CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT

New York State Governor's Office of Storm Recovery
June 20, 2017

Central Endicott Drainage Improvements
Environmental Assessment

June 20, 2017

Project Name:	Central Endicott Drainage Improvements
Project Location:	Within and near George W. Johnson Park, and bounded by Ellis Avenue/Cornell Avenue to the west, Oak Hill Road to the east, Clark Street to the south, and East Franklin Street and Jenkins Street to the north in the Village of Endicott, Town of Union, Broome County, New York 13760
Federal Agency:	U.S. Department of Housing and Urban Development (HUD)
Responsible Entity:	New York State Homes and Community Renewal (HCR) Governor's Office of Storm Recovery (GOSR)
Responsible Agency's Certifying Officer:	Lori A. Shirley, Certifying Environmental Officer 38-40 State Street, Hampton Plaza Albany, New York 12207 (518) 474-0755, Lori.Shirley@nyshcr.org
Project Sponsor: **Primary Contact:**	Village of Endicott John Bertoni, Mayor 1009 East Main Street Endicott, NY 13760-5290 (607) 757-2421, voemayor@endicottny.com
Project NEPA Classification:	24 CFR 58.36 (Environmental Assessment)

Environmental Finding:	☒ Finding of No Significant Impact - The project will not result in a significant impact on the quality of the human environment.
	☐ Finding of Significant Impact - The project may significantly affect the quality of the human environment.
Certification	The undersigned hereby certifies that New York State Homes and Community Renewal has conducted an environmental review of the project identified above and prepared the attached environmental review record in compliance with all applicable provisions of the National Environmental Policy Act of 1969, as amended (42 USC Sec. 4321 et seq.) and its implementing regulations at 24 CFR Part 58.
Signature	Lori A. Shirley

Environmental Assessment Prepared By:	Tectonic Engineering & Surveying Consultants, P.C. 70 Pleasant Hill Road Mountainville, New York 10953

CERTIFICATION OF NEPA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2015 NYS CDBG-DR project, Central Endicott Drainage Improvements are:
Project Year Project Name

Check the applicable classification.

☐ Exempt as defined in 24 CFR 58.34 (a).

☐ Categorically Excluded as defined in 24 CFR 58.35(b).

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and no activities are affected by federal environmental statues and executive orders [i.e., exempt under 58.34(a)(12)].

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and some activities are affected by federal environmental statues and executive orders.

☒ "Other" neither exempt (24 CFR 58.34(a)) nor categorically excluded (24 CFR 58.35).

☐ Part or all of the project is located in an area identified as a floodplain or wetland. For projects located in a floodplain or wetland, evidence of compliance with Executive Orders 11988 and/or 11990 is required.

For activities excluding those classified as "Other", attached is the appropriate Classification Checklist (Exhibit 2-4) that identifies each activity and the corresponding citation.

Lori A Shirley

Signature of Certifying Officer

6/20/17
Date

Lori A. Shirley
Print Name

Certifying Environmental Officer
Title

CERTIFICATION OF SEQRA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2015 NYS CDBG-DR project, Central Endicott Drainage Improvements are:
Project Year Project Name

Check the applicable classification:

- ☐ Type I Action (6NYCRR Section 617.4)
- ☐ Type II Action (6NYCRR Section 617.5)
- ☒ Unlisted Action (not Type I or Type II Action)

Check if applicable:

- ☐ Environmental Impact Statement (EIS) Prepared
  - ☐ Draft EIS
  - ☐ Final EIS

Lori A Shirley

Signature of Certifying Officer

6/20/17
Date

Lori A. Shirley
Print Name

Certifying Environmental Officer
Title

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

Project Name: Central Endicott Drainage Improvements

Location: Within and near George W. Johnson Park, and bounded by Ellis Avenue/Cornell Avenue to the west, Oak Hill Road to the east, Clark Street to the south, and East Franklin Street and Jenkins Street to the north in the Village of Endicott, Town of Union, Broome County, New York 13760

Description:
The Village of Endicott proposes stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system (see location maps in **Attachment 1**). The proposed project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. In addition, the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street will be rerouted. Thus, the 24" RCP trunk line relocation will mitigate flooding by removing a significant inflow at a critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection. The premise of the proposed underground detention storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, usually consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The underground storage detention systems should effectively reduce peak flows and provide underground flood storage and control, thus, mitigating aboveground flooding in the proposed project area. The proposed site layout, details and distribution area plans are included in **Attachment 2**.

Project Activities:
CDBG-DR funding is proposed for the construction of stormwater management improvements. The proposed project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. The three underground detention storage systems will be located wholly within the municipally owned George W. Johnson Park (Park). These locations were identified as the most suitable areas situated adjacent to the incoming trunk lines where installation would have little effect on the existing land use and function of the designated areas. A proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The total estimated footprint of the proposed underground detention storage systems is approximately 6,475 square feet. The locations of the proposed stormwater detention storage systems are included on the location maps in **Attachment 1**.

The proposed project also includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. The stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, however, it will remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection. The location of this proposed trunk line relocation is included in **Attachment 1**.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:
This funding assistance will provide for the construction of stormwater management improvements to improve stormwater drainage in the central portion of the Village of Endicott. The proposed project will alleviate flooding within the target area by adding capacity to the Village's stormwater retention system and improving the stormwater conveyance system in order to eliminate downstream flooding of homes, businesses, public improvements and schools. The FEMA Flood Insurance Rate Map (Firmette) is included in **Attachment 4**.

During Tropical Strom Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott, causing the central portion of the Village to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the target area. The proposed project will mitigate the flooding risks of the Village by providing an adequate stormwater management system.

Existing Conditions and Trends [24 CFR 58.40(a)]:
The George W. Johnson Park is located west of the former IBM site, north of the Conrail Railroad, east of Conrail Avenue, and south of Jenkins Street. The RCP trunk line will be relocated southwest of the Park, between Ellis Avenue and East Franklin Street. The approximate boundary of the proposed project area is zoned as open space and industrial area, and is surrounded by residentially zoned areas to the north and east. This area is located at the base of a mountain ridge with a slope of 15 to 35 percent (%) slope to the south-southeast, with land in the proposed project area generally trending south-southeast at a 0 to 8% slope. This proposed project is located in an area that is primarily residential to the north, with businesses and industrial areas located immediately south and east of the proposed project area (Location Maps: **Attachment 1**; Broome County Municipal Zoning Map: **Attachment 7**).

Funding Information
Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**: $2,470,830.00**

Estimated Total HUD-Funded Amount:

CDBG-DR	$2,470,830.00	Public Facilities
Total	**$2,470,830.00**	

Compliance with 24 CFR 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes No ☐ ☒	Based on guidance provided by HUD in Fact Sheet #D1, the National Plan of Integrated Airport Systems (NPIAS) was reviewed for civilian, commercial service and military airports located near the proposed project site. There are no civilian, commercial service airports located within 2,500 feet of the proposed project site. There are no military airports located within 15,000 feet of the proposed project site (**Attachment 1**). No additional review is required. Fact Sheet #D1: Siting HUD-Assisted Projects in Accident Potential Zones
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes No ☐ ☒	Based on the United States Fish and Wildlife Service (USFWS) Coastal Barrier Resources System Map, the proposed project site is not located in or immediately adjacent (within 150 feet) to a Coastal Barrier Resource System Unit or Otherwise Protected Area (**Attachment 3**). https://www.fws.gov/ecological-services/habitat-conservation/cbra/Maps/index.html
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes No ☐ ☒	Based on the preliminary FEMA Firmette and the effective FEMA Firmette 3600450005B, the proposed project site is not located within a FEMA designated 100-year flood zone. The Floodplain Management Determination (Executive Order [EO] 11988) and the FEMA Firmettes for this project are included in **Attachment 4**. https://msc.fema.gov/portal

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No ☐ ☒	The proposed project site is located in Broome County, which is listed as a current attainment county for ozone, particulate matter, sulfur dioxide, lead, carbon monoxide, and nitrogen dioxide (**Attachment 1**). Therefore, the federal general conformity regulations do not apply, and a conformity and screening analysis was not performed according to the requirements of 40 CFR 93, Subpart B. The proposed project involves stormwater management improvements (see proposed site plans in **Attachment 2**). Construction of the proposed project would not generate significant levels of new vehicular traffic; therefore, no exceedances of the National Ambient Air Quality Standard (NAAQS) associated with carbon monoxide (CO) or particulate matter (PM) is anticipated to occur. The proposed project will not result in siting any new major source of air pollutants as this proposed project involves stormwater management improvements. The proposed project does not involve work that will substantively affect the New York State Department of Environmental Conservation (NYSDEC) Air Quality State Implementation Plan (SIP). Any air quality impacts would be short-term and localized during construction and, therefore, no significant adverse impacts to air quality are anticipated. However, it is recommended that construction activities are conducted in such a way as to ensure acceptable air quality during these activities (e.g., through minimization of volatile organic compounds and nitrogen oxides emissions, mindful operation of gas-powered construction equipment to avoid prolonged idling, or fugitive dust management during construction). It is also recommended that low-VOC materials and inventory and energy star efficient equipment are used, as practicable. EPA, Nonattainment Areas for Criteria Pollutants https://www.epa.gov/green-book Ozone specific: https://www3.epa.gov/airquality/greenbook/hbca.html#Ozone_8-hr.2008.New_York

