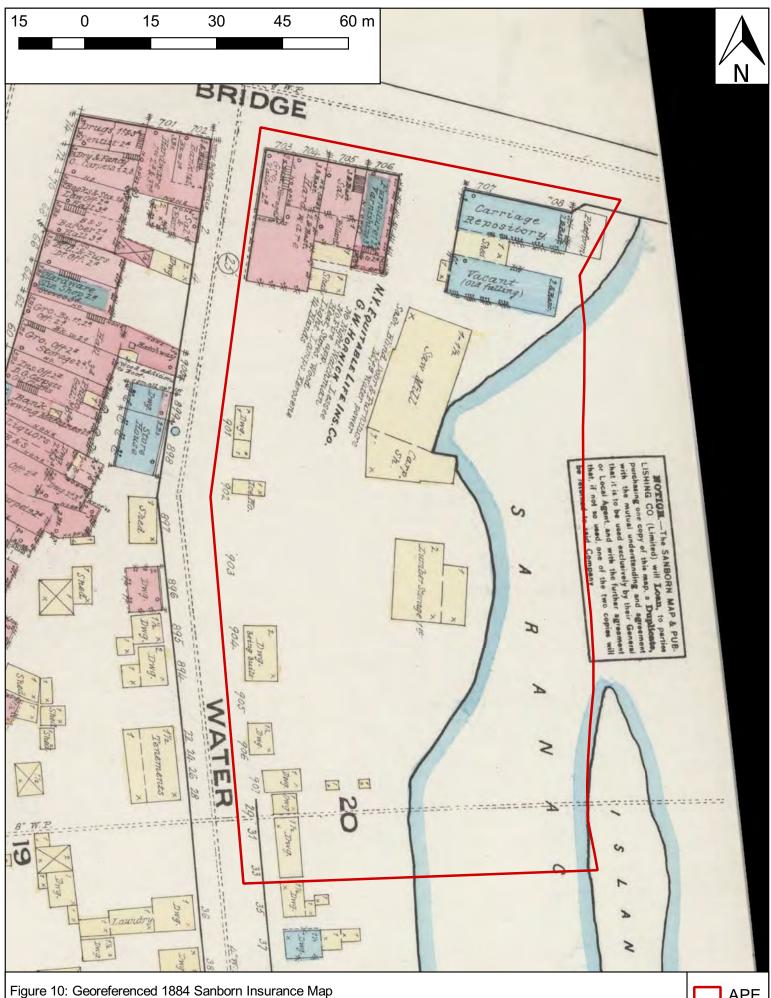


Figure 10: Georeferenced 1884 Sanborn Insurance Map

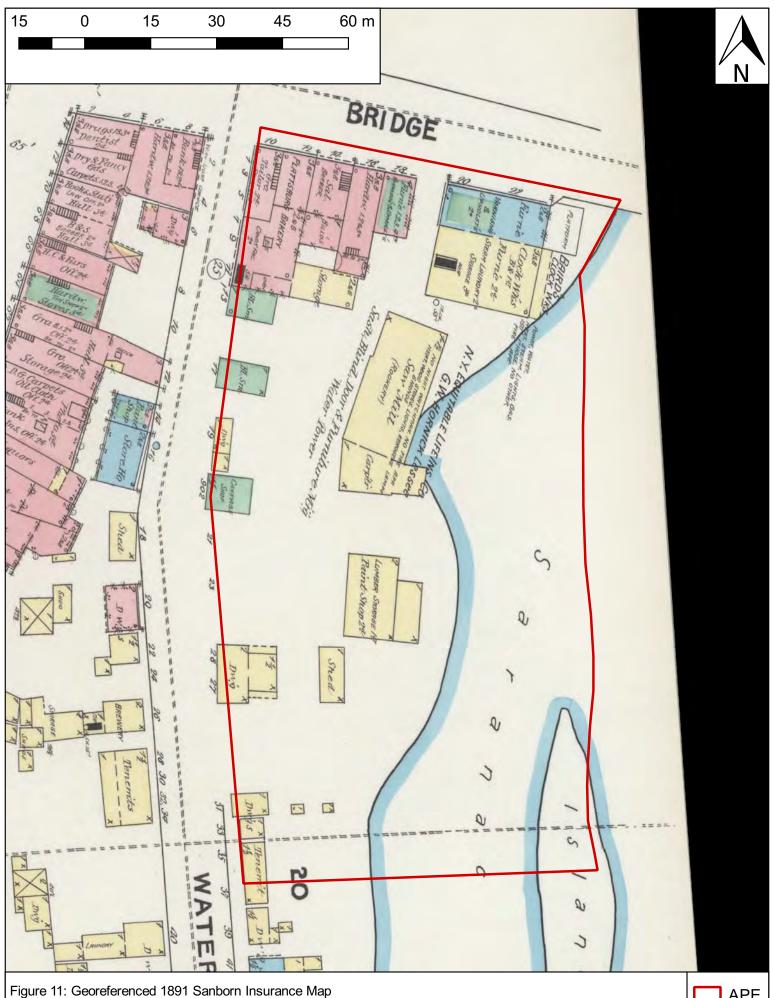
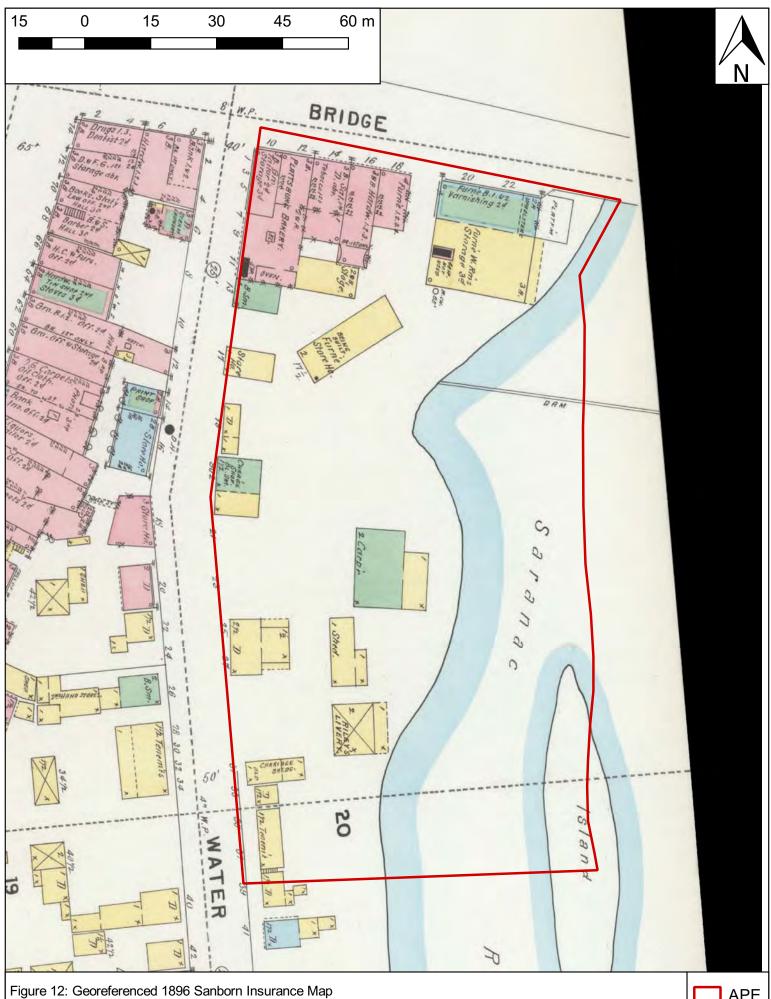


Figure 11: Georeferenced 1891 Sanborn Insurance Map



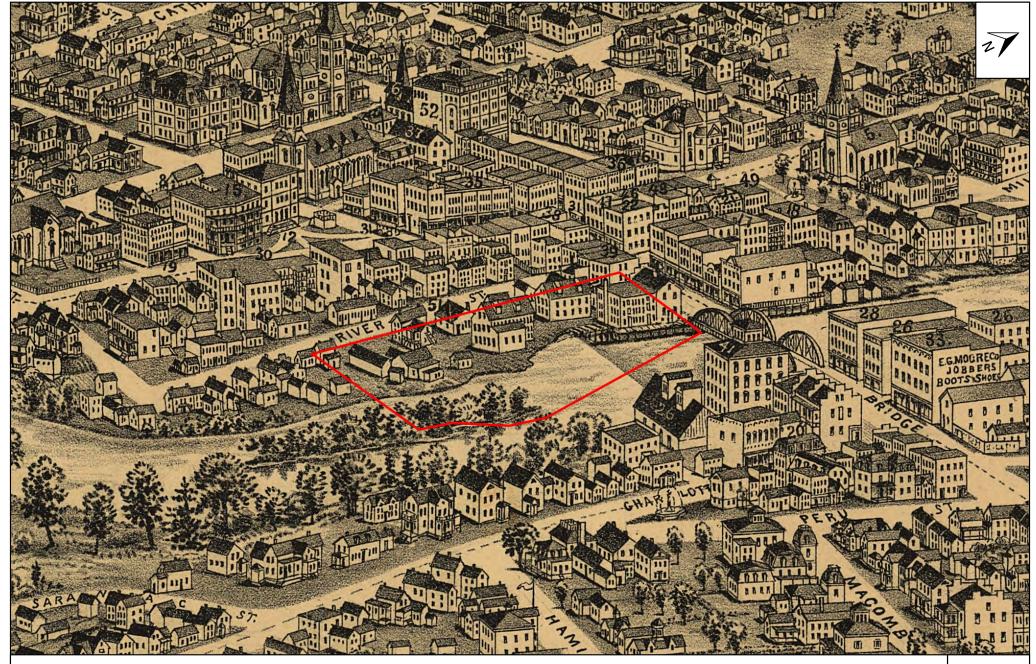
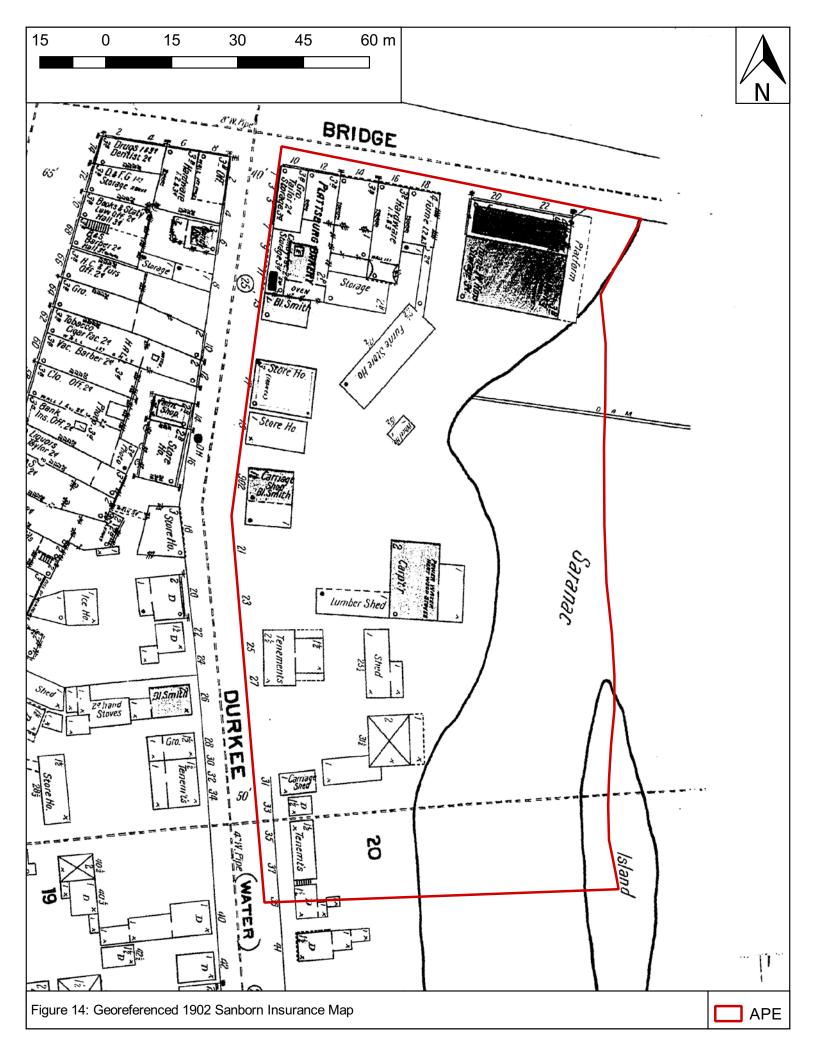
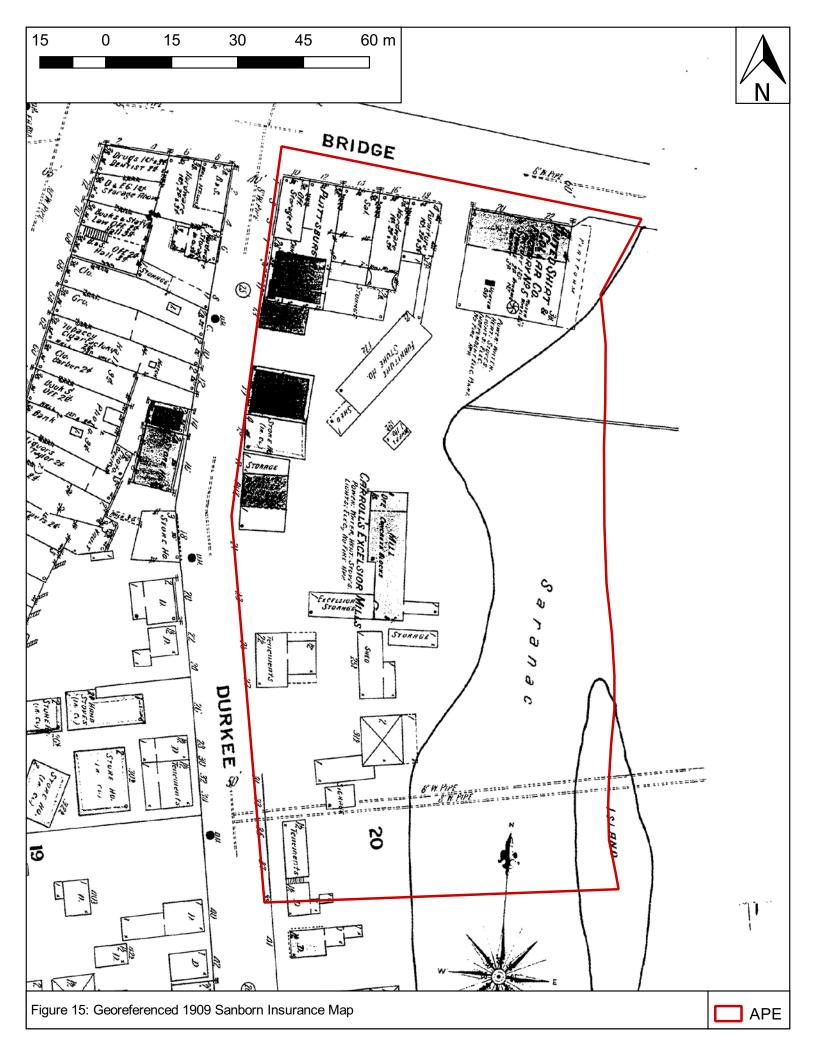
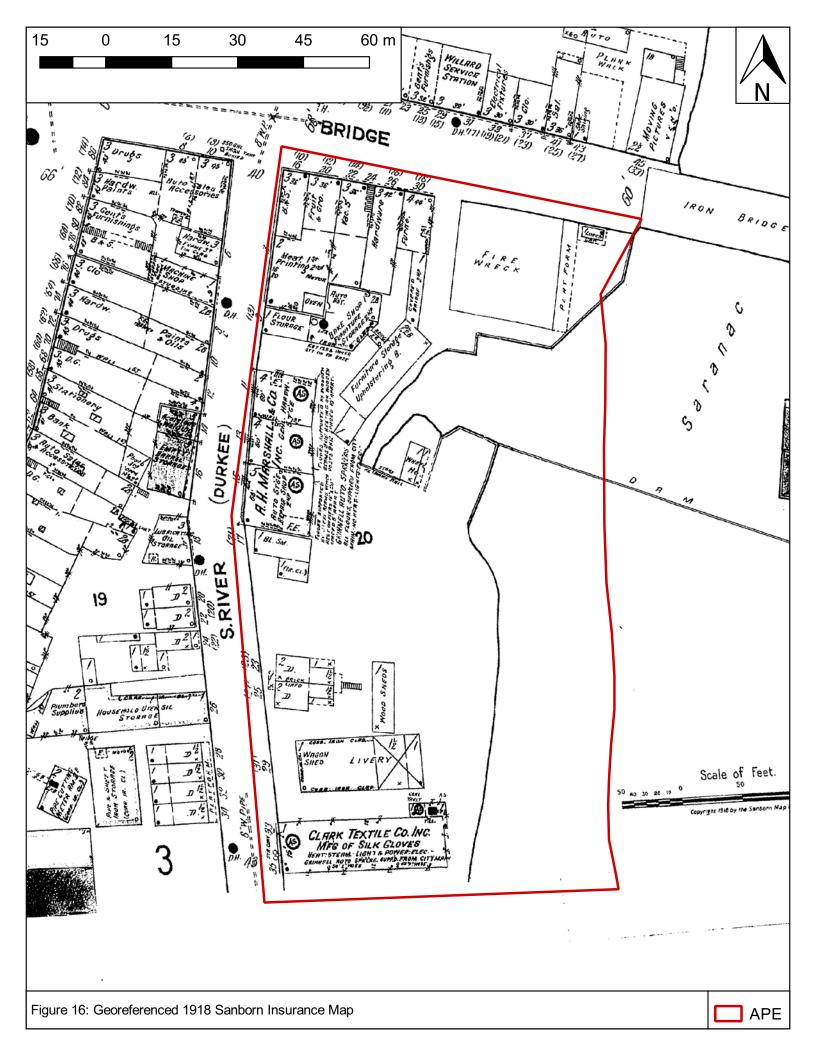
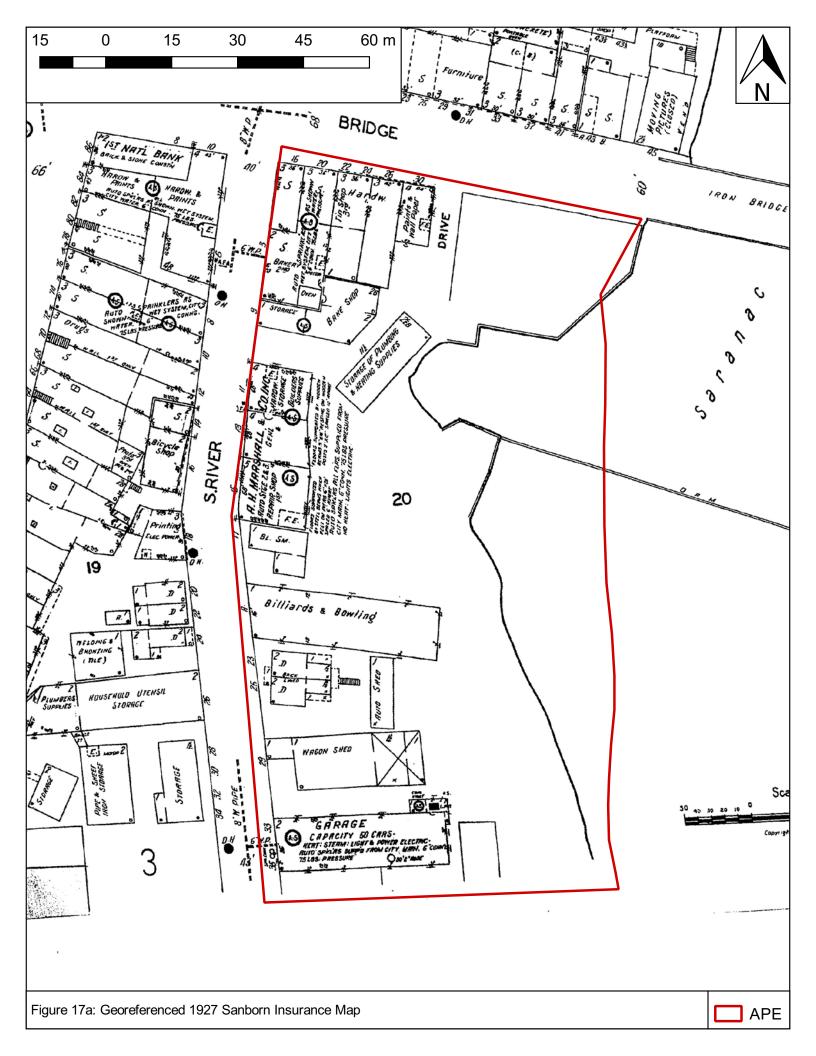


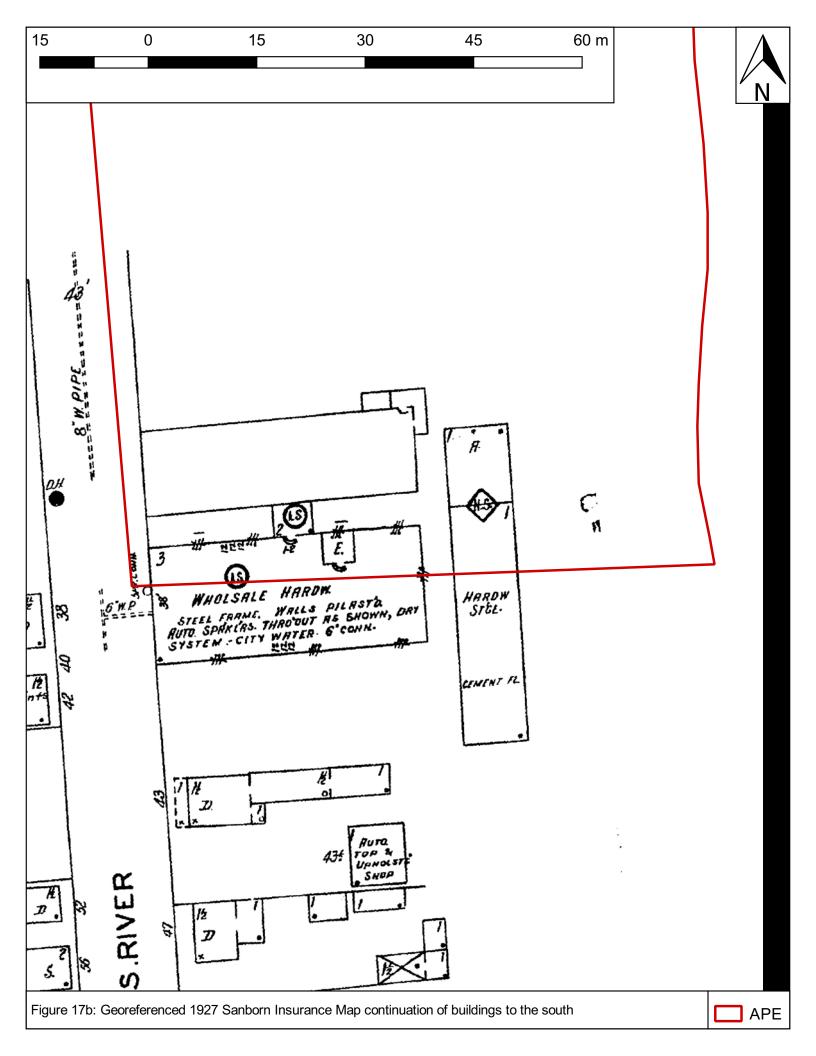
Figure 13: 1899 Plattsburgh bird's eye view by Burleigh

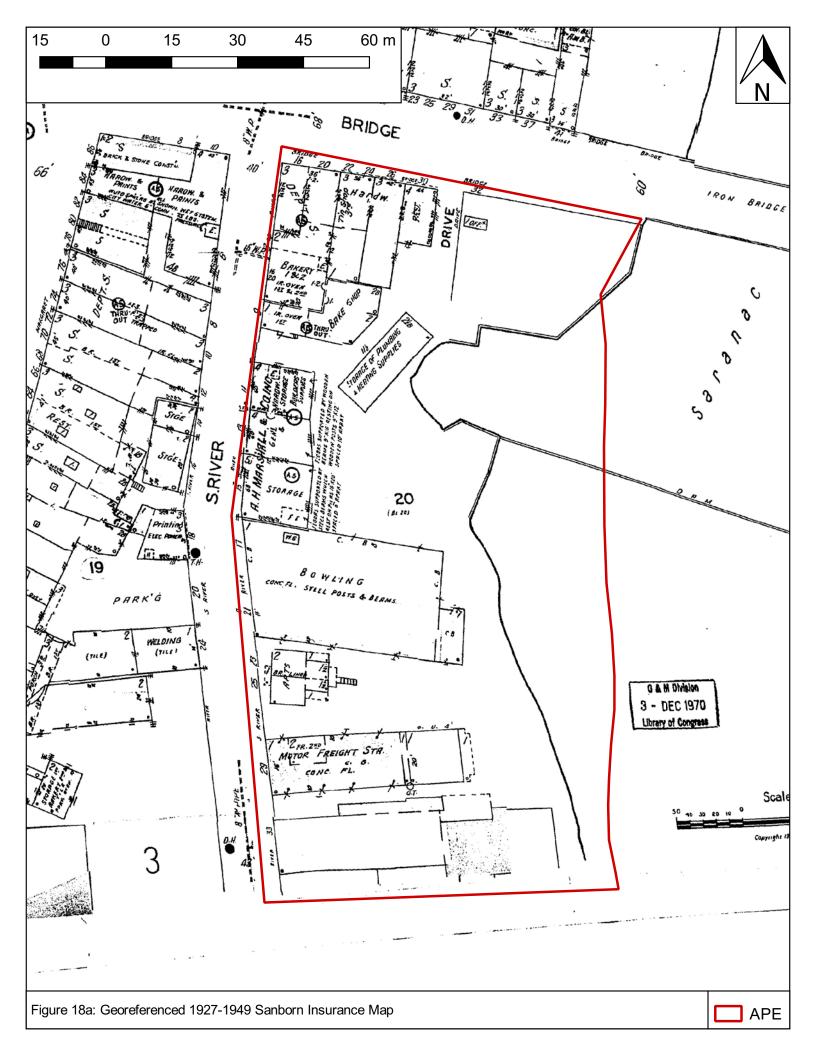


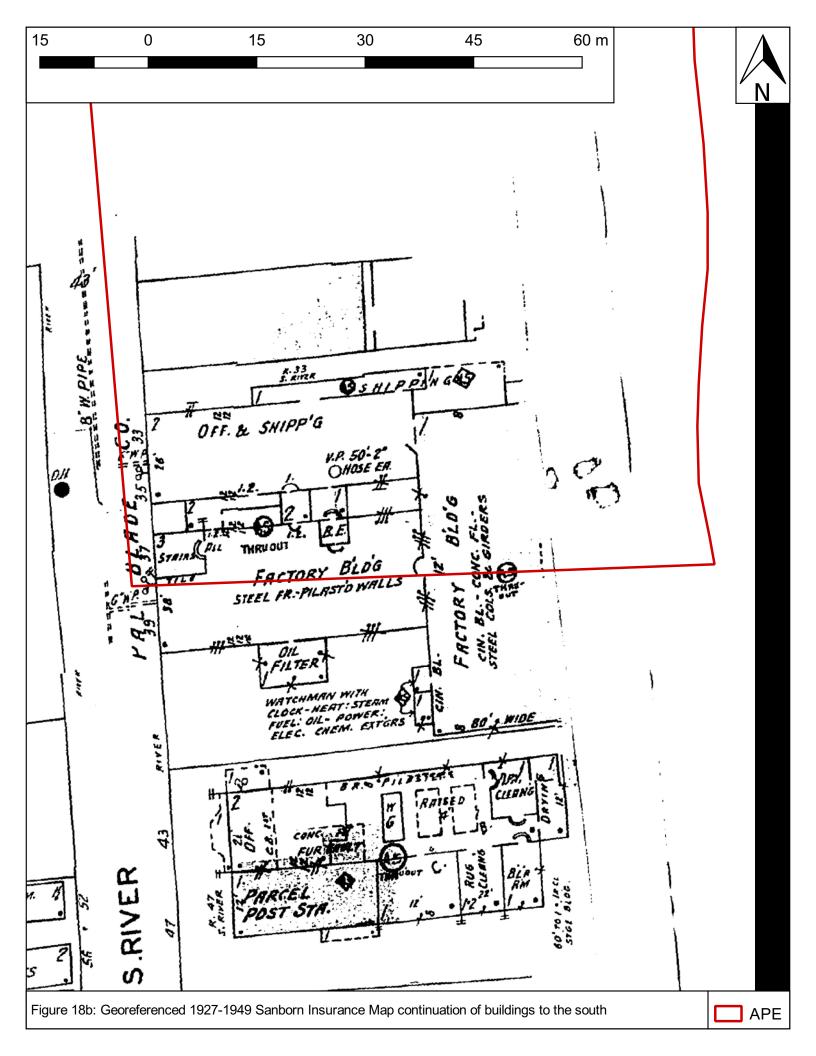












APPENDIX B: PHOTOS



Photo 1: Looking west/southwest at the concrete wall along the riverbank by the bridge. The APE is in the background.



Photo 2: A close of the same view in Photo 1.



Photo 3: Looking west, showing that stone and concrete juxtaposed: the concrete appears to cover a stone wall.



Photo 4: Looking northeast at the Bridge Street bridge over the Saranac. The terrace on the other side of the river was included in the Black Drake 2001 survey cited in the present report text.



Photo 5: View looking northwest at the buildings across Bridge Street



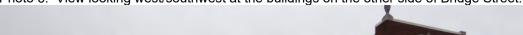




Photo 7: Looking south/southwest at the buildings on Durkee Street opposite the APE.



Photo 8: Looking north/northwest at the buildings on Durkee Street.



Photo 9: Looking southeast at the Excellus building south of the APE.



Photo 10: Looking southwest at the buildings across Durkee Street from the Excellus building.



Photo 11: Looking southeast at the parking structure south of the APE.



Photo 12: Looking northwest across the APE from the parking structure.



Photo 13: Looking northeast across the APE from the parking structure; farmers market building on the right.



Photo 14: Looking north/northwest at the filled area along the river.



Photo 15: Looking west at the filled area along the river. The filled area may extend to about the first row of cars.



Photo 16: Looking west/northwest at the north end of the parking lot. The former woolen mill and shirt collar factory site is in the grassy area to the right.



Preliminary Geotechnical Engineering Report

Mixed Use Development Plattsburgh, New York

April 3, 2019 Terracon Project No. JB195049

Prepared for:

Prime Plattsburgh, LLC Cohoes, New York

Prepared by:

Terracon Consultants-NY, Inc Dba Dente Group Watervliet, New York

Environmental 📁 Facilities 🧰 Geotechnical 😐 Materials

April 3, 2019

Prime Plattsburgh, LLC 621 Columbia Street Cohoes, New York 12047



Attn: Mr. Todd Curley, Partner

P: (518) 785-9000

E: tcurley@CBCPrime.net

Re: Preliminary Geotechnical Engineering Report

Mixed Use Development Durkee & Bridge Streets Plattsburgh, New York

Terracon Project No. JB195049

Dear Mr. Curley:

We have completed the Preliminary Geotechnical Engineering Report services for the above-referenced project. This study was performed in general accordance with Terracon Proposal No. PJB195049 dated March 5, 2019. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs, and pavements for the proposed project. This report should be used for preliminary planning purposes only. Supplemental subsurface explorations and evaluation will be required to refine and finalize the geotechnical related recommendations.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants-NY, Inc.

Edward C. Gravelle, P.E. Senior Engineer

Fred A. Dente, P.E. Principal

REPORT TOPICS

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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES SITE LOCATION AND EXPLORATION PLANS EXPLORATION RESULTS SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Preliminary Geotechnical Engineering Report

Mixed Use Development Durkee & Bridge Streets Plattsburgh, New York Terracon Project No. JB195049 April 3, 2019

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Mixed-Use Development to be located at Durkee & Bridge Streets in Plattsburgh, New York. The purpose of these services is to provide preliminary information and geotechnical engineering recommendations relative to:

- Subsurface soil (and rock) conditions
- Groundwater conditions
- Site preparation and earthwork
- Demolition considerations
- Excavation considerations
- Dewatering considerations

- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per NYSBC
- Lateral earth pressures
- Pavement design and construction
- Frost consideration

The geotechnical engineering Scope of Services for this project included the advancement of four test borings to depths ranging from approximately 20 to 27.5 feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included in the **Exploration Results** section.

SITE CONDITIONS

The project site is located at the intersection of Durkee and Bridge Streets in the City of Plattsburgh, New York. The site is currently used as a municipal parking lot which we understand was formerly occupied by commercial buildings. The north, south and west sides of the site are bordered by City streets and the east side by the Saranac River. The parking lot surface grades slope from elevations 120 to 128 feet along Durkee Street downward to between 116 and 118 feet at the top of the Saranac River embankment. The toe of the river embankment slope is between elevations 98 and 100 feet.

Mixed Use Development Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049



The USDA Soil Survey of Clinton County has mapped the surficial soils as Urban Land at the project site. Mapping and information obtained from the National Cooperative Soil Survey website is presented in the **Supporting Information**. Bedrock in the project area is shown to be Trenton Group shale and limestone on the Geologic Map of New York published by the State Education Department.

PROJECT DESCRIPTION

The project will entail the construction of two mixed-use buildings with associated parking lots and entrances from the adjoining City streets. The buildings will be five levels, with the first providing automobile parking spaces and the remaining levels a mix of apartments and commercial spaces. Portions of the buildings may be built into the gently sloping site grades resulting in partial basement areas. Site grading plans and floor elevations for the buildings we not developed at the time this report was prepared.

We assume the addition may be a combination of steel and/or wood framing. Loading information was not provided to us but for the purposes of this report we have assumed a maximum column load of 500 kips and wall load less than 6 kips per linear foot.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Fill / Former Topsoil	Varying mixes of gravel, sand, silt and clay, pieces of wood, brick, and cinders underlain by the former topsoil layer
2	Alluvial Sand	Clayey sand with gravel
3	Glacial Till	Silty sand with gravel

The fill and underlying topsoil layers extended to depths ranging between 6 and 24.5 feet below the ground surface. The fills were deepest in test boring B-1 located at the northeast corner of the site near the bridge over the Saranac River. As would be expected, the fill depths diminished

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further away from the river approaching Durkee Street. The native soils beneath the fills were of various thickness and they extended to the boring refusal depths encountered between 20 and 27.5 feet below the ground surface. Refusal may have been encountered at or near the bedrock surface, but this was not confirmed in the preliminary site explorations.

Groundwater measurements were obtained during and/or upon completion of drilling and sampling as denoted on the Boring Logs. In borings B-1, 2, and 3, the groundwater depths varied from 19.4 to 20.2 feet below grade. This corresponds roughly to groundwater surface elevations in the range of 97.6 to 100 feet. In test boring B-4, it appears that layers of trapped and perched groundwater were present within the deep fill layers at this location. Groundwater at this location was measured at 6.4 feet below grade 24 hours after the drilling was completed. It is expected that the groundwater depths will vary with fluctuations in the Saranac River water levels and seasonal changes in precipitation and runoff.

GEOTECHNICAL OVERVIEW

The project site was filled in the past to create the existing parking lot surface elevations. The fills varied in composition from clean sand to silt and clay containing wood, brick and other debris. These fills and the original topsoil layer found beneath them are not suitable for the support of conventional shallow spread foundations and slab-on-grade design. Thus, for preliminary planning purposes it should be assumed that the new building foundations and floor slabs must be supported on deep pile foundations. Steel H-piles driven to end bearing on bedrock is the recommended pile option for this site. While the presence of bedrock was not confirmed through coring during this preliminary site exploration, it appears it may be found near the depths where the borings were terminated, i.e., about 20 to 28 feet below the ground surface.

While removal and replacement of the existing fills would allow for the use of standard shallow spread foundations and slab-on-grade design, this option may not be economically feasible considering the depths of fill, the need for temporary shoring along City streets, and any environmental factors that may be of concern related to the removal of the fills from the site. Thus, the recommendations which follow were prepared assuming pile support will be provided for the new building. These preliminary conclusions and recommendations may be modified based upon the results of supplemental explorations and evaluations which are required to finalize planning for the geotechnical aspects of design and construction.

Removal of the existing fills would not be feasible beneath new pavements. Thus, the Owner must accept some degree of risk that the pavements may settle over time and required periodic maintenance. Subgrade preparation procedures are provided in the following sections of this report to reduce, but not eliminate these risks.

The General Comments section provides an understanding of the report limitations.

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SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC).

Seismic Site Classification

Based on the soil properties encountered at the site and as described on the exploration logs, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 28 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth, if desired.

Liquefaction

Based upon the composition and relative density of the site soils, their liquefaction should not occur in response to earthquake motions.

EARTHWORK

Earthwork is anticipated to include stripping of asphalt and topsoil, removal of any former building remains, and cut and fill placement as applicable to the site grading plans to be developed. The following sections provide preliminary recommendations for use in planning for the site development. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Site Preparation

Site preparation should begin with stripping of asphalt and topsoil from proposed building and pavement areas. If the remains of former buildings are encountered they should be removed in

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their entirety from beneath the building pad and to a depth of a least three feet below any final pavement surface.

Prior to placing fill and/or after cut to the plan subgrade elevation in pavement areas, the surface should be proof-rolled using a steel drum roller with a static weight of at least ten tons. The roller should operate in its vibratory mode, unless requested otherwise by the Geotechnical Engineer observing the work, and travel at a speed not exceeding three feet per second (two miles per hour). Areas found to be excessively deflecting under the proof-roll should be delineated and subsequently addressed by the Geotechnical Engineer. Excessively wet or dry material should either be removed, or moisture conditioned and recompacted as required to achieve their satisfactory compaction. The proof-roll and surficial stabilization work will reduce, but not eliminate the risk for the pavements to settle over time.

Proof-rolling should also be done beneath pile supported slabs to establish a stable base for the slab construction.

Fill Material Types

Structural Fill should be used as fill/backfill within the proposed building pad and pavement areas. The fill should consist of imported sand and gravel or suitable on-site material. Imported Structural Fill should contain no particles larger than 3 inches and less than 10 percent, by weight, of material finer than a No. 200 mesh sieve. The imported materials should be free of recycled concrete, asphalt, bricks, glass, and pyritic shale rock. Portions of the existing on-site fills composed of sand which is free of organic matter and other debris may be consider Suitable for reuse as Structural Fill pending its acceptance by the Geotechnical Engineer at the time of construction. Existing fills composed of silt and clay should not be reused as Structural Fill.

Fill Compaction Requirements

The Structural Fill should be placed in uniform loose layers no more than about one-foot thick where heavy vibratory compaction equipment is used. Smaller lifts should be used where hand operated equipment is required for compaction. Each lift should be compacted to no less than 95 percent of the maximum dry density for the soil which is established by the Modified Proctor Compaction Test, ASTM D1557. In landscape areas, the compaction may be reduced to 90 percent of maximum dry density.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks.

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Temporary Excavations and Bracing

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations. For planning purposes, it should be assumed the existing fills and native soils are classified as OSHA Type C materials.

All excavations should be completed so as not to undermine roads, utilities, and/or foundations of adjacent structures. In general, excavations should not encroach within a zone of influence defined by a line extending out and down from the existing structures at an inclination of 1.5H:1V. Excavations that encroach within this zone should be sheeted, shored, and braced to support the soil and adjacent structure loads, or the structure should be underpinned to establish bearing at a deeper level.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proof-rolling, and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

It should be understood the actual subsurface conditions that exist will only be known when the site is excavated. The continuation of the Geotechnical Engineer into the construction phase of the project will allow for validation of the subsurface conditions assumed to exist for this study and the design recommended in this report, including assessing variations, providing recommendations and reviewing associated design changes.

DEEP FOUNDATIONS

Steel H-piles driven to end bearing on bedrock may be designed for an allowable axial compressive load equal to 10.5 kips per square inch (ksi) times the pile cross-sectional area. For example, HP14x89 section piles of Grade 50 steel with an area of 26.1 square inches would have an allowable axial capacity of 274 kips (26.1 in² x 10.5 ksi). Similarly, and HP12X53 section would have an allowable axial load capacity equal to 162 kips. A smaller section could be selected for lighter loaded piles which may be used to support building floor slabs. It appears that bedrock may be present at or near the boring termination depths of 20 to 28 feet, but this must be confirmed by supplemental test borings and rock coring to finalize the pile design.

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The HP14x89 and HP12x53 pile sections can be assumed to develop lateral load capacities of at least five kips at translations of one-quarter (¼) inch or less with a semi fixed head condition. Lateral load capacity of pile caps may be calculated using a reduced passive earth pressure as lateral pile capacity is predicated on allowable lateral translation of one-quarter (¼) inch. The coefficient of passive lateral earth pressure and total unit weight of the compacted Structural Fill against pile caps and grade beams may be assumed to equal 2.5 and 120 pounds per cubic foot, respectively. As an example, applying these parameters to a five feet thick pile cap which is embedded 1.5 feet beneath grade generates an allowable lateral loading of six kips per lateral lineal foot of pile cap. This load capacity would be in addition to that of the individual piles.

The piles should be spaced no closer than three feet, with a minimum of three piles in any group supporting columns not restrained laterally by grade beams or haunched slabs. Piles which are laterally restrained may be installed in single or double pile groups. No pile group reduction factor for vertical loads is necessary. Group reductions for lateral loads will be required and determined through future evaluation of the actual location, layout and loadings.

A wave equation analysis should be performed to verify that the hammer, cushion, and pile section which are used achieves the design capacity without over-stressing the pile. Dynamic load testing should be conducted on at least four piles at locations spaced around the site and approved by the Geotechnical Engineer. Results of the wave equation analysis and load testing can be used to define the pile driving criteria.

The piles should be fitted with cast steel point protection such as the Hard-Bite – HP77600-B manufactured by Associated Pile and Fitting Co., Inc. to protect the piles as they are driven through the existing fills and native soils to end bearing on bedrock.

Settlement of the pile top should be less than one-half (1/2) inch and consist of elastic shortening of the pile under the design load and penetration of the pile into the bearing surface.

FLOOR SLABS

For preliminary planning purposes it should be assumed that building floor slabs must be pile supported. The subgrade surfaces should proof-rolled and stabilized as required to support the slab construction as specified in the **Earthwork** section of this report. A minimum six-inch thick base of crusher-run stone should be placed to provide a more uniform and stable base for construction. The crusher-run stone should meet the requirements specified for Item #304.12 in the NYSDDOT Standard Specifications for Construction and Materials. If tiles, rugs or moisture sensitive coatings are to be placed on the slabs, the base material should be changed to clean crushed stone and a vapor retarder installed. The crushed stone should be an ASTM C33 Blend 57 material and the vapor retarder a Stego Wrap 15 mil Class A or equivalent.



LATERAL EARTH PRESSURES

Design Parameters

Site or building walls that retain earth should be designed to resist lateral pressures, with applicable surcharge loads, at least equal to the values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Active earth pressures may be assumed for site walls that are free to deflect as the backfill is placed. At-rest earth pressures should be assumed for all building walls and site walls that are braced prior to backfilling or applying surcharge loads. Recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls.

Earth Pressure Condition	Earth Pressure Coefficient	Equivalent Fluid Density (pcf)
Active (Ka)	0.33	40
At-Rest (Ko)	0.50	60

For the tabulated values to be valid, the wall must be backfilled with Structural Fill as specified in the **Earthwork** section of this report. The Structural backfill must extend out and up from the base of the wall at an angle of at least 45 degrees from vertical for the active and at-rest cases.

Subsurface Drainage for Below-Grade Walls

The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining crushed stone, such as ASTM C 33, Blend No. 57 aggregate. The free-draining aggregate should be encapsulated in a filter fabric. The granular backfill should extend to within two feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system. If pavements abut the building the granular fill should be taken to the subgrade elevation for the pavement section. Basement walls should be damp-proofed as a minimum.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the site assuming the traffic will generally consist of automobiles with occasional delivery type trucks. A critical aspect of pavement performance is

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site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

Pavement Section Thickness

Assuming the pavements are subject primarily to automobile traffic with occasional light deliver trucks, we suggest the following flexible pavement section for consideration. The Light Section may be used for automobile parking and Heavy Section for entrance lanes.

Flexible Asphaltic Concrete Pavement Design						
Layer	NYSDOT Item Number ¹	Thickness (inches)				
·		Light Duty	Heavy Duty			
Asphaltic Concrete Top	#402.127303	1.0	1.5			
Asphaltic Concrete Binder	#402.257903	2.0	2.5			
Crusher-Run Stone Base	#304.12	10	12			
Stabilization Fabric ²	N/A	Single Ply	Single Ply			

- 1. All materials should meet the current New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials.
- 2. Stabilization Fabric should be Mirafi 500X or approved equivalent.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment.

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Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).

Temporary Construction Access Roadways

The recommended pavement sections are not designed to support heavy construction traffic which may require thicker sections. The contractor shall construct temporary haul and construction roadways and routes on site as appropriate for the specific weather conditions and equipment anticipated at the site.

Frost Considerations

It should be understood that sidewalks and pavements constructed upon the site's soils will heave as frost seasonally penetrates the subgrades. The magnitude of the seasonal heave will vary with many factors and result in differential movements. As the frost leaves the ground, the sidewalks and pavements will settle back, but not entirely in all areas, and this may accentuate the differential movements across the pavement areas. Where curbs, walks, and storm drains meet these pavements, these differential heave and settlements may result in undesirable movements and create trip hazards. To limit the magnitude of heave and the creation of these uneven joints to generally tolerable magnitudes for most winters, a 16-inch thick crushed stone base course, composed of Blend 57 aggregate, may be placed beneath the sensitive sidewalk, drive, etc. areas. The stone layer must have an underdrain placed within it.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and

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are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

FIGURES

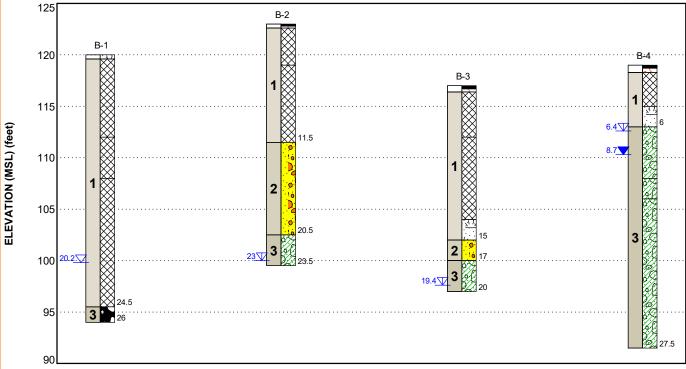
Contents:

GeoModel

GEOMODEL

Bridge Street Building ■ Plattsburgh, New York 4/03/2019 ■ Terracon Project No. JB195049





This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Fill / Former Topsoil	Varying amounts of gravel, sand, silt, and clay, pieces of wood, brick, cinders, loose to dense / medium-stiff to hard, underlain by former topsoil
2	Alluvial Deposit	Clayey sand (SC), with gravel, gray to brown, wet, loose
3	Glacial Till	Silty sand (SM), with gravel, occasional cobbles and boulders, gray, dry, medium dense to very dense

LEGEND

Topsoil Asphalt Glacial Till

Fill Aggregate Base Course

Boulders and Cobbles Poorly-graded Sand with Gravel

- ✓ First Water Observation
- ▼ Second Water Observation
- Third Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

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EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet)	Location
4	20 to 27.5	building pad

Boring Layout and Elevations: Terracon personnel staked the boring locations by traditional pacing and taping methods from existing features and approximate elevations were obtained by interpolation from the ALTA Survey Map prepared by R.M. Sutherland, P.C., dated 10/16/16. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the borings with a standard rotary drill rig using continuous flight augers. As the augers were advanced, the soils were sampled at intervals of five feet or less in accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs.

The soil samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Final boring logs were prepared, and they represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture)
 Content of Soil and Rock by Mass (1 sample tested)
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils (4 samples tested)
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (1 sample tested)

SITE LOCATION AND EXPLORATION PLANS

Contents:

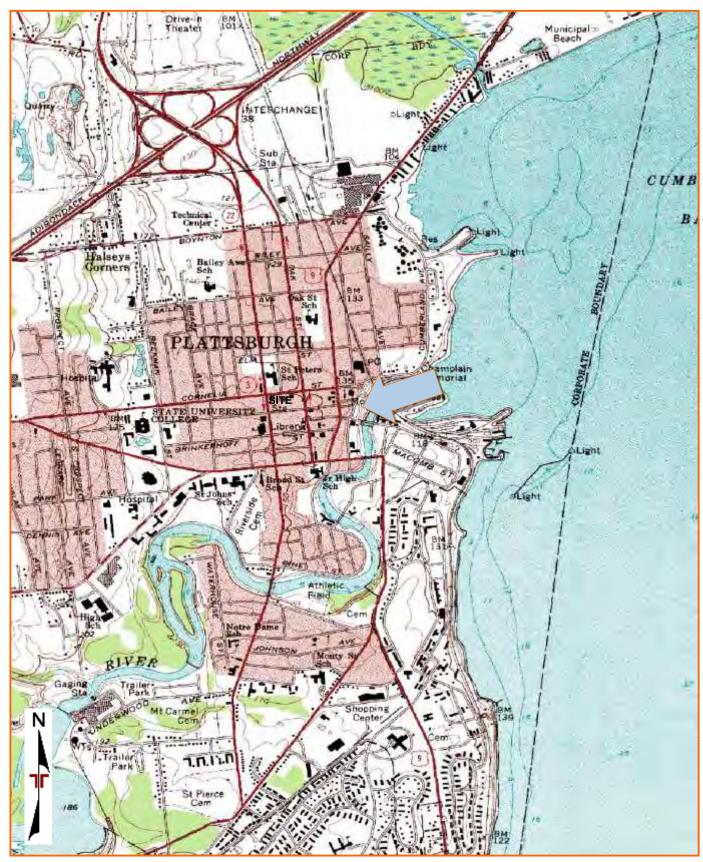
Site Location Plan Exploration Plan

Note: All attachments are one page unless noted above.

SITE LOCATION

Bridge Street Buildings Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049





EXPLORATION PLAN

Bridge Street Buildings Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049





EXPLORATION RESULTS

Contents:

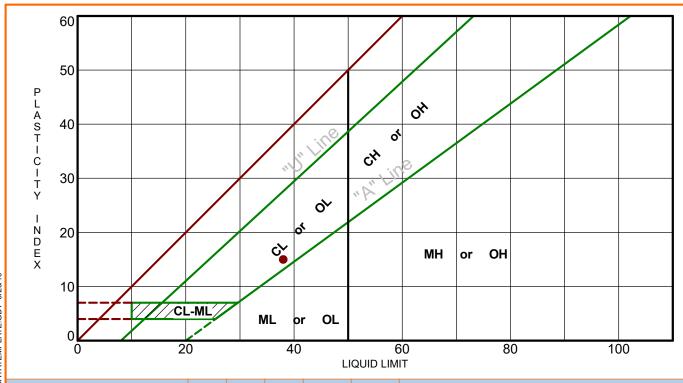
Boring Logs (B-1 through B-4) Atterberg Limits Grain Size Distribution (2 pages)

Note: All attachments are one page unless noted above.

			BORING L	OG NO. B-2)					Page 1 of	1
P	ROJ	ECT: Bridge Street Building		CLIENT: Prime	Plattsbu	rgh H	lotel	, LI	LC		
S	SITE:	Durkee and Bridge Street Plattsburgh, New York		Conoe	:3, New 1	OIK					
MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 44.6971° Longitude: -73.452° DEPTH	Aį	pproximate Surface Elev.: ¹	123 (Ft.) +/- ATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
F		0.2 ASPHALT 0.4 PAVEMENT BASE			123+/-						
		FILL - POORLY GRADED SAND, with g	gravel, orange to brow	vn, dry, dense		_		X	18	24-20-17-17 N=37	
		4.0 FILL - SILTY SAND, with gravel, pieces	of brick and cinders,	brown, moist to wet,	119+/-	_		X	22	17-14-6-4 N=20	
1		loose to medium dense				5 — –		X	19	2-2-2-3 N=4	
						_		X	18	2-3-3-2 N=6	
						10-		X	22	1-2-4-4 N=6	
	,0(11.5 POORLY GRADED SAND (SP), with gradense	ivel, gray to brown, w	et, loose to medium	111.5+/-	_		X	20	1-2-4-9 N=6	
2						- 15- - -			20	4-4-4-4 N=8	_
	0 0	20.5 SILTY SAND (SM), occasional cobbles a	and boulders, gray, di	ry, very dense	102.5+/-	20 -		X	20	7-20-45-50/2" N=65	
3							∇				
	(4,1/29)	Sampler Refusal on Probable Boulders	s at 23.5 Feet		99.5+/-				0	50/0"	
Adva 3											
	St	ratification lines are approximate. In-situ, the transition m	nay be gradual.		Hammer Ty	pe: Aut	omatic	-			
Adv 3	/anceme 3 1/4" ID	ent Method: 9 HSA	See Exploration and Te description of field and used and additional data	laboratory procedures	Notes:						
Aba E	Boring b	ent Method: ackfilled with soil cuttings upon completion. repaired using "cold patch" asphalt.									
		WATER LEVEL OBSERVATIONS	site plan		Boring Started	d: 03-20-	2019		Borin	ng Completed: 03-20	-2019
	7 00	fact ofter having completion	llerr		Orill Rig: CME		-			er: S. Loiselle	-
		B feet after boring completion	594 Br	oadway	Project No.: J		9		1		

ATTERBERG LIMITS RESULTS

ASTM D4318

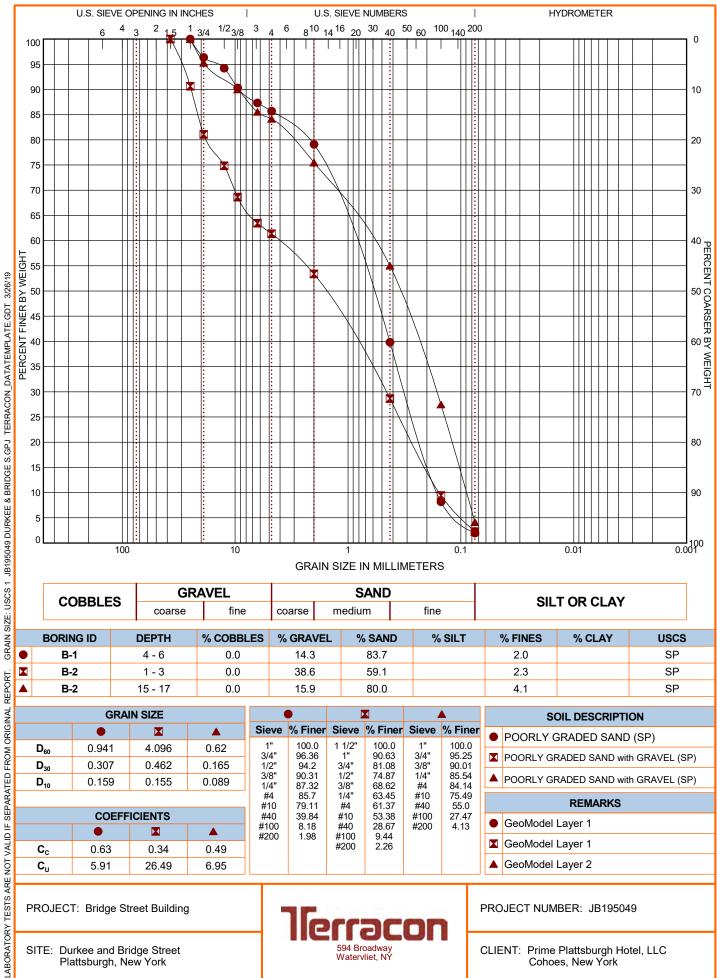


0	20		40) IQUID LIM	60 IT	80	100
Boring ID	Depth L	.L PL	PI	Fines	USCS	Descripti	on	
B-1	12 - 14 3	38 23	15		CL	Lean Clay		
	Street Building				ac (PROJECT NUMBE	



GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



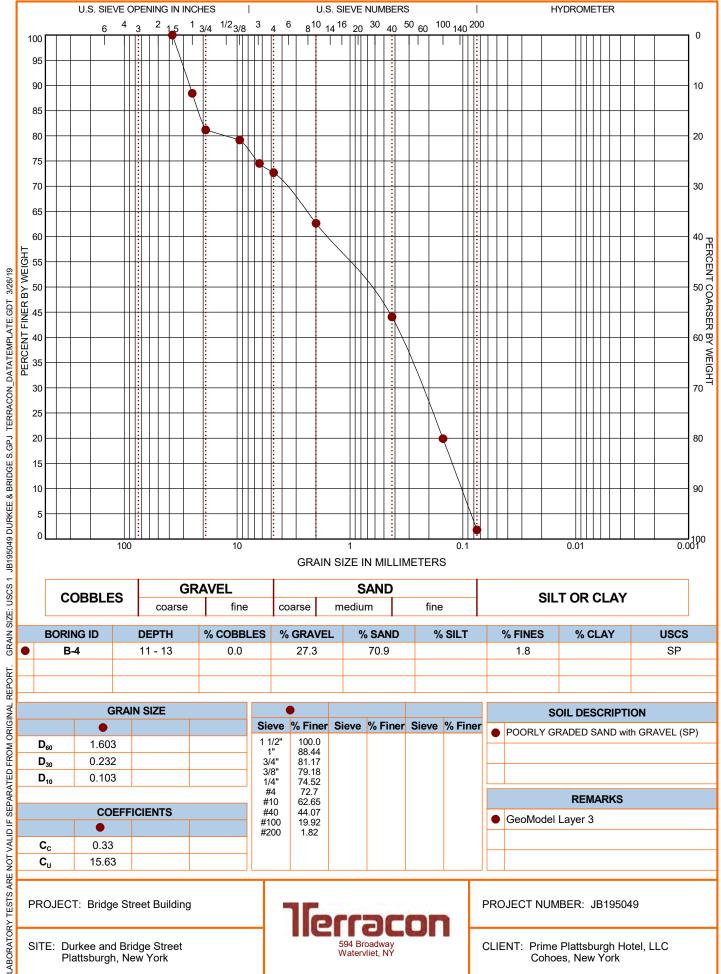
SITE: Durkee and Bridge Street Plattsburgh, New York



CLIENT: Prime Plattsburgh Hotel, LLC Cohoes, New York

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



SUPPORTING INFORMATION

Contents:

General Notes Unified Soil Classification System Clinton County Soils Survey Information

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Bridge Street Building Plattsburgh, New York April 3, 2019 Terracon Project No. JB195049



SAMPLING	WATER LEVEL	FIELD TESTS
	_ <u></u> Water Initially Encountered	N Standard Penetration Test Resistance (Blows/Ft.)
Split Spoon	Water Level After a Specified Period of Time	(HP) Hand Penetrometer
Mb	Water Level After a Specified Period of Time	(T) Torvane
	Water levels indicated on the soil boring logs are the levels measured in the borehole at the times	(DCP) Dynamic Cone Penetrometer
	indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not	UC Unconfined Compressive Strength
possible with short term water level observations.		(PID) Photo-Ionization Detector
		(OVA) Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

	STRENGTH TERMS						
RELATIVE DENSITY	OF COARSE-GRAINED SOILS	CONSISTENCY OF FINE-GRAINED SOILS					
	retained on No. 200 sieve.) Standard Penetration Resistance	Consistency de	(50% or more passing the No. 200 stermined by laboratory shear strength to procedures or standard penetration re	esting, field visual-manual			
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.			
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1			
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4			
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8			
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15			
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30			
		Hard	> 4.00	> 30			

RELATIVE PROPORTION	S OF SAND AND GRAVEL	RELATIVE PROPO	RTIONS OF FINES	
Descriptive Term(s) of other constituents			Percent of Dry Weight	
Trace	<15	Trace	<5	
With	15-29	With	5-12	
Modifier	>30	Modifier	>12	
CDAIN CIZE T	EDMINIOL COV	PLASTICITY DESCRIPTION		
GRAIN SIZE I	ERMINOLOGY	PLASTICITY	DESCRIPTION	
Major Component of Sample	Particle Size	Term	Plasticity Index	
Major Component of Sample	Particle Size	Term	Plasticity Index	
Major Component of Sample Boulders	Particle Size Over 12 in. (300 mm)	Term Non-plastic	Plasticity Index	
Major Component of Sample Boulders Cobbles	Particle Size Over 12 in. (300 mm) 12 in. to 3 in. (300mm to 75mm)	Term Non-plastic Low	Plasticity Index 0 1 - 10	



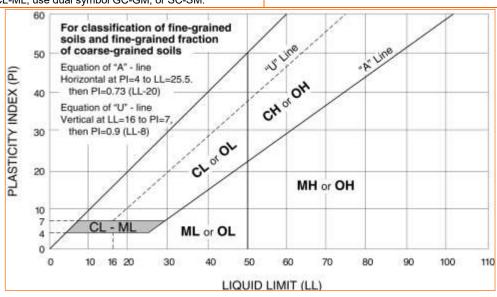
	Soil Classification				
Criteria for Assigni	ing Group Symbols	and Group Names	Using Laboratory Tests A	Group Symbol	Group Name ^B
	Gravels: More than 50% of	Clean Gravels:	Cu ≥ 4 and 1 ≤ Cc ≤ 3 ^E	GW	Well-graded gravel ^F
		Less than 5% fines ^C	Cu < 4 and/or [Cc<1 or Cc>3.0] ^E	GP	Poorly graded gravel ^F
	coarse fraction retained on No. 4 sieve	Gravels with Fines:	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}
Coarse-Grained Soils: More than 50% retained	retained on No. 4 sieve	More than 12% fines ^C	Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}
on No. 200 sieve	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands:	Cu ≥ 6 and 1 ≤ Cc ≤ 3 ^E	SW	Well-graded sand
		Less than 5% fines □	Cu < 6 and/or [Cc<1 or Cc>3.0] E	SP	Poorly graded sand
		Sands with Fines: More than 12% fines	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}
			Fines classify as CL or CH	sc	Clayey sand ^{G, H, I}
		In a receipt	PI > 7 and plots on or above "A"	CL	Lean clay ^{K, L, M}
	Silts and Clays:	Inorganic:	PI < 4 or plots below "A" line ^J	ML	Silt K, L, M
	Liquid limit less than 50	Organic:	Liquid limit - oven dried < 0.75	OL	Organic clay ^{K, L, M, N}
Fine-Grained Soils: 50% or more passes the		Organic.	Liquid limit - not dried	OL	Organic silt ^{K, L, M, O}
No. 200 sieve		Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}
	Silts and Clays:	morganic.	PI plots below "A" line	MH	Elastic Silt ^{K, L, M}
	Liquid limit 50 or more	Organic:	Liquid limit - oven dried < 0.75	ОН	Organic clay ^{K, L, M, P}
		0.94.110.	Liquid limit - not dried	011	Organic silt ^{K, L, M, Q}
Highly organic soils:	Primarily	organic matter, dark in co	olor, and organic odor	PT	Peat

- A Based on the material passing the 3-inch (75-mm) sieve.
- If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
- Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.
- Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

E Cu =
$$D_{60}/D_{10}$$
 Cc = $\frac{(D_{30})^2}{D_{10} \times D_{60}}$

- F If soil contains ≥ 15% sand, add "with sand" to group name.
- ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

- ^H If fines are organic, add "with organic fines" to group name.
- If soil contains ≥ 15% gravel, add "with gravel" to group name.
- ^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.
- K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.
- L If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.
- MIf soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.
- N PI \geq 4 and plots on or above "A" line.
- OPI < 4 or plots below "A" line.
- PI plots on or above "A" line.
- OPI plots below "A" line.





MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

(o) Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Candfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

ND

C-3

Stony SpotVery Stony Spot

Spoil Area

Very Stony S

Wet Spot

△ Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clinton County, New York Survey Area Data: Version 19, Mar 7, 2019

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 28, 2012—Oct 13, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI				
Un	Urban land	4.3	100.0%				
Totals for Area of Interest		4.3	100.0%				

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

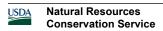
Clinton County, New York

Un-Urban land

Map Unit Setting

National map unit symbol: 9r0w

Mean annual precipitation: 31 to 42 inches



Mean annual air temperature: 39 to 45 degrees F

Frost-free period: 105 to 165 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 90 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of

the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Minor Components

Udipsamments

Percent of map unit: 3 percent Hydric soil rating: No

Udorthents

Percent of map unit: 3 percent Hydric soil rating: No

Deerfield

Percent of map unit: 1 percent Hydric soil rating: No

Covert

Percent of map unit: 1 percent Hydric soil rating: No

Grattan

Percent of map unit: 1 percent Hydric soil rating: No

Plainfield

Percent of map unit: 1 percent Hydric soil rating: No

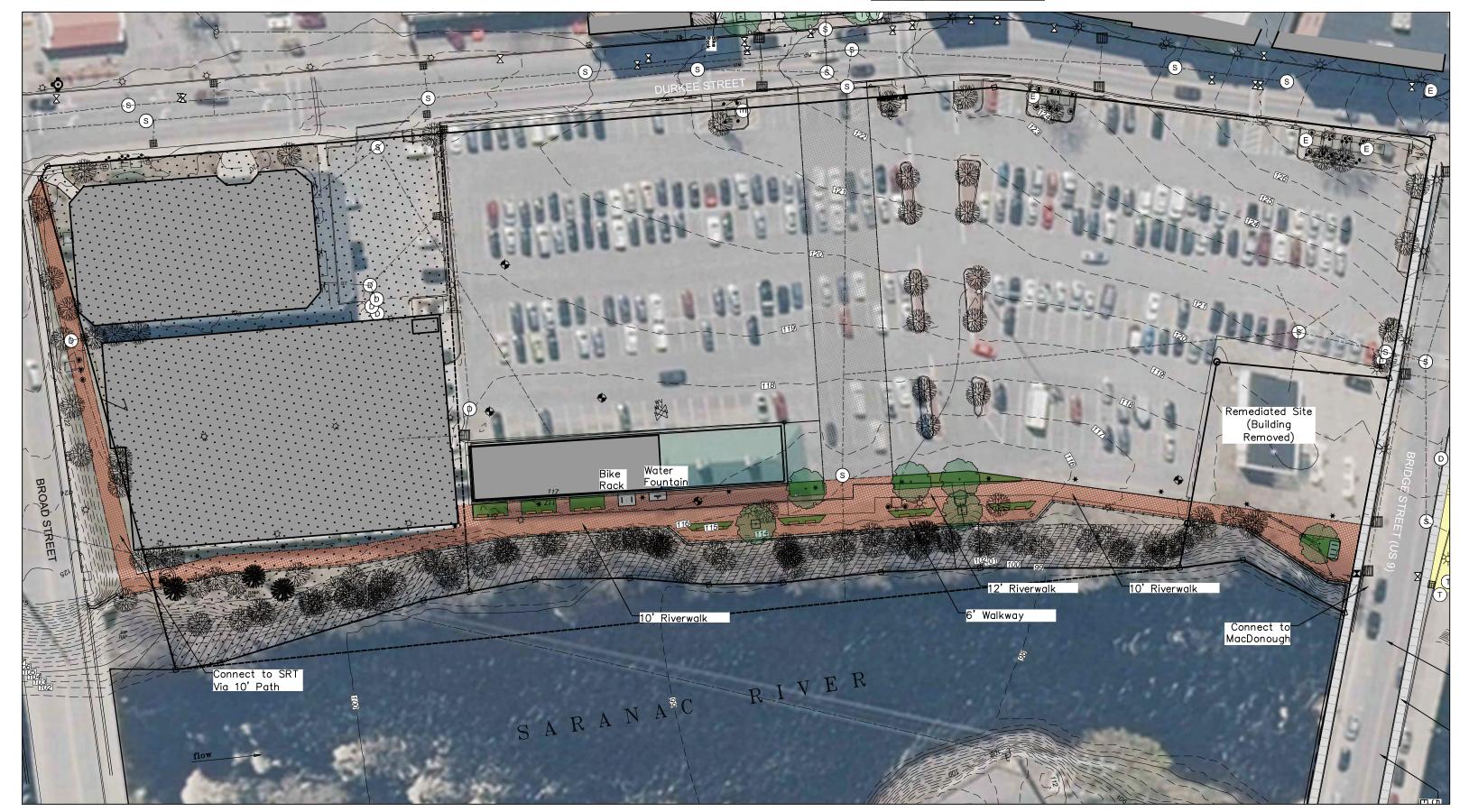
Data Source Information

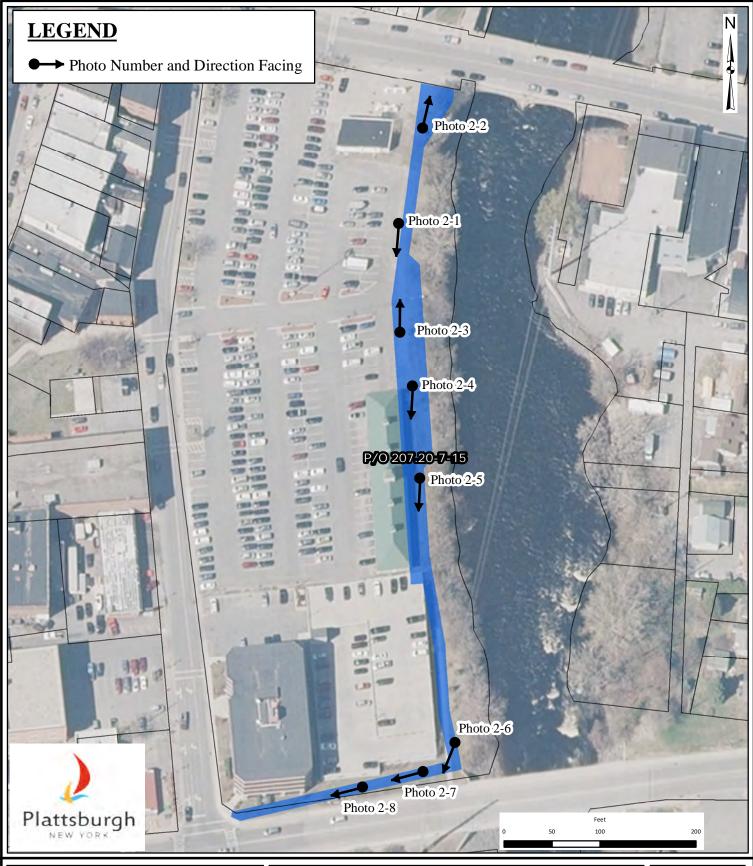
Soil Survey Area: Clinton County, New York Survey Area Data: Version 19, Mar 7, 2019

September 30, 2019

Attachment 2 Saranac Riverwalk









Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

LAND SURVEYORS North Country Office:
LAND SURVEYORS 20 Elm Street, Glens Falls, NY 12801
LANDSCAPE ARCHITECTS Phone: (518) 812-0513

City of Plattsburgh Downtown Area Improvement Projects Saranac Riverwalk

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 100 feet
Project:	91922.00
Figure:	2











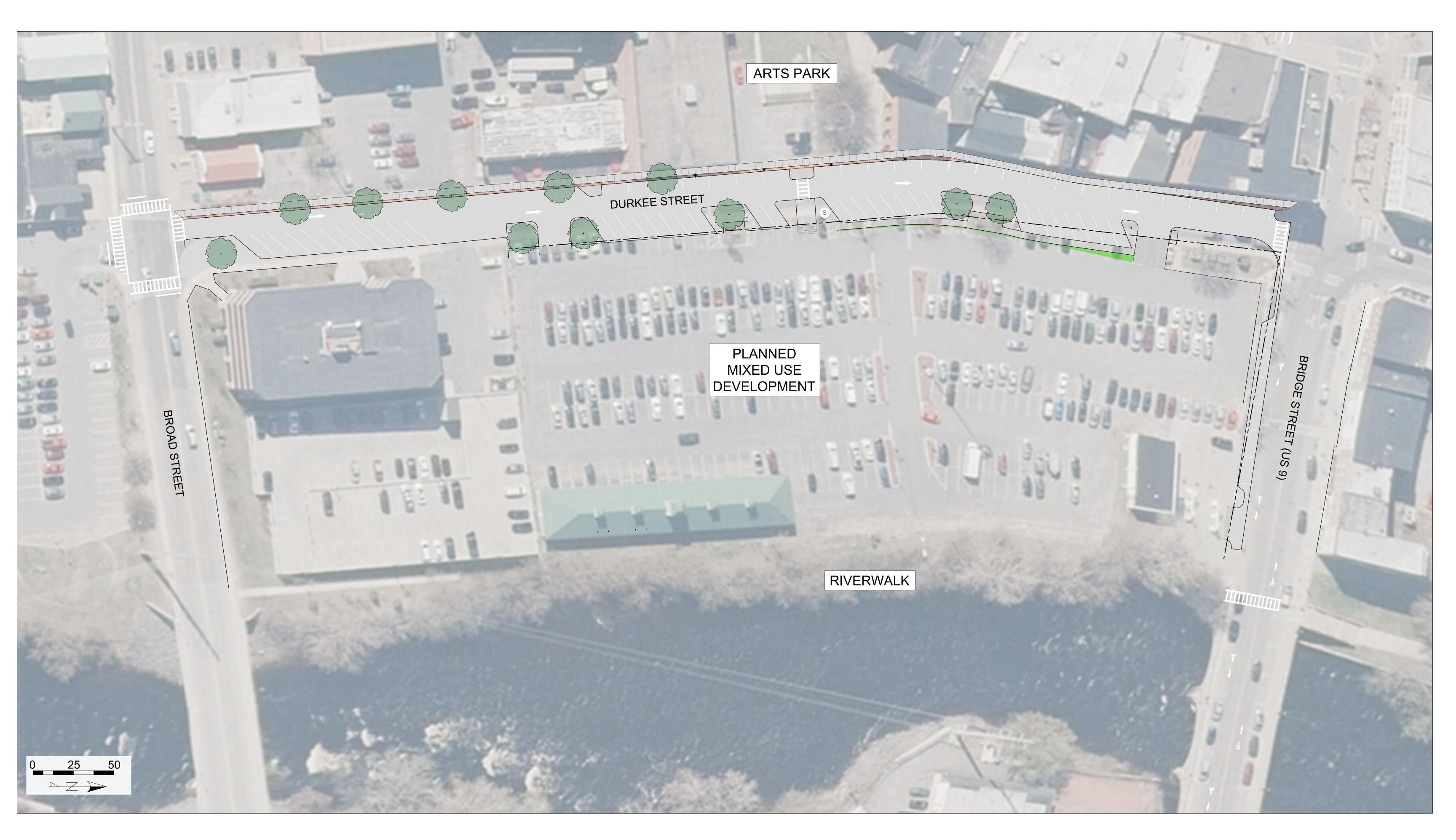




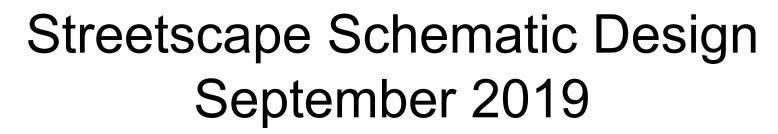




Attachment 3 Durkee Street Reconfiguration and Streetscape Improvements











Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

LAND SURVEYORS North Country Office:
LAND SURVEYORS 20 Elm Street, Glens Falls, NY 12801
LANDSCAPE ARCHITECTS Phone: (518) 812-0513

City of Plattsburgh Downtown Area **Improvement Projects Durkee Street**

Drawn:	STF	
Date:	9/26/2019	
Scale: 1 in	ch equals 150 f	eet
Project:	91922.00	
Figure:	2	





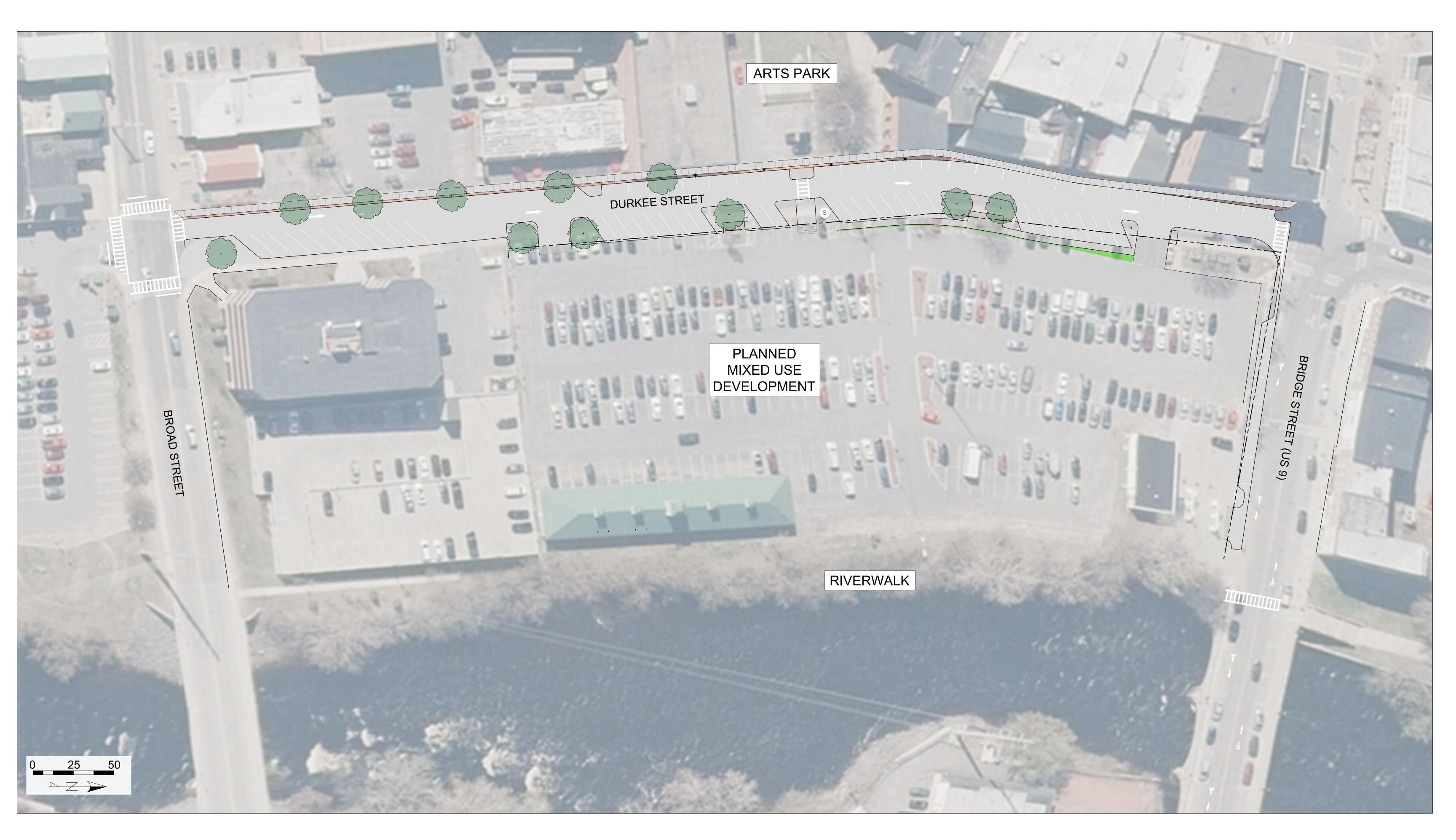




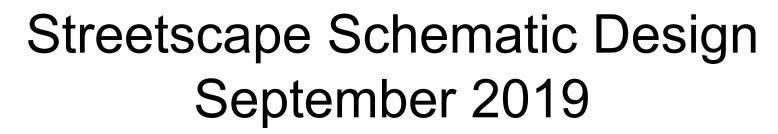


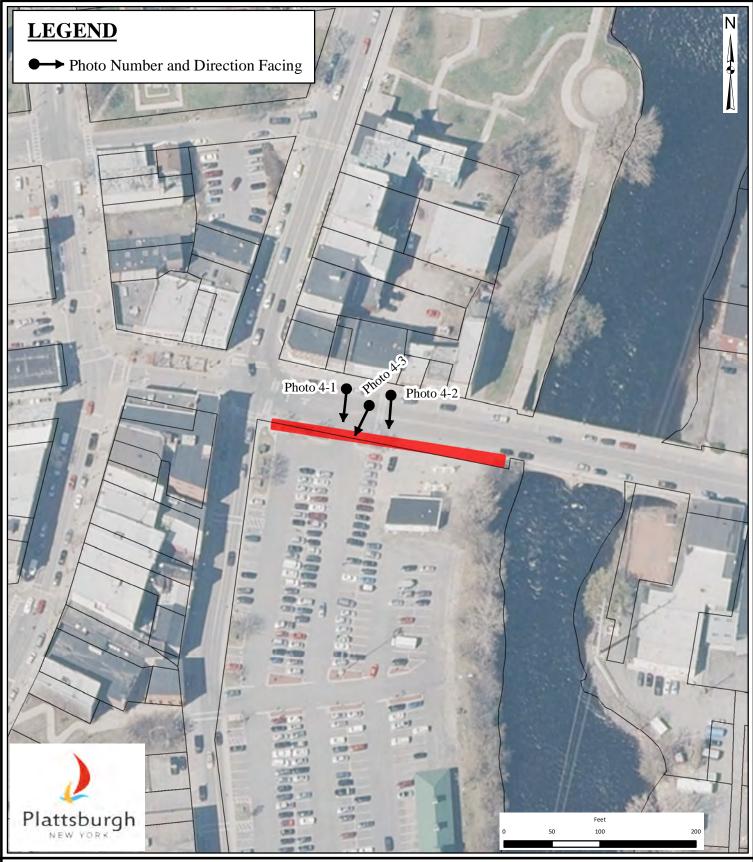


Attachment 4 Bridge Street Streetscape Improvements











Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

ENGINEERS LAND SURVEYORS PLANNERS THANKES THANKES LANDSCAPE ARCHITECTS Phone: (518) 812-0513

North Country Office: 20 Elm Street, Glens Falls, NY 12801

City of Plattsburgh Downtown Area **Improvement Projects Bridge Street**

	Drawn: STF
	Date: 9/26/2019
	Scale: 1 inch equals 100 feet
	Project: 91922.00
	Figure: 2







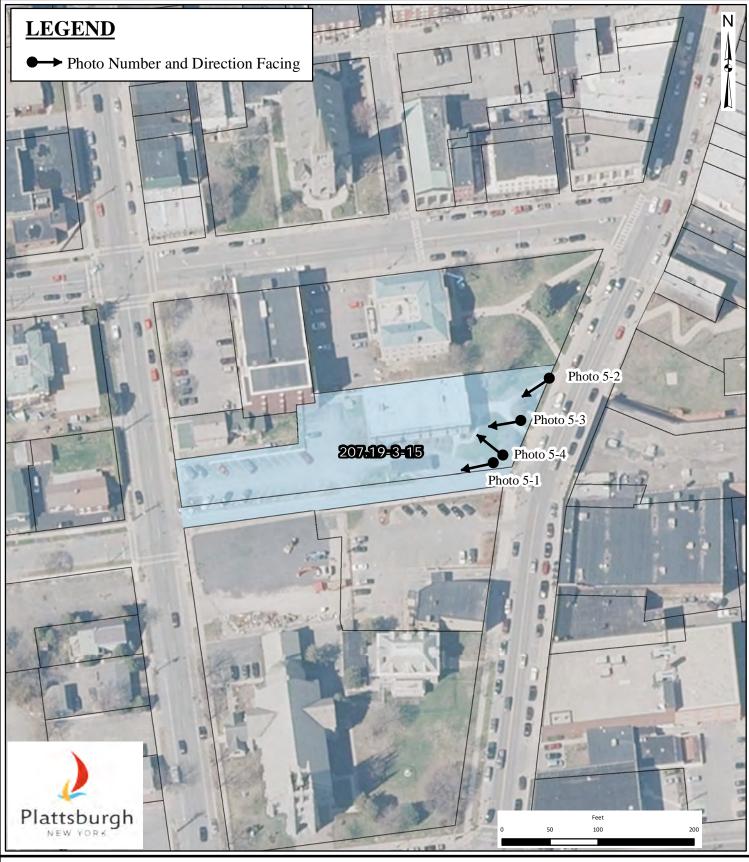
Attachment 5 Arnie Pavone Memorial Parking Plaza

City of Plattsburgh: Arts Park Schematic Design January 2019

0 10 20 40









Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

LAND SURVEYORS North Country Office:
LAND SURVEYORS 20 Elm Street, Glens Falls, NY 12801
LANDSCAPE ARCHITECTS Phone: (518) 812-0513

City of Plattsburgh Downtown Area Improvement Projects Arnie Pavone Memorial Parking Plaza

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 100 feet
Project:	91922.00
Figure:	2









Attachment 6 Westelcom Park

City of Plattsburgh: Arts Park Schematic Design January 2019

0 10 20 40











Dutchess County Office:

21 Fox Street, Poughkeepsie, NY 12601 Phone: (845) 454-3980

Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

ENGINEERS
LAND SURVEYORS
PLANNERS
20 Elm Street, Glens Fal
LANDSCAPE ARCHITECTS
Phone: (518) 812-0513 North Country Office: 20 Elm Street, Glens Falls, NY 12801

City of Plattsburgh Downtown Area **Improvement Projects** Westelcom Park/Arts Park

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 50 feet
Project:	91922.00
Figure:	2













ANDREW M. CUOMO Governor ERIK KULLESEID
Commissioner

July 3, 2019

Ms. Emily Gardner Project Manager Saratoga Associates 21 Congress St, Suite 201 Saratoga Springs, NY 12866

Re: NYSHCR

Downtown Revitalization Initiative - Plattsburgh Arts Park

30 Margaret, Plattsburgh, Clinton

19PR03717

Dear Ms. Gardner:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

We note that the park, located between Margaret and Durkee Streets, is within the Downtown Plattsburgh Historic District which is eligible for listing in the National Register of Historic Places. Based upon review of the plans dated 01/25/2019 it is the SHPO's opinion the proposed project will have No Adverse Effect on historic or archaeological resources.

If you have any questions, I can be reached at 518-268-2170.

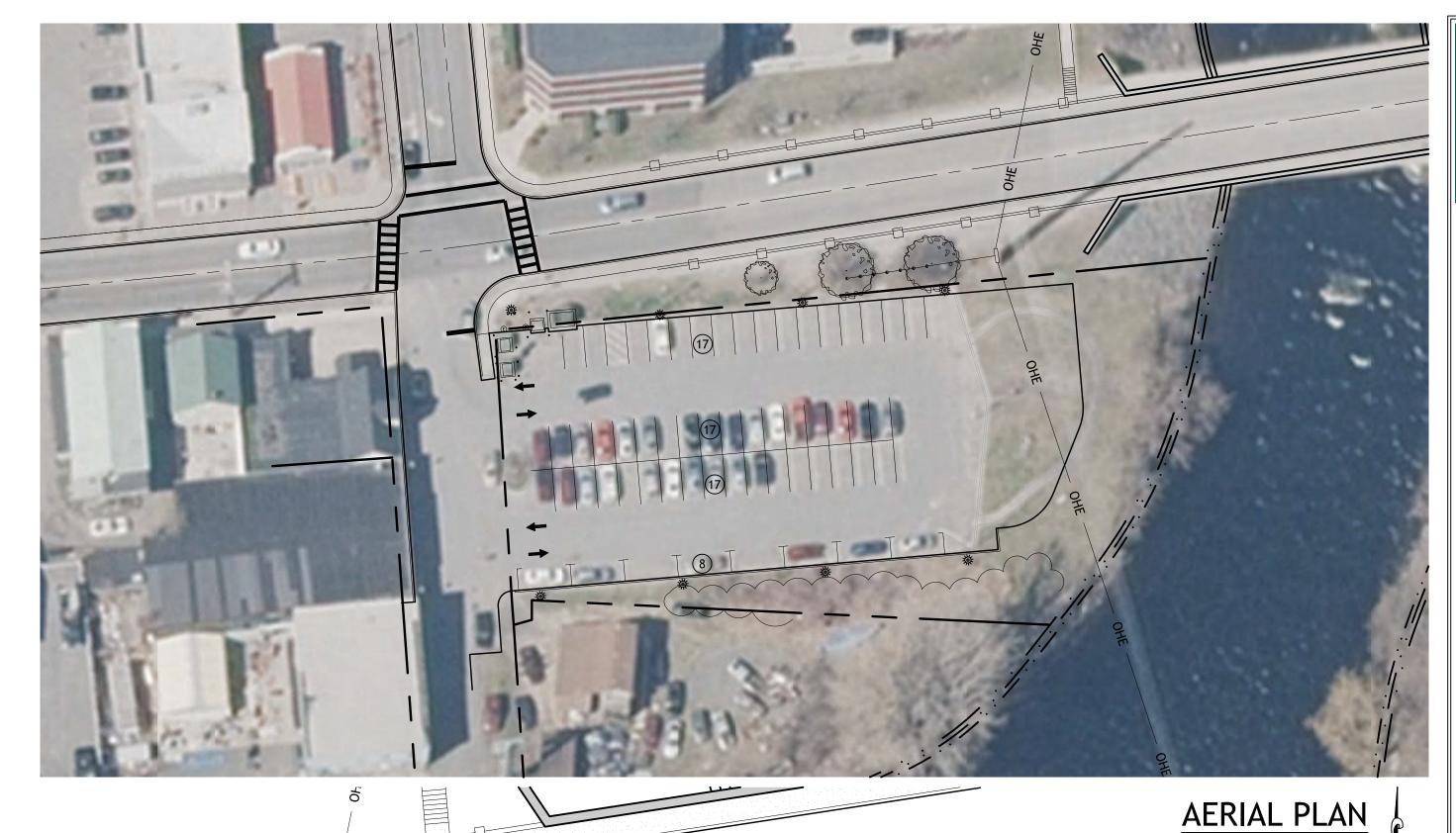
Sincerely,

Robyn Sedgwick

Historic Site Restoration Coordinator e-mail: robyn.sedgwick@parks.ny.gov

via e-mail only

Attachment 7 Broad Street Parking Lot



SKETCH SITE PLAN

SCALE: 1" = 20'

GRAPHIC SCALE

(IN FEET) 1 inch = 20 ft.

BROAD STREET

LANDS N/F PETER L. WHITBECK TAX MAP ID 221.7-3-5.2

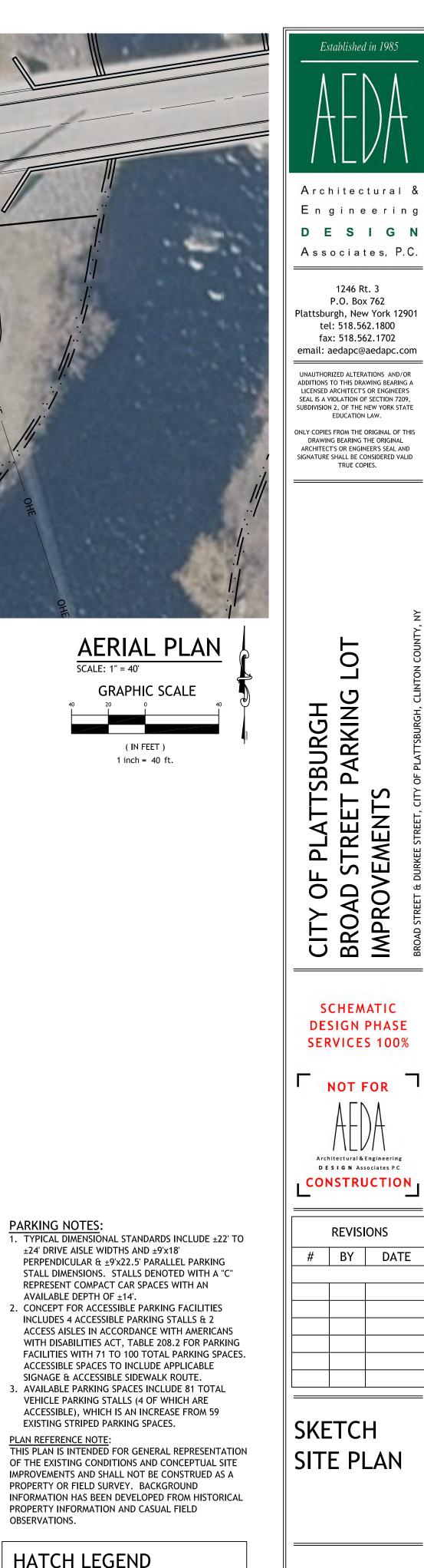
LANDS N/F STEVEN T. BRODI TAX MAP ID 221.7-3-10

STREET

DURKEE

PORTIONS OF LANDS N/F CITY OF PLATTSBURGH TAX MAP ID 207.20-7-15 AREA = ±0.8 ACRES

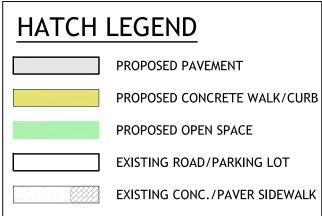
LANDS N/F STEVEN J. BAKER TAX MAP ID 221.7-3-8



±24' DRIVE AISLE WIDTHS AND ±9'x18' PERPENDICULAR & ±9'x22.5' PARALLEL PARKING STALL DIMENSIONS. STALLS DENOTED WITH A "C" REPRESENT COMPACT CAR SPACES WITH AN AVAILABLE DEPTH OF ±14'.

2. CONCEPT FOR ACCESSIBLE PARKING FACILITIES INCLUDES 4 ACCESSIBLE PARKING STALLS & 2 ACCESS AISLES IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT, TABLE 208.2 FOR PARKING FACILITIES WITH 71 TO 100 TOTAL PARKING SPACES. ACCESSIBLE SPACES TO INCLUDE APPLICABLE SIGNAGE & ACCESSIBLE SIDEWALK ROUTE. 3. AVAILABLE PARKING SPACES INCLUDE 81 TOTAL VEHICLE PARKING STALLS (4 OF WHICH ARE ACCESSIBLE), WHICH IS AN INCREASE FROM 59

PLAN REFERENCE NOTE:
THIS PLAN IS INTENDED FOR GENERAL REPRESENTATION
OF THE EXISTING CONDITIONS AND CONCEPTUAL SITE IMPROVEMENTS AND SHALL NOT BE CONSTRUED AS A PROPERTY OR FIELD SURVEY. BACKGROUND INFORMATION HAS BEEN DEVELOPED FROM HISTORICAL PROPERTY INFORMATION AND CASUAL FIELD OBSERVATIONS.



OVEMENT CITY BROA IMPR(

SCHEMATIC **DESIGN PHASE** SERVICES 100%

NOT FOR Architectural & Engineering DESIGN Associates PC CONSTRUCTION

REVISIONS					
#	BY DATE				

SKETCH SITE PLAN

PROJECT NO. DATE 08-16-19 DRAWN BY CHECKED BY

Figure 1



Figure 2: USDA: Web Soil Survey: Urban Land

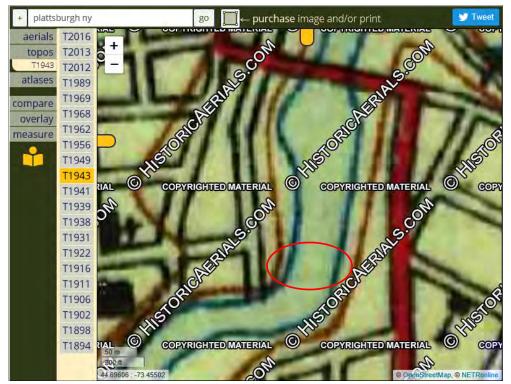


Figure 3: 1943 USGS Topographic



Figure 4: 1949 USGS Topographic

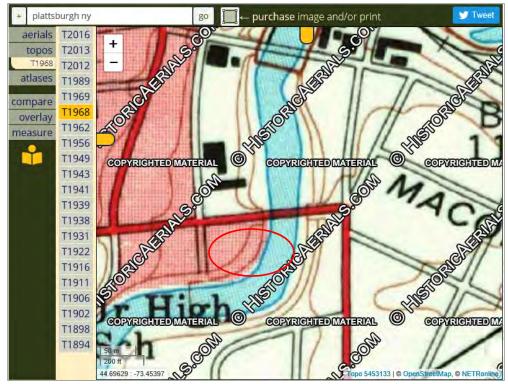


Figure 5: 1968 USGS Topographic

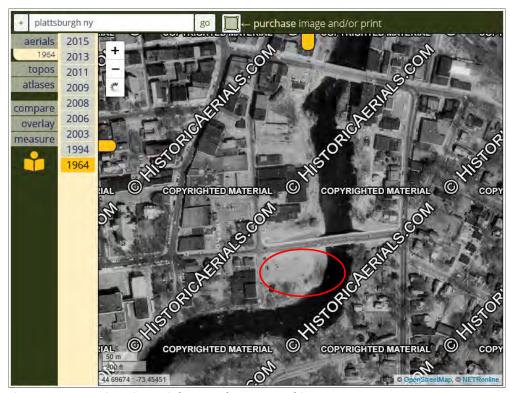


Figure 6: 1964 Historic Aerial - Broad Street Parking Lot

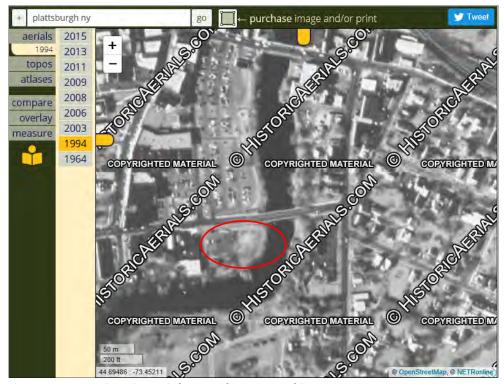
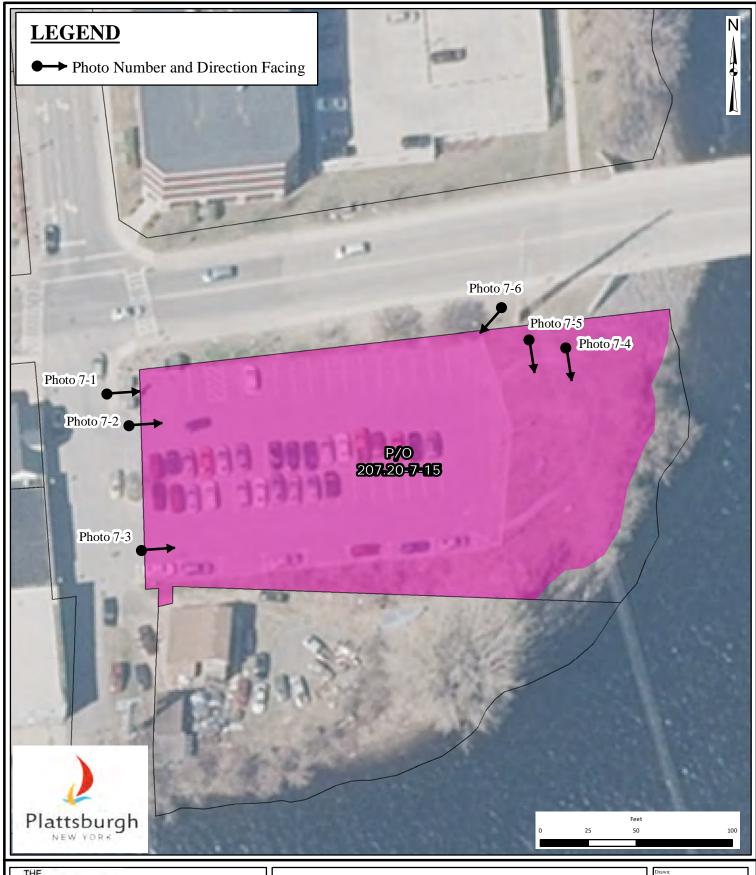


Figure 7: 1994 Historic Aerial - Broad Street Parking Lot





Dutchess County Office: 21 Fox Street, Poughkeepsie, NY 12601 Phone: (845) 454-3980

Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

ENGINEERS North Country Office:
LAND SURVEYORS 20 Elm Street, Glens Falls, NY 12801
FLANDESCAPE ARCHITECTS
Phone: (518) 812-0513

City of Plattsburgh Downtown Area Improvement Projects Broad Street Municipal Parking Lot

Clinton County, New York

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 50 feet
Project:	91922.00
Figure:	8













Attachment 8 26 Green Street Attachment



Figure 1: 1931 USGS Topographic

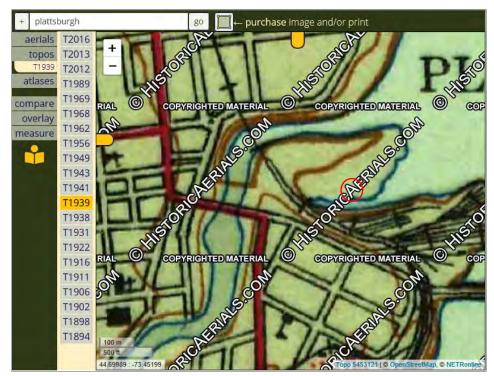


Figure 2: 1939 USGS Topographic

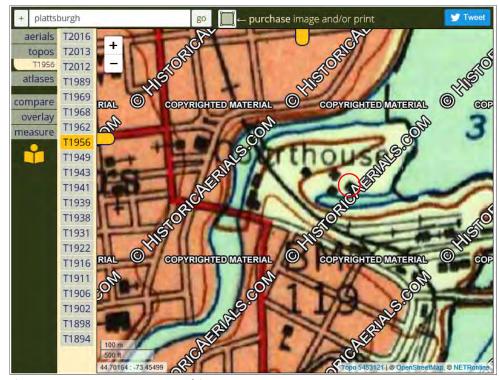
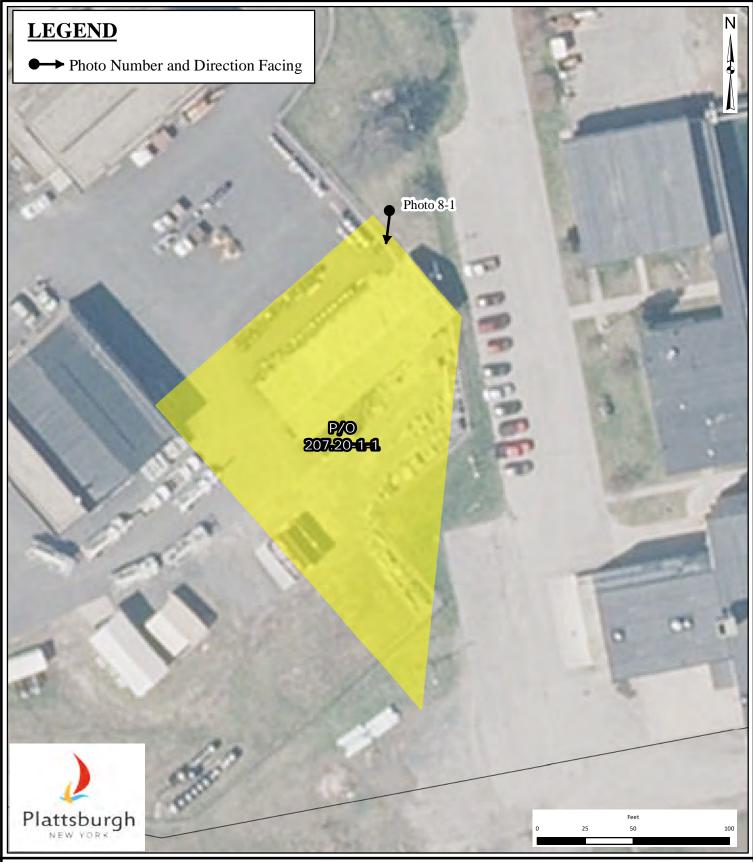


Figure 3: 1956 USGS Topographic



Figure 4: 1964 Historic Aerial View of Green Street Harbor Area





Dutchess County Office: 21 Fox Street, Poughkeepsie, NY 12601 Phone: (845) 454-3980

Capital District Office: 547 River Street, Troy, NY 12180 Phone: (518) 273-0055

ENGINEERS North Country Office:
PLANNERS 20 EIm Street, Glens Falls, NY 12801
Phone: (518) 812-0513

City of Plattsburgh Downtown Area Improvement Projects Proposed Relocated Farmers Market

Clinton County, New York

Drawn:	STF
Date:	9/26/2019
Scale:	inch equals 50 feet
Project:	91922.00
Figure:	5



PRELIMINARY DATA RETRIEVAL WORK SCOPE

PLATTSBURGH RAIL YARD WATERFRONT REDISCOVERY

CITY OF PLATTSBURGH
CLINTON COUNTY, NEW YORK
OPRHP 03PR 05681

PREPARED FOR:

COMMUNITY DEVELOPMENT OFFICE
41 CITY HALL PLACE
PLATTSBURGH, NEW YORK 12901

PREPARED BY:

HARTGEN ARCHEOLOGICAL ASSOCIATES, INC.
CERTIFIED WBE/DBE
524 BROADWAY
ALBANY, NEW YORK 12207
PHONE (518) 427-0382
FAX (518) 427-0384
email: hartgen@hartgen.com
www.hartgen.com

AN ACRA MEMBER FIRM www.acra-crm.org

JANUARY 2004

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3.	2003 Dufresne-Henry Draft Final Master Plan		
4.	2003 Dufresne-Henry Perspective Sketch		
5.	1852 Bevan Map of Plattsburgh, N.Y.		
6.	1856 Ligowsky Map of Clinton County, N.Y. (Plattsburgh Inset)		
7.	1869 Beers Atlas of Clinton County, New York (Plattsburgh)		
8.	1889 Beers Map of Plattsburgh, New York		
9.	1916 Beers New Atlas of the City of Plattsburgh, New York		
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- 11. 1891 Sanborn Plattsburgh, Clinton County, New York Sheet 7
- 12. 1902 Sanborn Plattsburgh, Clinton County, New York Sheet 6
- 13. 1909 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 14. 1918 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 15. 1949 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 16. 2003 Dufresne-Henry Draft Final Master Plan with Map-Documented Rail Yard Structures
- 17. 2003 Dufresne-Henry Draft Final Master Plan with Map-Documented Rail Yard Structures and Proposed Data Retrieval Backhoe Excavations

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INTRODUCTION

This proposal presents the preliminary work plan for data retrieval investigations for the Plattsburgh Rail Yard Waterfront Rediscovery project. It focuses on the standing and map-documented structures within the yard, assessing their archeological potential, the archeological potential of the yard as a whole, and the possible need for HABS/HAER recording of at least one building in the yard.

At this writing only a general plan for the Plattsburgh Rail Yard waterfront development is available. Map 1 locates the yard along the Plattsburgh waterfront, while Map 2 illustrates existing conditions in the yard. Maps 3 and 4 present the preliminary plan for rail yard redevelopment. The proposed data retrieval work scope takes into account the general impact areas now known for the project. However, details, such as utility line installations and the effects of landscaping, have not been worked out. When this information becomes available, the work scope will be reviewed to refocus the effort in locations of proposed disturbance. With this in mind, investigations at the roundhouse and turntable, coal elevator, and sand drier and for map-documented Structure 3, which are in locations to be developed, will undoubtedly remain part of the work scope. On the other hand, proposed archeological excavations for the water tower, office, and the building along the waterfront at the 19th-century Oakes Ames railroad ferry slip may need to be modified or omitted in favor of excavations elsewhere.

Included below are a sections on factors affecting archeological potential in the rail yard, a discussion of proposed construction plans as they affect former and existing rail yard structures, the research potential of the rail yard a the data retrieval work scope, other information required by OPRHP for project review, and summary and conclusions.

FACTORS AFFECTING THE ARCHEOLOGICAL POTENTIAL OF THE PLATTS-BURGH RAIL YARD

As part of this assessment, we reviewed the archeological potential of the rail yard and the most profitable direction for future research at the site. The following discussion relates the factors that reduce the archeological potential of the rail yard, a review of each of the 26 structures for which

there is presently surface evidence or that once stood in the rail yard and the archeological potential of each (Attachment 1). There is also a review of the proposed impacts and the adaptive reuse of the rail yard structures as part of the development plan, along with an assessment of locations with the greatest archeological potential and how best to examine them as part of a Phase III data retrieval.

As is clearly reflected in its NRL status, the former D&H Railroad Plattsburgh Rail Yard is an important historic resource in the City of Plattsburgh. There are, however, three factors relating to the historical development of the rail yard and its position along the city's waterfront that reduce the potential of significant archeological deposits (as opposed to structures) within its bounds, as is discussed below. To help illustrate the discussion, each rail yard structure appearing on historical maps has been assigned a number (Maps 5-15) and a table has been prepared that lists the structures and relevant information (Attachment 1).

The first factor affects the amount and type of archeological deposits to be expected in the rail yard. As an industrial/transportation site, the Plattsburgh Rail Yard had no full-time resident population. Rail yard probably workers worked and prepared no food onsite, although they probably brought a mid-shift meal which undoubtedly was consumed at the worksite. The rail yard structures reflect its use, a complex dominated by warehouses, coal sheds, and maintenance and repair facilities for locomotives and the rolling stock. With the exception of a few offices associated with the Repair Shop no buildings are designed to be occupied exclusively by workers. A review of the historical maps showing the rail yard, especially the detailed late 19th and 20th-century Sanborn fire insurance maps revealed perhaps one structure appended to the repair shop that might be a privy. Based upon the site being occupied by a workforce that commuted to work and the types of structures associated with that workforce, it is unlikely that significant cultural deposits (i.e. middens, artifact concentrations, dumps) accumulated onsite. In fact, considering 19th-century disposal patterns, the Lake Champlain/Saranac River waterfront would have been considered an appropriate location for dumping trash. Furthermore, with the ready availability of "incinerators" such as the fireboxes of locomotives in the roundhouse and the boiler firebox in the repair shop, archeological deposits of worker-related materials may be hard to come by in the rail yard.

With this in mind, the most productive archeological work scope for the rail yard should focus on exposing and documenting the remains of rail yard structures and features. One example is the evolution of the round house and turntable in response to changing railroad technology. These assumptions are borne out by two recent projects on contemporary rail yards in the Northeast. Excavations at the Old Colony Roundhouse in Whitman, Massachusetts, exposed and interpreted a 19th-century roundhouse and associated buildings while recovering only recovered 17 historic artifacts (PAL 2000). Likewise, the Phase II site evaluation of the Rutland and Burlington Railroad roundhouse and rail yard in Burlington, Vermont, across the lake from Plattsburgh, produced detailed information concerning the

structural remains of the earliest railroad site in Vermont but produced fewer than 450 artifacts, only about 100 of which were domestic items that potentially could be associated with the use of the rail yard by workers (Attachment 2). The other recovered materials were mainly architectural remains from the various structures that occupied the site during the 19th and 20th centuries (Corey et al. 1999:83). The most efficient and productive focus for archeology at the Plattsburgh Rail Yard will be on documenting the structures within the project area.

• The second factor affecting the archeological potential of the rail yard is that the land on which it rests was filled between about 1850 and 1920. Neither natural soils nor archeological deposits that predate the construction of this land form can be expected. Based upon the historic map review, the land upon which the core of the rail yard complex (the repair shop, the turntable, and the roundhouse) was deposited about 1850 and that the grade of that part of the site has not changed by more than a few inches in the past 150 years. We know this to be the case since the repair shop is still standing and portions of the roundhouse are visible on the ground surface today. Hence, there is virtually no chance for structures to be buried beneath the existing grade since that grade has been stable since the rail yard first came into being.

The stable rail yard grade affects the potential to discover archeological deposits within its bounds. Much of the rail yard is at an elevation between 104 and 105 feet. The average water level of Lake Champlain for much of the 20th century was 95.6 feet, with an average high water level of about 99.5 feet and a record high of 101.9 feet. Therefore the rail yard only sits five feet above the mean high water level. This suggests that any archeological deposits that may be present in the rail yard are within about five feet of the surface.

• The third factor affecting archeology is that the site of the proposed conference center, and retail development was filled between 1909 and 1918 (Maps 13 and 14). This large portion of the rail yard did not exist prior to 1910 and cannot be expected to hold archeological deposits or features predating the first decade of the 20th century. Furthermore, except for perhaps one oil storage tank, one shed, and railroad sidings, no structures ever stood on that part of the site. Therefore, the archeological potential of this part of the site is considered to be low.

With these factors in mind, it is possible to assess the archeological potential of all of the 26 structures that stood within the rail yard over the past 150 years (Attachment 1). By comparing this information with the proposed construction impacts, we can begin to develop plans for mitigating the impacts to resources that have the potential to yield significant information concerning the rail yard and are threatened by the planned development.

PROPOSED DEVELOPMENT PLANS FOR THE RAIL YARD

Current construction plans call for the adaptive reuse of virtually all of the extant structures and structure remnants within the rail yard and for reconstructing the boat house, a structure that does not survive, at the end of the slip. The only substantial existing rail yard elements are the tracks, ties, and switches, all of which are to be removed by CP Rail before the property is released for redevelopment. The plan proposed for the site focuses on preserving and interpreting its railroad-associated history for the benefit of the people of the city of Plattsburgh the The following section outlines the proposed reuse for each structure as well as the plan for rebuilding the boathouse.

• The Turntable and Roundhouse (Structures 1 and 22). For the sake of convenience and in light of their close functional relationship, the roundhouse and turntable are treated as one structure in the following discussion. Currently, the poured concrete foundation of the roundhouse survives above ground although it is cracked and will have to be repaired prior to its reuse. The design for the park calls for the roundhouse floor to be used as vehicle parking and as a passenger drop-off for visitors. Structure 22 is a small office appended to the northwest corner of the roundhouse on the 1909 and 1918 Sanborn maps (Maps 13 and 14).

Although not visible above the ground surface at present, the *turntable* was most likely filled to avoid liability when the rail yard was decommissioned in the 1970s and exists in front of the roundhouse. The design plans call for the rehabilitation of this feature and its incorporation into the interpretive park. The turntable will be re-excavated and turned into a reflecting pool that will retain much of its original function by carrying the light trolley as it passes through the rail yard.

- The Repair Shop (Structure 2). Currently the repair shop is standing the center of the rail yard and is used to store salt and sand. The repair shop will be rehabilitated and restored. In the current design it will be used as an interpretive display space that will attract visitors to the proposed waterfront park and highlight the history of the rail and its impact of the City of Plattsburgh from the second half of the 19th century until the 1970s. The repair shop will also house light trolleys which will take visitors from the park and hotel to heart of downtown Plattsburgh.
- <u>Coal Elevator (Structure 17)</u>. The exposed foundation of the coal elevator will be stabilized rehabilitated. According to current plans the area defined by the foundation will enclose a playground area for visiting children.
- The Sand Drier (Structure 18). The exposed foundation of the sand drier will be maintained
 and preserved as an interpretive element relating to the rail yard.

• The Boat House (Structure 19). A new boat house will be reconstructed on the footprint of the original boat house, which was built between 1909 and 1918. The new structure will compliment the design and architecture of the Repair Shop (Structure 1); the style will also be mimicked in the design of the hotel and conference center. The presence of the new boat house provides continuity of function between the historical rail yard and the proposed rail yard/waterfront park.

RESEARCH POTENTIAL AND PRELIMINARY DATA RETRIEVAL WORK SCOPE

Based upon the results of rail yard investigation in Whitman Massachusetts, and Burlington, Vermont, it appears that few archeological deposits relating to rail yard workers can be expected at the Plattsburgh Rail Yard. Therefore, the likely most productive type of archeological data retrieval conducted there should focus on documenting the major rail yard structures, remnants of which are already known to exist. A secondary effort relating to searching for map-documented structures should also be an integral facet of the study. The latter would naturally involve excavating a series of backhoe trenches at the mapped locations of buildings and other rail yard structures that no longer survive. Coincidentally, many of these building sites are situated over the former lake shoreline where it would be possible to search for overbank trash deposits, which are considered the most likely type to be situated in this waterfront environment. As power equipment will also be needed to examine partially extant structures such as the roundhouse and turntable, there is also the possibility of exposing trash pits, should that type of disposal also have been employed there.

Standing Buildings, Partly Visible Structures, and the Boat House

The following extant or partially extant rail yard structures are proposed for examination during the data retrieval along with the proposed archeological work scope for each:

- The Turntable and Roundhouse (Structures 1 and 22). Strip with power equipment and hand excavate the area encompassed by the full extent of the turntable and roundhouse as shown on Sanborn maps dating from 1884, 1891, and 1918 (Maps 10, 11, and 14). Search for evidence of the various alterations and building episodes revealed on the Sanborn and other maps. Map in detail and photo-document roundhouse and turntable details. Hand excavate up to six 1x1 or 1x2 units to document archeological deposits of interest should they be encountered.
- The Repair Shop (Structure 2). Backhoe testing along the foundation in four locations along the exterior of the repair shop augmented by up to three 1x1 or 1x2 excavation units should archeological deposits of interest be encountered in the power equipment excavations. Confer with OPRHP concerning the need for HABS/HAER documentation for the repair shop.

- <u>Coal Elevator (Structure 17)</u>. Remove all vegetation and other material obscuring the foundation of the coal elevator. Map and photo-document the exposed foundation. One backhoe trench may be excavated adjacent to this feature Excavate up to two 1x1 or 1x2 units to document subsurface elements of the structure.
- The Sand Drier (Structure 18). Expose the sand drier by removing vegetation and other material obscuring it. Map and photo-document. The sand drier first appears on the 1909 Sanborn map. It is a concrete structure for which no hand excavated units are proposed, as it was investigated during the Phase IB study.
- The Boat House (Structure 19). Clear and expose the remains of the boat house foundation. Map and photo-document. As with the sand drier, the boathouse first appears on the 1909 Sanborn map and may have had a concrete foundation. Despite its relatively recent vintage, either backhoe trench and one hand excavated unit with dimensions of 1x1 or 1x2 may be allotted to this feature to document subsurface elements and to examine the fill in this part of th site.

Map-Documented Structures

Besides the five buildings listed above, a further sample of seven map-documented structures will be examined to determine whether or not substantial subsurface remains and possible associated archeological deposits are preserved on site. In all, 12 of the 25 structures, nearly 50% of the complex, documented for the portion of the rail yard within the project boundary will be examined during the data retrieval. The list of the seven map-documented structures and the dates when they first appear on the historical maps is presented below.

- <u>Unidentified Structure (Structure 3)</u>. Only three buildings appear on the 1852 and 1856 maps showing the rail yard, the engine house, the repair shop, and a third of unidentified function west of the repair shop. Structure 3 is situated along the 1909 shoreline. The site of this building will be examined through backhoe testing. Up to 4m² will be excavated to examine structural remains and deposits associated with this building if they are encountered. One additional unit will be expended if overbank trash deposits are identified.
- <u>Unidentified Structure (Structure 7)</u>. On the 1869 Beers atlas (Map 7), Structure 7 appears at the west end of the slip for the Oakes Ames, the railroad ferry from Vermont. This structure could have been a warehouse or woodshed for fuel for the ferry. (A wood shed is shown on this map near the rail yard repair shop; presumably, the wood was fuel for the railroad locomotives. The site of this building will be examined through backhoe testing. Up to 4m² will be excavated to examine structural remains and deposits associated with this building if they are encountered. One additional unit will be allotted here if overbank trash deposits are identified.

- Storage, Casting Shed and Lumber Storehouse, and Paint Shop (Structure 16). Multiuse structure 16 is a long-lived 20th-century building that first appears on the 1909 Sanborn
 map (Map 13) with the label "storage" and later is used as the castings shed and lumber
 storehouse (Map 14) and finally was also the paint shop in 1949 (Map 15). Situated north of
 the repair shop, the northwest corner of this building would have stood at the approximate
 limit of the 1909 shoreline. The site of this building will be examined through backhoe
 testing. Since it is situated near the 1909 shoreline, this test will also examine this part of
 the site for overbank trash deposits. Up to 4m² will be excavated to examine structural
 remains and deposits associated with this building if they are encountered. One additional
 unit will be expended if trash deposits are identified.
- Dynamo House (Structure 20) and Boiler Room (Structure 21). The boiler room first appears along the east side of the repair shop on the 1891 Sanborn. The dynamo house (electrical generator) first appears in 1909 (Map 13) The sites of these buildings will be stripped as part of the examination of the roundhouse and turntable (Structure 1). No archeological deposits are anticipated, but interior features of each building may be preserved. These features will be mapped and photo-documented. No excavation units are anticipated.
- Water Tank (Structure 23) and Office (Structure 24). The water tank and office first appear on the 1918 Sanborn map (Map 14). The sites of these two buildings also traverse the 1909 shoreline. The site of this building will be examined through backhoe testing. Up to 4m² will be excavated to examine structural remains and deposits associated with this building if they are encountered. One additional unit will be expended if trash deposits are identified.
- Lockers (Structure 25). The lockers first appear on the Sanborn map in 1918 (Map 14). The type of locker is not indicated on the map and the label could refer to railway equipment or lockers for the roundhouse workers. The site of Structure 25 will be examined as part of stripping and documenting the roundhouse and turntable (Structure 1). One 1x1 or 1x2 excavation unit will be expended if foundation remains or archeological deposits associatred with this relatively short-lived building are found.

Other Excavations

As already mentioned in the previous section, backhoe excavations designed to search for the remains of Structures 3, 7, 16 and 23 and 24 will also examine the location of the 1909 shoreline where trash may have been deposited over the bank. The backhoe trenches aligned to search for these five structures will continue deep enough to encounter evidence of the early 20th century landfill expansion that brought the rail yard to its present configuration. Besides the four trenches

at the sites of Structures 3, 7, 16, 23 and 24, one other trench will be excavated north of the roundhouse in a location where there was potentially some activity because of its proximity to the roundhouse. Also as previously discussed, at least one 1x1m or 1x2m unit will be expended at each buried deposit encountered during backhoe testing.

Backhoe trenching and exposing the roundhouse and other rail yard features with power equipment also has the potential for finding trash pits. One excavation unit will be expended on each trash pit encountered up to a total of four units.

Historic Research

Preliminary research conducted at the Clinton County Historical Society and the Local History Room of the Feinberg Library at SUNY Plattsburgh indicates that there is limited information available locally concerning the Plattsburgh Rail Yard. Research in 19th-century Plattsburgh newspapers for articles relating to railroad construction has resulted in a modest amount of historical information being gathered concerning either the rail yard in particular and Clinton County railroad construction in general. Furthermore, to date the location of the D&H Railroad archive, if any, has not been identified.

Additional historical research concerning the Plattsburgh Rail Yard will be conducted at the Plattsburgh Public Library and the Feinberg Library where the focus will be on examining 19th- and 20th-century newspapers for information concerning the yard and general developments in the Plattsburgh and Montreal and Rutland and D&H railroad companies as they affected rail yard operations. The search will also continue to find out if a D&H Railroad archive exists, its location, and accessibility to the public. In the absence of project specific information, research will focus on the general history of rail yard development and rail yard equipment with a focus on the northeastern United States.

Other Information Requested by OPRHP for Project Review

A letter from Sloane Bullough, OPRHP Historic Sties Restoration Coordination, addressed to Robert Zauckerman, Chairman of the City of Plattsburgh Planning Board requested information concerning rail yard structures and the proposed Plattsburgh Waterfront Development as it relates to the rail yard. The following is a list of the requested information:

- Existing Conditions Site Plan for the Rail Yard.
- Photographs of the project area keyed to the site plan.
- Additional design documents as they become available, including elevation drawings of new
 construction and catalogue cut sheets of fixtures that will be installed, such as outdoor
 lighting.
- Interior and exterior photos of existing buildings keyed to existing conditions floor plans

- Proposed floor plans for reused existing buildings.
- Elevation drawings of the proposed work on existing buildings.

This information will be provided to OPRHP as it becomes available.

SUMMARY AND CONCLUSIONS

The Plattsburgh Rail Yard waterfront development project presents a rare opportunity to conduct research on a 19th- and 20th-century rail yard in the Northeast. To date, two other rail yards, one in Massachusetts, one in Vermont, have been the sites of archeological investigations. For the Burlington rail yard, the investigation apparently did not proceed past the Phase II site evaluation. Since the Plattsburgh Rail Yard already is listed on the National Register of Historic Places, any further study conducted there as part of an OPRHP-approved work scope will constitute mitigation of adverse effects through data retrieval.

To the credit of the Plattsburgh Community Development Office, the development plan calls for integrating salient surviving rail yard features into the Plattsburgh Waterfront Project. Included among the resources to be retained are the repair shop, which will house a museum and park facilities, the roundhouse and turntable (fountain, park plaza, and visitor drop-off), the coal elevator (park playground), the sand drier (railroad interpretive feature) and boathouse (community boathouse). The results of the archeological data retrieval can be integrated into interpretative displays for heritage tourists and residents of the City of Plattsburgh and Clinton County. Thus, the Plattsburgh Waterfront project promises benefits for both adaptive reuse of surviving rail yard elements that will be integrated into the project, as well as archeological and historical data that can be interpreted to the public.

OPRHP review staff is encouraged to support the efforts of the Community Development Office as it works to reuse this site. At a time when local agencies routinely propose total demolition of the surviving elements of important resources such as the rail yard to provide a "clean slate" for developers, the Community Development Office instead has chosen to recognize the significance of the resource and is working to preserve and reuse it. With this in mind, OPRHP review staff are encouraged to support the Community Development Office as the Rail Yard redevelopment project proceeds.

As part of a dialogue, the Community Development Office seeks comments on this preliminary data retrieval plan. By beginning the process early, the data retrieval work may be conducted on a schedule that advances the project. With this in mind, please contact Rosemarie Schoonmaker of the Plattsburgh Community Development Office or J.W. Bouchard of HAA, Inc. with comments.

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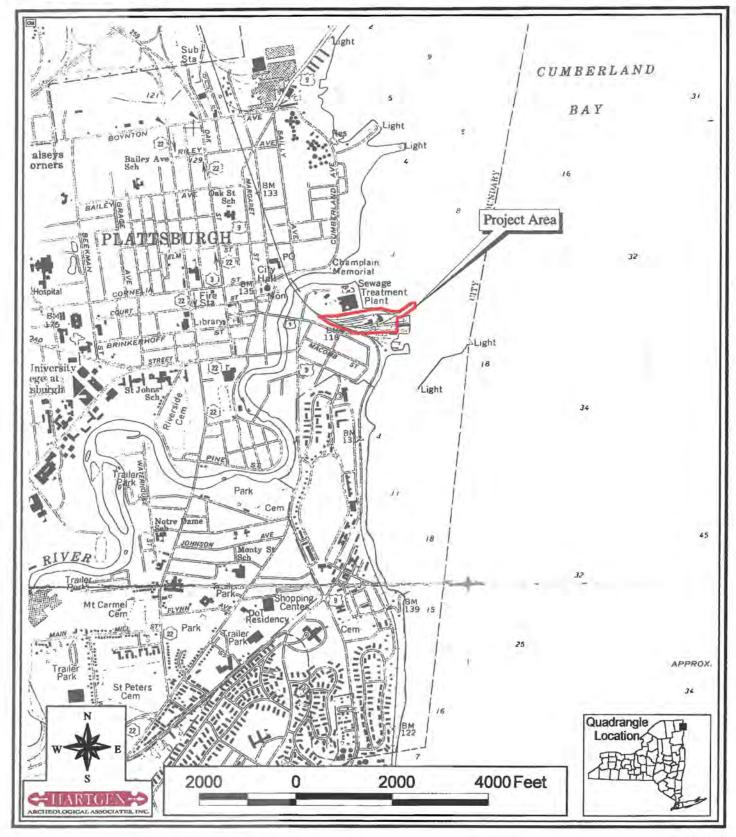
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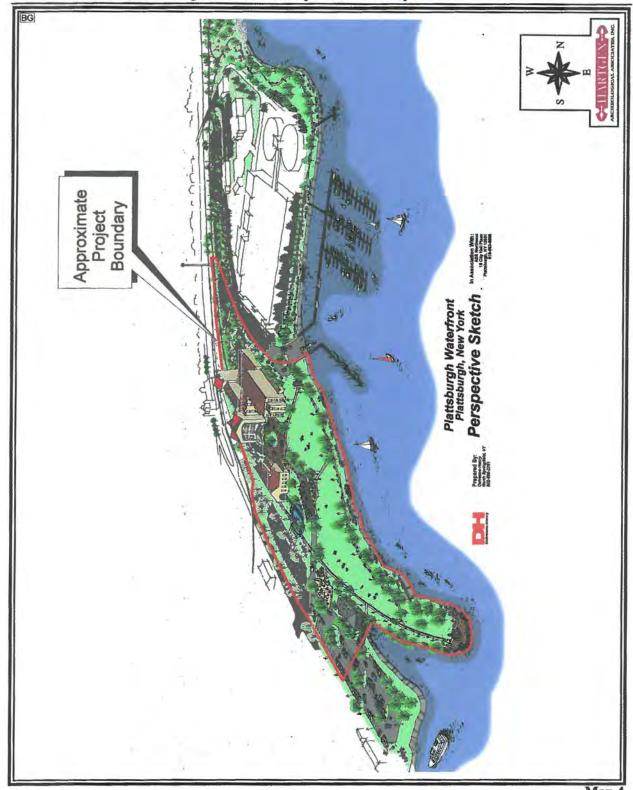
PAL (Public Archaeology Laboratory)

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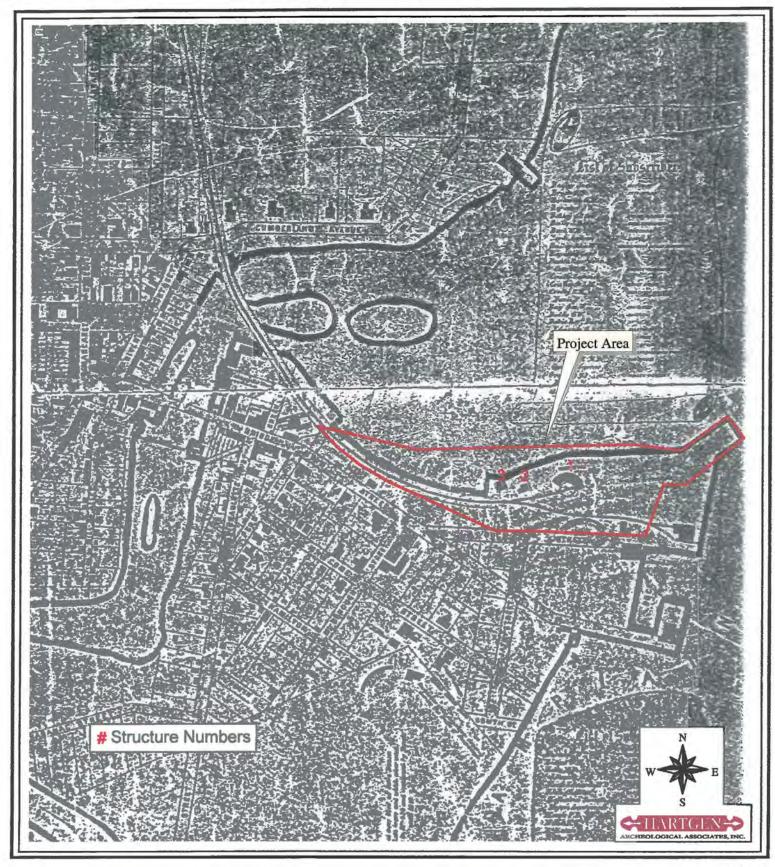
MAPS



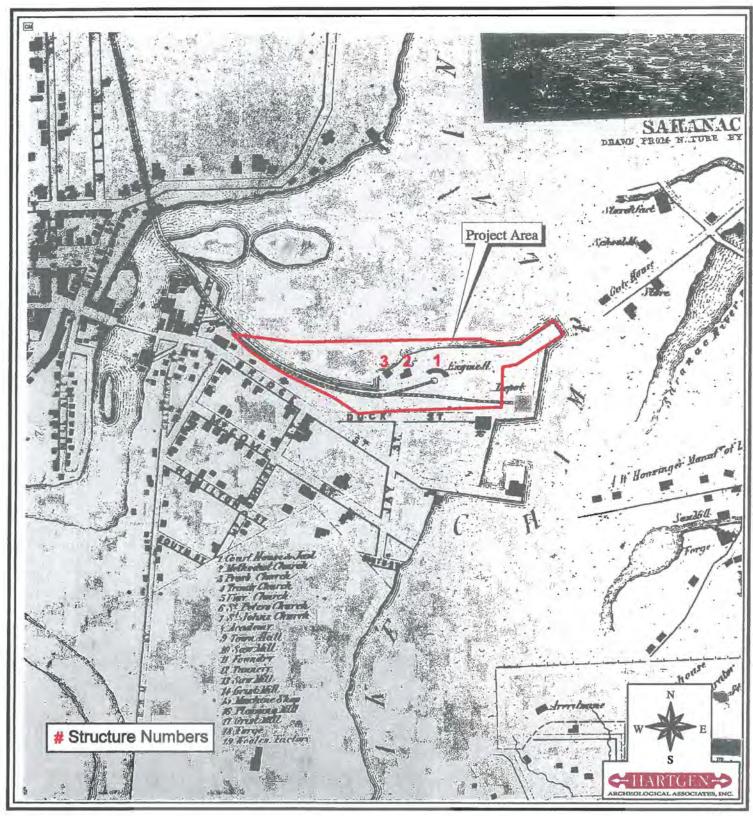
Map 1
1979 NYS DOT New York-Vermont Plattsburgh 7.5' Series Planimetric Quadrangle



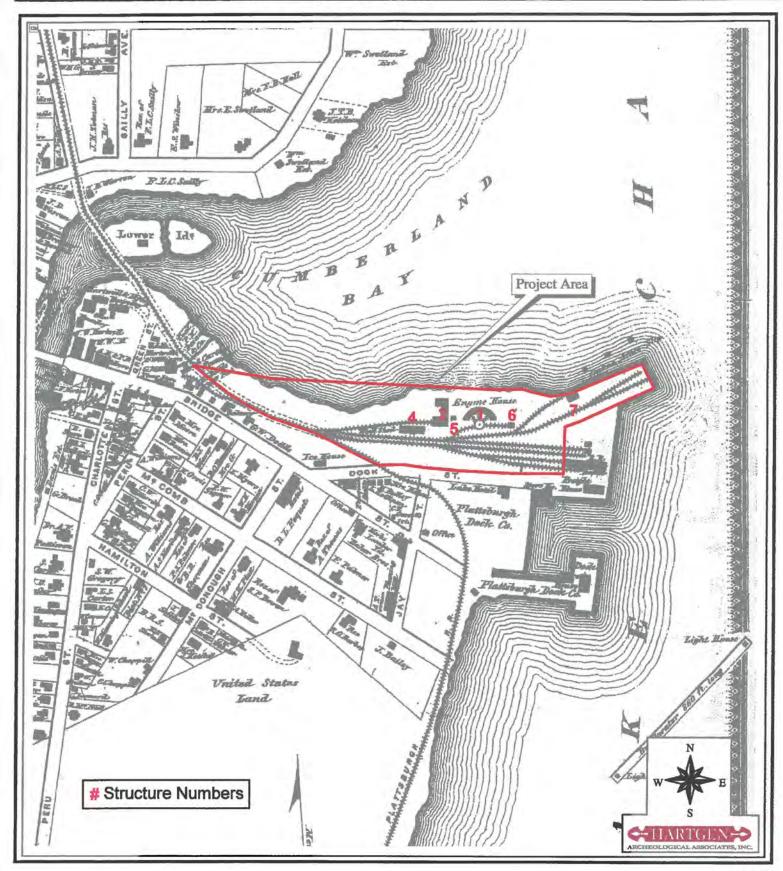
2003 Dufresne-Henry Perspective Sketch



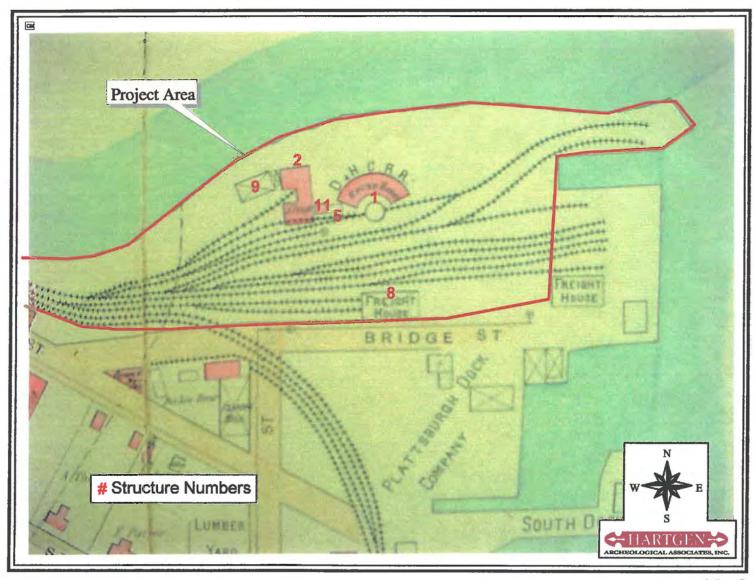
Map 5
1852 Bevan Map of Plattsburgh, N.Y.



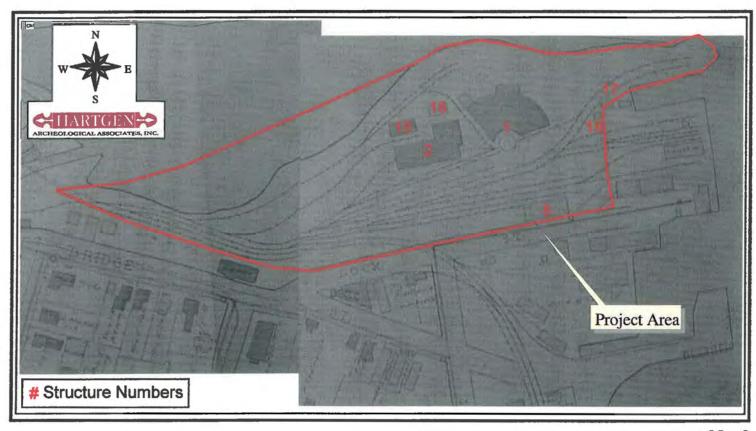
Map 6
1856 Ligowsky Map of Clinton County, N.Y.



