



Stormwater Management Plan

Town of Windsor Locks, Connecticut



PREPARED FOR

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April 2017



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1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) determined that municipal separate storm sewer systems (MS4s) are a major pathway for the introduction of pollutants to waterways and are a leading cause of the impairment of ambient water quality, for both fresh and coastal waters. Phase II of the National Pollutant Discharge Elimination System (NPDES) program for stormwater from MS4s requires small MS4s (those with a population of less than 100,000) to implement a stormwater management program. The Connecticut Department of Energy and Environmental Protection (DEEP) administers and implements this program through the *General Permit for the Discharge of Stormwater from Small Municipal Storm Sewer Systems* (the General Permit).

On January 20, 2016, DEEP issued a new General Permit that will be effective July 1, 2017. As part of the General Permit application, municipalities are required to develop and implement a Stormwater Management Plan that addresses six minimum control measures (MCMs) with selected best management practices (BMPs) and measurable goals for each respective control measure. The Stormwater Management Plan addresses each minimum measure required by the General Permit including the following:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-construction Stormwater Management
- Pollution Prevention and Good Housekeeping

The Town of Windsor Locks has developed this Stormwater Management Plan to meet the requirements of the General Permit and minimize the discharge of pollutants from the MS4.

2.0 ELIGIBLE ACTIVITIES

Under the General Permit, the Town is authorized to discharge stormwater from or associated with its MS4, provided the requirements for authorization are satisfied and the activity is conducted in accordance with this Stormwater Management Plan and the following conditions applicable for certain discharges:

1. There shall be no distinctly visible floating scum, oil, or other matter contained in the stormwater discharge. Excluded from this are naturally occurring substances such as leaves and twigs, provided no person has placed such substances in or near the discharge.
2. The stormwater discharge shall not result in pollution which may cause or contribute to acute or chronic toxicity to aquatic life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.
3. The stormwater discharge shall not cause or contribute to an exceedance of the applicable Water Quality Standards in the receiving water.



4. Any new stormwater discharge to high quality waters shall be discharged in accordance with the Connecticut Anti-Degradation Implementation Policy in the Water Quality Standards manual. At a minimum, the Town shall evaluate and implement to the Maximum Extent Practicable (MEP) practices which will prevent the discharge of the Water Quality Volume to a surface water body or other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.
5. Any stormwater discharge to waters identified in Appendix D of the General Permit shall be managed for the Stormwater Pollutant of Concern identified consistent with the requirements of the General Permit.

The Town is also authorized to discharge the following non-stormwater discharges, provided these discharges are controlled to the MEP, such discharges do not contribute to a violation of water quality standards, and such discharges are documented in the Stormwater Management Plan and are not significant contributors of pollutants to an MS4:

1. Uncontaminated ground water discharges including, but not limited to, pumped ground water, foundation drains, water from crawl space pumps and footing drains.
2. Irrigation water including, but not limited to, landscape irrigation and lawn watering runoff.
3. Residual street water associated with sweeping.
4. Discharges or flows from firefighting activities (except training).
5. Naturally occurring discharges, such as rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), springs, diverted stream flows, and flows from riparian habitats and wetlands.
6. Any non-stormwater discharge authorized by a permit issued pursuant to Section 22a-430 or 22a-430b of the Connecticut General Statutes is also authorized under the General Permit.

3.0 MINIMUM CONTROL MEASURES

3.1. Public Education and Outreach

Under this MCM, the Town anticipates implementation of the following BMPs:

1-1 Implement public education program

The following tools are used to educate the public with regard to general information about the MS4 and stormwater.

1. **The Windsor Locks Stormwater Homepage.** This webpage is a public education and outreach resource that provides information specific to the MS4, as well as links to key external stormwater resources. The webpage is currently housed at the following web address:
<https://www.windsorlocksct.org/departments/public-works/stormwater-information>.
2. **Informational Posters and other Print Materials in Town Offices.** The Town displays informational stormwater posters in public offices that are responsible for issuing permits or



are otherwise involved in stormwater pollution prevention. These include the Public Works Office, Water Pollution Control Facility, and Building Department Office in the Town Hall.

Responsible Parties: Department of Public Works

Measureable Goal(s): Public education program is implemented and tracked

Timeline: Initiate by June 2018. Ongoing thereafter.

1-2 Address education and outreach for pollutants of concern

Pollutants of concern include nitrogen, phosphorus, bacteria, and mercury. Ethylene glycol and propylene glycol are also listed as pollutants of concern in Seymour Hollow Brook and Rainbow Brook. To raise public awareness, the Town will provide educational materials identifying how these pollutants are generated and can be minimized. Additionally, these materials will identify the receiving waters impaired by each of these pollutants to raise awareness of the need to minimize discharge of these pollutants from their communities.

Educational materials will cover the following sources, impacts, and pollution reduction practices, at a minimum:

1. Septic systems
2. Sanitary cross-connections
3. Fertilizer use
4. Grass clippings and leaves management
5. Detergent use
6. Discharge of sediment from construction sites
7. Other erosive surfaces
8. Waterfowl
9. Pet waste
10. Manure piles
11. Thermometers
12. Thermostats
13. Fluorescent lights
14. Button cell batteries

Responsible Parties: Department of Public Works

Measureable Goal(s): Educational materials on pollutants of concern are distributed and/or posted



Timeline: Initiate by June 2018. Ongoing thereafter.

1-3 Inspection and maintenance of watercourse signage

The Town previously installed signage at road crossings of named tributaries to increase public awareness of local water resources. Signage will be inspected for conformance and visibility on an annual basis and maintained or replaced, as necessary. Inspection and maintenance records will be maintained.

Responsible Parties: Department of Public Works

Measureable Goal(s): Inspections and maintenance of signage are completed and tracked

Timeline: Initiate by July 2017. Ongoing thereafter.

3.2. Public Involvement/Participation

Under this MCM, the Town anticipates implementation of the following BMPs:

2-1 Comply with public notice requirements for the Stormwater Management Plan and Annual Reports

The Town will ensure that availability of the Stormwater Management Plan and the Annual Report, including any amendments to either document, is publicly noticed in accordance with the requirements of the General Permit.

The notice will provide a contact name, phone number, address, and email to whom the public can send comments. Additionally, the Stormwater Management Plan and the Annual Report will be made available at a publicly accessible location and the Town's website for public review.

Public notices regarding the availability of the Annual Report will allow for the required 45-day public review and comment period, pursuant to Section 4(d)(3) of the General Permit. Other public notices will allow for at least a 30-day public comment period, pursuant to Section 6(a)(2)(A).

Responsible Parties: Department of Public Works

Measureable Goal(s): Public notifications are made according to required schedules

Timeline: Initiate by July 2017. Ongoing thereafter.

2-2 Support community clean-up events

The Town will assist with community clean-up events to remove and properly dispose of trash and debris from public lands on an annual basis. The location(s), dates, and scope of clean-up events will be coordinated with the sponsoring organization, commission, or department.

Responsible Parties: Department of Public Works

Measureable Goal(s): Clean-up assistance provided on an annual basis and tracked

Timeline: Initiate by June 2018. Ongoing thereafter.



3.3. Illicit Discharge Detection and Elimination

Under this MCM, the Town anticipates implementation of the following BMPs:

3-1 Develop written IDDE program

Currently, the Town addresses illicit discharges through periodic dry-weather inspections of randomly selected outfalls on a rotating basis. Video surveillance of drainage infrastructure is also conducted prior to engineering sanitary sewers, drainage, or road surfaces to identify potential illicit connections in the affected segments.

As part of this BMP, a written Illicit Discharge Detection and Elimination (IDDE) program will be developed to provide specific protocols for systematic evaluation of the Urbanized Area that are consistent with Appendix B of the General Permit.

Responsible Parties: Department of Public Works

Measureable Goal(s): Written IDDE program developed

Timeline: Completed by June 2018

3-2 Develop list and maps of all MS4 stormwater outfalls in urbanized and priority areas

Stormwater outfalls greater than 12 inches in diameter were mapped at a 1"=200' scale throughout the Windsor Locks MS4. These maps were finalized in 2006 (Appendix B).

Under this BMP, the locations of the mapped outfalls on existing maps will be confirmed. An outfall database will be developed and updated, as necessary, to reflect the current condition of each outfall. The database will be prepared in a format compatible with Microsoft Word and include the following information for each discharge feature:

1. Type, material, size, and location (coordinates).
2. Name, water body ID, and Surface Water Quality Classification of the immediate receiving surface waterbody or wetland.
3. If the outfall does not discharge directly to a named surface waterbody or wetland, the name, water body ID, and Surface Water Quality Classification of the nearest named waterbody to which the outfall discharges will be indicated.
4. Name of the watershed, including the subregional drainage basin number in which the discharge is located.

Responsible Parties: Department of Public Works

Measureable Goal(s): Outfall database and maps developed

Timeline: By June 2019



3-3 Develop citizen reporting program

The Town has developed a citizen reporting program that is accessible through the Windsor Locks Stormwater Homepage (<https://www.windsorlocksct.org/departments/public-works/stormwater-information>). Citizens may report suspected illicit discharges to the MS4 through a hotline phone number for confidential reporting, as well as by emailing the Public Works Director. Reports submitted through this system will be investigated and the outcomes of each investigation will be tracked. The program will be updated, as necessary, to facilitate citizen reporting of illicit discharges.

Responsible Parties: Department of Public Works

Measureable Goal(s): Citizen reporting system established. Reports investigated and tracked.

Timeline: Initiate by July 2017. Ongoing thereafter.

3-4 Establish legal authority to prohibit illicit discharges

Illicit discharges are currently prohibited under Chapter 307 of the Windsor Locks Code of Ordinances. The legal authority will be reviewed and amended, as needed, to maintain compliance with the General Permit.

Responsible Parties: Department of Public Works

Measureable Goal(s): Amended ordinance and/or regulations adopted

Timeline: By June 2018. Ongoing on an as-needed basis thereafter.

3-5 Develop record-keeping system for IDDE tracking

The Town will develop a database of IDDE activities to track detection and elimination of illicit discharges to the MS4. The database will include the following elements, at a minimum:

1. Location (street address and/or coordinates)
2. Description of the discharge
3. Date(s) of inspection
4. Sampling data
5. Action(s) taken
6. Date of removal or repair
7. Responsible parties

Responsible Parties: Department of Public Works

Measureable Goal(s): IDDE database developed

Timeline: By July 2017



3-6 Address IDDE in areas with pollutants of concern

The Town will prioritize IDDE for outfalls discharging to waters where phosphorus, nitrogen, or bacteria is a pollutant of concern. In Windsor Locks, wastewater is generally conveyed via sanitary sewer to Publicly Owned Treatment Works (POTWs) for treatment. Remaining facilities or developed areas that are not connected to the sanitary sewer system will be identified. For those facilities and areas, priority for IDDE will be focused where historic on-site sanitary system failures, proximity to bacteria impaired waters, low infiltrative soils, and/or shallow groundwater are known to exist. The Town will consult with local or state health officials, as necessary, to assist in identifying failing septic systems.

Responsible Parties: Department of Public Works

Measureable Goal(s): Illicit discharges screened, tracked, and eliminated in areas with pollutants of concern.

Timeline: Initiate by June 2018. Ongoing thereafter, as needed to address IDDE in these areas.

3-7 Support hazardous waste collection and recycling events

The Town hosts an annual Hazardous Waste Collection Day event to encourage residents of the MS4 to properly dispose of household hazardous waste. This event is sponsored by The Metropolitan District and services residents of Windsor Locks, as well as other nearby towns. The amounts and types of hazardous waste collected are tracked. The number of cars and town of residences are also tracked. The Town will continue to support hazardous waste collection and recycling events on an annual basis.

Responsible Parties: Department of Public Works

Measureable Goal(s): Hazardous waste collection event held and results tracked

Timeline: By June 2018

3.4. Construction Site Runoff Control

Under this MCM, the Town anticipates implementation of the following BMPs:

4-1 Implement, upgrade, and enforce legal authority to meet requirements of the General Permit

Chapters IX, X, and XI of the Windsor Locks Zoning Regulations and Chapter 7 of the Inland Wetlands and Waterways Regulations require plans providing acceptable measures for addressing runoff from construction sites.

The legal authority to control construction site runoff will be reviewed and amended, as needed, to maintain compliance with the General Permit.

Responsible Parties: Department of Public Works, Planning and Zoning Commission

Measureable Goal(s): Amended ordinance and/or regulations adopted



Timeline: By June 2019

4-2 Develop and implement plan for interdepartmental coordination in site plan review and approval

The Town will develop and implement a plan outlining how all municipal or institutional departments and boards with jurisdiction over the review, permitting, or approval of land disturbance and development projects will coordinate their functions.

Responsible Parties: Department of Public Works, Planning and Zoning Commission, Town Engineer, Building Department, Inland Wetlands and Watercourses Commission

Measureable Goal(s): Plan developed and implemented by coordinating departments and commissions

Timeline: By July 2017. Ongoing thereafter.

4-3 Review site plans for stormwater quality concerns

The Town conducts site plan reviews in such a way as to incorporate consideration of stormwater controls or management practices to prevent or minimize impacts to water quality. Reviews will be documented and tracked.

Responsible Parties: Planning and Zoning Commission, Town Engineer, Building Department, Inland Wetlands and Watercourses Commission

Measureable Goal(s): Site plans reviewed and tracked

Timeline: By July 2017. Ongoing thereafter.

4-4 Conduct site inspections

The Town completes inspections of construction sites to assess and enforce the adequacy of the installation, maintenance, operation, and repair of stormwater control measures. Inspections will be documented and tracked, including information on problems, violations, and corrective actions.

Responsible Parties: Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission

Measureable Goal(s): Site inspections conducted and documented

Timeline: By July 2017. Ongoing thereafter.



4-5 Implement procedure to allow public comment on site development

The public may provide comment on site development, including proposed and ongoing site development and land disturbance activities at Planning and Zoning Commission meetings.

Responsible Parties: Planning and Zoning Commission

Measureable Goal(s): Public comment procedure implemented for site development proposals and ongoing activities

Timeline: By July 2017. Ongoing thereafter.

4-6 Implement procedure to notify developers about DEEP construction stormwater permit

The Town will notify developers or contractors of their potential obligation to obtain authorization under the DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities. This notification will be triggered during site plan review for projects disturbing one or more acres of land (individually or collectively) and resulting in a point source discharge directly to surface waters or through the MS4. Notification will include a provision informing the developer or contractor of their obligation to provide a copy of the site Stormwater Pollution Control Plan to the Town upon request.

Responsible Parties: Planning and Zoning Commission

Measureable Goal(s): Incorporate written notification procedure into site development review process

Timeline: By July 2017. Ongoing thereafter.

3.5. Post-construction Stormwater Management

Under this MCM, the Town anticipates implementation of the following BMPs:

5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning

The Town will review existing legal authority regarding low impact development (LID) and runoff reduction site planning and development practices. Local regulatory barriers to implementing LID and runoff reduction practices to the maximum extent possible will be identified and, where appropriate, reduced or eliminated.

Responsible Parties: Department of Public Works, Planning and Zoning Commission

Measureable Goal(s): Amended ordinance and/or regulations adopted

Timeline: By June 2021



5-2 Establish LID/runoff reduction requirements for development and redevelopment projects

LID and runoff reduction requirements will be amended, as necessary, to require the following standards:

1. For redevelopment of sites that are currently developed with directly connected impervious area (DCIA) of 40% or more, retain half the water quality volume onsite
2. For new development and redevelopment of sites with less than 40% DCIA, retain the water quality volume for the site
3. An alternate retention or treatment standard, pursuant to Section 6(a)(5)(B)(i)-(ii) of the General Permit

Compliance with these requirements will be enforced and documented.

Responsible Parties: Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission

Measureable Goal(s): Compliance with requirements enforced and tracked

Timeline: By June 2021. Ongoing thereafter.

5-3 Implement long-term maintenance plan for stormwater basins and treatment structures

The Town will develop and implement a long-term maintenance plan for ensuring the effectiveness of stormwater basins and treatment structures located in priority areas. Priority areas include the Urbanized Area and those catchment areas with DCIA in excess of 11% or which discharge to impaired waters. The plan will include stormwater basins and treatment structures owned or operated by the Town, including privately owned stormwater basins and treatment structures for which the Town maintains an easement or other legal authority.

Responsible Parties: Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission

Measureable Goal(s): Written plan developed and implemented

Timeline: By June 2019. Ongoing thereafter.