		U.S. Environmental Protection Agency (EPA), Recent Updates: Federal Register Notices Published or Effective After September 22, 2016 http://www.epa.gov/airquality/greenbook/adden.html
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes No ☐ ☒	Not applicable. The proposed project site is not located within the New York State Coastal Boundary or a Local Waterfront Revitalization Program Community (**Attachment 3**).
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No ☐ ☒	**<u>Subject Property Records Review</u>** **Subject Property Description:** The proposed project consists of the installation of underground stormwater detention systems near and within George W. Johnson Park and the installation of a 24" RCP trunk line between Ellis Avenue and East Franklin Street. No occupied structures are proposed. The areas of disturbance as noted by the proposed site plans submitted by Griffiths Engineering are included in **Attachment 2**, with approximate boundaries shown on the project location maps in **Attachment 1**. This will collectively be referred to as the Subject Property below. **EPA Records:** The Subject Property is not listed on an EPA Superfund National Priorities or CERCLA list or equivalent State list. A review of the EPA Facilities Database provides no indication of past uses of the Subject Property that could have contaminated the Subject Property, or potentially adversely affect the occupants of the Subject Property. **Broome County & NYSDEC Records:** The Subject Property is not located within 3,000 feet of a toxic or solid waste landfill site. The Subject Property is not listed within the NYSDEC Bulk Storage Database. According to the NYSDEC Environmental Site Database, the Subject Property is listed in the Spill Incidents Database and Remedial Sites Database. One spill was reported on the Subject Property, **Spill report #1607989**. This spill was reported at George W. Johnson Park in November 2016. A geotechnical boring and soil analysis performed on the soil samples detected semi-volatile organic compounds. The site is suspected to have historical fill, in many cases identified as being

		generated by the Endicott-Johnson Shoe Company. Based on the tests results provided, the NYSDEC is in agreement with the fill material being contaminated with petroleum and characterized as non-hazardous. Based on the subsurface investigation report, the NYSDEC closed this spill report on May 16, 2017. The NYSDEC requests that any fill material removed during the installation of Chamber #3 be properly disposed of, and no additional fill material will be required to be removed beyond the excavation needed to properly install the stormwater system. A spill closure by the NYSDEC indicates that the records and data submitted for the spill demonstrated that the necessary cleanup and removal actions have been completed and no further remedial actions are necessary under these spill reports. Please see NYSDEC Letter, Subsurface Investigation Report, and NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on or Within Close Proximity to the Site within **Attachment 5** for documentation containing the NYSDEC letter and spill information dated December 30, 2016 and Subsurface Investigation Report from LiRo Engineers, Inc. dated December 5, 2016. The Subject Property is also listed in the Environmental Site Remediation Database two (2) times. The proposed area of disturbance located south of Clark Street and north of E. Franklin Street is on a parcel identified as 901 E. Franklin Street. A State Superfund Site, **Endicott-Johnson, Inc. (704018)**, is identified as a 5.5-acre lot located at 901 E. Franklin Street. The lot was once the location of a small manufacturing plant for Endicott-Johnson Shoe Company, though it is currently vacant. Twelve underground storage tanks used for storing solvents and raw materials were historically located on the property. Leakage from the tanks contaminated the site soils and groundwater with toluene. Remediation at the site is complete, and the NYSDEC Inactive Hazardous Waste Disposal registry notes the remedial efforts at the site have effectively mitigated the potential for on-site exposure to contaminants. Additionally, no building structures are proposed to be constructed on-site. As such, this investigation is not considered a hazard that could affect the health

		and safety of occupants or conflict with the intended utilization of the Subject Property. Additionally, the Subject Property is located within the **Endicott Area-Wide Investigation (704038)** New York State Superfund Site. The primary contaminants of concern are trichloroethylene (TCE) and perchloroethylene (PCE), affecting indoor air quality. However, the subject property is zoned for open space, and the proposed project does not involve the construction of any building structures. As such, this site is not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. A review of the NYSDEC databases provided no indication of other past uses of the Subject Property that could contaminate the Subject Property or conflict with the intended utilization of the Subject Property. **<u>Surrounding Properties</u>** **EPA Records:** There are 35 EPA-permitted hazardous waste, air emissions, and water discharger facilities located within 3,000 feet of the Subject Property. Of the 35 facilities, 31 have no violations reported at the facility. Facilities with no permit violations are not considered a hazard because the facilities are in compliance with permit conditions that are enforced and meet standards that protect public health and the environment by preventing releases to the environment. There were two (2) facilities with no data records available, and two (2) facilities that have violations and are in non-compliance of permit conditions, identified below. The facilities are determined NOT to pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property as documented below. Two (2) Toxics Release Inventory (TRI) facilities have no data available; **BAE Systems Controls** is an active TRI facility with data reported as of 2015, while **VMR Electronics** is an inactive facility with data reported since 2011. However, these facilities have no spills reported, and the chemical and TRI forms indicate the primary form of release at these two sites are via recycling. As such, these two facilities are not considered a hazard that could affect the health and safety of

		occupants or conflict with the intended utilization of the Subject Property. The remaining two (2) facilities are **I3 Electronics Inc.** and **Endicott MS4 Storm Sewers**. These facilities were reviewed in detail in the HUD Environmental Standards Review included in **Attachment 5**. The facilities were determined to NOT pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property because hazardous substances have not been released from the facility. **NYSDEC Records:** A search of the NYSDEC Spill Incidents Database resulted in the identification of 13 spills within 1,000 feet of the Subject Property. Of the 13 spills, all 13 spills have been closed by the NYSDEC. A spill closure means that the records and the data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial actions are necessary or the case was closed for administrative reasons (e.g. multiple reports of a single spill consolidated into a single spill number). As such, these spills are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. According to the NYSDEC Bulk Storage and Environmental Site Remediation Databases, there are 21 bulk storage sites and seven (7) environmental remediation sites within 3,000 feet of the Subject Property. These sites are discussed in further detail in **Attachment 5**, and are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. **<u>Conclusion:</u>** Based on a review of available environmental records for the Subject Property and surrounding area, the Subject Property is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, or radioactive substances which would constitute a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. Therefore, a Phase I Environmental Site Assessment (ESA) or Phase II Investigation is not

		warranted. Maps, EPA reports, NYSDEC reports and the subsurface investigation report are provided in **Attachment 5**.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No ☒ ☐	A formal request was submitted to the NYSDEC Natural Heritage Program (NHP) for records of threatened or endangered species at the proposed project site. On November 16, 2016, a response was received from the NHP indicating their database contained no records of rare or state-listed animals or plants, or significant natural communities at or within the immediate vicinity of the proposed project site. NHP documentation is included in **Attachment 6**. The USFWS lists the threatened Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*) and migratory birds of concern as species with the potential to occur within the vicinity of the proposed project site. The IPaC Resource List indicates that there are 18 species of migratory birds protected by the MBTA and BGEPA that could potentially be affected by the proposed project, including the bald eagle (*Haliaeetus leucocephalus*) (**Attachment 6**). However, there are no known breeding bald eagles within the vicinity of the proposed project; therefore, no adverse impacts to breeding bald eagles are expected to occur as a result of the proposed project. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance. The proposed project will not jeopardize the continued existence of Endangered Species Act (ESA) species or destroy or adversely modify their critical habitat. The proposed project will not disturb hibernating NLEBs in a known hibernaculum, alter the entrance or interior environment of a known hibernaculum, remove any trees within 0.25 miles of a known hibernaculum, or cut or destroy known occupied maternity roost trees or any other trees within a 150-foot radius from the maternity roost tree. Suitable summer habitat for NLEBs is present within the vicinity of the proposed project area. The proposed project involves the removal of approximately 1.3 acres of trees for the relocation of the 24" reinforced concrete pipe stormwater connection. However, **no tree cutting will occur between June 1 and July 31** to prevent impacts

		to pups. GOSR **recommends that all tree cutting occur between November 1 and March 31**, but this may not be feasible due to construction schedules which have not been finalized. Prior to the initiation of any construction, bright orange construction fencing and flagging would be used to demarcate trees to be protected compared with those to be cut. Therefore, GOSR determined that the proposed project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule (**Attachment 6**). On February 27, 2017, this determination was sent to the USFWS. The USFWS response was not received within 30 days from submission of the determination to USFWS. Thus, GOSR may presume that its determination is informed by the best available information and its project responsibilities under Section 7 of the ESA, including Section 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016 "Programmatic Biological Opinion (BO) on the Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions" (**Attachment 6**).
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No ☐ ☒	Not applicable. The proposed project does not involve construction, development, conversion, or rehabilitation that will increase residential densities. The proposed project also does not introduce any storage, handling or processing of hazardous materials outside of the short-term use of construction equipment. Therefore, no further review is required.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No ☐ ☒	Not applicable. The proposed project site is not located within an Agricultural District (**Attachment 7**). Most of the site is classified as Not Prime Farmland with a small forested portion near Clark Street being Statewide Important Farmland according to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Farmland Classification Map (**Attachment 7**). However, this stormwater management improvements project does not involve the conversion of farmland to non-agricultural use. Therefore, the proposed project would not violate the Farmland Protection Policy Act. Thus, no further review is required.

		http://www.agriculture.ny.gov/ap/agservices/agricultural-districts.html
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No ☐ ☒	The proposed project is not located within a FEMA designated flood zone as documented in **Attachment 4**. Therefore, a formal floodplain review process is not required for compliance with Executive Order 11988 Floodplain Management. https://msc.fema.gov/portal
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800; Tribal notification for new ground disturbance.	Yes No ☐ ☒	On April 13, 2017, the New York State Historic Preservation Office (SHPO) reviewed the proposed project and determined that there will be *No Effect* on historic properties listed or eligible for listing on the National Register of Historic Places (**Attachment 8**). On April 18, 2017, GOSR sent consultations letters to the Tribal Historic Preservation Offices (THPO) of the following Tribes, Communities and Nations: • Delaware Nation • Delaware Tribe of Indians • Oneida Indian Nation • Onondaga Nation • Seneca-Cayuga Nation • Stockbridge-Munsee Community Band of Mohicans • Tuscarora Nation The Delaware Tribe THPO responded that they had no objections to the proposed project. The Oneida Indian Nation THPO determined that the proposed project site lies outside of the Oneida aboriginal territory. The Stockbridge-Munsee Community Band of Mohicans THPO responded that the Community does not have significant cultural resource concerns with the proposed project. No response was received from the Delaware Nation, Onondaga Indian Nation, Seneca-Cayuga Nation, or the Tuscarora Nation. The THPO consultations and responses have been included in **Attachment 8**. Any subsequent responses received from the THPOs will be incorporated

		into the requirements of this environmental review and appended to **Attachment 8**. In the event any unanticipated discoveries of human remains and/ or cultural resources including, but not limited to, funerary objects, sacred objects, and objects of cultural patrimony are made during execution of the proposed project, work shall be halted immediately and the SHPO and the THPOs of the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Seneca-Cayuga Nation, Stockbridge-Munsee Community Band of Mohicans, and Tuscarora Nation shall be consulted before work resumes.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes No ☐ ☒	The proposed project use is not a noise-sensitive use. The proposed project activities are not expected to generate excessive noise during the short-term construction work and will adhere to local noise control standards. The proposed project will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Therefore, the proposed project is not expected to generate any significant adverse noise impacts.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No ☐ ☒	The proposed project site is located within the surficial boundaries of the Clinton Street-Ballpark Valley Sole Source Aquifer (SSA). An Initial Screen/ Preliminary Review request was submitted to the Region 2 Office of the EPA as per the Memorandum of Understanding (MOU) between EPA and HUD dated August 24, 1990. On April 14, 2017, the EPA determined that there is compliance with the Safe Drinking Water Act of 1974 Section 1424(e) and the regulations promulgated in 40 CFR Part 149, and no further compliance measures are necessary. The EPA strongly encourages the planting of native vegetation and included other considerations to reduce environmental impacts and create a more sustainable project in their response. Documentation associated with the EPA consultation and response are included in **Attachment 9**. http://www.dec.ny.gov/docs/water_pdf/ssa.pdf

Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No ☐ ☒	Based on the USFWS National Wetlands Inventory (NWI) map and NYSDEC Environmental Resource Mapper, there is a federally designated freshwater pond (PUBHx) and NYSDEC classified A, standard A, unnamed stream located within the larger project area. However, there are no mapped federal or state wetlands located in the proposed project sites as shown on the wetland maps included in **Attachment 3**. Because no proposed project activities are occurring in a wetland, a formal wetland management review process is not required for compliance with Executive Order 11990 Protection of Wetlands, as documented in **Attachment 4**. NYSDEC Environmental Resource Mapper http://www.dec.ny.gov/gis/erm/ USFWS National Wetland Inventory - V2 https://www.fws.gov/wetlands/Data/Mapper.html
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No ☐ ☒	The proposed project is not located near any wild, scenic or recreational rivers, as designated by the U.S. Department of the Interior and NYSDEC or included in the National Wild and Scenic Rivers System (**Attachment 3**). Thus, there is compliance with this section. National Wild and Scenic Rivers System http://www.rivers.gov/new-york.php NYSDEC Wild, Scenic and Recreational Rivers http://www.dec.ny.gov/permits/32739.html NPS Nationwide Rivers Inventory https://www.nps.gov/ncrc/programs/rtca/nri/states/ny.html
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes No ☐ ☒	The proposed project sites are not located in an area defined by the NYSDEC as a potential environmental justice area, see map included in **Attachment 11**. In addition, the proposed project involves stormwater management improvements that will benefit the potential environmental justice areas located nearby through the mitigation of future flooding during severe storm events. Therefore, the proposed project does not

		contribute to, or promote, environmental injustice. NYSDEC County Maps Showing Potential Environmental Justice Areas http://www.dec.ny.gov/public/899.html

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	1	The proposed project is in accordance with the local Town of Union zoning for this site. Based on the Broome County Zoning Map, the proposed project activities will be performed mainly in areas zoned for open space and industrial use (**Attachment 7**). Active mixed-use/ industrial zoned parcels lie north of the Conrail Railroad on the southern and eastern boundaries of the proposed project area, which includes the proposed project location. South of the railroad is zoned as commercial. Further to the east there are active industrial parcels that occupy the area along the tracks up to the Village of Endicott Border at Hayes Avenue. The proposed project area is located adjacent to residential zoning to the north and west. According to the *Town of Union Unified Comprehensive Plan*, the proposed project site location is in an area designated for future mixed and recreational uses. The proposed project involves stormwater management improvements that will benefit the area and its mixed uses by mitigating future flooding. The neighborhood surrounding the proposed project area is one of the most populous areas in the Town, and has already been

		built out to near full capacity according to the *Town of Union Unified Comprehensive Plan*. The proposed project will not alter the existing land use, cause changes to neighborhood characteristics of the local area, or alter residential or commercial density. Residential and commercial infrastructure in these neighborhoods will not be adversely affected. Rather, the proposed project will enhance evacuation efforts and the ability for emergency personnel to respond during and after future storm events by allowing access to the neighboring residential area in and around the project location that would otherwise be blocked off due to flood waters. Broome County, *All Hazards Mitigation Plan* (Approved June 2013) http://www.gobroomecounty.com/planning/hazardmitigation/plandocuments http://www.gobroomecounty.com/files/planning/_pdf/Hazard%20Mitigation/Final%20Draft%20For%20Approval/9-21%20Town%20of%20Union%20Annex%20February%202013%20low%20res.pdf Broome County, *Comprehensive Plan*, Building Our Future, Action Plan http://www.gobroomecounty.com/files/planning/_pdf/Comprehensive%20Plan/Comprehensive%20Plan%20Final/16%20WD%20County%20Comp%20Plan%20-%20Action%20Plan.pdf Town of Union, *Comprehensive Plan*, Demographic Profile, Neighborhood 8, Northside-West Endicott http://www.townofunion.com/depts_services_plan_comprehensive_plan_neighborhood.html Town of Union, *Permits/Code Enforcement/Zoning,* January 4, 2014 http://ecode360.com/UN0126?needHash=true
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	Per the USGS Topographic Map, the proposed project area is located in an area with terrain gently sloping to the south (**Attachment 1**). The proposed project activities would not significantly alter the slope of the site (**Attachment 2**). USDA NRCS maps provide information on soils types and properties that influence development of building sites. According to the USDA NRCS soils map data for "Shallow Soil Excavation" and Soil classification, the proposed project area contains various cut and fill lands, with loamy and silty materials, Lordstown channery silt loam with 15-25% slopes, Lordstown and Oquaga channery silt loams with 25-35% slopes, Bath channery silt loam with 15-25% slopes, and Volusia channery silt loam with 8-15% slopes (**Attachment 7**).

		According to the NRCS, "somewhat limited" indicates that the soil has features that are moderately favorable for the specified use, while “very limited” indicates that the soil has one or more features that are unfavorable for the specified use. The cut and fill lands, reported at the proposed stormwater storm tank sites, were rated as "somewhat limited" on the “Shallow Excavations” soils map; the relocated stormwater trunk line is rated as "somewhat limited" to “very limited” on the “Shallow Excavations” soil map. Therefore, the proposed project conforms to the soil ratings assigned by the USDA. As such, the soils at the proposed project site will not limit the construction activities and designs. The proposed project includes the relocation of a stormwater trunk line and the installation of stormwater storage tanks to be connected to existing stormwater infrastructure. No potential undesirable impacts are anticipated and the area should be improved in terms of its landscape and stability upon completion of the proposed project. The proposed project will be implemented in accordance with all applicable federal, state and local permit requirements and conditions, including a NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit. Thus, no adverse potential impacts from the proposed project are anticipated.
Hazards and Nuisances including Site Safety and Noise	2	Based on a review of available environmental records for the proposed project and surrounding area, the proposed project is unlikely to be adversely impacted by hazardous materials, contamination, toxic chemicals and gases, and radioactive substances. No hazards are anticipated to affect the health and safety of occupants or conflict with the intended utilization of the proposed project. Maps, EPA reports, NYSDEC reports and the subsurface investigation report are provided in **Attachment 5**. The proposed project use is not a noise-sensitive use. The proposed activities are not expected to generate excessive noise during the short-term construction work and will adhere to local noise control standards. The proposed project will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Therefore, the proposed project is not expected to generate any significant adverse noise impacts at this open space and industrial use site.
Energy Consumption	2	The proposed project involving installation of stormwater mitigation systems and the relocation of the stormwater trunk line will not cause a demand or increase in long-term energy consumption.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	The proposed project would not adversely affect employment opportunities or income patterns, is not likely to impact traffic and potential customer access to residences and businesses in the area, either during construction or operation. Rather, the proposed project only involves the installation of stormwater management improvements in an open space and industrial zoned area. Therefore, there is not expected to be an adverse effect on employment and income patterns from this proposed project. The proposed project would decrease the vulnerability of the surrounding community to future flooding and aid in a faster post-disaster recovery by enhancing access in the surrounding area for emergency response operations and egress for evacuation efforts during disasters.
Demographic Character Changes, Displacement	2	The proposed project is not expected to cause any change in the demographic character of the area. The proposed project will not involve residential or commercial development activities. Also, the proposed project will not present the potential to cause the displacement of individuals or families, destroy jobs, local businesses or public community facilities, or disproportionately affect particular populations. Rather, the proposed project only involves the installation of stormwater mitigation systems and relocation of a stormwater trunk line to mitigate flooding during future storm events.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	The proposed project will not introduce any new populations that would increase the student population of the area. As such, the proposed project will not have an impact on educational or cultural facilities.
Commercial Facilities	2	The proposed project will not introduce any new commercial development that would require additional retail services or other commercial facilities.
Health Care and Social Services	1	The proposed project will not introduce any new development that would require the availability of additional routine or emergency health services. Rather, the proposed project will improve accessibility in the area for routine and emergency health services during and after severe storm events.
Solid Waste Disposal / Recycling	2	The proposed project will not introduce new development that would generate solid wastes on an ongoing basis. All construction wastes will be appropriately disposed of, according

		to the type of waste generated and construction waste management practices, in an appropriate, legally compliant receiving facility.
Waste Water / Sanitary Sewers	2	The proposed project will not introduce any new development that would generate waste water. Mitigative measures and best management practices (BMPs) will be utilized during construction to prevent soil and/ or debris from being washed off-site. No waste water is anticipated to be generated during construction.
Water Supply	2	The proposed project will not increase the demand for water. As such, the proposed project will not have an impact on local water supplies.
Public Safety - Police, Fire and Emergency Medical	1	The proposed project will not generate new demand for police, fire, or emergency medical services. The proposed project only involves the installation of stormwater mitigation systems and the relocation of a stormwater trunk line. The proposed project will decrease the vulnerability of the community by adding capacity to the municipal stormwater retention system, effectively conveying water during future storm events, and alleviating chronic flooding problems. Thus, the proposed project will improve the accessibility and travel times for emergency services and emergency response operations during and after severe storm events. This includes an improved egress for evacuation efforts.
Parks, Open Space and Recreation	1	The proposed project will not introduce new development that will generate demand for open space resources or impede open space access. Instead, the proposed project is likely to reduce flooding in the area and the vulnerability of assets by increasing the resiliency of the community during future storm events. Additionally, while the proposed work will be performed in an open space area, the area will be returned to its previously existing conditions. Thus, the proposed project will not have an adverse effect on existing open space resources or impede open space access.
Transportation and Accessibility	1	Other than limited trips generated by construction vehicles during a short window of construction, the proposed project will not introduce new development that generates continuing demand for transportation access or transportation services. During Tropical Storm Lee, six to twelve inches of rain led to massive flooding in the Village of Endicott as the existing stormwater system was overwhelmed and inundated the surrounding areas. The flooding rendered emergency response operations and evacuation efforts ineffective. The proposed stormwater management improvements will protect the residents' public health and safety by mitigating flooding,