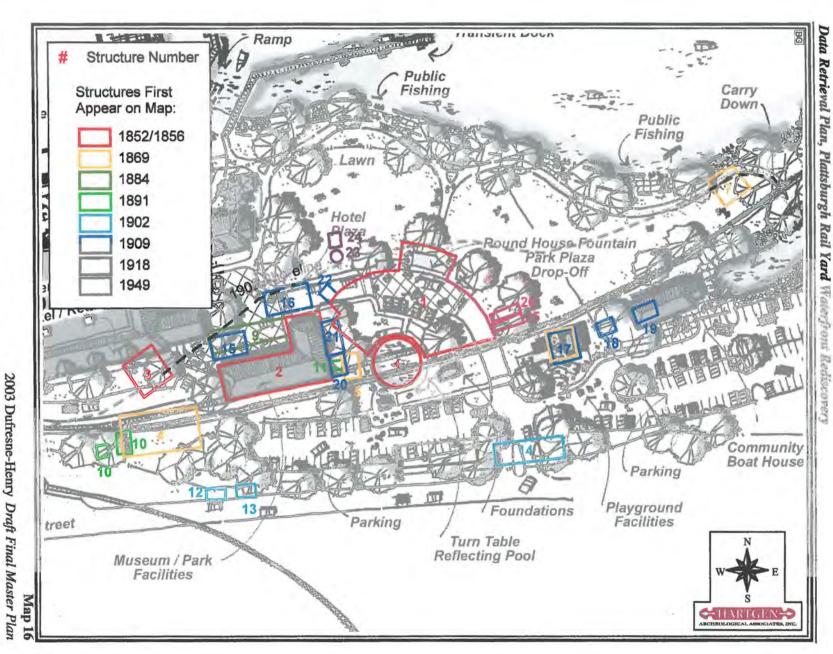
Map 7
1869 Beers Atlas of Clinton County, New York



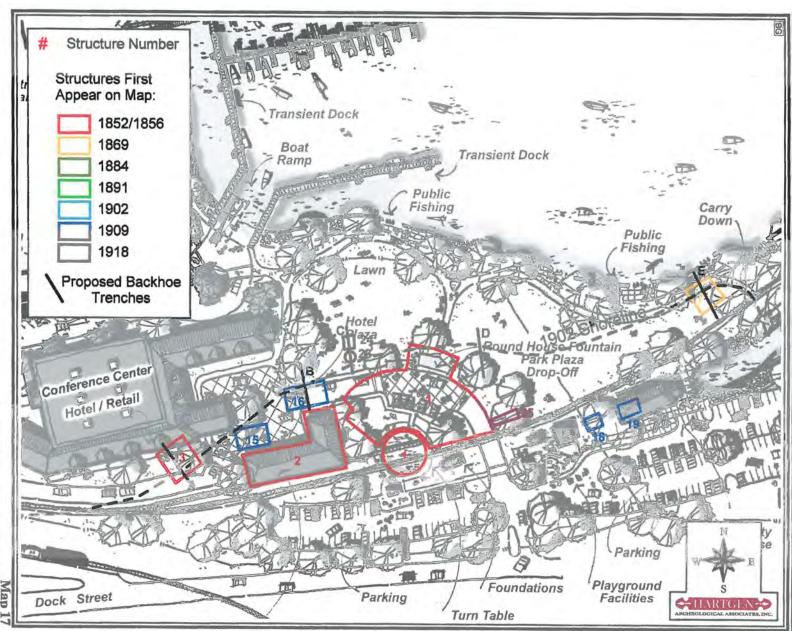
Map 8
1889 Beers Map of Plattsburgh, New York



Map 9
1916 Beers New Atlas of the City of Plattsburgh, New York



January 2004



2003 Dufresne-Henry Draft Final Master Plan

ATTACHMENT 2:

Table 2: Horizontal and Vertical Distribution of Historic Euroamerican Remains Recovered From the Rail Site (VT-CH-736) During the C-6 Alignment, Southern Connector Project Archaeological Phase II Testing (Corey et al. 1999:83)

Table: Archeological Potential of D&H Rail Yard Structures Appearing on Historical Maps Plattsburgh Rail Yard Waterfront Development

No.	Structure	Source	Location	Construction Details	Removed Before
1.7	Tumtable and Roundhouse	1856 Ligowsky	Central (still visible)	britis	11002

Archeological Status: The Roundhouse ruins are visible above ground; the turntable was filled after the rail yard was abandoned in the 1970s.

Archeological Potential: Both the roundhouse and the turntable may be exposed and details of their construction recorded. This will be necessary anyway since both are to be integrated into the project. It is unlikely that significant archeological deposits are associated with either structure since during its 125 life the roundhouse was modified several times and the associated episodes of construction and demolition have most likely compromised deposits. Furthermore, the stable grade of the rail yard since the 1850s reduces the potential for finding deposits relating to its use.

REPRESENTATION OF THE PROPERTY	1000 1100 1100 1100 1100 1100 1100 110	新型1000000000000000000000000000000000000	1
2) Repair Shop	1856 Ligowsky Gentral (still star	id(ng) brick	Extent (heavily
		The state of the s	medified)

Archeological Status: Standing although heavily modified.

Archeological Potential: Currently the repair shop building is used to store sand, gravel, and road salt. The original structure was built as a part of the 1850s construction. A series of wood frame sheds was attached to the northwest corner of the machine shop by 1884, but the sheds were demolished and the site was built over as the building was added to in the last decade of the 19th century. The integrity of any remains of other buildings attached to the repair shop may have been compromised during the various renovations. The archeological potential of this structure is considered to be low.

Unidentified structure	1856 Ligowsky	Along the 1856	un nowe .	1869
(A) (A) (A) (A) (A) (A) (A) (A) (A) (A)		lakeshore due west of		
		the repair shop		ก เกียงสู้ใน ไ

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: The only construction at the site of this structure along the 1856 shoreline appears to be railroad tracks sometime between 1884 and 1909. The archeological potential for structural remains is considered to be moderate if this building had a substantial foundation that extended more than a few feet below grade. The potential for associated archeological deposits is considered to be low to moderate.

4 Wood Shed	16	75 1869 Beers	Just south and west of	wood france	1889
		A Comment	the repair shop		100

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: NO significant construction occurred on the site of the woodshed with the exception of rail lines installed sometime before 1889. Considering its function, the building may have been supported on footers rather than a continuous stone foundation and the installation of the rail lines may not have eliminated all evidence of this structure. Given the building's function and its location in the center of the rail yard it is unlikely that significant cultural deposits accumulated around it. The archeological potential of the structure itself is considered to be moderate, while the potential for associated archeological deposits is low.

No.	Structure	Source	Location	Construction Details	Removed Before
(5) T	o) House/Room	1869 Peers	Rewest the repair	Word frame	902

Archeological Status: No visible evidence; subsurface evidence unknown, but likely disturbed.

Archeological Potential: Currently two demolished brick additions to the repair shop stand in the place once occupied by this building. Most evidence of the wood frame tool house were probably removed prior to the construction of the overlying buildings. The archeological potential for both building remains and associated archeological deposits is considered to be low.

Unidentified shed	1869 Beers	East of the round	Unknown	1889
Character MARK	1 - 11 - 11 - 1	house		12.1

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: Within 15 years of its first appearance on a map, this small structure was removed and rail lines had been laid over the site. Possible foundation or footers could survive below grade. There is no information to indicate the type of archeological deposits that might be associated, if any. The archeological potential of this structure and associated deposits are considered to be low to moderate.

The number of the district of	1869 Boors	On the north arm of	Unknown	877
	1/18	the feery slip northeast	Mary May May	
	Sent 16 - 910	of the roundhouse		

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: With the exception of rail lines there does not appear to have been any later construction over the site of this shed. The building was removed about eight years after it was first depicted on maps, thus diminishing the potential that substantial cultural deposits accumulated around it, especially in light if its proximity to the lake and ferry slip. The archeological potential of the structure and associated deposits is considered to be low to moderate.

Preight House/Car Shed	1884 Sanborn	On Dock Street due	Wood frame	1918
	F	south of the roundhouse		

Archeological Status: No visible evidence; no subsurface evidence detected in Phase IB.

Archeological Potential: Phase IB testing revealed up to three feet of rail yard slag and ballast topped by a set of tracks in the vicinity of this structure. Rather than suggesting that remains of this structure could be preserved beneath the fill, it is likely that the fill was deposited when the rail yard was created instead of after the building was demolished. The archeological potential of Structure 8 is considered to be low for both structural remains and associated deposits.

No.	Structure	Source	Location	Construction Details	Removed Before
9 Ui	identified Sheets	1884 Samborn	Extending west from northern May of repair	Wood frame	1909

Archeological Status: No visible evidence; subsurface evidence unknown, likely disturbed.

Archeological Potential: The wood frame buildings extended southwest off the northwest corner of the original repair shop. The structural remains have likely been impacted by the subsequent construction of the southern wing of the repair shop, or of the brick office that stood just north of that southern wing beginning in 1909. The archeological potential for both structural remains and associated deposits is considered to be low.

10 Lindentified Sheds		West of the repair shop on shoreline near main		1960
	Marie Committee	line track	, all 1	

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: The rail lines constitute the only potential for disturbance of these structures. Thus, there could be subsurface remains of these buildings if they had substantial foundations. The archeological potential is moderate for structural remains and low to moderate for associated archeological deposits.

14 Office	1891 Saphorn	Between the tool room	Wood frame	1902
11 Oiffice		and the repair shop		

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: The area occupied by this building is currently occupied by the ruins of two brick buildings extending off the eastern end of the repair shop. Some subsurface structural remains might be preserved if the building had a substantial foundation. The potential for intact deposits associated with this building is considered to be no more than low considering its high profile location with respect to the rest of the complex.



Archeological Status: No visible evidence; no subsurface evidence detected in Phase IB.

Archeological Potential: Phase IB testing revealed up to three feet of rail yard slag and ballast topped by a set of tracks in the vicinity of this structure. It appears that the fill was deposited when the rail yard was created rather than after the building was removed. Therefore, the archeological potential for structural remains of this building to survive is considered to be low as is the potential for associated archeological deposits.

No.	Structure	Source	Location	Construction Details	Removed Before
13 Sia	ed ti	902 Sanborn	Along Dock Street south at the repair	Wood Tame	1918

Archeological Status: No visible evidence; no subsurface evidence detected in Phase IB.

Archeological Potential: Phase IB testing revealed up to three feet of rail yard slag and ballast topped by a set of tracks in the area of this structure. It appears that the fill was deposited when the rail yard was created rather than after the building was removed. Therefore, the archeological potential for structural remains of this building to survive is considered to be low as is the potential for associated archeological deposits.

11/4 Cehouse	1902 Sanborn : Along Dock Sares	Wood frame	1268
TO SHOW THE PROPERTY OF THE PR	south of the furniable.		

Archeological Status: No visible evidence; no subsurface evidence detected in Phase IB.

Archeological Potential: Phase IB testing revealed up to three feet of rail yard slag and ballast topped by a set of tracks in the area of this structure. It appears that this fill was deposited when the rail yard was created rather than after the building was removed. Therefore, the archeological potential for structural remains of this building to survive is considered to be low as is the potential for associated archeological deposits.

15 Office	and the	1909 Sanborn	just north of repair	One-story brick	1968
			shop west wing	- A - A	

Archeological Status: Some visible evidence; subsurface evidence unknown.

Archeological Potential: There has been no significant construction on the site of this building since its demolition sometime before 1968. The building was removed down to the grade of the rail yard and some architectural elements may survive. The archeological potential is considered to be moderate for structural remains and low for associated deposits.

16 Storage (1909)// Casting Shed and Lumber	1909 Sanborn 1919 Sarborn	North of the repair	One-story wood	1968
Storehouse (1918), and Paint Shop (1949)	1949 Saliborn			

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: (The 1918 and 1949 Sanborn maps also show a scrap iron box-not inventoried as a separate structure-west of the storehouse.) The only potential for disturbance at the site of this building after its removal was the installation of railroad tracks prior to 1968. The potential for intact archeological remains is moderate if this building had a substantial foundation. The potential for associated archeological deposits is low.

No.	Structure	Source	Location	Construction Details	Removed Before
17	Coal Elevator	1909 Sanborn	Northeast the of	Wood frame	1968

Archeological Status: The 50-foot square, 3-foot high poured-concrete foundation of the coal elevator is intact.

Archeological Potential: The coal elevator's superstructure stood above ground on the raised concrete foundation. The superstructure has been removed. Associated archeological deposits are not expected other than subsurface elements of the foundation. The potential for associated archeological deposits relating to its use is low.

18 Sand Drier	1909 Sanborn	At the western end of	Wood frame	19/19
	490	the ferry slip northeast		
	1 3 31 11 11	of the roundhouse,	11101110711416	Shirt A

Archeological Status: The poured-concrete lower section of the sand drier extends about 3 feet above grade.

Archeological Potential: The sand dryer's superstructure stood above ground on the raised foundation but has been removed. Subsurface investigation of the sand drier is unlikely to provide substantial information other than the depth to which it extends and whether or not the feature stands on a concrete foundation or mortared stone. The potential is considered low for associated archeological deposits.

是特別以及	-2-	120 Maria	* · · · · · · · · · · · · · · · · · · ·		The same	高 期间
19 Shed (1909) D&H Co. Boat H	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1909 Sanborn	Northeast the of room	Wood frame	JAN 1	1949
Darmo D	Tree CLOTTEN	1010			18,000	100
The state of the s	HR26 (15 190)	1910 SHREOTH	THE PARTY OF THE P	The state of the s	40.	T Section 1988

Archeological Status: The poured-concrete foundation of this building extends above grade. The depth of construction is not known.

Archeological Potential: There is potential for structural and architectural evidence associated with the boat house; the potential for substantial archeological deposits is considered to be low.

20 Dynamo House	1909 Santom	Extending from the	Brick	2002
		eastenn end of reput	- F- 10-11	1

Archeological Status: Visible ruins attached to east side of Repair Shop; subsurface evidence unknown.

Archeological Potential: The dynamo house housed the electrical generator which was turned by a steam engine housed in the adjacent boiler room. In winter the latter would have been one of the warmest places in the rail yard and the heat would have been sought by workers. The generator has been removed, but the Dynamo House has a moderate archeological potential for internal architectural and structural elements. There is a low potential for associated of cultural deposits.

2.1 Boiler Room	1909 Sanborn	Aftached to the eastern	Brick	2002
		and of repair shop (still visible)		

Archeological Status: The ruins of the Boiler Room extend to the east of the Repair Shop.

Archeological Potential: The Boiler Room structure survives as a ruin but once housed a large hot water tank and boiler. The boiler has been removed. The Boiler Room has a moderate archeological potential for internal architectural and structural elements and a low potential for the associated archeological deposits.

No.	Structure	Source	Location	Construction Details	Removed Before
22 OF	rice Allows	1,1909 Shipting	Attacked to rear of western end of the roundhouse.	Wood frame	7,949

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: The office does not appear on the 1949 Sanborn, which shows that more than half of the roundhouse was removed by that year. This structure has a moderate archeological potential for structural and architectural remains. There is a low potential for associated archeological deposits.

roundhouse	23 Water Tank:	Sanborn North of the roundhouse.	Wood or Iron?	1949
------------	----------------	----------------------------------	---------------	------

Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: There is potential for structural remains in the form of a foundation or footers and a buried water line to fill the tower. The potential for other substantial archeological deposits is considered to be low.

24	Offic-	1918 Sanborn	onthe	Wood Fame?	1949
			Toundhouse	Sell Sun - A	

Archeological Status: No visible Evidence; subsurface evidence unknown.

Archeological Potential: There is potential for structural remains in the form of a foundation or footers. The potential for archeological deposits is considered to be low.

	A TOUR PROPERTY OF THE PARTY OF	ALSO EXCEPT AND AND AND AND AND AND AND AND AND AND	111111111111111111111111111111111111111	11 月 5	134
25 Locusts	1918 Sanforn	East side of the	Wood frame	1949	2000
	(1) (A. 1) 建 等则从海绵的引从高的图》	12.10			
	THINK'S I	roundhouse			No.
SPERSON CONTRACTOR OF THE PROPERTY OF THE PROP	1. 1000 年度以下,1000年度	经验证的工程的	CONTRACTOR OF THE PARTY OF THE		MERCEF

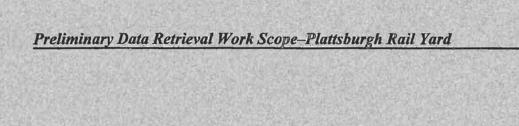
Archeological Status: No visible evidence; subsurface evidence unknown.

Archeological Potential: There is the potential for structural remains in the form of a foundation or footers. The potential for archeological deposits is considered to be low.

and an analysis	1040 8-14	Cart Co.	Wash Coleban	2020
26 Snedy (1949)	1949 Sanborn	East of the	Wood fr (shed)	1968 (stied)
26 Shed? (1949) Oil tank (1968)	1968 Aerial Ph.	roundhouse	Steel (oil tank)	1992 (fire)

Archeological Status: The shed shown on the 1949 Sanborn map was replaced by an oil tank of approximately the same dimensions and in virtually the samelocation in the 1968 aerial photo of the rail yard. No visible evidence; subsurface evidence unknown.

Archeological Status: There is the potential for structural remains in the form of a foundation or footers. The potential for archeological deposits is considered to be low.



ATTACHMENT 1:

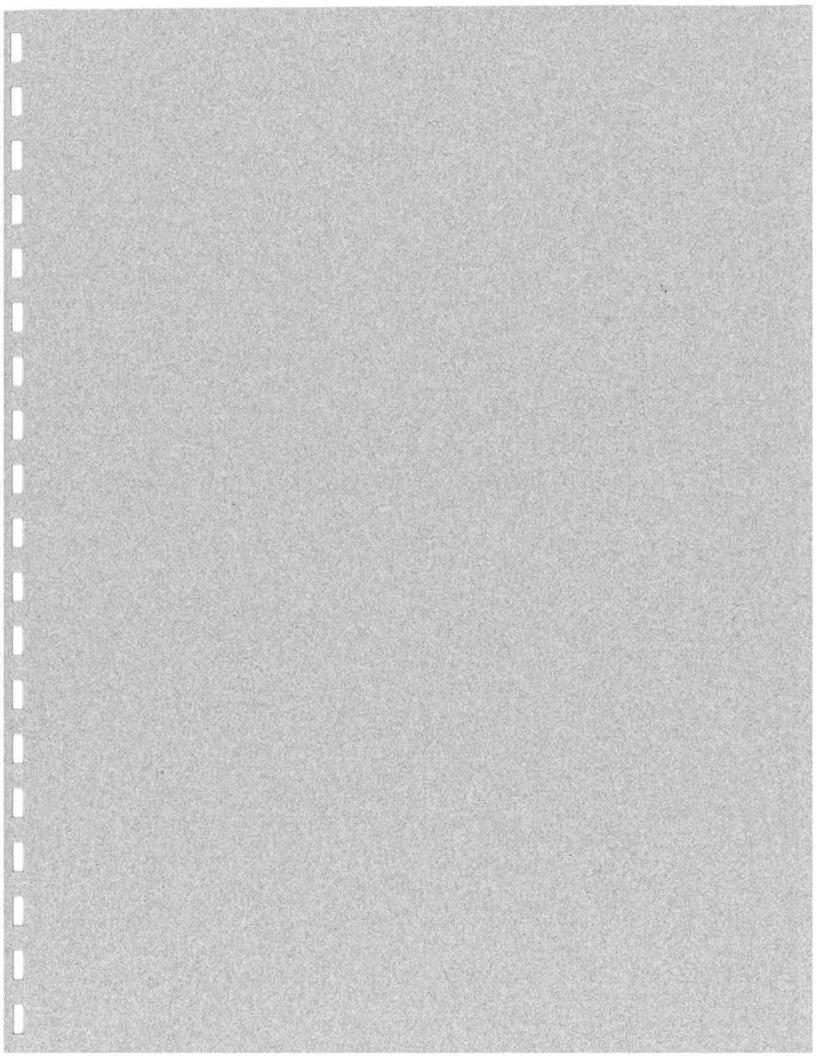
Table. Archeological Potential of D&H Rail Yard Structures Appearing on Historical Maps Plattsburgh Rail Yard Waterfront Development

Table 2. Horizontal and Vertical Distribution of Historic Euroamerican Remains Recovered From the Rail Site (VT-CH-736) During the C-6 Alignment, Southern Connector Project Archaeological Phase II Testing.

PROVENIENCE		-									ART	FACT	CAT	EGOR	Y													
SITE CERAMIC GL TRENCH/PIT/UNIT LEVEL (cm. b.s.) EW KA PO RW SW CV	CERAMIC					GLASS		METAL							OTHER HISTORICS										FLORAL	The second		
	CV	FG	NA	HA	SK	TL	WI	OT	UN	BK	CI	CO	CS	CT	SY	TP	TX	WO	OT	UN	UB							
RAIL SITE VT-CH-736 Trench 20			2			11	6	1	ı			3	1	1	1			1						1				29
Trench 21	-			2	2	12	6		1			-		1	2			2		- 1								29
Trench 23	2			-	1	8	-	3				-		1						-	-			-	-	1		35
Pit A	1	18			1	6	-	1		1				4	6										1	-		31
Pit B	1					10	11	3	1	2		2		4						3						1		36
Extension A	1					- 1	2.11	2	- 1		1	1	1.5	2			III.											8
N208.5 E199.4 Unit 20-30 30-40 40-50 50-60					2	11 5 7	8 5	2	1					5 4 1	4 30 33 1	4 4	1		2				1				x	26 57 52 1
60-75	2			5.5		1		- 1	4	5	200		1	9	. 58							2				1	J	74
N208.5 E199.4 Total	2				2	24	13	4	1	1	11			19	126	12	1		2			2	- 1			1		210
General Site	4	1				10	19	10	3	3		2		12	-7.	J-14			1	1	2		11					67
SITE TOTAL	9	- t	2	2	6	82	84	24	8	6	- 1	8	1	44	135	12	1	3	2	5	2	2	-1	- 1	1	2	1 ===:	445

MATERIAL KEY:					
CERAMIC	GLASS	METAL	OTHER HISTORICS	BONE	FLORAL REMAINS
EW= carthenware	CV= curved	NA= nail	BK= brick	UB= unburned	X= denotes presence
KA= knolin	FG= flet	HA= hardware	CI= cinder		
PO= porcelain		SK= spike	CO= coal		
RW= redware		TL= tool	CS= construction (marble, slate)		
SW= stoneware		Wi= wire	CT= concrete		
		OT= other (shock absorber)	SY= synthetics		121
		UN= unknown	TP= tarpaper		
			TX= textile		
			WO≔ wood		
			OT= other (carbon rod)		

UN= unknown



ADDITIONAL INFORMATION

PLATTSBURGH RAIL YARD AND WATERFRONT REDISCOVERY

CITY OF PLATTSBURGH
CLINTON COUNTY, NEW YORK
OPRHP 03PR 05681
HAA #2510

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FEBRUARY 2004

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Recovered From the Rail Site (VT-CH-736) During the C-6 Alignment, Southern Connector Project Archaeological Phase II Testing (Corey et al. 1999:83)

Maps

- 1. 1979 NYS DOT New York-Vermont Plattsburgh 7.5' Series Planimetric Quadrangle
- 2. 2003 Dufresne-Henry Draft Final Master Plan
- 3. 2003 Dufresne-Henry Perspective Sketch
- 4. 1852 Bevan Map of Plattsburgh, N.Y.
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- 7. 1877 Ruger Bird's Eye View of Plattsburgh, Clinton County, New York
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- 10. 1916 Beers New Atlas of the City of Plattsburgh, New York
- 11. 1884 Sanborn Plattsburgh, Clinton County, New York Sheet 5
- 12. 1891 Sanborn Plattsburgh, Clinton County, New York Sheet 7
- 13. 1902 Sanborn Plattsburgh, Clinton County, New York Sheet 6
- 14. 1909 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 15. 1918 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 16. 1949 Sanborn Plattsburgh, Clinton County, New York Sheet 9
- 17. 2003 Dufresne-Henry Draft Final Master Plan with Map-Documented Rail Yard Structures

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February 24, 2004

INTRODUCTION

At the request of our client, the Plattsburgh Community Development Office (PCDO), HAA, Inc. presents this additional information to augment the Phase IA/IB report for the Plattsburgh Rail Yard and Waterfront Rediscovery project in the City of Plattsburgh, Clinton County, New York (OPRHP 03PR05681; HAA 2510). The Phase IA/IB report was submitted to the PCDO in October 2002. Comments on the report by Michael Schifferli were appended to a letter dated January 13, 2004, from Sloane Bullough to the PCDO (Attachment 1). Mr. Schifferli's comments stated that additional archeology would be required for the project. Comments by Ms. Bullough asked for additional information relating to construction plans, elevation drawings, details of fixtures to be added to the outside of existing structures that will be retained as part of the redevelopment, and other information (Attachment 1).

Included below are a description of the project as it is proposed as of January 2004, including a description of how the project has expanded beyond the area addressed in the 2002 report. Other sections discuss factors affecting archeological potential in the rail yard, construction plans as they affect former and existing rail yard structures, and the research potential of rail yard components. There is also a framework for conducting further studies, information on standing rail yard structures required by OPRHP to complete project review, and summary and conclusions.

PROJECT DESCRIPTION

At this writing a conceptual plan for the Plattsburgh Rail Yard waterfront redevelopment is available. However, it is critical at this juncture to note that the area of potential effect (APE) for the project has expanded beyond the approximately 12-acre (4.86 ha) parcel that HAA, Inc. studied in the October 2002 report. At that time, the project area consisted only of the rail yard. Over time the project has expanded to include the Saranac River/Lake Champlain waterfront north and east of the Plattsburgh Municipal Lighting Department/Wastewater Treatment Plant (Map 1). The amount of additional land included in the project may be in the neighborhood of two acres, making for total of about 14 acres.

According to the CP Rail Yard and Waterfront Rediscovery "Draft" Final Report prepared by AES Northeast (Attachment 2), the area encompassed by the project is 13 acres (Section One - Summary, Mission Statement). A schematic plan and perspective renderings of the proposed project are presented in Maps 2 and 3. Outlined on the plans are the three areas that make up the waterfront study area. On the south is the CP Rail Yard parcel, which was assessed in the Phase IA report. In the center is the Municipal Lighting Department/Wastewater Treatment Plant parcel. Surrounding the municipal facilities like a ring is a narrow band of land added to the project since the 2002 Phase IA/IB report was completed.

According to Section Three – Final Schematic Plan (Attachment 2) and the Draft Final Master Plan (Map 2) the project will consist of the following elements:

- Building a centrally located conference center, hotel and retail development with a small building wing extending east toward and into the area of the waterfront park.
- Adaptively reusing of the historic (D & H Rail Yard) machine shop as a museum with park facilities.
- Integrating the D & H Rail Road roundhouse foundation into a park plaza drop-off.
- Reusing the turntable as a reflecting pool, possibly traversed by a trolley.
- Retaining the other D & H Rail Yard foundations including the coal shed and sand drier, and
 integrating the coal shed into a playground design and interpreting the sand drier as a
 railroad-related structure.
- Establishing a central pedestrian circulation corridor connecting the site development from
 one end to the other. The location and form of the corridor will reflect the historic arc of the
 rail yard tracks. In a nod to the sites railroad history, a trolley and track may be installed to
 connect the waterfront park with downtown Plattsburgh. The trolley will terminate at the
 fishing pier and observation deck at the east end of park.
- Building marina docking, transient docking, three public fishing access points, and a boathouse and associated carry-down launch site.
- Parking consisting of 150 spaces for hotel guests and employees; 250 spaces for conference facility and employees; 50 spaces for associated retail; 80 spaces for tour boat facility; 100 spaces for waterfront park users; and 10 short-term spaces adjacent to the boat landing, and 50 remote spaces for boat trailers.

- Plant trees to augment the existing trees along the shoreline. Install other plantings and lawn
 around the hotel and conference facility, waterfront park, and parking areas.
- Design utilities to avoid impact to the sites of map-documented rail yard structures.
- CP Rail will remove existing tracks, ties, and any other railroad-related equipment prior to transferring the property to the city.

DOCUMENT AND MAP REVIEW OF NON-RAIL YARD LANDS

Introduction

The document and map review in the 2002 Phase IA/IB report focused on lands within the rail yard. This section reviews one previous survey as it relates to the expanded project area and extends the review of 19th-century maps to lands north of the rail yard. Included in the discussion are the 1852 Bevan, 1856 Ligowsky, and 1869 Beers maps (Maps 4, 5, and 6, respectively), and the 1877 Ruger and 1899 Fausel bird's eye views of Plattsburgh (Maps 7 and 8, respectively). Elements common to four of the five maps are the railroad mainline as it crosses the mouth of the Saranac River and continues southward toward and into the rail yard, and two islands at the mouth of the river. The 1899 Fausel bird's eye view also shows the rail line, but shows three islands at the mouth of the Saranac River rather than two. The discussion begins with the map review and continues on to the discussion of a previous survey that occurred within this part of the project area.

Historical Map Review

The 1852 Bevan map (Map 4) shows a single structure apparently erected at lakeside on a landfill bordering the northwest corner of the rail yard parcel. The structure lies well east of Green Street and is also straight across from a short street angling off toward the lake from the east side of Green Street. (See Map 6 for the location of Green Street.) The ownership and function of this building is not indicated.

Map 5 (1856 Ligowsky), also shows a single structure between the rail line and the lakeshore, but this time the structure is just east of Green Street and well north and west of the short street angling off the east side of Green Street toward the lake. Its position relative to the adjacent street pattern raises doubt about whether this is the same building as the one shown on the 1852 map.

The 1869 Beers atlas (Map 6) shows no structures on the shore between the rail line and the lake, although the tailrace from the gristmill on the southwest side of the rail line passes beneath the tracks before passing through the study area and entering the lake. One unidentified structure is shown toward the center of the western island over which the rail bridge crossing the Saranac River

passes.

The 1877 Ruger Bird's Eye View of Plattsburgh (Map 7), shows two unidentified structures in the vicinity of the single building shown on the 1856 Ligowsky map. The 1899 Fausel bird's eye view (Map 8), shows one building, one other roofed structure, and two or more rows of stacked logs at what is identified as the Frank Z. Jabaut Icehouse and Wood Yards (no. 43 on the map). One small structure that may be a boathouse appears on the most easterly of the three islands at the mouth of the Saranac River.

Previous Survey



A Phase IA addendum and Phase IB archeological survey were conducted by Edward V. Curtin and Kerry L. Nelson following work previously performed by Murphy in 1993 (Curtin 1996). The report was prepared in advance of construction of a New York State Electric and Gas Corporation gas service through the Towns of Dannemora, Saranac, and Plattsburgh. The most significant find reported in this survey relating to the Waterfront Rediscovery was a precontact chert artifact recovered from the east end of the footbridge across the Saranac River. The point where the footbridge crosses the Saranac River is represented in the upper right corner of Map 2 and is proposed to be one of the pedestrian access points into the rail yard/waterfront redevelopment project. While the reported precontact artifact apparently was recovered from a shovel test excavated in the vicinity of the landing point of the bridge, the precise location of that test was not indicated in the Curtin report. Nonetheless, it appears that the east end of the bridge landed on the upstream island that is represented on all of the 19th-century maps and, if the precontact artifact was found in undisturbed context, attests to the apparent stability of at least the westernmost island.

Archeological Sensitivity and Potential of Non-Rail Yard Lands

Apparently there is no surface evidence for any of the structures represented outside of the rail yard on the 19th-century maps. The inventory of those structures includes two buildings—one a one-story boathouse about 1899, the other of two stories and dating from about 1877 and of unknown function. The two buildings stood on different islands. As many as five other separate buildings were erected on the mainland between the rail line and the lakeshore; these buildings dated between 1852 and 1899. Of those buildings, two belonged to a business selling ice and [fire?]wood. There is no evidence to indicate that any of them was a substantial industrial or commercial structure. No residential buildings are known to have been erected in this flood-prone lakeside location. In addition to the historic structures reported for non-rail yard lands, one precontact artifact was obtained from one shovel test excavated on the east side of the footbridge that now spans the Saranac River. The footbridge will be used as an entry point for the proposed waterfront development.

Based upon the map and document review, it appears that the northwest quadrant of non-rail

yard lands that are within the project area have a high sensitivity for the remains of industrial or commercial structures dating from the last half of the 19th century. Furthermore, the recovery of a single precontact artifact indicates that precontact sensitivity is high, although, considering the amount of historic development, these materials may not be present in undisturbed context.

FACTORS AFFECTING THE ARCHEOLOGICAL POTENTIAL OF THE PLATTSBURGH RAIL YARD AND WATERFRONT REDISCOVERY

As part of this assessment, we reviewed the archeological potential of the rail yard with an eye toward proposing the most profitable direction for future research. The following discussion relates the factors that reduce the archeological potential of the rail yard, reviews each of the 26 structures for which there is either surface evidence or are known to have stood in the rail yard and the archeological potential of each (Attachment 3). There is also a review of the proposed impacts and the adaptive reuse of the rail yard structures as part of the development plan.

As is clearly reflected in its listing on the National Register, the former D & H Railroad Plattsburgh Rail Yard is an important historic resource in the City of Plattsburgh. There are, however, three factors relating to the historical development of the rail yard and its position along the city's waterfront that reduce the potential for identifying significant archeological deposits (as opposed to structures) within its bounds. To help illustrate the discussion, each rail yard structure appearing on historical maps (Maps 4-6 and 9-16) been assigned a number. A table has been prepared that lists the structures and relevant information (Attachment 3).

The first factor concerning archeological potential relates to the amount and type of deposits expected in the rail yard. As an industrial/transportation site, the Plattsburgh Rail Yard had no full-time resident population. It is unlikely that rail yard employees prepared food onsite, although they undoubtedly brought a mid-shift meal which was consumed there. Therefore, dense domestic deposits relating to food preparation and consumption are not expected. Furthermore, a review of historical maps showing the rail yard, especially the detailed late 19th- and 20th-century Sanborn fire insurance maps (Maps 11-16), reveal one structure appended to the repair shop that might have been a privy. Unfortunately, the site of that building was subsequently built over and is now not accessible. In all likelihood, there is only a low probably that substantial cultural deposits (i.e. middens, artifact concentrations, dumps) accumulated onsite. In fact, considering 19th-century disposal patterns, the Lake Champlain/Saranac River waterfront would have been considered an appropriate location for dumping trash. Furthermore, with the ready availability of "incinerators" such as the fireboxes of locomotives in the roundhouse and the boiler firebox in the repair shop, archeological deposits of worker-related materials may be hard to come by.

With this in mind, the most productive archeological work scope for the rail yard should focus on exposing and documenting the remains of rail yard structures and features that are

to be integrated into the project design and the few that may be otherwise impacted by construction. The advantage of focusing on structures rather than archeological deposits is borne out in two recent projects on contemporary rail yards in the Northeast. Excavations at the Old Colony Roundhouse in Whitman, Massachusetts, exposed and interpreted a 19thcentury roundhouse and associated buildings while recovering only recovered 17 historic artifacts (PAL 2000). Likewise, the Phase II site evaluation of the Rutland and Burlington Railroad roundhouse and rail yard in Burlington, Vermont, across Lake Champlain from Plattsburgh, produced detailed information concerning the structural remains of the earliest railroad site in Vermont but produced fewer than 450 artifacts, only about 100 of which were domestic items that potentially could be associated with the use of the rail yard by workers (Attachment 4). The other recovered materials were mainly architectural remains from the various structures that occupied the site during the 19th and 20th centuries (Corey et al. 1999:83). The most efficient and productive focus for archeology at the Plattsburgh Rail Yard will be on documenting the structures within the project area. One example is the evolution of the round house and turntable whose form and size evolved in response to changing railroad technology.

- The second factor affecting the archeological potential of the rail yard is that the land on which it rests was filled between about 1850 and 1920. Neither natural soils nor archeological deposits that predate the construction of this land form can be expected. Based upon the historic map review, the land upon which the major elements of the rail yard complex (the repair shop, the turntable, and the roundhouse) was deposited about 1850 and that the grade of that part of the site probably has not changed by more than a few inches in the past 150 years. We know this to be the case since the repair shop is still standing and portions of the roundhouse are visible on the ground surface today. Hence, there is virtually no chance for structures to be buried deeply beneath the existing grade since that grade has been stable since the rail yard first came into being.
- The third factor affecting archeology is that the site of the proposed conference center, and retail development was filled between 1909 and 1918 (Maps 14 and 15). This section of the rail yard cannot be expected to hold archeological deposits or features predating the first decade of the 20th century. Furthermore, except for a water tank and office—Structures 23 and 24 on Map—no other structures ever stood on that part of the site. Therefore, the archeological potential there is considered to be low.

With these three factors in mind, it is possible to assess the archeological potential of all 26 structures that stood within the rail yard over the past 150 years (Attachment 3). By comparing this information with the proposed construction impacts, we can focus a plan for mitigating the impacts to resources that have the potential to yield significant information concerning the rail yard and are threatened by the planned development.

DEVELOPMENT PLANS FOR THE RAIL YARD AND WATERFRONT REDISCOVERY

Current development plans call for the adaptive reuse of virtually all of the extant structures and structure remnants within the rail yard and for reconstructing the boathouse, a structure that does not survive, at the end of the slip. The only other substantial existing rail yard elements are the tracks, ties, and switches, all of which are to be removed by CP Rail before the property is released to the city. The plan proposed for the site focuses on preserving and interpreting its railroad-associated history for the benefit of the people of the city of Plattsburgh. The following section outlines the proposed reuse for each structure as well as the plan for rebuilding the boathouse.

• The Turntable and Roundhouse (Structures 1 and 22). For the sake of convenience and in light of their close functional relationship, the roundhouse and turntable are treated as one structure in the following discussion. Currently, the poured concrete foundation of the roundhouse survives above ground although it is cracked and will have to be repaired. The design for the park calls for the roundhouse floor to be used as vehicle parking and as a passenger drop-off for visitors. Structure 22 is a small office appended to the northwest corner of the roundhouse on the 1909 and 1918 Sanborn maps (Maps 14 and 15).

Although not visible above the ground surface at present, the *turntable* was most likely filled to avoid liability when the rail yard was decommissioned in the 1970s. The design plans call for the rehabilitation of this feature and its incorporation into the interpretive park. The turntable will be re-excavated and turned into a reflecting pool. In a nod to its original function, the trolley is designed to pass over it.

- The Repair Shop (Structure 2). Currently the repair shop is standing the center of the rail yard and is used to store salt and sand. The repair shop will be rehabilitated and restored. In the current design, it will be used as an interpretive display space that will attract visitors to the proposed waterfront park and highlight the history of the rail yard and its impact on the City of Plattsburgh from the second half of the 19th century until the 1970s. The repair shop will also house trolley cars which will take visitors from the park and hotel to heart of downtown Plattsburgh.
- Coal Elevator (Structure 17). The exposed foundation of the coal elevator will be stabilized
 and rehabilitated. According to current plans, the area defined by the foundation will enclose
 a playground.
- The Sand Drier (Structure 18). The sand drier will be maintained and preserved as an interpretive element relating to the rail yard.

- The Boat House (Structure 19). A new boathouse will be reconstructed on the footprint of the original boathouse, which was built between 1909 and 1918. The new structure will compliment the design and architecture of the Repair Shop (Structure 1); the style will also be mimicked in the design of the hotel and conference center. The presence of the new boathouse provides continuity of function between the historical rail yard and the proposed rail yard/waterfront park.
- Other Rail Yard Components. Other than the structures described above, there is little to
 no surface evidence for other rail yard components that appear in the many historical maps
 illustrating the evolution of the D & H Railroad Company's Plattsburgh rail yard. The
 locations of all structures have been mapped on the proposed project plan (Map 17).

Except for the examples cited above, waterfront park development in the vicinity of other map-documented structures consists of laying trolley track in the vicinity of Structures 3, 4, and 10, and possibly Structure 5. Otherwise, most other disturbance will be restricted to landscaping, laying down pedestrian paths, developing parking areas, and installing utilities, such as light poles and the electric lines to power them. The Community Development Office is committed to avoiding or reducing the impact of these activities on map-documented structures by routing utility lines around the sites of map-documented structures.

RESEARCH POTENTIAL AND PRELIMINARY DATA RETRIEVAL WORK SCOPE

Based upon the results of rail yard investigation in Whitman Massachusetts, and Burlington, Vermont, it appears that few archeological deposits relating to rail yard workers can be expected at the Plattsburgh Rail Yard. Therefore, the most productive type of archeological data retrieval conducted there should focus on documenting the major rail yard structures, remnants of which are already known to exist. In an effort to control costs, any of the archeological data retrieval work should occur as the initial phases of construction are undertaken.

Standing Building, Partly Visible Structures, and the Boat House

The following extant or partially extant rail yard structures are proposed for examination during the data retrieval along with the proposed archeological work scope for each. All work will occur immediately prior to or in concert with construction.

• The Turntable and Roundhouse (Structures 1 and 22). Strip with a combination of power equipment and hand clearing the area encompassed by the full extent of the turntable and roundhouse as shown on Sanborn maps dating from 1884 to 1918 (Maps 11-15). Search for evidence of the various alterations and building episodes revealed on the Sanborn and other maps. Map in detail and photodocument roundhouse and turntable details. Hand excavate units to document archeological deposits of interest should they be encountered.

- The Repair Shop (Structure 2). No archeology is proposed for this standing structure.
 Confer with OPRHP concerning the need for and level of HABS/HAER documentation.
- Coal Elevator (Structure 17). Remove all vegetation and other material obscuring the foundation of the coal elevator. Map and photodocument the exposed foundation.
- The Sand Drier (Structure 18). Expose the sand drier by removing vegetation and other material obscuring it. Map and photodocument.
- The Boat House (Structure 19). Clear and expose the boathouse foundation, if any of it survives, and map and photodocument the remains.

Other Studies

As is the case with the CP Rail Yard itself, detailed plans for the development of non-rail yard lands are not available at this time. However, land-based waterfront park development in non-rail yard lands, is generally restricted to landscaping, and constructing trails, a pergola east of the wastewater treatment plant, and parking areas, most or all of which will have restricted subsurface impact. Lakeside construction will consist of a boat ramp, transient docking, marina docking, and a fishing pier. Depending upon the depth of construction, limited shovel testing or backhoe testing may be appropriate to examine the west and north side of the non-rail yard lands for evidence of precontact occupation and the 19th-century structures documented for this part of the site. If it is necessary to undertake archeological investigations for precontact sites in non-rail yard lands, the office of Edward V. Curtin, Archaeological Consultant will be contacted for detailed information concerning the precontact finds.

Historic Research

Preliminary research conducted at the Clinton County Historical Society and the Local History Room of the Feinberg Library at SUNY Plattsburgh indicates that there is limited information available locally concerning the Plattsburgh Rail Yard. Research in 19th-century Plattsburgh newspapers for articles relating to railroad construction has resulted in a modest amount of historical information being gathered concerning either the rail yard in particular and Clinton County railroad construction in general. The location of the D & H Railroad archive, if any, has not been identified to date.

Additional historical research concerning the Plattsburgh Rail Yard will be conducted at the Plattsburgh Public Library and the Feinberg Library where the focus will be on examining 19th- and 20th-century newspapers for information concerning the yard and general developments in the Plattsburgh and Montreal and Rutland and D & H railroad companies as they affected rail yard

operations. The search will also continue to find out if a D & H Railroad archive exists, its location, and accessibility to the public. In the absence of project specific information, research will focus on the general history of rail yard development and rail yard equipment with a focus on the northeastern United States.

Other Information Requested by OPRHP for Project Review

A letter from Sloane Bullough, OPRHP Historic Sties Restoration Coordination, addressed to Robert Zauckerman, Chairman of the City of Plattsburgh Planning Board requested information concerning rail yard structures and the proposed Plattsburgh Waterfront Development as it relates to the rail yard. The following is a list of the requested information:

- Existing Conditions Site Plan for the Rail Yard.
- Photographs of the project area keyed to the site plan.
- Additional design documents as they become available including elevation drawings of new construction and catalog cut sheets of fixtures that will be installed, such as outdoor lighting.
- Interior and exterior photos of existing buildings keyed to existing conditions floor plans
- Proposed floor plans for reused existing buildings.
- Elevation drawings of the proposed work on existing buildings.

This information will be provided to OPRHP as it becomes available.

SUMMARY AND CONCLUSIONS

The Plattsburgh Rail Yard and Waterfront Rediscovery Project presents a rare opportunity to conduct research on a 19th- and 20th-century rail yard in the Northeast. To date, two other rail yards, one in Massachusetts, one in Vermont, have been the sites of archeological investigations. For the Burlington rail yard, the investigation apparently did not proceed past the Phase II site evaluation. Since the Plattsburgh Rail Yard already is listed on the National Register of Historic Places, any further study conducted there as part of an OPRHP-approved work scope will constitute mitigation of adverse effects through data retrieval.

To the credit of the Plattsburgh Community Development Office, the development plan calls for integrating salient surviving rail yard features into the Plattsburgh Waterfront Project. Included among the resources to be retained are the repair shop, which will house a museum and park facilities, the roundhouse and turntable (fountain, park plaza, and visitor drop-off), the coal elevator (park playground), the sand drier (railroad interpretive feature) and boathouse (community boathouse). The results of the archeological data retrieval can be integrated into interpretative displays for heritage tourists and residents of the City of Plattsburgh and Clinton County. Thus, the Plattsburgh Waterfront project promises benefits for both adaptive reuse of surviving rail yard

elements that will be integrated into the project, as well as historical data that can be interpreted to the public.

At a time when local agencies routinely call for the total demolition of the surviving elements of important resources, such as the rail yard, to provide a "clean slate" for developers, PCDO instead has chosen to recognize the significance of the resource and is working to preserve and reuse it. With this in mind, OPRHP review staff are encouraged to support the Community Development Office as the Rail Yard redevelopment project proceeds.

As part of a dialog, PCDO seeks comments on this preliminary data retrieval plan. By beginning the process early, the data retrieval work may be conducted on a schedule that advances the project. With this in mind, please contact J. Wm. Bouchard of HAA, Inc. with questions and comments.

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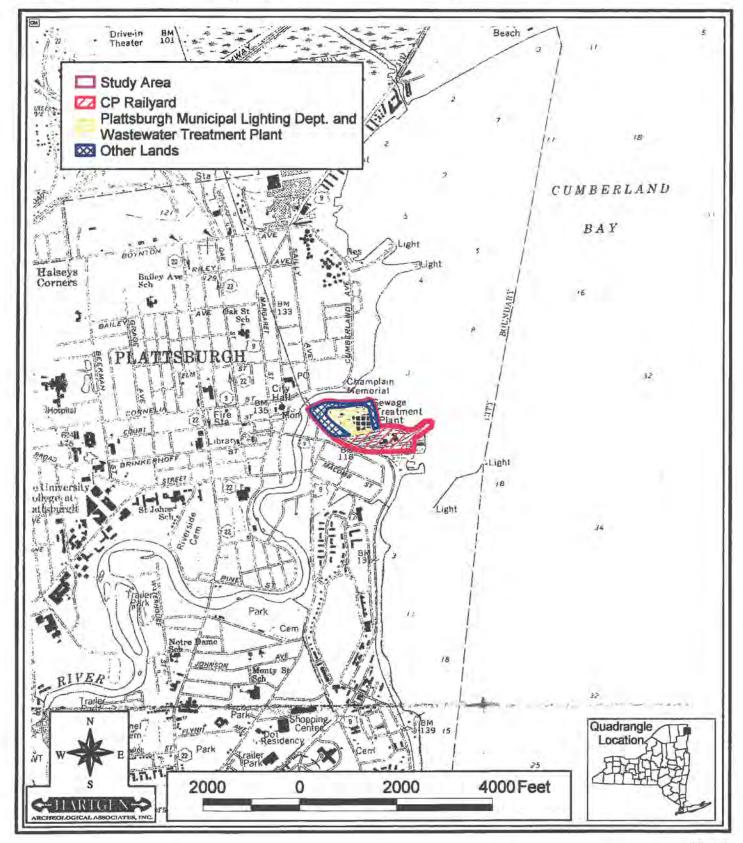
Ruger, A.

1877 Bird's Eye View of Plattsburgh, Clinton County, New York 1877. J.J. Stoner, Madison, Wisconsin.

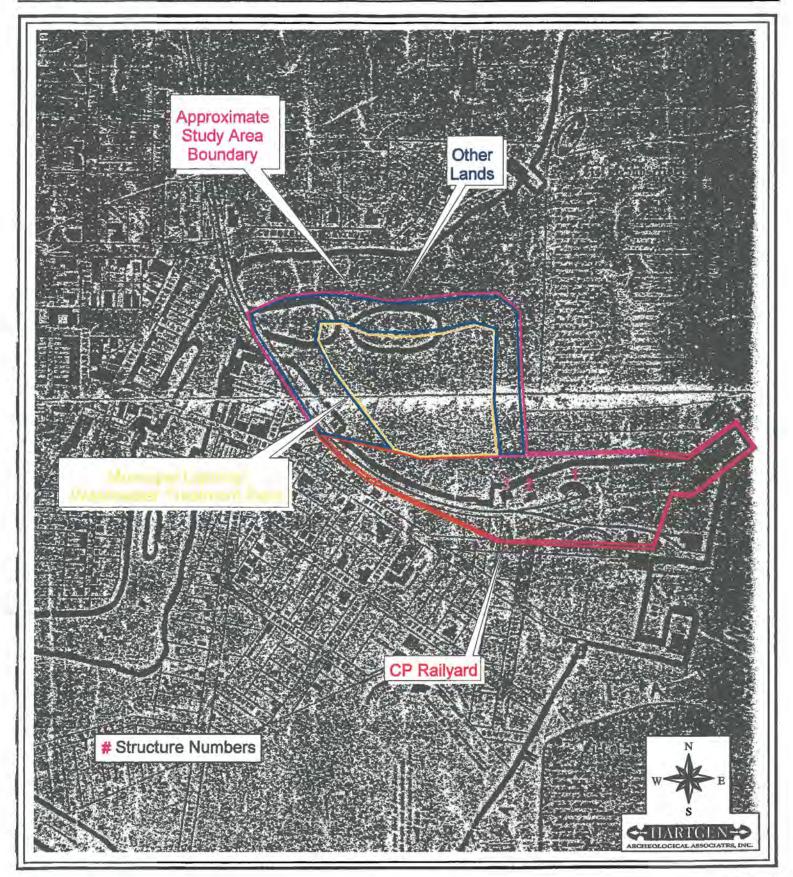
Sanborn Fire Insurance Company

- 1884 Plattsburgh, Clinton County, New York. Sheet 5. Sanborn Map Company, New York.
- 1891 Plattsburgh, Clinton County, New York. Sheet 7. Sanborn Map Company, New York.
- 1902 Plattsburgh, Clinton County, New York. Sheet 6. Sanborn Map Company, New York.
- 1909 Plattsburgh, Clinton County, New York. Sheet 9. Sanborn Map Company, New York.
- 1918 Plattsburgh, Clinton County, New York. Sheet 9. Sanborn Map Company, New York.
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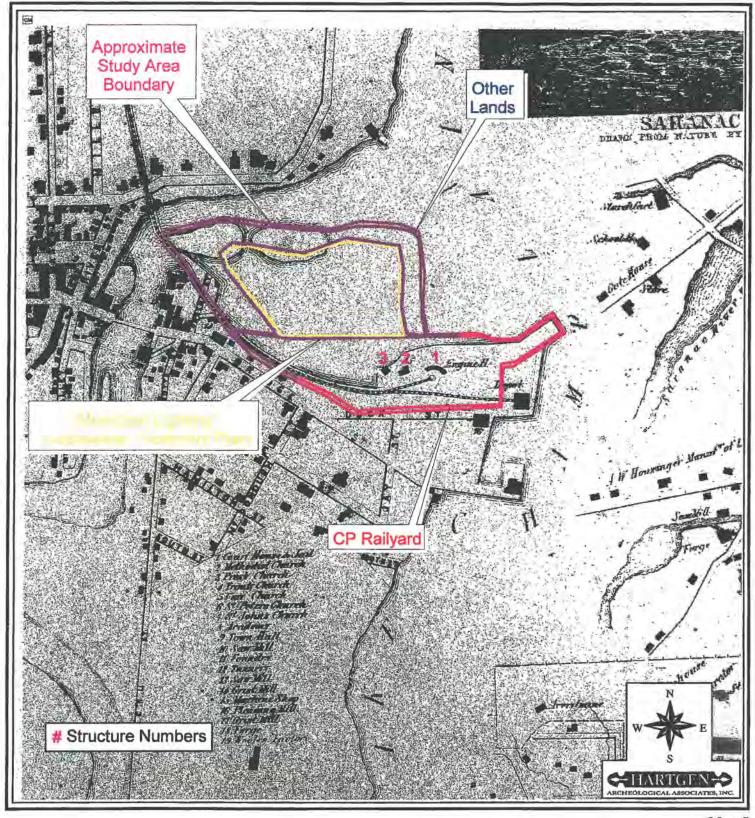
MAPS



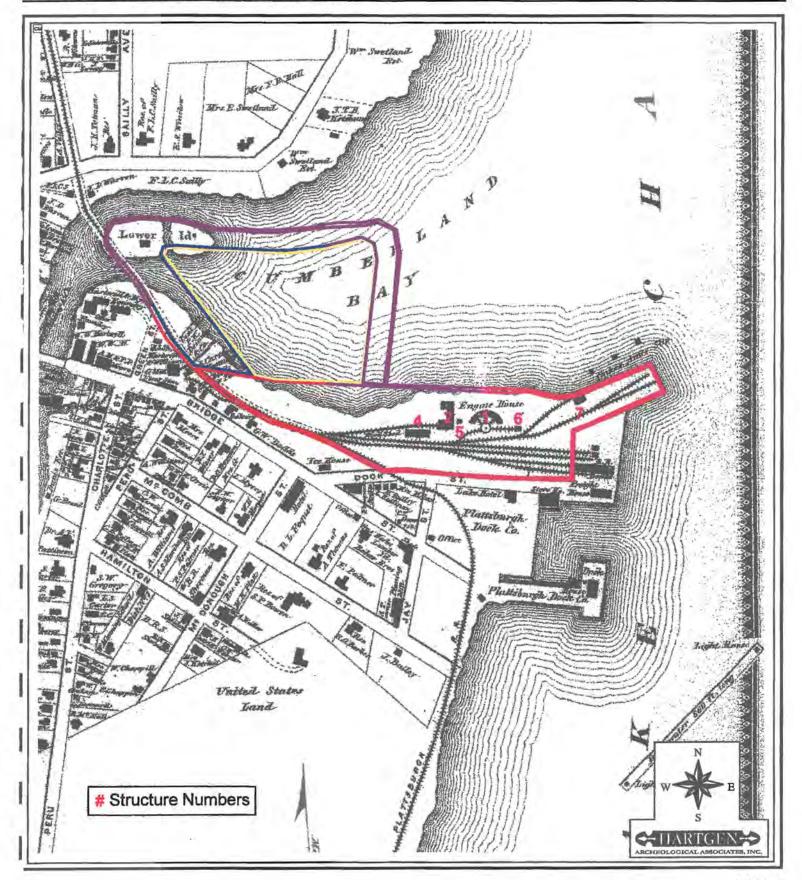
Map 1
1979 NYS DOT New York-Vermont Plattsburgh 7.5' Series Planimetric Quadrangle



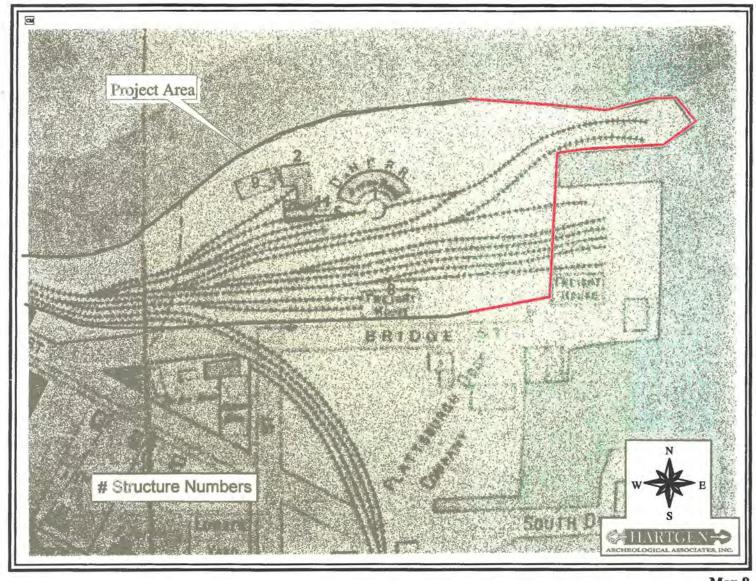
Map 4
1852 Bevan Map of Plattsburgh, N.Y.



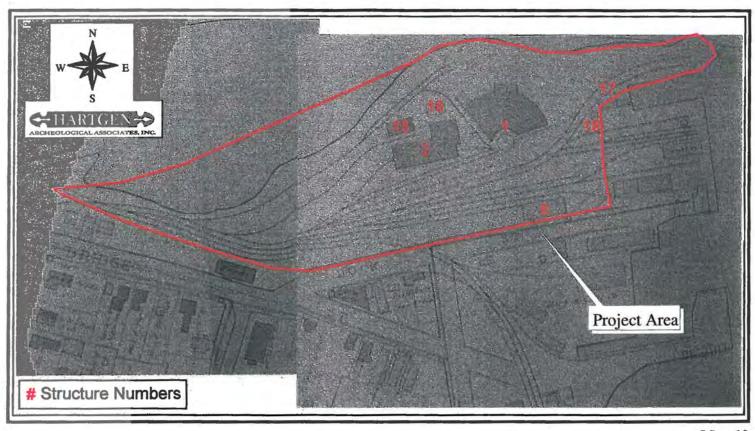
Map 5
1856 Ligowsky Map of Clinton County, N.Y.



Map 6 1869 Beers Atlas of Clinton County, New York



Map 9
1889 Beers Map of Plattsburgh, New York



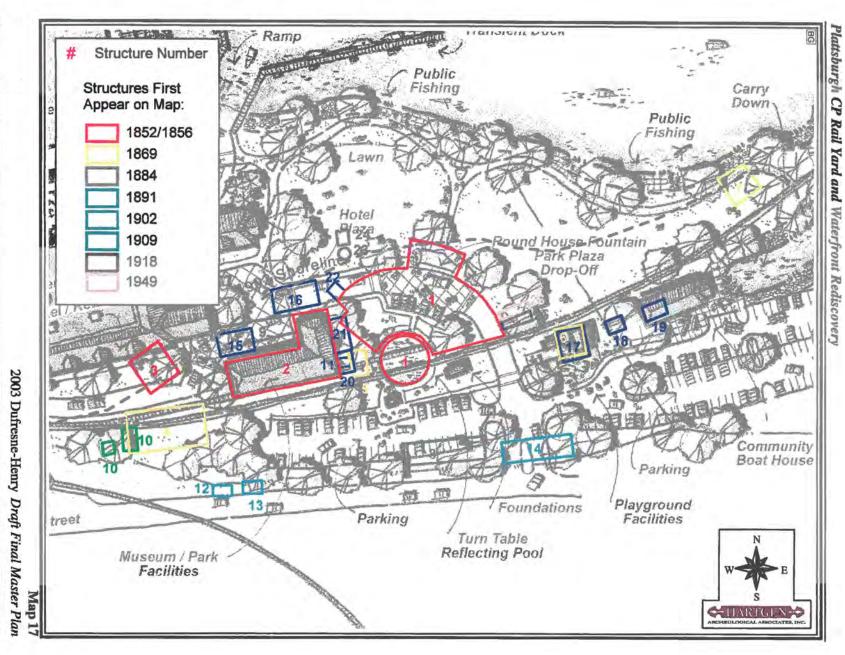
Map 10
1916 Beers New Atlas of the City of Plattsburgh, New York

Table: D & H Rail Yard Structures Appearing on Historical Maps

No.	Structure	Source	Location	Construction Details	Removed Before	Status
1	Turntable and roundhouse	1856 Ligowsky	Central (still visible)	Brick	1992	The Roundhouse ruins are visible above ground; the turntable was filled after the rail yard was abandoned in the 1970
2	Repair Shop	1856 Ligowsky	Central (still standing)	Brick	Extent (heavily modified)	Standing although heavily modified.
3	Unidentified	1856 Ligowsky	Along the 1856 lakeshore due west of the repair shop	Unknown	1869	No visible evidence.
4	Wood Shed	1869 Beers	Just south and west of the repair shop	Wood frame	1889	No visible evidence.
5	Tool House/Tool Room	1869 Beers	Between the repair shop and the roundhouse	Wood frame	1902	No visible evidence; probably disturbed by construction of the dynamo house.
6	Shed	1869 Beers	East of the roundhouse	Unknown	1889	No visible evidence.
7	Shed	1869 Beers	On the north arm of the ferry slip	Unknown	1877	No visible evidence.
8	Freight House/Car Shed	1884 Sanborn	Near Dock Street due south of the roundhouse	Wood frame	1918	No visible evidence; no subsurface evidence detected during the Phase IB.
9	Sheds	1884 Sanborn	Extending west from northern wing of repair shop	Wood frame	1909	No visible evidence.
10	Sheds	1891 Sanborn	West of the repair shop on shoreline near main line	Wood frame	1909	No visible evidence.

No.	Structure	Source	Location	Construction Details	Removed Before	Status
			track			
11	Office	1891 Sanborn	Between the tool room and the repair shop	Wood frame	1902	No visible evidence,
12	Office	1902 Sanborn	Along Dock Street southwest of the repair shop.	Wood frame	1918	No visible evidence; no evidence detected during the Phase IB
13	Shed	1902 Sanborn	Along Dock Street south of the repair shop.	Wood frame	1918	No visible evidence; no evidence detected during the Phase IB.
14	Icehouse	1902 Sanborn	Along Dock Street south of the turntable.	Wood frame	1968	No visible evidence; no evidence detected during Phase IB
15	Office	1909 Sanborn	Just north of repair shop west wing	One-story brick	1968	Removed to grade; some architectural elements may survive.
16	Storage (1909) Casting Shed and Lumber Storehouse (1918), and Paint Shop (1949)	1909 Sanborn 1919 Sanborn 1949 Sanborn	North of the repair shop	One-story wood frame	1968	No visible evidence.
17	Coal Elevator	1909 Sanborn	Northeast the of roundhouse.	Wood frame	1968	The 50-foot square, 3-foot high poured- concrete foundation of the coal elevator is intact.
18	Sand Drier	1909 Sanborn	At the western end of the ferry slip northeast of the roundhouse.	Wood frame	1949	The lower poured-concrete section extends about 3 feet above grade.
19	Shed (1909) D & H Co. Boat House (1918)	1909 Sanborn 1918 Sanborn	Northeast of the roundhouse	Wood frame	1949	The poured-concrete foundation extends above grade.

No.	Structure	Source	Location	Construction Details	Removed Before	Status
20	Dynamo House	1909 Sanborn	Extending from the eastern end of repair shop	Brick	2002	Visible ruins attached to east side of Repair Shop.
21	Boiler Room	1909 Sanborn	Attached to the eastern end of repair shop (still visible)	Brick	2002	The ruins of the Boiler Room extend to the east of the Repair Shop.
22	Office	1909 Sanborn	Attached to rear of western end of the roundhouse.	Wood frame	1949	No visible evidence.
23	Water Tank	1918 Sanborn	North of the roundhouse.	Wood or Iron?	1949	No visible evidence.
24	Office	1918 Sanborn	North of the roundhouse	Wood frame?	1949	No visible evidence.
25	Lockers	1918 Sanborn	East side of the roundhouse	Wood frame	1949	No visible evidence.
26	Shed? (1949) Oil tank (1968)	1949 Sanborn 1968 Aerial Ph.	East of the roundhouse	Wood fr (shed) Steel (oil tank)	1968 (shed) 1992 (fire)	No visible evidence.



February 2004

ATTACHMENT 1: Letter from Sloane Bullough (OPRHP) to Robert Zuckerman, Planning Board (January 13, 2004)



New York State Office of Parks, Recreation and Historic Preservation Historic Preservation Field Services Burgay Peobles Island, PO Box 189, Waterford, New York 12188-0189

518-237-9843

Sampleile Cantro Comminekumer

January 13, 2004

Hobert Zuckermen, Chairman Planning Board Plattsburgh City Hall 41 City Hall Placo Plattsburgh, NY 12901

Re: 9

SECRA, DOS, OPAHP

Redevelopment of D&H Rall Yard -14 Acres

Dock Street

Plattsburgh, Clinton County, NY

03PR05681

Thank you for requesting the comments of the Office of Parks, Recreation, and Historic Preservation for the redevelopment of the D&H Rail Yard in Plattsburgh, NY. We are reviewing this project under the provisions of Section 14.09 of the New York State Historic Preservation Act of 1980. The proposal for the City of Plattsburgh to act as Lead Agency is fine in our opinion.

Michael Schifferli, of our archeological unit, has reviewed the project and has determined that additional archeology testing is warranted. I have enclosed a copy of his comments for your review and use. If you have any questions about the archeological concerns, please contact Mr. Schifferli at 518-237-8643, ext. 3281.

The Delaward & Mudson (D&H) Rail Road Complex is listed on the National Register of Historic Places. Before we can make our formal determination on the project's impact to historic resources, we will need more information. Please send us an existing conditions site plan, a full set of photographs of the project area keyed to a site plan, and any additional design documents as they become available. These should include elevation drawings of new construction and catalogue cut sheets of any fixtures that will be installed such as outdoor lighting. In order for us to review the treatments proposed for the existing buildings, we will need exterior photos of those buildings, interior photos keyed to existing conditions floor plans, and elevation drawings documenting proposed work.

Again, thank you for your request. If anyone has any questions, or if I can be of any assistance, please call me at (518) 237-8643, ext. 3252. Using the PR# above will significantly expedite the processing of future submissions for this project.

Sincerely,

Sleane Bullough

Historic Sites Restoration Coordinator

Enclosure

An Equal Opportunity/Alarmative Action Agency
Oprines on respect

Page I of 1

REQUEST FOR ADDITIONAL INFORMATION ARCHEOLOGY

PROJECT NUMBER 03PR05681

(Redevelopment of D & H Rall Yard - 14 acres/..../C/PLATTSBURGH)

us to complete our evaluation of the Archaeological sensitivity of your project will need the following formation
Full project description showing area of potential effect.
Clear, original photographs of the project area from all directions, keyed to a site plan.
Brief history of property.
Clear, original photographs of the following:
Other:
Other:
additional archaeological testing regired. Complete Set of Engineering Plans
The boundaries of the project area should be clearly delineated on a United States Geological Survey (USGS) Quadrangle, or New York State Department of Transportation (DOT) 7.5-minute (scale 1=24,000) map. Original scale should be used if photocopying and a label providing map title should be included. There are several "on-line" resources for these maps. Some examples include: terraserver. com and topozone.com.

Please provide only the additional information checked above, for archaeological review. If you have any questions concerning this request for additional information, please call Michael Schifferli at 518-237-8643, ext 3281

PLEASE BE SURE TO REFER TO THE PROJECT NUMBER NOTED ABOVE WHEN RESPONDING TO THIS REQUEST

ATTACHMENT 2: CP Rail Yard and Waterfront Rediscovery "Draft" Final Report (AES Northeast)

CP RailYard and Waterfront Rediscovery "Draft" Final Report

Plattsburgh, New York

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- * Presentations:

Conceptual Alternatives 06/19/03

Schematic Alternatives 08/06/03

"Draft" Final Schematic 08/14/03

- * Public presentation of "Draft" Final Schematic 09/03/03
- * Engineering Reports
- * Stormwater Treatment Review, December 24, 2003
- * Odor Abatement Review, April 17, 2003
- * Correspondence
- * Letter from Sloane Bullough, Historic Sites Restoration Coordinator, NY State Office of Parks, Recreation and Historic Preservation, January 21, 2003
- * Letter from David F. Klinge, Project Director, Hartgen Archeological Associates, Inc., February 4, 2003
- * Letter from Daniel T. Kelly, Regional Rail Coordinator, NYSDOT, June 25, 2003
- * Excerpts from City Zoning Ordinances Schedules I, II & IV with Zoning Map
- * "Draft Copy" Newsletter
- * Final Master Plan at 1' = 100' 24"x36" Figure 3.1
- * Perspective Sketch 24" x 36" Figure 3.2
- * Development details 24" x 3x- Figure 3.3

SECTION EIGHT - References

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CP RailYard and Waterfront Rediscovery "DRAFT" Final Report
Plattsburgh, New York

SECTION ONE - Summary

Mission Statement

The City of Plattsburgh, through its Community Development Office, is in the process of facilitating the redevelopment of the current CP RailYard site as part of the Plattsburgh Rail Yard Waterfront Rediscovery Program. The proposed redevelopment of this 13-acre parcel features a hotel and conference facility, restaurants, limited retail and a public access waterfront park.

The Community Development Office has identified this parcel as a critical revitalization project for the City of Plattsburgh. It will spark a strong, positive economic influence and act as a waterfront gateway to the downtown, as well as stimulate the region in general. To further this goal, the Community Development Office needs to develop a Master Plan that will analyze the site, fully explore the opportunities, and clearly identify its constraints. The Community Development Office needs an implementable, feasible, urban design vision for the site as well as the graphic tools to communicate that vision to the public, and ultimately to potential developers.

Section One - Page 1 CP RailYard and Waterfront Rediscovery "DRAFT" Final Report Plattsburgh, New York

SECTION TWO - Introduction

Overview

AES Northeast and Dufresne-Henry were retained by the City of Plattsburgh to provide an overall Master Plan Design Study. AES Northeast is a local, community-minded architectural, engineering and planning firm. Dufresne-Henry is a broad based consulting engineering firm which has a wide range of local and regional waterfront design experience.