5-4 DCIA mapping

The Town will calculate the DCIA contributing stormwater runoff to each of its MS4 outfalls. The DCIA calculations will be made according to the protocol below, which is consistent with guidance available from the DEEP stormwater webpage (www.ct.gov/deep/municipalstormwater). Changes in DCIA will be tracked as development, redevelopment, or retrofit projects occur and will be reported in the Annual Report.



Protocol for Calculating DCIA

The process and resources required to calculate DCIA for Windsor Locks follows the guidance provided by DEEP's *Connecticut Watershed Response Plan for Impervious Cover* (http://www.ct.gov/deep/lib/deep/water/ic/watershed_response_plan_for_ic/appendix3_ic_in_ct_municipalities.pdf). This guidance identifies two options for performing the calculation:

1. For areas where information on land use and connectivity is limited, the DCIA may be estimated using the following equation: $DCIA\% = 0.1(\%IC)^{1.5}$.
2. For areas where sufficient information is available, the calculation is based on the "Sutherland Equations," which provide additional precision by accounting for differences in catchment area types (Table A).

Table A. DCIA Equations by Area Type

DCIA Type	Description of Contributing Area	Equation to Apply
Fully	100% storm sewered with all impervious cover (IC)	None
Highly	Mostly storm sewered with curb and gutter, residential rooftops connected to MS4	$DCIA\% = 0.4(\%IC)^{1.2}$
Average	Mostly storm sewered with curb and gutter, residential rooftops not connected to MS4	$DCIA\% = 0.1(\%IC)^{1.5}$
Partially	50% storm sewered with some infiltration and residential rooftops not connected to MS4	$DCIA\% = 0.04(\%IC)^{1.7}$
Slightly	Small % of urban area storm sewered or mostly infiltration	$DCIA\% = 0.01(\%IC)^2$

Modified from Sutherland (1995)

To calculate the percent of impervious cover for each outfall, the Town will use the Estimation Tool for Impervious Surfaces developed by the University of Connecticut (UConn) Center for Land Use Education and Research (<http://clear.uconn.edu/tools/is/etis/index.htm>). This GIS tool requires the following datasets and processes:

- **National Land Cover Data (NLCD):** The most current NLCD (2011) is available from <https://www.mrlc.gov>
- **Population density:** The density is expressed in people per square mile and will be based on the most recent available population census block data



- **Analysis unit:** Polygons will be constructed to define the connected contribution area for each, with connection defined as continuous conveyance via paved surfaces, gutters, drain pipes, or other conventional conveyance and detention structures that do not reduce runoff volume. These polygons will exclude the following:
 - Impervious areas (IA) draining to stormwater practices designed to meet recharge and other volume reduction criteria
 - IA draining to stormwater practices designed to meet recharge and other volume reduction criteria
 - Isolated IA with an indirect hydraulic connection to the MS4, or that otherwise drains to a pervious area
 - Swimming pools or man-made impoundments, unless drained to an MS4
 - The surface area of natural waterbodies (e.g., wetlands, ponds, lakes, streams, rivers)

This mapping process may be augmented using aerial photography and other relevant data, as needed, to assist in determining boundaries. Supplemental site visits may also be conducted to resolve remaining uncertainties. Once completed, these connected contribution areas will be classified based on the area types and descriptions, and represent the analysis units for the ETIS calculation.

Responsible Parties: Department of Public Works

Measureable Goal(s): DCIA calculated for drainage areas associated with each outfall

Timeline: By June 2020. Ongoing thereafter.

5-5 Address post-construction issues in areas with pollutants of concern

The Town will prioritize long-term maintenance issues for correction in catchment areas draining to impaired receiving waters where pollutants of concern may include nitrogen, phosphorous, or bacteria. A retrofit program will be developed, funded, and implemented to identify and address these issues. Implementation of retrofits will be documented, including the location, costs, and anticipated pollutant reduction.

Responsible Parties: Department of Public Works

Measureable Goal(s): Retrofits identified and tracked for discharges to impaired waters

Timeline: By June 2018. Ongoing thereafter.



3.6. Pollution Prevention/Good Housekeeping

Under this MCM, the Town anticipates implementation of the following BMPs:

6-1 Develop/implement formal employee training program

The Town will continue to implement a formal employee training program to increase awareness of water quality related issues in management of the MS4. In addition to providing key staff with topical training regarding standard operating procedures and other activities necessary to comply with the General Permit, the program will also include the following elements:

1. General goals and objectives of the Stormwater Management Plan
2. Identification and reporting of illicit discharges and improper waste disposal
3. Spill response protocols and respective responsibilities of involved personnel

Responsible Parties: Department of Public Works

Measureable Goal(s): Employee training continued

Timeline: Ongoing

6-2 Implement MS4 property and operations maintenance

Town-owned or operated properties, parks, and other facilities will be maintained to minimize the discharge of pollutants to the MS4. Property and operations maintenance activities will be documented and tracked.

This maintenance will include the following elements, at a minimum:

1. **Parks and Open Space (General):** Optimization of fertilizer application; proper handling, storage, application, and disposal of pesticides and herbicides; evaluation of lawn maintenance and landscaping activities to promote water quality; and management of trash receptacles. Standard operating procedures will be developed, as necessary, to support parks and open space maintenance activities that reduce discharge of pollutants to the MS4.
2. **Pet Waste Management:** Implementation of targeted management efforts in locations where inappropriate pet waste management practices are readily apparent and pose a threat to receiving waters of the MS4. In Town-owned recreational areas where dog walking is permitted, the Town will install education signage, pet waste baggie stations, and disposal receptacles (or require carry-out).
3. **Waterfowl Management:** Discouragement of waterfowl congregation in areas draining to the MS4 and receiving waters. This may include installation of educational signage to educate the public about the detrimental impacts of feeding waterfowl or other targeted techniques.



4. **Buildings and Facilities:** Evaluation of the use, storage, and disposal of petroleum and non-petroleum products; training to encourage proper handling procedures; development and implementation of Spill Prevention Plans, including coordination with the fire department, as needed; management procedures for waste management equipment; sweeping and cleaning of parking lots; and confirmation that interior floor drains are not connected to the MS4.
5. **Vehicles and Equipment:** Establishment of procedures for the storage, operation, refueling, maintenance, washing, and repair of Town-owned or operated vehicles to minimize exposure and contain leaks.
6. **Leaf Management:** Implementation of procedures to minimize or prevent deposition of leaves in catch basins, streets, parking lots, driveways, sidewalks, or other paved surfaces connected to the MS4. Leaves collected by the Town will also be transported, stockpiled, and otherwise handled in a manner to minimize contact with paved surfaces or MS4 drainage infrastructure.

Responsible Parties: Department of Public Works

Measureable Goal(s): Property and operations maintenance is conducted and tracked

Timeline: Initiate by July 2017. Ongoing thereafter.

6-3 Implement coordination with interconnected MS4s

Most of the interconnections with the Town's MS4 are contained within Town boundaries, such as the interconnections with the Connecticut Department of Transportation and Bradley International Airport. The Town will conduct outreach to interconnected MS4s to coordinate implementation of BMPs identified in the Stormwater Management Plan. Outreach and coordination of permit responsibilities will be documented.

Responsible Parties: Department of Public Works

Measureable Goal(s): Coordination of permit responsibilities implemented and documented

Timeline: Initiate by July 2017. Ongoing thereafter.

6-4 Develop/implement program to control other sources of pollutants to the MS4

The Town will develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional, or other facilities not otherwise authorized by permit issued pursuant to Sections 22a-403 or 22a-430b of the Connecticut General Statutes. Relevant actions related to implementation of this program will be documented.

Responsible Parties: Department of Public Works

Measureable Goal(s): Program to control pollutants from other facilities (commercial, industrial, and other non-permitted facilities) implemented and documented

Timeline: Initiate by July 2017. Ongoing thereafter.



6-5 Evaluate additional measures for discharges to impaired waters

For waters in which nitrogen or phosphorus is a pollutant of concern, the Town will implement a policy governing turf management practices and procedures. This policy will include, at a minimum, procedures for proper fertilizer application and the planting of native plant materials to reduce the need for turf mowing and chemical application. Implementation of this policy will be documented, including an estimate of annual reductions in fertilizer application and turf area.

For waters in which bacteria is a pollutant of concern, the Town will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem on Town-owned or operated lands with a high potential to contribute bacteria (e.g., dog parks, parks with open water, sites with failing septic systems). Implementation of retrofits or source management programs will be documented, including the location, costs, and anticipated pollutant reduction.

Responsible Parties: Department of Public Works

Measureable Goal(s): Additional measures to control discharges to impaired waters implemented, as feasible, and documented

Timeline: Initiate by July 2017. Ongoing thereafter.

6-6 Track projects that disconnect DCIA

The Town will begin tracking the acreage of DCIA disconnected from the MS4 on at least an annual basis. Redevelopment or retrofit of an existing developed site will qualify toward disconnection, whether the project was initiated by the Town or other entity, or completed on land owned by the Town or other entity.

Responsible Parties: Department of Public Works

Measureable Goal(s): Disconnections tracked and mapped

Timeline: Initiate by July 2017. Ongoing thereafter.

6-7 Develop/implement infrastructure repair/rehab program

The Town repairs and rehabilitates stormwater infrastructure based on observations made during periodic inspections. Emergency repair or rehabilitation is also completed in response to specific problems reported during storm events.

The Town will review and adjust the infrastructure repair and rehabilitation program, as needed, to accommodate additional MS4 information obtained or generated over the course of the General Permit. Infrastructure repair and rehabilitation will be prioritized based on new information regarding outfall pollutant discharge, designation of impaired waters, inspection observations, or observations made during outfall mapping or screening.

Repair and rehabilitation work undertaken through this program will be documented.



Responsible Parties: Department of Public Works

Measureable Goal(s): Infrastructure repair and rehabilitation work is completed and documented

Timeline: Initiate by July 2017. Ongoing thereafter.

6-8 Develop/implement plan to identify/prioritize retrofit projects

The Town will develop a stormwater retrofit plan to identify and prioritize retrofit projects within the MS4. This will include a prioritized list of retrofit projects within catchment areas that discharge to impaired waters, are within the Urbanized Area, or are within areas exceeding 11% DCIA.

Implementation of the plan will be targeted to achieve a minimum of 2% disconnection of DCIA over the course of the General Permit, with 1% disconnection of DCIA by June 30, 2021. An additional 1% disconnection of DCIA will be targeted for completion by June 30, 2022.

Responsible Parties: Department of Public Works

Measureable Goal(s): Written plan to identify and prioritize retrofit projects developed and implemented

Timeline: By June 2020 (development). Implementation according to schedule in plan.

6-9 Develop/implement street sweeping program

The Town completes sweeping of roads Town-wide on an annual basis, typically beginning around the third week of March. After the initial round of annual street sweeping, areas that were frozen or otherwise impeded during sweeping are reviewed for possible re-sweeping. Once the annual sweeping has been completed, a second town-side sweeping program is completed to re-sweep each of the maintained areas.

Roadways known to accrue greater amounts of debris over the year receive supplemental sweeping, as needed. Additionally, municipal parking lots and roadway intersections with excessive winter sand are swept on an as-needed basis over the winter months. Since the Town converted from sand to salt de-icing practices the volume of sweepings generated has greatly decreased. Sweepings are disposed of in accordance with DEEP policies, guidance, and regulations.

The Town will review the street sweeping program and amend, if necessary, to ensure Town-owned or operated streets and parking areas are properly inspected and swept on at least an annual basis. Streets and parking lots outside the Urbanized Area or contributing catchment areas of the MS4, including rural uncurbed streets and parking lots with no catch basins will also be addressed by the street sweeping program. If they cannot be swept on an annual basis, a targeted sweeping or cleaning plan will be developed and submitted with the first Annual Report under the General Permit.

Responsible Parties: Department of Public Works

Measureable Goal(s): Street sweeping program developed and implemented

Timeline: By June 2018. Ongoing thereafter.



6-10 Develop/implement catch basin cleaning program

The Town annually inspects and cleans 1,800 catch basins throughout the MS4. Catch basins in low-lying areas may require more frequent cleanings. Cleaning is completed using a Vacall machine. Each structure is inspected during cleaning and evaluated for cleanliness, as well as any structural damage. Catch basins in need of repair or rehabilitation are prioritized for attention.

Since the Town converted from sand to salt de-icing practices the volume of catch basin cleanings generated has greatly decreased. Material removed from catch basins is disposed of in accordance with DEEP policies, guidance, and regulations.

The Town will review the catch basin cleaning program and amend, if necessary, to ensure the program is optimized. Town-owned or operated catch basins will be properly inspected and cleaned, including those located outside the Urbanized Area or contributing catchment areas of the MS4, with either DCIA in excess of 11% or discharging to impaired waters will be inspected. Results of inspections and cleanings will be documented, using appropriate metrics and supporting information. Documentation will allow the Town to determine that the established plan for catch basin cleaning and maintenance is optimal for the MS4.

Responsible Parties: Department of Public Works

Measureable Goal(s): Catch basin cleaning program developed and implemented

Timeline: Optimization plan developed by June 2018. Implemented by June 2020 and ongoing thereafter.

6-11 Develop/implement snow management practices

The Town will review current snow management practices and amend, if necessary, to address deicing material management as well as snow and ice control practices. Implementation of snow management practices will be appropriately documented to allow inclusion in each Annual Report.

Responsible Parties: Department of Public Works

Measureable Goal(s): Snow management practices developed and implemented

Timeline: By June 2018. Ongoing thereafter.

4.0. OTHER REQUIREMENTS

4.1 Monitoring Requirements

The Town anticipates implementation of the following monitoring requirements:

S-1 Outfall screening

Outfalls discharging to impaired waters will be screened for those pollutants identified as the pollutant of concern for the impairment. Wet weather sampling data collected prior to the effective date of the General Permit may be used toward this requirement.

Screening must be completed during wet weather, which includes any storm that produces a discharge from the outfalls being monitored and occurs at least 48 hours after any previous storm that resulted in



discharge from the outfall. Samples must be collected within six hours of the start of discharge. Monitoring may be conducted during a rainfall event in the presence of insignificant amounts of snow or ice melt. However, snow or ice melt alone is not acceptable for sample collection.

The following information will be collected for all outfall screening samples:

- Date
- Water temperature
- Time of the start of discharge
- Time of sampling
- Magnitude (in inches) of the storm event sampled
- The duration between the sampled event and the end of the previous measurable (greater than 0.1 inch) rain event

Outfalls discharging to water bodies impaired for:

- nitrogen will be tested for total nitrogen
- phosphorus will be tested for total phosphorus
- bacteria will be tested for *E. coli* and total coliform
- other pollutants of concern will be tested for turbidity at both the outfall and the receiving water body either immediately upstream or otherwise outside the influence of the outfall

Outfall sample analysis should be completed in accordance with 40 CFR Part 136 (1990). Laboratory analysis must be consistent with Connecticut Reasonable Confidence Protocols (RCP).

Outfall screening will be completed according to the following schedule:

- Screening initiated by June 2019
- 50% of outfalls discharging to impaired waters screened by June 2020
- 100% of outfalls discharge to impaired waters screened by June 2022

Responsible Parties: Department of Public Works

Measureable Goal(s): Outfall screening begun and continued on the required schedule

Timeline: Initiated by June 2019. 50% of outfalls screened by June 30, 2020. 100% of outfalls screened by June 30, 2022.



S-2 Inventory and mapping of discharges to impaired waters

The Town will create an inventory and map of outfalls that discharge to impaired waters within the MS4. Impairments for the receiving waters associated with each outfall will be noted in the inventory.

Responsible Parties: Department of Public Works

Measureable Goal(s): Outfalls discharging to impaired waters are inventoried and mapped

Timeline: By June 2019

S-3 Follow-up investigations of drainage areas

The Town will conduct follow-up investigations for the drainage areas associated with outfalls exceeding one or more of the following thresholds:

- Total nitrogen > 2.5 mg/L
- Total phosphorus > 0.3 mg/L
- *E. coli* >235 col/100mL for swimming areas and >410 col/100mL for others
- Total coliform >500 col/100mL
- Turbidity of outfall sample >5 NTU above the background receiving water sample

At outfalls where exceedance of the bacteria thresholds is documented to be caused solely by natural sources, such as wildlife or runoff from undeveloped wooded lands (but not including pet waste or waterfowl congregations), no follow-up investigation will be necessary.