		safeguarding vital infrastructure, and improving transportation accessibility including emergency response operations and evacuation efforts during and after severe storm events.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	According to NYSDEC, there are no unique geological features located on or adjacent to the proposed project site. According to NYSDEC's Environmental Resource Map, the proposed project site is not located in or adjacent to "Significant Natural Communities." This data layer identifies locations within ½ mile of an identified significant natural community (**Attachment 3**). NYSDEC Unique Geologic Features http://www.dec.ny.gov/permits/53826.html Based on the USFWS NWI map and NYSDEC Environmental Resource Mapper, there is a federally designated freshwater pond (PUBHx) and NYSDEC classified A, standard A, unnamed stream located within the larger project area (**Attachment 3**). However, there are no mapped federal or state wetlands located in the proposed project sites as shown on the wetland maps included in **Attachment 3**. Therefore, no proposed project activities are occurring in a wetland, and a formal wetland management review process is not required for compliance with Executive Order 11990 Protection of Wetlands, as documented in **Attachment 4**. NYSDEC Environmental Resource Mapper http://www.dec.ny.gov/gis/erm/ USFWS National Wetland Inventory - V2 https://www.fws.gov/wetlands/Data/Mapper.html The proposed project will not interfere with the restoration of a vital ecosystem and preservation of its natural heritage. The proposed project will be implemented in accordance with all applicable federal, state and local permit requirements and conditions, including a NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit, in order to ensure the preservation of water quality. Thus, no adverse potential impacts from the proposed project are anticipated. The proposed project will not introduce new demand for groundwater or surface water, nor will the proposed project introduce septic flows that may affect groundwater. The proposed project will not significantly increase impervious surfaces. Rather, the proposed project will introduce stormwater runoff controls in the form of increased capacity in the

		stormwater systems and drainage improvements that will effectively convey water during 50-year storm events and alleviate chronic flooding problems. Therefore, unique natural features or water resources are not expected to be adversely affected by this proposed project.
Vegetation, Wildlife	2	The proposed project will involve the installation of stormwater management improvements. Any disturbed areas will be restored to pre-existing and/ or improved conditions after construction is complete. For a detailed vegetation and wildlife analysis, see the Endangered Species (Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402) section above.
Other Factors	1	This project will ensure that emergency service providers and residents can carry out a post-disaster survival and recovery plan by providing enhanced access to and from the area during and after a severe storm event. The proposed project will introduce stormwater runoff controls in the form of increased capacity in the stormwater systems and drainage improvements that will effectively convey water during 50-year storm events and alleviate chronic flooding problems. The proposed project is intended to sustain the area and build resiliency of this area during future flooding events while not detracting from visual quality. Additionally, the proposed project will protect the residents' public health and safety by mitigating flooding, safeguarding vital infrastructure, and improving transportation accessibility including emergency response operations and evacuation efforts during and after severe storm events.

Attachments:

- **Attachment 1:** Location Maps
    - Street Map
    - Topographic Map
    - Aerial Photograph
    - Airport Hazards Map
    - Airport Location Data
- **Attachment 2:** Proposed Site Plans
- **Attachment 3:** Coastal, Wetlands, and River Maps
    - NYSDEC Coastal Barrier Resources System Mapper
    - USFWS NWI Map
    - NYSDEC Environmental Resource Map
    - Wild and Scenic Rivers Map
- **Attachment 4:** Floodplain Management (EO 11988) and Protection of Wetlands (EO 11990) Determination
    - USFWS NWI Map
    - NYSDEC Environmental Resource Map
    - FEMA Firmette
- **Attachment 5:** HUD Environmental Standards Review Report
    - Maps
    - U.S. EPA Reports for Properties Contiguous to the Subject Property
    - NYSDEC Letter, Subsurface Investigation Report, and NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on or Within Close Proximity to the Site
- **Attachment 6:** Section 7 Documents
    - NHP Documentation
    - USFWS Consultation Letters
- **Attachment 7:** Zoning, Agricultural, and NRCS Documents
    - Broome County Zoning Map for the Village of Endicott
    - New York State Agricultural Districts Map
    - USDA NRCS Soil Resource Map
    - USDA NRCS Building Site Development
    - USDA NRCS Land Classification Map
- **Attachment 8:** SHPO and THPO Documentation
    - SHPO Response
    - THPO Responses
        - Delaware Tribe of Indians
        - Oneida Indian Nation
        - Stockbridge-Munsee Community Band of Mohicans
    - THPO letters
        - Affidavit of Mailing
        - Delaware Nation
        - Onondaga Nation
        - Seneca-Cayuga Nation
        - Tuscarora Nation
- **Attachment 9:** EPA Sole Source Aquifer Map & Documentation
- **Attachment 10:** Potential Environmental Justice Areas Map
- **Attachment 11:** Permit Documentation (To be added upon receipt)

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA)
- United States Environmental Protection Agency (USEPA)
- United States Fish and Wildlife Service (USFWS)
- U.S. Department of Agriculture (USDA)
- Natural Resources Conservation Service (NRCS)
- United States Department of Interior (USDOI)
- National Parks Service (NPS)
- United States Geological Survey (USGS)
- New York State Department of Environmental Conservation (NYSDEC)
- Natural Heritage Program (NHP)
- New York State Department of State (NYSDOS)
- New York State Historic Preservation Office (SHPO)
- New York State Tribal Historic Preservation Office (THPO)
    - Delaware Nation
    - Delaware Tribe of Indians
    - Oneida Indian Nation
    - Onondaga Nation
    - Seneca Cayuga Tribe
    - Stockbridge-Munsee Community Band of Mohicans
    - Tuscarora Nation
- NYRCR Program Central Endicott Drainage Improvements Project Application for Funding (December 2015)
- Broome County, *NY Rising Community Reconstruction Program Plan,* March 2014 https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/broomecounty_nyrcr_plan.pdf
- Broome County, *All Hazards Mitigation Plan* (Approved June 2013) http://www.gobroomecounty.com/planning/hazardmitigation/plandocuments http://www.gobroomecounty.com/files/planning/_pdf/Hazard%20Mitigation/Final%20Draft%20For%20Approval/9-21%20Town%20of%20Union%20Annex%20February%202013%20low%20res.pdf
- Broome County, *Comprehensive Plan*, Building Our Future, Action Plan http://www.gobroomecounty.com/files/planning/_pdf/Comprehensive%20Plan/Comprehensive%20Plan%20Final/16%20WD%20County%20Comp%20Plan%20-%20Action%20Plan.pdf
- Town of Union, *Comprehensive Plan*, Demographic Profile, Neighborhood 14, South Endwell http://www.townofunion.com/pdfs/Comprehensive%20Plan%20Neigh%20Profiles/Neighborhood_14/NH%2014%20South%20Endwell%201-13-09.pdf
- Town of Union, *Permits/Code Enforcement/Zoning,* January, 4, 2014 http://ecode360.com/UN0126?needHash=true
- Site Plans developed by Griffiths Engineering, dated September 2016.

List of Permits Obtained or Required:

- NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit

List of Approvals Obtained or Required:

- SEQRA Unlisted determination per 6 NYCRR PART 617

Public Outreach [24 CFR 50.23 & 58.43]**:**

- March 22, 2016 - Village of Endicott Meeting
- June 14, 2016 - Village of Endicott Meeting
- August 10, 2016 - Village of Endicott Meeting
- June 20, 2017 – Publication of a Combined Notice of Finding of No Significant Impact (*FONSI*) and Notice of Intent to Request Release of Funds (*NOI-RROF*).

Cumulative Impact Analysis [24 CFR 58.32]**:**

The proposed project was evaluated according to the proposed site plans included in **Attachment 2**. There are no other known future projects in the area of the proposed project that would create environmental or social impacts in the community. The proposed project fits within the surrounding area per the local zoning regulations and comprehensive plan's land use goals.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]**:**

The primary alternative for the proposed project is the "no action" alternative. This alternative means that there would be no work undertaken to mitigate flooding from future storm events. This would leave the surrounding community vulnerable to future flood damage. The "no action" alternative would provide no protection to the residential neighborhoods, public infrastructure, and greater community from future flood events, as mitigation would be compromised due to lack of financial support. Thus, the "no action" alternative is not feasible in relation to the desired objective of creating area resiliency to future flooding events.

Summary of Findings and Conclusions:

The preceding Statutory Checklist and Environmental Assessment Checklist, and the discussion below, document that the proposed work will comply with regulations in 24 CFR part 58 and that there are no direct or cumulative adverse environmental impacts anticipated as a result of the proposed project.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal state and local laws. Failure to obtain all appropriate federal, state, and local environmental permits and clearances may jeopardize federal funding.

Law, Authority, or Factor	Mitigation Measure
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	The proposed project involves the removal of approximately 1.3 acres of trees for the relocation of the 24" reinforced concrete pipe stormwater connection. However, the proposed project will not disturb hibernating NLEBs in a known hibernaculum, alter the entrance or interior environment of a known hibernaculum, remove any trees within 0.25 miles of a known hibernaculum, or cut or destroy known occupied

	maternity roost trees or any other trees within a 150-foot radius from the maternity roost tree. Additionally, **no tree cutting will occur between June 1 and July 31** to prevent impacts to pups. GOSR **recommends that tree cutting occur between November 1 and March 31**, but this may not be feasible due to construction schedules which have not been finalized. Prior to the initiation of any construction, bright orange construction fencing and flagging would be used to demarcate trees to be protected compared with those to be cut. The proposed project may affect the NLEB, but any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule (**Attachment 6**).

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Andrea Dievers Date: 6/20/17

Name/Title/Organization: Tectonic Engineering and Surveying Consultants, P.C.