The AES Northeast/Dufresne-Henry design team provided a thorough site analysis attained from extensive local knowledge and expert review. The design team generated potential site development programs through review of reports and studies specifically prepared for this site and project, and through focused in-house project meetings with city and state representatives and other project "stakeholders". Team members reviewed studies and reports prepared specifically for the project and the findings and recommendations were considered and incorporated into the development of the site program and subsequent designs. Reports included a waterfront hotel feasibility study, a historical and archeological report, a boat launch (ramp) study and a site environmental assessment.

The project team prepared a site analysis, and opportunities and constraints studies to determine how best to approach matching the site development program to the property. Access to and through the site was studied and documented. The team in conjunction with the City, explored the feasibility of a separate grade (over the railroad tracks) access to the site, referred to as "the flyover".

The City and the design team reviewed the historic resources of the property and discussed the opportunities to incorporate elements of the past into the plan for the future. The historic and renovated station building, the historic machine shop building, foundations from the roundhouse and turntable, and the general sweep and arc of the rails in the rail yard were important design generators and influenced the design plans. The team presented concepts for screening and filtering views of the wastewater treatment facility and discussed options for odor abatement.

After completing these evaluations, the design team prepared and presented three schematic plan options to the City for comment and review. City officials identified one of the three options as a preferred plan and it was carried forward with several revisions and additions and presented as the "Draft" Final Schematic Plan.

The "Draft" Final Report includes graphic presentation materials that illustrate and describe the Final Schematic Plan, document the planning and design process, and include an estimate of probable construction costs.

Section Two - Page 1 CP RailYard and Waterfront Rediscovery "DRAFT" Final Report Plattsburgh, New York

Schedule

Project work began in December 2002. The "Draft" Final Report was submitted in January 2004. Major milestones reached along the project timeline included:

Project Kick-off Meeting	01/23/03
Stakeholders Meeting	03/18/03
Presentations: Site Analysis, Opportunities and Constraints	06/19/03
Preliminary Schematic Plan	07/23/03
Schematic Options	08/06/03
"Draft" Final Schematic Plan	08/14/03
Public Presentation of "Draft" Final Schematic Plan	09/03/03
Submission of "Draft" Final Report	01/09/04

SECTION THREE - Final Schematic Plan

The Plattsburgh Waterfront Final Master Plan graphics and plans include images of the Final Master Plan, Perspective Sketch and Site Sections. Each of these graphics is included at the back of the report as a full-size foldout page.

The Plattsburgh Waterfront Final Master Plan shows that the hotel and conference facilities are centrally located within the property and that a small building wing extends to the east towards and into the area of waterfront park. The historic machine shop building and roundhouse foundation are incorporated into the site development to form and frame the park and hotel arrival and drop-off areas.

Dock Street is the primary access to the waterfront park, hotel and conference facilities. Green Street is the secondary access to the hotel and park, and is the primary access to the major parking facilities, the boat launch and the wastewater treatment facility.

A central pedestrian circulation corridor connects the entire site development from one end to the other. The location and form of the corridor reflect the historic arc and location of the many rail yard tracks. The corridor is envisioned to provide both walkway facilities and possibly a parallel trolley track and trolley. The walkway and trolley will connect parking at the west end of the park with the centrally located hotel and conference facility. It will also connect to the waterfront park and facilities to the east, and will terminate at the fishing pier ands observation deck.

Parking for the property is located throughout the site along the pedestrian and trolley corridor. The bulk of the parking is located at the western end of the site along the pedestrian and trolley corridor. At the eastern end of the site parking is located along Dock Street adjacent to the tour boat facilities and community boathouse. A limited amount of parking is proposed at grade below the conference facility. A limited amount of short-term parking is available at the waterfront park drop-off areas and hotel and conference facility arrival and drop-off areas. The original parking requirements identified for the proposed development program included:

- x 150 spaces for hotel guests and employees
- x 250 spaces for conference facility and employees
- x 50 spaces for associated retail
- x 80 spaces for tour boat facility
- x 100 spaces for waterfront park users
- x 10 short-term spaces adjacent to the boat landing, and 50 remote spaces for boat trailers

Trees will be planted to enhance and augment the existing trees along the shoreline. Plantings and lawn areas are proposed throughout the property, hotel and conference facility, waterfront park and parking areas.

NEXT

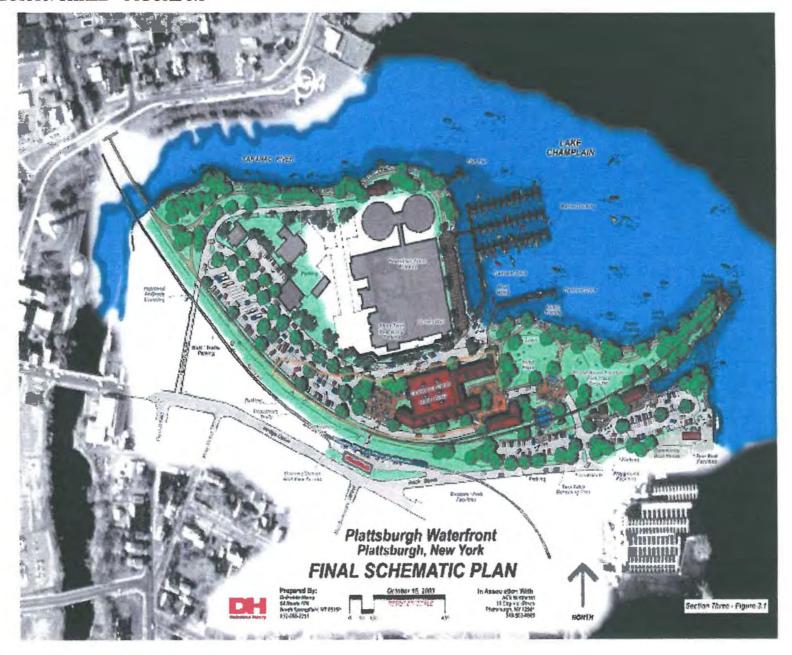
Section Three - Page 1 CP RailYard and Waterfront Rediscovery "DRAFT" Final Report Plattsburgh, New York

ITEM DESCRIPTION	OPTION A	OPTION B	OPTIO
Adjacent to WWPT	Adjacent, some rooms will view facility	Lowest impact by WWTP	Adjacent but v controlled to la
Vistas of lake from hotel entrance	No view until 3 rd floor	None but rooms, facilities have best views	Views of lake
Impact of building on green space	Intrudes into park area with linear configuration	Divides public park into 2 separate areas	Maximizes pul
Architectural possibilities	Very linear	Village concept has strong appeal	Functional
Developer appeal	Economical construction	A true "Hotel in the Park"	Lowest appeal
Expansion options for growth	Conference area to west but rooms into park	Limited to west for rooms and conference area	Conference ar west, rooms to
Treatment of public approach to hotel entrance	Views of lake and park	Strong focus on hotel entrance	Access via par
Parking proximity	Close	Separated by park	Close

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SECTION THREE - FIGURE 3.1

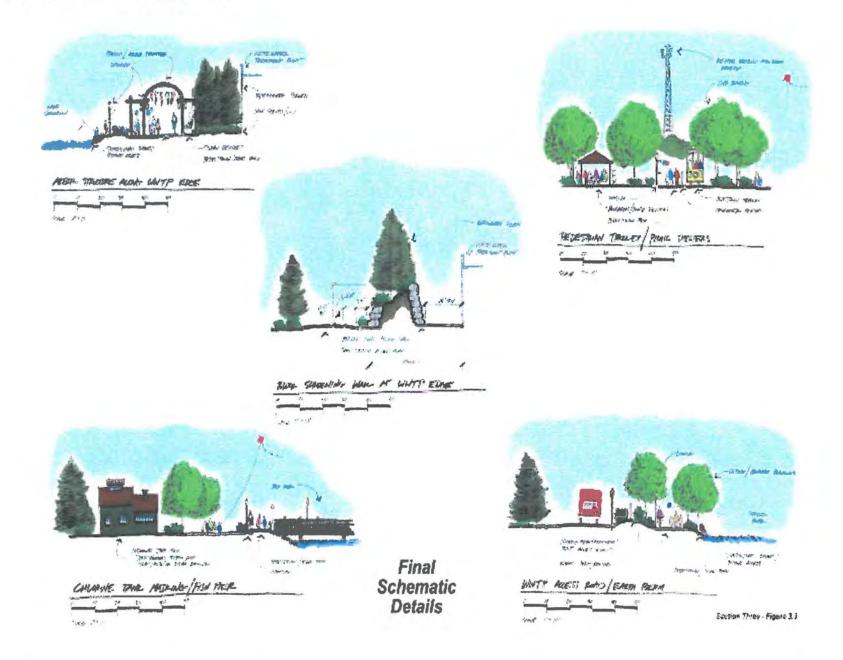


SECTION THREE - FIGURE 3.2



Section Three . Figure 1.2

SECTION THREE - FIGURE 3.3



ESTIMATE OF PROBABLE COSTS-PLATTSBURGH WATERFRONT DEVELOPMENT

Plattsburgh, New York Date: 09/03/2003 (Revised: 10/03/2003)

ITEM DESCRIPTION	UNIT	UNIT	EST QUAN	COST	
Demolition, Clearing and Grubbing	\$50,000.00	L.S.	1	\$50,000.00	
Unclassified Excavation and Embankment		C.Y.		- A-C-4-1 (2) (-3)	
Unclassified Excavation and Disposal	\$12.50	C.Y.			
Embankment in Place	\$10.00	C.Y.			
Stone Bedding	\$30.00	C.Y.			
Sand	\$21.00	C.Y.			
Clean Fill to Bring Grade up in Rail Yard	\$23.00	C.Y.	33000	\$759,000.00	
Select Granular Backfill (Water)	\$25.00	C.Y.		101110	
Soil Management Plan		L.S.			
Structure Excavation	\$16.00	C.Y.			
Trench and Culvert Excavation	\$19.00	C.Y.			
Conduit Excavation and Backfill	\$9.00	L.F.			
Abandon Existing Sewer		C.Y.			
Excavation for Test Pits	\$30.00	C.Y.			
Temporary Soil Erosion and Water Pollution Control		L.S.			
Subbase Course, Type 1	\$26.00	C.Y.			
Subbase Course, Type 2 (18")	\$26.00	C.Y.	16700	\$434,200.00	
Asphalt Concrete , Type 1 Base Course	\$40.00	TON	1400	\$56,000.00	
Asphalt Concrete, Type 3 Binder Course	\$42.00	TON	2325	\$97,650.00	
Asphalt Concrete, Type 7F Top Course (High Friction) Marshall Design	\$44.00	TON		401,000.00	
Asphalt Concrete - Truing and Leveling Course	\$45.00	TON			
Pavement Key	410.00	L.F.			
Tack Coat		Gal			
Temporary Pavement with Subbase	\$1.50	S.F.			
Cement Treated Permeable Base Course	\$150.00	C.Y.			
Unreinforced Concrete Pavement Exposed Aggregate Finish	\$450.00	C.Y.			
Class K Concrete	9450,00	C.Y.			
Concrete for Structures, Class 'A'	\$450.00	C.Y.			
Architectural Treatment	\$15.00	S.F.			
Manhole, 4' D Precast Up To 6' Deep	\$1,370.00	EA.			
Additional Depth of 4' D Manhole	\$228.00	L.F.			
Manhole, 5' D Precast Up To 6' Deep	\$2,800.00	EA.			
Additional Depth of 5' D Manhole	\$2,000.00	L.F.			
Connect New 12" Lateral to Existing or New Sewer	\$200.00	EA.			
Connect New 12" Sewer to Existing Manhole	\$1,200.00	EA.			
Connect New 15" Sewer to Existing Manhole	\$1,350.00	EA.			
Type A Catch Basin	\$1,335.00	EA.			
		EA.			
Type B Catch Basin	\$1,335.00	EA.			
Type C Catch Basin	\$1,200.00	L.F.			
Additional Depth Type A Catch Basin		L.F.			
Additional Depth Type B Catch Basin Additional Depth Type C Catch Basin		L.F.			
Adjust Existing Manhole Frame and Cover		EA.			
Replace Existing Manhole Frame and Cover (Furnished)	\$320.00	EA.			
	The state of the s	1			
6" Corrugated Polyethylene Underdrain Pipe	\$6.00	L.F.	2500	#250 000 00	
Rustic Steel Fence	\$140.00	L.F.	2500	\$350,000.00	
Concrete Sidewalk and Driveway	\$235.00	C.Y.			
Asphalt Pathway - Light Duty	\$2.25	S.F.	20000	8404 500 00	
Asphalt Pathway - Medium Duty	\$3.50	S.F.	29000	\$101,500.00	
Concrete Entrance Walk	\$6.50	S.F.	1400	\$9,100.00	
Exposed Aggregate Concrete Sidewalk and Driveway	\$315.00	C.Y.	4500	P00 000 00	
5" Stone Curb (Granite)	\$20.00	L.F.	1500	\$30,000.00	
Salvage Existing Curb	\$5.00	L.F.	arac	670 000 00	
Concrete Curb	\$20.00	L.F.	3500	\$70,000.00	
Hydroseeding	\$0.10	S.F.	310000	\$31,000.00	
Seeding	\$0.50	S.F.	200	410 405 60	
Shredded Bark Mulch	\$30.00	C.Y.	350	\$10,500.00	
Development Site Preparation	\$10,000.00	L.S.	1	\$10,000.00	

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ESTIMATE OF PROBABLE COSTS-PLATTSBURGH WATERFRONT DEVELOPMENT

Plattsburgh, New York
Date: 09/03/2003 (Revised: 10/03/2003)

Date: 09/03/2003 (Revised: 10/03/2003)				
ITEM DESCRIPTION	UNIT	UNIT	QUAN	COST
Tree Planting Grass Area- Green Vase Zelkova Tree Planting Grass Area- Pioneer Elm Tree Planting Grass Area- White Cedar Tree Planting Grass Area- London Plane Tree Tree Planting Grass Area- Greenspire Linden Tree Planting Grass Area- Sugar Maple Tree Planting Grass Area- Profusion Crabapple Tree Planting Grass Area- Spring Snow Crabapple Tree Planting Grass Area- Fozam Crabapple Tree Planting Grass Area- Fozam Crabapple Deciduous Shrub-Myrica Pennslyvanica - Northern Bayberry Ground Cover Planting - Thomdale Baltic Ivy	\$700.00 \$700.00 \$400.00 \$700.00 \$700.00 \$700.00 \$500.00 \$500.00 \$40.00 \$2.00	EA. EA. EA. EA. EA. EA. EA. EA.	20 75 20 20 20 20 30 30 0 150 1500	\$14,000.00 \$14,000.00 \$30,000.00 \$14,000.00 \$14,000.00 \$15,000.00 \$15,000.00 \$6,000.00 \$3,000.00
Topsoil 8" Steel Bollard - non-removable 8" Steel Bollard - removable Square Granite Block and Foundation	\$29.00 \$350.00 \$375.00 \$500.00	C.Y. EA. EA. EA.	5800 20 20	\$168,200.00 \$7,000.00 \$7,500.00
Bench Bike Rack Accent Paving for Plazas - Stamped Concrete or Bricks on Concrete	\$850.00 \$500.00 \$325.00	EA. EA. C.Y.	40 10 680	\$34,000.00 \$5,000.00 \$221,000.00
Trash Receptacle Galvanized Steel Pipe Handrail	\$750.00 \$28.50	EA. L.F.	20	\$15,000.00
40' W x 350' L x 8' H Wood & Steel Arbor by Waste Water Treatment Facility	\$100,000.00	L.S.	1	\$100,000.00
Crushed Stone, (In-Place Measure) X" White Paint Pavement Stripe (stop bars) Exposed Aggregate Concrete Gutter (BAND?) Horizontal Control Survey Monument Vertical Control Survey Monument Reset Existing Monument Frame and Cover Engineer's Office - Type A	\$40.00 \$55.00 \$1,500.00 \$1,500.00 \$250.00 \$1,167.00	C.Y. L.F. EA. EA. MO,	200	4, 200 70
4" White Paint Pavement Stripe (parking) 16" White Paint Pavement Stripe (stop bars and crosswalks) White Paint Pavement Symbol Sign Post Sleeve Type A Catch Basion Frame and Grate - Fabricated Type B Catch Basion Frame and Grate - Fabricated	\$0.10 \$0.30 \$25.00 \$100.00	L.F. EA. EA. EA. EA.	10000 400 15	\$1,000.00 \$120.00 \$375.00
2" PVC Conduit with Wiring (Including Excavation and Backfill)	\$20.00	L.F.	7000	\$140,000.00
2" Galvanized Steel Conduit in Roadway (Including Excavation and Backfill) Street Lighting Service Pedestal Fiberglass Handhole/Pullbox Street Light Pole Foundation Furnish and Install Type A Street Light Assembly Furnish and Install Type A2 Parking Lot Light Assembly with Double Arm Furnish and Install Type B Walkway Light Assembly 3" PVC Conduit Conductors 3" Empty PVC Conduit (Including Excavation and Backfill) Transformer Base Installation (Transformer provided by R,G & E)	\$20.00 \$2,500.00 \$500.00 \$500.00 \$3,500.00 \$3,000.00 \$6.00 \$10.00	L.F. EA. EA. EA. EA. EA.	3 12 135 35 30 75	\$6,000.00 \$67,500.00 \$122,500.00 \$90,000.00 \$225,000.00
Type 'C' Lighting 8" D. I. P. Water Main, Class 52 (Incl. Poly. Encasement) 12" D. I. P. Water Main, Class 52 (Incl. Poly. Encasement) 6" D. I. P. Water Main, Class 52 (Anchor Pipe Incl. Poly. Encasement) 8" D. I. P. Water Main, Class 56 (Incl. Poly. Encasement) 4" Resilient Seat Gate Valve W/ Valve Box-Vertical Type 6" Resilient Seat Gate Valve W/ Valve Box-Vertical Type 8" Resilient Seat Gate Valve W/ Valve Box-Vertical Type 12" Resilient Seat Gate Valve W/ Valve Box-Vertical Type 8" x 8" Tapping Sleeve and Resilient Seat Gate Valve w/Valve Box Connect New Water Main To Existing Water Main	\$60.00 \$63.00 \$62.00 \$93.00 \$400.00 \$600.00 \$750.00 \$1,300.00 \$3,500.00 \$1,667.00	EA. LF. LF. LF. EA. EA. EA. EA. EA. EA.		
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ESTIMATE OF PROBABLE COSTS-PLATTSBURGH WATERFRONT DEVELOPMENT

Plattsburgh, New York

Date: 09/03/2003 (Revised: 10/03/2003)

ITEM DESCRIPTION	UNIT	UNIT	EST QUAN	COST
Cut and Plug Existing 6" Water Main Furnish and Install New Valve Box Temp. Cut & Plug Existing 8" Water Main (Including 1" Blow-Off)	\$200.00 \$1,000.00	EA. EA.		
3/4" Service Tap at Main, Corporation Stop and Connection 1" Service Tap at Main, Corporation Stop and Connection Abandon Existing Water Service at Tap New 3/4" Copper Water Service New 1" Copper Water Service New 1" Copper Water Service New 1" Copper Water Service at Existing Appurtenances Furnish and Install New 3/4" Curb Stop and Box at New Water Service Furnish and Install New 1" Curb Stop and Box at New Water Service Replace Existing Curb Box Assembly (3/4" to 1 1/2") Replace Existing Curb Box Assembly (2") Remove Existing Water Meter Box New Hydrant New Hydrant (Including Removal of Existing Hydrant) Remove Existing Hydrant Hydrant Marking Post 24" Water Meter Box 16" Steel Casing Pipe Abandon Existing Water Main at Railroad Grade Crossing Project Sign 6' x 4" Architecture includes renovating the historic salt storage building, constructing a community boat house, a shell over the chlorine facility and 4 picnic pavilions.	\$200.00 \$600.00 \$310.00 \$15.00 \$30.00 \$30.00 \$160.00 \$200.00 \$285.00 \$200.00 \$150.00 \$2,100.00 \$85.00 \$85.00 \$800.00 \$150.00 \$150.00	EA.A.A.A.A.A.A.A.A.F.F.A.F.E.F.E	15000	\$2,250,000.00
Storm Drainage Rip Rap 20 FT Wide Play Structure	\$15,000.00 \$400.00 \$30,000.00	ACRE LF LS	20 3100 1	\$300,000.00 \$1,240,000.00 \$30,000.00
SUBTOTAL: Marine Features				\$7,178,145.00
Canoe Kayak Launch Area Dolphins 140 Slip Marina Dredging of Dock Area Transient Docking and Floats	\$25.00 \$25.00 \$30.00 \$200,000.00 \$30.00	SF EA SF LS SF	3000 50 29000 1 4500	\$75,000.00 \$1,250.00 \$870,000.00 \$200,000.00 \$135,000.00
SUBTOTAL:				\$1,281,250.00
Special Marine Engineering Contingencies				
Hydrolic Survey Geotechnical Exploration Wetland and Coastal Resource Identification Marine Site Investigation (Ice, Flodding, Current, Etc.) Regulatory Environmental Approvals (Including Dredging)	\$10,000.00 \$30,000.00 \$15,000.00 \$15,000.00 \$30,000.00	LS LS LS LS	1 1 1 1 1	\$10,000.00 \$30,000.00 \$15,000.00 \$15,000.00 \$30,000.00
Marine Engineering SUBTOTAL:				\$100,000.00
SUBTOTAL				\$8,559,395.00
15% Contingency				\$1,283,909.25
SUBTOTAL				\$9,843,304.25
10% Design & Engineering				\$984,330.43
GRAND TOTAL				\$10,827,635
Back to TOC			200	
			Section Three	- Page 9

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SECTION FOUR - Urban Context

The proposed waterfront park and hotel and conference center property is a vital component of the larger urban and waterfront environment of downtown Plattsburgh. The urban context plan illustrates the relationship of the project property to the major elements of the downtown.

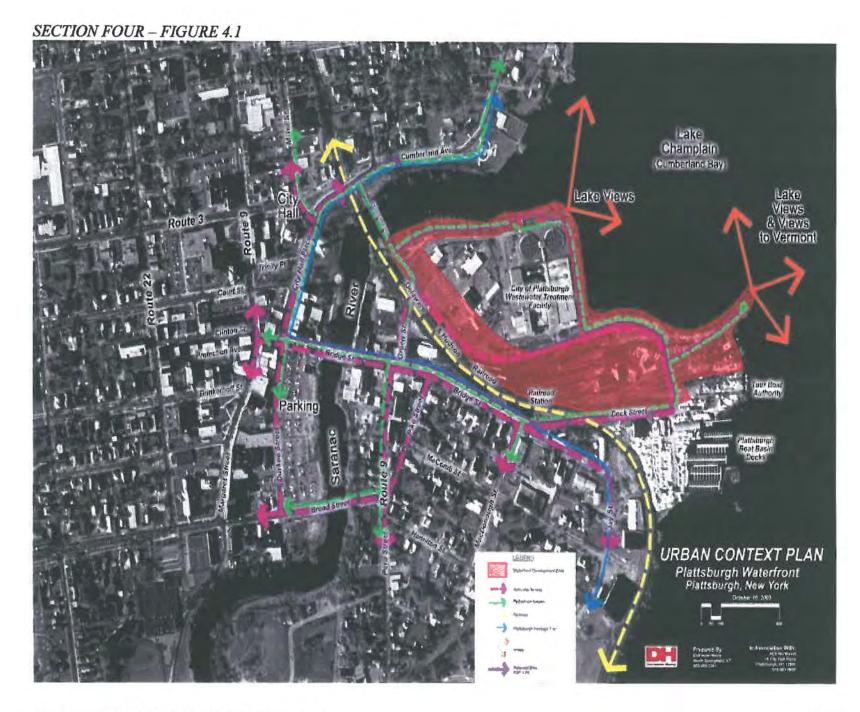
- x View corridors to downtown and views from downtown towards the waterfront park
- x Views and vistas to Lake Champlain
- x Roadway and circulation systems to downtown and the site
- x Existing and proposed bicycle pathways and connection to (and the alignment within) the hotel and conference facility and waterfront park
- x Pedestrian access to and through the project property
- x Connection of the site to adjacent lands and elements
- x The roadway network and the transportation concept
- x Visual and physical access to Lake Champlain for fishing, boating and general recreation
- x Dock Street Park

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"Design largely depends on constraints" by Charles Eames

IDENTIFIED CONSTRAINTS/ISSUES	POSSIBLE SOLUTION
Site configuration – very linear	Tie site together with pedestrian walks, dedicated trolley car
Access to site by at-grade crossings, railroad is a barrier	x Use site contours to "flyover" tracks x Upgrade / relocate crossing x Add connections by footpath, bicycle
Adjacent to WWTP	x Upgrade plant with odor control system x Screening
4. Historic Foundations	Incorporate into walkways as "features" transform into exhibits.
5. Vistas of lake are limited	x Elevate hotel lobby, hotel rooms for be vantage point. x Control vistas with building configurations.
6. Historic Machine Shop building	x Centerpiece of "Interpretive Museum" DH RR site x Public bathrooms, park facilities stora
7. Limited access to lake for general public	x Public boat launch, hotel pick-up / dro dock
	x Small craft, non-motorized boat launce park
	x Community boat house for small craft storage, dingy-class sailing school
	x Reserve waterfront for public waterfro park
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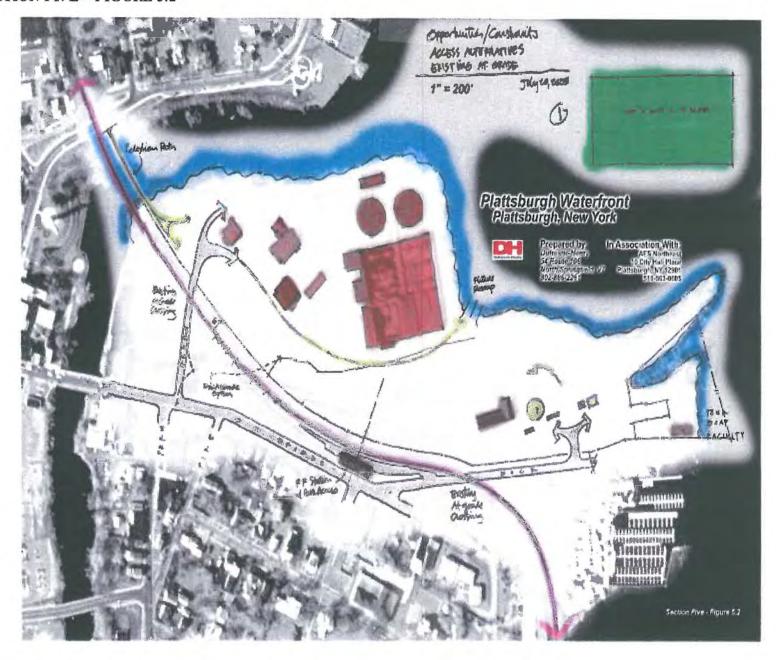
http://www.aesnortheast.com/Projects/2852/Report/TABLE%201.htm



SECTION FIVE - FIGURE 5.1

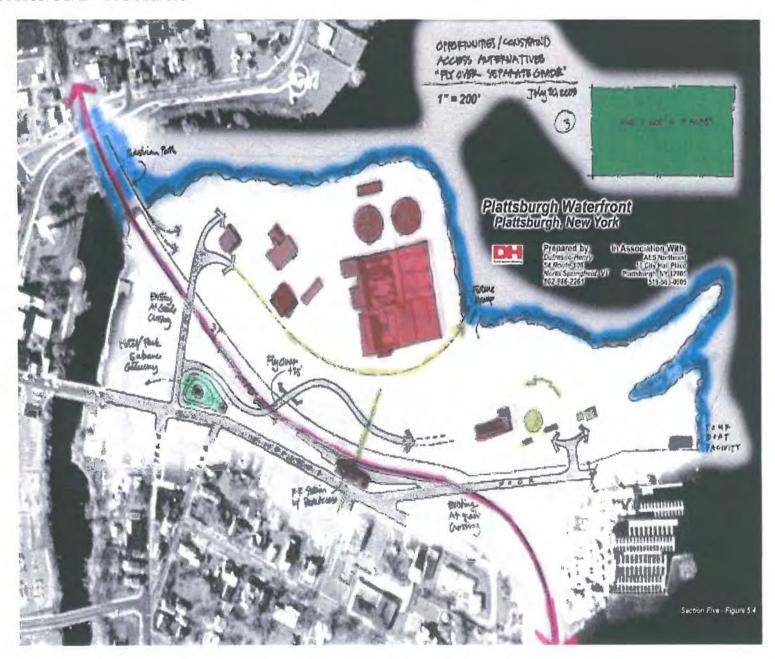


SECTION FIVE - FIGURE 5.2



SECTION FIVE - FIGURE 5

SECTION FIVE - FIGURE 5.4



SECTION SIX - Schematic Alternatives

Three schematic alternatives were prepared to illustrate and test potential locations and juxtapositions of hotel and conference development, waterfront park facilities, pedestrian and vehicular circulation and parking.

Option "A" illustrates the hotel and conference facilities centrally located within the property with a hotel building wing extending to the east into the area of the waterfront park. The waterfront park is developed to the east of the hotel and conference facilities. The plan includes the locations and description of future buildings, structures and the uses, pedestrian walkways, parking areas, on-site roadways and connections to adjacent streets and properties, landscaping and the relationship to existing vegetation and future buildings, recreational use areas and the location of site infrastructure.

The suggested building configuration reflects the design parameters identified in the Hotel Study and responds to various site constraints:

- x Conference Center adjacent to WWTP
- x Economical double loaded corridor
- x Linear configuration maximizes adjacent green space to WWTP and Dock Street

Dock Street is the primary access to the waterfront park, hotel and conference facilities. Green Street is the secondary access to the hotel and park, and is the primary access to the major parking facilities, the boat launch and the wastewater treatment facility.

Parking for the property is located throughout the site along the pedestrian and trolley corridor. The bulk of the parking is located at the western end of the site along the pedestrian and trolley corridor. At the eastern end of the site, parking is located along Dock Street adjacent to the tour boat facilities and community boathouse. A limited amount of parking is proposed at grade, below the conference facility. A limited amount of short-term parking is available at the waterfront park drop-off areas and hotel and conference facility arrival and drop-off area.

The boat launch and facilities are located at the north central portion of the property, adjacent to the wastewater treatment facility. The Bernier Carr and Associates comparative study considered three (3) locations on the property for these facilities and recommended the location as shown. This location is included in all three options.

The proposed community boathouse and facility is located at the head of the existing embayment, adjacent to the tour boat facilities and shared parking areas. The tour boat facilities are augmented to include convenient, direct access and additional parking.

The plan includes future buildings and uses, parking areas, pedestrian walkways and connections to adjacent streets and properties, on-site roadways and connections to

Section Six - Page 1 CP RailYard and Waterfront Rediscovery "DRAFT" Final Report Plattsburgh, New York

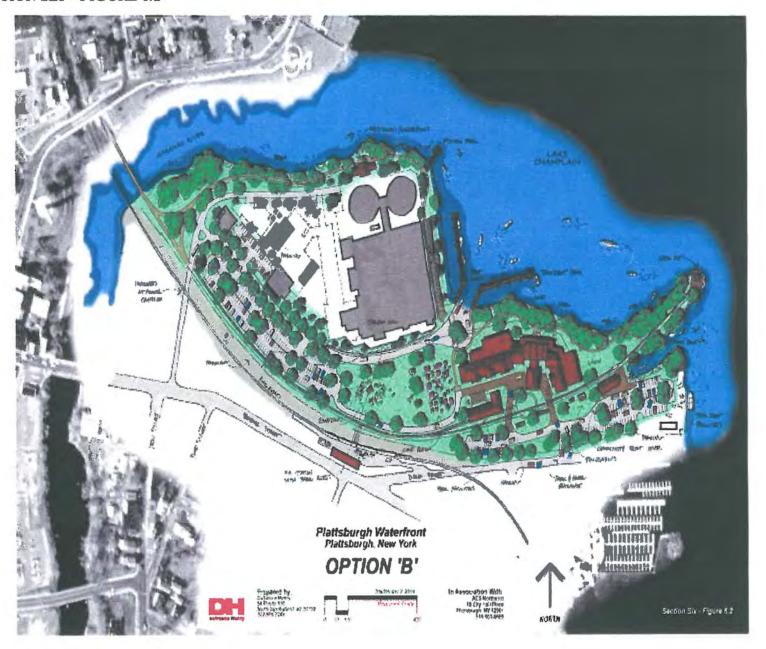
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SECTION SIX - FIGURE 6.1



SECTION SLA- FIGURE V

SECTION SIX - FIGURE 6.2



SECTION SIX - FIGURE 6.3



Plattsburgh	CP Rail Ya	rd and Wa	terfront l	Rediscover	y		

ATTACHMENT 3:

D&H Rail Yard Structures Appearing on Historic Maps, Plattsburgh Rail Yard and Waterfront Development

Table: D&H Rail Yard Structures Appearing on Historical Maps

No.	Structure	Source	Location	Construction Details	Removed Before	Status
1	Turntable and roundhouse	1856 Ligowsky	Central (still visible)	Brick	1992	The Roundhouse ruins are visible above ground; the turntable was filled after the rail yard was abandoned in the 1970
2	Repair Shop	1856 Ligowsky	Central (still standing)	Brick	Extent (heavily modified)	Standing although heavily modified.
3	Unidentified 1856 Ligowsky		Along the 1856 lakeshore due west of the repair shop	Unknown	1869	No visible evidence.
4	Wood Shed	1869 Beers	Just south and west of the repair shop	Wood frame	1889	No visible evidence.
5	Tool House/Tool Room	1869 Beers	Between the repair shop and the roundhouse	Wood frame	1902	No visible evidence; probably disturbed by construction of the dynamo house.
6	Shed	1869 Beers	East of the roundhouse	Unknown	1889	No visible evidence.
7	Shed	1869 Beers	On the north arm of the ferry slip	Unknown	1877	No visible evidence.
8	Freight House/Car Shed	1884 Sanborn	Near Dock Street due south of the roundhouse	Wood frame	1918	No visible evidence; no subsurface evidence detected during the Phase IB.
9	Sheds	1884 Sanborn	Extending west from northern wing of repair shop	Wood frame	1909	No visible evidence.
10	Sheds	1891 Sanborn	West of the repair shop on shoreline near main line track	Wood frame	1909	No visible evidence.

No.	Structure	Source	Location	Construction Details	Removed Before	Status
11	Office	1891 Sanborn	Between the tool room and the repair shop	Wood frame	1902	No visible evidence.
12	Office	1902 Sanborn	Along Dock Street southwest of the repair shop.	Wood frame	1918	No visible evidence; no evidence detected during the Phase IB
13	Shed	1902 Sanborn	Along Dock Street south of the repair shop.	Wood frame	1918	No visible evidence; no evidence detected during the Phase IB.
14	Icehouse	1902 Sanborn	Along Dock Street south of the turntable.	Wood frame	1968	No visible evidence; no evidence detected during Phase IB
15	Office	1909 Sanborn	Just north of repair shop west wing	One-story brick	1968	Removed to grade; some architectural elements may survive.
16	Storage (1909) Casting Shed and Lumber Storehouse (1918), and Paint Shop (1949)	1909 Sanborn 1919 Sanborn 1949 Sanborn	North of the repair shop	One-story wood frame	1968	No visible evidence.
17	Coal Elevator	1909 Sanborn	Northeast the of roundhouse.	Wood frame	1968	The 50-foot square, 3-foot high poured- concrete foundation of the coal elevator is intact.
18	Sand Drier	1909 Sanborn	At the western end of the ferry slip northeast of the roundhouse.	Wood frame	1949	The lower poured-concrete section extends about 3 feet above grade.
19	Shed (1909) D&H Co. Boat House (1918)	1909 Sanborn 1918 Sanborn	Northeast of the roundhouse	Wood frame	1949	The poured-concrete foundation extends above grade.

No.	Structure	Source	Location	Construction Details	Removed Before	Status
20	Dynamo House	1909 Sanborn	Extending from the eastern end of repair shop	Brick	2002	Visible ruins attached to east side of Repair Shop.
21	Boiler Room	1909 Sanborn	Attached to the eastern end of repair shop (still visible)	Brick	2002	The ruins of the Boiler Room extend to the east of the Repair Shop.
22	Office	1909 Sanborn	Attached to rear of western end of the roundhouse.	Wood frame	1949	No visible evidence.
23	Water Tank	1918 Sanborn	North of the roundhouse.	Wood or Iron?	1949	No visible evidence.
24	Office	1918 Sanborn	North of the roundhouse	Wood frame?	1949	No visible evidence.
25	Lockers	1918 Sanborn	East side of the roundhouse	Wood frame	1949	No visible evidence.
26	Shed? (1949) Oil tank (1968)	1949 Sanborn 1968 Aerial Ph.	East of the roundhouse	Wood fr (shed) Steel (oil tank)	1968 (shed) 1992 (fire)	No visible evidence.

ATTACHMENT 4:

Table 2: Horizontal and Vertical Distribution of Historic Euroamerican Remains Recovered From the Rail Site (VT-CH-736) During the C-6 Alignment, Southern Connector Project Archaeological Phase II Testing (Corey et al. 1999:83)

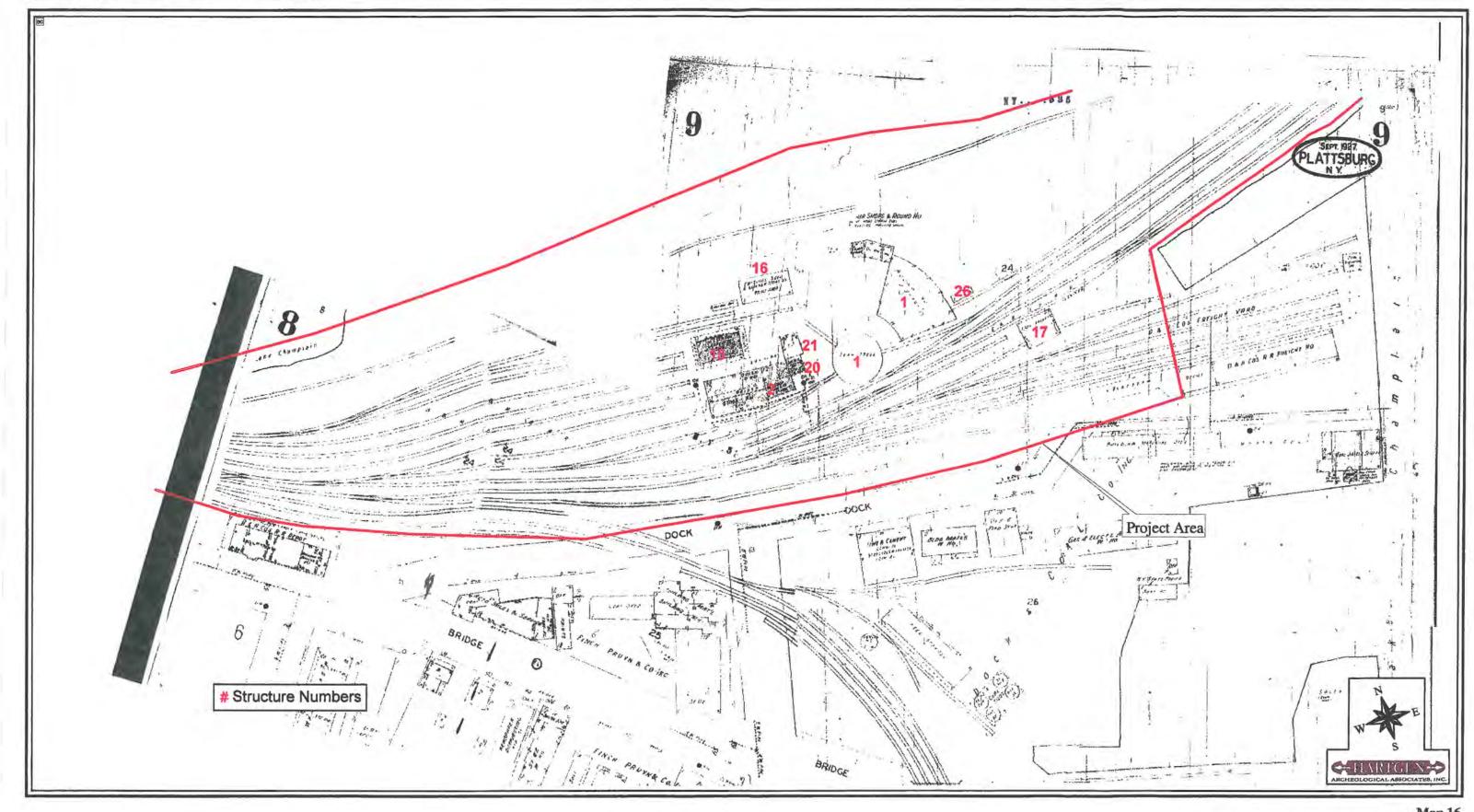
Table 2. Horizontal and Vertical Distribution of Historic Euroamerican Remains Recovered From the Rail Site (VT-CH-736) During the C-6 Alignment, Southern Connector Project Archaeological Phase II Testing.

PROVENIENCE											ARTI	FACT	CAT	EGOR	Y													
SITE TRENCH/PIT/UNIT	CER	AMIC	2			GLA	SS	MET	AL						1	HER	s									BONE	FLORAL REMAINS	TOTAL
LEVEL (cm b.s.)	EW	KA	PO	RW	sw	CY	FG	NA	HA	5K	TL	WI	OT	UN	BK	CI	CO	CS	CT	SY	TP	TX	WO	OT	UN	UB		
RAIL SITE VT-CH-736 Trench 20			2			11	6	1	1			3	1	.1	1			1		,				1				29
Trench 21				2	2	12	6		t					1	2			2	-	1								29
Trench 23	2				1	8	19	3	111				-	1												1		35
Pit A	1	*			- 1	6	10	1		1				4	6										1			31
Pit B						10	11	3	1	2		2		4						3		1				-		36
Extension A						1		2	1		1	1		2		1		P								/		8
N208,5 E199,4 Unit 20-30 30-40 40-50 50-60 60-75	2				2	11 5 7	8 5	1	ì					5 4 1	4 30 33 1 58	4 4 4	ı		2			2	1				x	26 57 52 1 74
N208.5 E199.4 Total	2				2	24	13	4	- 1			17		19	126	12	1		2			2	- 1			1		210
General Site	4	1				10	19	10	3	3		2		12						1	2							67
SITE TOTAL	9	1	2	2	6	82	84	24	8	6	1	8	1	44	135	12	1	3	2	5	2	2	1	- 1	1	2		445

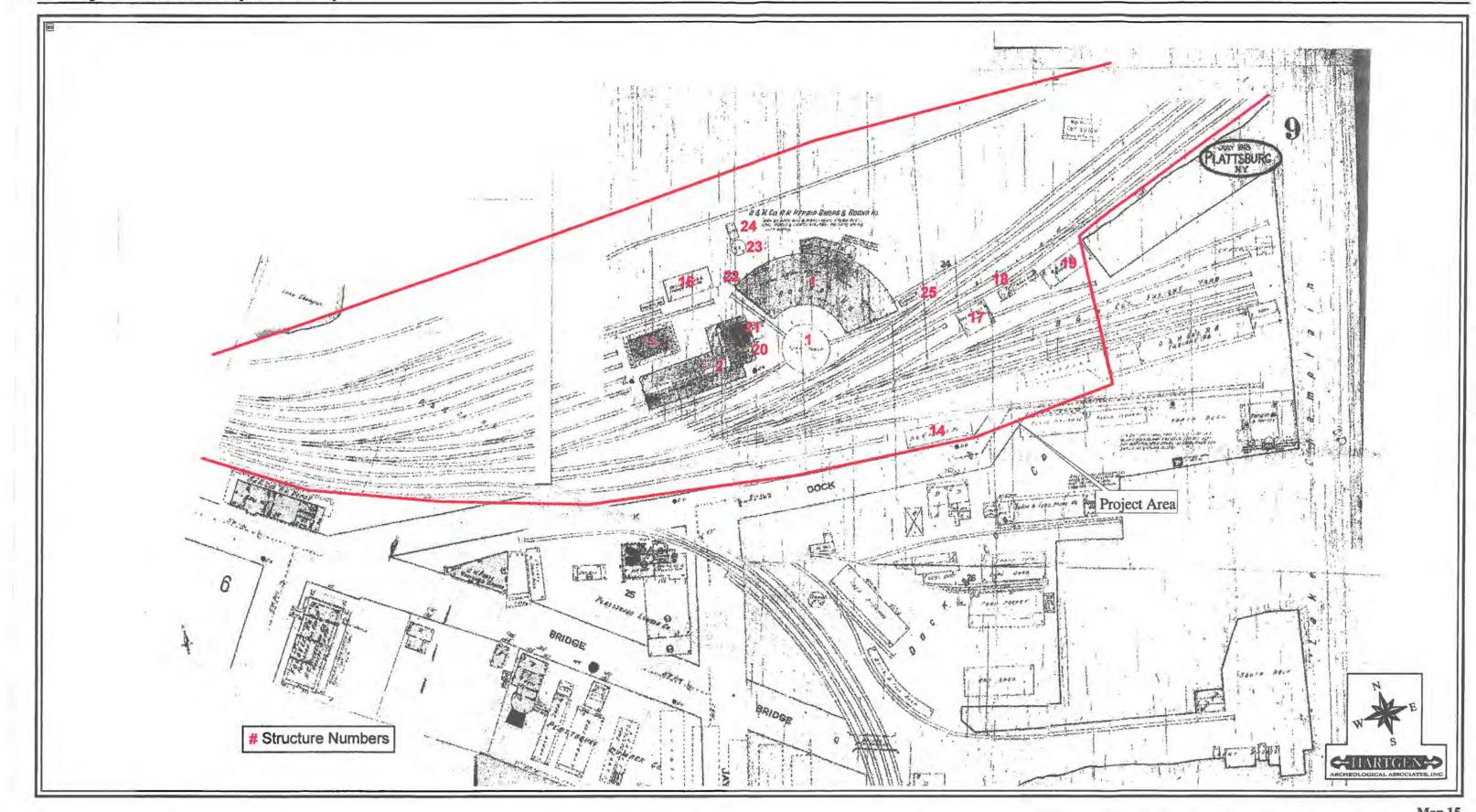
UN= unknown

MATERIAL KEY:).
CERAMIC EW= carthenware	GLASS CV= curved	METAL NA= neil	OTHER HISTORICS BK= brick	BONE UB= unburned	FLORAL REMAINS X= denotes presence
KA= kaolin	FG= flat	HA= bardware	Cl= cinder		C = 2200
PO= porcelain		SK= spike	CO= coal		
RW= redware		TL= tool	CS= construction (marble, slate)		
SW= stoneware		WI= wire	CT= concrete		
		OT= other (shock absorber)	SY= synthetics		
		UN= unknown	TP= tarpaper		
			TX= textile		
			WO= wood		
			OT= other (carbon rod)		

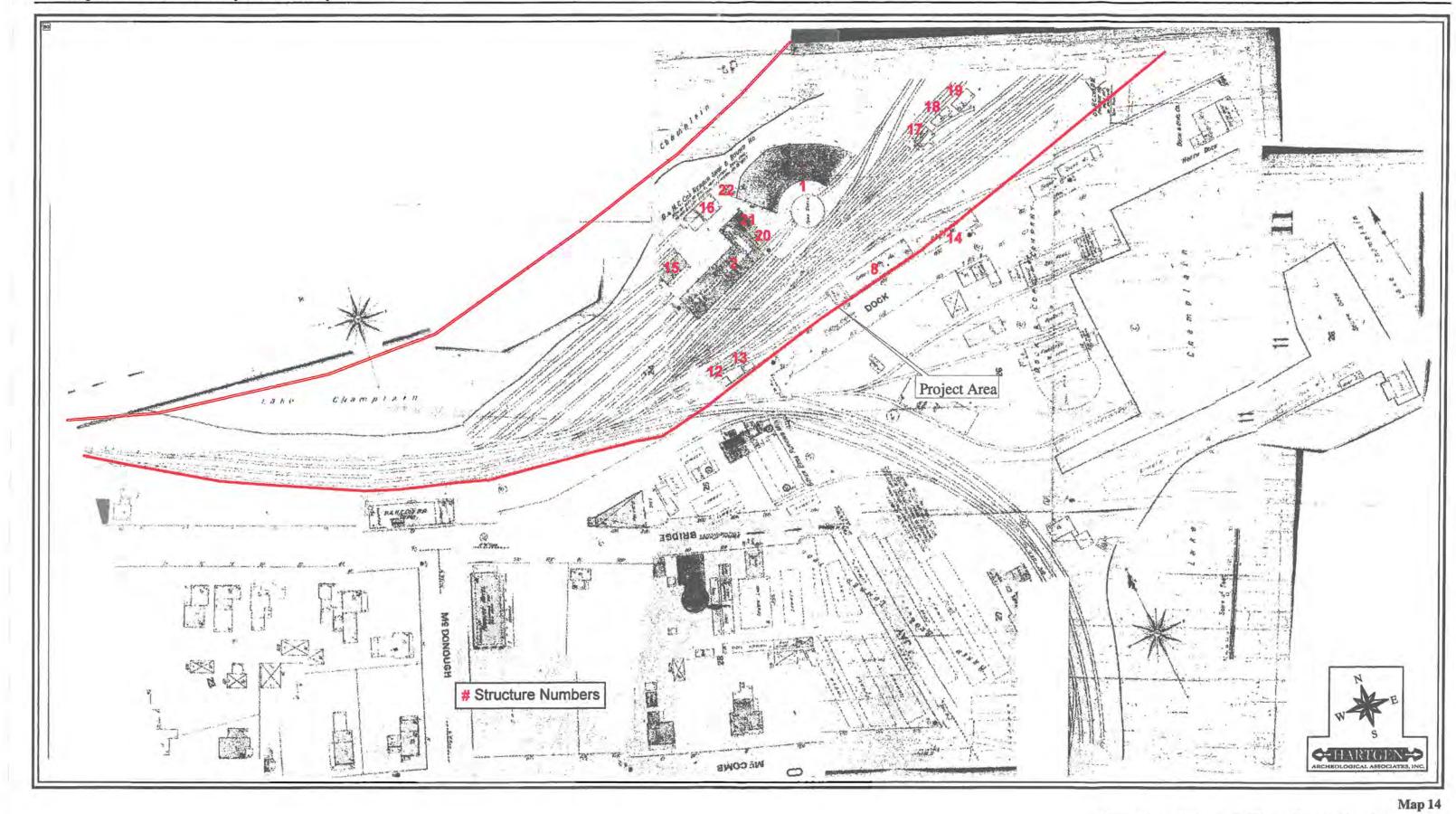
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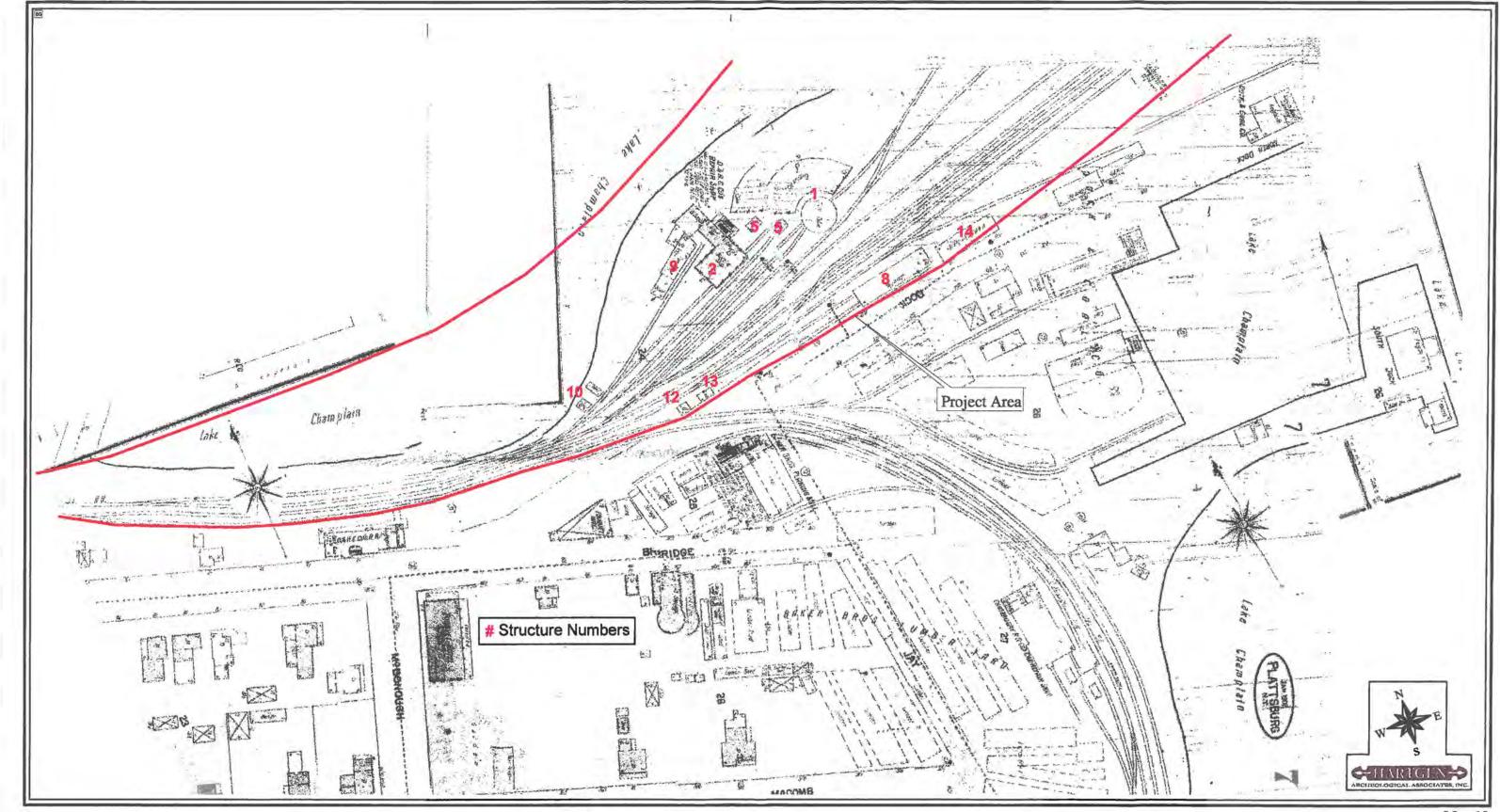
Map 16
1949 Sanborn Plattsburgh, Clinton County, New York Sheet 9



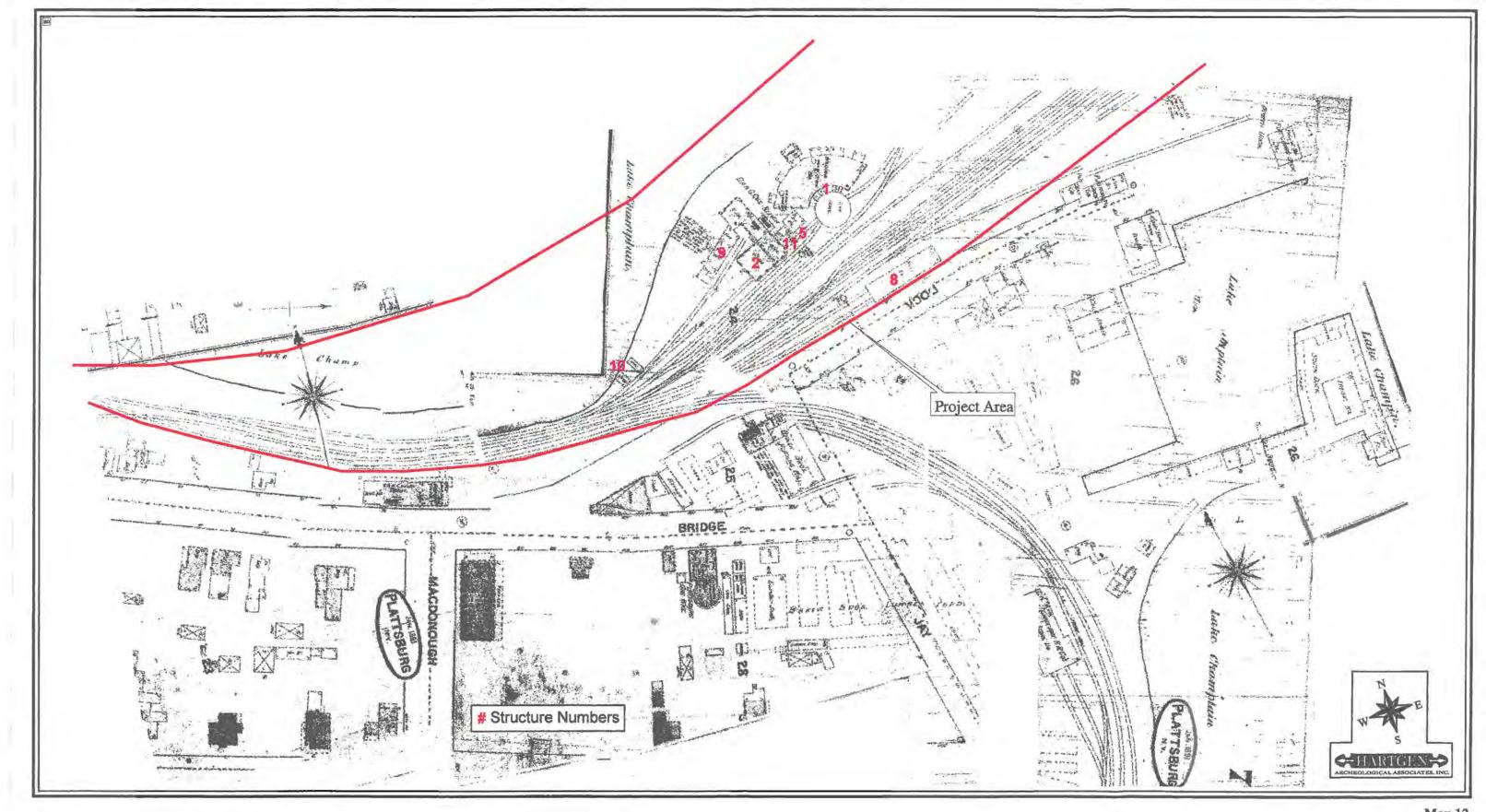
Map 15
1918 Sanborn Plattsburgh, Clinton County, New York Sheet 9



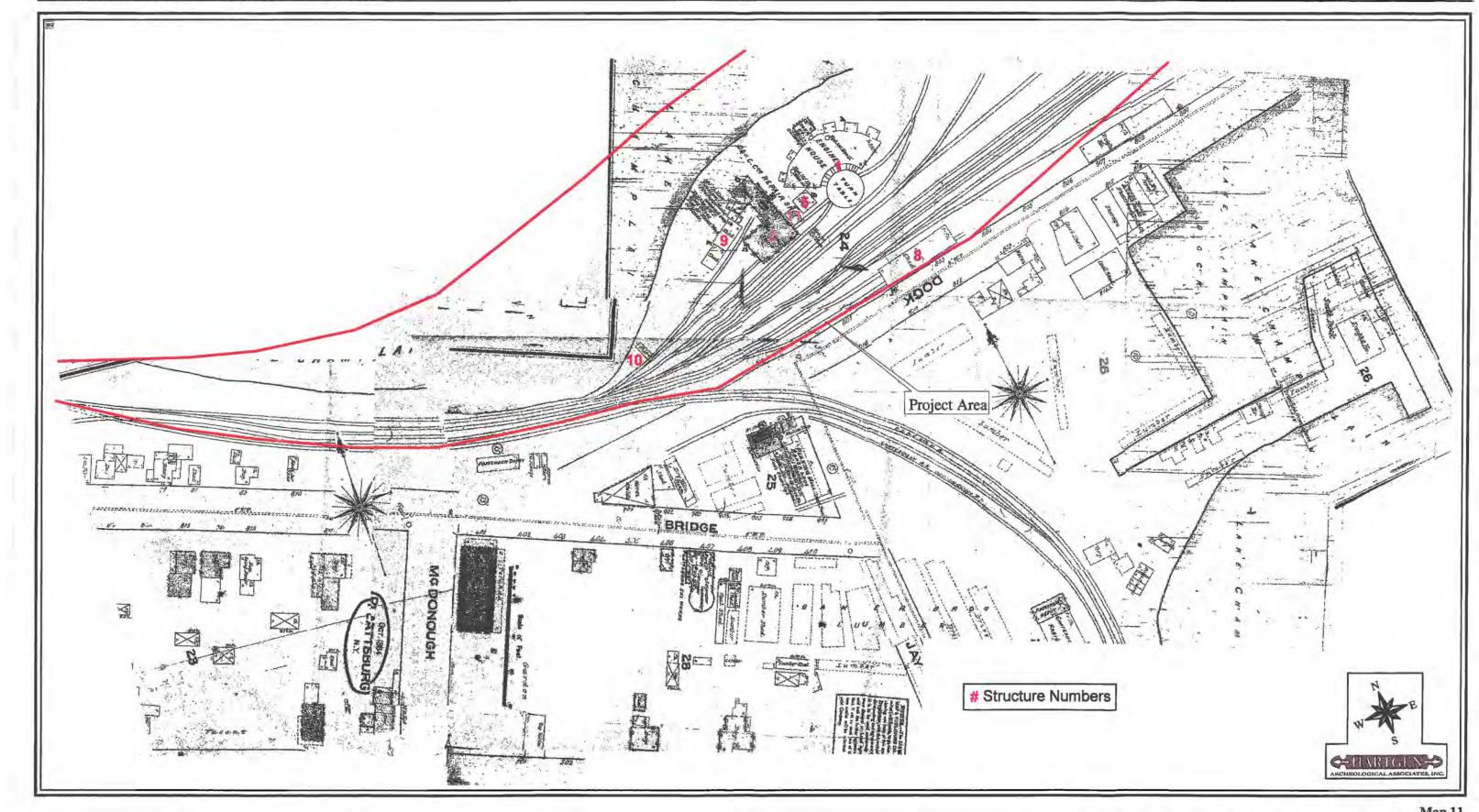
1909 Sanborn Plattsburgh, Clinton County, New York Sheet 9



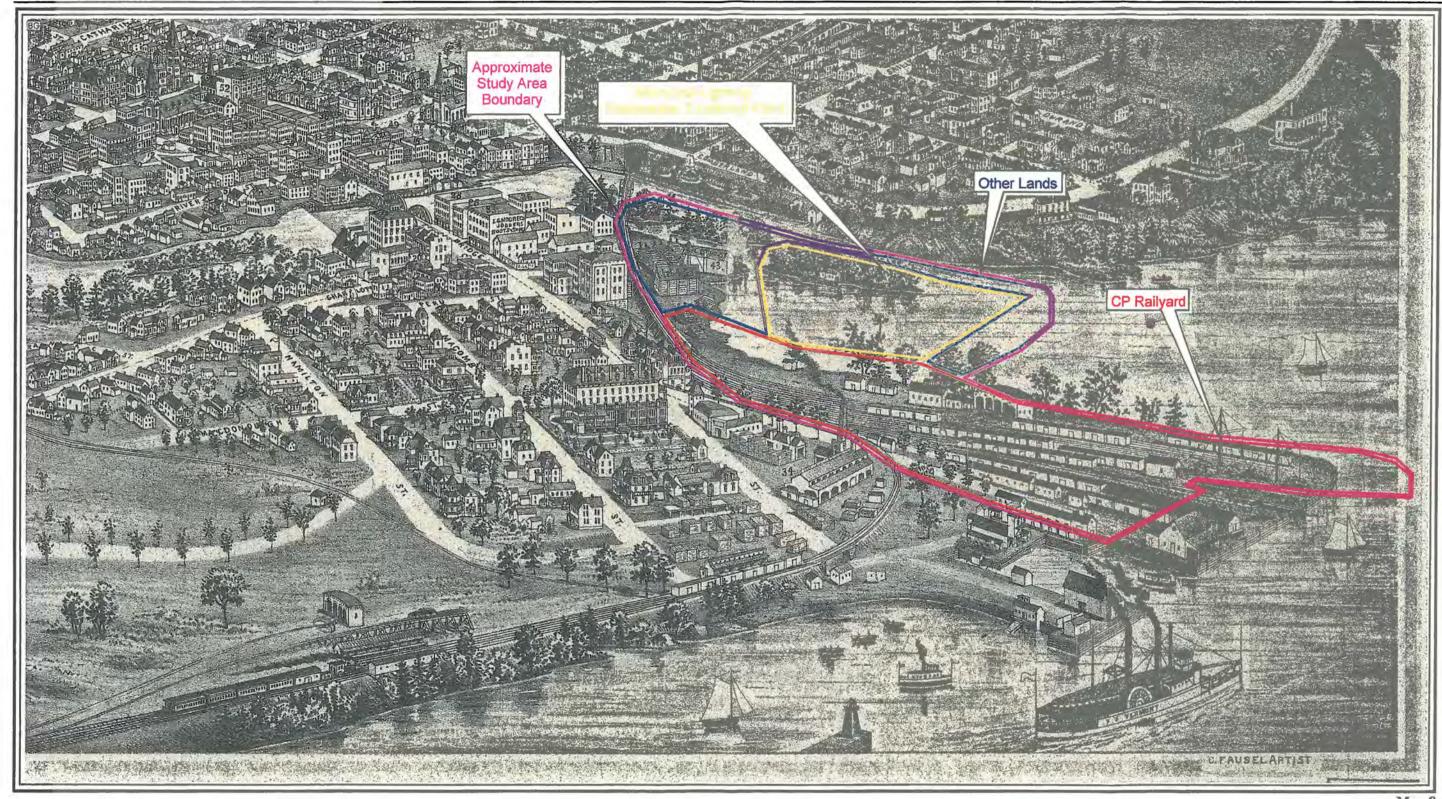
Map 13
1902 Sanborn Plattsburgh, Clinton County, New York Sheet 6



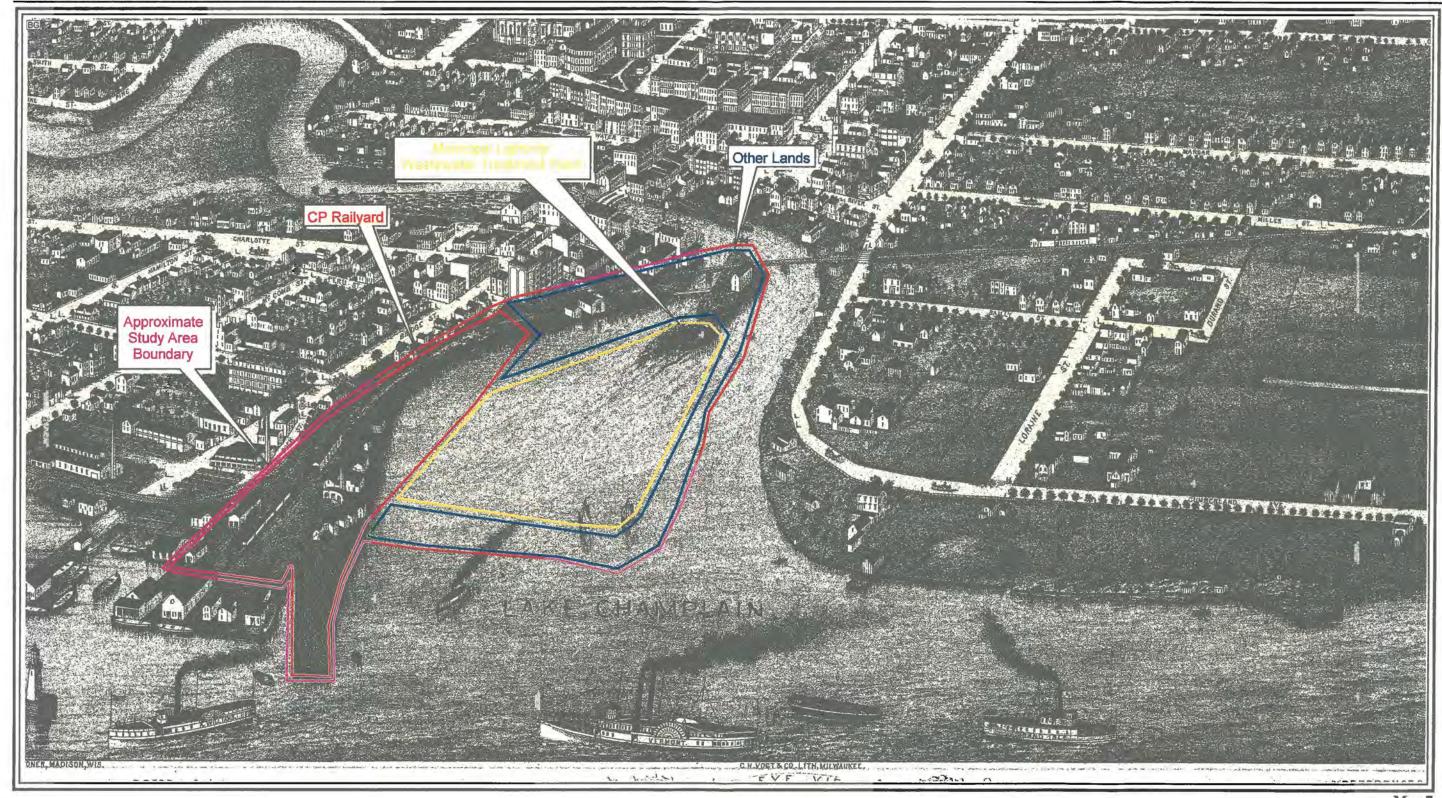
Map 12
1891 Sanborn Plattsburgh, Clinton County, New York Sheet 7