Follow-up investigations will include investigation of factors in the drainage area potentially related to the pollutant causing impairment. Examples of potential factors include land use-related activities or development patterns, DCIA, natural sources, and MS4 maintenance issues. Once the source(s) have been identified, the most appropriate BMPs will be implemented to address each factor.

Responsible Parties: Department of Public Works

Measureable Goal(s): Follow-up investigations of drainage areas begun and continued on the required schedule

Timeline: Initiate by June 2019. Ongoing thereafter.



S-4 Annual monitoring of priority outfalls

Once 50% of the outfall screening has been completed, the Town will prioritize six outfalls for continued wet weather monitoring on an annual basis. The six outfalls will be selected based on degree of contribution of the pollutants of concern. Each pollutant of concern identified for a priority outfall will be monitored. If fewer than six outfalls are identified for follow-up investigation, each of those outfalls will be monitored but no more than six.

Responsible Parties: Department of Public Works

Measureable Goal(s): Six priority outfalls selected and annual monitoring begun

Timeline: Initiate by June 2020. Ongoing on an annual basis thereafter.

S-5 Annual reporting

The Town will submit an Annual Report to DEEP by April 1 of each calendar year, starting in the second year following the effective date of the General Permit. The Annual Report will include an assessment of compliance with the requirements of the General Permit during the prior calendar year. This will address each of the following elements:

1. A listing and brief description of BMPs associated with each MCM.
2. Reporting requirements enumerated for each MCM.
3. An implementation schedule for each BMP and an indication of whether the BMP or any portion thereof was scheduled to be implemented during the prior year.
4. Status of implementation for each BMP, including an assessment of appropriateness and progress towards achieving implementation dates and measurable goals.
5. A discussion of the reasons for non-implementation of any BMP scheduled for implementation (partial or otherwise) during the prior year. A modified implementation schedule and, if necessary, a modified or alternate BMP (and rationale for the modification) will also be presented.
6. An assessment of the overall status of each MCM and a discussion of its effectiveness in achieving the desired goals.
7. A discussion of any changes to personnel responsible for the Stormwater Management Plan or BMP implementation.
8. A description of any new BMPs added to the Stormwater Management Plan, including each of the required elements for describing the BMP (e.g., responsible parties).
9. A discussion of the status of the IDDE program and results.
10. A discussion of measures included in the Stormwater Management Plan for the control of discharges to impaired waters, including an assessment of progress made, an evaluation of effectiveness, and identification of new or modified BMPs to be added to the Stormwater Management Plan to improve effectiveness.



11. A discussion of the status of required monitoring, a summary of findings, and any significant observations or modifications to the Stormwater Management Plan that will need to be taken in response.
12. A discussion of BMP implementation planned for the upcoming year, including any new or modified BMPs.
13. Required monitoring data from the prior year.
14. Other information collected and analyzed, including data collected under the IDDE protocol during the prior year.

Responsible Parties: Department of Public Works

Measureable Goal(s): Progress on screening, follow-up investigation, and annual monitoring included in Annual Report

Timeline: Complete first Annual Report by April 2019. Ongoing on an annual basis thereafter.

4.2 Proper Operation and Maintenance

The Town will properly operate and maintain structural BMPs and other facilities in the MS4 which it owns or operates to achieve compliance with the conditions of the General Permit.

4.3 Keeping Plans Current

The Town will amend the Stormwater Management Plan, as necessary, including but not necessarily limited to occurrence of the following events:

1. There is a change having the potential to cause pollution to waters of the state, such as a new discharge in the MS4.
2. The existing Stormwater Management Plan is otherwise inadequate to prevent pollution from MS4.
3. The DEEP Commissioner (Commissioner) requests modification of the Stormwater Management Plan.

Amendments to the Stormwater Management Plan will be made in compliance with the requirements of the General Permit and will be completed in accordance with the time period determined by the Commissioner. If the Commissioner determines that the Stormwater Management Plan does not meet one or more requirements of the General Permit, the Town will respond with a plan to modify so that the requirements are addressed. This response will be completed within 30 days of receiving written notification, unless otherwise specified by the Commissioner in writing. Within 90 days of this response or within 120 days of the original notification, whichever is less (unless otherwise specified by the Commissioner in writing), the Town will revise the Stormwater Management Plan, perform the actions required under the revised Stormwater Management Plan, and certify to the Commissioner that the requested changes have been made and implemented.

The availability of an amended Stormwater Management Plan will also comply with public notice requirements.



4.4 Record Keeping

Records associated with the General Permit will be maintained for at least five years following its expiration.

4.5 Regulations of Connecticut State Agencies Incorporated into the Discharge of Stormwater from MS4s

The Town will comply with all laws applicable to the subject discharges, including but not limited to, the following Regulations of Connecticut State Agencies:

(1) Section 22a-430-3

Subsection (b) General - subparagraph (1)(D) and subdivisions (2), (3), (4), and (5)

Subsection (c) Inspection and Entry

Subsection (d) Effect of a Permit - subdivisions (1) and (4)

Subsection (e) Duty to Comply

Subsection (f) Proper Operation and Maintenance

Subsection (g) Sludge Disposal

Subsection (h) Duty to Mitigate

Subsection (i) Facility Modifications, Notification - subdivisions (1) and (4)

Subsection (j) Monitoring, Records and Report Requirements - subdivisions (1), (6), (7), (8), (9), and (11) (except subparagraphs (9) (A) (2) and (9) (c))

Subsection (k) Bypass

Subsection (m) Effluent Limitation Violations

Subsection (n) Enforcement

Subsection (p) Spill Prevention and Control

Subsection (q) Instrumentation, Alarms, Flow Recorders

Subsection (r) Equalization

(2) Section 22a-430-4

Subsection (t) Prohibitions

Subsection (p) Revocation, Denial, Modification

Appendices



4.6 Duty to Correct and Report Violations

Upon learning of a violation of a condition of the General Permit, the Town will take reasonable action to determine the cause of such violation, correct and mitigate the results of such violation and prevent further such violation. The Town will report in writing such violation and such corrective action to the Commissioner within five days of learning of such violation. Such information will be filed in accordance with the certification requirements of the General Permit (see Section 3.7.10).

4.7 Duty to Provide Information

If the Commissioner requests information pertinent to the authorized activity or compliance with the General Permit or with the Town's authorization under the General Permit, the Town will provide such information within 30 days of such request. Such information shall be filed in accordance with the certification requirements of the General Permit (see Section 3.7.10).

4.8 Correction of Inaccuracies

Within 15 days after the date the Town becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, the Town will correct the inaccurate or misleading information or supply the omitted information in writing to the Commissioner. Such information will be filed in accordance with the certification requirements of the General Permit (see Section see Section 3.7.10).

4.9 Other Applicable Law

Nothing in the General Permit or this Stormwater Management Plan will relieve the Town of the obligation to comply with any other applicable federal, state, and local law, including but not limited to the obligation to obtain any other authorizations required by such law.

4.10 Certification Requirements

Any document, including but not limited to any notice, information or report, which is submitted to the Commissioner under the General Permit will be signed by the First Selectman of Windsor Locks and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."



5.0 ADDITIONAL INFORMATION

5.1 List of Receiving Waters in the MS4

The following water bodies currently receive stormwater discharges from the MS4:

- Connecticut River
- Kettle Brook
- Paper Mill Brook
- Little Brook
- Dibble Hollow Brook
- Strawberry Meadow Brook
- Waterworks Brook
- Adds Brook
- Spencer Brook
- Seymour Hollow Brook
- Rainbow Brook
- Farmington River



6.0 CERTIFICATIONS

6.1 Certification of the Stormwater Management Plan Document

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Chief Elected Official

J. Christopher Kervick, First Selectman

Signature

Date

Primary Municipal Contact

Philip J. Sissick, Director of Public Works

Signature

Date

Preparer

Matt Ladewig, Consultant

April 21, 2017

Signature

Date

Preparer

M. James Riordan, Consultant

April 21, 2017

Signature

Date

Preparer

Joshua Burgoyne, Consultant

April 21, 2017

Signature

Date

Preparer

Scott DeHainaut, Consultant

April 21, 2017

Signature

Date

Preparer

Mike Mahoney, Consultant

April 21, 2017

Signature

Date



6.2 Qualified Professional Engineer Certification

I hereby certify that I am a qualified professional engineer, as defined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. I am making this certification in connection with a registration under such general permit, submitted to the Commissioner by the Town of Windsor Locks for an activity located at or within Windsor Locks. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(9)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(9)(A) of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Section 3(b)(9)(B) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment,

Qualified Professional Engineer

James Bernardino, PE, Consultant

PE License #27475



Signature

April 21, 2017

Date

Appendix A

Definitions (from General Permit)



Section 1. Authority

This general permit is issued under the authority of Section 22a-430b of the Connecticut General Statutes.

Section 2. Definitions

The definitions of terms used in this general permit shall be the same as the definitions contained in Sections 22a-423 of the Connecticut General Statutes and Section 22a-430-3(a) of the Regulations of Connecticut State Agencies. As used in this general permit, the following definitions shall apply:

“x-year, 24-hour rainfall event” means the maximum 24-hour precipitation event with a probable recurrence interval of once in the given number of years (i.e. x=2, 25 or 100), as defined by the National Weather Service in Technical Paper Number 40, “Rainfall Frequency Atlas of the United States,” May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.

“Aquifer protection area” means aquifer protection area as defined in section 22a-354h of the Connecticut General Statutes.

“Best engineering practices” means the design of engineered control measures to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable.

“Best Management Practices (BMP)” means schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state consistent with state, federal or other equivalent and technically supported guidance. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage.

“Catchment area” means the land area from which stormwater runoff is collected by a permittee’s MS4 and discharges through a single outfall to surface water.

“Coastal Jurisdiction Line” means the location of the topographical elevation of the highest predicted tide as defined in Section 22a-359(c) of the Connecticut General Statutes.

“Coastal waters” means coastal waters as defined in Section 22a-93(5) of the Connecticut General Statutes.

“Commissioner” means Commissioner as defined in section 22a-423 of the Connecticut General Statutes.

“Control Measures” means any BMPs or other methods (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the state.

“Department” means the Department of Energy & Environmental Protection.

“Directly Connected Impervious Area (DCIA)” means that impervious area from which stormwater runoff discharges *directly* to waters of the state or *directly* to a storm sewer system that discharges to waters of the state. Impervious areas that discharge through a system designed to retain the

appropriate portion of the Water Quality Volume (pursuant to Section 6(a)(5)(b)(i) or (ii) of this general permit) are not considered DCIA.

“Fresh-tidal wetland” means a tidal wetland located outside of coastal waters.

“Grab sample” means an individual sample collected in less than fifteen minutes.

“Guidelines” means the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, established pursuant to Section 22a-328 of the Connecticut General Statutes.

“High Quality Waters” means those waters defined as high quality waters in the Connecticut Water Quality Standards pursuant to Section 22a-426-1(36) of the Regulations of Connecticut State Agencies.

“Illicit Discharge” means any unpermitted discharge to waters of the state that does not consist entirely of stormwater or uncontaminated ground water except those discharges identified in Section 3(a)(2) of this general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from an identified MS4.

“Impaired water(s)” means those surface waters of the state designated by the Commissioner as impaired pursuant to Section 303(d) of the federal Clean Water Act and as identified in the most recent State of Connecticut Integrated Water Quality Report within Categories 4 or 5, including any subdivisions of these categories.

“Individual permit” means a permit issued to a named permittee under Section 22a-430 of the Connecticut General Statutes.

“Inland wetland” means wetlands as that term is defined in Section 22a-38 of the Connecticut General Statutes.

“Low Impact Development” or *“LID”* means a site design strategy that maintains, mimics or replicates pre-development hydrology through the use of numerous site design principles and small-scale treatment practices distributed throughout a site to manage runoff volume and water quality at the source.

“Minimize”, for purposes of implementing the minimum control measures in Section 6 of this general permit, means to reduce and/or eliminate to the Maximum Extent Practicable (MEP) as described in Section 5(b).

“Municipal separate storm sewer system” or *“MS4”* means conveyances for stormwater (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) owned or operated by any municipality or by any state or federal institution and discharging to surface waters of the state.

“Municipality” means a city, town or borough of the state as defined in section 22a-423 of the Connecticut General Statutes.

“New or Increased Discharge” means new discharge or activity as defined in section 22a-426-8(b)(3) and increased discharge or activity as defined in section 22a-426-8(b)(2), as referenced to the Regulations of Connecticut State Agencies.

“Permittee” means any municipality or any state or federal institution that initiates, creates, originates or maintains a discharge authorized by this general permit and that has filed a registration pursuant to Section 4 of this permit.

“Point Source” means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

“Qualified professional engineer” means a professional engineer who: (1) has, for a minimum of eight (8) years, engaged in the planning and designing of engineered stormwater management systems for (i) municipal separate storm sewer systems and (ii) residential and commercial construction projects in accordance with the Guidelines and the Stormwater Quality Manual including, but not limited to, a minimum of four (4) years in responsible charge of the planning and designing of engineered stormwater management systems for such projects; or (2) is currently certified as a Professional in MS4 Stormwater Compliance as designated by EnviroCert International, Incorporated, or other certifying organization acceptable to the Commissioner, and for a minimum of six (6) years, has engaged in the planning and designing of engineered stormwater management systems for (i) municipal separate storm sewer systems and (ii) residential and commercial construction projects in accordance with the Guidelines and the Stormwater Quality Manual including, but not limited to, a minimum of two (2) years in responsible charge of the planning and designing of engineered stormwater management systems for such projects; or (3) currently provides engineering services for the Permittee by employ (e.g. Town Engineer) or by contract.

“Registrant” means a municipality or institution which files a registration pursuant to Section 4 of this general permit.

“Redevelopment” means any construction activity (including, but not limited to, clearing and grubbing, grading, excavation, and dewatering) within existing drainage infrastructure or at an existing site to modify or expand or add onto existing buildings or structures, grounds, or infrastructure.

“Registration” means a registration form filed with the Commissioner pursuant to Section 4 of this general permit.

“Retain” means to hold runoff on-site to promote vegetative uptake and groundwater recharge through the use of runoff reduction or LID practices or other measures. In addition, it means there shall be no subsequent point source release to surface waters from a storm event defined in this general permit or as approved by the Commissioner.

“Runoff reduction practices” means those post-construction stormwater management practices used to reduce post-development runoff volume delivered to the receiving water, as defined by retaining the volume of runoff from a storm up to the first half inch or one inch of rainfall in accordance with Sections 6(a)(5)(B)(i) or (ii), respectively. Runoff reduction is quantified as the total annual post-development runoff volume reduced through canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration or evapotranspiration.

“Sanitary Sewer Overflow” or *“SSO”* means a discharge of untreated sanitary wastewater from a municipal sanitary sewer.

“*Small MS4*” means any municipally-owned or -operated MS4 (as defined above) including all those located partially or entirely within an Urbanized Area that have at least 1,000 residents in the Urbanized Area (as determined by the 2000 or 2010 census) and all state- and federally-operated MS4s (except DOT) and any other MS4s located outside an Urbanized Area as may be designated by the Commissioner. (Note: A list of Small MS4 municipalities is included in Appendix A of this general permit. DOT will be authorized under a separate permit.)

“*Standard of care*”, as used in Section 3(b)(9), means to endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

“*State or Federal Institution*” or “*institution*” means any facility (including, but not limited to, state and federal prisons, office complexes, hospitals; university campuses, public housing authorities, schools, or other special districts) consisting of more than one building that is owned by an agency or department of the State of Connecticut (except the Department of Transportation) or a federal agency and has an average daily population of 1,000 people or more.

“*Stormwater*” means waters consisting of rainfall runoff, including snow or ice melt during a rain event.

“*Stormwater Quality Manual*” means the Connecticut Stormwater Quality Manual published by the Connecticut Department of Energy & Environmental Protection in 2004, as amended and maintained at <http://www.ct.gov/deep/stormwaterqualitymanual>.

“*Surface water*” means those waters as defined in Section 22a-426-1(60) of the Regulations of Connecticut State Agencies.

“*Tidal wetland*” means a wetland as that term is defined in Section 22a-29(2) of the Connecticut General Statutes.

“*Total Maximum Daily Load (TMDL)*” means a water quality implementation plan established pursuant to Section 303 of the federal Clean Water Act.

“*Urbanized Area (UA)*” means the areas of the State of Connecticut so defined by the U.S. Census Bureau for the 2000 or 2010 census.