Certifying Officer Signature: Lori A Shirley Date: 6/20/17

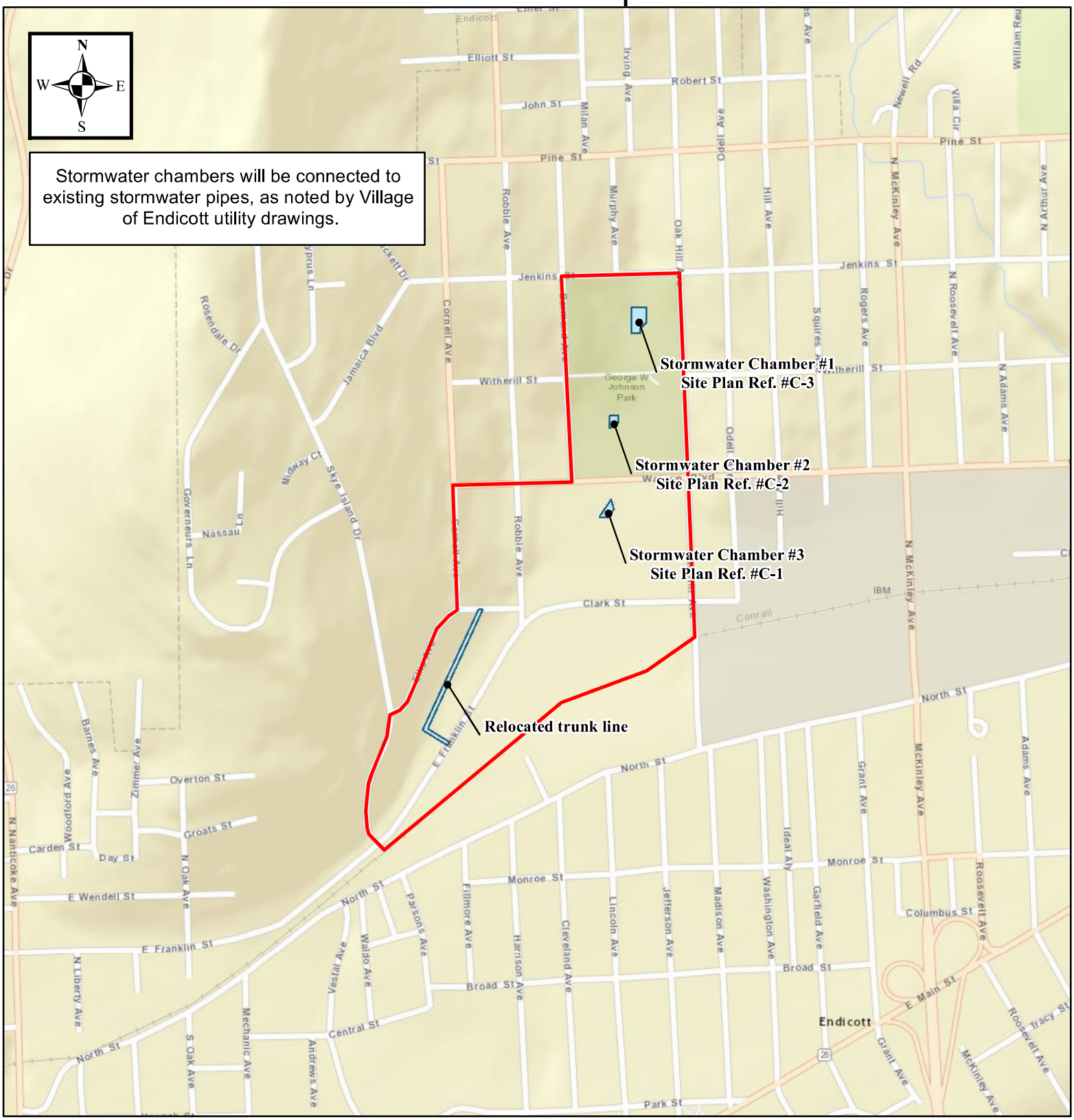
Name/Title: Lori A. Shirley, Certifying Officer, GOSR

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Attachment 1

Street Map,
Topographic Map,
Aerial Photograph,
Airport Hazards Map,
& Airport Location Data

Location Map



TECTONIC
Practical Solutions, Exceptional Service

0 1,250 2,500 5,000 Feet

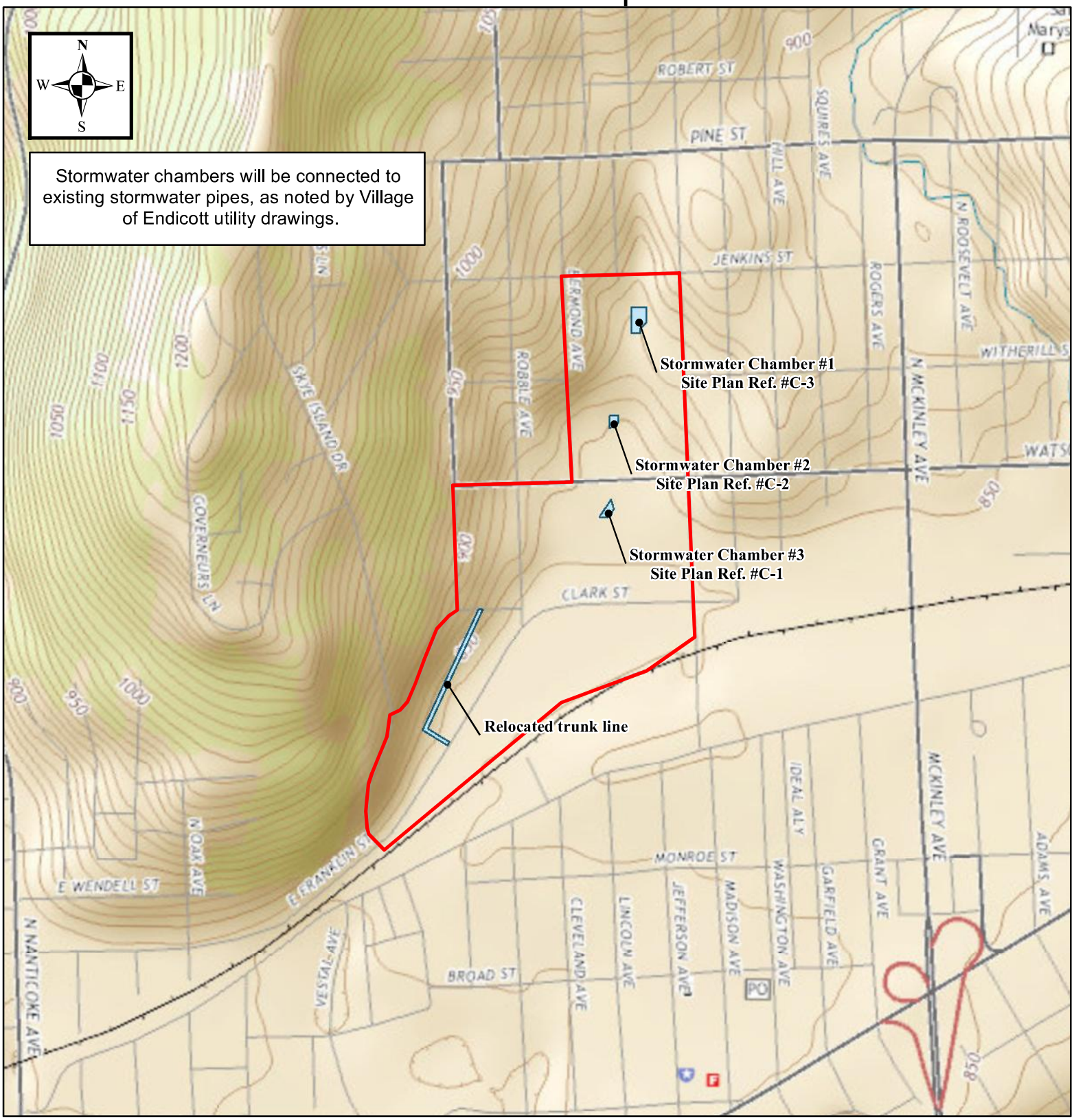
1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)

Location Map



TECTONIC
Practical Solutions, Exceptional Service

0 1,250 2,500 5,000 Feet

1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)

Location Map

TECTONIC
Practical Solutions, Exceptional Service

0 1,250 2,500 5,000 Feet

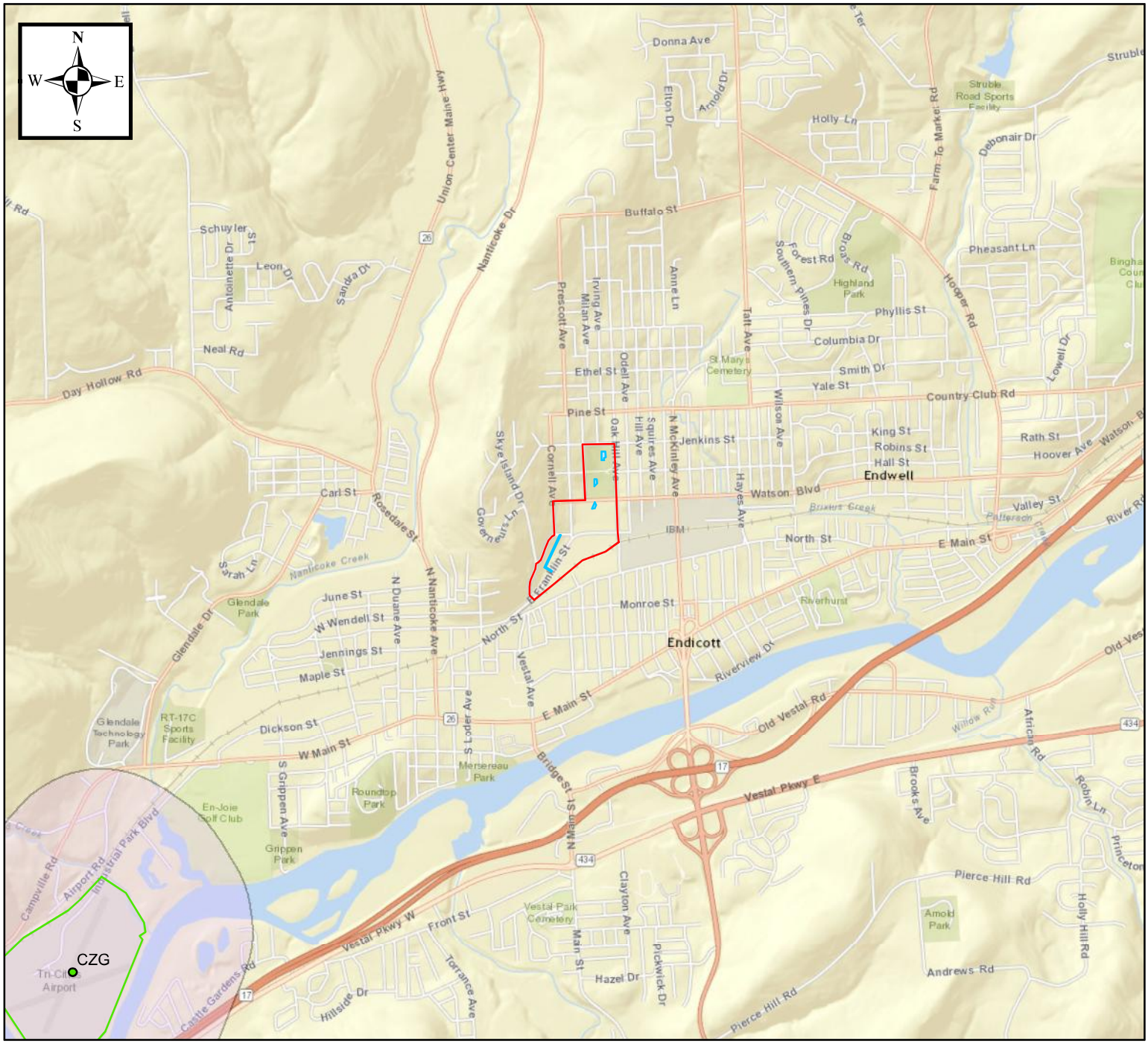
1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