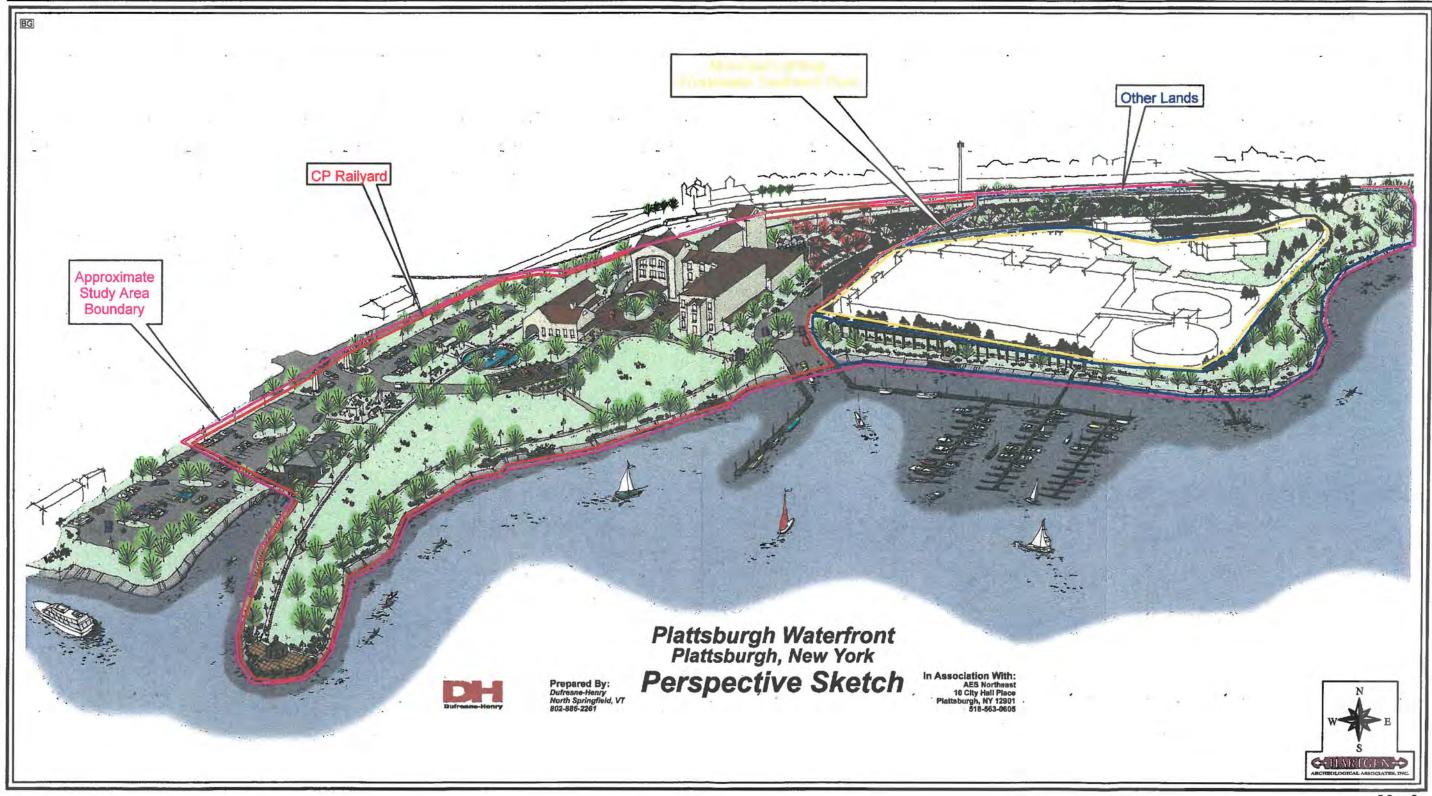
Map 11
1884 Sanborn Plattsburgh, Clinton County, New York Sheet 5



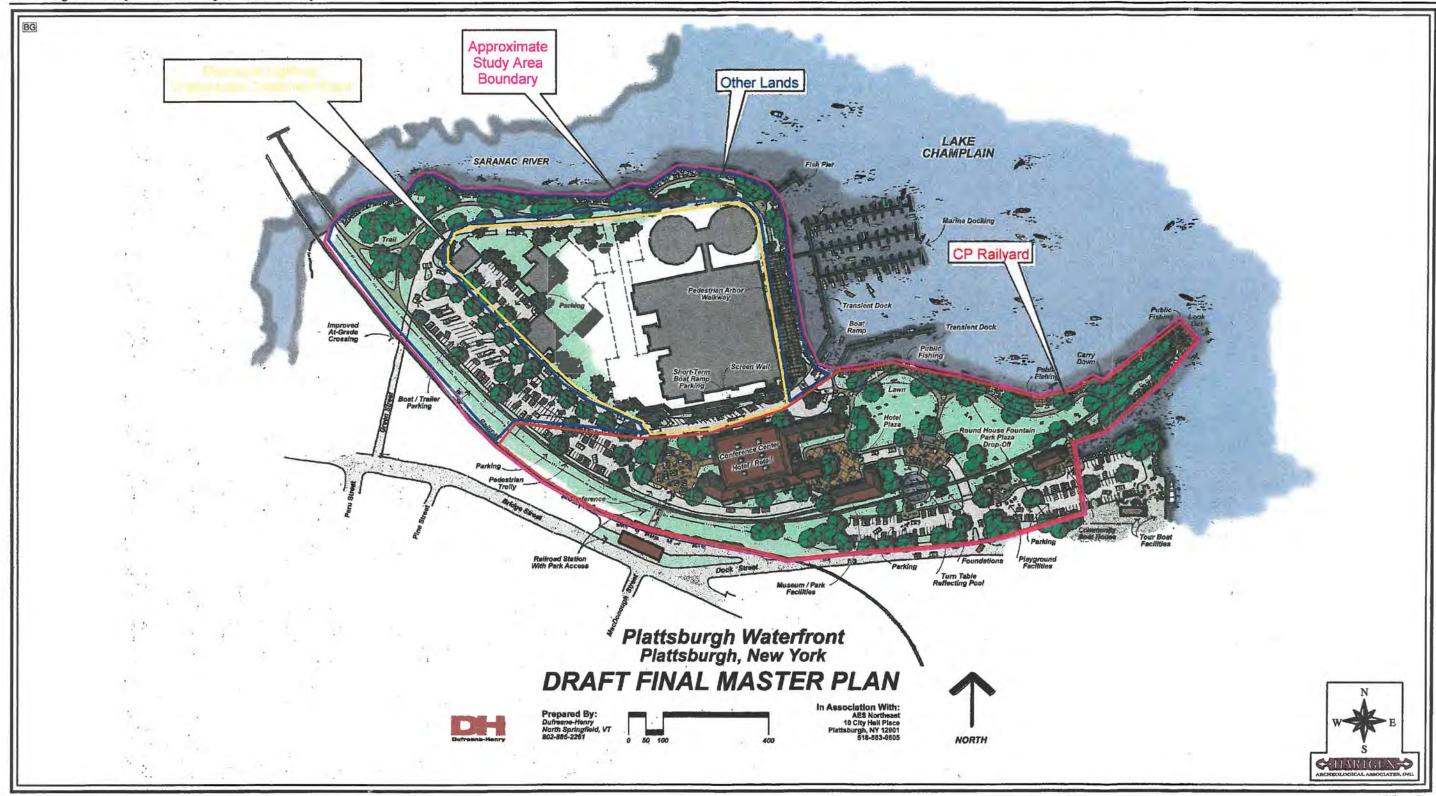
Map 8 1899 Fausel Plattsburgh, New York



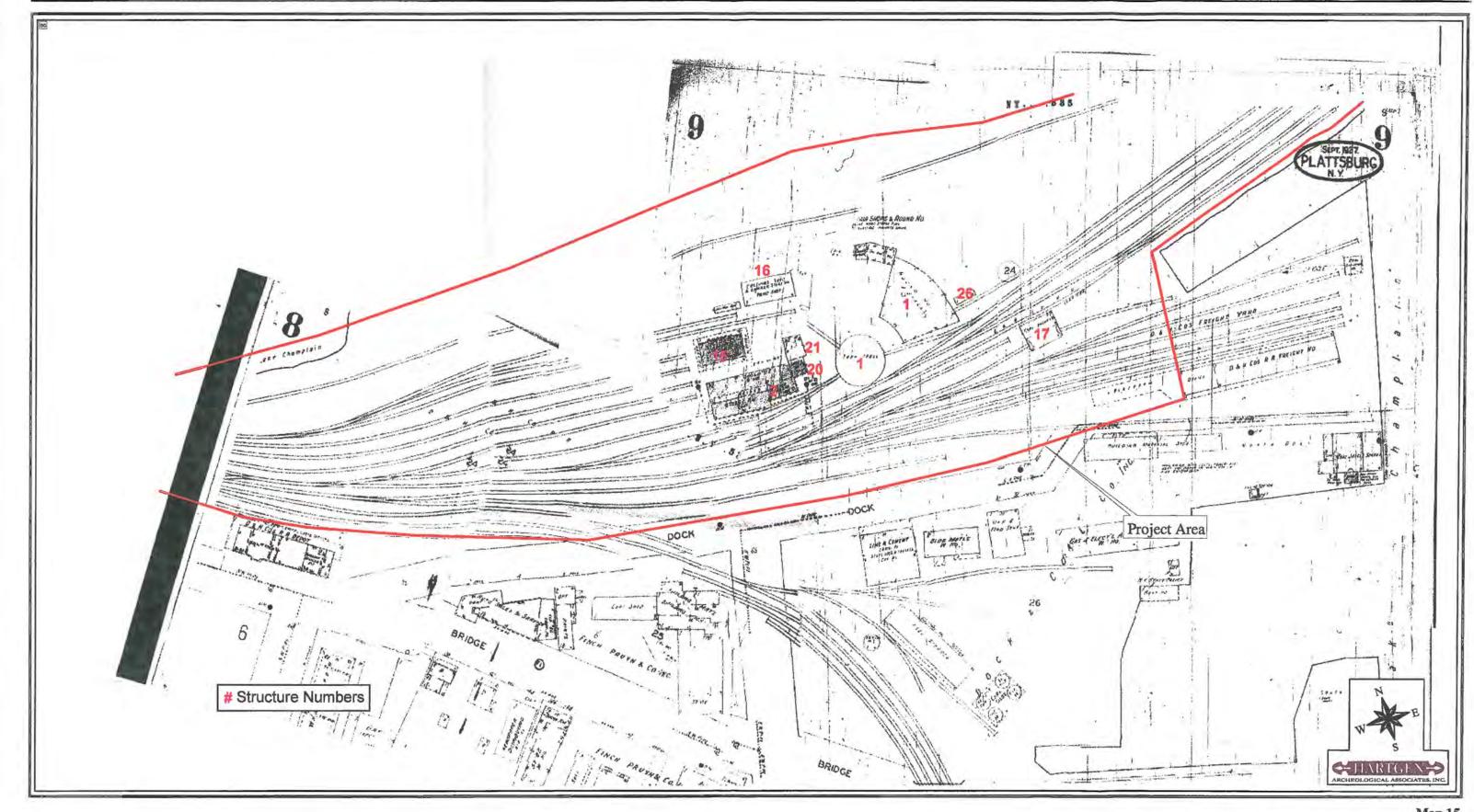
Map 7 1877 Ruger Bird's Eye View of Plattsburgh



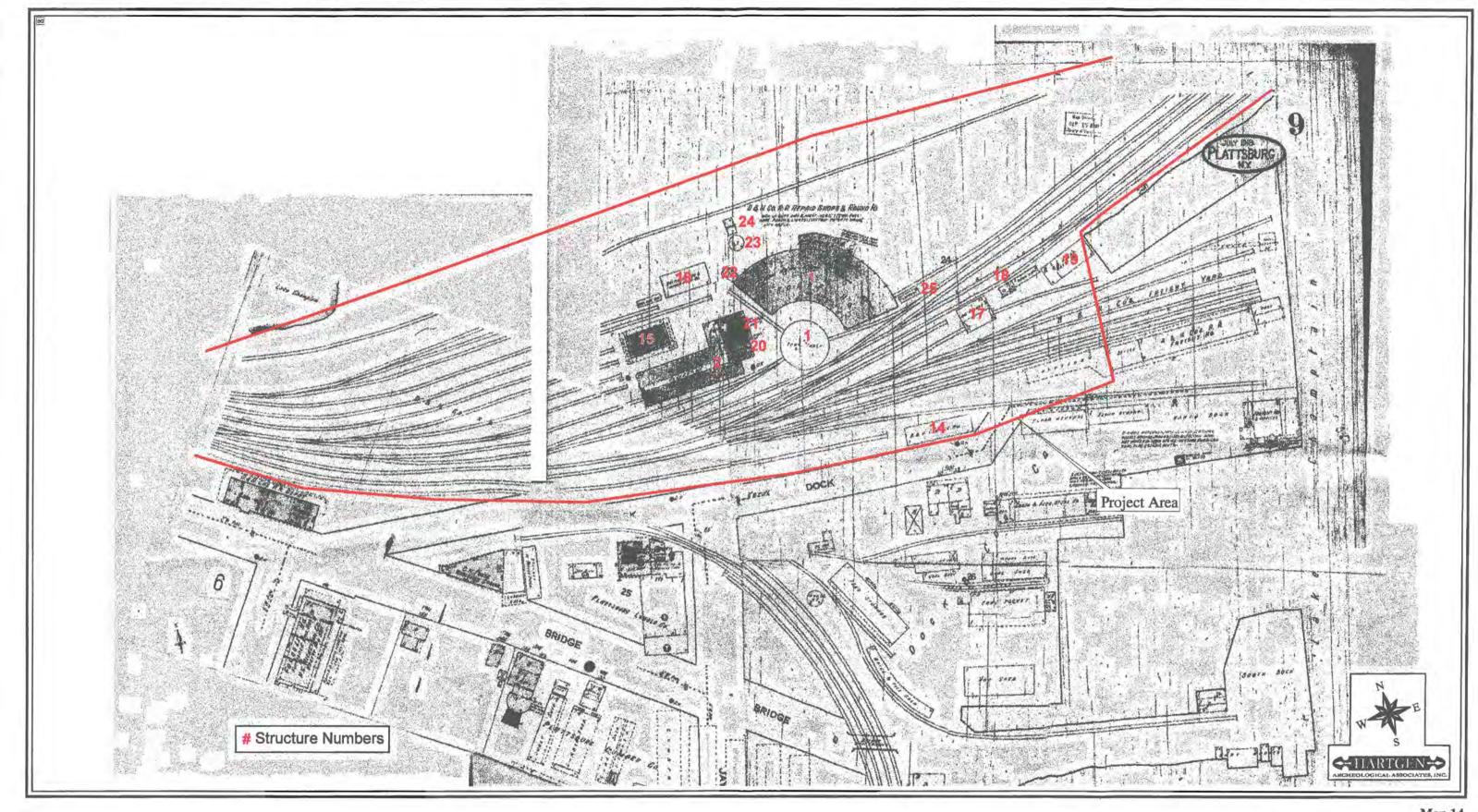
Map 3
2003 Dufresne-Henry Perspective Sketch



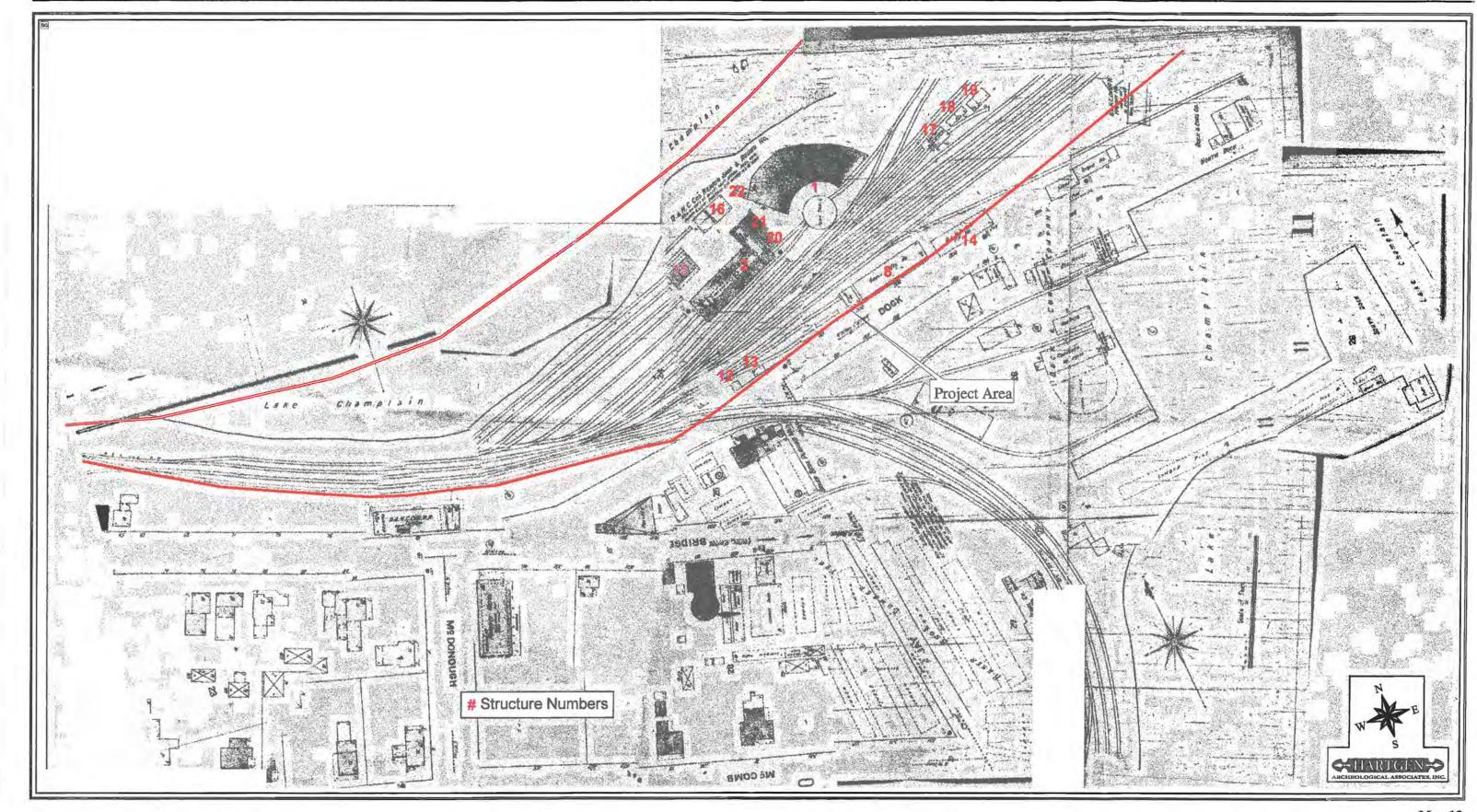
Map 2 2003 Dufresne-Henry Draft Final Master Plan



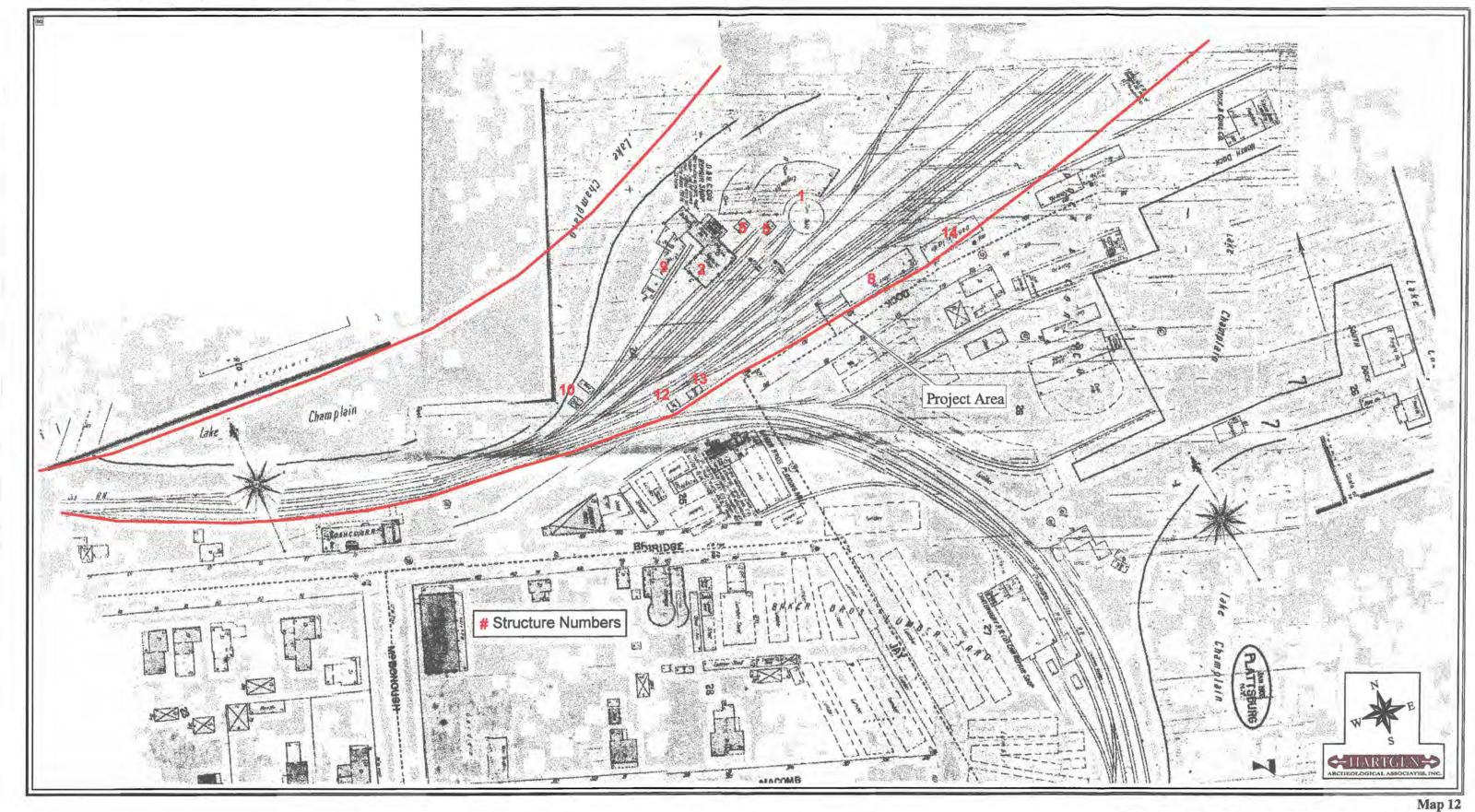
Map 15
1949 Sanborn Plattsburgh, Clinton County, New York Sheet 9



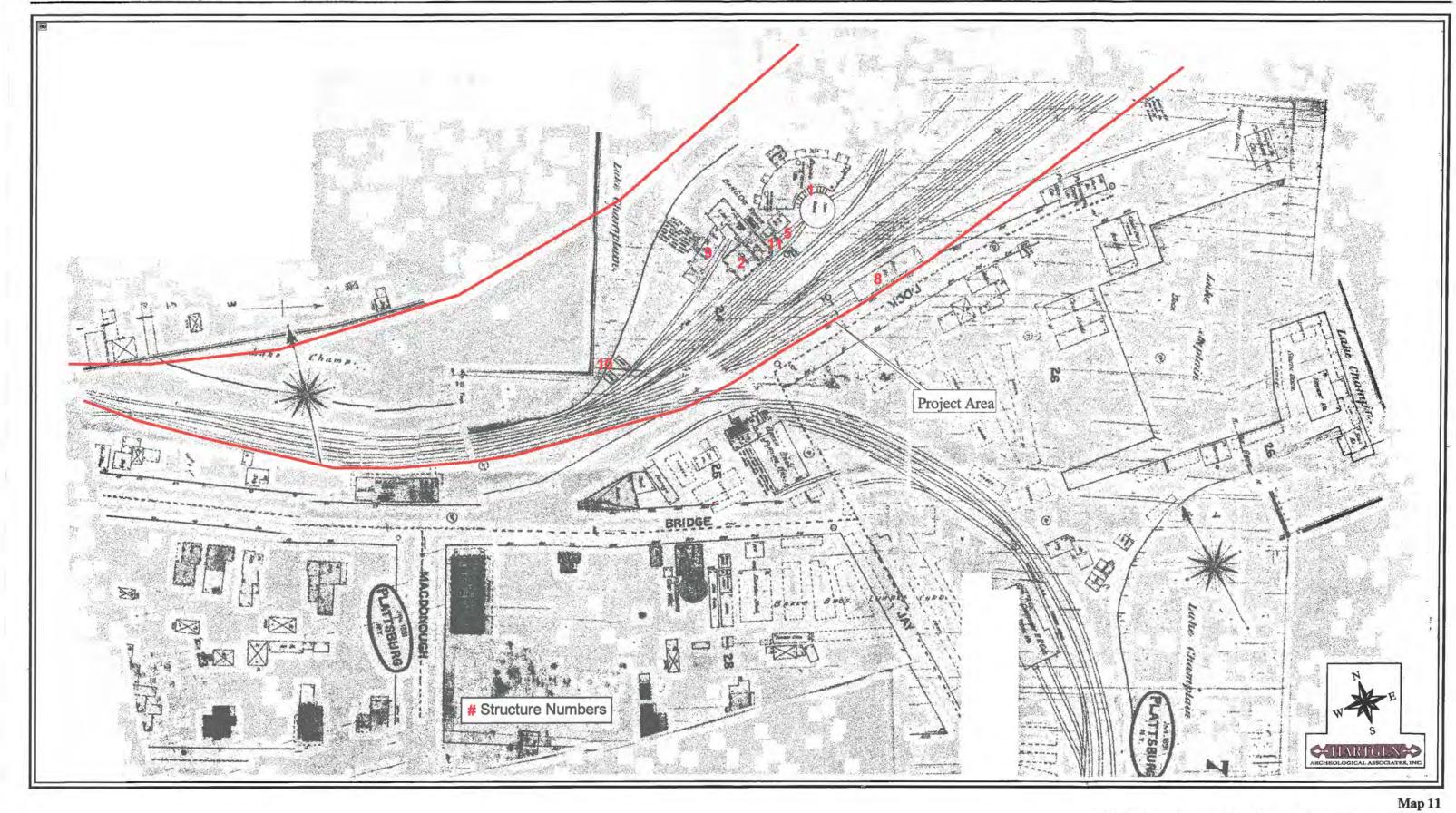
Map 14
1918 Sanborn Plattsburgh, Clinton County, New York Sheet 9



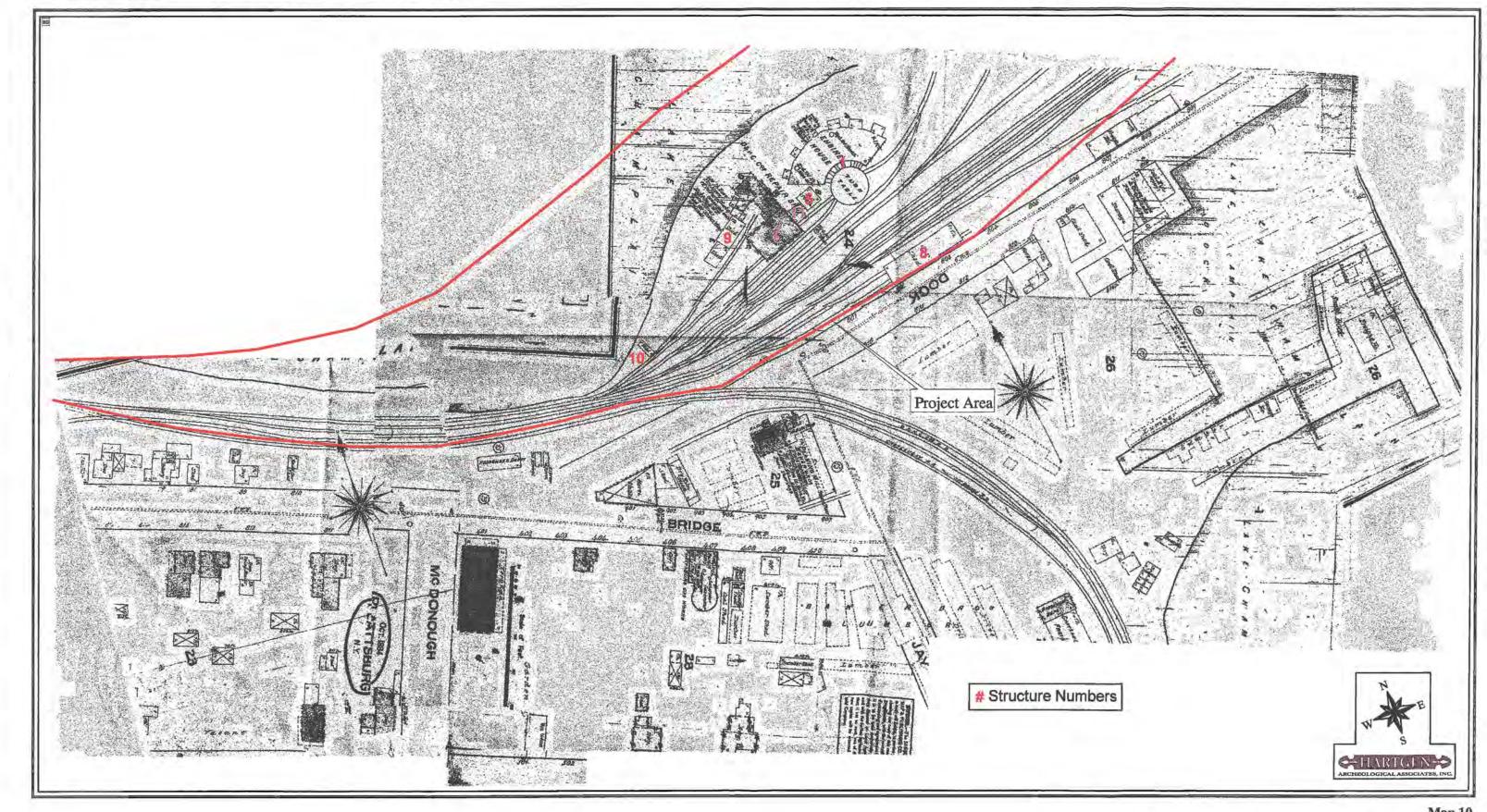
Map 13
1909 Sanborn Plattsburgh, Clinton County, New York Sheet 9



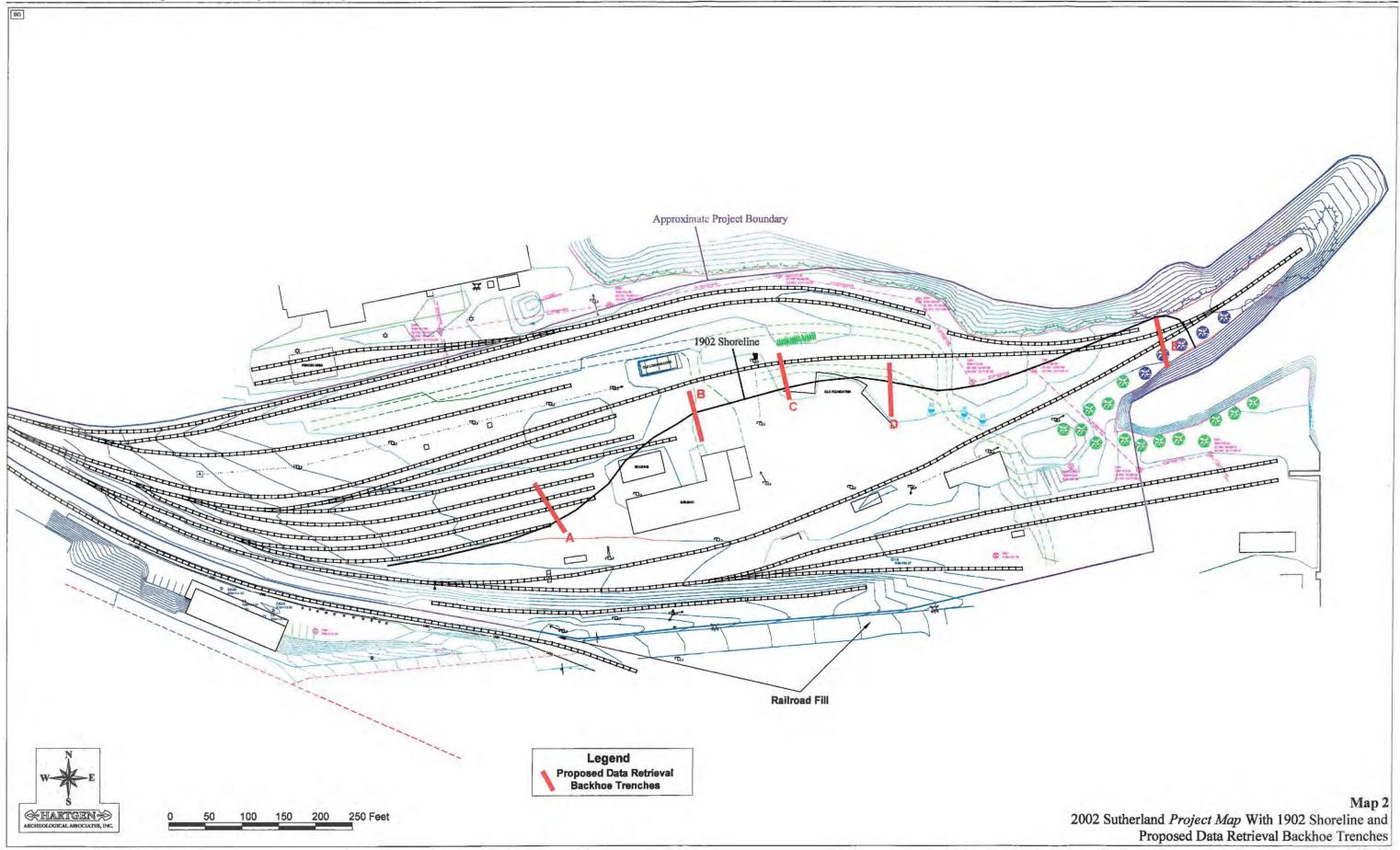
1902 Sanborn Plattsburgh, Clinton County, New York Sheet 6



1891 Sanborn Plattsburgh, Clinton County, New York Sheet 7



Map 10
1884 Sanborn Plattsburgh, Clinton County, New York Sheet 5





ANDREW M. CUOMO Governor ERIK KULLESEID
Commissioner

October 17, 2019

Mr. Ethan Vinson City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

Re: DEC

City of Plattsburgh Downtown Area Improvement Projects

19PR05584

Dear Mr. Vinson:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We note that the majority of proposed projects are within or adjacent to the State and National Register (NR) eligible Downtown Plattsburgh Historic District and are adjacent to several NR listed resources. We understand that the proposed work will include eight separate projects involving street improvements, parking lots, parks, and a mixed-use development.

In order for our office to continue its review, please provide the following additional documentation:

 Durkee Lot Mixed Use Development: Provide a detailed site plan along with building elevations and any available renderings of the proposed new construction. Our office will be evaluating any potential impacts of the new construction to the adjacent National Register eligible historic district.

In addition, please see comments from Joslyn Fergusson, sent with this CRIS communication, for concerns regarding archaeological resources.

Documentation requested in this letter should be provided via our Cultural Resource Information System (CRIS) at https://cris.parks.ny.gov/. Once on the CRIS site, you can log in as a guest and choose "submit" at the very top menu. Next choose "submit new information for an existing project". You will need this project number and your e-mail address.

If you have any questions, I can be reached at (518) 268-2164. Sincerely,

Weston Davey

Historic Site Restoration Coordinator

weston.davey@parks.ny.gov

via e-mail only



ANDREW M. CUOMO Governor ERIK KULLESEID
Commissioner

October 18, 2019

Mr. Ethan Vinson Project Coordinator City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

Re: DEC

City of Plattsburgh Downtown Area Improvement Projects

Plattsburgh, Clinton County, NY

19PR05584.003

Dear Mr. Vinson:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6NYCRR Part 617).

Based on available information, your project is located in an historic and archaeologically sensitive area and thus has the potential to impact Precontact and Historic archaeological sites. OPRHP recommends that a Phase IA Archaeological Survey is warranted for all portions of the project that will involve ground disturbance. A Phase IA survey is a literature and background search, and sensitivity study, designed to help assess the significance of, and overall sensitivity for cultural resources within your project area, or Area of Potential Effect (APE), and determine areas and degrees of previous disturbance. This study will subsequently be used to make recommendations regarding whether any further, subsurface investigations are warranted.

The OPRHP can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the OPRHP.

The Phase IA archaeological survey report must include a concise project area description that clearly indicates the project location, outlines all related project impacts, reviews historic maps and archaeological site information, and the extent and reason(s) for recommending or not recommending testing within the project APE. The areas of proposed testing versus non-testing should also be illustrated in map form for our review.

Mr. Ethan Vinson October 18, 2019 Page 2.

If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many significant sites have been identified in previously cultivated land.

Our office does not conduct cultural resources surveys. A 36 CFR 61 qualified archaeologist should be retained to undertake the Phase I survey. Many archaeological consulting firms advertise their availability in the yellow pages. The services of qualified archaeologists can also be obtained by contacting local, regional, or statewide professional archaeological organizations. Archaeology surveys can be expected to vary in cost per mile of right-of-way or by the number of acres impacted. We encourage you to contact a number of consulting firms and compare examples of each firm's work to obtain the best product.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before any archaeological survey activities are conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Dr. Christina Reith and she can be reached at (518) (518) 402-5975. Section 233 permits are not required for projects on private land.

Please continue to consult with OPRHP's Survey & Evaluation Unit pertaining to above ground historic cultural resources, and their concerns for potential impacts to these resources.

If you have any questions, I can be reached at (518) 268-2218 or via e-mail at Josalvn, Ferguson@parks, nv.gov.

Sincerely,

Josalyn Ferguson, Ph.D. Scientist Archaeology

via e-mail only

c.c. Caren LoBrutto, Chazen Companies

c.c. Charles Vandrei. DEC

c.c. Malana Tamer, City of Plattsburgh

PHASE 1A LITERATURE SEARCH AND SENSITIVITY ASSESSMENT CITY OF PLATTSBURGH

DOWNTOWN AREA IMPROVEMENTS PROJECT

DURKEE, MARGARET, BRIDGE AND BROAD STREETS

CITY OF PLATTSBURGH, CLINTON COUNTY, NEW YORK

PREPARED FOR:

THE CHAZEN COMPANIES
21 FOX STREET,
POUGHKEEPSIE, NY 12601



HUDSON VALLEY
CULTURAL RESOURCE CONSULTANTS, LTD.
3 LYONS DRIVE POUGHKEEPSIE, NY 12601

OCTOBER 2019

MANAGEMENT SUMMARY

SHPO Project Review Number (if available):

Involved State and Federal Agencies:

Phase of Survey: Phase 1A Literature Search & Sensitivity Assessment

Location Information:

Location: **Downtown Area of Plattsbugh** Minor Civil Division: **City of Plattsburgh**

County: Clinton County

Survey Area (English & Metric)

Length:

Width:

Depth (when appropriate):

Number of Acres Surveyed: N/A

Number of Square Meters & Feet Excavated (Phase II, Phase III only): N/A

Percentage of the Site Excavated (Phase II, Phase III only):

USGS 7.5 Minute Quadrangle Map: Plattsburgh NY Quadrangle

Results of Archaeological Survey

Number & name of prehistoric sites identified: 0

Number & name of historic sites identified: 0

Number & name of sites recommended for Phase II/Avoidance: 0

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area:

Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: 3: **Downtown Historic District, Brinkerhoff Street District and Court Street District.**

Number of identified eligible buildings/structures/cemeteries/districts: 0

Report Author (s): Beth Selig, MA, RPA.

Date of Report: October 2019

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I. Phase 1A Literature Search and Sensitivity Assessment

A. CITY OF PLATTSBURGH DOWNTOWN AREA IMPROVEMENTS PROJECT DESCRIPTION

In October of 2019, Hudson Valley Cultural Resource Consultants (HVCRC) was retained by The Chazen Companies to complete a Phase 1A Literature Search and Sensitivity Assessment of the proposed City of Plattsburgh Downtown Area Improvement Project near the Saranac River in the City of Plattsburgh, Clinton County, New York.

The purpose of the Phase 1 Cultural Resources Survey is to determine whether previously identified cultural resources (historic and archeological sites) are located within the boundaries of the proposed project, and to evaluate the potential for previously unidentified cultural resources to be located within the boundaries of the Project Area of Potential Effect (APE). All work was completed in accordance with the *Standards for Cultural Resource Investigations and the Curation of Archeological Collections* published by the New York Archeological Council (NYAC) and recommended for use by New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The report has been prepared according to New York State OPRHP's *Phase 1 Archaeological Report Format Requirements*, established in 2005.

The background research as well as the cultural and environmental overviews were completed by Beth Selig, MA, RPA, President and Principal Investigator with HVCRC. A project site visit was completed by Franco Zani Jr. on October 28, 2019 to observe and photograph existing conditions within the Project APE. The information gathered during the walkover reconnaissance is included in the relevant sections of the report.

The following report examines seven study areas for which improvements are proposed as part of the Plattsburgh Downtown Area Improvement project. The Phase 1A report examined these seven locations to determine whether the potential exists for intact archaeological resources to be present within the Area of Potential Effect (APE). The seven locations are identified throughout this report as follows.

- 1. Saranac Riverwalk
- 2. Durkee Street Improvements
- 3. Bridge Street Improvements
- 4. Arnie Pavone Memorial Parking Plaza
- 5. Westelcom Park
- 6. Broad Street Municipal Parking Lot
- 7. Proposed Relocated Farmers Market

The proposed project includes improving currently developed areas in an Urban environment.

The Plattsburgh Downtown Area Improvement Project includes an eighth location, the Durkee Lot Mixed Use Development parcel, on the eastern side of Durkee Street. This location was evaluated by Curtin Archaeological Consulting in June of 2019. As this location has been previously evaluated, it is not included in this report.

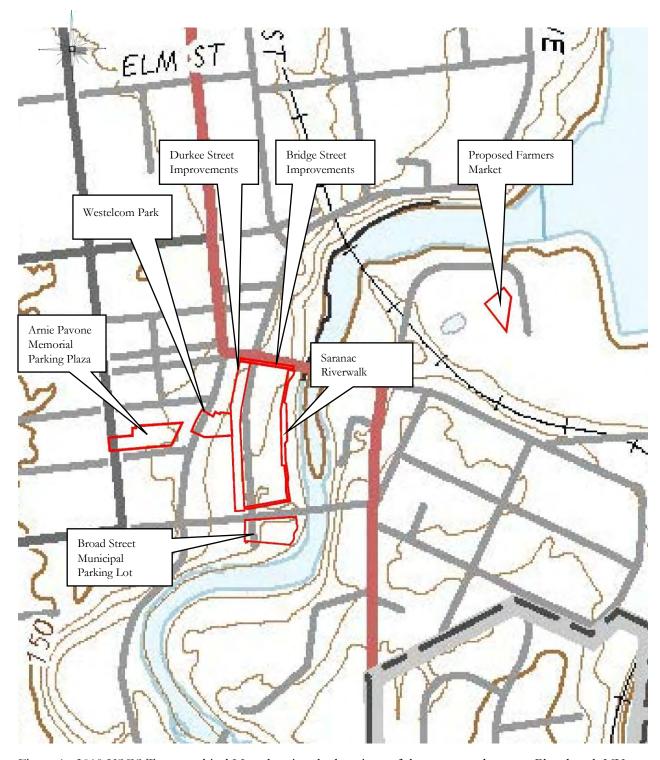


Figure 1: 2019 USGS Topographical Map showing the locations of the seven study areas. Plattsburgh NY Quadrangle. 7.5 Minute Series. (Source: USGS.gov.) Scale: 1"=600'.

SARANAC RIVERWALK

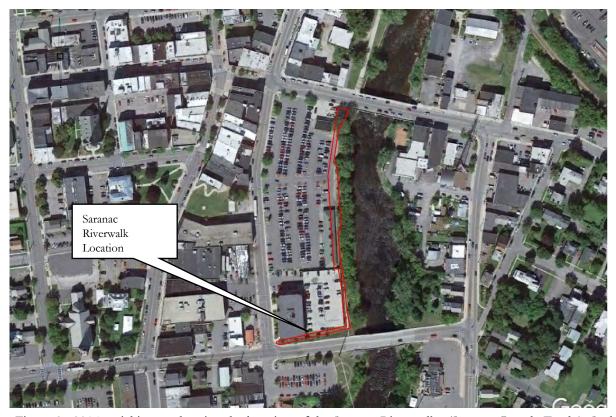


Figure 2: 2014 aerial image showing the location of the Saranac Riverwalk. (Source: Google Earth.) Scale: 1"=340'.

The Saranac Riverwalk is located along the western bank of the Saranac River, east of a large parking lot on Durkee Street. The proposed improvements in this location include replacing an existing wooden boardwalk on the western bank of the Saranac River. The improvements include creating an overlook and adding landscape plantings as well as surface material that will accommodate both pedestrians and bicyclists. This boardwalk will connect to the Saranac River Trail, along a path to be constructed between the Gateway Office Building and Broad Street. This path will connect the Riverwalk to existing sidewalks.

The landscape has experienced extensive grading, and other surficial alterations as a result of the construction of the existing parking lot. In 2019, Curtin Archaeological Consulting completed a Phase 1A Survey of the Durkee Street Parking Lot, and determined that the location had experienced profound disturbance as a result of episodes of demolition and rebuilding that have taken place within the City of Plattsburgh.

The historic maps reviewed for this report indicate that the shoreline of the Saranac River in this location is entirely made lands. During the site walkover, signs indicating that contaminated soils were present were noted.



Photo 1: The proposed work on the Saranac Riverwalk consists of replacing and refurbishing an existing walkway, adjacent to an existing parking lot. View to the south.



Photo 2: The walkway progresses south between an existing pavilion and park benches. View to the southeast.



Photo 3: A large pavilion, currently utilized by a farmers market, is located adjacent to the proposed location of the Riverwalk. View to the south.



Photo 4: The proposed Riverwalk will progress to the east of a concrete parking garage. View to the south.



Photo 5: A path will be constructed on the northern side of Broad Street to connect the Riverwalk to existing sidewalks on Durkee Street. View to the west.



Photo 6: View to the west along Broad Street, south of the proposed Riverwalk location.

DURKEE STREET IMPROVEMENTS

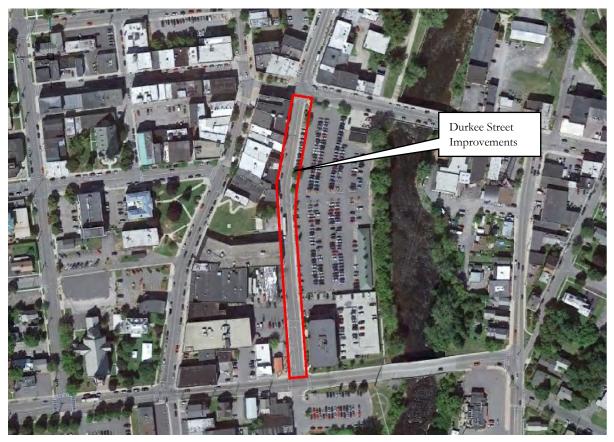


Figure 3: 2014 aerial image showing the location of the Durkee Street Improvements (Source: Google Earth.) Scale: 1"=340'.

The Durkee Street Improvements consists of the portion of Durkee Street between Broad Street and Bridge Street. This location currently consists of the asphalt roadway and sidewalks. The proposed improvements consist of reconfiguring the street from a two-way to one-way, with street scape improvements consisting of wider sidewalks, tree plantings, pedestrian lighting. The improvements will also consists of constructing public parking spaces on the western side of the street.

The landscape has experienced extensive grading, and other surficial alterations as a result of the construction of the existing roadway and the installation of subsurface infrastructure and utilities.



Photo 7: Proposed improvements along Durkee Street include new sidewalks and street lighting. View to the south.



Photo 8: Large electrical units and subsurface utilities are located on the eastern side of Durkee Street. View to the north.



Photo 9: View to the north along Durkee Street from Broad Street.



Photo 10: View to the northeast along Durkee Street. The Durkee Street Municipal Parking Lot is located to the east of the roadway.

BRIDGE STREET IMPROVEMENTS



Figure 4: 2014 aerial image showing the location of the Bridge Street Improvements (Source: Google Earth.) Scale: 1"=100'.

The Bridge Street Improvements area is located on the southern side of Bridge Street, between Durkee Street and the Saranac River. This area currently consists of sidewalks and a lawn area. The proposed undertaking in this location consists of streetscape improvements, including tree planting and pedestrian lighting and the creation of six parking spaces on the southern side of Bridge Street.

The landscape has experienced extensive grading, and other surficial alterations as a result of the construction of the Veterans Memorial Bridge, the existing roadway, and the Durkee Street parking lot. The eastern portion of this area is made lands.



Photo 11: View to the south of an informational booth currently located on the southern side of Bridge Street. View to the south.



Photo 12: A lawn area is located on the southern side of Bridge Street, near the Saranac River. View to the southeast. This area consists of fill added in the mid-twentieth century.



Photo 13: View to the west along Bridge Street in the location of the proposed parking spaces.



Photo 14: View to the east along Bridge Street.

ARNIE PAVONE MEMORIAL PARKING PLAZA



Figure 5: 2014 aerial image showing the location of the Arnie Pavone Memorial Parking Plaza (Source: Google Earth.) Scale: 1"=250'.

The proposed location of a new parking plaza, includes demolishing the former Glens Falls National Bank branch at 25 Margaret Place. This structure was built in the late 1970s and is currently owned by the City of Plattsburgh. The proposed parking plaza will also involve the abandonment of Division Street. The proposed undertaking consists of constructing a 109 space municipal parking lot.

The proposed location currently consists of Division Street, a current roadway, a small drive up window for the former bank, a parking lot and a small lawn area adjacent to Margaret Street. Existing subsurface infrastructure, including electric, water and sewer are located along Margaret and Division Streets.

This structure is included in the Plattsburgh Downtown Historic District, and is listed as a non-contributing structure to that resource. This resource, added to the listing in October of 2019, is discussed in more detail later in this report (Section G).



Photo 15: View to the northwest of the former Glens Falls National Bank. View from Margaret Street.



Photo 16: The southern side of the building is bounded by Division Street. View to the north.



Photo 17: Division Street borders a small parking lot located to the west of the former bank. View to the northwest.



Photo 18: View to the east of the parking lot and western elevation of the former bank.

WESTELCOM PARK

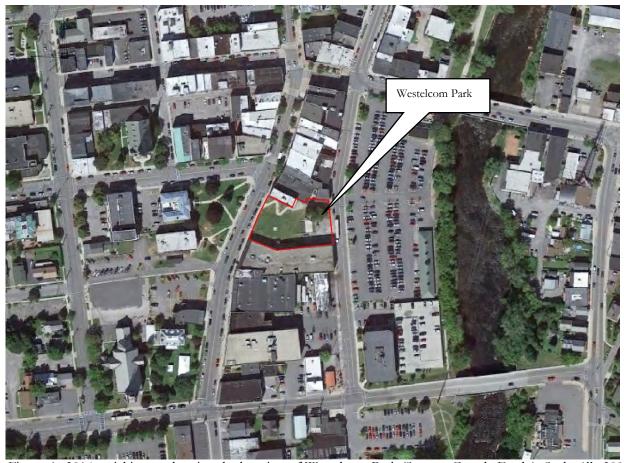


Figure 6: 2014 aerial image showing the location of Westelcom Park (Source: Google Earth.) Scale: 1"=300'.

The Westelcom Park is located to the west of Durkee Street. This park consists of a lawn area, concrete walkways electrical boxes and underground utilities. The redesign of the park will include the construction of a water feature, sculpture areas, a plaza, bicycle infrastructure, and pedestrian walkways. An existing sewer line through the will be replaced in the project APE to facilitate the new design.

The information available in CRIS indicates that a historic structure was removed in the late twentieth century. The Levy Block Buildings (USN 01940.001332) was demolished between 1980 and 1994.



Photo 19: View to the east of the existing park from Margaret Street.



Photo 20: The Park is currently a mix of concrete walkways, bike stands and benches, and subsurface utilities. View to the northeast.



Photo 21: The existing utilities in the park are centrally located adjacent to a concrete slab. View to the north.



Photo 22: The landscape within the park rises gently to the west. View to the west from Durkee Street.



Photo 23: View to the southwest of the current park.



Photo 24: View to the south along Durkee Street. The Park is located to the west.

BROAD STREET MUNICIPAL PARKING LOT

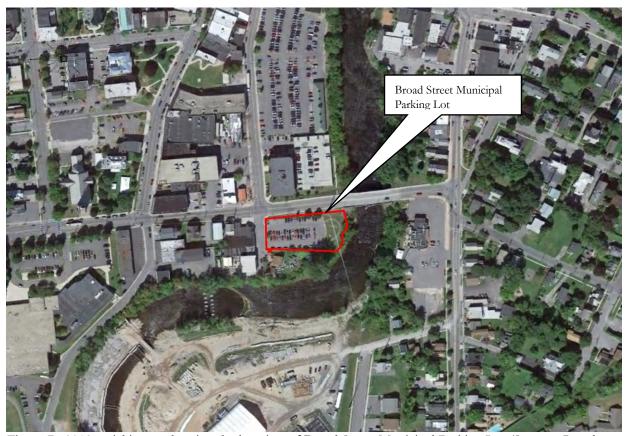


Figure 7: 2018 aerial image showing the location of Broad Street Municipal Parking Lot (Source: Google Earth.) Scale: 1"=400'.

The Broad Street Parking Lot is located to the east of Durkee Street and south of Broad Street. This parking lot is bordered by a small lawn area and the Saranac River. The proposed work in this location includes slightly expanding and resurfacing the existing parking lot.

The historic maps reviewed for this report indicate that the shoreline of the Saranac River in this location is made lands. The existing ground surface was built up in the mid twentieth century.



Photo 25: View to the west of the existing Broad Street parking lot.



Photo 26: A small park area is located to the east of the parking lot. View to the north. This area is primarily made lands.



Photo 27: View to the north of the northern portion of the lot. Broad Street is located to the right in the photo.



Photo 28: A small building is located to the southwest of the parking lot. View to the southwest.



Photo 29: View to the east along the southern boundary of the parking lot. The ground surface of the parking lot is a lot higher than that of the property to the south.



Photo 30: Utility equipment cabinets are located within the parking area, adjacent to Broad Street. View to the east.

RELOCATED FARMERS MARKET



Figure 8: 2014 aerial image showing the proposed location of the Farmers Market (Source: Google Earth) Scale: 1"=250'.

The proposed location for the Farmers Market is on the southwestern side of Green Street, south of the confluence of the Saranac River and Lake Champlain. This location is west of a large water treatment plant. A large rectangular structure, surrounded by parking lots is located in this area. The existing structure will be utilized for the Plattsburgh Farmers Market. The parking lot in this location will be reconfigured and improvements to the interior of the existing structure will also be completed. The existing structure previously housed the Plattsburgh Municipal Lighting Department.

In 2002 Hartgen Archaeological Consultants completed a Phase 1A Literature Review and Archaeological Sensitivity Assessment and Phase 1B Archaeological Field Reconnaissance, Plattsburgh Rail Yard Waterfront Rediscovery, City of Plattsburgh, and a secondary survey titled as the Additional Information, Plattsburgh Rail Yard and Waterfront Rediscovery, in the area of the proposed Farmers Market Relocation. These surveys identified significant features associated with the rail yard to the southwest, but did not identify any significant cultural resources in the location of the proposed Farmers Market.



Photo 31: The proposed location of the Farmers Market is bordered to the northeast by a water treatment facility. View to the northeast.



Photo 32: A single story rectangular structure will be utilized by the farmers market. View to the north.



Photo 33: Existing commercial buildings and outbuildings are located to the north and east of this structure. View to the west.



Photo 34: View to the north of the existing building.

B. ENVIRONMENTAL CONDITIONS

The Project APE consists primarily of existing municipal areas that are located within the City of Plattsburgh. The proposed Saranac Riverwalk will take place on top of the stabilized river bank. The improvements along Durkee and Bridge Streets area in areas covered with asphalt and buried subsurface utilities. The balance of the study areas includes existing parks, buildings and municipal parking areas. In general, the landscape is level with elevations at approximately 130' (39.6 m) Above Mean Sea Level.

The landscape within the Project APE has been impacted through extensive nineteenth industry and early twentieth and twenty-first century development. A comprehensive review of the Sanborn Fire Insurance Maps and historic aerials (Appendix A) indicates that the shoreline along the Saranac River has been dramatically altered since the mid-nineteenth century. In addition, these maps and images show a continued pattern of building demolition and reconstruction within the Project APE.

ECOLOGY

The Project APE lies in a vegetation zone where the Northern Hardwood Forest Zone meets the Appalachian Oak Forest Zone. In the Northern Hardwood Forest Zone, sugar maple, birch, beech and hemlock are the predominant trees (Bailey 1995).

GEOLOGY

The St. Lawrence-Champlain Lowlands physiographic province is an extensive area of relatively low elevations and low relief. It extends from near the Jefferson-St. Lawrence County line across the extreme northern tier of the State, bordering the St. Lawrence River, east to the Lake Champlain Valley and then south to Washington County. The lowest elevations are found bordering the St. Lawrence River (250 feet AMSL) and Lake Champlain (100 feet AMSL). The surficial geology of the St. Lawrence-Champlain Lowlands physiographic province consists primarily of glacially-derived material with some marine deposits and recent alluvial deposits. In the west, the surficial geologic deposits are dominated by glaciolacustrine silt and clay, with secondary amounts of glacial till, and extend to an approximate line between Waddington and Potsdam. Lesser amounts of swamp deposits (peat and muck), lake sands, kames and other small, miscellaneous glacial deposits are also present in this area. From this line east to the St. Lawrence-Franklin County line, lake sands and till dominate the landscape. In low areas along the shoreline and in some of the small embayments created by tributary rivers and creeks flowing into the St. Lawrence River, marine deposits consisting primarily of silt and clay, and containing marine shells, are found interbedded with glacial deposits.

Drainage

The Project APE is located along the banks of the Saranac River. Drainage is into the river, or into storm water basins located along the roadway.

Soils

Soil surveys provide a general characterization of the types and depths of soils that are found in an area. The characteristics of the soils within the Project APE have an important impact on the potential for the presence of cultural material, since the types of soils present affect the ability of an area to support human populations. The Natural Resources Conservation Service indicates that the soils within the Project APE are Urban Land (Figure 9).

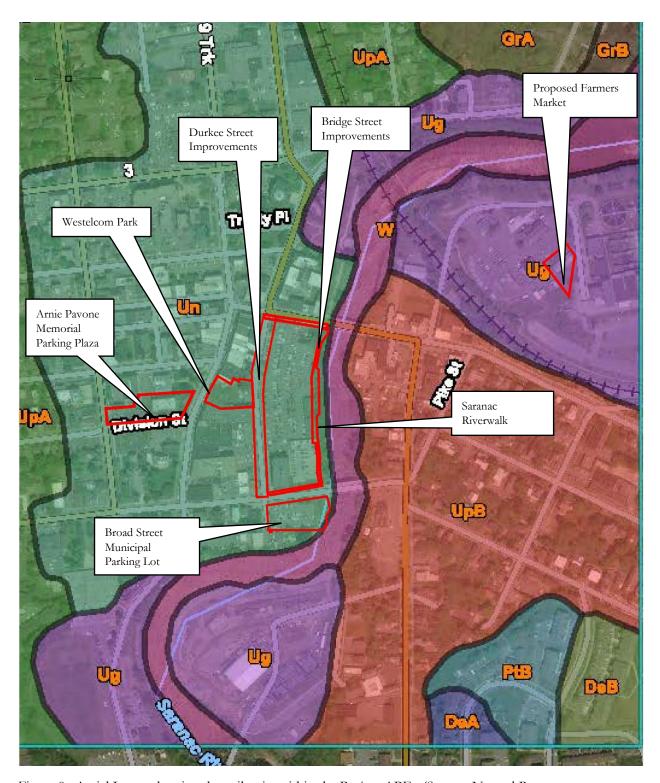


Figure 9: Aerial Image showing the soil units within the Project APE. (Source: Natural Resources Conservation Service). Scale: 1"=500'.

C. RECORDED ARCHAEOLOGICAL SITES AND SURVEYS

To gather information on the history of the Project APE and the surrounding region, HVCRC consulted historical documents and maps available at the Library of Congress, David Rumsey Cartography Associates and the New York Public Library. HVCRC reviewed the combined site files of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) and the New York State Museum (NYSM) for information regarding previously recorded archeological sites within one mile (1.6 km) of the Project APE. HVCRC also consulted regional Native American sources (e.g. Beauchamp 1900; Parker 1920; Ritchie 1980; Ritchie and Funk 1973) for descriptions of regional archeological sites.

PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES

Twenty-one archaeological sites have been identified within a one mile radius of the Project APE.

Table 1: Previously Recorded Archaeological Sites within a one half mile radius of the study locations							
Site Number	Site Name	Distance from Project APE	Site Type	Materials Recovered			
1940.000004	Public Hanging Grounds	2640' / 0.8 k	c. 1812, the public hanging grounds used by the City of Plattsburgh				
1940.000018	Fort Brown	1320' / 0.4 k	Nineteenth century fort, used during the War of 1812				
1940.000347	Byonton Farm	5280' / 1.6k	Charles Platt ho the War of 1812	use used by the British during			
1940.000348	Sperry's Tavern	1320' / 0.4 k	Early nineteenth	century tavern and hostelry			
1940.000349	Hunter's Tavern	1320' / 0.4 k	Early nineteenth century tavern				
1940.000350	Old Clinton County Courthouse	1320' / 0.4 k	Late nineteenth century Victorian Romanesque structure				
1940.000351	Riverside Cemetery	2640' / 0.8 k	Historic cemetery, with burials from the War of 1812.				
1940.000353	Fort Scott-AFB	3960' / 1.2 k	Historic Marker site form	, no additional information on			
1940.000354	Village Site-Shore North Of Saranac River	2640' / 0.8 k	Precontact villag	ge site reported by A. C. Parker			
1940.000355	Battery, Smith And Saranac Streets	3960' / 1.2 k	Nineteenth cent	ury industrial complex			
1940.000356	Cltn-18 (NYSM 3085)	5280' / 1.6k	Precontact Village site				
1940.000357	Platt's Forge	1320' / 0.4 k	Late eighteenth century forge				
1940.000358	Weston's Forge & Norton Furnace	1320' / 0.4 k	Nineteenth century forges and furnaces				
1940.001125	Riverwalk Historic Site	1320' / 0.4 k	Nineteenth century domestic artifacts				
1940.001126	Footbridge Historic Site	2640' / 0.8 k	Early nineteenth century domestic artifacts				
1940.001187	Site of Clinton Dynamite Co. Plant	2640' / 0.8 k	Late nineteenth	century explosive factory			

1940.001204	War of 1812 Military Hospital	2640' / 0.8 k	Site of Hospital used during the latter part of the War of 1812.
1940.001261	19th Century Guardhouse Site	3960' / 1.2 k	Site associated with the Battle of Plattsburgh
NYSM 7175	A.C. Parker	2640' / 0.8 k	Trail
NYSM 7172	A.C. Parker	2640' / 0.8 k	Traces of Occupation
NYSM 3083	A.C. Parker	2640' / 0.8 k	Village and / or Camp site

PREVIOUSLY COMPLETED ARCHAEOLOGICAL SURVEYS

The Project APE is located in an area that has been surveyed for cultural resources over the past twenty years; however, for expediency and clarity only the surveys completed within the study areas have been included in the table below.

Table 2: Previously Completed Archaeological Surveys within the Project APE						
Project Name	Survey Findings	Reference				
Historic Resource Survey and Determination of Eligibility, PIN 7752.22 / BIN 2219630, Major Rehabilitation of Broad Street Bridge over the Saranac River, City of Plattsburgh, Clinton County, New York	No Report in CRIS.	Skelly and Loy, 2000				
Phase 1A Literature Review and Archeological Sensitivity Assessment/ Phase 1B Archeological Field Reconnaissance, Plattsburgh Rail Yard Waterfront Rediscovery, City of Plattsburgh, Clinton County	The Phase 1 Survey was completed I the location of the former 1814 Blockhouse and the Plattsburgh Rail yard. The survey revealed that a substantial amount of the Project APE is fill. The survey identified two possible privy features, but no further work was recommended.	HAA, 2002				
Additional Information, Plattsburgh Rail Yard and Waterfront Rediscovery, City of Plattsburgh, Clinton County, New York	An additional survey was completed in the location of the Waterfront, due to an expansion of the Project area. The survey identified features associated with the Plattsburgh Railyard and indicated that a Phase 3 Data Retrieval study would be needed to mitigate any adverse effects to these features.	HAA, 2004				

D. PRECONTACT CONTEXT

During the Paleoindian period, mobile bands of hunter-gatherers occupied what is now New York State. These bands exploited the resources of the landscape by hunting game and gathering plants. Paleoindian sites have been identified in the upland regions a short distance from Lake Champlain. Occupation of the Champlain Sea beaches by Paleoindians has been suspected for the upper Champlain Valley, based on discoveries of Parkhill fluted points, documented by Ritchie at the Davis site, near Crown Point (Ritchie 1965). Subsistence patterns in this period revolved primarily around hunting. It is believed that the native people moved seasonally along major river valleys, keeping to the elevated terraces, as water levels were higher at this time. A fluted point of similar age and the same Beekmantown chert material as the Davis site specimens has been found at the edge of the Pine Plains on Fort Drum, New York suggesting a regularly traveled Paleoindian migration route along the St. Lawrence Valley rim (Abel 2001). Clovis points have been discovered around Black Lake in St. Lawrence County. The majority of the sites appear to have been temporary campsites.

With the lowering of the water table during the Archaic period, subsistence methods and technologies changed in response to climatic warming. Evidence for Early Archaic occupation of the St. Lawrence Valley, however, has not been found. It is believed that northern New York was sparsely occupied during this time period. Laurentian materials are common throughout the St. Lawrence Valley, likely due to the change in settlement and subsistence patterns that occurred during the Late Archaic period which reflect an increased focus on coastal and riverine resources. Ground stone food processing tools are more common, reflecting an increase in processed plant resources in the diet. Projectile points commonly found at Late Archaic sites include narrow stemmed, broad stemmed and side notched types. The Laurentian Tradition of the Late Archaic is the most commonly represented throughout New York State, and subdivided into a series of phases: Vergennes, Vosburg, Sylvan Lake, River and Snook Kill.

Little evidence for Woodland period sites, distinguished from the Archaic in part by the use of ceramics, exists in the northern tier. Sites in the St. Lawrence region that date to this period are few, and are generally considered to be Late Woodland/Contact period sites. The soil and water requirements of the cultivation of maize, beans and squash created a marked change in the pattern of land use and the selection of locations for villages, particularly in the northern region of the state (Abel 2001).

The lack of evidence for the precontact period in this region of the state is limited by the lack of systematic survey and investigation in the northern tier. Only a small number of precontact sites have been recorded in this region. It is also possible that the widespread logging and subsequent severe erosion of the thin soil layers in this region have erased the sites within the Adirondack uplands. The first known inhabitants in the Champlain Valley were the Algonquians approximately 8000 years ago. In 1300 A.D. Mohawk Tribes moved into the area, driving the Algonquians east and north of the Champlain Valley (Abel 2001).

E. HISTORIC BACKGROUND

In 1609, Samuel de Champlain entered the region which allowed the French to claim the Champlain Valley until 1759. Historically, the settlement of the Adirondack mountain area occurred much later than the lower lying areas of northeastern New York. In May of 1782, New York State passed a law giving land to refugees of the American Revolution (Sullivan and Martin 1970). On September 10, 1787 the Canadian and Nova Scotia Refugee Tract set apart 250 lots of 80 acres each, to be given to the refugees (Sullivan and Martin 1970). In 1784, land was secured from the Mohawk by the Treaty of Stanwix and divided into lots. In 1791, Great Lots 1 through 6 were purchased by a company under the direction of Alexander Macomb in what became known

as Macomb's Purchase. That same year, Macomb's Purchase was divided among its principal shareholders, with Macomb, William Constable and Daniel McCormick assuming ownership of Great Lot 1. When Clinton County was formed, it covered most of the North Country from Lake Champlain to the St. Lawrence River. Essex, St. Lawrence and Franklin Counties were later formed from Clinton County.

Settlement of the patent continued into the nineteenth century. But when war broke out with Great Britain in 1812, the safety and economic wellbeing of the settlers of Clinton County were threatened. Settlement of Clinton County was encouraged by the end of hostilities and the resumption of normalized relations between the United States and British Canada in 1815.

The village of Plattsburgh was incorporated in March 3, 1815, shortly after the end of the War of 1812. The growth in the city was spurred by industries in the Adirondack Mountains, particularly logging and quarries. The Saranac River provided the power for the lumber mills and marble mills in the City. By the 1830s there were carding and clothing mills, a foundry, cotton factories and a comb factory. Other early industries in the city included a distillery and an oil mill. The lumber mills operated until the forests in the area were cleared (French 1860).