“*Water Quality Standards or Classifications*” means those water quality standards or classifications contained in Sections 22a-426 -1 through 22a-426-9, inclusive, of the Regulations of Connecticut State Agencies and the Classification Maps adopted pursuant to Section 22a-426 of the Connecticut General Statutes, which together constitute the Connecticut Water Quality Standards., as may be amended.

“*Water Quality Volume*” or “*WQV*” means the volume of runoff generated by one inch of rainfall on a site as defined in the Connecticut Stormwater Quality Manual.

Appendix B

Town of Windsor Locks Drainage Atlas

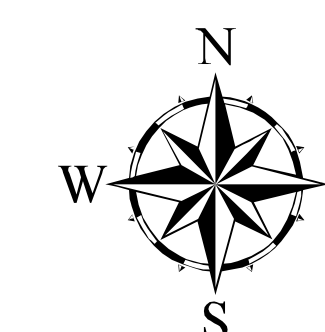
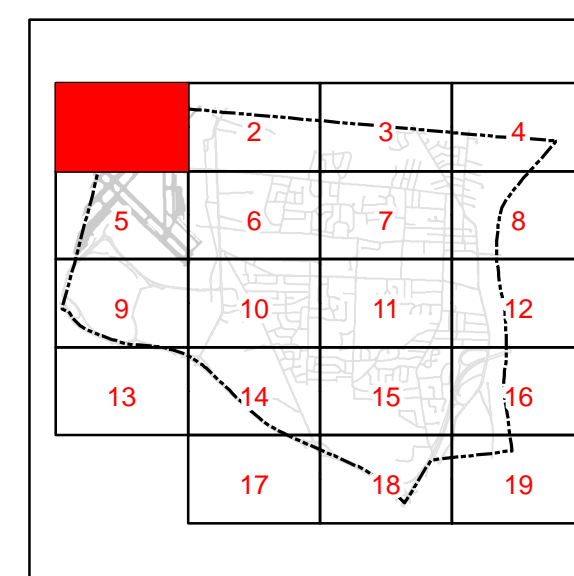


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- Drain Pipe
- Culvert
- Building
- Prvt Development
- ⊗ Tank
- Water
- Wetland
- Railroad

Locus Map



200 100 0 200 Feet
1" = 200'

Map Number

1

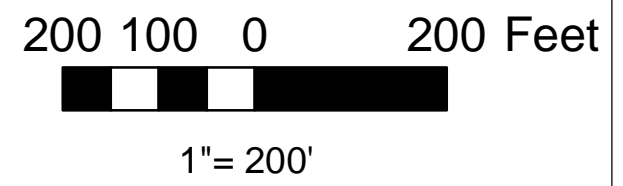
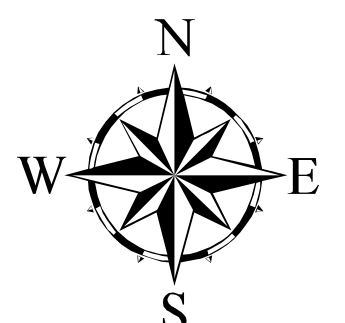
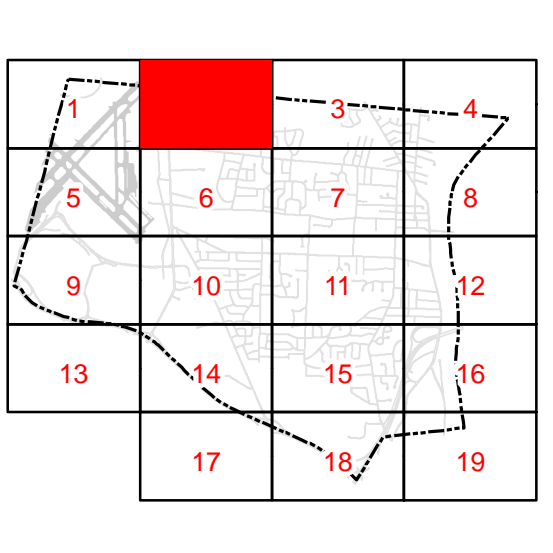
November 2006



Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- Culvert
- Building
- ▬ Prvt Development
- ⊙ Tank
- 💧 Water
- 🌿 Wetland
- 🚂 Railroad

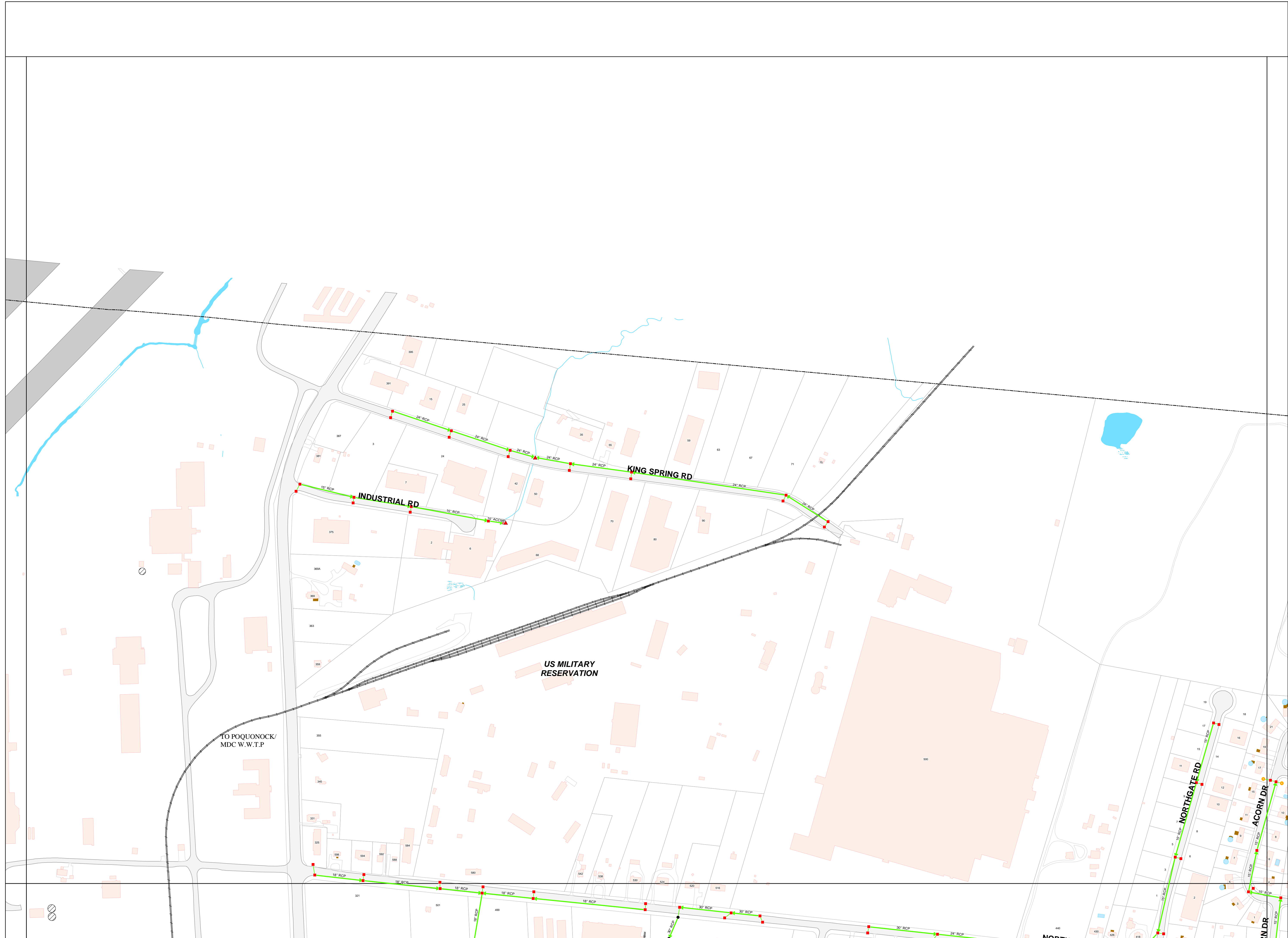
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Map Number

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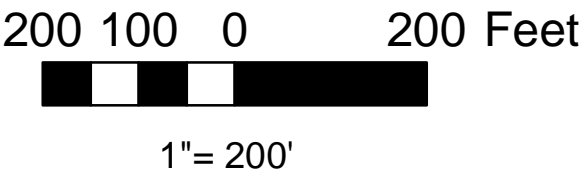
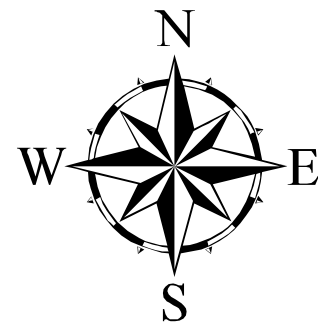
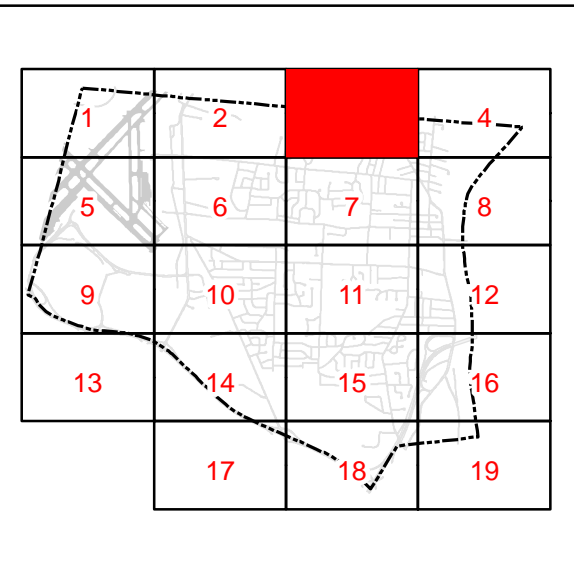




Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- Culvert
- Building
- ▬ Prvt Development
- ⊙ Tank
- ☁ Water
- ☁ Wetland
- Railroad

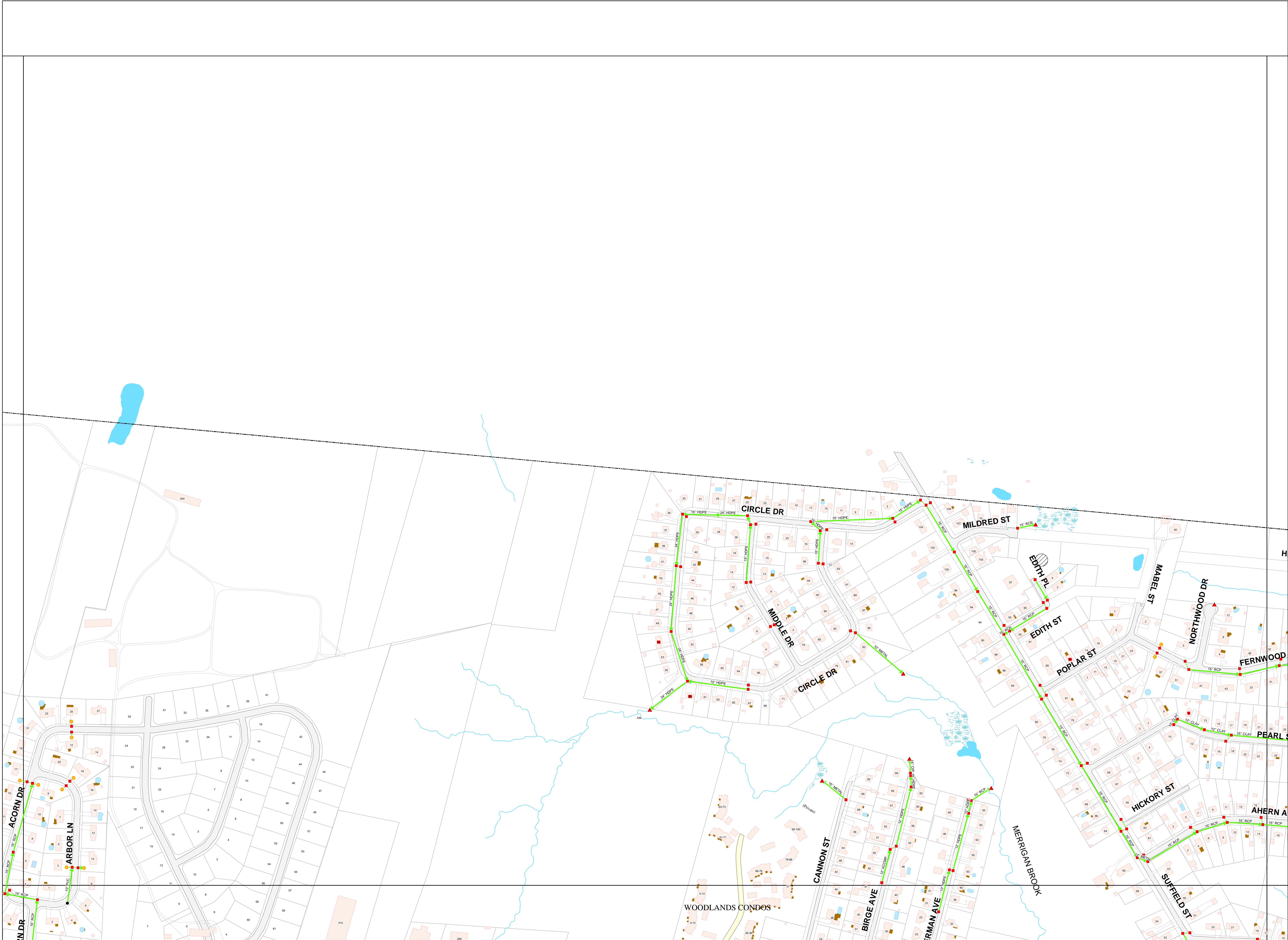
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Map Number

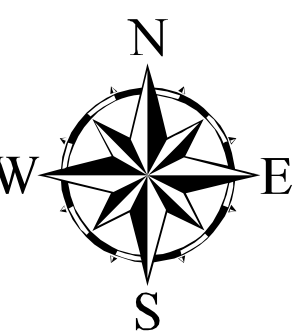
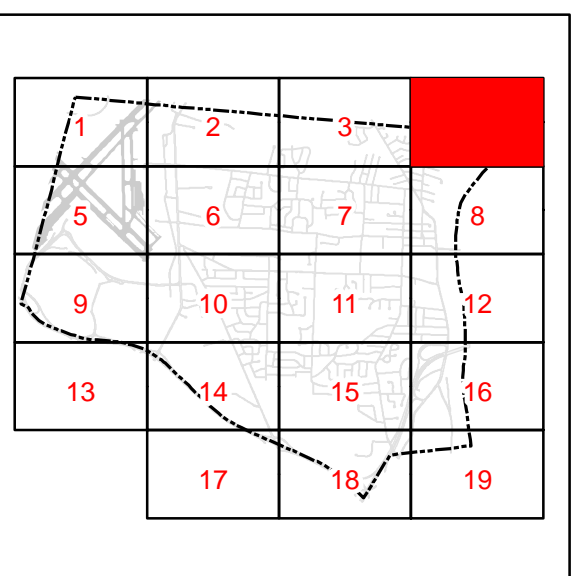
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November 2006