- **Project Area (Approximate Boundary)**
- **Proposed Area of Ground Disturbance (Approximate Boundary)**

Airport Hazards Map



TECTONIC
Practical Solutions, Exceptional Service

0 1,450 2,900 5,800 Feet

1:40,000

Central Endicott Drainage Study
George W. Johnson Park
Endicott, NY
Broome County

Created: 10/27/2016
Source data: FAA facility data and
Airport Master Records and Reports data.

Note: This map identifies all documented airport and heliport facilities located within the shown area.

Legend

- Central Endicott Drainage Study Project Area (Approximate Boundary)
- Central Endicott Proposed Work Area (Approximate Boundary)
- Airport and Heliport Locations (Location ID)
- Major Commercial Airport Locations (Approximate Boundary)
- Civilian Runway Protection Zone (2500 ft)

Aeronautical Information Services - National Flight Data Center (NFDC)

The NFDC website has been consolidated with the FAA's **Aeronautical Information Services** website. Please bookmark the **new Aeronautical Data/NFDC website** location.

Data Effective: **09/15/2016 - 11/10/2016**

CZG (KCZG)

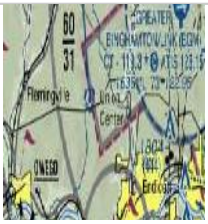
TRI-CITIES

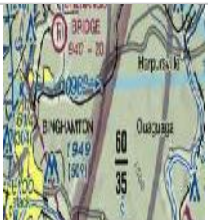
ENDICOTT , NY - UNITED STATES

Summary/Location

View active NOTAMS

Latitude/Longitude	42-4-42.7 N / 76-5-46.8 W
Elevation	832.7 FT
Variation	12 W 1995
From city	3 miles SW of ENDICOTT, NY
ARTCC	ZNY
Section chart	NEW YORK
Time Zone	UTC-5(-4DT)





OPERATIONS

Airport Status	Operational
Facility use	Open to the public
Control Tower	No air traffic control tower at airport
FSS	BUFFALO FSS (BUF) Toll Free: 1-800-WX-BRIEF
NOTAMs Facility	CZG (TRI-CITIES)
Attendance	UNATNDD
Wind Indicator	Lighted
Segmented Circle	Yes
Lights	SEE RMK ACTVT REIL RY 03/21; MIRL RY 03/21 - CTAF.
Beacon	Clear and Green ROTG BEACON OBSCURED NORTH & WEST OF ARPT DUE TO HIGH TERRAIN. SS-SR
Landing Fee	No
Fuel	100LL, A+
Int'l Operations	Not a Landing Rights Airport Not an Airport of Entry

COMMUNICATIONS

UNICOM:	122.8 MHz		
CTAF:	122.8 MHz		
ATIS:	None		
RADAR SERVICE:	Approach / Departure		
BINGHAMTON APPROACH:	118.6 MHz	APCH/P	(S-SE)
BINGHAMTON APPROACH/DEPARTURE:	118.6 MHz	APCH/P DEP/P	
	257.625 MHz	APCH/P DEP/P	

BINGHAMTON CLERANCE DELIVERY:	121.7 MHz	CD/P

Remarks:

- CD THRU FLT SVCS 1-888-766-8267.
- APCH/DEP SERVICE PROVIDED BY NEW YORK ARTCC ON FREQS 133.35/372.0 (SAYRE RCAG) WHEN BINGHAMTON APCH CTL CLOSED.

NAVAIDS

NAVAIDS:

Type	ID	Name	Frequency	Hours	Distance	Bearing	Remarks
VORTAC	CFB	BINGHAMTON	112.2 MHz	24 Hours	5.1 nm	159.3°	• OPERATIONAL IFR
VOR/DME	ITH	ITHACA	111.8 MHz	24 Hours	29.8 nm	147.0°	• OPERATIONAL RESTRICTED • VOR PORTION UNUSABLE 360-059 BYD 10 NM BLO 3800'; 060-080 BYD 28 NM BLO 2500'; 081-150 BYD 10 NM BLO 3800'. • DME PORTION UNUSBL 360-160 BYD 20 NM BLO 6500'.
NDB	ALP	ALPINE	245 KHz	24 Hours	31.3 nm	107.7°	• OPERATIONAL IFR
VORTAC	GGT	GEORGETOWN	117.8 MHz	24 Hours	44.3 nm	195.7°	• OPERATIONAL IFR • VOR UNUSBL 105-279 ALL DSTCS BLO 4000 FT.

WEATHER

ID	Type	Frequency	Phone	Distance	Remarks
CZG	WX AWOS-3	119.075 MHz	607-785-2926	0.0 nm	
BGM	WX ASOS		607-729-8335	9.4 nm	
N27	WX AWOS-3	119.925 MHz	570-265-1024	25.3 nm	
N03	WX AWOS-3	132.225 MHz	607-753-9784	31.3 nm	
N23	WX AWOS-3	118.275 MHz	607-561-2333	33.0 nm	

RUNWAY 03/21

Dimensions	3900 ft. x 75 ft.
Surface Type	ASPH
Surface Condition	FAIR
Treatment	
Runway Edge Lights	Medium Intensity
PCN	
Single Wheel	30,000 lbs
Double Wheel	
Double Tandem	
Dual Double Tandem	

Base End: 03

True Alignment	24°
Traffic Pattern	Left
Markings	Non-precision instrument
Markings Condition	Fair
Latitude	42-4-25.0861 N
Longitude	76-5-57.1812 W
Elevation	829.9 ft.
Threshold Crossing Height	
Visual Glide Path Angle	
Visual Slope Indicator	
Runway End Identifier Lights	Yes
TDZE	832.7 ft.

Reciprocal End: 21

True Alignment	204°
Traffic Pattern	Left
Markings	Non-precision instrument
Markings Condition	Poor MARKINGS FADED
Latitude	42-5-0.3633 N
Longitude	76-5-36.4102 W
Elevation	826.2 ft.

Threshold Crossing Height	40 ft. AGL
Visual Glide Path Angle	4°
Visual Slope Indicator	2-light PAPI on right
Runway End Identifier Lights	Yes
TDZE	832.7 ft.

HELIPORTS

None

CHARTS

Chart data valid from 0901Z 10/13/16 to 0901Z 11/10/16.

Minimums

TAKEOFF MINIMUMS

Instrument Approach Procedure (IAP) Charts

RNAV (GPS) RWY 03

RNAV (GPS) RWY 21

VOR-A

CONTACTS

OWNER

VILLAGE OF ENDICOTT
MUNICIPAL BLDG
ENDICOTT, NY 13760
UNITED STATES
Phone: 607-757-2420

MANAGER

GERARD CORPREW
351 INDUSTRIAL PK
ENDICOTT, NY 13760
UNITED STATES
Phone: 607-785-0467

REMARKS

- HIGH TENSION TOWERS 2000' FM EOR 21 60-70' TALL.