By the end of the nineteenth century, industries consisted of large iron company, which processed the material from the nearby mountains, and maintained a shipping facility on the Saranac River. Large lumber and pulp factories and a sewing machine and typewriter company were located along the River. By the late nineteenth century the Hotel Chaplain had been constructed at Bluff Point a high point on the shore Lake Champlain, south of the City of Plattsburgh (French 1860).

Plattsburgh was incorporated as a city in 1902. The industries that had developed in the city in the nineteenth century had continued to expand and grow. Large paper factories operated at the northern end of the city. By the end of the twentieth century the Champlain Valley Physicians Hospital Medical Center became the city's largest business.

At the close of the War of 1812, the US Military retained a presence within the city of Plattsburgh. An Army base was constructed in or about 1814, and operated into the 1950s. In the mid twentieth century, the US Airforce took over the base, and it was expanded to a large Strategic Air Command location. This base was closed in 1995, and its currently operated as civilian domestic airport (Rumnet 2009).

CARTOGRAPHIC RESEARCH

HVCRC examined historical maps of Clinton County to identify possible structures, previous road alignments and other landscape features or alterations that could affect the likelihood that archeological and/or historic resources could be located within the Project APE. These maps are included in this report, with the boundaries of the Project APE superimposed. Nineteenth century maps frequently lack the accuracy of location and scale present in modern surveys. As a result of this common level of inaccuracy on the historic maps, the location of the Project APE is drafted relative to the roads, structures, and other features as they are drawn, and should be regarded as approximate.

The historic maps included in this report depict the sequence of road construction and settlement/development in the vicinity of the Project APE. In the City of Plattsburgh, early development took place near the docks and on the elevated terraces overlooking the Saranac River. The early maps also depict the changing shoreline along the banks of the River.

This report does not include all the historic maps available for the City of Plattsburgh, but rather includes those that show the changes that have taken place within the Project APE and the general vicinity. They identify the dates of construction of the buildings and in some cases the former landowners. These maps also illustrate the extent to which the shoreline of the Saranac River has been altered over the past centuries.

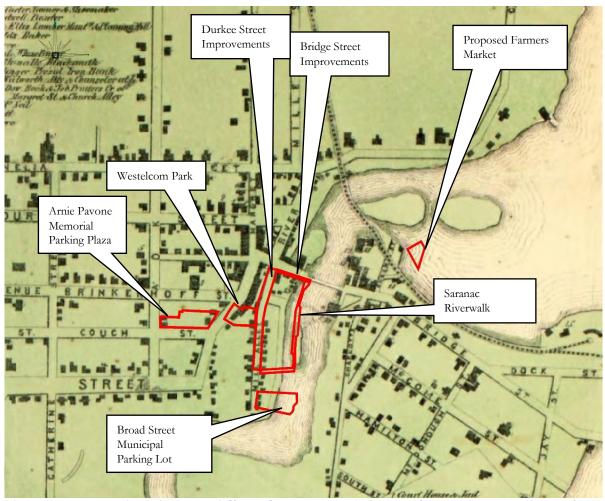


Figure 10: 1854 A. Ligowsky. *Map of Clinton County, New York: from actual surveys.* (Source: Library of Congress) Scale: 1"=715'.

In 1854 Ligowsky published the *Map of Clinton County, New York*. This map shows that the proposed Riverwalk, Broad Street Parking Lot and location of the Farmers Market are on water. This map shows Durkee Street as Mill Alley, due to the number of mills located along this portion of the Saranac River. A small waterfall is shown to the south of the bridge over the River. These falls were removed or altered when the western bank of the River was filled in.

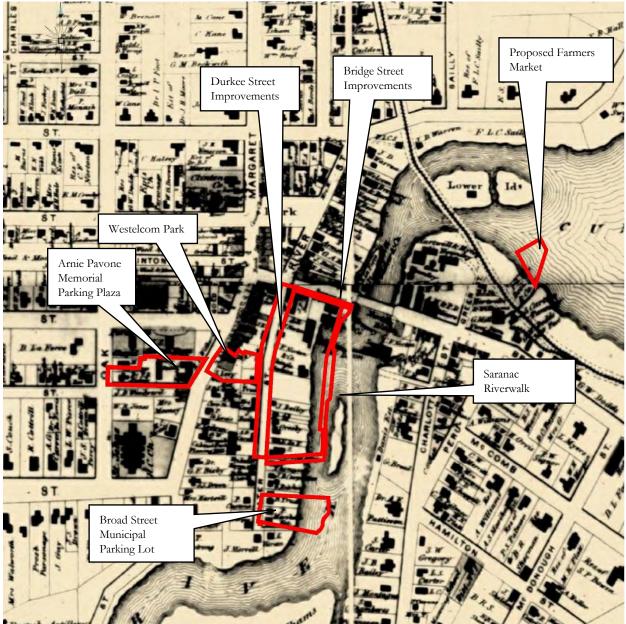


Figure 11: 1869 F.W. Beers. Town of Plattsburgh, N.Y.: Clinton County. (Source: Historic Map Works) Scale: 1"=415'.

In 1869, a number of large factories are shown along the banks of the Saranac River. The Riverwalk, Broad Street Parking lot and the location of the Farmers Market are all or partially located on water. The Witherhill Hotel has been constructed in the location of the Arnie Pavone Parking Plaza. Residential structures are shown along Broad and Margaret Streets. Mill Alley has been renamed Water Street.

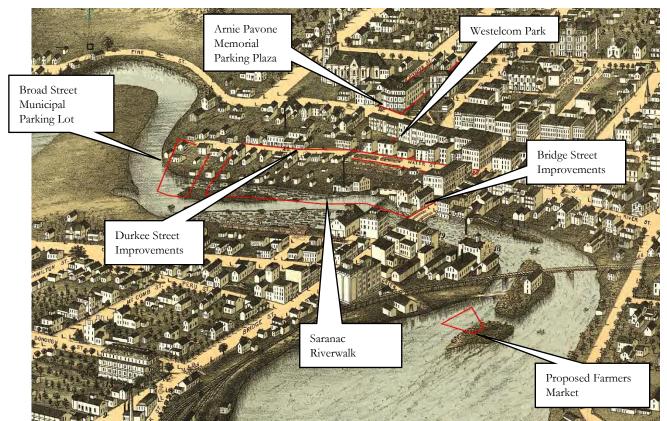


Figure 12: 1877 A. Cruger. Bird's eye view of Plattsburgh, Clinton Co., New York surveys. Not to Scale. (Source: New York Public Library)

In 1877, the Birds Eye view shows the built structures along the banks of the River. This image shows that lumber was stored to the south of a water fall and Bridge Street. In the location of the Broad Street parking lot there are a number of residential structures. Mills and factory buildings are located on the banks of the river. The Witherhill Hotel is shown on Margaret Street.

F. SANBORN FIRE INSURANCE MAPS AND HISTORIC AERIAL IMAGES

In addition to the historic maps, the Sanborn Fire Insurance Maps (hereafter "Sanborn Maps") and the historic aerials were examined to identify the former locations of structures within the Project APE. While the Sanborn Maps do not show landowner information, they show the locations of structures, outbuildings and any other features that may have existed within the Project APE. The Sanborn Maps and the historic aerials depict the extensive changes to the landscape within the Project APE and have been included this report as Appendix A.

SARANAC RIVERWALK

The Sanborn Maps show that the majority of the proposed Riverwalk was part of the Saranac River during the late nineteenth and early twentieth centuries (Appendix A: Figure 13). By the early twentieth century, this area had been filled in, and built up (Figures 19-22). Structures are shown at the northern end of the proposed park, and at the southwestern extent adjacent to Durkee Street. By 1969 these structures have been removed. By 1980 all but one large structure is located near the western bank of the Saranac River. All of the structures within the locations have been removed by 1994, and a parking lot was constructed to the west and north.

DURKEE STREET IMPROVEMENTS AND STREETSCAPE & BRIDGE STREET PARKING IMPROVEMENTS

The Sanborn Maps for the Durkee Street Improvements and Streetscape and Bridge Street Improvements (Appendix A: Figures 13-16), show that by structures, both commercial and residential have been located near these streets since the mid-nineteenth century. The layout of the buildings remains consistent from the end of the nineteenth century, until the mid-twentieth century, when a majority of them are removed and new buildings are constructed on the eastern side of Durkee Street. By 1994, these buildings have been removed, and a large parking lot has been constructed in this lot.

ARNIE PAVONE MEMORIAL PARKING PLAZA

The Sanborn Maps Arnie Pavone Plaza (Appendix A: Figures 13-16), show that in the late nineteenth century the Witherhill House hotel was located within the southeastern corner of the block. A residential structure was located in the western portion adjacent to Oak Street. By 1980, this building has been removed, and the existing Glens Falls bank has been constructed. The residential structure in the western portion of the lot was removed by 1980. The Glens Falls Bank is currently vacant and is owned by the City of Plattsburgh.

WESTELCOM PARK IMPROVEMENTS

The Sanborn Maps show that this location has been occupied by buildings from the mid nineteenth century to the late twentieth century. By 1994, the buildings have been removed, and the location has been converted to a park (Appendix A: Figures 13-16, 22). These buildings are shown as row house that feature stores or commercial spaces on the ground floor with living space on the upper stories.

BROAD STREET MUNICIPAL LOT

The earliest Sanborn Map for the city of Plattsburgh do not include the area south of Broad Street. This area if only partially shown on the late nineteenth century maps. These maps, along with those published in the early twentieth century, shows that a large portion of the project APE includes the Saranac River. The historic aerial show that the river bank was filled in by 1969. Residential structures are located within the lot along Durkee Street until the until 1969, when the lot has been graded and filled (Figure 19-21). This lot has remained

vacant through the twenty-first century. By the early 2000s an asphalt parking lot has been constructed in this location.

RELOCATED FARMERS MARKET

The new location for the Farmers Market, is entirely made lands. In the late nineteenth and early twentieth century, this location is entirely open water. By the mid-twentieth century, this area has been partially filled in, and a commercial building has been constructed. The existing sewer plant to the north and east has also been built. By the late twentieth century, the entire area has been filled in, and a parking lot and roadway have been built in the new fill (Figures 18-22).

G. NATIONAL REGISTER ELIGIBLE/LISTED SITES

The National Register Database and OPRHP files were reviewed to identify structures on or in the vicinity of the Project APE that have been listed (NRL) on the National Register of Historic Places or identified as National Register Eligible (NRE). Two National register eligible properties are located within the boundaries of the Project APE. The Levy Block, located at 32-38 Margaret Street was documented in 1978. The 1980 historic aerial shows that the building was located in the western portion of the lot. By 1994 this structure had been removed, and a park created in the space. A second structure, the Glens Falls National Bank is located at 25 Margaret Street in the location of the proposed Arnie Pavone Municipal Parking Plaza. This structure is listed as a non-contributing structure to the Plattsburgh Downtown Historic District. This district is considered eligible as an architecturally and historically significant intact city business core that reflects the growth and development of Plattsburgh as a regional commercial hub and industrial center from the early nineteenth to the mid-twentieth century. The former Glens Falls National Bank structure is owned by the City of Plattsburgh who is proposing to demolish the building as part of the project. This structure, built in the 1970s is not considered to be eligible as an individual structure, nor is it a contributing feature to the nineteenth and early twentieth century commercial and industrial center of downtown Plattsburgh. Therefore, the removal of the non-contributing structure will not have an adverse impact on the characteristics that make the Plattsburgh downtown Historic District eligible for listing on the National Register.

Five Listed properties are located adjacent to the Project APE. Two National Register-listed historic districts are immediately west of the Downtown Historic District, the Brinkerhoff Street and Court Street Historic District. Both of these districts are primarily residential and represent the growth of the City during the nineteenth century. The Strand Theater, the First Presbyterian Church and the St. John the Baptist Church and rectory are individually listed properties that are located within the Plattsburgh Downtown Historic District.

Based on the current project design, the proposed project will not adversely impact these historic properties.

H. ASSESSMENT OF SENSITIVITY FOR CULTURAL RESOURCES

PRECONTACT SENSITIVITY

Precontact period archaeological sensitivity of an area is based primarily on proximity to previously documented Precontact archeological sites, known Precontact period resources, and physiographic characteristics, such as topography and proximity to freshwater. The project's location along the banks of the Saranac River and proximity to previously identified precontact period sites, makes this landscape moderate to highly sensitive for precontact cultural resources.

However, the landscape within the seven study areas has experienced a significant amount of development, demolition and redevelopment from the nineteenth through the twenty-first centuries. Previously completed surveys within the study areas and general vicinity have documented a profound level of disturbance, associated with the filling and stabilization of the River bank, as well as previous building demolition. The history of demolition, cutting and filling and stabilization practices within these areas, makes it highly unlikely that intact Native American cultural deposits exist within the study areas. Therefore, the precontact period sensitivity is considered to be low.

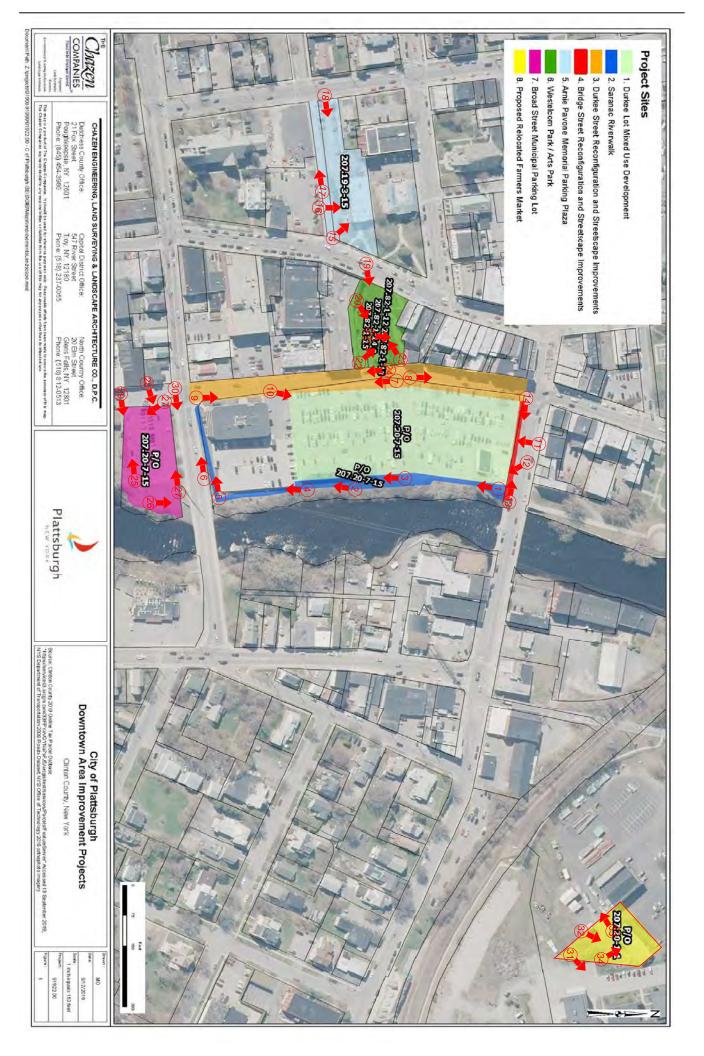
HISTORIC SENSITIVITY

The study areas are located in the area of Plattsburgh that was dominated by commercial industries in the nineteenth century. The historic map review documents many iterations of demolition and rebuilding along the banks of the Saranac River. The previous surveys completed by Hartgen Archaeological Associates, and Curtin Archaeological Consulting, have documented a profound level of disturbance with fill deposits below grade. Any historic resources that would have been located within the study area and associated with the early history of the area, would have been disturbed by the alterations to the landscape in the late twentieth century. Based on this assessment, the historic potential of the study areas is considered to be low.

I. SUMMARY AND RECOMMENDATIONS

In October of 2019 Hudson Valley Cultural Resource Consultants completed a Phase 1A Literature Search and Sensitivity Assessment for the City of Plattsburgh Downtown Area Improvements Project in the City of Plattsburgh, New York. The results of the literature search indicate that the lands within the study area were occupied from the early nineteenth century to the late twentieth century.

The proposed undertaking includes improvements to existing streets, parking lots and the creation of walking trails along the banks of the Saranac River. The project also includes the demolition of a vacant late twentieth century structure. Based on the information identified in this report, significant disturbances have occurred on the location of the seven study areas. Based on the review of the existing conditions, the previously completed surveys and the area's history of demolition and reconstruction, the existing subsurface infrastructure these seven study areas are not considered to retain archaeological integrity. Therefore, no additional investigations for the City of Plattsburgh Downtown Area Improvements project are warranted.



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Appendix A: Sanborn Fire Insurance Maps & Historic Aerials	

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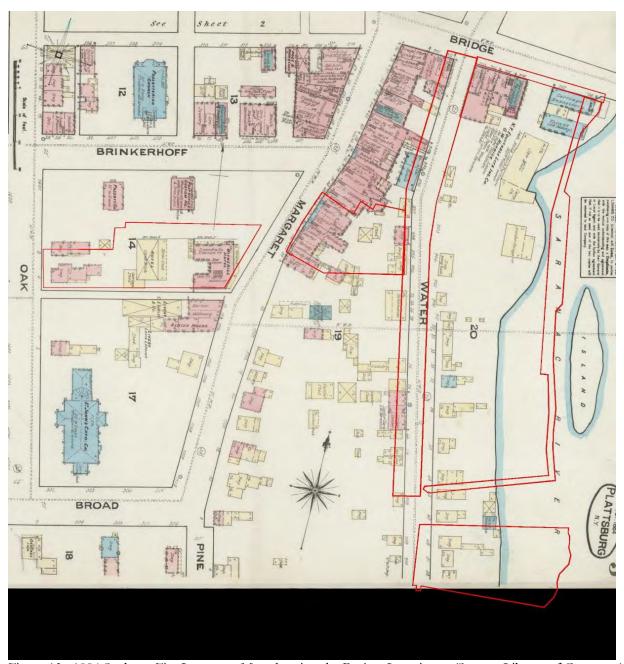


Figure 13: 1884 Sanborn Fire Insurance Map showing the Project Locations. (Source: Library of Congress.). Scale: 1"=200'.

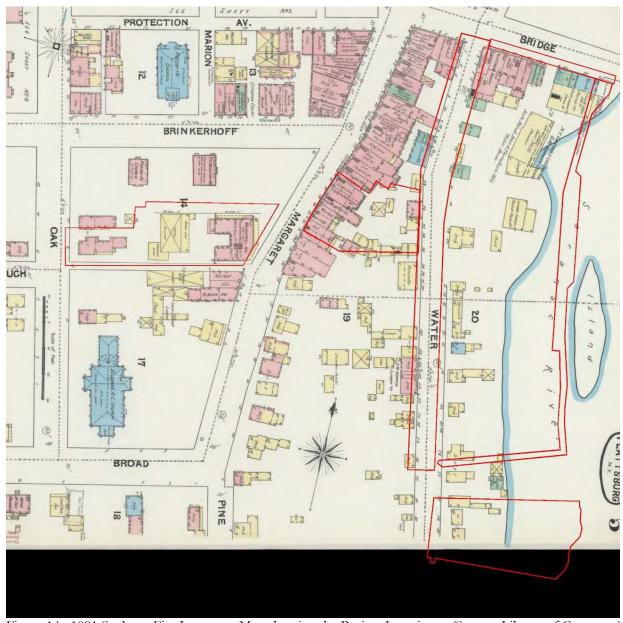


Figure 14: 1891 Sanborn Fire Insurance Map showing the Project Locations. (Source: Library of Congress.). Scale: 1"=200'.



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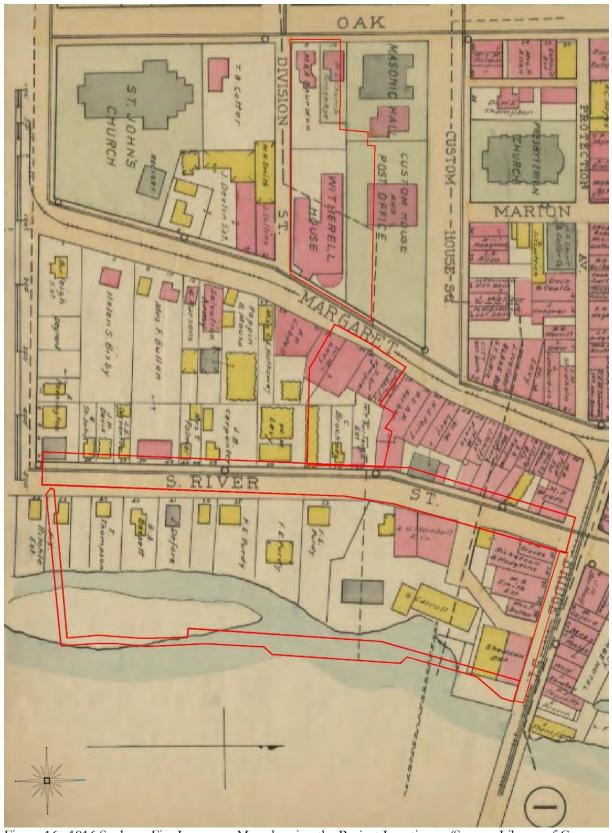


Figure 16: 1916 Sanborn Fire Insurance Map showing the Project Locations. (Source: Library of Congress.). Scale: 1"=150'.

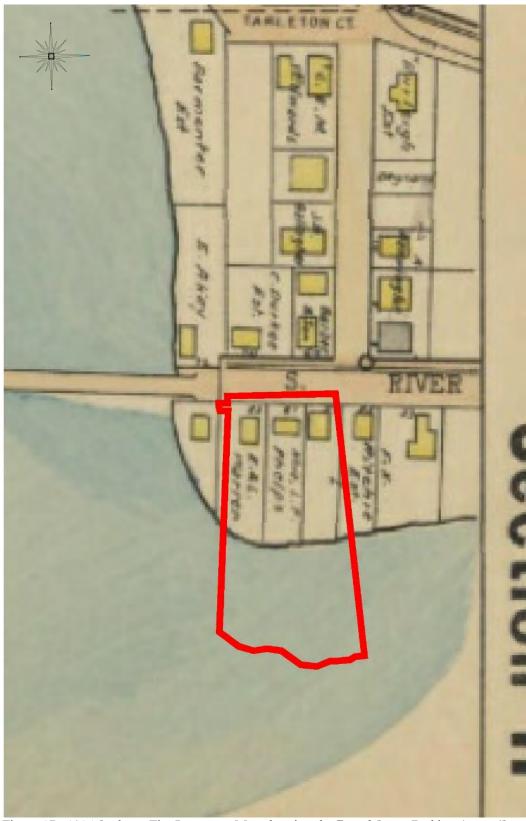


Figure 17: 1916 Sanborn Fire Insurance Map showing the Broad Street Parking Area. (Source: Library of Congress.). Scale: 1"=125'.

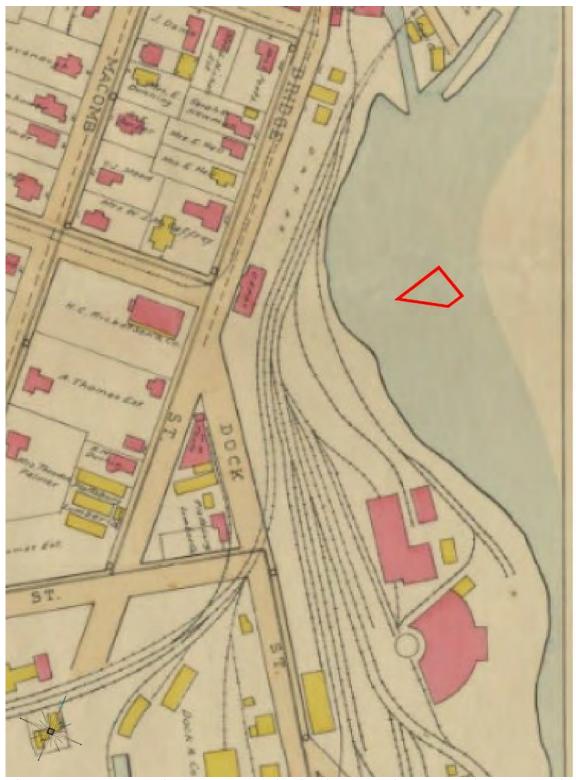


Figure 18: 1916 Sanborn Fire Insurance Map showing the proposed Farmers Market. (Source: Library of Congress.). Scale: 1"=125'.

AERIAL REVIEW

To track the evolution of the structures within the Project APE, a series of aerial images have been examined and are included in this report.

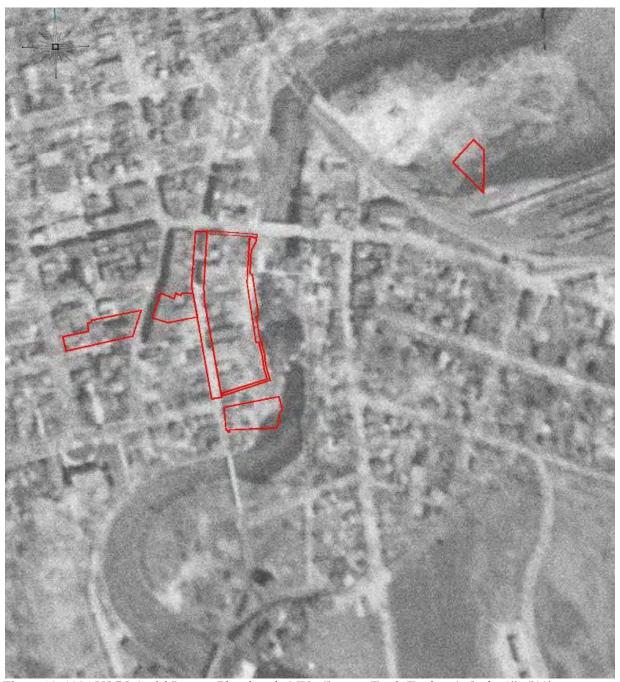


Figure 19: 1936 USGS Aerial Image. Plattsburgh, NY. (Source: Earth Explorer) Scale: 1"=500'.

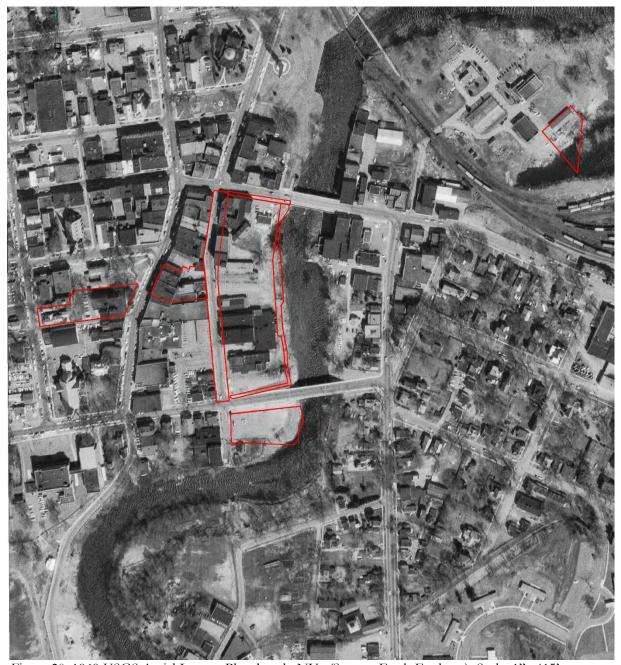


Figure 20: 1969 USGS Aerial Image. Plattsburgh, NY. (Source: Earth Explorer) Scale: 1"=415'.

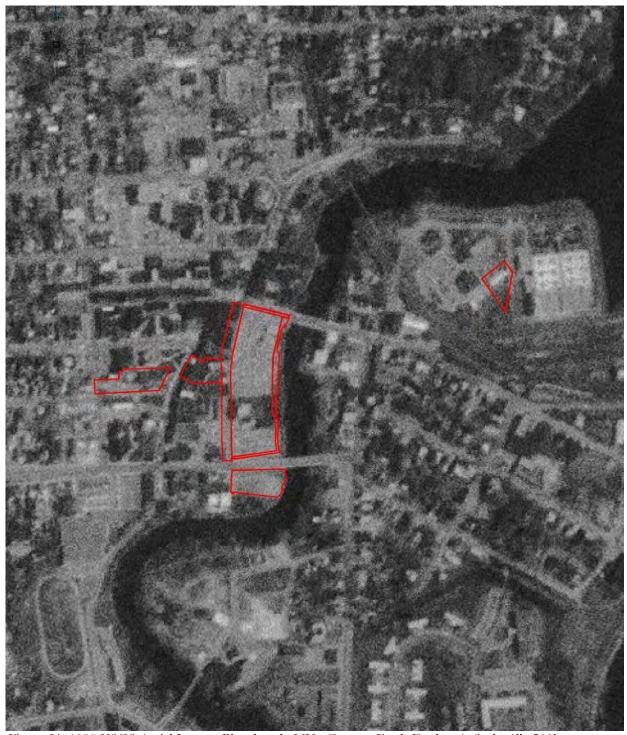


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Figure 22: 1994 USGS Aerial Image. Plattsburgh, NY. (Source: Google Earth) Scale: 1"=415'.

Durkee Street Development Plattsburgh, NY October 28, 2019 Design Overview

Item #9 of the Secretary of the Interior's 'Standards for Rehabilitation' for historic preservation offers relevance for this project's context, in that it encourages contemporary design that "is compatible with the size, scale, color, material, and character of the property, neighborhood or environment." We have endeavored to incorporate compatibility as the foundation for our design approach to the project.

Our primary design considerations for the overall development included the following goals;

- 1. Enhance the overall fabric of the downtown through restoration of the street edges along Durkee and Bridge;
- 2. Maintain particular sensitivity to Durkee and Bridge Streets with respect to the immediate context and the surrounding area in terms of:
 - a. project scale,
 - b. building character,
 - c. materials,
 - d. color, and
 - e. fenestration;
 - f. detailing;
- 3. Enhance the overall commercial viability of the downtown through infusion of housing and commercial uses, and
- 4. Promote sustainable lifestyles;

Our strategy for addressing each of above goals is as follows:

- 1. With regard to the downtown fabric, our new building by definition will reestablish both street edges and maintain setback lines similar to existing buildings to the west and north;
 - a. By configuring the building as a 'U' shape we're able to create a more private interior courtyard with an amenity deck facing the river for resident use, similar to European precedents;
 - b. Less attractive parking uses are concealed by placing them either below the building or within the interior courtyard, thus enhancing the streetscape character;
- 2. With regard to design sensitivity, we have employed the following measures;
 - a. the primary massing scale is similar in height to existing four, three and two story buildings to the west;
 - i. the strong cornice lines at the corners and along both streets reinforce the relationship;
 - ii. the mid-block and end sections step back above the fourth level to reduce the visual scale along both streets and the pedestrian walkway to the river;
 - iii. the north side steps down another level at the northeast corner to parallel the street slope and further reduce visual impact;
 - b. in keeping with the neighborhood scale of varied and clustered building facades, the U-shaped building is articulated in five sections;

- the two corner sections are clad in masonry and metal panel with bracketed cornices to give them greater emphasis and differentiate them from the Bridge Street and mid-block Durkee sections;
- ii. the end and mid-block sections have punched balcony openings to create a more unified and sympathetic façade for the neighborhood, and minimize the visibility of balconies;
- c. we have employed a variety of elements sympathetic to many other downtown buildings:
 - i. a mix of building materials including
 - 1. brick and stone masonry;
 - 2. smooth painted finishes similar to stucco;
 - 3. metal panel;
 - 4. board and batten siding;
 - ii. punched openings;
 - iii. stone sill and lintel aesthetic;
 - iv. opening proportions similar in scale;
 - v. larger ground level glazing for commercial uses;
 - vi. strong cornice expression;
- 3. A significant project benefit is to facilitate sustainable lifestyles, as evidenced by the following:
 - a. An opportunity for a live/work circumstance in the downtown;
 - b. A corresponding opportunity to eliminate the need for ownership of and/or dependence on the automobile;
 - c. A walkable, pedestrian oriented circumstance for those staying living downtown;
 - d. A corresponding opportunity to rely on bicycles (electric or other) as primary means of transportation;
 - e. The ability to facilitate healthier lifestyles through walking and bicycling;
 - f. Units that facilitate downsizing for those who so desire, similar to the small/tiny house movement:
 - g. Linkages between parking/housing/commercial/public uses that facilitate and promote walkability;
 - h. A public pedestrian walkway and amenity courtyard for housing residents that offer a convenient, potentially stress reducing respite from vehicular traffic;

We believe that the introduction of neighborhood housing, addition of infill commercial uses along Durkee Street, the discreet introduction of convenient parking and restoration of the Farmers Market will only serve to further enhance the viability of the area. We also believe that the creation of a pedestrian connection between the Riverwalk and the public park across Durkee Street will provide a valuable 'sense of place' and facilitate a whole that is greater than the sum of the parts.









Similar angled corner entrance (Building A)

Similar street scene with variation in building relief as well as variations in building facades (Buildings A, B, C)

Similar architectural details including cornice treatments (Buildings A, B, C), lintels above windows, trim around windows (Building B)





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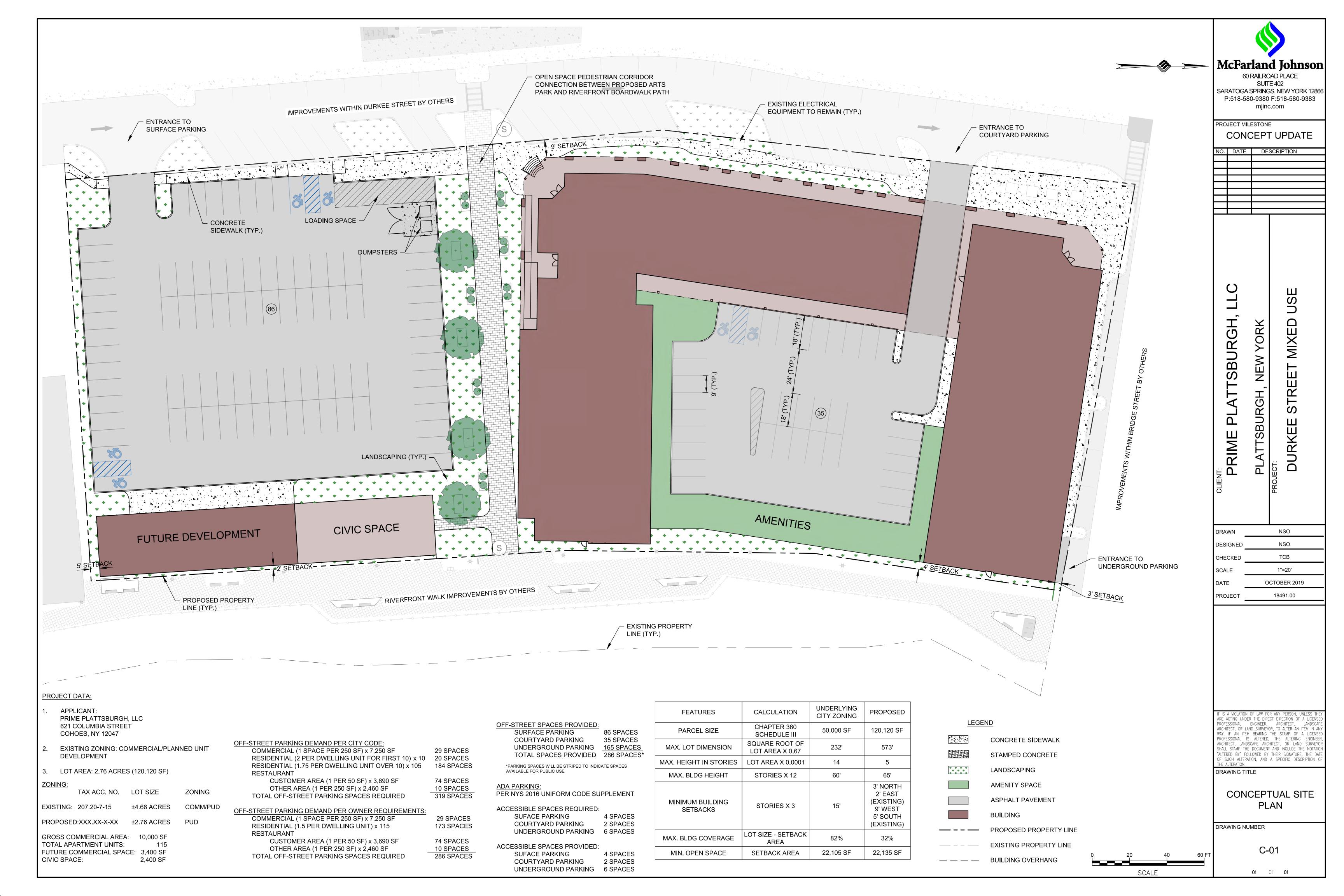
Plattsburgh Mixed Use Development View Looking Down Bridge St The City of Plattsburgh Plattsburgh, NY 11/5/2019



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Plattsburgh Mixed Use Development View Looking Down Durkee St The City of Plattsburgh Plattsburgh, NY 11/5/2019



Appendix F: Environmental Contamination Information

Division of Environmental Remediation

Environmental Restoration Record of Decision Plattsburgh Gateway Project/ Durkee Street Site City of Plattsburgh,

Clinton County, New York

Site Number E510020

March 2007

New York State Department of Environmental Conservation ELIOT SPITZER, *Governor*

DECLARATION STATEMENT ENVIRONMENTAL RESTORATION RECORD OF DECISION

Plattsburgh Gateway Project/Durkee Street Environmental Restoration Site City of Plattsburgh, Clinton County, New York Site No. E510020

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Plattsburgh Gateway Project/Durkee Street site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Plattsburgh Gateway Project/Durkee Street environmental restoration site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents, as a part of the Administrative Record, is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous substances and petroleum products from this site have been addressed by implementing the interim remedial measures identified in this ROD. The removal of contaminated soil from the site has significantly reduced the threat to public health and the environment. Therefore, a groundwater monitoring program will be implemented to monitor the effectiveness of previous remedial actions in preventing further contamination of the groundwater.

Description of Selected Remedy

Based on the results of the Remedial Investigation/Remedial Alternatives Report (RI/RAR) for the Plattsburgh Gateway Project/Durkee Street site and the criteria identified for evaluation of alternatives, the Department has selected No Further Action with institutional controls in the form of an environmental easement limiting use of the site to restricted residential activity in conformance with local zoning, including the continued use as a parking lot. The components of the remedy are as follows:

1. Imposition of an institutional control in the form of an environmental easement that will require: (a) limiting the use and development of the property to restricted residential use, which will also permit commercial use in conformance with local zoning; (b) compliance

with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) submission by the property owner to the Department a periodic certification of institutional and engineering controls.

- 2. Development of a site management plan which will include the following institutional and engineering controls: (a) notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated soil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be properly managed in a manner acceptable to the Department; (b) evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitoring of groundwater; and (d) provisions for the operation, maintenance, and monitoring of the of the installed sub-slab vapor mitigation system in the office building presently under construction.
- 3. The property owner would provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal would: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

Date	Dale A. Desnoyers, Director
	Division of Environmental Remediation

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Environmental Restoration RECORD OF DECISION

Plattsburgh Gateway Project/Durkee Street Site City of Plattsburgh, Clinton County, New York Site No. E510020 March 2007

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Plattsburgh Gateway Project/Durkee Street site.

The 1996 Clean Water/Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

As more fully described in Sections 3 and 5 of this document, former commercial and manufacturing activities such as automotive repair, steam laundering, and milling resulted in the disposal of hazardous substances, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals. These hazardous substances contaminated the subsurface soils and groundwater at the site, and resulted in:

• a threat to human health associated with potential exposure to contaminated subsurface soils and groundwater.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the Plattsburgh Gateway Project/Durkee Street site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation/remedial alternatives report (RI/RAR). The IRM undertaken at this site included an extensive source soil excavation and underground storage tank removal.

Based on the implementation of the above IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore, No Further Action with institutional controls in the form of an environmental easement limiting use of the site to restricted residential activity in conformance with local zoning, including the continued use as a parking lot, was selected as the remedy for this site.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The

selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Plattsburgh Gateway Project/Durkee Street site is approximately a 5.1-acre lot on the eastern side of Durkee Street in the City of Plattsburgh, Clinton County, New York. The site lies in an urban area in downtown Plattsburgh, adjacent to the Saranac River as indicated in Figure 1. Lake Champlain lies approximately ½ mile to the east of the site.

The site's geology consists primarily of urban fill to approximately 8 feet deep, followed by glacial till to approximately 18 feet below ground surface (bgs). The fill consisted of various amounts of sand, gravel, silt, brick, ash, wood, cinder and concrete. During onsite drilling activities, auger refusal was encountered at approximately 18 ft bgs, which based on information obtained from another nearby remedial project, this is indicative of the presence of bedrock. The site's hydrogeology consisted of groundwater perched atop the glacial till layer, at approximately 8 ft bgs. Overall groundwater flow is from west to east toward the Saranac River. Surface water drains into the Saranac River then flows northerly into Lake Champlain, entering into the lake approximately ½ mile to the northeast of the site.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The site has been occupied since the late 1800s with primarily tenement residences and auto repair until 1927. After 1927, manufacturing became more prominent with rug cleaning, dry cleaning, sign painting, and milling activities associated with the site. In addition, over the years, several petroleum spills were reported and properly closed under the oil spill program. These former manufacturing activities and spill events may have resulted in the disposal of hazardous substances on site. The City slowly acquired the deeds for the Durkee Street lots from approximately 1964 through 1991. The buildings were demolished over that time period. The current municipal public parking lot was established in the early 1980s.

3.2: Remedial History

A Limited Subsurface Investigation was performed in May 2004 on behalf of the City of Plattsburgh. This investigation detected metals, VOC, and SVOC soil contamination in the subsurface. In October 2004, an Environmental Database Report was also conducted on behalf of the City. The RI was conducted between July 2004 and December 2006.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers. Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should

PRPs be identified. The City of Plattsburgh will assist the state in its efforts by providing all information to the state which identifies PRPs. The City will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 5: SITE CONTAMINATION

The City of Plattsburgh has recently completed remedial investigation/remedial alternatives reports (RI/RARs) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between July 2004 and December 2006. The field activities and findings of the investigation are described in the RI reports.

Investigative tasks performed as part of the RI include surface soil sampling and analysis, soil boring and monitoring well installation, subsurface soil sampling and analysis, groundwater sampling and analysis, and the performance of a soil gas survey.

5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, groundwater, and soil gas contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the Department's Cleanup Objectives ("Technical and Administrative Guidance Memorandum [TAGM] 4046; Determination of Soil Cleanup Objectives and Cleanup Levels," and 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives").
- Concentrations of VOCs in air were evaluated using the air guidelines provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York."

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site required remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI reports.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the RI reports, many soil, groundwater and soil vapor samples were collected to characterize the nature and extent of contamination. As seen in Figures 2 through 7 and summarized in Tables 1 through 3, the main categories of contaminants that exceed their SCGs were volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and inorganics (metals). For comparison purposes, where applicable, SCGs were provided for each medium.

Chemical concentrations are reported in parts per billion (ppb) for water, and parts per million (ppm) for soil. Air samples are reported in micrograms per cubic meter ($\mu g/m^3$).

Figures 2 through 7 and Tables 1 through 3 summarize the degree of contamination for the contaminants of concern in soil, and groundwater, and compare the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Surface Soil

The Plattsburgh Gateway Project/Durkee Street site comprises of a large municipal parking lot with a farmer's market pavilion and a future office building with adjacent parking garage. Because the entire site is either completely paved or covered with concrete, there was no surface soil sampling conducted at the site.

Subsurface Soil

During the Remedial Investigation, both subsurface soil samples and near surface soil samples immediately below the pavement were taken. The following discussion summarizes the analytical results for these samples.

Six SVOCs were detected above their respective SCGs, as indicated on Table 1. These SVOCs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene. All of the SVOC contaminants are considered carcinogenic polycyclic aromatic hydrocarbons (cPAHs). These cPAHs were all detected in the historic fill material at approximately 8 to 10 foot depth and potentially associated with the ash and cinder components of the fill material. The SVOC contamination is depicted in Figures 3 and 5, with the highest exceedance being benzo(a)pyrene at 14 ppm at MW-14 at the 8 to 10 foot depth.

Four metals were detected above their respective SCGs as indicated on Table 1. Of the four detected, calcium, and magnesium were the only contaminants found to be above their respective Eastern USA Background concentration. As indicated in Figures 4 and 6, the metals contamination appeared to be spread randomly throughout the site at varying depths, with the greatest exceedance being calcium at 117,000 ppm at MW-11 at the 0.5 to 2 foot depth. In general, the subsurface soil contaminants of concern are SVOCs, mainly cPAHs, and metals. Pesticides, PCBs, and VOCs were not detected in any of the soil samples collected. Subsurface soil contamination identified during the RI/RAR was partially addressed during the IRM soil excavation and underground storage tank (UST) removal as described in Section 5.2.

Groundwater

Five metals were detected at concentrations above SCGs in the site groundwater. These detections included iron, lead, magnesium, manganese, and sodium as indicated in Table 3. These detections are attributed to the elevated turbidity levels measured during the groundwater sampling event. The historic fill material may have contributed to the elevated turbidity levels.

Only one SVOC, bis(2-Ethylhexyl)phthalate, was detected slightly above its SCG in 8 of the 12 monitoring wells onsite with the highest exceedance detected at 9.7 ppb in MW-4. Bis(2-Ethylhexyl)phthalate is a common laboratory contaminant, and was also detected in the equipment blank during this sampling event. However, the data usability summary report (DUSR) did not identify the compound as a laboratory contaminant.

Six VOCs were detected in the onsite monitoring wells above SCGs. Five of these chlorinated VOCs or CVOCs were detected in monitoring wells MW-9, MW-10, MW-23, MW-25, and MW-26 as indicated in Figure 7. The five CVOCs were all detected at their highest concentration at MW-10 at the following concentrations: vinyl chloride at 170 ppb; 1,1-dichloroethene at 6.0 ppb; trans-1,2-dichloroethene at 410 ppb; cis-1,2-dichloroethene at 680 ppb; and trichloroethene at 99 ppb. Dichloroethene and vinyl chloride are created through the degradation of trichloroethene. MW-10 was the only monitoring well to exhibit trichloroethene and its breakdown products, while the downgradient monitoring wells exhibited significantly lower concentrations of the breakdown products of vinyl chloride and dichloroethenes. Because no VOC contamination was detected in the soil borings at these corresponding areas, there does not appear to be a soil source for this VOC groundwater contamination. The other VOC detected in the groundwater was methyl tert-butyl ether (MTBE) at 57 ppb at monitoring well MW-17. As depicted in Figure 7, monitoring well MW-17 straddles the site's northeast property border. Since no other detections of MTBE were revealed during the RI, it does not appear that MTBE is a site related groundwater contaminant of concern.

These impacted monitoring wells, MW-10, MW-23, MW-25, and MW-26, were re-sampled in December 2006 to determine the effectiveness of the soil excavation IRM that was performed adjacent to the VOC groundwater contamination plume. The levels of trichloroethene and its breakdown products all decreased in MW-10 to the following concentrations: trichloroethylene at 11 ppb, vinyl chloride at non-detect; 1,1-dichloroethene at non-detect; trans-1,2-dichloroethene at non-detect; and cis-1,2-dichloroethene at 8.2 ppb. The levels of breakdown products (vinyl chloride, trans-1,2-dichloroethene, and cis-1,2-dichloroethene) slightly increased in MW-23, while there was a decrease in cis-1,2-dichloroethene and vinyl chloride in MW-25, and the concentrations of contaminants in MW-26 generally remained the same. This decrease in trichloroethene in MW-10, along with the increase of breakdown products in MW-23, suggest evidence of biodegradation. The most downgradient VOC-impacted monitoring wells, MW-25 and MW-26, showed no increase in contamination, indicating that the VOC groundwater contamination plume appears to be contained on site.

Groundwater contamination identified during the RI/RAR was partially addressed during the IRM soil excavation and UST removal as described in Section 5.2.

Soil Vapor/Sub-Slab Vapor/Air

The soil vapor intrusion evaluation included the collection of sub-slab soil vapor and outdoor air samples to evaluate the potential for exposures via soil vapor intrusion. Three soil gas samples were collected within the area of the future office building foundation as indicated in Figure 2. Six soil gas samples were collected within the municipal parking lot area, as indicated in Figure 2, to determine the potential for vapor intrusion in the event that the site should undergo future redevelopment. There were detections of VOCs and SVOCs above the NYSDOH guidance values and EPA BASE Data Background Levels as provided in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York".

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/RAR. In response to the preliminary findings of the Remedial Investigation in October 2005, a soil excavation and UST removal IRM was performed to address the subsurface contamination on site. During the excavation activities, excavation dewatering and active groundwater treatment via carbon filtration was performed. Approximately 12,360 gallons of groundwater was evacuated and treated from the excavation prior to discharge to the sanitary sewer system.

During the excavation activities, four USTs were located, ranging from 275-gallon to 1000-gallon capacity, and were subsequently emptied, cleaned, and properly disposed of off-site. The vertical extent of excavation varied across the site, with depths ranging from approximately 5 feet deep to approximately 20 feet deep in the areas of deeper contamination. In total, approximately 9,614 tons of contaminated soil was excavated and transported for off-site disposal.

The post-excavation confirmatory samples were analyzed for VOCs and SVOCs only, as the preliminary results from the RI revealed that SVOCs and VOCs were the primary contaminants of concern. Seventy-two (72) post-excavation soil samples were collected. As indicated in Table 2, only seven VOCs were detected slightly above SCGs. These results confirm that a majority of the site's SVOC and VOC contamination was addressed through the implementation of the IRM.

To prevent exposures to soil gas concentrations beneath the soon to be occupied building on site, the developer of the four-story office building that is currently under construction, installed a sub-slab vapor abatement system in the future office building. This sub-slab vapor abatement system will be in operation upon completion of the building construction.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 7.0 of the RI reports, which are located in the document repositories.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no known completed exposure pathways at the site. Potential exposure pathways include inhalation of contaminated soil vapors, dermal contact with impacted sub-surface soils or ingestion of groundwater containing volatile organic compounds.

Use of the site will be limited to restricted residential, but the continued commercial use is currently planned at this time. To address the potential for contaminated soil vapors to impact indoor air quality in the future on-site office building, an active sub-slab depressurization system will be installed during construction. Any changes in the use of the remainder of the site will require an evaluation of the potential for soil vapor intrusion and mitigation, if necessary.

The site is paved, therefore, contact with residual contaminated soil is unlikely. Maintenance of the pavement will be required, and the NYSDEC will require notification prior to any ground intrusive work to prevent the potential for exposures.

On-site groundwater is not used for potable or irrigation purposes, making exposures unlikely. Restrictions will be placed to prevent future use of the groundwater, and monitoring will continue.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site prior to the IRM. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands. The site, and all adjacent property, is a developed area with buildings, paved areas, and little to no vegetation. Contamination detected on site was a localized source, which was partially addressed during the IRM, that has not migrated and will not migrate from the site to impact any off-site resources. Therefore, no complete or potentially complete environmental exposure pathways or ecological risks were identified. However, site contamination has impacted the groundwater resource in the overburden aquifer.

SECTION 6: <u>SUMMARY OF THE REMEDIATION GOALS, SELECTED REMEDY</u>, AND THE PROPOSED USE OF THE SITE

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to VOC and SVOC soil contamination exceeding SCGs.
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- the release of contaminants from subsurface soil under buildings, into indoor air through soil vapor.

The main SCGs applicable to this project are as follows:

- ambient groundwater quality standards: groundwater sample results indicate that the main groundwater contaminants of concern are VOCs in the municipal parking lot area. The soil excavation IRM was conducted directly adjacent to the VOC groundwater contaminant plume. The initial post-IRM groundwater sampling results indicate an improvement in groundwater quality with evidence of biodegradation. A long-term groundwater monitoring program would be needed to document the long-term effectiveness of the soil excavation IRM on the site's groundwater quality.
- TAGM 4046 and Part 375-6: the TAGM 4046 soil cleanup objectives for VOCs and SVOCs were used as the soil excavation IRM remediation goals. When compared to the 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, only seven VOCs were detected slightly above SCGs in the post-excavation confirmatory samples. These results reveal that a majority of the site's SVOC and VOC contamination was addressed through the implementation of the IRM.

The Department believes that the IRM has accomplished the remediation goals and satisfied the SCGs for the site, provided that groundwater continues to be monitored and a soil management plan is developed to address the residual contaminated soils to prevent human exposures and dispersion of contamination during potential future intrusive activities.

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department has selected No Further Action as the preferred alternative for the site. The Department believes that this alternative will be protective of human

health and the environment, and will satisfy all SCGs as described above. Overall protectiveness is achieved through meeting the remediation goals listed above.

The elements of the IRM already completed are:

- 1. Excavation and off-site disposal of 9,614 tons of contaminated soil;
- 2. Dewatering and treatment, via carbon filtration, of 12,360 gallons of groundwater; and treated groundwater was discharged to the sanitary sewer system;
- 3. Backfilling of the excavation with clean, off-site soil; and
- 4. Excavation and proper closure of four USTs.

Therefore, the Department concludes that No Further Action is needed other than site management, and institutional and engineering controls. The institutional and engineering controls are:

- 1. Imposition of an institutional control in the form of an environmental easement that will require: (a) limiting the use and development of the property to restricted residential use, which will also permit commercial use in conformance with local zoning; (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) submission by the property owner to the Department a periodic certification of institutional and engineering controls.
- 2. Development of a site management plan which will include the following institutional and engineering controls: (a) notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated soil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be properly managed in a manner acceptable to the Department; (b) evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitoring of groundwater and (d) provisions for the operation, maintenance, and monitoring of the of the installed sub-slab vapor mitigation system in the office building presently under construction.
- 3. The property owner would provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal would: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect

public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

The proposed future use for the Plattsburgh Gateway Project/Durkee Street site is commercial.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the environmental restoration process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media, and other interested parties, was established.
- A public meeting was held on February 27, 2007 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

In general, the public comments received were supportive of the selected remedy.

TABLE 1 Plattsburgh Gateway Project/Durkee Street Site Nature and Extent of Soil Contamination

July 2004 - January 2005

SUBSURFACE SOIL (Pre-IRM ^c)	Contaminants of Concern	Concentration Range Detected (ppm) ^a	SCG ^b (ppm) ^a	Frequency of Exceeding SCG
Semivolatile Organic	Benzo(a)anthracene	2.6 to 20	1	4 of 31
Compounds	Benzo(a)pyrene	2.1 to 14	1	4 of 31
	Benzo(k)fluoranthene	1.8 to 8.4	1	2 of 31
	Benzo(b)fluoranthene	2.4 to 17	1	4 of 31
	Chrysene	1.8 to 19	1	4 of 31
	Dibenzo(a,h)anthracen e	0.78	0.33	1 of 31
Inorganic	Calcium	38,000 to 117,000	SB ^c	11 of 49
Compounds Iron		3890 to 122,000	2,000	22 of 49
	Magnesium	5080 to 44,200	SB^c	11 of 49
	Mercury	1.0	0.81	1 of 49

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; $ug/m^3 = micrograms$ per cubic meter

^c IRM = interim remedial measure

MDL = laboratory minimum detection limit

^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 2 Plattsburgh Gateway Project/Durkee Street Site Post-IRM^c Confirmatory Soil Sampling Results

October -December 2005

SUBSURFACE SOIL (Post-IRM ^c)	Contaminants of Concern	Concentration Range Detected (ppm) ^a	SCG ^b (ppm) ^a	Frequency of Exceeding SCG
Semivolatile Organic	Benzo(a)anthracene	1.1 to 16	1	10 of 72
Compounds	Benzo(a)pyrene	0.085 to 15	1	9 of 72
	Benzo(b)fluoranthene	1.3 to 16	1	12 of 72
	Benzo(k)fluoranthene	1.2 to 5.9	1	5 of 72
	Chrysene	1.1 to 15	1	10 of 72
	Dibenzo(a,h)anthracene	0.39 to 1.1	0.33	3 of 72
	Indeno(1,2,3-cd)pyrene	0.65 to 7.9	0.5	6 of 72

^c IRM = interim remedial measure

MDL = laboratory minimum detection limit

a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; ug/m³ = micrograms per cubic meter

^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 3 Plattsburgh Gateway Project/Durkee Street Site Groundwater Nature and Extent of Contamination July 2004

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb) ^a	SCG ^b (ppb) ^a	Frequency of Exceeding SCG
Volatile Organic	Methyl Tert-Butyl Ether	57	10	1 of 12
Compounds (VOCs)	Compounds (VOCs) Vinyl Chloride		2	3 of 12
	1,1-Dichloroethene	6.0	5	1 of 12
	Trans-1,2-Dichloroethene	8.0 to 410	5	2 of 12
	Cis-1,2-Dichloroethene	6.0 to 180	5	4 of 12
	Trichloroethene	11 to 99	5	1 of 12
Semivolatile Organic	Bis(2-Ethylhexyl) Phthalate	5.3	5	1 of 12
Compounds (SVOCs)				
Inorganic	Iron	1,380 to 38,200	300	6 of 7
Compounds	Lead	80.5	25	1 of 7
	Magnesium	50,400 to 128,000	35,000(GV ^c)	7 of 7
	Manganese	713 to 1,720	300	6 of 7
	Sodium	224,000 to 1,790,000	20,000	6 of 7

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; $ug/m^3 = micrograms$ per cubic meter

^c IRM = interim remedial measure

MDL = laboratory minimum detection limit

^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 4

Plattsburgh Gateway Project/Durkee Street Site Post-IRM^c Groundwater Sampling Results

December 2006

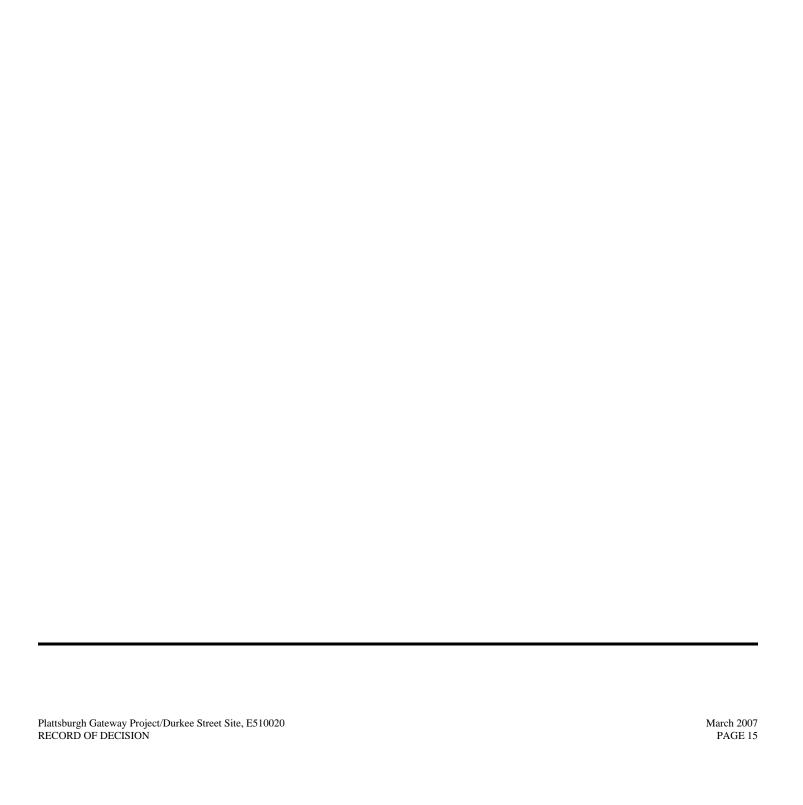
GROUNDWATER (Post-IRM ^c)	Contaminants of Concern	Concentration Range Detected (ppb) ^a	SCG ^b (ppb) ^a	Frequency of Exceeding SCG
Volatile Organic	Methyl Tert-Butyl Ether	57	10	1 of 6
Compounds (VOCs)	Vinyl Chloride	1.7 to 13	2	1 of 6
Cis-1,2-Dichloroethene		4.1 to 32	5	3 of 6

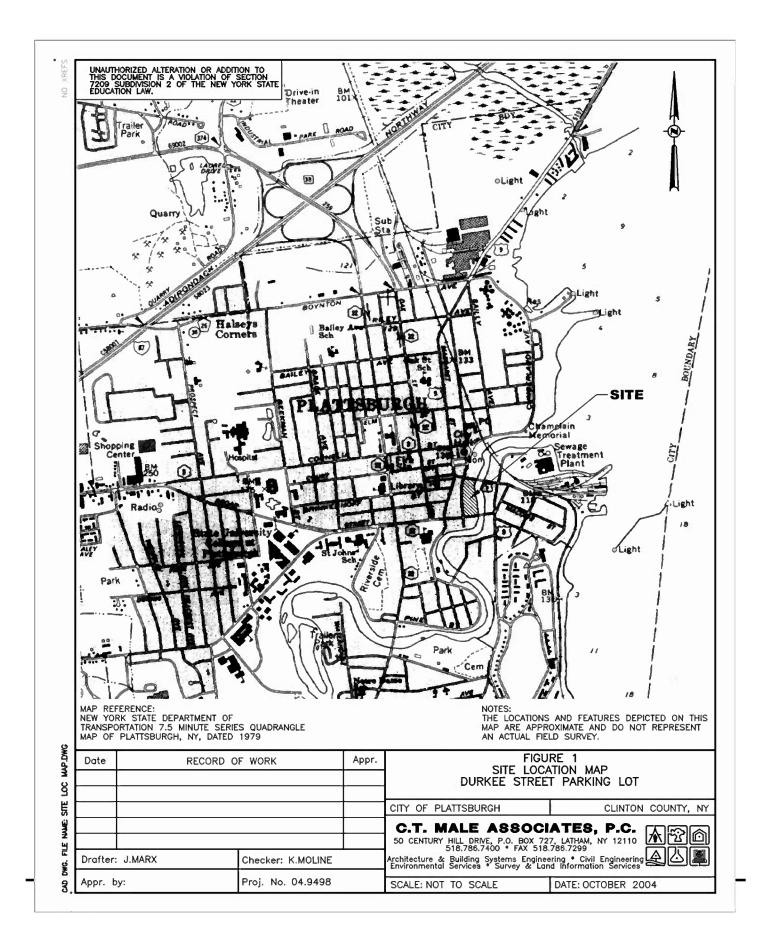
^c IRM = interim remedial measure

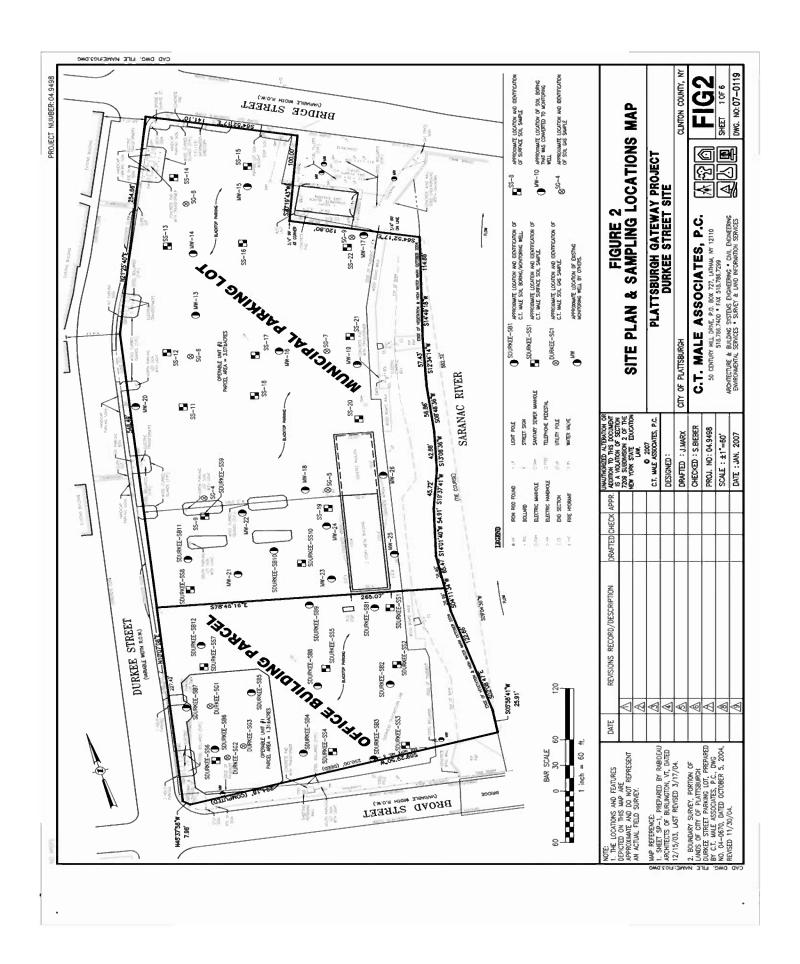
MDL = laboratory minimum detection limit

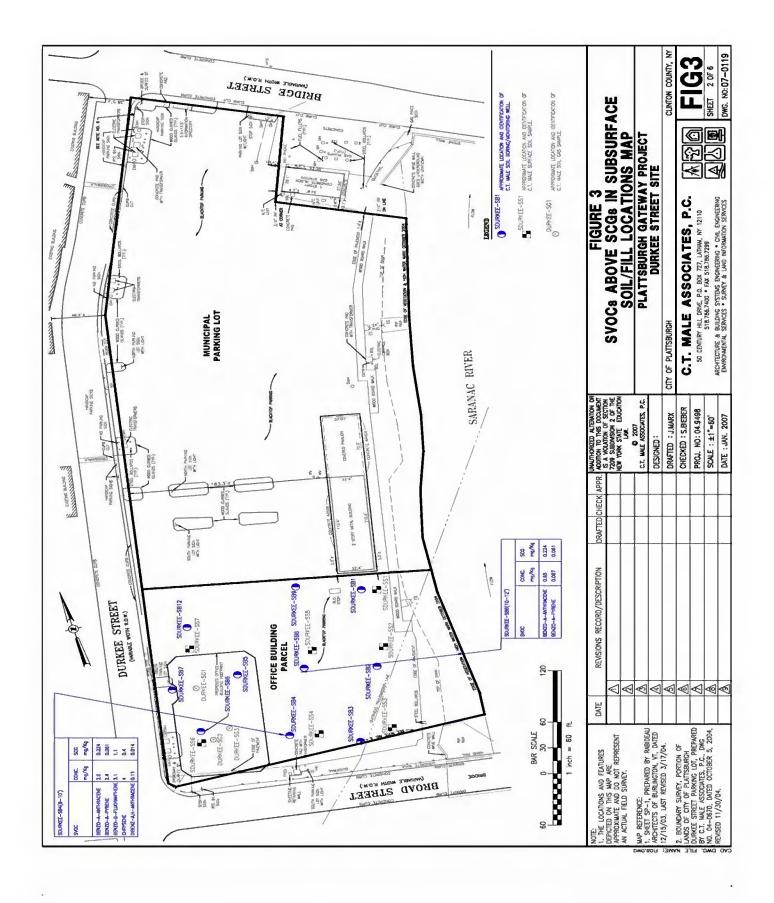
^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; $ug/m^3 = micrograms$ per cubic meter

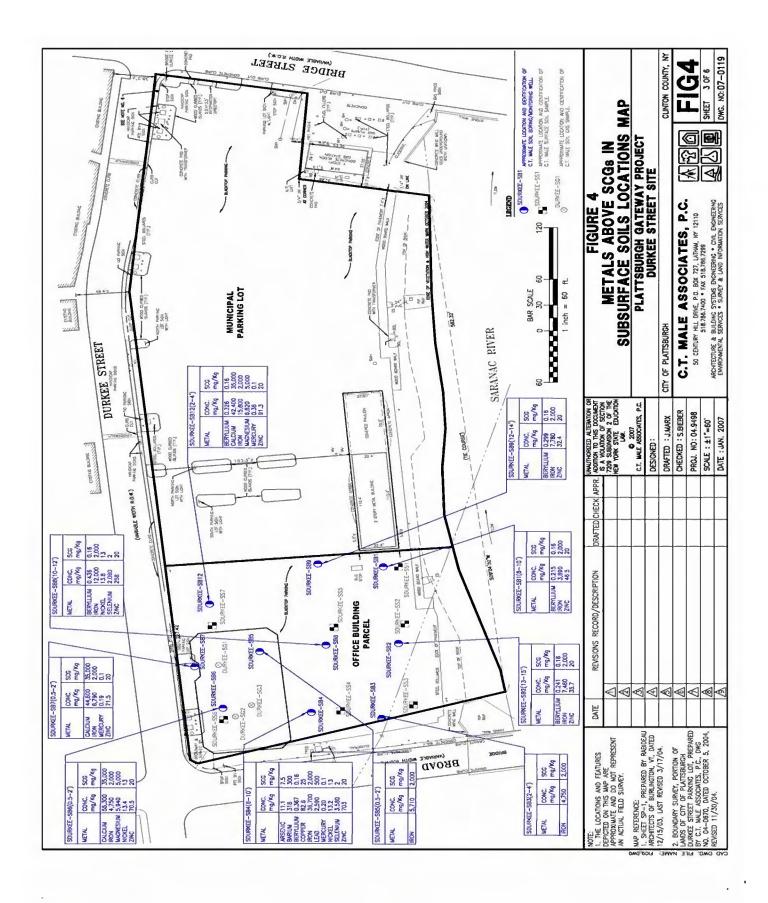
^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

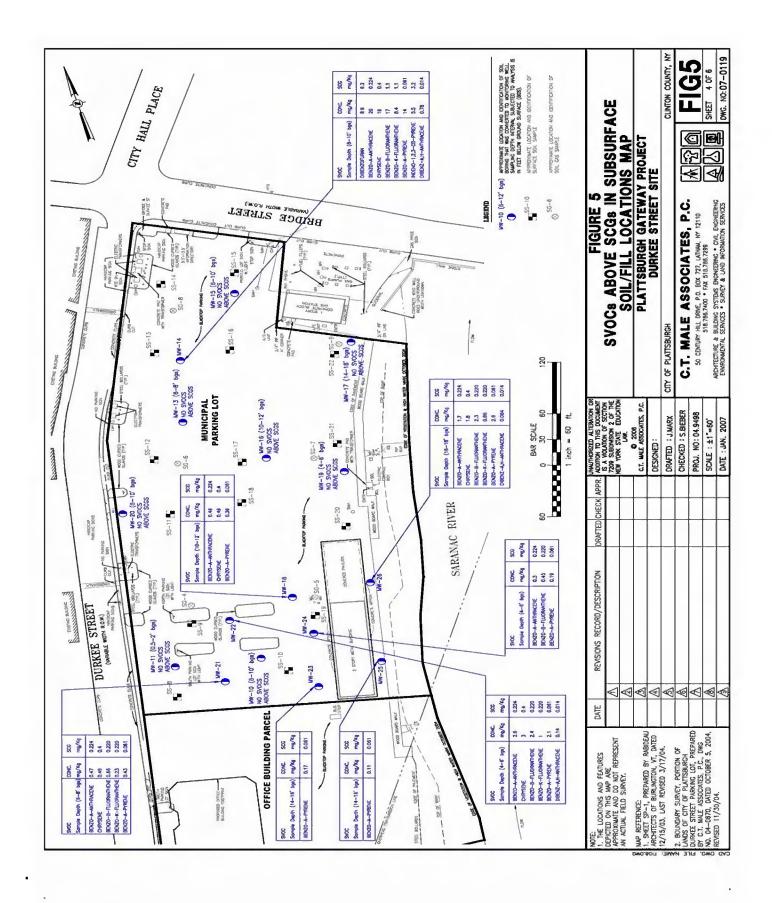


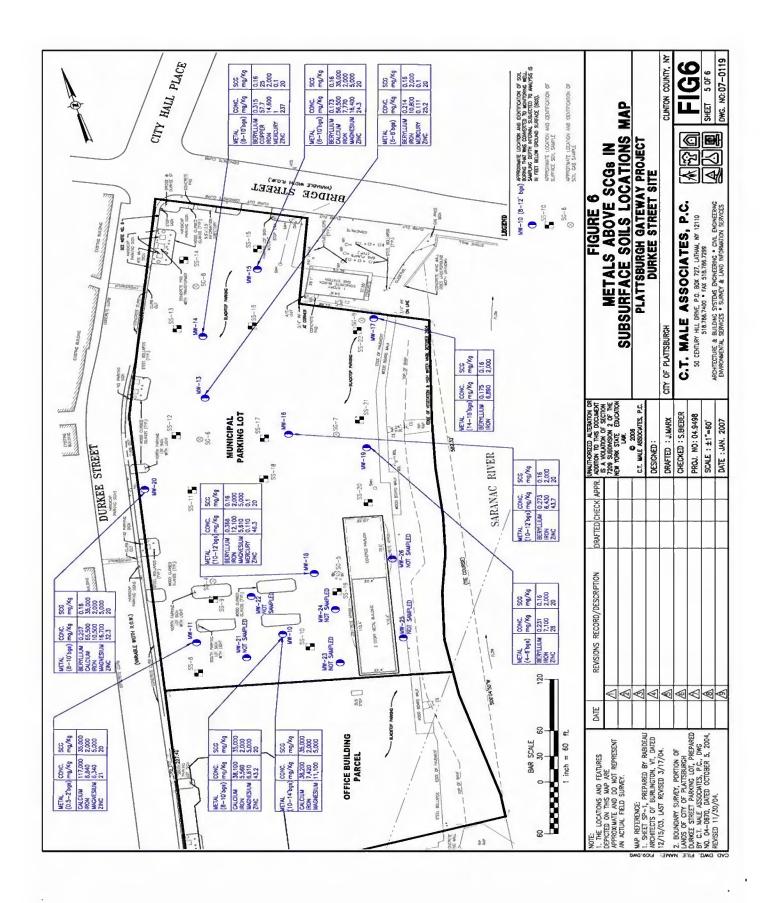


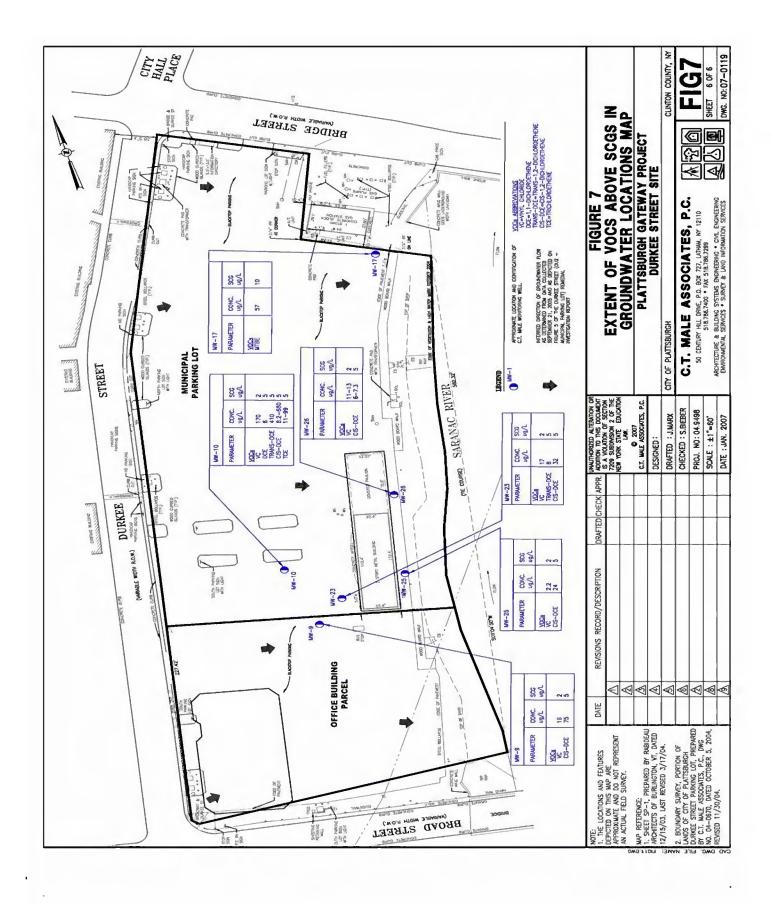












APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Plattsburgh Gateway Project/Durkee Street Environmental Restoration Site City of Plattsburgh, Clinton County, New York

Site No. E510020

The Proposed Remedial Action Plan (PRAP) for the Plattsburgh Gateway Project/Durkee Street site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 7, 2007. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater media at the Plattsburgh Gateway Project/Durkee Street site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 27, 2007, which included a presentation of the Remedial Investigation (RI) and the Remedial Alternatives Report (RAR), as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 25, 2007.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Where are the HVAC intakes on the office building in comparison to the vapor vents?