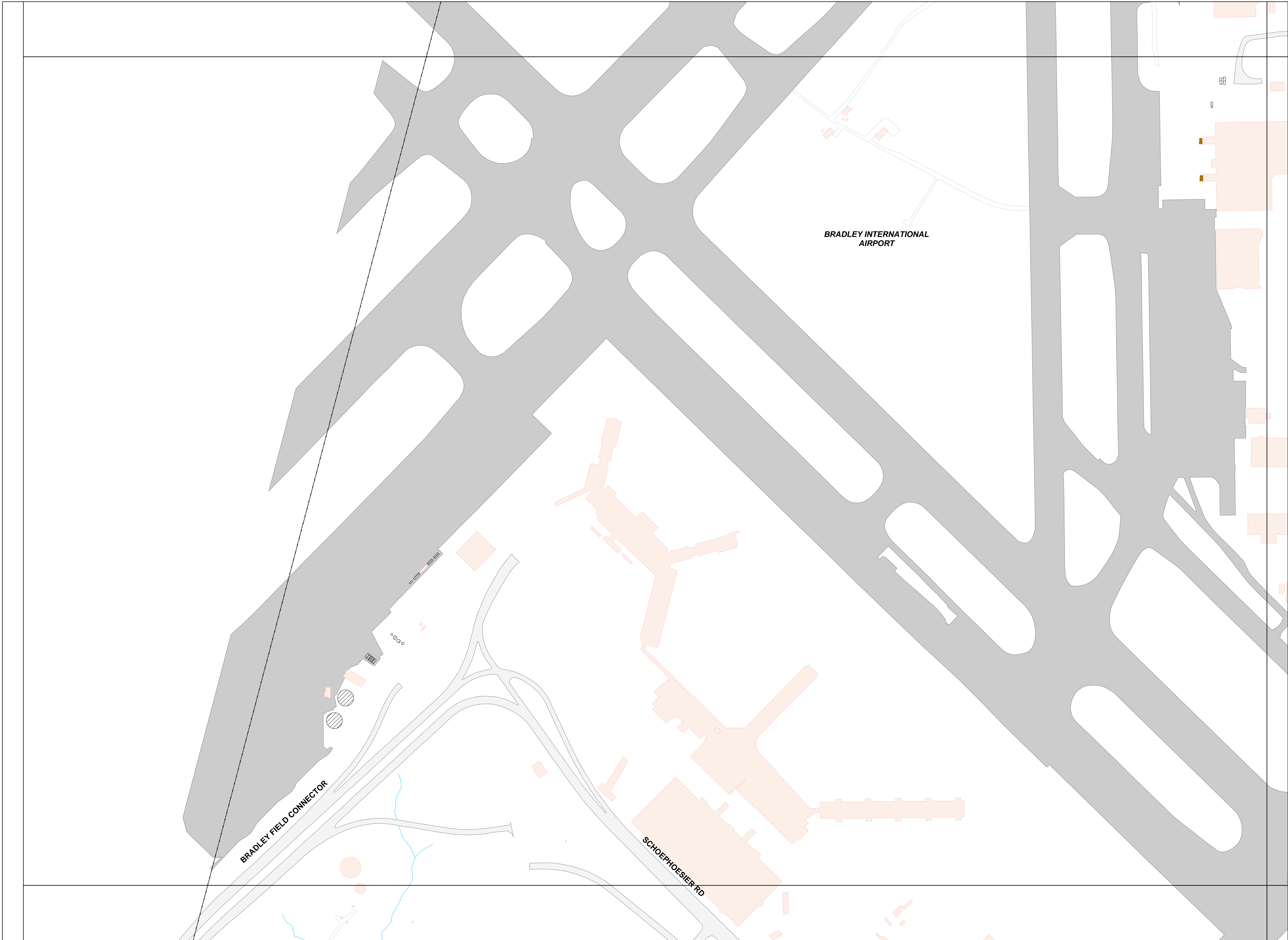
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- ## Locus Map



4

November 2006



Town of Windsor Locks

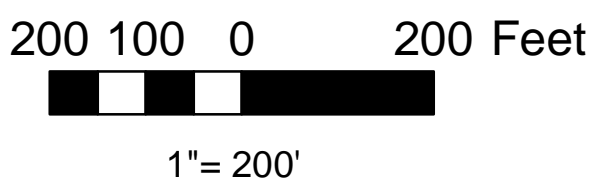
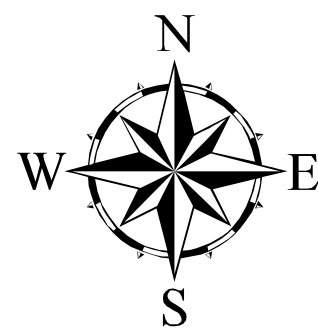
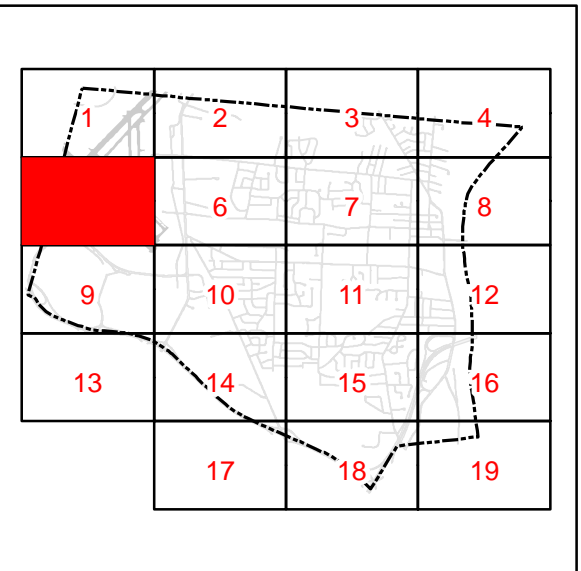


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- Drain Pipe
- - - Culvert
- Building
- ▬ Prvt Development
- ⊗ Tank
- Water
- ~ Wetland
- +— Railroad

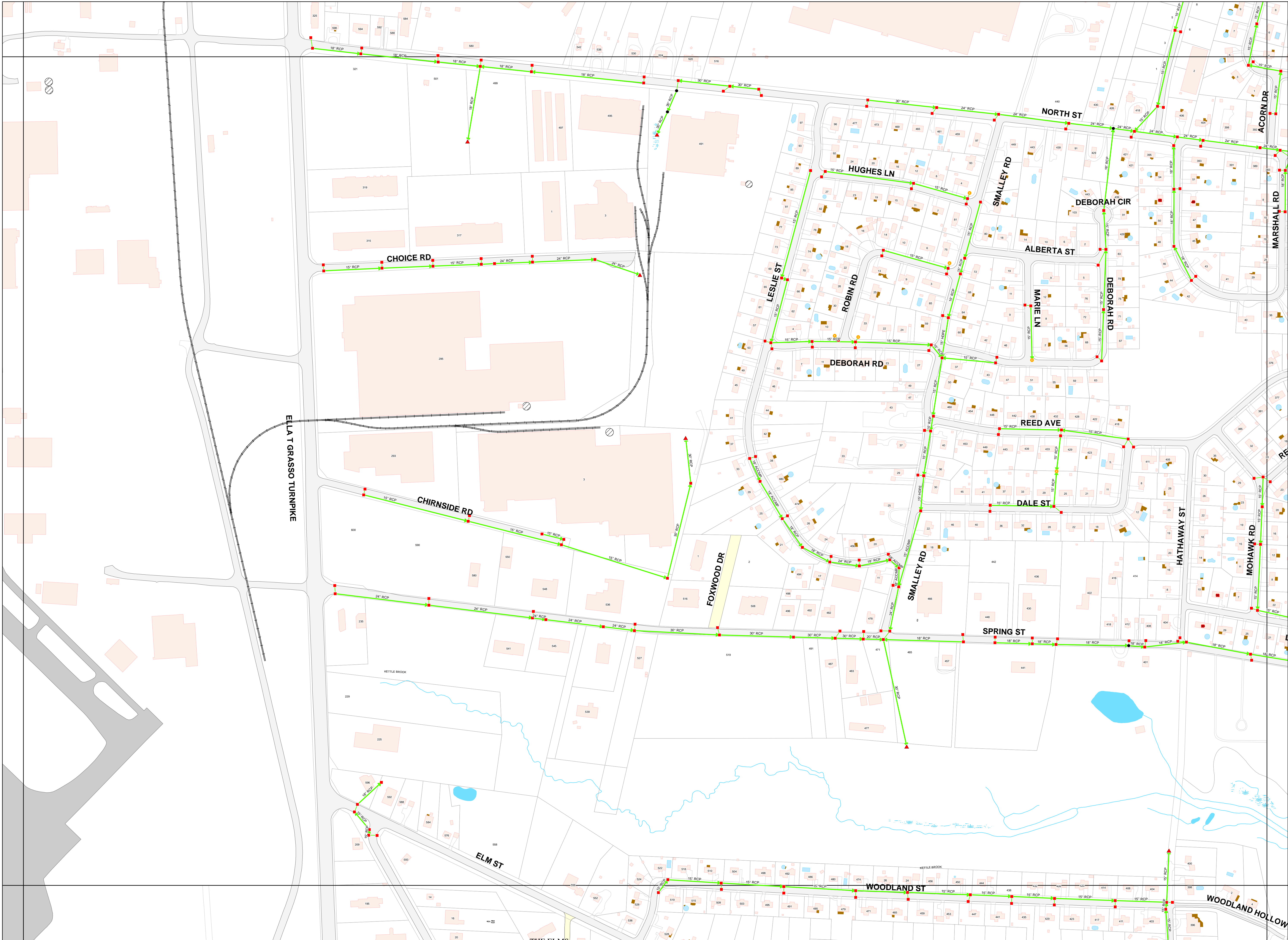
Locus Map




Map Number

5

November 2006





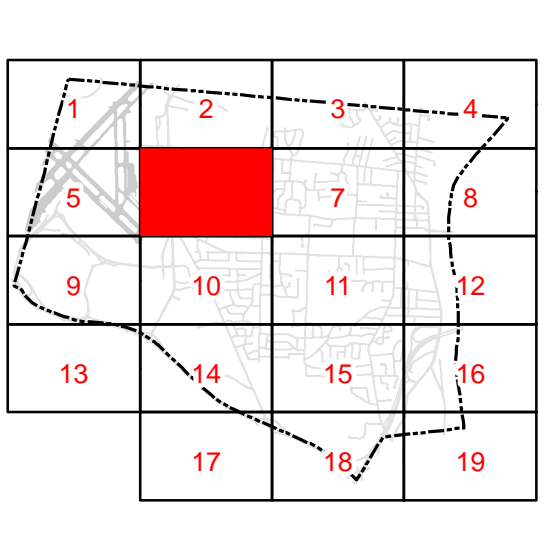
Town of Windsor Locks, Connecticut
SEAL

Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- Drain Pipe
- - - Culvert
- Building
- ▬ Prvt Development
- ⊗ Tank
- Water
- Wetland
- Railroad

Locus Map



A 4x4 grid of squares. The square in the second row, second column from the left is highlighted in red, indicating the location of this map within the larger drainage atlas.



N
W E
S

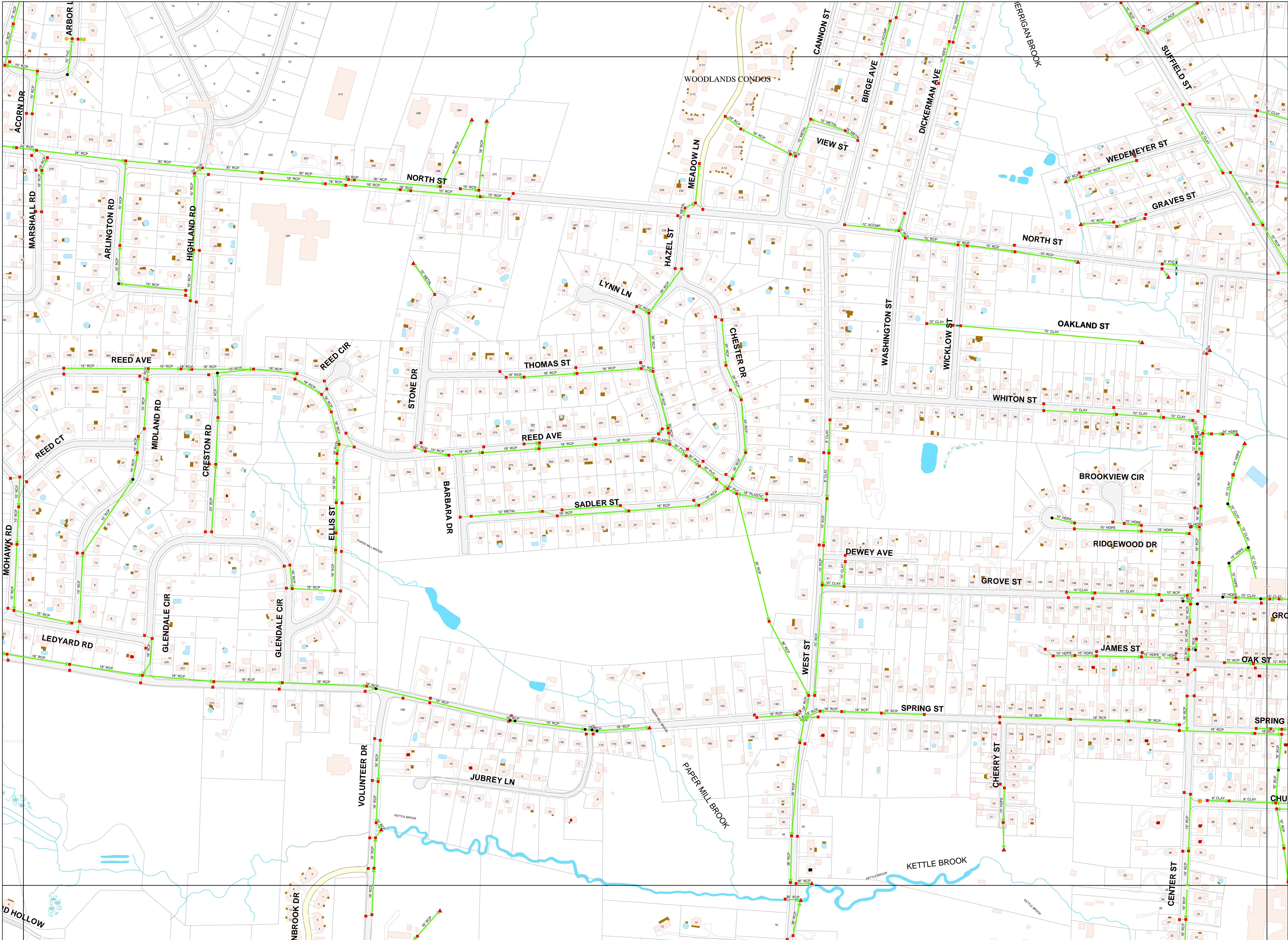
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1" = 200'

Map Number

6

November 2006





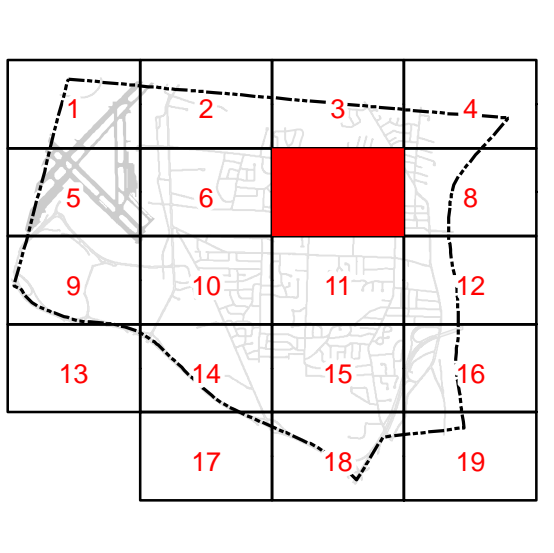
Town of Windsor Locks, Connecticut
SEAL

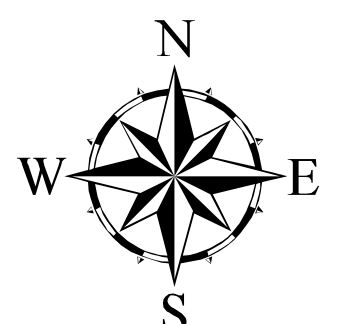
Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- Drain Pipe
- Culvert
- Building
- Prvt Development
- Tank
- Water
- Wetland
- Railroad

Locus Map





200 100 0 200 Feet

1" = 200'

Map Number

7

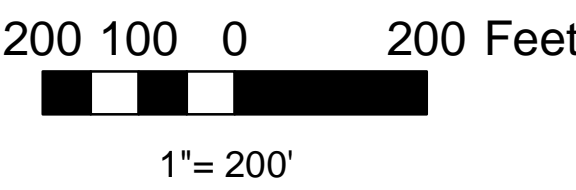
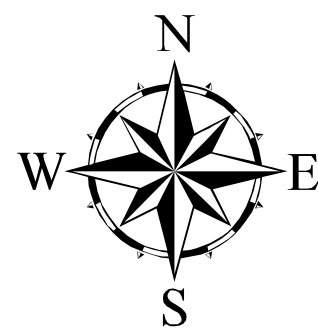
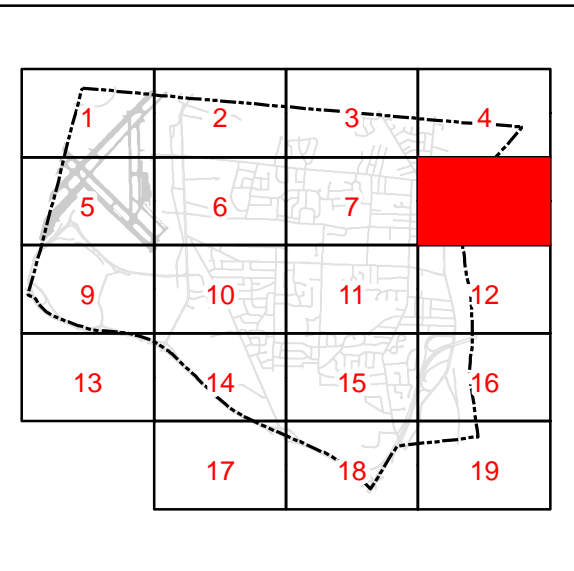
November 2006



Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- Culvert
- ⬢ Building
- ▬ Prvt Development
- ⊙ Tank
- 💧 Water
- ☁ Wetland
- ⚓ Railroad

Locus Map

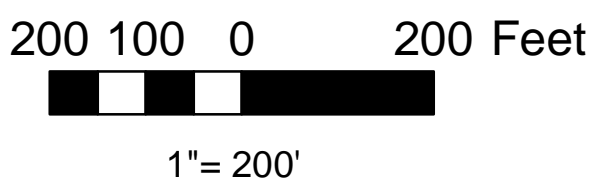
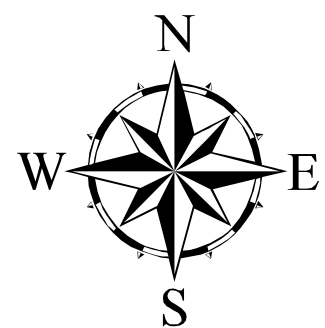
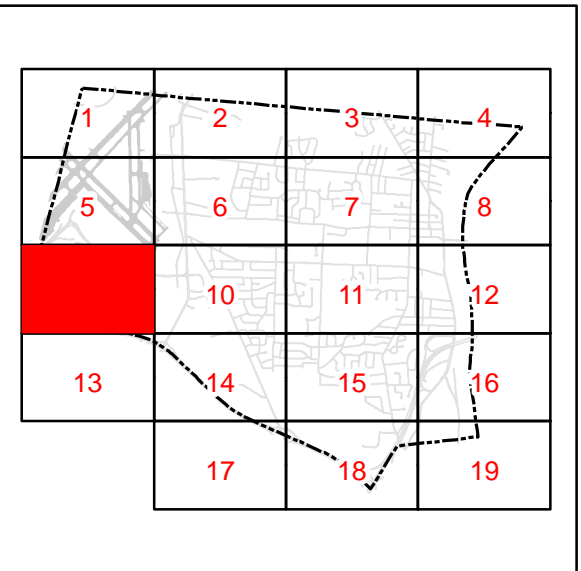


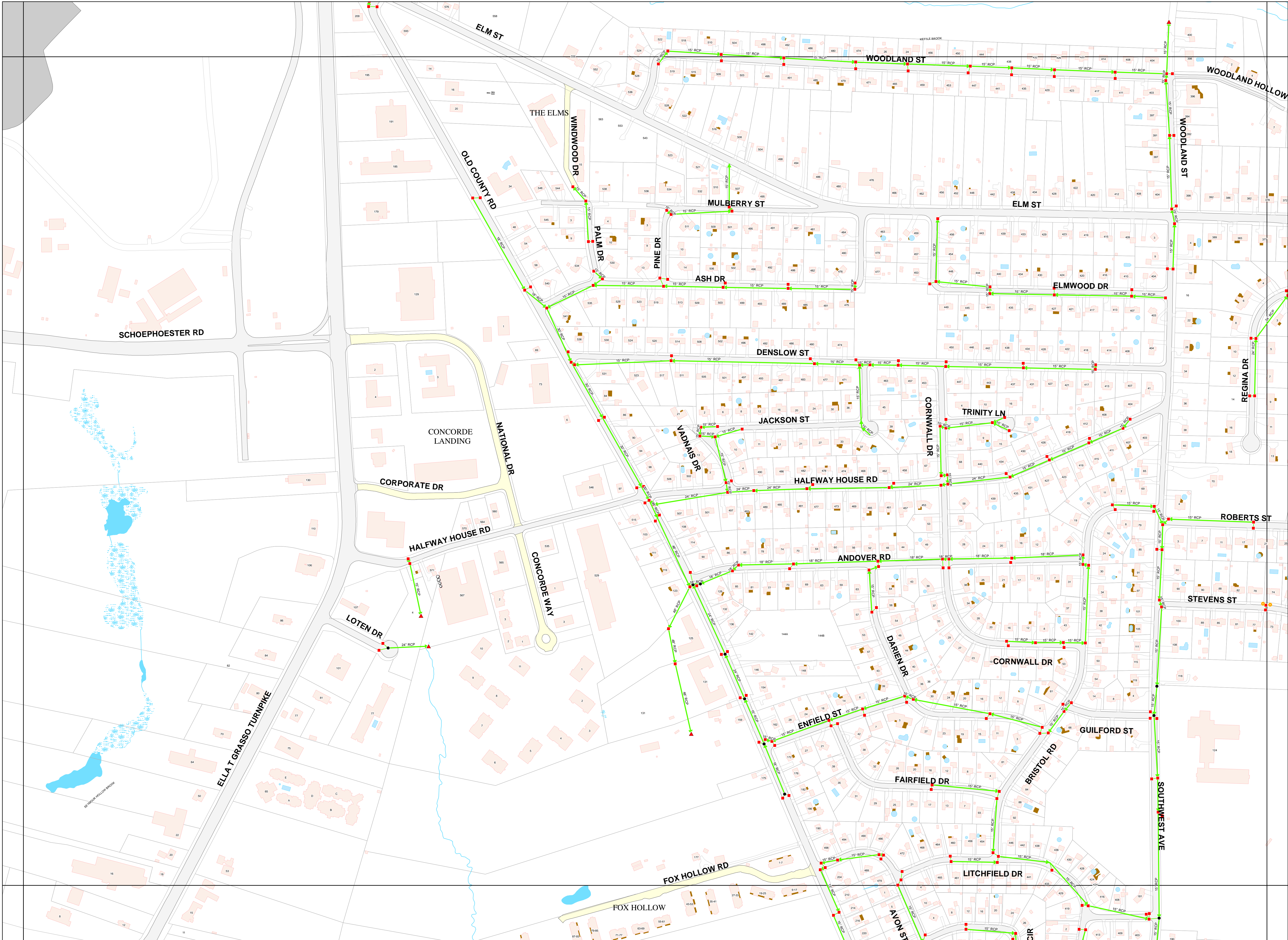


Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- - - Culvert
- Building
- ▬ Prvt Development
- ⊗ Tank
- Water
- Wetland
- +— Railroad

Locus Map

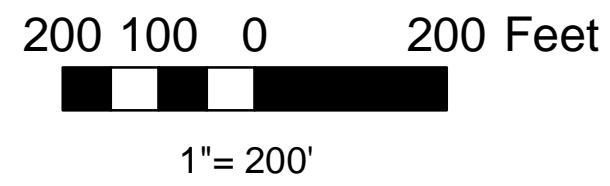
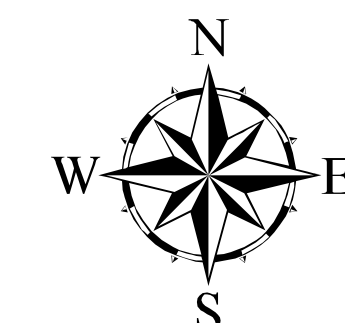
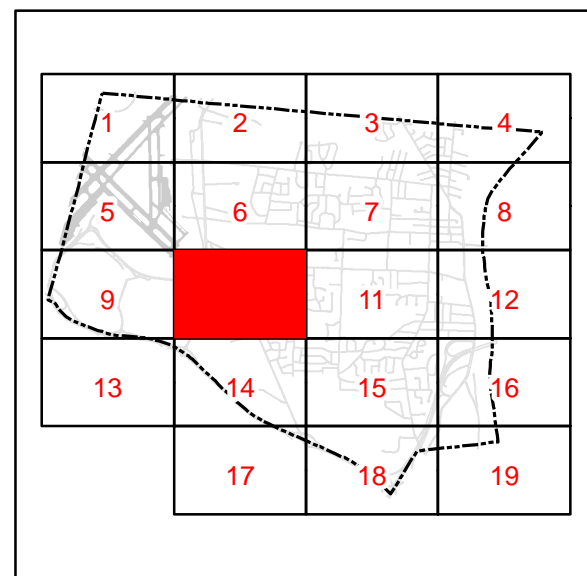


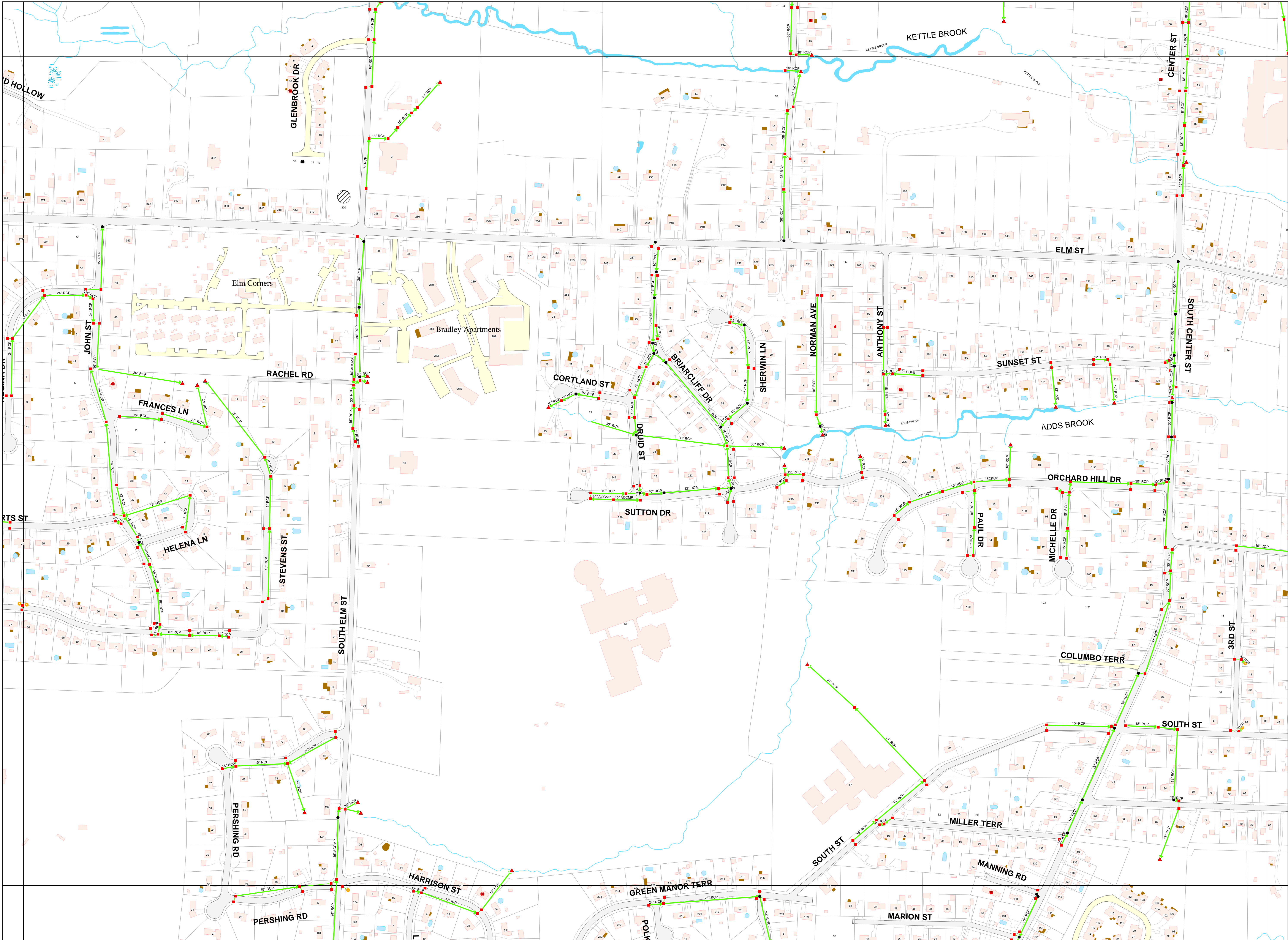


Legend

- Drain Manhole
- Catch Basin
- ⬡ Dry Well
- ⬡ Headwall
- ▲ Outfall
- Drain Pipe
- - - Culvert
- Building
- ▬ Prvt Development
- Tank
- Water
- Wetland
- Railroad

Locus Map

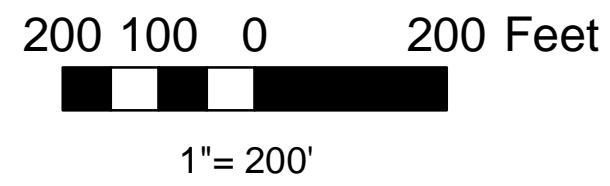
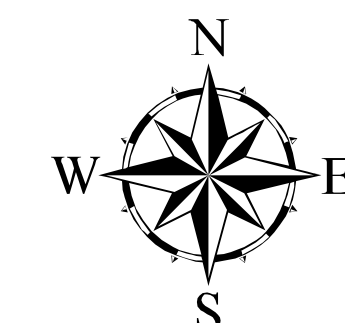
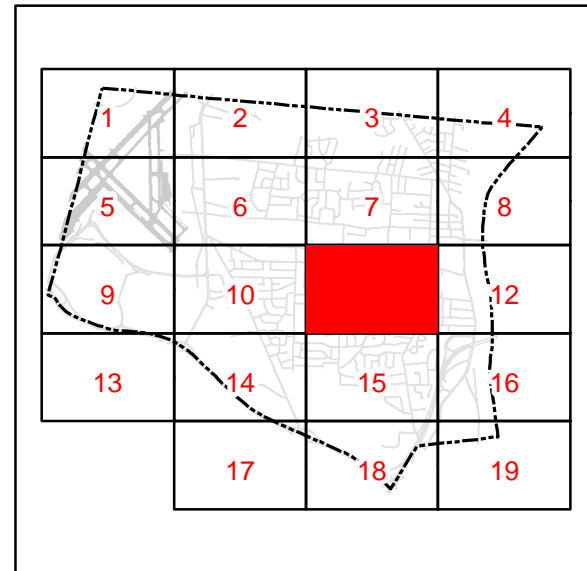




Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- Drain Pipe
- Culvert
- Building
- ▭ Prvt Development
- ⊙ Tank
- Water
- Wetland
- Railroad