Attachment 2

Proposed Site Plans

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

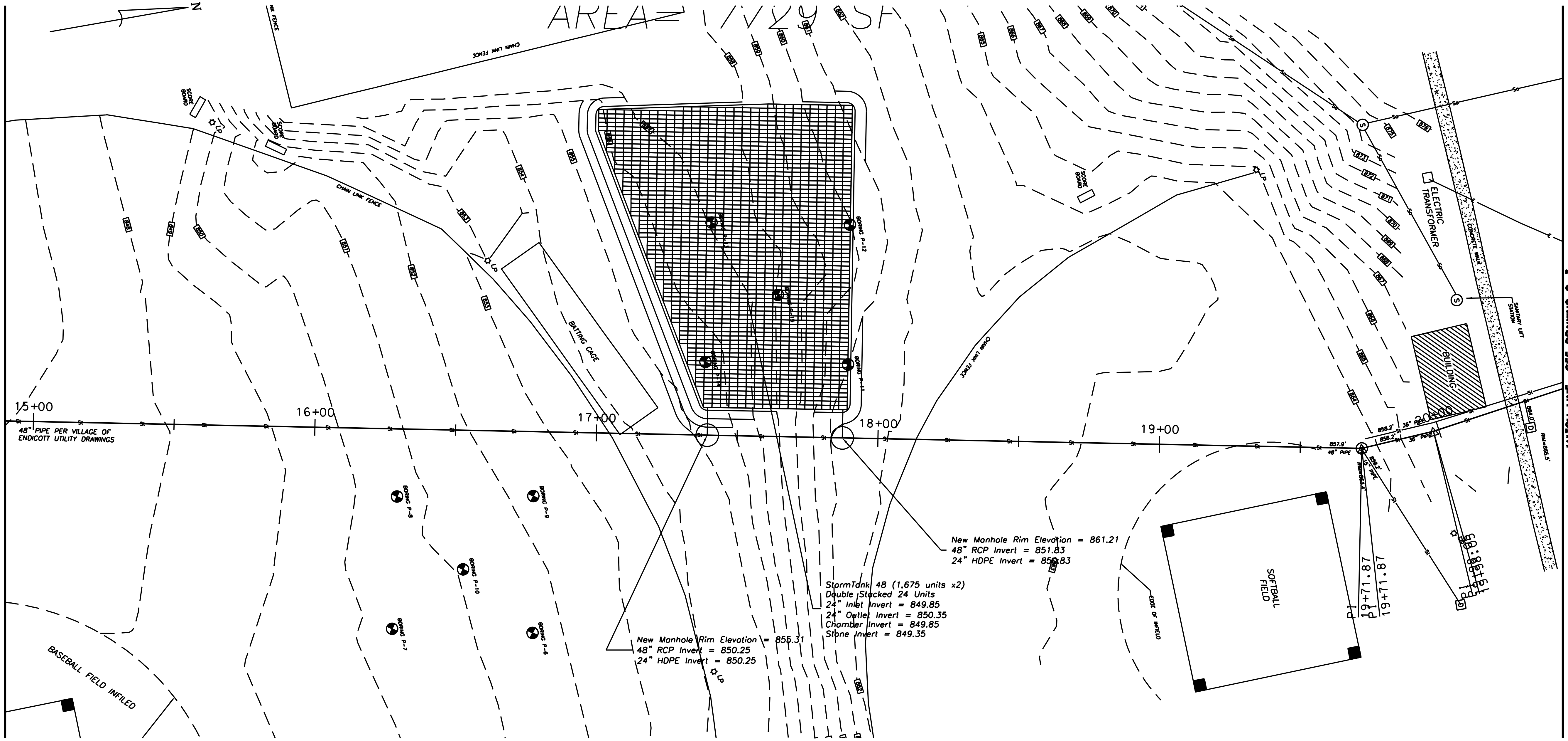
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

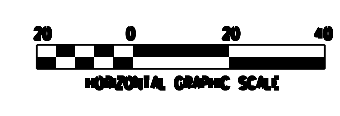
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1





GRIFFITHS

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2016	Rev.:
Drawn by: CSS	Ckd by: DC	Project No.: 2016-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.	Plot Scale: AS NOTED	

Drawing Name:
SITE LAYOUT PLAN

Project Location:
VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name:
CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:
C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

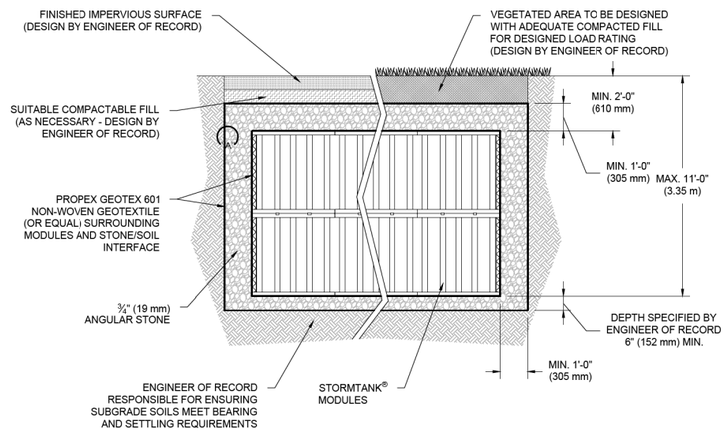
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

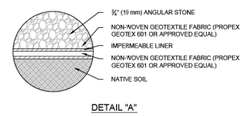
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

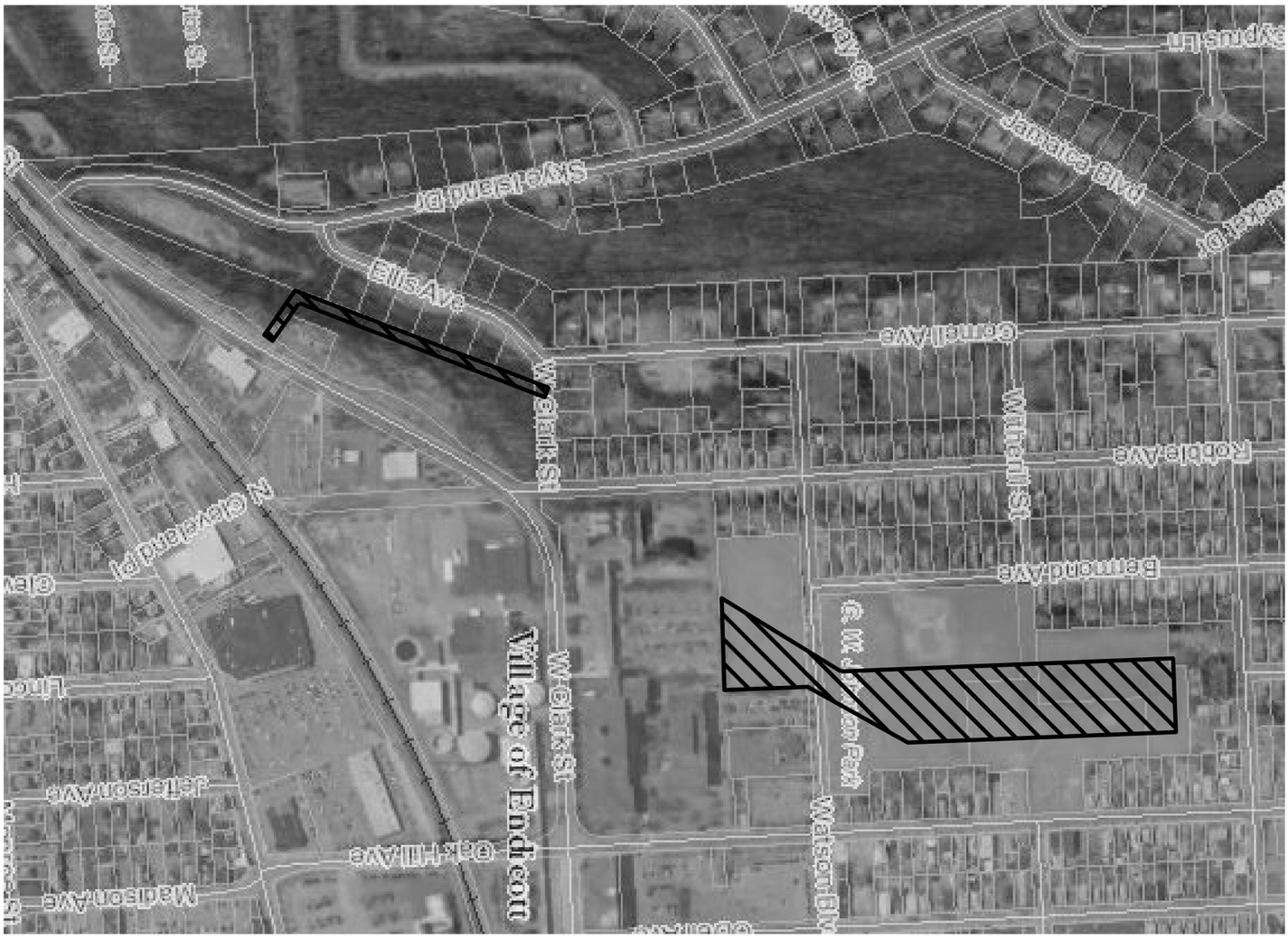
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

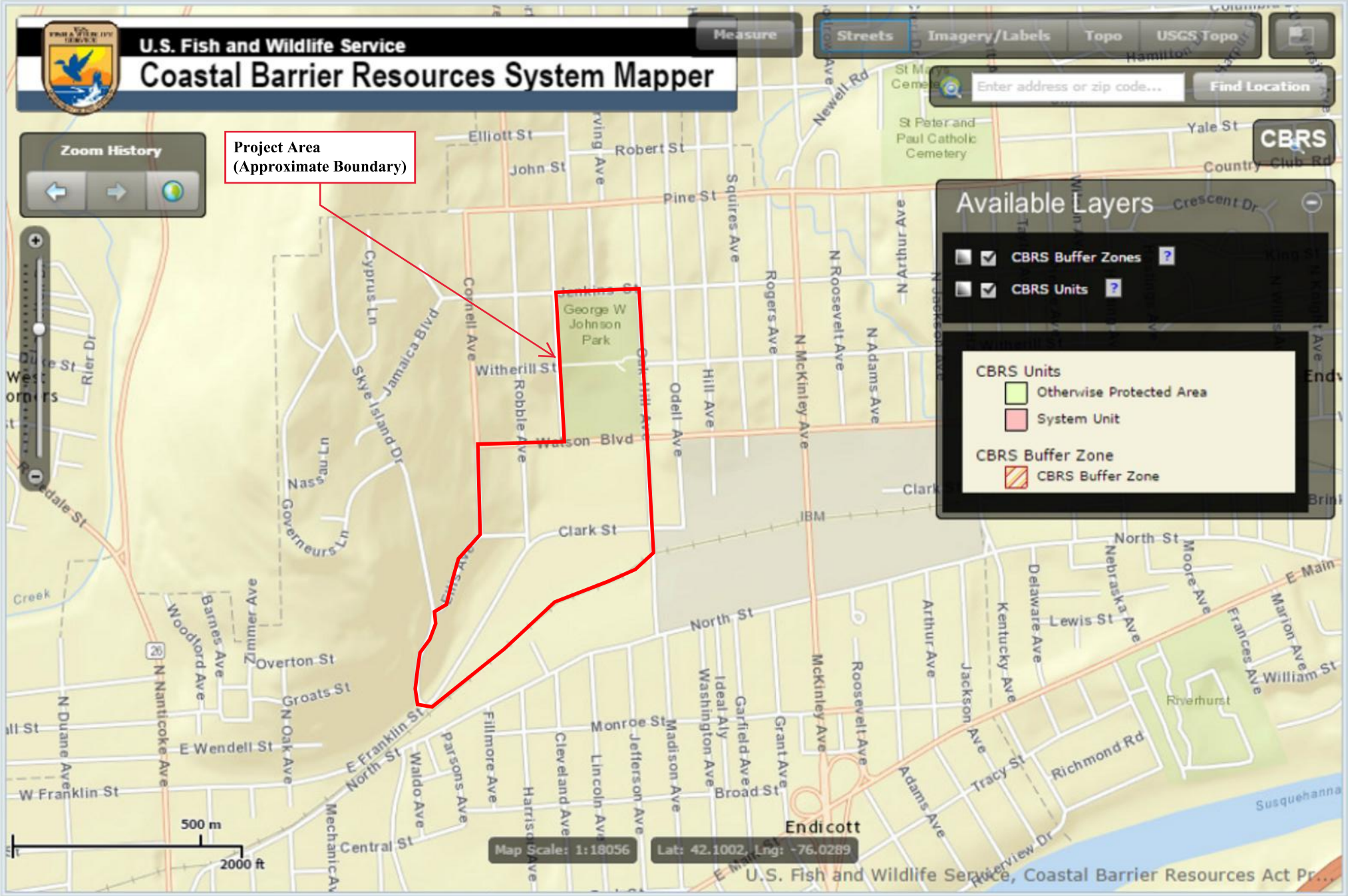
Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