RESPONSE 1: The vapor vent is located on the eastern side or leeward side of the building. The building code requires a minimum of ten feet of separation between the HVAC intake and the vapor discharge point. However, the actual distance will be more than ten feet by nature of the HVAC unit being located in the center of the building.

COMMENT 2: Is testing of the vapor part of the ongoing management of the project?

RESPONSE 2: The vapor ventilation system will be managed pursuant to the Site Management Plan to be developed for the site. The Site Management Plan will outline the specific testing and monitoring of the system's operating components, including the vapor exhaust system.

COMMENT 3: Is the sub-slab system difficult to maintain?

RESPONSE 3: No, the system generally requires that a negative pressure be maintained under the building slab and is typically monitored by a pressure gauge. A qualified contractor will be required to maintain the system according to the Site Management Plan.

COMMENT 4: Could you elaborate on the periodic certification of institutional and engineering controls requirement?

RESPONSE 4: The periodic certifications will need to be prepared and submitted by a professional engineer or such other expert acceptable to the Department. The expert will certify that the institutional

and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications.

COMMENT 5: Will the management requirements be described in detail in the final project plans?

RESPONSE 5: The Site Management Plan will further elaborate, specify and document the operation, long term maintenance and monitoring requirements for the site.

COMMENT 6: When will the project plan be finalized?

RESPONSE 6: It is expected that the proposed remedy will be selected and documented in the Record of Decision, which is expected to be finalized by March 31, 2007. The Site Management Plan will be developed shortly after the execution of the Record of Decision.

COMMENT 7: Will the requirements of the management plan be essentially the same as what has been described in the PRAP?

RESPONSE 7: Correct, the specifics of the management plan will be further documented in the Site Management Plan.

COMMENT 8: How high are the vapor vents on top of the office building?

RESPONSE 8: The vapor discharge vent is being incorporated into the design of the building in that it will not protrude from the rooftop and cannot be seen from the surrounding landscape.

APPENDIX B

Administrative Record

Plattsburgh Gateway Project/Durkee Street Site Site No. E510020

- 1. Proposed Remedial Action Plan for the Plattsburgh Gateway Project/Durkee Street site, dated February 2007, prepared by the Department.
- 2. PRAP Availability Fact Sheet, February 2007, prepared by the Department.
- 3. "Remedial Investigation Work Plan", December 2004, prepared by <u>C.T. Male Associates</u>.
- 4. Site Investigation Fact Sheet, May 2005, prepared by the Department.
- 5. Interim Remedial Measures Fact Sheet, July 2005, prepared by the Department.
- 6. "Final Remedial Investigation Report, Operable Unit No. 1", January 2007, prepared by <u>C.T. Male Associates</u>.
- 7. "Final Remedial Investigation Report, Operable Unit No. 2", January 2007, prepared by <u>C.T. Male Associates.</u>
- 8. "Final Remedial Alternatives Analysis Report, Operable Unit No. 1", January 2007, prepared by <u>C.T. Male Associates.</u>
- 9. "Remedial Alternatives Analysis Report, Operable Unit No. 2", January 2007, prepared by <u>C.T. Male Associates.</u>

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director 625 Broadway, 12th Floor, Albany, New York 12233-7011 P: (518) 402-9706 | F: (518) 402-9020 www.dec.ny.gov

SEP 13 2016

James E. Calnon, Mayor City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

Re: Certificate of Completion

Site Name: Plattsburgh Gateway Project/ Durkee St.

Site No.: E510020 SAC No.: C302578

Plattsburgh, Clinton County

Dear Mayor Calnon:

Congratulations on having satisfactorily completed the Remediation phase of the environmental restoration project that the City of Plattsburgh undertook with State Assistance funds provided pursuant to the 1996 Clean Water/Clean Air Bond Act. The New York State Department of Environmental Conservation (DEC) has determined, based upon our inspection of the above-referenced site and upon our review of the documents you have submitted, that you completed the project in accordance with the terms and conditions of the above-referenced State Assistance Contract (SAC).

As a result, DEC is pleased to inform you that the Final Engineering Report is hereby approved, allowing the Certificate of Completion (COC) to be issued for the above referenced site. Enclosed please find an original, signed COC. The City of Plattsburgh is hereby entitled to the benefit of the liability limitation provisions described in the New York State Environmental Conservation Law (ECL) 56-0509.

Please be advised that the significant benefits described in ECL 56-0509 are contingent upon the City of Plattsburgh fulfilling all continuing obligations set forth in ECL Article 56, Title 5, accompanying regulations, and the above-referenced SAC, including but not limited to, the obligations involving reimbursement to the State if the municipality receives payments or other consideration with respect to the project; disposition of proceeds upon the sale, transfer, or lease of the property; ensuring that DEC has access to the property; and providing complete notice of any proposed change of use, as defined in ECL 56-0511.

Please note that in addition to the requirements discussed above, you are required to perform the following tasks:

 Record a notice of the COC in the recording office for the County (or Counties) where any portion of the site is located within 30 days of issuance of the COC, and provide DEC with proof of filing within 30 days of receipt. A standard notice form is attached to this letter. Please return the proof of recording to:



Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7020

- Place the notice of the COC in the document repository for the site within 10 days of issuance of the COC; and;
- Implement the DEC-approved Site Management Plan (SMP) which details the activities necessary to assure the performance, effectiveness, and protectiveness of the remedial program; and you must report the results of these activities to DEC in a Periodic Review Report (PRR) which also includes any required IC/EC Certifications. The site IC/ECs are identified on the attached Site Management Form. The first PRR including the certification of the IC/ECs is due to DEC in February 2018.

DEC will prepare and distribute to the Site Contact List a fact sheet announcing the issuance of the COC and describing the institutional and engineering controls, if any, that are required at the site.

The final payment under the SAC will be made after the execution of all necessary amendments, and the issuance of the COC.

If you have any questions, please do not hesitate to contact Michael McLean, the DEC project manager for this site by telephone at 518-897-1242, or by email at micheal.mclean@dec.nv.gov.

Robert W. Schick, P.E.

Director

Sincerely

Division of Environmental Remediation

Enclosures

ec: Krista Anders, DOH
Wendy Kuehner, DOH
Charlotte Bethoney, DOH
Michael Ryan, DEC
Jim Harrington, DEC

Russ Huyck, DEC Michael McLean, DEC

NYSDEC ENVIRONMENTAL RESTORATION PROGRAM (ERP) CERTIFICATE OF COMPLETION

CERTIFICATE HOLDER(S):

Name

Address

City of Plattsburgh

41 City Hall Place, Plattsburgh, NY 12901

SITE INFORMATION

Site No.: E510020 Site Name: Plattsburgh Gateway Project/ Durkee St.

State Assistance Contract No.: C302578

Site Owner: City Of Plattsburgh Street Address: 14 Durkee Street

Municipality: Plattsburgh County: Clinton DEC Region: 5

Site Size: 5.110 Acres

Tax Map Identification Number(s): 207,20-7-15.1 & 207.20-7-15.2

A description of the property subject to this Certificate is attached as Exhibit A and a site survey is attached as Exhibit B.

CERTIFICATE ISSUANCE

This Certificate of Completion, hereinafter referred to as the "Certificate," is issued pursuant to Article 56, Title 5 of the New York State Environmental Conservation Law ("ECL") and 6NYCRR 375.

This Certificate has been issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the State Assistance Contract, as well as any other relevant information regarding the Site, that the applicable remediation requirements set forth in the ECL have been or will be achieved in accordance with the time frames, if any, established in the approved remedial work plan.

The remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

Allowable Uses under the ERP: Restricted-Residential, Commercial, and Industrial

The Remedial Program includes use restrictions or reliance on the long term employment of institutional or engineering controls which are contained in the approved Site Management Plan and an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office for Clinton County with recording identifier 2003-152840.

LIABILITY LIMITATION

Upon issuance of this Certificate of Completion, and subject to the terms and conditions set forth herein, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 56-0509. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 56-0509. The liability limitation shall be subject to all rights reserved to the State by ECL Section 56-0509 and any other applicable provision of law.

CERTIFICATE TRANSFERABILITY

This Certificate may be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by ECL Section 56-0509(1) and 6NYCRR Part 375.

CERTIFICATE MODIFICATION/REVOCATION

This Certificate of Completion may be modified or revoked by the Commissioner following notice and an opportunity for a hearing in accordance with 6NYCRR Part 375-1.9(e) upon a finding that:

- (1) either the Municipality or the Municipality's successors or assigns have failed to comply with the terms and conditions of the State Assistance Contract;
- (2) either the Municipality or the Municipality's successors or assigns failed to manage the controls or monitoring in full compliance with the terms of the remedial program;
- (3) either the Municipality or the Municipality's successors or assigns made a misrepresentation of a material fact tending to demonstrate that the cleanup levels identified in the approved remedial work plan were reached;
 - (4) the terms and conditions of the environmental easement, if applicable, have been intentionally violated;
- (5) the environmental easement as implemented, if applicable, is not protective or enforceable; or
 - (6) there is good cause for such modification or revocation.

The Certificate holder(s) (including its successors or assigns) shall have thirty (30) days within which to cure any deficiency or to seek a hearing. If the deficiency is not cured or a request for a hearing received within such 30-day period, the Certificate shall be deemed modified or vacated on the 31st day after the Department's notice.

Date: September 13, 2016

Basil Seggos Commissioner

New York State Department of Environmental Conservation

By:

Røbert W. Schick, P.E., Director

Division of Environmental Remediation

NOTICE OF CERTIFICATE OF COMPLETION Environmental Restoration Program Pursuant to 6 NYCRR Part 375-1.9(d)

Plattsburgh Gateway Project/Durkee Street, Site ID No. E510020 14 Durkee Street, Plattsburgh, New York, 12901 City of Plattsburgh, Clinton County, Tax Map Identification Number 207.20-7-15.1 & 15.2

PLEASE TAKE NOTICE, the New York State Department of Environmental Conservation (Department) has issued a Certificate of Completion (Certificate) pursuant to 6 NYCRR Part 375 to the City of Plattsburgh for a parcel approximately 5.11 acres located at 14 Durkee Street in the City of Plattsburgh, Clinton County.

PLEASE TAKE NOTICE, the Certificate was issued upon satisfaction of the Commissioner, following review by the Department of the final engineering report and data submitted pursuant to the State Assistance Contract, as well as any other relevant information regarding the Site, that the remediation requirements set forth in ECL Article 56, Title 5 have been or will be achieved in accordance with the time frames, if any, established in the remedial work plan.

PLEASE TAKE NOTICE, the remedial program for the Site has achieved a cleanup level that would be consistent with the following categories of uses (actual site use is subject to local zoning requirements):

- Unrestricted Use, as set forth in 6 NYCRR 375-1.8(g)(1)i
- ☐ Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)i.
- Restricted Residential Use, as set forth in 6 NYCRR 375-1.8(g)(2)ii.
- ☑ Industrial Use, as set forth in 6 NYCRR 375-1.8(g)(2)iv.

PLEASE TAKE NOTICE, provided that the Certificate is complied with, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 56-0509. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 56-0509. The liability limitation shall be subject to all rights reserved to the State by ECL Section 56-0509 and any other applicable provision of law.

Further, the use of groundwater is restricted and may not be used, unless treated in accordance with the requirements provided by the New York State Department of Health, or a local County Health Department with jurisdiction in such matters and such is approved by the Department as not inconsistent with the remedy.

PLEASE TAKE NOTICE, since the remedial program relies upon use restrictions or the long term employment of institutional or engineering controls; such institutional or engineering controls are contained in an Environmental Easement granted pursuant to ECL Article 71, Title 36 which has been duly recorded in the Recording Office for Clinton County as Recording Number 2003-152840.

PLEASE TAKE NOTICE, the Environmental Easement requires that the approved site management plan (SMP) for this property be adhered to. The SMP, which may be amended from time to time, may include sampling, monitoring, and/or operating a treatment system on the property, providing certified reports to the NYSDEC, and generally provides for the management of any and all plans and limitations on the property. A copy of the SMP is available upon request by writing to the Department's Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, New York 12233.

PLEASE TAKE NOTICE, provided that the Environmental Easement, SMP and Certificate are complied with, the Certificate holder(s) shall be entitled to the liability limitation provided in ECL Section 56-0509. The liability limitation shall run with the land, extending to the Certificate holder's successors or assigns through acquisition of title to the Site and to a person who develops or otherwise occupies the Site, subject to certain limitations as set forth in ECL Section 56-0509. The liability limitation shall be subject to all rights reserved to the State by ECL Section 56-0509 and any other applicable provision of law.

PLEASE TAKE NOTICE, any change of use of the site, as defined in 6 NYCRR 375, must be preceded by notice to the Department in accordance with 6 NYCRR 375-1.11(d). A transfer of any or all of the property constitutes a change of use.

PLEASE TAKE NOTICE, the Certificate may be only be transferred to the Certificate holder's successors or assigns upon transfer or sale of the Site as provided by 6 NYCRR Part 375-1.9. Failure to comply with the regulatory requirements for transfer WILL bar the successors and assigns from the benefits of the Certificate.

PLEASE TAKE NOTICE, the Certificate may be modified or revoked by the Commissioner as set forth in the applicable regulations.

PLEASE TAKE NOTICE, the Certificate may be revoked if the Environmental Easement as implemented, if applicable, is not protective or enforceable.

PLEASE TAKE NOTICE, a copy of the Certificate can be reviewed at DEC's Region 5 office located at 1115 NYS State Route 86, Ray Brook, NY by contacting the Regional Environmental Remediation Engineer.

WHEREFORE, the undersigned has signed this Notice of Certificate

WILLIE ONE,	the undersigned has signed this Notice of Certificate
	City of Plattsburgh
	Ву:
	Title:
	Date:
STATE OF NEW YORK) SS: COUNTY OF)	
of satisfactory evidence to be the inc instrument and acknowledged to m capacity(ies), and that by his/her/thei	, in the year 20, before me, the undersigned,, personally known to me or proved to me on the basis dividual(s) whose name is (are) subscribed to the within e that he/she/they executed the same in his/her/their r signature(s) on the instrument, the individual(s), or the dual(s) acted, executed the instrument.
	Please record and return to:
Signature and Office of individual	City of Plattsburgh 41 City Hall Place
	Platteburgh NV 12001



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Form

5/31/2016

SITE DESCRIPTION

SITE NO.

E510020

SITE NAME Plattsburgh Gateway Project/ Durkee St.

SITE ADDRESS: 14 Durkee Street

ZIP CODE: 12901

CITY/TOWN:

Plattsburgh

COUNTY: Clinton

ALLOWABLE USE: Restricted-Residential, Commercial, and Industrial

SITE MANAGEMENT DESCRIPTION

SITE MANAGEMENT PLAN INCLUDES:

YES NO

IC/EC Certification Plan

Monitoring Plan

Operation and Maintenance (O&M) Plan

Periodic Review Frequency:

Periodic Review Report Submittal Date:

02/2018

Description of Institutional Control

14 Durkee Street

Environmental Easement

Block: 7 Lot: 15

Sublot: 1 Section: 207

Subsection: 20

S_B_L Image: 207.20.7.15.1

Ground Water Use Restriction

IC/EC Plan

Landuse Restriction

Monitoring Plan .

O&M Plan

Site Management Plan

Soil Management Plan

Description of Engineering Control

14 Durkee Street Environmental Easement Block: 7 Lot: 15 Sublot: 1

Section: 207 Subsection: 20

S_B_L Image: 207.20.7.15.1 Cover System Vapor Mitigation

Exhibit A

Site Description

SCHEDULE "A" PROPERTY DESCRIPTION

14 Durkee Street City of Platisburgh, Clinton County, NY Section 207.20 Block 7 Lot 15

ALL THAT CERTAIN PIECE OR PARCEL OF LAND, together with any buildings and improvements thereon, situate in the City of Plattsburgh, County of Clinton and State of New York more particularly described as follows:

BEGINNING at the intersection of the assumed southerly boundary of Bridge Street and the assumed easterly boundary of Durkee Street, being the northwest corner of lands owned by the City of Plattsburgh, a municipal corporation as described in a deed recorded in the Clinton County Clerk's Office as deed instrument # 2003-152840;

Thence running South 64°52' 17" East a distance of 141.10 feet along said boundary of Bridge Street to a drill hole in concrete at the northwest corner of lands now or formerly of GK. Management, LLC, by virtue of deed instrument # 2006-201071; '

Thence turning South 20° 19' 43" West along the westerly boundary of said lands now or formerly of GK Management, LLC and running a distance of 100.00 feet to a 3/4" iron rod found at the southwesterly corner of said lands of GK Management, LLC;

Thence turning South 64° 52'17" East along the southerly boundary of said lands now or formetly of GK Management, LLC and running through a found 3/4" fron rod a distance of 120.80 feet to a point at the mean high water mark of the Saranac River, which point is also the southeasterly corner of said lands now or formerly of GK Management, LLC;

Thence turning and running southerly along the mean high water mark of the Saranac River the following (10) ten courses and distances:

- South 14° 49'18" West a distance of 114.88 feet to a point;
- 2) South 12°34'14" West a distance of 57.43 feet to a point;
- 3) South 08°48'36" West a distance of 56.86 feet to a point;
- South 13°08'35" West a distance of 42.88 feet to a point;
 South 19°37'41" West a distance of 45.72 feet to a point;
 South 14°01'40" West a distance of 54.91 feet to a point;
- 7) South 04°11'34" West a distance of 38.47 feet to a point at the northeasterly corner of a lessed portion of property, lessee is ICV-New York, LLC, by virtue of deed instrument # 2006-200533;

- 8) South 04°11'34" West a distance of 27.00 feet to a point;
 9) South 02°08'47" East a distance of 122.66 feet to a point;
 10) South 05°58'41" West a distance of 25.91 feet to a point at the intersection of the high water mark of the Saranac River, and lands acquired by the City of Plattsburgh by

Environmental Easement Page 9

Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence turning South 89° 29' 50" West and running a distance of 294.17 feet to a point in said lands equired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence turning North 45° 37' 58" West and running a distance of 7.98 feet to a point in the easterly boundary of Durkee Street;

Thence turning North 10° 07' 08" East along the easterly boundary of said Durkee Street and running a distance of 227.42 feet to a point at the northwesterly corner of a leased portion of property, lessee is ICV-New York, LLC, by virtue of deed instrument #2006-200533;

Thence continuing North 10° 07' 08" East along the easterly boundary of said Durkée Street and running a distance of 321.07 feet to a point;

Thence turning North 21° 25' 40" East and continuing along the easterly boundary of said Durkee Street and running a distance of 254.66 feet to the POINT OR PLACE OF BEGINNING;

Containing herein 4,38 acres of land more or less.

HEREBY intending to describe a portion of property lying easterly of Durkee Street, southerly of Bridge Street, westerly of the high water mark of the Saranac River and northerly of Broad Street;

LOT 2

ALL THAT CERTAIN PIECE OR PARCEL OF LAND, situate in the City of Plattsburgh, County of Clinton, State of New York, more particularly described as follows:

BEGINNING at the intersection of the assumed easterly boundary of Durkee Street and the southerly boundary of land acquired by the City of Platisburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence running South 76°07'58" East along the southerly boundary of land acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street and running a distance of 259.09 feet to a point at the top of bank of the Saranac River;

Thence continuing South 76°07'58" East along the southerly boundary of land acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street and running a distance of 10.62 feet to a point in the mean high water mark of the Saranae River;

Thence turning and running southerly along the mean high water mark of the Saranac River the following (3) three courses and distances:

- 1) South 15° 01'07" West a distance of 39.17 feet to a point;
- 2) South 33° 58'16" West a distance of 51.72 feet to a point;

Environmental Easement Page 10

 South 42° 39'10" West a distance of 45.74 feet to a point at the intersection of the high water mark of the Saranac River, and the northerly boundary of lands now or formerly of Steven Baker, by virtue of deed liber 629 at page 318;

Thence turning North 73°48'10" West along the northerly boundary of said lands now or formerly of Steven Baker and running a distance of 2.45 feet to a point at the top of bank of the Saranac River:

Thence continuing North 73°48'10" West along the northerly boundary of said lands now or formerly of Steven Baker and running a distance of 212.00 feet to point at the northwesterly corner of lands now or formerly of Steven Baker.

Thence turning South 19°10'02" West along the westerly boundary of said lands now or fermerly of Steven Baker and running a distance of 8.38 feet to a point at the northeasterly comer of lands now or fermerly of New York State Electric & Gas;

Thence turning North 77°55'32" West along the northerly boundary of said lands now or formerly of New York State Electric & Gas and running a distance of 5.54 feet to a point at the southeasterly corner of Durkee Street;

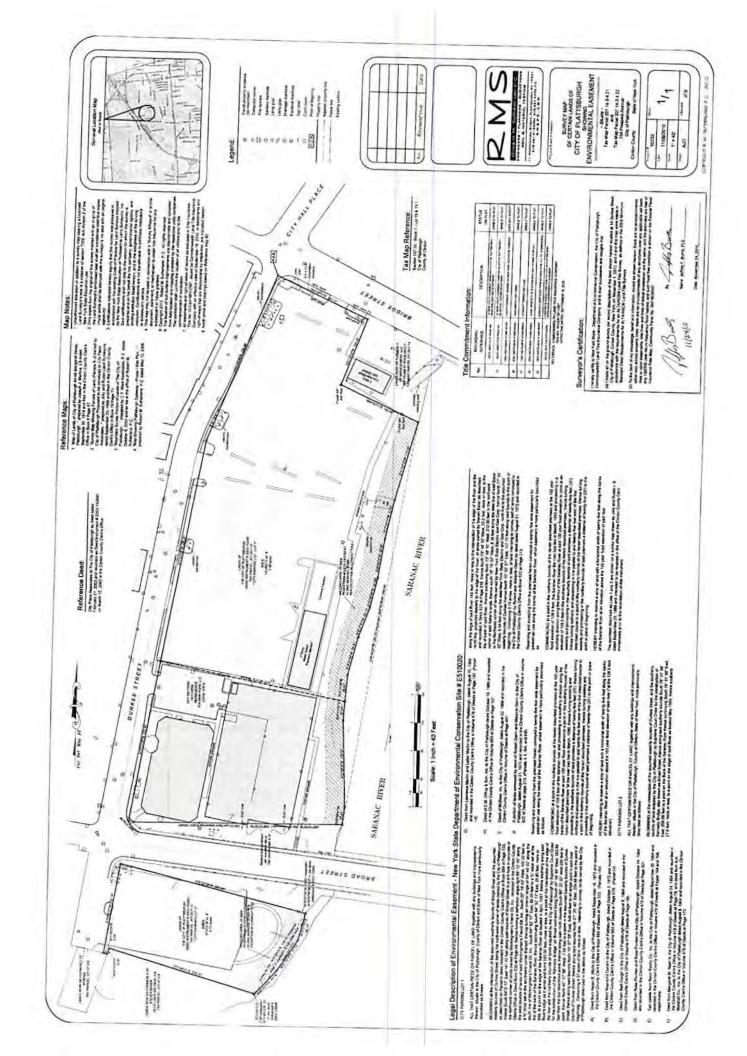
Thence turning North 10°02'27" East along the easterly boundary of said Durkee Street and running'a distance of 127.91 feet to the POINT OR PLACE OF BEGINNING;

Containing herein 0.72 acres of land more or less.

HEREBY intending to describe a portion of property lying easterly of Durkee Street, southerly of Broad Street, westerly of the high water mark of the Saranae River and northerly of certain lands now or formerly of Steven Baker and New York State Bleetric & Gas;

Exhibit B

Site Survey



State Assistance Contract: C302578

County: Clinton Site No: E 510020

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 14 Durkee Street in the City of Plattsburgh, Clinton County and State of New York, known and designated on the tax map of the County Clerk of Clinton as tax map parcel numbers: Section 207.20 Block 7 Lot 15, being the same as that property conveyed to Grantor by deed dated February 27, 2003 and recorded in the Clinton County Clerk's Office on March 12, 2003 in Instrument Number: 152840 and by virtue of a Ground Lease recorded in the Clinton County Clerk's Office on November 17, 2006 as Instrument No. 2006-00200533, comprising approximately 5.11 ± acres, and hereinafter more fully described in the Land Title Survey dated November 9, 2010, revised December 9, 2010, December 21, 2010 and signed December 22, 2010 prepared by Jeffrey F. Burns, PLS of Robert M. Sutherland P.C. Engineers-Planners-Surveyors, which will be attached to the Site Management Plan. The property description and survey (the "Controlled Property") is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of State Assistance Contract Number: C302578, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

- Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental
 Easement are: to convey to Grantee real property rights and interests that will run with the land in
 perpetuity in order to provide an effective and enforceable means of encouraging the reuse and
 redevelopment of this Controlled Property at a level that has been determined to be safe for a
 specific use while ensuring the performance of operation, maintenance, and/or monitoring
 requirements; and to ensure the restriction of future uses of the land that are inconsistent with the
 above-stated purpose.
- 2. <u>Institutional and Engineering Controls</u>. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.
 - A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

- (2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);
- (3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.
- (4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- (5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- (6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.
- Access to the site must be provided to agents, employees or other (9) representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.
- The Controlled Property shall not be used for raising livestock or producing animal products for human consumption, and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.
- C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer NYSDEC - Region 5 Division of Environmental Remediation 1115 NYS Route 86, P.O. Box 296 Ray Brook, NY 12977-0296 Phone: (518) 897 - 1227

or

Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, New York 12233 Phone: (518) 402-9553

- Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.
- E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

Site No: E 510020

- Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.
- G Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:
- the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).
 - the institutional controls and/or engineering controls employed at such site: (2)
 - are in-place;
- are unchanged from the previous certification, or that any identified (ii) changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and
- that nothing has occurred that would impair the ability of such (iii) control to protect the public health and environment;
- the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;
- nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls:
- the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and
 - the information presented is accurate and complete. (7)
- Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the 3. State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.
- Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:
- Use of the Controlled Property for all purposes not inconsistent with, or limited by A. the terms of this Environmental Easement:
- The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

County: Clinton Site No: E 510020 State Assistance Contract: C302578

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

- B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.
- C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.
- D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.
- 6. <u>Notice</u>. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: E 510020

Office of General Counsel

NYSDEC 625 Broadway

Albany New York 12233-5500

With a copy to: Site Control Section

Division of Environmental Remediation

NYSDEC 625 Broadway Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and

communicating notices and responses to requests for approval.

- 7. <u>Recordation</u>. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.
- 8. <u>Amendment</u>. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.
- 9. <u>Extinguishment.</u> This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.
- 10. <u>Joint Obligation</u>. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor: City of Plattsburgh

Print Name: Donald M. Kasprzak

Title: Mayor Date: January, 2011

ICV-New York, LLC

Print Name:

Title: Date: January, 2011

Grantor's Acknowledgment

STATE OF VERMONT)
) ss:
COUNTY OF CHITTENDEN)
On the day of, in the year 20 //, before me, the undersigned, personally appeared, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.
Barbara L. Surpresset
Notary Public - State of Vermont

Grantor's Acknowledgment

STATE OF NEW YORK)
COUNTY OF CLATON) ss:
On the day of, in the year 20, before me, the undersigned, personally appeared, mersonally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their
capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.
Natha Duklia State of New York
Notary Public - State of New York
JOHN E. CLUTE Notary Public in the State of New York No. 02Cl 4676573

Residing in the County of Clinton
My Commission Expires February 28, 20

County: Clinton

Site No: E 510020

State Assistance Contract: C302578

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner.

By:

Dale A. Desnoyers, Director Division of Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)

COUNTY OF Albany) ss:

On the day of Novement in the year 20// before me, the undersigned, personally appeared Dale A. Desnoyers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public - State of New York

David J. Chiusano Notary Public, State of New York No. 01CH5032146

Qualified in Schenectady County Commission Expires August 22, 20 County: Clinton

Site No: E 510020

SCHEDULE "A" PROPERTY DESCRIPTION

14 Durkee Street City of Plattsburgh, Clinton County, NY Section 207.20 Block 7 Lot 15

LOT 1

ALL THAT CERTAIN PIECE OR PARCEL OF LAND, together with any buildings and improvements thereon, situate in the City of Plattsburgh, County of Clinton and State of New York more particularly described as follows:

BEGINNING at the intersection of the assumed southerly boundary of Bridge Street and the assumed easterly boundary of Durkee Street, being the northwest corner of lands owned by the City of Plattsburgh, a municipal corporation as described in a deed recorded in the Clinton County Clerk's Office as deed instrument # 2003-152840;

Thence running South 64°52' 17" East a distance of 141.10 feet along said boundary of Bridge Street to a drill hole in concrete at the northwest corner of lands now or formerly of GK Management, LLC, by virtue of deed instrument # 2006-201071;

Thence turning South 20° 19' 43" West along the westerly boundary of said lands now or formerly of GK Management, LLC and running a distance of 100.00 feet to a 3/4" iron rod found at the southwesterly corner of said lands of GK Management, LLC;

Thence turning South 64° 52'17" East along the southerly boundary of said lands now or formerly of GK Management, LLC and running through a found 3/4" iron rod a distance of 120.80 feet to a point at the mean high water mark of the Saranac River, which point is also the southeasterly corner of said lands now or formerly of GK Management, LLC;

Thence turning and running southerly along the mean high water mark of the Saranac River the following (10) ten courses and distances:

- 1) South 14° 49'18" West a distance of 114.88 feet to a point;
- 2) South 12°34'14" West a distance of 57.43 feet to a point;
- 3) South 08°48'36" West a distance of 56.86 feet to a point;
- 4) South 13°08'36" West a distance of 42.88 feet to a point;
- 5) South 19°37'41" West a distance of 45.72 feet to a point;
- 6) South 14°01'40" West a distance of 54.91 feet to a point;
- South 04°11'34" West a distance of 38.47 feet to a point at the northeasterly corner of a leased portion of property, lessee is ICV-New York, LLC, by virtue of deed instrument # 2006-200533;
- 8) South 04°11'34" West a distance of 27.00 feet to a point;
- 9) South 02°08'47" East a distance of 122.66 feet to a point;
- 10) South 05°58'41" West a distance of 25.91 feet to a point at the intersection of the high water mark of the Saranac River, and lands acquired by the City of Plattsburgh by

Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence turning South 89° 29' 50" West and running a distance of 294.17 feet to a point in said lands acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence turning North 45° 37' 58" West and running a distance of 7.98 feet to a point in the easterly boundary of Durkee Street;

Thence turning North 10° 07' 08" East along the easterly boundary of said Durkee Street and running a distance of 227.42 feet to a point at the northwesterly corner of a leased portion of property, lessee is ICV-New York, LLC, by virtue of deed instrument # 2006-200533;

Thence continuing North 10° 07' 08" East along the easterly boundary of said Durkee Street and running a distance of 321.07 feet to a point;

Thence turning North 21° 25' 40" East and continuing along the easterly boundary of said Durkee Street and running a distance of 254.66 feet to the POINT OR PLACE OF BEGINNING;

Containing herein 4.38 acres of land more or less.

HEREBY intending to describe a portion of property lying easterly of Durkee Street, southerly of Bridge Street, westerly of the high water mark of the Saranac River and northerly of Broad Street;

LOT 2

ALL THAT CERTAIN PIECE OR PARCEL OF LAND, situate in the City of Plattsburgh, County of Clinton, State of New York, more particularly described as follows:

BEGINNING at the intersection of the assumed easterly boundary of Durkee Street and the southerly boundary of land acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street;

Thence running South 76°07'58" East along the southerly boundary of land acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street and running a distance of 259.09 feet to a point at the top of bank of the Saranac River;

Thence continuing South 76°07'58" East along the southerly boundary of land acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge", also known as Broad Street and running a distance of 10.62 feet to a point in the mean high water mark of the Saranac River;

Thence turning and running southerly along the mean high water mark of the Saranac River the following (3) three courses and distances:

- 1) South 15° 01'07" West a distance of 39.17 feet to a point;
- 2) South 33° 58'16" West a distance of 51.72 feet to a point;

3) South 42° 39'10" West a distance of 45.74 feet to a point at the intersection of the high water mark of the Saranac River, and the northerly boundary of lands now or formerly of Steven Baker, by virtue of deed liber 629 at page 318;

Thence turning North 73°48'10" West along the northerly boundary of said lands now or formerly of Steven Baker and running a distance of 2.45 feet to a point at the top of bank of the Saranac River;

Thence continuing North 73°48'10" West along the northerly boundary of said lands now or formerly of Steven Baker and running a distance of 212.00 feet to point at the northwesterly corner of lands now or formerly of Steven Baker;

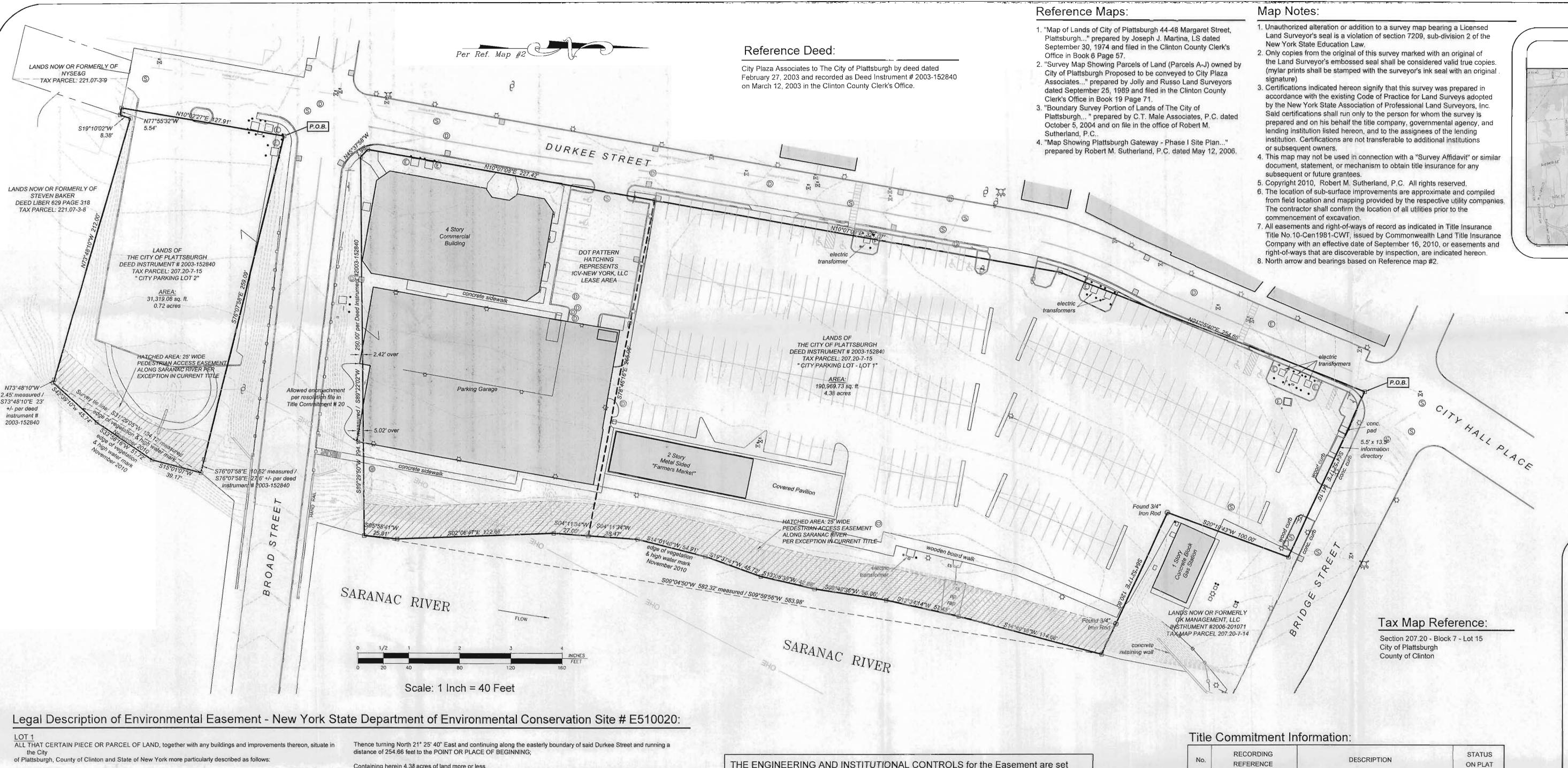
Thence turning South 19°10'02" West along the westerly boundary of said lands now or formerly of Steven Baker and running a distance of 8.38 feet to a point at the northeasterly corner of lands now or formerly of New York State Electric & Gas;

Thence turning North 77°55'32" West along the northerly boundary of said lands now or formerly of New York State Electric & Gas and running a distance of 5.54 feet to a point at the southeasterly corner of Durkee Street;

Thence turning North 10°02'27" East along the easterly boundary of said Durkee Street and running a distance of 127.91 feet to the POINT OR PLACE OF BEGINNING;

Containing herein 0.72 acres of land more or less.

HEREBY intending to describe a portion of property lying easterly of Durkee Street, southerly of Broad Street, westerly of the high water mark of the Saranac River and northerly of certain lands now or formerly of Steven Baker and New York State Electric & Gas;



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5) South 19°37'41" West a distance of 45.72 feet to a point; 6) South 14°01'40" West a distance of 54.91 feet to a point; 7) South 04*11'34' West a distance of 38.47 feet to a point at the northeasterly corner of a leased portion of property, lessee is ICV-New York, LLC, by virtue of deed instrument # 2006-200533;

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HEREBY intending to describe a portion of property lying easterly of Durkee Street, southerly of Broad Street, westerly of the high water mark of the Saranac River and northerly of certain lands now or formerly of Steven Baker and New York State Electric & Gas;

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property.

The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

> This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law

Engineering / Institutional Controls

(a) limiting the use and development of the property to restricted residential use, which will also permit commercial use in conformance with local zoning;

(b) compliance with the approved site management plan

(c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and

(d) submission by the property owner to the Department a periodic certification of institutional and engineering

(e) notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated topsoil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be

managed in a manner acceptable to the Department;

(f) evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified;

(g) monitoring of groundwater and

(h) provisions for the operation, maintenance, and monitoring of the installed sub-slab vapor mitigation system in the office building presently under construction.

No.	RECORDING REFERENCE	DESCRIPTION	STATUS ON PLAT
	DEED LIBER 219 AT PAGE 349	15' WIDE UTILITY EASEMENT GRANTED TO CITY OF PLATTSBURGH, MUNICIPAL LIGHTING DETAFFIMENT	UNABLE TO PLOT
15	DEED LIBER 219 AT PAGE 351	15' WIDE UTILITY EASEMENT GRANTED TO CITY OF PLATTSBURGH, MUNICIPAL LIGHTING DEPARTMENT	UNABLE TO PLOT
	DEED INSTRUMENT # 1998-101259	UTILITY EASEMENT GRANTED TO NEW YORK TELEPHONE COMPANY	DOES NOT AFFECT
20	MISC. INSTRUMENT # 2006-000929	AMENDMENTS AND TERMS	UNABLE TO PLOT
21	DEED INSTRUMENT # 2006-200534	AFFIDAVIT TERMINATING LEASE	UNABLE TO PLOT
22	DEED INSTRUMENT # 2006-200533	LEASE FROM CITY OF PLATTSBURGH AND ICV-NEW YORK, LLC	PLOTTED
22	DEED INSTRUMENT # 2006-200535	LEASEHOLD MORTGAGE FROM ICV-NEW YORK, LLC TO TO BANKNORTH	UNABLE TO PLOT
	ON FILE WITH THE CITY CLERK	CORPORATE RESOLUTION FROM THE CITY OF PLATTSBURGH AUTHORIZING ENVIRONMENTAL EASEMENT	UNABLE TO PLOT

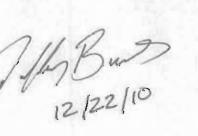
REFERENCE: COMMONWEALTH LAND TITLE INSURANCE COMPANY FILE NO. 10-CEN1381-CWT EFFECTIVE DATED: SEPTEMBER 16, 2010

Surveyor's Certification:

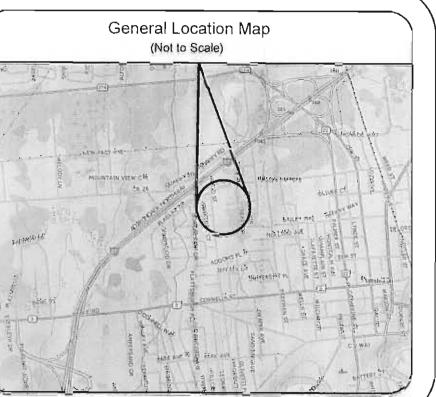
hereby certify to New York State - Department of Environmental Conservation, the City of Plattsburgh, Commonwealth Land Title Insurance Company, and to their successors and assigns that:

(a) I made an on the ground survey per record description of the land shown hereon located at 14 Durkee Street, City of Plattsburgh, Clinton County, New York, on November 1, 2010; and it and this map were made in accordance with the requirements for an ALTA/ACSM Land Title Survey, as defined in the 2005 Minimum Standard Detail Requirements for ALTA/ASCM Land Title Surveys.

 To the best of my knowledge, belief and information, except as shown hereon: there are no encroachments either way across property lines; there are no encroachments of any structures over any applicable set back lines or upon easements; title lines and lines of actual possession are the same; and the premises are free of any 100/500 year return frequency flood hazard, and such flood free condition is shown on the Federal Flood Insurance Rate Map, Community Panel No. 36019C604D

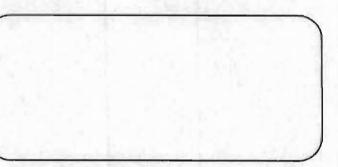


Date: December 22, 2010_



Legend:		
0	Found property evidence (as described)	
	Computed corner	
\$	Fire hydrant	
(S)	Sanitary manhole	
\$	Lamp post	
P	Utility pole	
0	Drainage manhole	
©	Electrical manhole	
-a-	Sign post	
	Catch basin	
P.O.B.	Point of Begining	
	Property line	
	Adjoiner property line	
0 0 0	Fence line	
110	Existing contour	

2	Revised tax parcel ID.	12/21/10
41.	General revisions.	12/9/10
No.	Revision/Issue	Date





Project Name & Address

OF CERTAIN LANDS OF CITY OF PLATTSBURGH SHOWING ENVIRONMENTAL EASEMEN

SURVEY MAP

~ Situate ~ Tax Map Parcel 207.2-7-15 Durkee Street City of Plattsburgh

Clinton County

State of New York

Project # 10239	Sheet
Pate 11/09/2010	1/1
Scalc 1" = 40'	
AJD	Shecked JFB

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Environmental Restoration Program

Site Management Plan

Plattsburgh Gateway Project/
Durkee Street Site
Durkee Street
City of Plattsburgh
Clinton County, New York

ERP Site No. E510020

Prepared for:

CITY OF PLATTSBURGH OFFICE OF COMMUNITY DEVELOPMENT 41 City Hall Place Plattsburgh, New York 12901

Prepared by:

C.T. MALE ASSOCIATES, P.C. 50 Century Hill Drive P.O. Box 727 Latham, New York 12110 (518) 786-7400 FAX (518) 786-7299

C.T. Male Project No: 04,9498

Unauthorized alteration or addition to this Document is a violation of Section 7209 Subdivision 2 of the New York State Education Law.

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ENVIRONMENTAL RESTORATION PROGRAM SITE MANAGEMENT PLAN PLATTSBURGH GATEWAY PROJECT/DURKEE STREET SITE CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK

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ENVIRONMENTAL RESTORATION PROGRAM SITE MANAGEMENT PLAN PLATTSBURGH GATEWAY PROJECT/DURKEE STREET SITE CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK

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Exhibit 2:	Deed Restrictions and/or Environmental Easement

1.0 INTRODUCTION

The City of Plattsburgh (the City) Office of Community Development submitted an application to the New York State Department of Environmental Conservation (DEC) for participation in the NYS Environmental Restoration Program (ERP) in relationship to the Durkee Street Parking Lot located along the east side of Durkee Street in the City of Plattsburgh, Clinton County, New York. A Site Location Map is presented as Figure 1.

To date, the site has been investigated inclusive of an Interim Remedial Measure (IRM) that was undertaken to address impacted soil/fill and groundwater at the site. Results of the remedial investigations and IRM were incorporated in Remedial Investigation (RI) and Alternatives Analysis (AA) Reports which are available for review at the document repositories. Based on information contained in the RI and AA reports and public comments solicited via a public meeting held in response to the NYS Department of Environmental Conservation (DEC or Department) Proposed Remedial Action Plan (PRAP) for the site, the DEC has issued a Record of Decision (ROD) for the site, dated March 2007. The ROD is attached hereto as Exhibit 1.

In the ROD, the Department promulgated the remedy for the site as "No Further Action with Site Management, and Institutional and Engineering Controls". As part of the remedy, the Department has required the development of a Site Management Plan (SMP) which will include the following institutional and engineering controls:

- Notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated soil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be properly managed in a manner acceptable to the Department;
- Evaluation of the potential for vapor intrusion for any buildings developed on the site, including provisions for mitigation of any impacts identified;
- Monitoring of groundwater; and

• Provisions for the operation, maintenance, and monitoring of the installed subslab vapor mitigation system in the office building presently under construction.

In addition to the SMP, the ROD states that the property owner would provide periodic certification that the institutional and engineering controls were being maintained as prepared by and submitted to the Department by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed.

1.1 Background

According to historical sources, the site was improved with several buildings associated with commercial, residential and manufacturing activities prior to its conversion into a parking lot and farmer's market. Historical land-use activities included automotive repair, steam laundering, sign painting and milling. Since historical practices at the site had the potential to degrade the site's environmental quality, the City of Plattsburgh made application for inclusion into the New York State Environmental Restoration Program.

At the onset of the RI, the site was subdivided into two Operable Units (OUs) to accommodate the redevelopment schedule (office building and parking deck) for the southern portion of the site. Operable Unit 1 (OU1), later renamed by the Department in the ROD as the "Office Building Parcel", consists of a three-story office building and open-air parking deck which occupies the southern portion of the site. Operable Unit 2 (OU2), later renamed by the Department in the ROD as the "Municipal Parking Lot", consists of an asphalt-paved public parking lot with farmer's market and occupies the central and northern portions of the site.

Each of the operable units was investigated as part of the RI. The investigations involved the collection and laboratory analysis of near-surface soil, subsurface soil, and groundwater samples, the drilling and installation of monitoring wells, and the completion of a soil gas survey. The investigative methods employed were derived in part from information contained in a limited subsurface investigation report of the Site conducted by others in May 2004, and from review of historical maps and regulatory databases. As part of the RI, an Interim Remedial Measure (IRM) was completed within the boundaries of the Office Building Parcel (OU1). The IRM involved: the excavation

for off-site disposal of impacted soils and fill materials; the dewatering, treatment and disposal of impacted groundwater within the excavations; and the closure by removal of underground storage tanks within the excavations. Furthermore, detections of chlorinated volatile organic compounds exceeding regulatory guidelines in groundwater sampled from monitoring wells installed as part of the RI dictated the installation of additional monitoring wells within the boundaries of the Municipal Parking Lot parcel (OU2) to further delineate the extent of these contaminants.

The City of Plattsburgh currently owns the subject site. There are no current redevelopment plans for the central and northern portions of the site.

1.2 Nature and Extent of Contamination

Contaminants of Concern (COCs) detected at concentrations exceeding DEC standards, criteria and guidance (SCGs) during the RI of the site included seven (7) semi-volatile organic compounds and four (4) metals in subsurface soils; six (6) volatile organic compounds (5 of which were chlorinated), one (1) semi-volatile organic compound, and five (5) metals in groundwater; and several volatile and semi-volatile organic compounds in soil gas. The frequencies that the COCs exceeded their respective SCGs are detailed in the attached DEC ROD (Exhibit 1) and the RI reports (document repositories).

1.3 Purpose and Objectives

The purpose of the SMP is to mitigate potential future impacts to human health and the environment via the institution and adherence to site specific institutional and engineering controls promulgated by the Department (see Section 1.1 and Exhibit 1). Additionally, the property owner is required to provide a periodic certification of institutional and engineering controls until the Department notifies the property owner in writing that this certification is no longer needed.

The objective of this SMP is to describe the requirements for the management of subsurface soil/fill material beneath the existing surface cover system; groundwater monitoring; vapor intrusion assessments for future buildings; and the currently existing vapor mitigation system in the office building. The SMP also presents site specific SCGs (Section 2.0) as determined through the RI and AA completed for the site.

The SMP is not intended to serve as a design document for construction activities relating to redevelopment activities, it is the developer's responsibility to prepare a design that incorporates the requirements set forth in this SMP.

1.4 Contemplated Use and Property Use Limitations

The contemplated use of the subject site, as described in the DEC ROD, is restricted residential in conformance with local zoning which permits commercial use, including the continued use as a parking lot. Restricted residential is defined as: "residential uses such as homes, apartments, mobile home parks, dormitories, schools, and day-care facilities are allowed, but require engineering and/or institutional controls for the use to be protective".

Property use limitations for the site's contemplated use as restricted residential will be established in deed restrictions and/or the environmental easement for the property as filed with the City of Plattsburgh clerk and/or the Clinton County clerk. Deed restrictions and/or the environmental easement are applicable to successors and assigns of the property. The deed restrictions and/or environmental easement, when finalized, will be attached as Exhibit 2.

1.5 Summary of the Remedy

The contaminants of concern (COCs) for soil, groundwater and soil gas have been identified in section 1.2 of this document. The identification of the remedial action objectives for the site are based primarily on the human health and environmental risks posed by the site as identified in the RI and AA Reports prepared by C.T. Male which are available in the document repositories and the DEC ROD (Exhibit 1). Based on the site's contemplated use as restricted residential with permitted commercial use, the remedial action objectives for the site are to minimize potential exposure to on-site subsurface soil/fill, groundwater, and subsurface soil gas.

To achieve the remedial action objectives, the site's existing surface cover system will be utilized as a barrier to contact; long term groundwater monitoring and groundwater use restrictions will be instituted; a subsurface vapor mitigation system will be installed within the newly constructed office building; and a vapor intrusion assessment will be conducted should habitable buildings be developed on the site in the future.

1.6 Site Management Plan Responsibility

The current property owner and any future property owners will be responsible for implementing and monitoring the requirements of this SMP. The property owner will not authorize their employees, agents, or assigns to disturb site soils, except in accordance with the SMP. The property owner will be responsible for proper notification and reporting to regulatory agencies (i.e., NYSDEC Region 5) prior to and following any site maintenance and/or development.

It is expected that the Department will provide periodic oversight and monitoring during site maintenance and/or potential future development activities to document that the requirements of this SMP are followed.

2.0 STANDARDS, CRITERIA AND GUIDANCE

In order to identify which site soils require special handling and management, SCGs have been determined for the site. SCGs are promulgated requirements and non-promulgated guidance that govern site activities. Based on the contemplated use of the site as restricted residential with permitted commercial use, the site SCGs to be used for this project are the 6 NYCRR Part 375 Restricted (Residential) Use Soil Cleanup Objectives (December 14, 2006).

It has been assumed, based on the RI findings, that the soil and fill within the boundaries of the site contain concentrations of metals and semi-volatile organic compounds above SCGs. As such, all of the site soils must be handled in accordance with this SMP. Disposition of soil/fill (i.e., natural soils mixed with non-native materials) and native soils will be managed in accordance with the following general guidelines:

- Soil/fill which exists on-site with low level metals and semi-volatile organic compounds above site SCGs will be managed under the existing asphalt pavement and building footprint surface cover systems.
- Soil/fill which exists on-site with low level metals and semi-volatile organic compounds above site SCGs, and is disturbed can be reused on-site, provided it is placed beneath an acceptable surface cover system.
- Soil/fill which exists on-site with low level metals and semi-volatile organic compounds above site SCGs that can not be managed on-site will be required to be properly transported and disposed of at a disposal/treatment facility permitted to accept such material.
- Soil/fill which exists on-site with low level metals and semi-volatile organic compounds below site SCGs can be reused on-site as general fill, provided it is placed beneath an acceptable surface cover system, or may be transported off-site provided the proposed disposal location is approved by the Department prior to disposal.

• Native soils which have not been commingled with non-native materials, and do not reveal subjective evidence of contamination (i.e., staining or odors) do not require special handling or management.

3.0 SURFACE COVER SYSTEM

3.1 Purpose

The purpose of the surface cover system is to mitigate the potential for human contact with site soils containing COCs above SCGs and mitigate the potential for contaminated runoff from the property. The site's existing asphalt and building footprint surface cover system must be protected and maintained in accordance with this SMP as more specifically described in Section 5.0.

3.2 Acceptable Surface Cover Materials

According to the DEC ROD, the site's existing asphalt pavement and the farmer's market, office building and parking garage structures are considered as suitable existing surface cover materials to protect human populations from underlying soils and groundwater containing COCs at concentrations above SCGs.

4.0 SUB-SLAB VAPOR BARRIER SYSTEM

4.1 General

Based on the analytical results for soil gas sampling conducted on the Parking Lot parcel (OU2), as presented in the RI (document repositories), a soil vapor mitigation system will be designed and installed beneath any future habitable site structures to prevent soil vapors from entering the structures. Mitigation systems must be designed by a professional engineer or environmental professional acceptable to the Department and the DOH. The design and installation of the mitigation system will be documented and reported to the Department and the NYS Department of Health (DOH). As applicable, an information package on the mitigation system's operation, maintenance and monitoring will be given to the appropriate personnel (i.e., building owner, building tenant, etc.).

4.2 Design/Installation Requirements

The goal of the mitigation systems is to minimize and possibly eliminate the infiltration of subsurface organic vapors into habitable site buildings. Mitigation systems should be designed and installed in general accordance with the following:

- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006
- USEPA Radon Mitigation Standards, EPA 402-R-93-078, Revised April 1994
- USEPA Model Standards and Techniques for Control of Radon in New Residential Buildings EPA 402-R-94-009, March 1994

5.0 MANAGEMENT OF SOILS BELOW SURFACE COVER SYSTEM

The purpose of this section is to provide environmental guidelines for management of site soil/fill beneath the surface cover system. The repair/replacement of the surface cover system during any future intrusive site work should also follow these guidelines.

5.1 General Guidelines

The following are general guidelines for management of surface and subsurface soil/fill at the site containing COCs above Site SCGs.

- Any breach of the site's surface cover system, including for the purposes of construction or utilities work, must be replaced or repaired.
- Control surface erosion and run-off of the entire property at all times, including during construction activities.
- Site soil/fill which is excavated may be reused as backfill material or relocated onsite provided it contains no visual or olfactory evidence of contamination and it is placed beneath an acceptable surface cover material that meets the definition as described in Section 3.2. Hazardous soil/fill (on the basis of TCLP testing) will not be allowed to be placed on-site, but will be required to be disposed off-site at a permitted waste disposal facility.
- Site soil/fill that is excavated and intended for removal from the property must be characterized, managed and properly disposed of in accordance with DEC regulations and directives.
- Prior to ground invasive activities, workers are to be notified of the site conditions
 with respect to the COCs. The scope of work to be implemented must be reviewed
 and approved by the Owner or its designated representative. Invasive work must
 be performed in accordance with all applicable local, state and federal regulations to
 protect worker health and safety.

5.2 Potentially Contaminated Soil

Based on the RI, soils within the site include fill composed of brick, concrete, cinder, slag and ash, which vary in color and appearance. Soil that is unnaturally discolored, tinted, dyed, and has an unnatural sheen and exhibits petroleum or chemical odors and/or produces elevated Photo-ionization Detector (PID) readings (i.e., sustained 5 ppm or greater) will be considered potentially contaminated and stockpiled on the property for further assessment. The property owner will be notified and will retain a qualified consultant to observe excavation activities, field screen soil samples to determine level of excavation required to remove the observed contamination and, as necessary, collect samples for laboratory analysis. The potentially contaminated soil will be stockpiled on two layers of 6-mil polyethylene sheeting. The stockpiled, potentially contaminated soil will also be completely covered using polyethylene sheeting to reduce the infiltration of precipitation and the migration of dust. Sampling and analysis will be completed in accordance with applicable NYSDEC guidance documents for reuse, treatment, or disposal determination. Soil that exhibits elevated PID readings containing one or more constituents in excess of site SCGs for semivolatile organic compounds and metals will be transported off-site to a permitted waste management facility.

5.3 Excavated Soil Reuse and Disposal

Excavated soil/fill may be used on-site below the surface cover system. Soil/fill that is excavated as part of any ground invasive activities that can't be reused as fill below the surface cover system will be characterized prior to transportation off-site for disposal at a permitted facility or otherwise DEC approved location. The frequency and parameters of the characterization will be based on the desired disposal facility. The soil analyses will be performed by a DOH Environmental Laboratory Assurance Program (ELAP) certified analytical laboratory.

Soil/fill that exhibits elevated PID readings may also be used on-site as fill below the surface cover system if characterized and found to contain semi-volatile organic compounds and metals at concentrations less than site SCGs. This soil/fill may not be used as a replacement surface cover material, or as backfill in any future landscape areas for the planting of trees and shrubs.

Native soils which have not been commingled with non-native materials, and do not reveal subjective evidence of contamination (i.e., staining or odors) do not require special handling or management.

5.4 Underground Storage Tanks and Buried Drums

Buried underground storage tanks were encountered during the IRM and were removed and disposed of off-site. Additional tanks, and drums, may still be present beneath the site. If buried drums or tanks are encountered during any ground intrusive work, excavation activities must cease and the property owner and the Department will be notified. The drums and tanks will be handled, removed and cleaned by appropriately trained personnel in accordance with all applicable federal, state and local regulations. The contents of the drums and/or tanks will be characterized and properly disposed off-site. Soils surrounding the tanks and drums will be assessed for impacts in accordance with applicable guidance documents (i.e., PBS regulations, NYSDEC Part 375, etc.).

5.5 Erosion Controls

Should the surface cover system be disturbed by future ground invasive activities, all erosion & sediment control measures and pollution prevention measures will be evaluated, designed and implemented by the contractor in compliance with the "New York Guidelines for Urban Erosion and Sediment Control" and the "New York State Stormwater Management Design Manual".

5.6 Dust Controls

Soil/fill handling, depending on the moisture content of the soil, has the potential for generating dust or particles in which COCs, if present, may be adhered to and released into the environment. Dust suppression techniques will be employed as necessary to prevent, control and mitigate fugitive dust during any maintenance and/or development work that penetrates the surface cover system. All reasonable attempts will be made to keep visible and/or fugitive dust to a minimum. Techniques to be utilized may include one or more of the following:

- Applying water to access roads.
- Restricting construction and other vehicle speeds on-site.

- Hauling materials in tarped containers or construction vehicles.
- Spraying or misting excavations and equipment prior to and during soil/fill disturbances.

5.7 Dust Control Monitoring

Visual assessment for visible/respirable dust must be implemented during ground intrusive activities beneath the surface cover material. Misting/wetting the area must be performed, as needed, on the basis of the visual assessment to assure no visible dust migrates beyond the immediate work area. If dust does not appear to be controlled by this or other typical construction methods, dust monitoring would be required to determine if particulate action levels are being exceeded. Particulate monitoring should be performed in accordance with the applicable sections of the NYSDOH Generic Community Air Monitoring Plan (Appendix A) and NYSDEC TAGM 4031, Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites (Appendix B).

5.8 Construction Water Management

Due to the subsurface soil/fill conditions observed during the RI, groundwater infiltration may be significant on western portions of the site closest to Durkee Street and will require management if excavations reach four to six feet below grade. Water pumped from excavations, if any, will be managed properly in accordance with all applicable federal, state and local regulations.

If any sheens are observed on the water surface, the water will be pumped from the excavations and containerized and analyzed in general accordance with Surface Water and Groundwater Standards set forth in 6NYCRR Part 703.5 and applicable local sewer authority discharge requirements. If the water meets the water quality standards, it may be discharged to the publicly owned treatment works. If the water does not meet the water quality standards, the water will be discharged to the local sewer under the necessary permits, treated and discharged under proper permitting, or properly disposed off-site.

5.9 Management and Long-term Maintenance of Surface Cover System

The purpose of this section is to provide environmental guidelines for management of subsurface soil/fill and the long-term maintenance of the surface cover system during any future intrusive work which breaches the acceptable surface cover. Maintenance of the surface cover at the site will be the responsibility of the property owner, or its successors and assigns.

- Control surface erosion and run-off during maintenance and/or construction activities that breach the cover system.
- Replace or repair any breach of the surface cover system, including the installation
 of utilities and construction work, using a similar surface cover material than that
 existing. A certification that work required to replace or repair the surface cover
 system was performed in conformance with the DEC approved SMP will be
 required in the annual reporting for the year it was completed.
- Annually inspect the surface cover system for sloughing, cracks, settlement, erosion, damage or other items that affect the integrity of the surface cover system.
- Repair any deficiencies observed in the surface cover in a timely manner.
- Prepare and submit to the Department an Annual Report by January 15th of each year. The Annual Report shall contain certification by a P.E. or environmental professional that the institutional controls put in place, pursuant to the DEC approved SMP are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintained throughout the year; and that the conditions of the site remain protective of human health and the environment.

6.0 LONG-TERM GROUNDWATER MONITORING

The DEC ROD states that long-term groundwater monitoring will be conducted of select monitoring wells installed as part of the RI. The monitoring wells that require long-term monitoring are identified as monitoring wells MW-9 (new replacement well), MW-10, MW-17, MW-21, MW-23, MW-25 and MW-26. The monitoring well locations are depicted on the attached Figure 2.

The monitoring wells will be sampled to verify the persistence of chlorinated and non-chlorinated volatile organic compounds at these locations. The long term monitoring will also aid in part in determining the effectiveness of the IRM and to determine if the contaminant persistence is diminishing via bio-degradation. The monitoring wells will be sampled and analyzed for volatile organic compounds by EPA Method 8260.

The site owner will be required to perform long-term groundwater monitoring at a frequency to be determined by the Department. The Department will be notified at least 60 days prior to the commencement of site maintenance and/or future redevelopment activities having the potential to physically alter and/or destroy the monitoring wells. The physical integrity of the monitoring wells and the groundwater sampling analytical results will be included in the Annual Report to the Department.