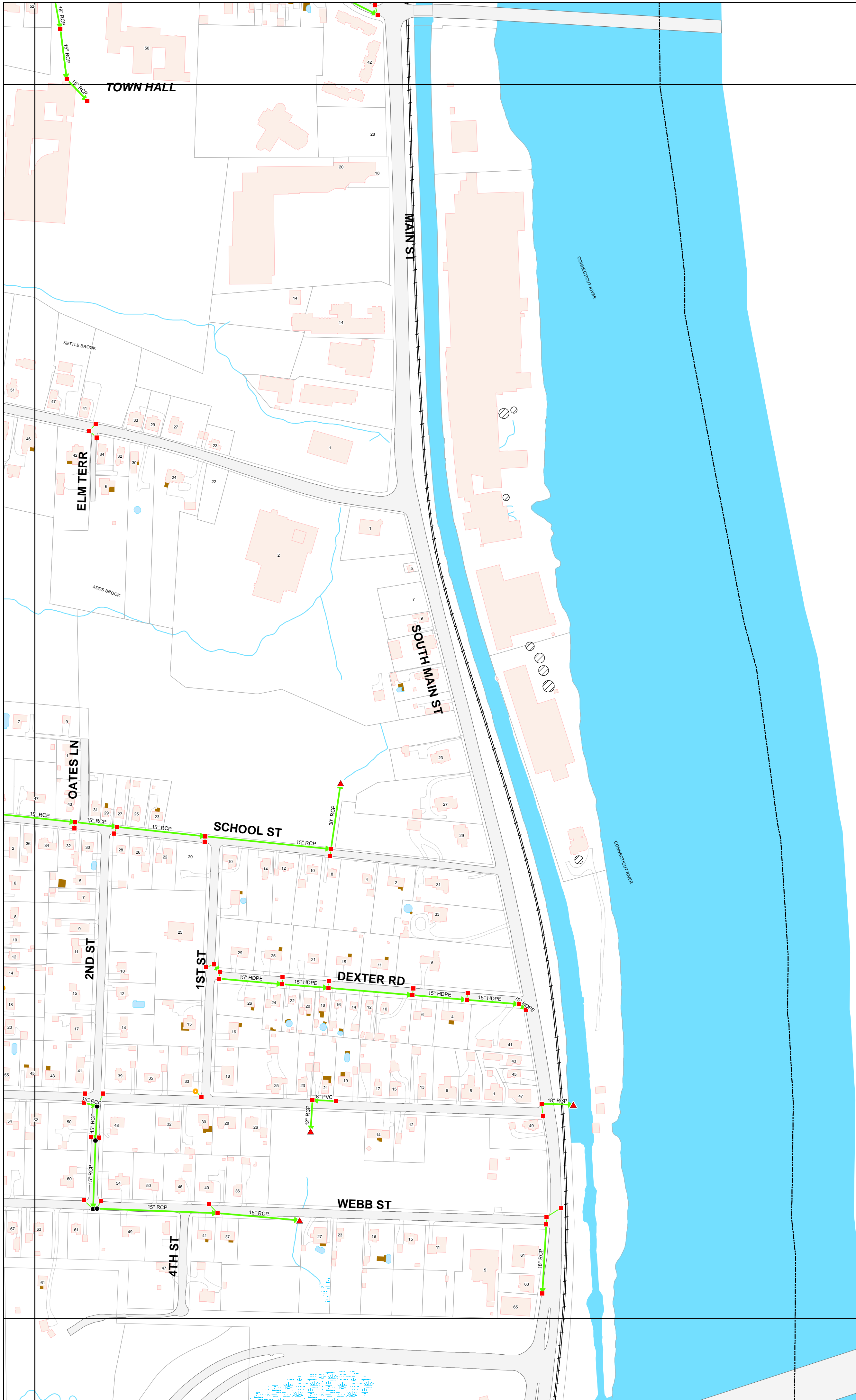
Locus Map



Map Number

11

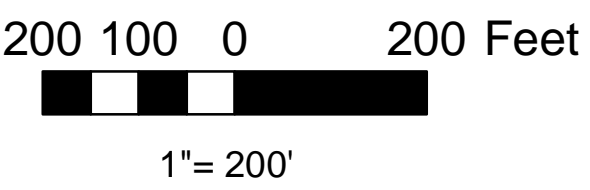
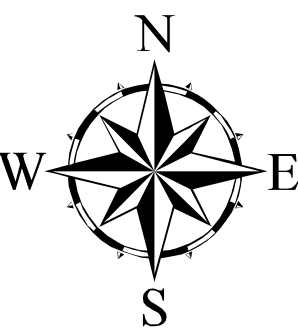
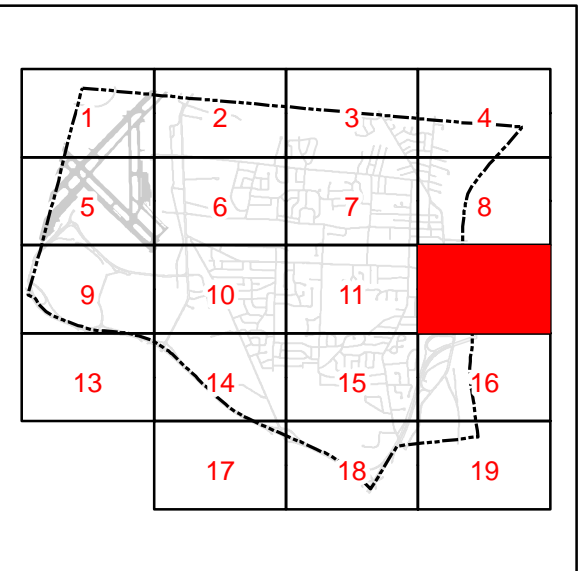
November 2006



Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- Culvert
- Building
- ▬ Prvt Development
- ⊘ Tank
- Water
- Wetland
- Railroad

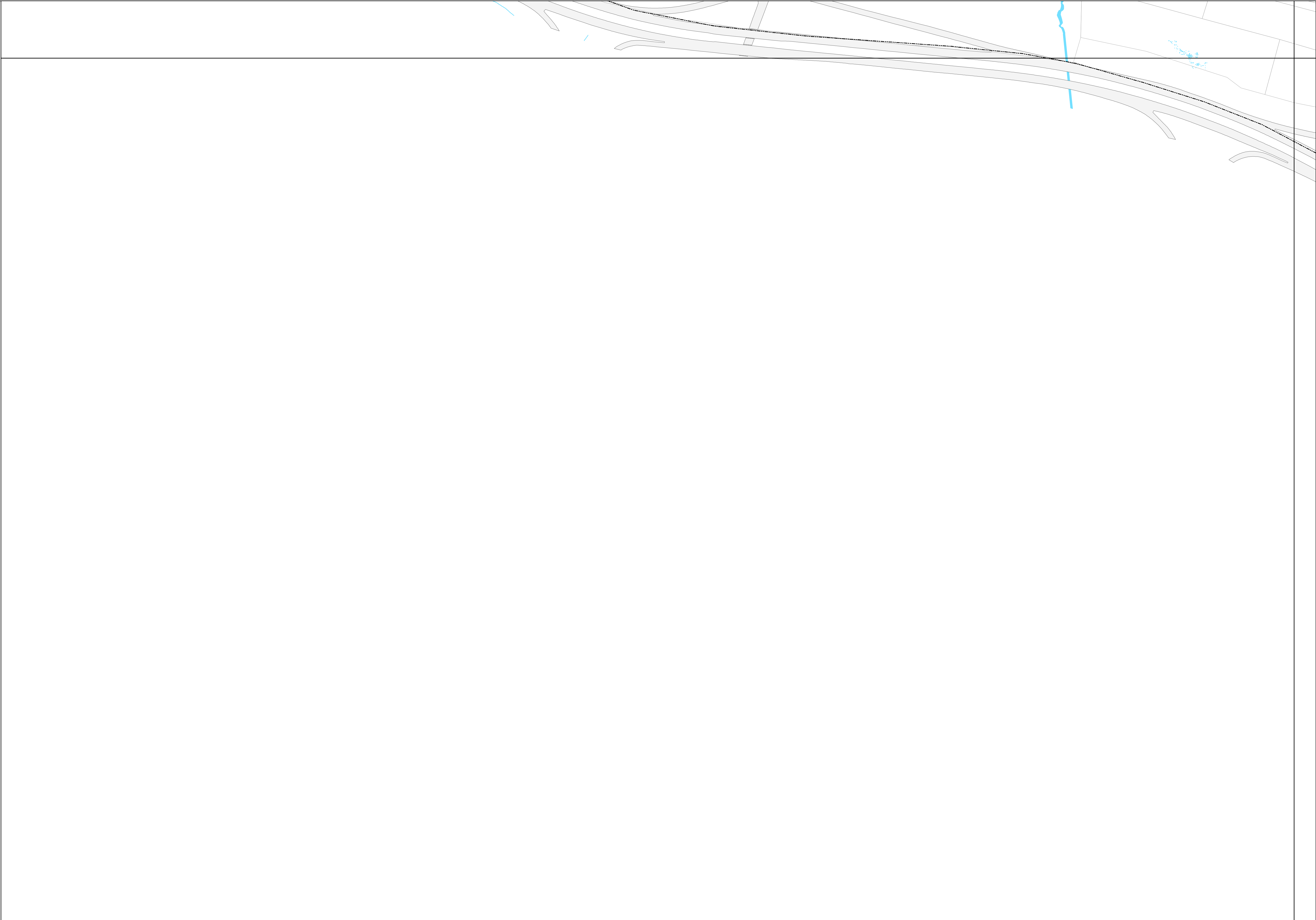
Locus Map



Map Number

12

November 2006



Town of Windsor Locks

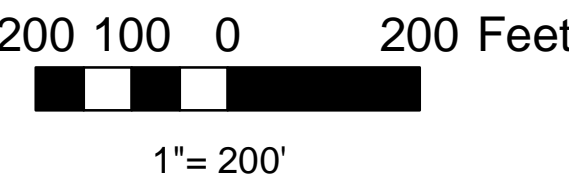
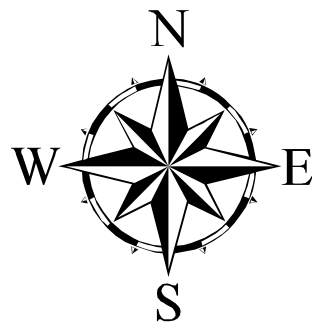
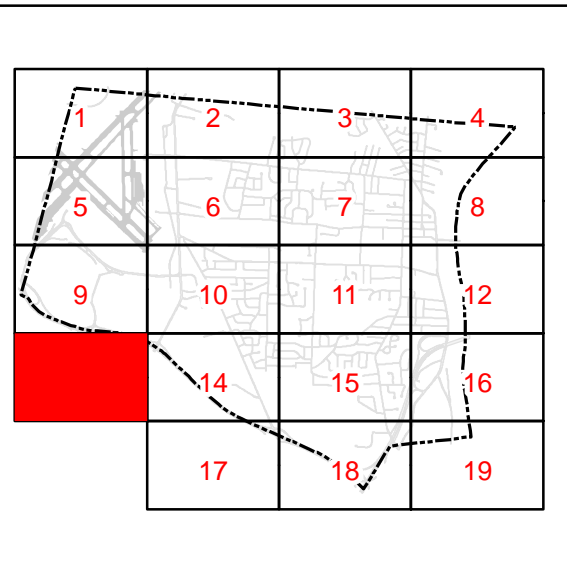


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬠ Headwall
- ▲ Outfall
- ➡ Drain Pipe
- Culvert
- ⬠ Building
- ▬ Prvt Development
- ⊘ Tank
- 💧 Water
- 🌿 Wetland
- ⚓ Railroad

Locus Map




Map Number

13

November 2006



Town of Windsor Locks

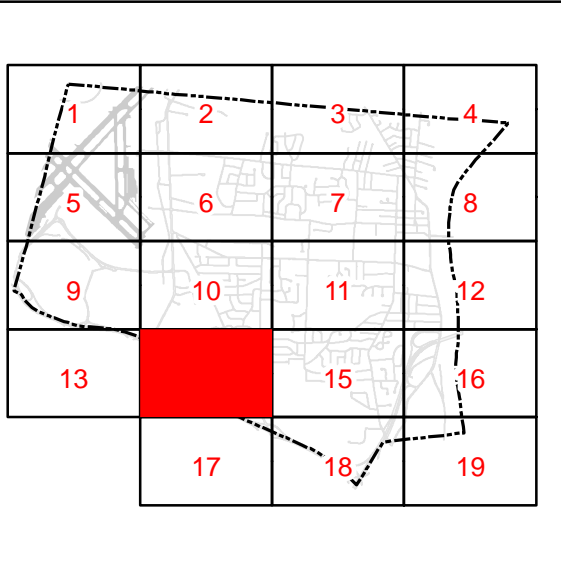


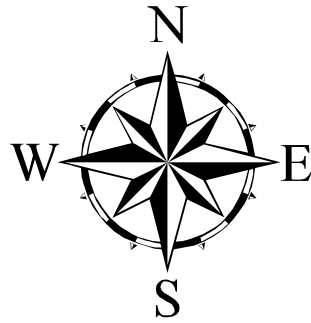
Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➡ Drain Pipe
- Culvert
- ▤ Building
- ▬ Prvt Development
- ⊘ Tank
- 💧 Water
- 🌿 Wetland
- 🚂 Railroad

Locus Map





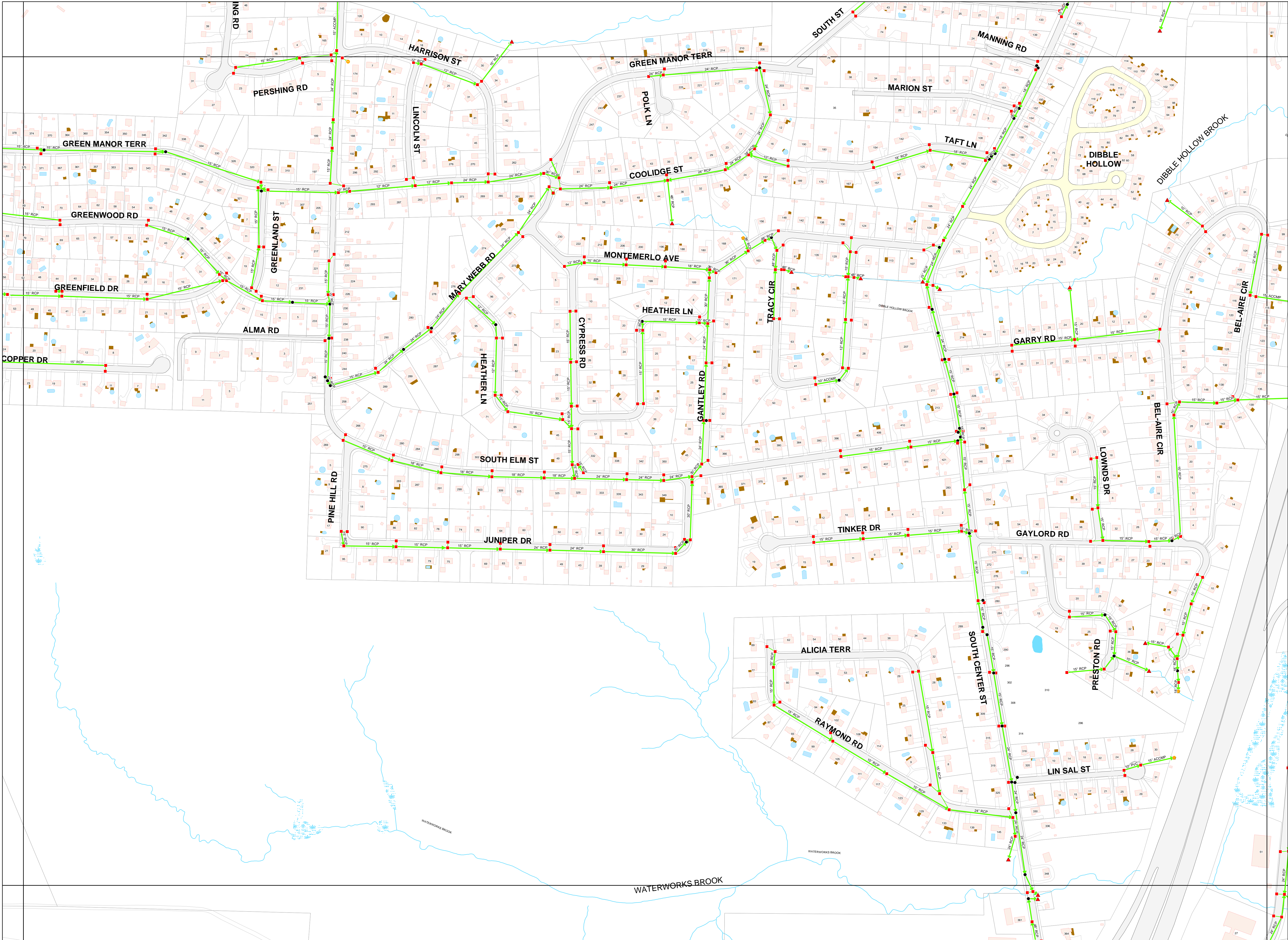
200 100 0 200 Feet

1" = 200'

Map Number

14

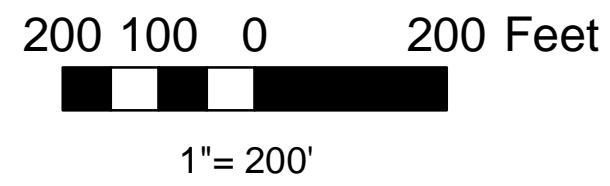
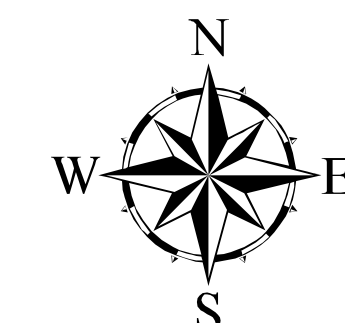
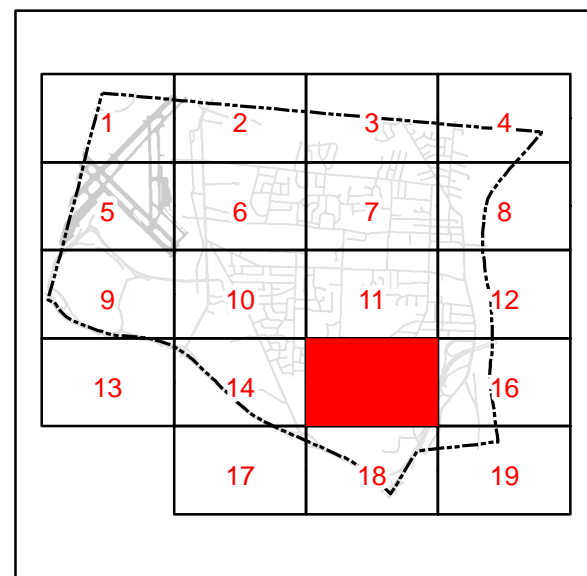
November 2006