7.0 NOTIFICATION AND REPORTING REQUIREMENTS

7.1 Notification

There shall be no construction, use or occupancy of the property that results in the disturbance or excavation of the property, which threatens the integrity of the acceptable surface cover system or which would result in human exposure to contaminated soils, unless prior written approval by the DEC is obtained. Therefore, notification of DEC at the address listed below should precede any such work by at least 60 days, to allow time for review and any necessary revisions of a work plan, if applicable.

Ms. Alicia Thorne, P.E.

NYS Department of Environmental Conservation (Region 5 Office)

232 Golf Course Road, P.O. Box 220

Warrensburg, New York 12885

Telephone No.: (518) 623-1238

For emergency repairs or alterations that require excavation at the site, notification and reporting will occur in a timely manner after completion of work.

For general repairs or alterations (i.e. utility work), a certification that the work was performed in conformance with this SMP will be incorporated in the Annual Report for the year that the work was completed.

Other notification requirements for this site include the following:

- The Department will be immediately notified if buried drums or underground storage tanks are encountered during soil excavation activities.
- Under State Law, all petroleum and most hazardous material spills must be reported to NYSDEC Hotline (1-800-457-7362) within New York State. Petroleum spills must be reported to DEC unless they meet all of the following criteria; the spill is known to be less than 5 gallons; the spill is contained and under the control of the spiller; the spill has not and will not reach the State's water or any land; and the spill is cleaned up within 2 hours of discovery. For spills not deemed reportable, it is

recommended that the facts concerning the incident be documented by the spiller and a record maintained for one year.

7.2 Reporting

The following minimum reporting requirements shall be followed by the owner, as appropriate:

The Owner shall complete and submit to the Department an Annual Report by January 15th of each year. The Annual Report shall contain certification that the institutional controls put in place, pursuant to the DEC approved SMP are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintained throughout the year; provide analytical results for long-term groundwater monitoring; and that the conditions of the site remain protective of human health and the environment.

If the surface cover system has been breached during the year covered by that Annual Report, the Owner of the property shall include the following in such Annual Report:

- A certification that work was performed in conformance to the DEC approved SMP.
- Plans showing areas and depth of fill removal.
- Copies of daily observation reports for soil/fill related issues.
- Description of erosion and or dust control measures.
- A text narrative describing the excavation activities performed, health and safety
 monitoring performed, quantities and locations of soil/fill excavated and disposed
 on-site, sampling locations and results, if any, description of problems encountered,
 location and acceptability of test results for backfill sources, if any, and other
 pertinent information necessary to document that the site activities were properly
 performed.

7.3 Analytical Data

All characterization sampling and other necessary sampling during any site redevelopment activities will be conducted in accordance with the most recent NYSDEC Analytical Services Protocol (ASP), and in part consistent with Section 2 of DER-10 Technical Guidance for Site Investigation and Remediation. The laboratory utilized for laboratory analyses will be certified through the DOH Environmental Laboratory Approval Program (ELAP) to perform Contract Laboratory Program (CLP) analysis and Solid Waste and Hazardous Waste Analytical testing on all media to be sampled. The laboratory will maintain these certifications for the duration of the project.

Procedures for chain of custody, laboratory instrumentation calibration, laboratory analyses, reporting of data, internal quality control, and corrective actions shall be followed as per NYSDEC ASP and as per the laboratory's Quality Assurance Plan. Where appropriate, trip blanks, field blanks, field duplicates, and matrix spike/matrix spike duplicate shall be performed at a rate of 5% (1 per up to 20 samples) and will be used to assess the quality of the data. The laboratory's in-house quality assurance/quality control limits will be utilized whenever they are more stringent than those suggested by the EPA methods.

8.0 HEALTH AND SAFETY PROCEDURES

8.1 General

Invasive work at the property will be performed in accordance with applicable local, state, and federal regulations to protect worker health and safety. If intrusive work is expected to breach the surface cover system at the property, contractors performing redevelopment or maintenance activities will be required to prepare and follow a site specific, activity specific, Health and Safety Plan (HASP). The HASP will also include provisions for protection of the community (i.e., Community Air Monitoring Plan). The HASP will be prepared in accordance with the regulations contained in OSHA 29CFR 1910.120 and inclusive of the components of the NYSDOH Generic Community Air Monitoring Plan and in part NYSDEC TAGM 4031.

8.2 Construction Personnel

Contractors engaged in subsurface construction or maintenance activities (e.g., utility workers) will be required to implement appropriate health and safety procedures for handling site soil/fill. These procedures may involve, donning adequate personal protective equipment, performing appropriate air monitoring, and implementing other engineering controls as necessary to mitigate potential ingestion, inhalation and contact with residual constituents in the soil/fill. Recommended health and safety procedures include, but may not be limited to, the following:

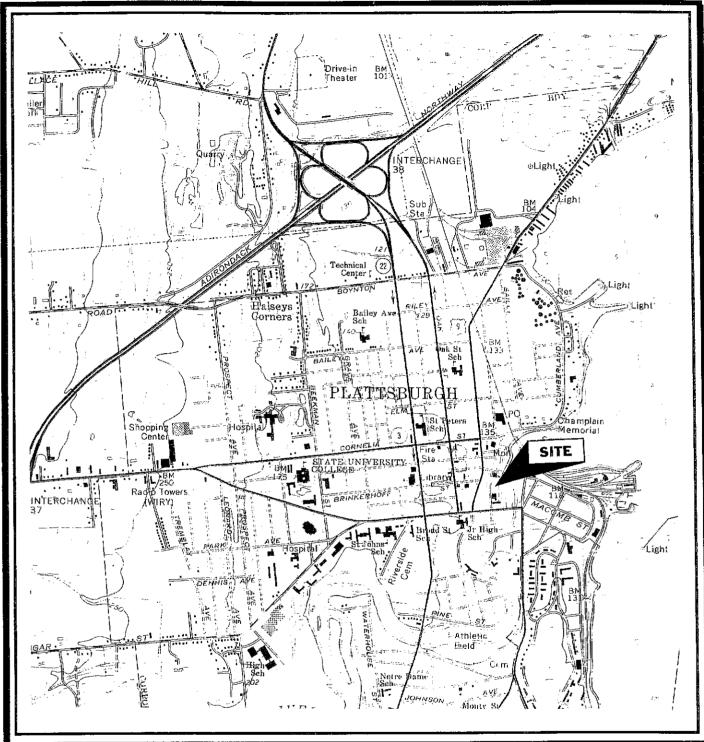
- While conducting invasive work at the Site, the Contractor shall provide safe and healthful working conditions. The Contractor shall comply with all New York State Department of Labor regulations and published recommendations and regulations promulgated under the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with laws, rules, and regulations of other authorities having jurisdiction. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance. The Contractor shall insure that all work is performed in accordance with recognized safe work practices.
- The Contractor shall be responsible for the safety of the Contractor's employees and the public. The Contractor shall be solely responsible for the adequacy and

safety of all construction methods, materials, equipment and the safe prosecution of the work.

- The Contractor is responsible to ensure that all project personnel have been trained in accordance with 29 CFR 1910.120, if required.
- The Contractor shall have a site specific HASP, written in accordance with 29 CFR 1926.65, prepared, signed and sealed by a safety professional; a safety professional and/or a trained safety representative(s) active on the job whenever the work is in progress; an effective and documented safety training program; and a safety work method check list system.
- Recognition as a safety professional shall be based on a minimum of certification by the Board of Certified Safety Professionals as a Certified Safety Professional and 5 years of professional safety management experience in the types of construction and conditions expected to be encountered on the Site.
- All personnel employed by the Contractor or his subcontractors or any visitors whenever entering the job site, shall be required to wear appropriate personal protection equipment required for that area.

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FIGURE 1 SITE LOCATION MAP



MAP REFERENCE

United States Geological Survey 7.5 Minute Series Topographic Map Quadrangles: Plattsburgh, NY

Date: 1966





ARCHITECTURE &
BUILDING SYSTEMS
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MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110 PHONE (518) 786- 7400 FAX (518) 786-7299

SURVEY & LAND
INFORMATIONAL SERVICES

SITE LOCATION MAP DURKEE STREET PARKING LOT

CITY OF PLATTSBURGH

CLINTON COUNTY, NY

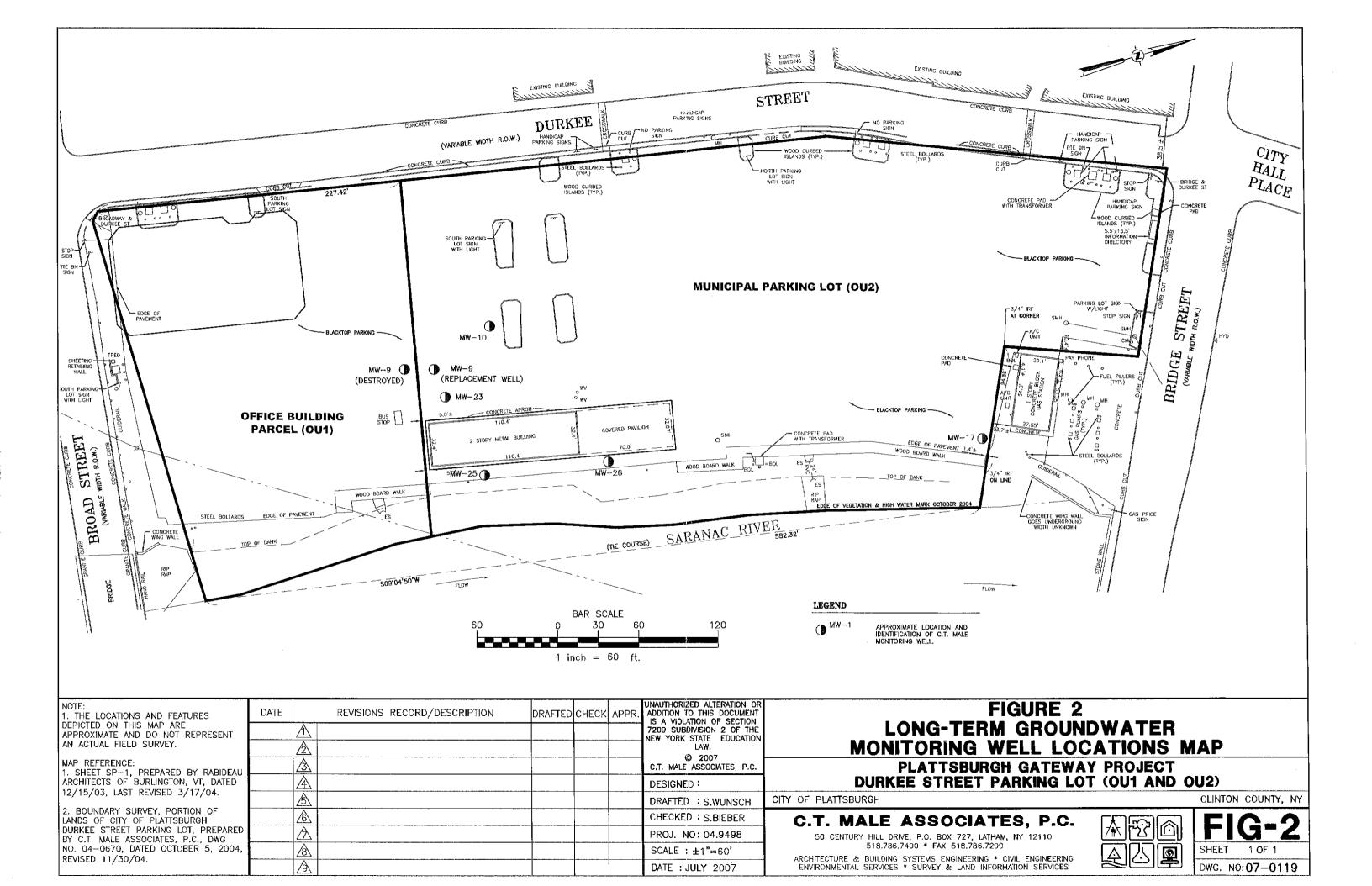
SCALE: 1" = 2000'

DRAFTER: SHB

PROJECT No. 04.9498

FIGURE 2

LONG-TERM GROUNDWATER MONITORING WELL LOCATIONS MAP



APPENDIX A NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

Appendix 1A New York State Department of Health Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during <u>non-intrusive</u> activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- 1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- 2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- 3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
- 4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- 1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.
- 2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.
- 3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX B

NYSDEC TAGM #4031, FUGITIVE DUST AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES



Fugitive Dust Suppression and Particulate Monitoring Program (TAGM - 4031)

To:	Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs			
From:	Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation (signed)			
	Technical and Administrative Guidance Memorandum Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites			
Date:	Oct 27, 1989			

1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter—a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes—which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter (PM₁₀); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects, PM ₁₀ is considered conservative for the primary standard—that requisite to protect public health with an adequate margin of safety. The primary standards are 150 ug/m³ over a 24-hour averaging time and 50 ug/m³ over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure PM₁₀ and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

asonable fugitive dust suppression techniques must be employed during all site activities ich may generate fugitive dust.

rticulate monitoring must be employed during the handling of waste or contaminated soil or en activities on site may generate fugitive dust from exposed waste or contaminated soil. ch activities shall also include the excavation, grading, or placement of clean fill, and control saures therefore should be considered.

rticulate monitoring must be performed using real-time particulate monitors and shall initor particulate matter less than ten microns (PM₁₀) with the following minimum

formance standards:

ject to be measured: Dust, Mists, Aerosols

:e range: <0.1 to 10 microns

nsitivity: 0.001 mg/m^3 nge: $0.001 \text{ to } 10 \text{ mg/m}^3$

erall Accuracy: ±10% as compared to gravimetric analysis of stearic acid or reference dust

erating Conditions:

mperature: 0 to 40°C

midity: 10 to 99% Relative Humidity

wer: Battery operated with a minimum capacity of eight hours continuous operation

tomatic alarms are suggested.

rticulate levels will be monitored immediately downwind at the working site and integrated er a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary eraging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by DA Scientific, Inc. or similar is appropriate.

order to ensure the validity of the fugitive dust measurements performed, there must be propriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity erating the equipment to adequately supplement QA/QC Plans to include the following ical features: periodic instrument calibration, operator training, daily instrument performance an) checks, and a record keeping plan.

e action level will be established at 150 ug/m³ over the integrated period not to exceed 15 nutes. While conservative, this short-term interval will provide a real-time assessment of one air quality to assure both health and safety. If particulate levels are detected in excess of 0 ug/m³, the upwind background level must be measured immediately using the same table monitor. If the working site particulate measurement is greater than 100 ug/m³ above background level, additional dust suppression techniques must be implemented to reduce generation of fugitive dust and corrective action taken to protect site personnel and reduce potential for contaminant migration. Corrective measures may include increasing the level personal protection for on-site personnel and implementing additional dust suppression hniques (see Paragraph 7). Should the action level of 150 ug/m³ be exceeded, the Division Air Resources must be notified in writing within five working days; the notification shall lude a description of the control measures implemented to prevent further exceedences.

-site, has the potential for transporting contaminants off-site. There may be situations when

st is being generated and leaving the site and the monitoring equipment does not measure I₁₀ at or above the action level. Since this situation has the potential to migrate ntaminants off-site, it is unacceptable. While it is not practical to quantify total suspended ticulates on a real-time basis, it is appropriate to rely on visual observation. If dust is served leaving the working site, additional dust suppression techniques must be employed. tivities that have a high dusting potential--such as solidification and treatment involving iterials like kiln dust and lime--will require the need for special measures to be considered. It is following techniques have been shown to be effective for the controlling of the generation it migration of dust during construction activities: ing water on haul roads.

ng equipment and excavation faces.

ing water on buckets during excavation and dumping.

ng materials in properly tarped or watertight containers.

cting vehicle speeds to 10 mph.

ing excavated areas and material after excavation activity ceases.

zing the excavation size and/or number of excavations.

perience has shown that utilizing the above-mentioned dust suppression techniques, within ison as not to create excess water which would result in unacceptable wet conditions, the ance of exceeding the 150 ug/m³ action level at hazardous waste site remediations is note. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide effective means of suppressing the fugitive dust.

ne dust suppression techniques being utilized at the site do not lower particulates to an ceptable level (that is, below 150 ug/m³ and no visible dust), work must be suspended until propriate corrective measures are approved to remedy the situation. Also, the evaluation of ather conditions will be necessary for proper fugitive dust control—when extreme wind aditions make dust control ineffective, as a last resort remedial actions may need to be spended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

EXHIBIT 1 NYSDEC RECORD OF DECISION

Division of Environmental Remediation

Environmental Restoration Record of Decision

Plattsburgh Gateway Project/
Durkee Street Site
City of Plattsburgh,
Clinton County, New York
Site Number E510020

March 2007

New York State Department of Environmental Conservation ELIOT SPITZER, *Governor*

DECLARATION STATEMENT ENVIRONMENTAL RESTORATION RECORD OF DECISION

Plattsburgh Gateway Project/Durkee Street Environmental Restoration Site City of Plattsburgh, Clinton County, New York Site No. E510020

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Plattsburgh Gateway Project/Durkee Street site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Plattsburgh Gateway Project/Durkee Street environmental restoration site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents, as a part of the Administrative Record, is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous substances and petroleum products from this site have been addressed by implementing the interim remedial measures identified in this ROD. The removal of contaminated soil from the site has significantly reduced the threat to public health and the environment. Therefore, a groundwater monitoring program will be implemented to monitor the effectiveness of previous remedial actions in preventing further contamination of the groundwater.

Description of Selected Remedy

Based on the results of the Remedial Investigation/Remedial Alternatives Report (RI/RAR) for the Plattsburgh Gatcway Project/Durkee Street site and the criteria identified for evaluation of alternatives, the Department has selected No Further Action with institutional controls in the form of an environmental easement limiting use of the site to restricted residential activity in conformance with local zoning, including the continued use as a parking lot. The components of the remedy are as follows:

1. Imposition of an institutional control in the form of an environmental easement that will require: (a) limiting the use and development of the property to restricted residential use, which will also permit commercial use in conformance with local zoning; (b) compliance

with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) submission by the property owner to the Department a periodic certification of institutional and engineering controls.

- 2. Development of a site management plan which will include the following institutional and engineering controls: (a) notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated soil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be properly managed in a manner acceptable to the Department; (b) evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitoring of groundwater; and (d) provisions for the operation, maintenance, and monitoring of the of the installed sub-slab vapor mitigation system in the office building presently under construction.
- 3. The property owner would provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal would: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

MAR 2 8 2007

Date

Dale A. Desnoyers, Director

Division of Environmental Remediation

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Environmental Restoration RECORD OF DECISION

Plattsburgh Gateway Project/Durkee Street Site City of Plattsburgh, Clinton County, New York Site No. E510020 March 2007

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Plattsburgh Gateway Project/Durkee Street site.

The 1996 Clean Water/Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

As more fully described in Sections 3 and 5 of this document, former commercial and manufacturing activities such as automotive repair, steam laundering, and milling resulted in the disposal of hazardous substances, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals. These hazardous substances contaminated the subsurface soils and groundwater at the site, and resulted in:

• a threat to human health associated with potential exposure to contaminated subsurface soils and groundwater.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the Plattsburgh Gateway Project/Durkee Street site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation/remedial alternatives report (RI/RAR). The IRM undertaken at this site included an extensive source soil excavation and underground storage tank removal.

Based on the implementation of the above IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore, No Further Action with institutional controls in the form of an environmental easement limiting use of the site to restricted residential activity in conformance with local zoning, including the continued use as a parking lot, was selected as the remedy for this site.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The

selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Plattsburgh Gateway Project/Durkee Street site is approximately a 5.1-acre lot on the eastern side of Durkee Street in the City of Plattsburgh, Clinton County, New York. The site lies in an urban area in downtown Plattsburgh, adjacent to the Saranac River as indicated in Figure 1. Lake Champlain lies approximately ½ mile to the east of the site.

The site's geology consists primarily of urban fill to approximately 8 feet deep, followed by glacial till to approximately 18 feet below ground surface (bgs). The fill consisted of various amounts of sand, gravel, silt, brick, ash, wood, cinder and concrete. During onsite drilling activities, auger refusal was encountered at approximately 18 ft bgs, which based on information obtained from another nearby remedial project, this is indicative of the presence of bedrock. The site's hydrogeology consisted of groundwater perched atop the glacial till layer, at approximately 8 ft bgs. Overall groundwater flow is from west to east toward the Saranac River. Surface water drains into the Saranac River then flows northerly into Lake Champlain, entering into the lake approximately ½ mile to the northeast of the site.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The site has been occupied since the late 1800s with primarily tenement residences and auto repair until 1927. After 1927, manufacturing became more prominent with rug cleaning, dry cleaning, sign painting, and milling activities associated with the site. In addition, over the years, several petroleum spills were reported and properly closed under the oil spill program. These former manufacturing activities and spill events may have resulted in the disposal of hazardous substances on site. The City slowly acquired the deeds for the Durkee Street lots from approximately 1964 through 1991. The buildings were demolished over that time period. The current municipal public parking lot was established in the early 1980s.

3.2: Remedial History

A Limited Subsurface Investigation was performed in May 2004 on behalf of the City of Plattsburgh. This investigation detected metals, VOC, and SVOC soil contamination in the subsurface. In October 2004, an Environmental Database Report was also conducted on behalf of the City. The RI was conducted between July 2004 and December 2006.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers. Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be

identified. The City of Plattsburgh will assist the state in its efforts by providing all information to the state which identifies PRPs. The City will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 5: SITE CONTAMINATION

The City of Plattsburgh has recently completed remedial investigation/remedial alternatives reports (RI/RARs) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between July 2004 and December 2006. The field activities and findings of the investigation are described in the RI reports.

Investigative tasks performed as part of the RI include surface soil sampling and analysis, soil boring and monitoring well installation, subsurface soil sampling and analysis, groundwater sampling and analysis, and the performance of a soil gas survey.

5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, groundwater, and soil gas contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the Department's Cleanup Objectives ("Technical and Administrative Guidance Memorandum [TAGM] 4046; Determination of Soil Cleanup Objectives and Cleanup Levels," and 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives").
- Concentrations of VOCs in air were evaluated using the air guidelines provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York."

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site required remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI reports.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the RI reports, many soil, groundwater and soil vapor samples were collected to characterize the nature and extent of contamination. As seen in Figures 2 through 7 and summarized in Tables 1 through 3, the main categories of contaminants that exceed their SCGs were volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and inorganics (metals). For comparison purposes, where applicable, SCGs were provided for each medium.

Chemical concentrations are reported in parts per billion (ppb) for water, and parts per million (ppm) for soil. Air samples are reported in micrograms per cubic meter ($\mu g/m^3$).

Figures 2 through 7 and Tables 1 through 3 summarize the degree of contamination for the contaminants of concern in soil, and groundwater, and compare the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Surface Soil

The Plattsburgh Gateway Project/Durkee Street site comprises of a large municipal parking lot with a farmer's market pavilion and a future office building with adjacent parking garage. Because the entire site is either completely paved or covered with concrete, there was no surface soil sampling conducted at the site.

Subsurface Soil

During the Remedial Investigation, both subsurface soil samples and near surface soil samples immediately below the pavement were taken. The following discussion summarizes the analytical results for these samples.

Six SVOCs were detected above their respective SCGs, as indicated on Table 1. These SVOCs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene. All of the SVOC contaminants are considered carcinogenic polycyclic aromatic hydrocarbons (cPAHs). These cPAHs were all detected in the historic fill material at approximately 8 to 10 foot depth and potentially associated with the ash and cinder components of the fill material. The SVOC contamination is depicted in Figures 3 and 5, with the highest exceedance being benzo(a)pyrene at 14 ppm at MW-14 at the 8 to 10 foot depth.

Four metals were detected above their respective SCGs as indicated on Table 1. Of the four detected, calcium; and magnesium were the only contaminants found to be above their respective Eastern USA Background concentration. As indicated in Figures 4 and 6, the metals contamination appeared to be spread randomly throughout the site at varying depths, with the greatest exceedance being calcium at 117,000 ppm at MW-11 at the 0.5 to 2 foot depth. In general, the subsurface soil contaminants of concern are SVOCs, mainly cPAHs, and metals. Pesticides, PCBs, and VOCs were not detected in any of the soil samples collected. Subsurface soil contamination identified during the RI/RAR was partially addressed during the IRM soil excavation and underground storage tank (UST) removal as described in Section 5.2.

Groundwater

Five metals were detected at concentrations above SCGs in the site groundwater. These detections included iron, lead, magnesium, manganese, and sodium as indicated in Table 3. These detections are attributed to the elevated turbidity levels measured during the groundwater sampling event. The historic fill material may have contributed to the elevated turbidity levels.

Only one SVOC, bis(2-Ethylhexyl)phthalate, was detected slightly above its SCG in 8 of the 12 monitoring wells onsite with the highest exceedance detected at 9.7 ppb in MW-4. Bis(2-Ethylhexyl)phthalate is a common laboratory contaminant, and was also detected in the equipment blank during this sampling event. However, the data usability summary report (DUSR) did not identify the compound as a laboratory contaminant.

Six VOCs were detected in the onsite monitoring wells above SCGs. Five of these chlorinated VOCs or CVOCs were detected in monitoring wells MW-9, MW-10, MW-23, MW-25, and MW-26 as indicated in Figure 7. The five CVOCs were all detected at their highest concentration at MW-10 at the following concentrations: vinyl chloride at 170 ppb; 1,1-dichloroethene at 6.0 ppb; trans-1,2-dichloroethene at 410 ppb; cis-1,2-dichloroethene at 680 ppb; and trichloroethene at 99 ppb. Dichloroethene and vinyl chloride are created through the degradation of trichloroethene. MW-10 was the only monitoring well to exhibit trichloroethene and its breakdown products, while the downgradient monitoring wells exhibited significantly lower concentrations of the breakdown products of vinyl chloride and dichloroethenes. Because no VOC contamination was detected in the soil borings at these corresponding areas, there does not appear to be a soil source for this VOC groundwater contamination. The other VOC detected in the groundwater was methyl tert-butyl ether (MTBE) at 57 ppb at monitoring well MW-17. As depicted in Figure 7, monitoring well MW-17 straddles the site's northeast property border. Since no other detections of MTBE were revealed during the RI, it does not appear that MTBE is a site related groundwater contaminant of concern.

These impacted monitoring wells, MW-10, MW-23, MW-25, and MW-26, were re-sampled in December 2006 to determine the effectiveness of the soil excavation IRM that was performed adjacent to the VOC groundwater contamination plume. The levels of trichloroethene and its breakdown products all decreased in MW-10 to the following concentrations: trichloroethylene at 11 ppb, vinyl chloride at non-detect; 1,1-dichloroethene at non-detect; trans-1,2-dichloroethene at non-detect; and cis-1,2-dichloroethene at 8.2 ppb. The levels of breakdown products (vinyl chloride, trans-1,2-dichloroethene, and cis-1,2-dichloroethene) slightly increased in MW-23, while there was a decrease in cis-1,2-dichloroethene and vinyl chloride in MW-25, and the concentrations of contaminants in MW-26 generally remained the same. This decrease in trichloroethene in MW-10, along with the increase of breakdown products in MW-23, suggest evidence of biodegradation. The most downgradient VOC-impacted monitoring wells, MW-25 and MW-26, showed no increase in contamination, indicating that the VOC groundwater contamination plume appears to be contained on site.

Groundwater contamination identified during the RI/RAR was partially addressed during the IRM soil excavation and UST removal as described in Section 5.2.

Soil Vapor/Sub-Slab Vapor/Air

The soil vapor intrusion evaluation included the collection of sub-slab soil vapor and outdoor air samples to evaluate the potential for exposures via soil vapor intrusion. Three soil gas samples were collected within the area of the future office building foundation as indicated in Figure 2. Six soil gas samples were collected within the municipal parking lot area, as indicated in Figure 2, to determine the potential for vapor intrusion in the event that the site should undergo future redevelopment. There were detections of VOCs and SVOCs above the NYSDOH guidance values and EPA BASE Data Background Levels as provided in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York".

5.2: <u>Interim Remedial Measures</u>

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/RAR. In response to the preliminary findings of the Remedial Investigation in October 2005, a soil excavation and UST removal IRM was performed to address the subsurface contamination on site. During the excavation activities, excavation dewatering and active groundwater treatment via carbon filtration was performed. Approximately 12,360 gallons of groundwater was evacuated and treated from the excavation prior to discharge to the sanitary sewer system.

During the excavation activities, four USTs were located, ranging from 275-gallon to 1000-gallon capacity, and were subsequently emptied, cleaned, and properly disposed of off-site. The vertical extent of excavation varied across the site, with depths ranging from approximately 5 feet deep to approximately 20 feet deep in the areas of deeper contamination. In total, approximately 9,614 tons of contaminated soil was excavated and transported for off-site disposal.

The post-excavation confirmatory samples were analyzed for VOCs and SVOCs only, as the preliminary results from the RI revealed that SVOCs and VOCs were the primary contaminants of concern. Seventy-two (72) post-excavation soil samples were collected. As indicated in Table 2, only seven VOCs were detected slightly above SCGs. These results confirm that a majority of the site's SVOC and VOC contamination was addressed through the implementation of the IRM.

To prevent exposures to soil gas concentrations beneath the soon to be occupied building on site, the developer of the four-story office building that is currently under construction, installed a sub-slab vapor abatement system in the future office building. This sub-slab vapor abatement system will be in operation upon completion of the building construction.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 7.0 of the RI reports, which are located in the document repositories.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no known completed exposure pathways at the site. Potential exposure pathways include inhalation of contaminated soil vapors, dermal contact with impacted sub-surface soils or ingestion of groundwater containing volatile organic compounds.

Use of the site will be limited to restricted residential, but the continued commercial use is currently planned at this time. To address the potential for contaminated soil vapors to impact indoor air quality in the future on-site office building, an active sub-slab depressurization system will be installed during construction. Any changes in the use of the remainder of the site will require an evaluation of the potential for soil vapor intrusion and mitigation, if necessary.

The site is paved, therefore, contact with residual contaminated soil is unlikely. Maintenance of the pavement will be required, and the NYSDEC will require notification prior to any ground intrusive work to prevent the potential for exposures.

On-site groundwater is not used for potable or irrigation purposes, making exposures unlikely. Restrictions will be placed to prevent future use of the groundwater, and monitoring will continue.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site prior to the IRM. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands. The site, and all adjacent property, is a developed area with buildings, paved areas, and little to no vegetation. Contamination detected on site was a localized source, which was partially addressed during the IRM, that has not migrated and will not migrate from the site to impact any off-site resources. Therefore, no complete or potentially complete environmental exposure pathways or ecological risks were identified. However, site contamination has impacted the groundwater resource in the overburden aquifer.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS, SELECTED REMEDY, AND THE PROPOSED USE OF THE SITE

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to VOC and SVOC soil contamination exceeding SCGs.
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- the release of contaminants from subsurface soil under buildings, into indoor air through soil vapor.

The main SCGs applicable to this project are as follows:

- ambient groundwater quality standards: groundwater sample results indicate that the main groundwater contaminants of concern are VOCs in the municipal parking lot area. The soil excavation IRM was conducted directly adjacent to the VOC groundwater contaminant plume. The initial post-IRM groundwater sampling results indicate an improvement in groundwater quality with evidence of biodegradation. A long-term groundwater monitoring program would be needed to document the long-term effectiveness of the soil excavation IRM on the site's groundwater quality.
- TAGM 4046 and Part 375-6: the TAGM 4046 soil cleanup objectives for VOCs and SVOCs were used as the soil excavation IRM remediation goals. When compared to the 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, only seven VOCs were detected slightly above SCGs in the post-excavation confirmatory samples. These results reveal that a majority of the site's SVOC and VOC contamination was addressed through the implementation of the IRM.

The Department believes that the IRM has accomplished the remediation goals and satisfied the SCGs for the site, provided that groundwater continues to be monitored and a soil management plan is developed to address the residual contaminated soils to prevent human exposures and dispersion of contamination during potential future intrusive activities.

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department has selected No Further Action as the preferred alternative for the site. The Department believes that this alternative will be protective of human

health and the environment, and will satisfy all SCGs as described above. Overall protectiveness is achieved through meeting the remediation goals listed above.

The elements of the IRM already completed are:

- 1. Excavation and off-site disposal of 9,614 tons of contaminated soil;
- 2. Dewatering and treatment, via carbon filtration, of 12,360 gallons of groundwater; and treated groundwater was discharged to the sanitary sewer system;
- 3. Backfilling of the excavation with clean, off-site soil; and
- 4. Excavation and proper closure of four USTs.

Therefore, the Department concludes that No Further Action is needed other than site management, and institutional and engineering controls. The institutional and engineering controls are:

- 1. Imposition of an institutional control in the form of an environmental easement that will require: (a) limiting the use and development of the property to restricted residential use, which will also permit commercial use in conformance with local zoning; (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) submission by the property owner to the Department a periodic certification of institutional and engineering controls.
- 2. Development of a site management plan which will include the following institutional and engineering controls: (a) notice to the Department of any ground intrusive work or change in use, management of the final cover system to restrict excavation below the pavement layer, or buildings. Excavated soil would be tested, properly handled to protect the health and safety of workers and the nearby community, and would be properly managed in a manner acceptable to the Department; (b) evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) monitoring of groundwater and (d) provisions for the operation, maintenance, and monitoring of the of the installed sub-slab vapor mitigation system in the office building presently under construction.
- 3. The property owner would provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal would: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health

or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

The proposed future use for the Plattsburgh Gateway Project/Durkee Street site is commercial.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the environmental restoration process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media, and other interested parties, was established.
- A public meeting was held on February 27, 2007 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

In general, the public comments received were supportive of the selected remedy.

TABLE 1 Plattsburgh Gateway Project/Durkee Street Site Nature and Extent of Soil Contamination

July 2004 - January 2005

SUBSURFACE SOIL (Pre-IRM°)	Contaminants of Concern	Concentration Range Detected (ppm) ^a	SCG ^b (ppm) ⁿ	Frequency of Exceeding SCG
Semivolatile Organic	Benzo(a)anthracene	2.6 to 20	1	4 of 31
Compounds	Benzo(a)pyrene	2.1 to 14	1	4 of 31
	Benzo(k)fluoranthene	1.8 to 8.4	1	2 of 31
	Benzo(b)fluoranthene	2.4 to 17	1	4 of 31
	Chrysene	1.8 to 19	1	4 of 31
	Dibenzo(a,h)anthracene	0.78	0.33	1 of 31
Inorganic	Calcium	38,000 to 117,000	SB°	11 of 49
Compounds	Iron	3890 to 122,000	2,000	22 of 49
	Magnesium	5080 to 44,200	SB°	11 of 49
<u>.</u>	Mercury	1.0	0.81	1 of 49

a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; ug/m³ = micrograms per cubic meter

cIRM = interim remedial measure
MDL = laboratory minimum detection limit
SB = site background
GV = guidance value

^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 2

Plattsburgh Gateway Project/Durkee Street Site Post-IRM^c Confirmatory Soil Sampling Results

October -December 2005

SUBSURFACE SOIL (Post-IRM ^c)	Contaminants of Concern	Concentration Range Detected (ppm) ^a	SCG ^b (ppm) ^a	Frequency of Exceeding SCG
Semivolatile Organic	Benzo(a)anthracene	1.1 to 16	1	10 of 72
Compounds	Benzo(a)pyrene	0.085 to 15	1	9 of 72
	Benzo(b)fluoranthene	1.3 to 16	1	12 of 72
	Benzo(k)fluoranthene	1.2 to 5.9	1	5 of 72
	Chrysene	1.1 to 15	1	10 of 72
	Dibenzo(a,h)anthracene	0.39 to 1.1	0.33	3 of 72
	Indeno(1,2,3-cd)pyrene	0.65 to 7.9	0.5	6 of 72

IRM = interim remedial measure
 MDL = laboratory minimum detection limit
 SB = site background
 GV = guidance value

a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; ug/m³ = micrograms per cubic meter

^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 3 Plattsburgh Gateway Project/Durkee Street Site Groundwater Nature and Extent of Contamination July 2004

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb) ^a	SCG ^b (ppb) ^a	Frequency of Exceeding SCG
Volatile Organic	Methyl Tert-Butyl Ether	57	10	1 of 12
Compounds (VOCs)	Vinyl Chloride	2.2 to 170	2	3 of 12
	1,1-Dichloroethene	6.0	5	1 of 12
	Trans-1,2-Dichloroethene	8.0 to 410	5	2 of 12
	Cis-1,2-Dichloroethene	6.0 to 180	5	4 of 12
	Trichloroethene	11 to 99	5	1 of 12
Semivolatile Organic	Bis(2-Ethylhexyl) Phthalate	5.3	5	1 of 12
Compounds (SVOCs)				
Inorganic	Iron	1,380 to 38,200	300	6 of 7
Compounds	Lead	80.5	25	1 of 7
	Magnesium	50,400 to 128,000	35,000(GV°)	7 of 7
	Manganese	713 to 1,720	300	6 of 7
	Sodium	224,000 to 1,790,000	20,000	6 of 7

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; ug/m³ = micrograms per cubic meter

^c IRM = interim remedial measure

MDL = laboratory minimum detection limit

SB = site background

GV = guidance value

^bSCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

TABLE 4 Plattsburgh Gateway Project/Durkee Street Site Post-IRM^c Groundwater Sampling Results

December 2006

GROUNDWATER (Post-IRM°)	Contaminants of Concern	Concentration Range Detected (ppb) ^a	SCG ^b	Frequency of Exceeding SCG
Volatile Organic	Methyl Tert-Butyl Ether	57	10	1 of 6
Compounds (VOCs)	Vinyl Chloride	1.7 to 13	2	1 of 6
	Cis-1,2-Dichloroethene	4.1 to 32	5	3 of 6

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water; ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil; ug/m³ = micrograms per cubic meter

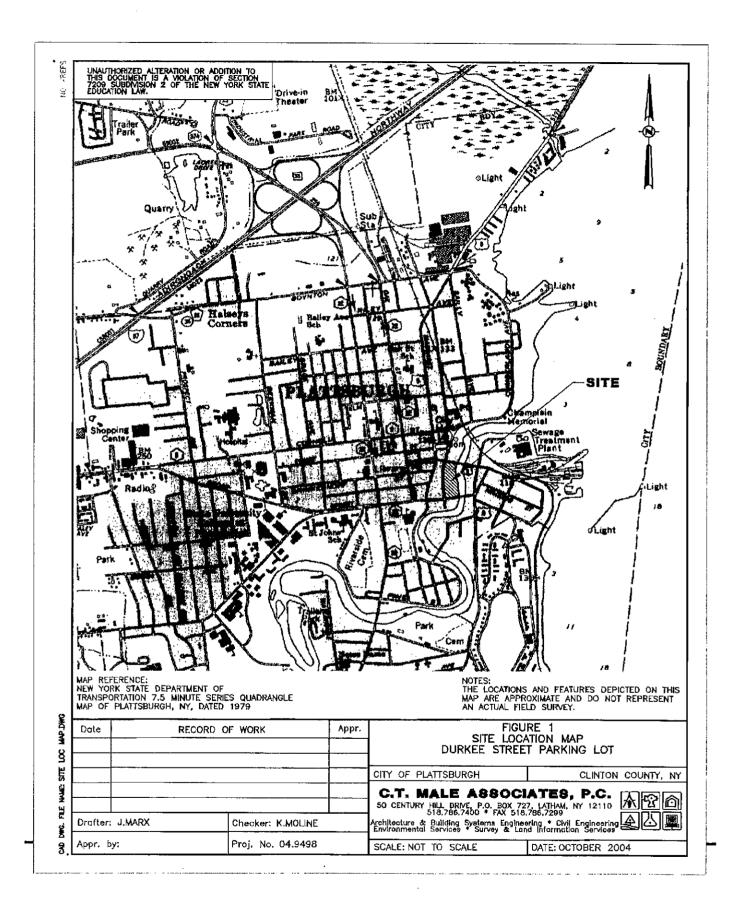
° IRM = interim remedial measure

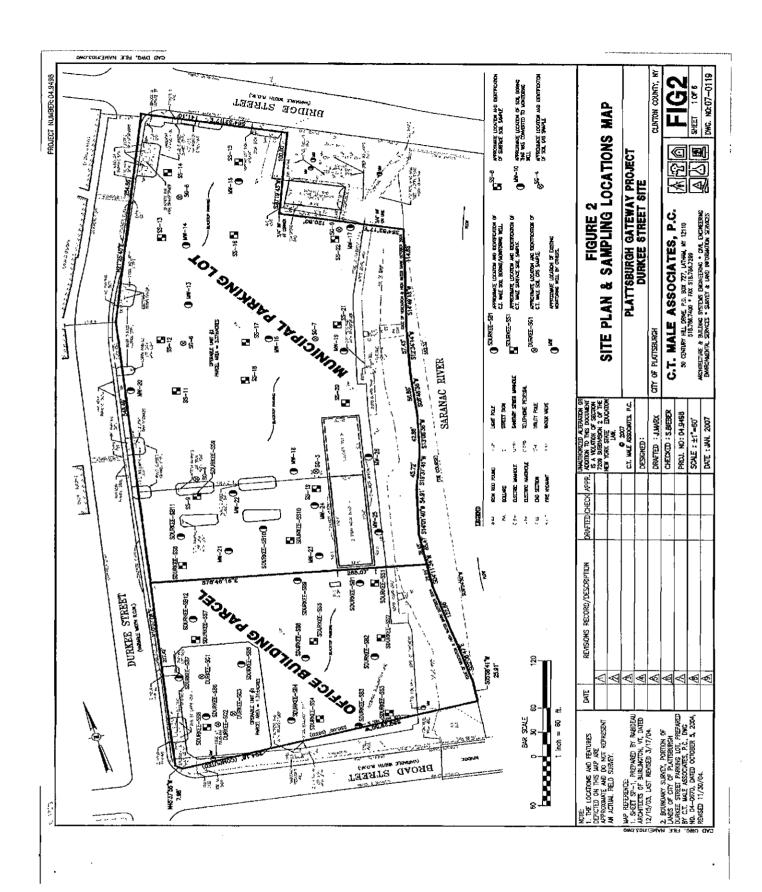
MDL = laboratory minimum detection limit

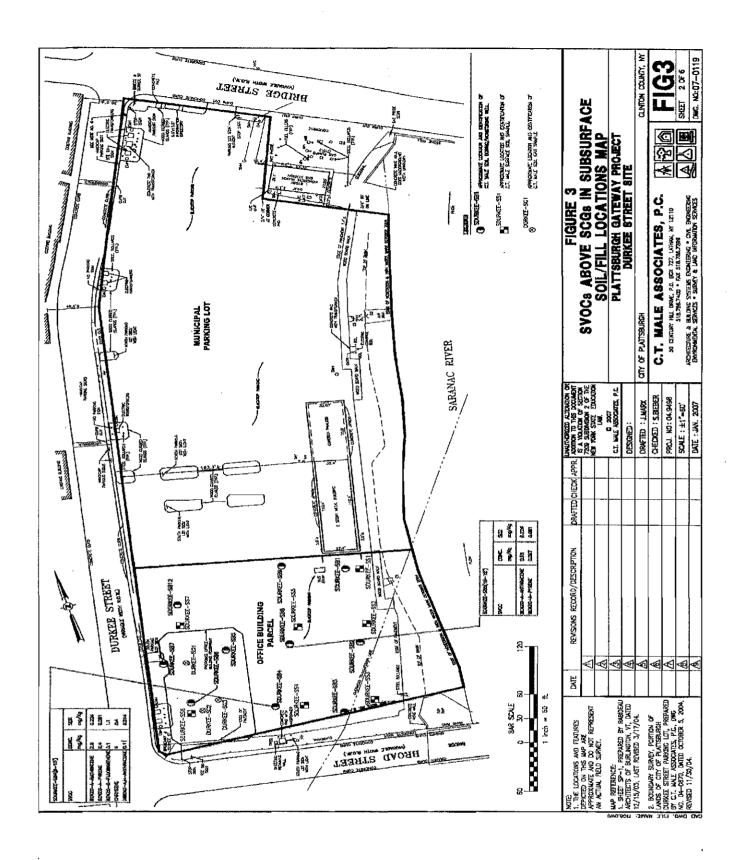
SB = site background

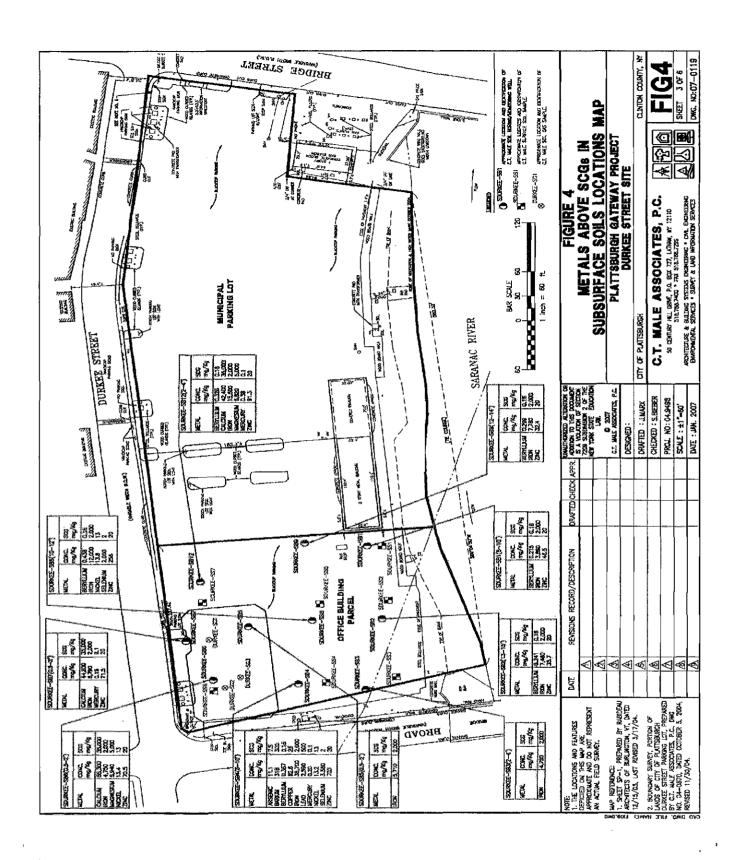
GV = guidance value

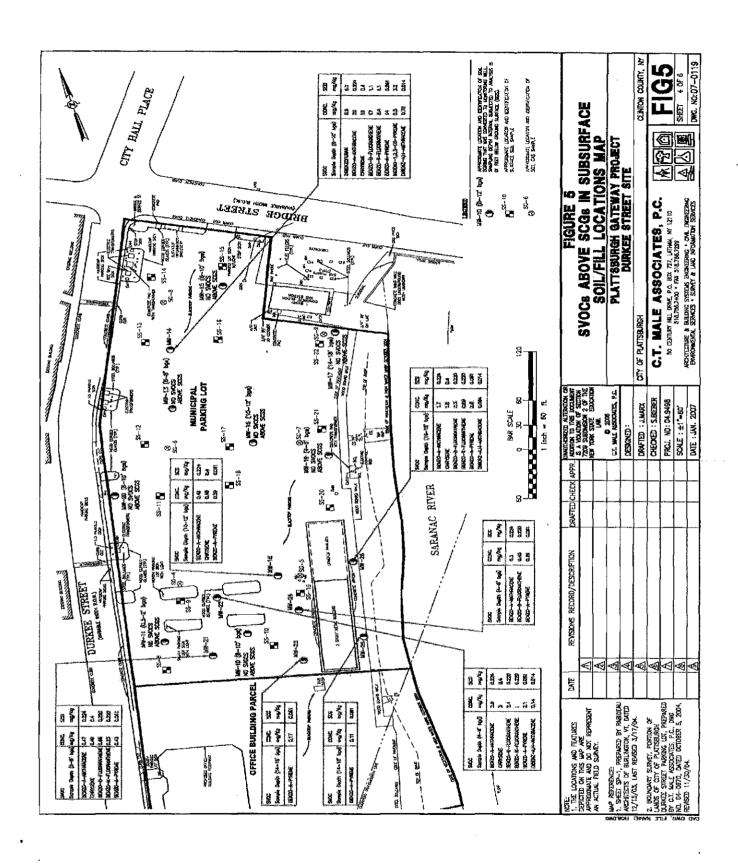
^b SCG = standards, criteria, and guidance values: Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; Technical and Administrative Guidance Memorandum (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels; NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives; and Guidance for Evaluating Soil Vapor Intrusion in New York.

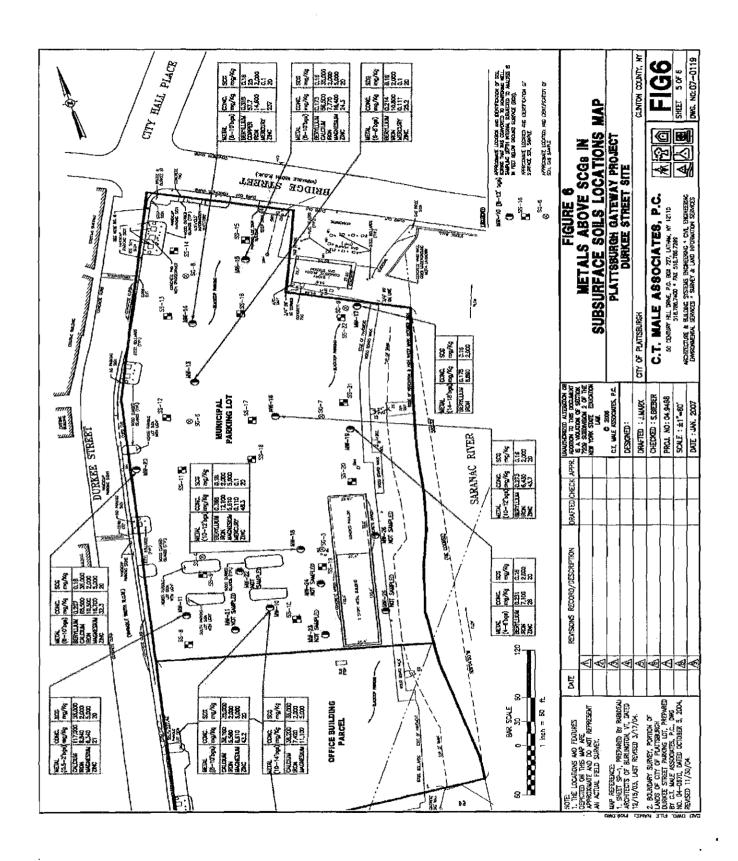


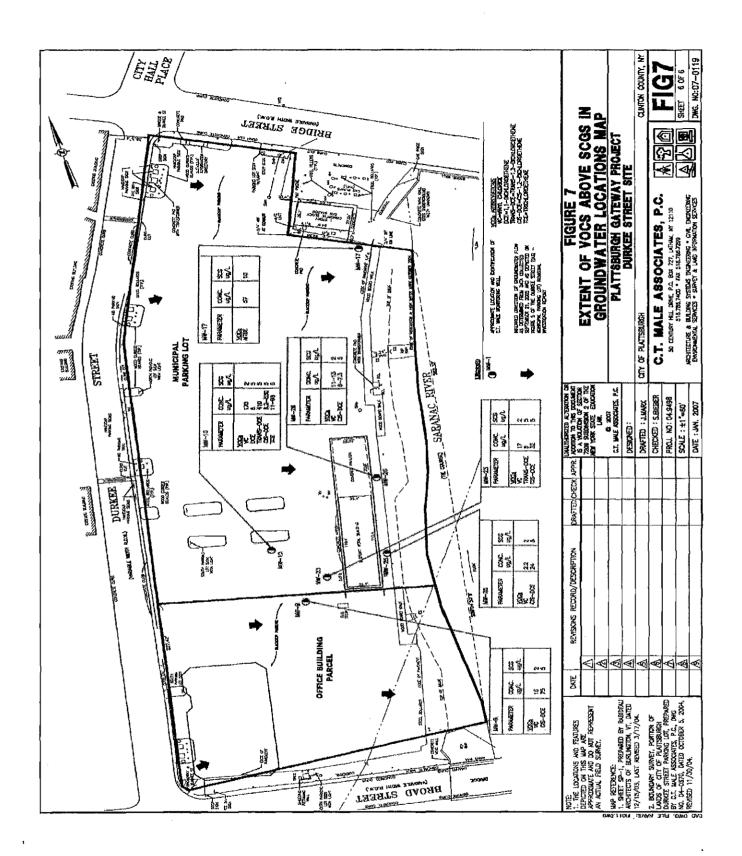












APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY Plattsburgh Gateway Project/Durkee Street Environmental Restoration Site

City of Plattsburgh, Clinton County, New York

Site No. E510020

The Proposed Remedial Action Plan (PRAP) for the Plattsburgh Gateway Project/Durkee Street site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 7, 2007. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater media at the Plattsburgh Gateway Project/Durkee Street site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 27, 2007, which included a presentation of the Remedial Investigation (RI) and the Remedial Alternatives Report (RAR), as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 25, 2007.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Where are the HVAC intakes on the office building in comparison to the vapor vents?

RESPONSE 1: The vapor vent is located on the eastern side or leeward side of the building. The building code requires a minimum of ten feet of separation between the HVAC intake and the vapor discharge point. However, the actual distance will be more than ten feet by nature of the HVAC unit being located in the center of the building.

COMMENT 2: Is testing of the vapor part of the ongoing management of the project?

RESPONSE 2: The vapor ventilation system will be managed pursuant to the Site Management Plan to be developed for the site. The Site Management Plan will outline the specific testing and monitoring of the system's operating components, including the vapor exhaust system.

COMMENT 3: Is the sub-slab system difficult to maintain?

RESPONSE 3: No, the system generally requires that a negative pressure be maintained under the building slab and is typically monitored by a pressure gauge. A qualified contractor will be required to maintain the system according to the Site Management Plan.

COMMENT 4: Could you elaborate on the periodic certification of institutional and engineering controls requirement?

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RESPONSE 4: The periodic certifications will need to be prepared and submitted by a professional engineer or such other expert acceptable to the Department. The expert will certify that the institutional and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications.

COMMENT 5: Will the management requirements be described in detail in the final project plans?

RESPONSE 5: The Site Management Plan will further elaborate, specify and document the operation, long term maintenance and monitoring requirements for the site.

COMMENT 6: When will the project plan be finalized?

RESPONSE 6: It is expected that the proposed remedy will be selected and documented in the Record of Decision, which is expected to be finalized by March 31, 2007. The Site Management Plan will be developed shortly after the execution of the Record of Decision.

COMMENT 7: Will the requirements of the management plan be essentially the same as what has been described in the PRAP?

RESPONSE 7: Correct, the specifics of the management plan will be further documented in the Site Management Plan.

COMMENT 8: How high are the vapor vents on top of the office building?

RESPONSE 8: The vapor discharge vent is being incorporated into the design of the building in that it will not protrude from the rooftop and cannot be seen from the surrounding landscape.

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APPENDIX B

Administrative Record

Administrative Record

Plattsburgh Gateway Project/Durkee Street Site Site No. E510020

- 1. Proposed Remedial Action Plan for the Plattsburgh Gateway Project/Durkee Street site, dated February 2007, prepared by the Department.
- 2. PRAP Availability Fact Sheet, February 2007, prepared by the Department.
- 3. "Remedial Investigation Work Plan", December 2004, prepared by C.T. Male Associates.
- 4. Site Investigation Fact Sheet, May 2005, prepared by the Department.
- 5. Interim Remedial Measures Fact Sheet, July 2005, prepared by the Department.
- 6. "Final Remedial Investigation Report, Operable Unit No. 1", January 2007, prepared by <u>C.T. Male Associates.</u>
- 7. "Final Remedial Investigation Report, Operable Unit No. 2", January 2007, prepared by <u>C.T. Male Associates.</u>
- 8. "Final Remedial Alternatives Analysis Report, Operable Unit No. 1", January 2007, prepared by <u>C.T.</u> Male Associates.
- 9. "Remedial Alternatives Analysis Report, Operable Unit No. 2", January 2007, prepared by <u>C.T. Male</u> Associates.

EXHIBIT 2 DEED RESTRICTION AND/OR ENVIRONMENTAL EASEMENT

Office of Environmental Quality, Region 5 1115 State Route 86, PO Box 296, Ray Brook, NY 12977 P: (518) 897-1241 | F: (518) 897-1245 www.dec.ny.gov

July 2, 2019

Honorable Colin L. Read City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter Plattsburgh Gateway Project/ Durkee St., Plattsburgh Clinton County, Site No.: E510020

Dear Mayor Read,

The Department of Environmental Conservation has reviewed your Periodic Review Report (PRR) and Institutional Control/Engineering Control Certification for the following period: February 13, 2018 to February 13, 2019.

The Department hereby accepts the PRR and associated Certification. With the potential for development of the site being considered, the frequency of Periodic Reviews for this site remains at 1 year; the next PRR is due on March 16, 2020. You will receive a reminder letter and updated certification form 75-days prior to the due date. Regardless of receipt or not of the reminder notice, the next PRR including the signed certification form is still due on the date specified above.

Additionally, development which may include the erection of site structures, paving of the site, or any activity likely to disrupt or expose contamination requires submittal of a Change of Use form at least 60 days before the change of use is to begin. The Change of Use form can be found at https://www.dec.ny.gov/docs/remediation_hudson_pdf/changeofuse.pdf. A hard copy is also enclosed for your reference.

Hon. Colin L. Read Re: Plattsburgh Gateway Project, Durkee St. June 27, 2019 Page 2

If you have any questions or comments please contact me at 518-897-1254 or e-mail: mike.mclean@dec.ny.gov.

Sincerely,

Michael McLean

Project Manager

ec: Charlotte Bethany, DOH Project Manager

Russell Huyck, RHWRE

Jeff Marx, CT Male Associates Matthew Miller, City of Plattsburgh



60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership

Required by 6NYCRR Part 375-1.11(d) and 375-1.9(f)

To be submitted at least 60 days prior to change of use to:

Chief, Site Control Section New York State Department of Environmental Conservation Division of Environmental Remediation, 625 Broadway Albany NY 12233-7020

	Site Name: DEC Site ID No		
	Contact Information of Person Submitting Notification:		
	Name:		
	Address1:		
	Address2:		
	Phone: E-mail:		
I.	Type of Change and Date: Indicate the Type of Change(s) (check all that apply):		
	Change in Ownership or Change in Remedial Party(ies)		
	Transfer of Certificate of Completion (CoC)		
	Other (e.g., any physical alteration or other change of use)		
	Proposed Date of Change (mm/dd/yyyy):		
IV.	Description: Describe proposed change(s) indicated above and attach maps, drawings, and/or parcel information.		
	If "Other," the description must explain <u>and</u> advise the Department how such change may or may not affect the site's proposed, ongoing, or completed remedial program (attach additional sheets it needed).		

I hereby certify that the prospective purchaser and/or remedial party has been provided a copy					
order, agreement, Site Management Plan, or State Assistance Contract regarding the Site's reprogram as well as a copy of all approved remedial work plans and reports.					
Name:					
	(Signature)	(Date)			
_	(Print Name)				
Address1:					
	E-mail:				
there will be a information. I Management F	mation for New Owner, Remedial In new remedial party, identify the prosest the site is subject to an Environment of the requiring periodic certification of the cate who will be the certifying party (pective owner(s) or party(ies) a al Easement, Deed Restriction, institutional controls/engineeri	long wit , or Site ing contr		
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VII. Agreement to Notify DEC after Transfer: If Section VI applies, and all or part of the site will be sold, a letter to notify the DEC of the completion of the transfer must be provided. If the current owner is also the holder of the CoC for the site, the CoC should be transferred to the new owner using DEC's form found at http://www.dec.ny.gov/chemical/54736.html. This form has its own filing requirements (see 6NYCRR Part 375-1.9(f)).

Signing below indicates that these notices will be provided to the DEC within the specified time frames. If the sale of the site also includes the transfer of a CoC, the DEC agrees to accept the notice given in VII.3 below in satisfaction of the notice required by VII.1 below (which normally must be submitted within 15 days of the sale of the site).

Within 30 days of the sale of the site, I agree to submit to the DEC:

- 1. the name and contact information for the new owner(s) (see §375-1.11(d)(3)(ii));
- 2. the name and contact information for any owner representative; and
- 3. a notice of transfer using the DEC's form found at http://www.dec.ny.gov/chemical/54736.html (see §375-1.9(f)).

Name:		
_	(Signature)	(Date)
-	(Print Name)	
Address1:		
Address2:		
Phone:	E-mail:	

Continuation Sheet Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Name: Address1: Address2: E-mail: Phone: Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Address1: E-mail: Phone: Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Name: Address1: Address2: _____ E-mail: _____ Phone: Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Address1: Address2: E-mail: Phone: Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Name: Address1: Address2: E-mail: Phone: Prospective Owner/Holder Prospective Remedial Party Prospective Owner Representative Address1: Address2: Phone: E-mail:

New York State Department of Environmental Conservation



Instructions for Completing the 60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion (CoC), and/or Ownership Form

Submit to: Chief, Site Control Section, New York State Department of Environmental Conservation, Division of Environmental Remediation, 625 Broadway, Albany NY 12233-7020

Section I	Description			
Site Name	Official DEC site name.			
Site Ivallie	(see http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3)			
	(see http://www.dec.ny.gov/chmz/extapps/defexternal/mdex.chm?pageid=3)			
DEC Site ID No.	DEC site identification number.			
Section II	Contact Information of Person Submitting Notification			
Name	Name of person submitting notification of site change of use, transfer of certificate of completion and/or ownership form.			
Address1	Street address or P.O. box number of the person submitting notification.			
Address2	City, state and zip code of the person submitting notification.			
Phone	Phone number of the person submitting notification.			
E-mail	E-mail address of the person submitting notification.			
Section III	Type of Change and Date			
Check Boxes	Check the appropriate box(s) for the type(s) of change about which you are notifying the Department. Check all that apply.			
Proposed Date of Change	Date on which the change in ownership or remedial party, transfer of CoC, or other change is expected to occur.			
Section IV	Description			
Description	For each change checked in Section III, describe the proposed change.			
4.6.4	Provide all applicable maps, drawings, and/or parcel information.			
	If "Other" is checked in Section III, explain how the change may affect the site's			
	proposed, ongoing, or completed remedial program at the site.			
	Please attach additional sheets, if needed.			

1

Section V Certification Statement

This section must be filled out if the change of use results in a change of ownership or responsibility for the proposed, ongoing, or completed remedial program for the site. When completed, it provides DEC with a certification that the prospective purchaser has been provided a copy of any order, agreement, or State assistance contract as well as a copy of all approved remedial work plans and reports.

Name The owner of the site property or their designated representative must sign and date the

certification statement. Print owner or designated representative's name on the line provided

below the signature.

Address1 Owner or designated representative's street address or P.O. Box number.

Address2 Owner or designated representative's city, state and zip code.

Phone Owner or designated representative's phone number.

E-Mail Owner or designated representative's E-mail.

Section VI Contact Information for New Owner, Remedial Party, and CoC Holder (if a CoC was issued)

Fill out this section only if the site is to be sold or there will be a new remedial party. Check the appropriate box to indicate whether the information being provided is for a Prospective Owner, CoC Holder (if site was ever issued a COC), Prospective Remedial Party, or Prospective Owner Representative. Identify the prospective owner or party and include contact information. A Continuation Sheet is provided at the end of this form for additional owner/party information.

Name of Prospective Owner, Prospective Remedial Party or Prospective Owner Representative.

Address1 Street address or P.O. Box number for the Prospective Owner, Prospective Remedial Party, or

Prospective Owner Representative.

Address2 City, state and zip code for the Prospective Owner, Prospective Remedial Party, or Prospective

Owner Representative.

Phone Phone number for the Prospective Owner, Prospective Remedial Party or Prospective Owner

Representative.

E-Mail E-mail address of the Prospective Owner, Prospective Remedial Party or Prospective Owner

Representative.

If the site is subject to an Environmental Easement, Deed Restriction, or Site Management Plan requiring periodic certification of institutional controls/engineering controls (IC/EC), indicate who will be the certifying party(ies). Attach additional sheets, if needed.

Certifying Party

Name of Certifying Party.

Address1 Certifying Party's street address or P.O. Box number.

Address2 Certifying Party's city, state and zip code.

Phone Certifying Party's Phone number.

E-Mail Certifying Party's E-mail address.

Section VII Agreement to Notify DEC After Property Transfer/Sale

This section must be filled out for all property transfers of all or part of the site. If the site also has a CoC, then the CoC shall be transferred using DEC's form found at http://www.dec.ny.gov/chemical/54736.html

Filling out and signing this section of the form indicates you will comply with the post transfer notifications within the required timeframes specified on the form. If a CoC has been issued for the site, the DEC will allow 30 days for the post transfer notification so that the "Notice of CoC Transfer Form" and proof of it's filing can be included. Normally the required post transfer notification must be submitted within 15 day (per 375-1.11(d)(3)(ii)) when no CoC is involved.

Name Current property owner must sign and date the form on the designated lines. Print owner's name

3

on the line provided.

Address1 Current owner's street address.

Address2 Current owner's city, state and zip code.

Office of Environmental Quality, Region 5 1115 State Route 86, PO Box 296, Ray Brook, NY 12977 P. (518) 897-1241 F. (518) 897-1245 www.dre.nygov.

Sent Via Email Only

December 10, 2018

Honorable Colin Read Mayor, City of Plattsburgh 41 City Hall Place Plattsburgh, NY carlinb@cityofplattsburgh-ny.gov

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter

Plattsburgh Gateway Project/ Durkee St.

Site No.: E510020

Plattsburgh (C), Clinton County

Dear Mayor Read:

New York State Department of Environmental Conservation ("Department") has reviewed your Periodic Review Report (PRR) and IC/EC Certification for the following period: May 15, 2007 to February 13, 2018. Additionally, the Department also reviewed the C. T. Male 2017 Annual Site Inspection Report dated August 27, 2018.

The Department hereby accepts the PRR and associated Certification. Due to the potential for redevelopment at the location, the frequency of Periodic Reviews for this site will remain as annually. The next PRR is due on March 15, 2019. You will receive a reminder letter and updated certification form 75-days prior to the due date. Regardless of receipt or not of the reminder notice, the next PRR including the signed certification form is still due on the date specified above.

No further groundwater monitoring is necessary at the location; site groundwater contaminants show a decreasing contaminant trend and are just slightly above groundwater standards, groundwater is not utilized in the area, and the monitoring wells are becoming aged and in disrepair. Proper decommissioning of all monitoring wells is required and a monitor well decommissioning report must be submitted to the Department. This work can occur in 2019 with the return of warmer weather.



Hon. Colin Read Re: Plattsburgh Gateway Project December 10, 2018 Page 2

If you have questions or concerns please contact me at 518-897-1254 or e-mail at mike.mclean@dec.ny.gov .

Sincerely,

Michael McLean, P.E. Project Manager

MM:bk

ec: Russell Huyck, NYSDEC

Charlotte Bethoney, NYSDOH, charlotte.bethoney@health.ny.gov Jeff Marx, CT Male Associates, j.marx@ctmale.com



Bulk Storage Database Search Details

Next Site

Last Site

Facility Information

Site No.: 5-438499

Status: Unregulated/Closed **Expiration Date:** 07/09/2019

Site Type: PBS Facility Type: Other

Site Name: 40 BRIDGE STREET Address: 40 BRIDGE STREET Locality: PLATTSBURGH

State: NY

Zipcode: 12901 County: Clinton

Facility(Property) Owner(s) Information

Facility Owner: CITY OF PLATTSBURGH

CITY HALL, 41 CITY HALL PLACE . PLATTSBURGH, NY. 12901

Mail Contact: CITY OF PLATTSBURGH CITY HALL . PLATTSBURGH, NY. 12901

Facility Operator

Facility Operator: N/A

Tank Information

4 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
0004	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	275
001	Underground including vaulted with no access for inspection	Closed - Removed	12000
002	Underground including vaulted with no access for inspection	Closed - Removed	12000
003	Underground including vaulted with no access for inspection	Closed - Removed	12000

Return To Results

Refine This Search

Office of Environmental Quality, Region 5
1115 State Route 86, PO Box 296, Ray Brook, NY 12977
P: (518) 897-1241 | F: (518) 897-1245
www.dec.nv.gov

Sent Via E-mail Only

June 25, 2019

Mr. Jeff Marx CT Male Associates 50 Century Hill Drive Latham, NY 12977-0296

Re: Response to June 13, 2019 Spill Status Clarification Former Highway Oil, 40 Bridge Street, City of Plattsburgh

Dear Jeff,

I have reviewed your June 13, 2019 correspondence concerning the five closed spill numbers related to the former Highway Oil Site.

The Department does not require any additional investigation or clean-up work at the site. The latest Aztech site investigation report dated November 2016 did identify low level gasoline contamination in the groundwater and in the soil approximately 20 feet below grade. Public water is utilized in the area.

It is recommended that if development at the location involves soil excavation that any excavated soil be properly screened with field instruments to identify potential petroleum contamination. The Department needs to be notified if petroleum contamination is encountered; and sampling of the material may be necessary to allow for off-site disposal or on-site use. This procedure is required at the Durkee Street ERP site in the Site Management Plan.

If you have questions or concerns about this information, please contact me. I can be reached at (518) 897-1242.

Sincerely,

Michael P. McLean

Professional Engineer 1 (Environmental)

ec: Matthew Miller, City of Plattsburgh