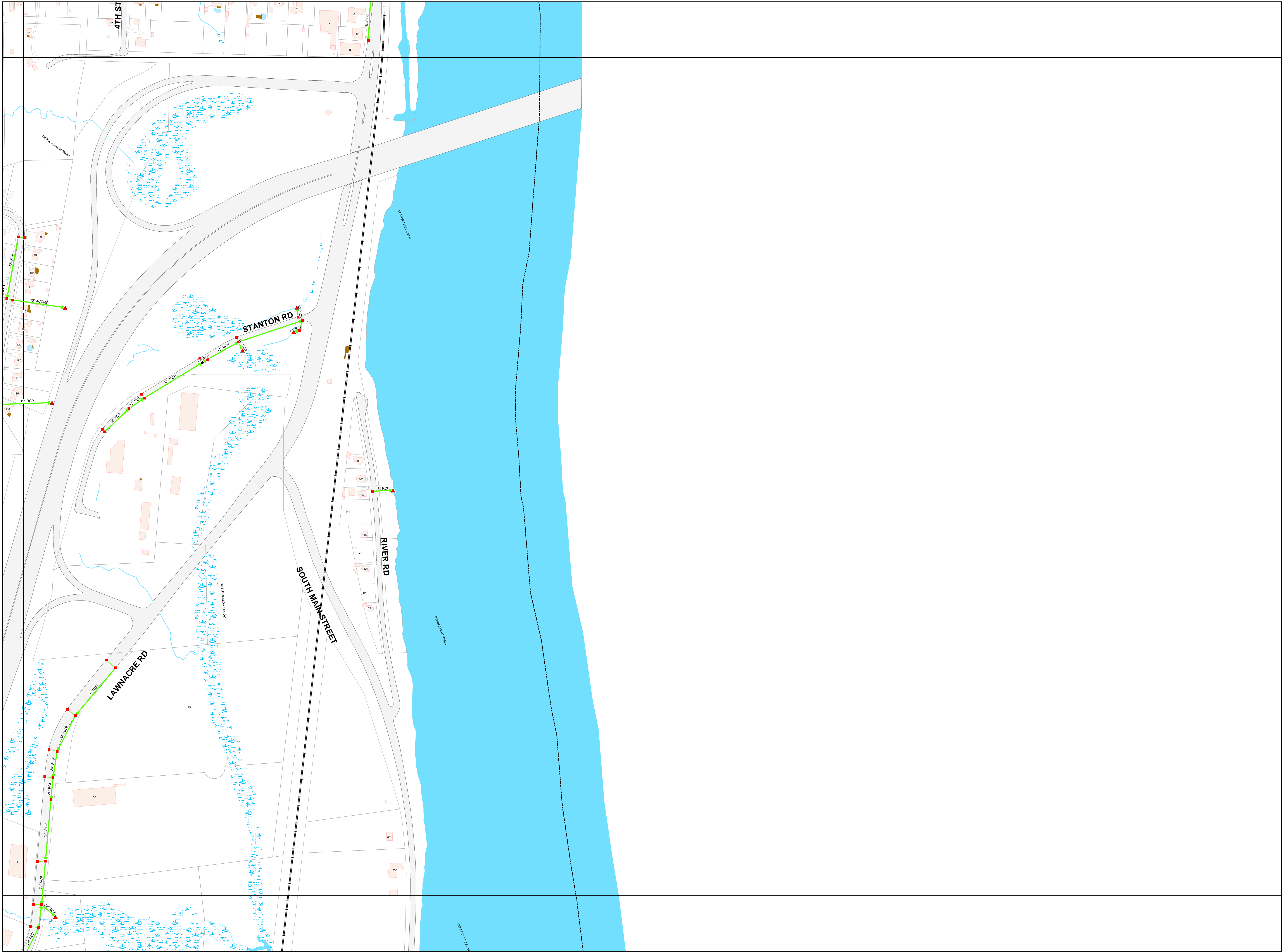


Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- Drain Pipe
- Culvert
- Building
- ▭ Prvt Development
- Tank
- Water
- Wetland
- Railroad

Locus Map

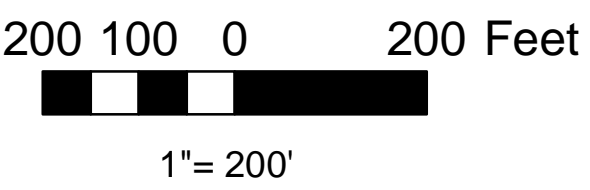
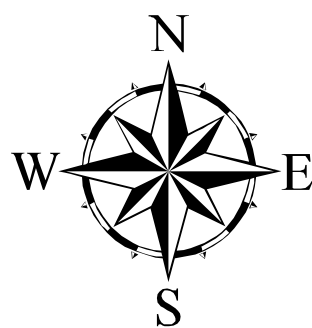
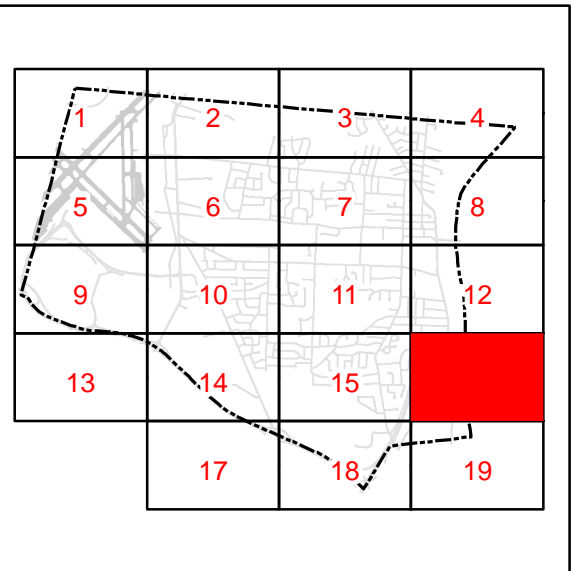




Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➡ Drain Pipe
- Culvert
- ⬢ Building
- ▬ Prvt Development
- ⊗ Tank
- 💧 Water
- 🌿 Wetland
- ⚓ Railroad

Locus Map



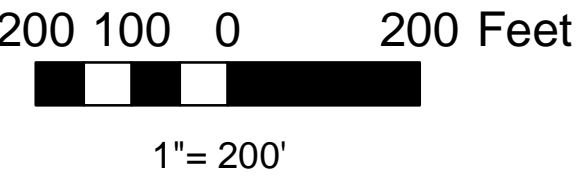
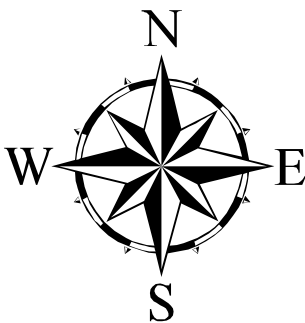
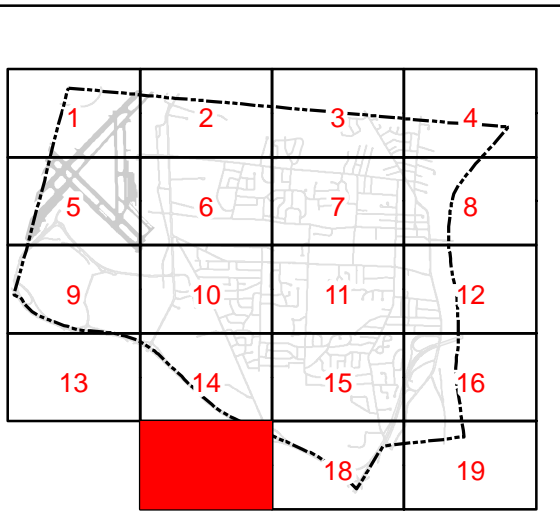


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➡ Drain Pipe
- Culvert
- ⬢ Building
- ▬ Prvt Development
- ⊘ Tank
- 💧 Water
- 🌿 Wetland
- 🚂 Railroad

Locus Map



Map Number

17

November 2006



Town of Windsor Locks

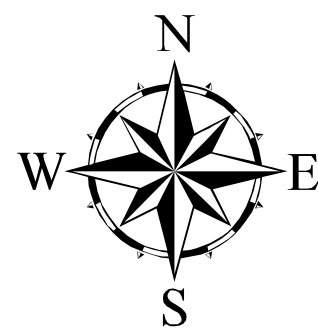
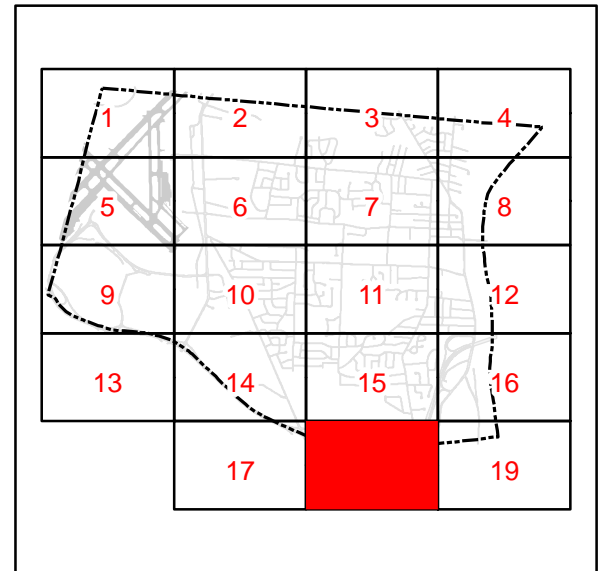


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➔ Drain Pipe
- Culvert
- Building
- Prvt Development
- ⊘ Tank
- Water
- Wetland
- Railroad

Locus Map

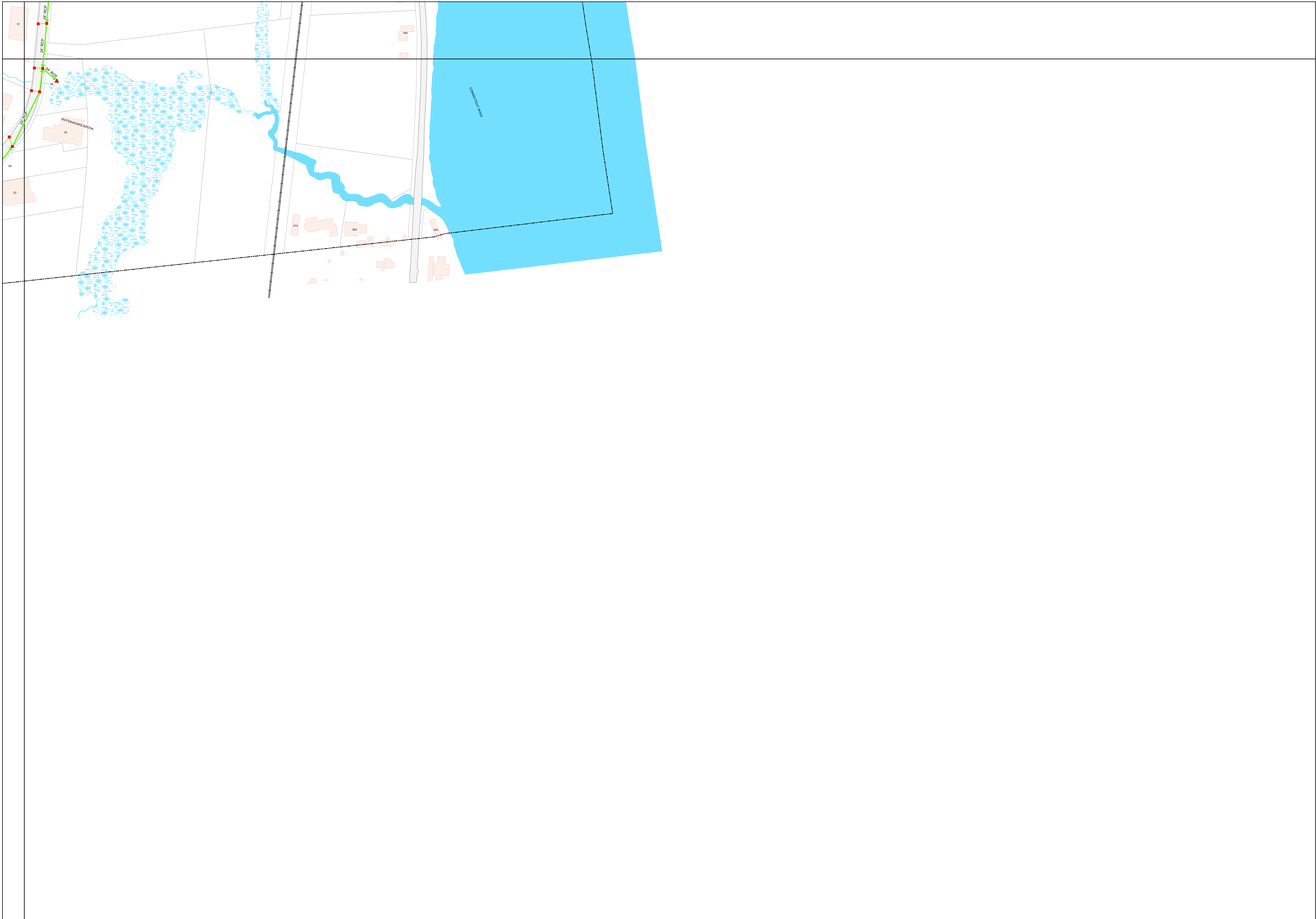


200 100 0 200 Feet
1" = 200'

Map Number

18

November 2006



Town of Windsor Locks

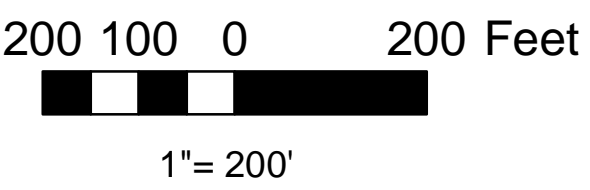
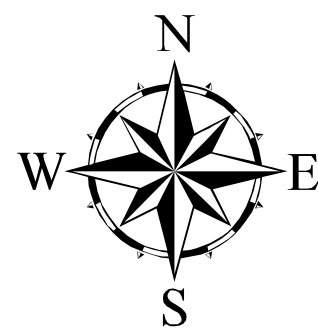
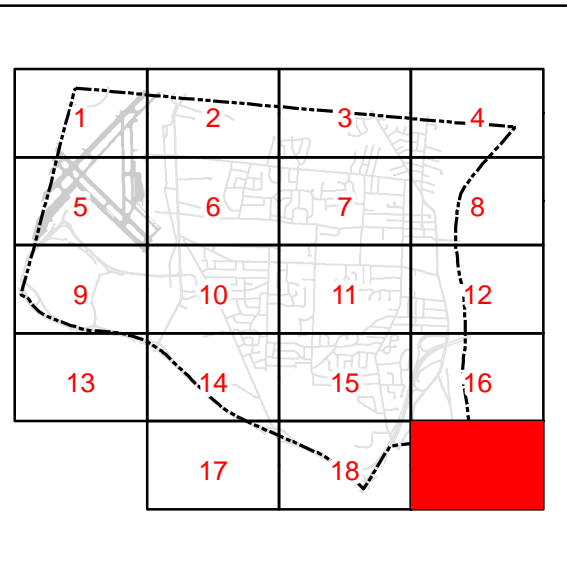


Drainage Atlas

Legend

- Drain Manhole
- Catch Basin
- Dry Well
- ⬡ Headwall
- ▲ Outfall
- ➡ Drain Pipe
- ⋯ Culvert
- ⬢ Building
- ▬ Prvt Development
- ⊘ Tank
- 💧 Water
- 🌿 Wetland
- ⚓ Railroad

Locus Map



Map Number

19

November 2006