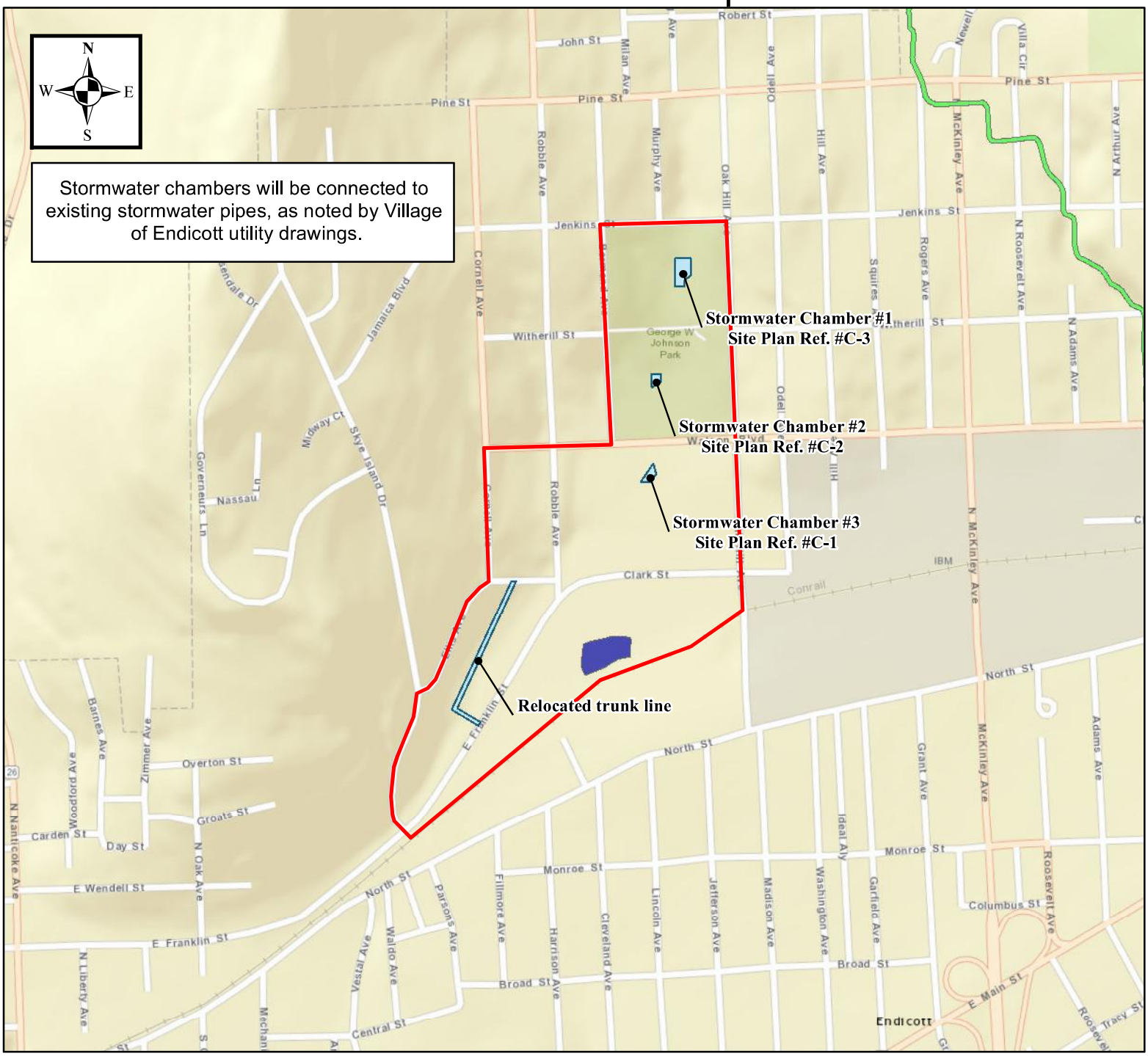
GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

Attachment 3

NYSDEC Coastal Barrier Resources System Mapper; USFWS NWI Map; NYSDEC Environmental Resource Map; & NYSDEC Wild and Scenic Rivers Map


U.S. Fish and Wildlife Service
Coastal Barrier Resources System Mapper
Measure
Streets
Imagery/Labels
Topo
USGS Topo
Enter address or zip code...
Find Location
CBRS
Zoom History
Project Area
(Approximate Boundary)
Available Layers
CBRS Buffer Zones
CBRS Units
CBRS Units
Otherwise Protected Area
System Unit
CBRS Buffer Zone
CBRS Buffer Zone
George W Johnson Park
Elliott St
John St
Robert St
Pine St
Witherill St
Watson Blvd
Clark St
North St
Monroe St
Broad St
Central St
E Franklin St
W Franklin St
E Wendell St
Overton St
Groats St
Yale St
Country Club Rd
Crescent Dr
Lewis St
Richmond Rd
Tracy St
Riverhurst
Endicott
Susquehanna
500 m
2000 ft
Map Scale: 1:18056
Lat: 42.1002, Lng: -76.0289
U.S. Fish and Wildlife Service, Coastal Barrier Resources Act Pr...

USFWS NWI Map



TECTONIC
Practical Solutions, Exceptional Service

0 500 1,000 2,000 Feet

1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/2/2017

Data Sources:
Boundaries of Wetlands provided by the USFWS NWI.

USFWS NWI
https://www.fws.gov/wetlands/data/data-download.html

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)

USFWS NWI (NY)

- Freshwater Pond
- Riverine

Environmental Resource Mapper

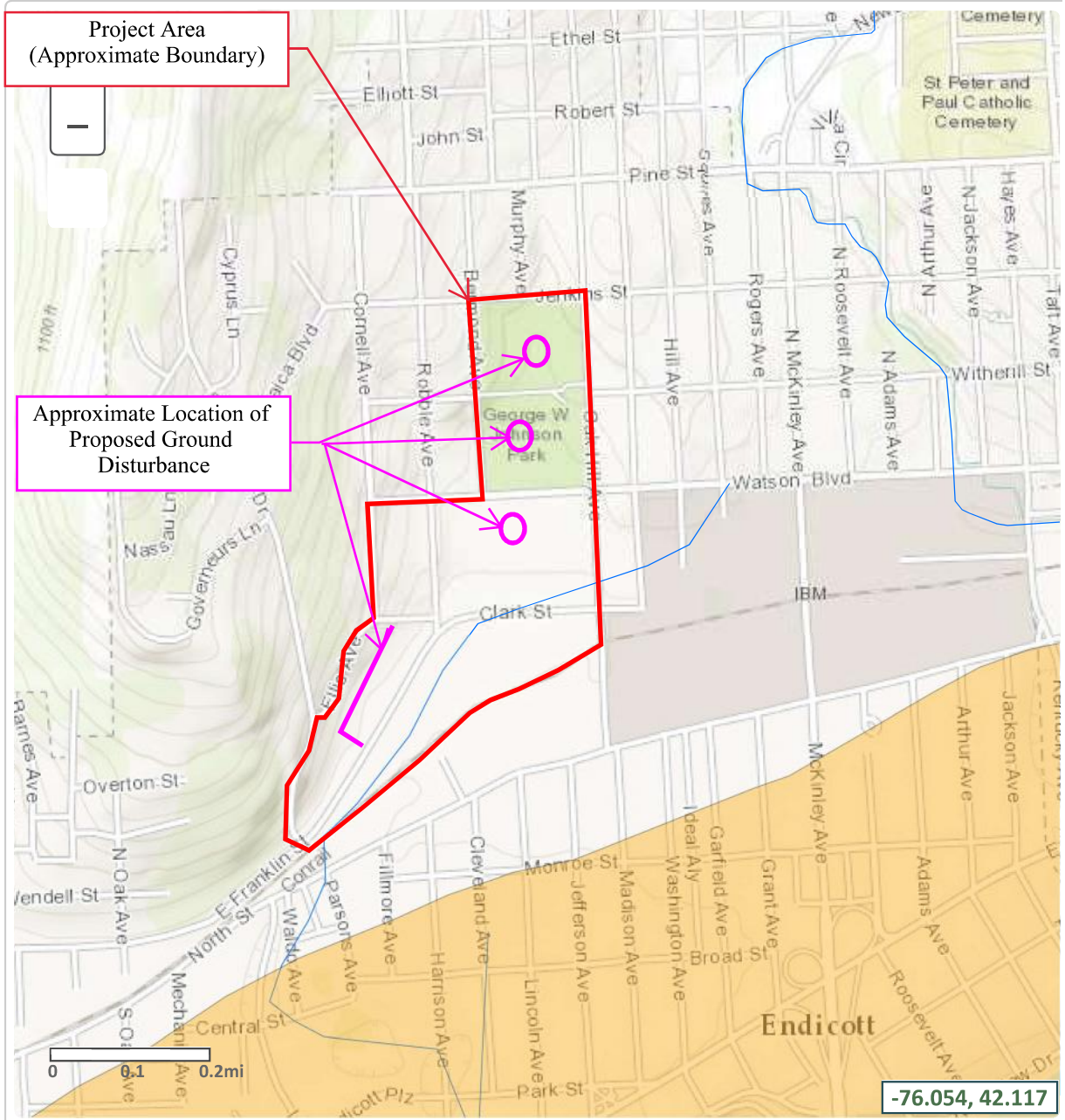
Base Map: Topographical

- Search
- Tools
- **Layers and Legend**

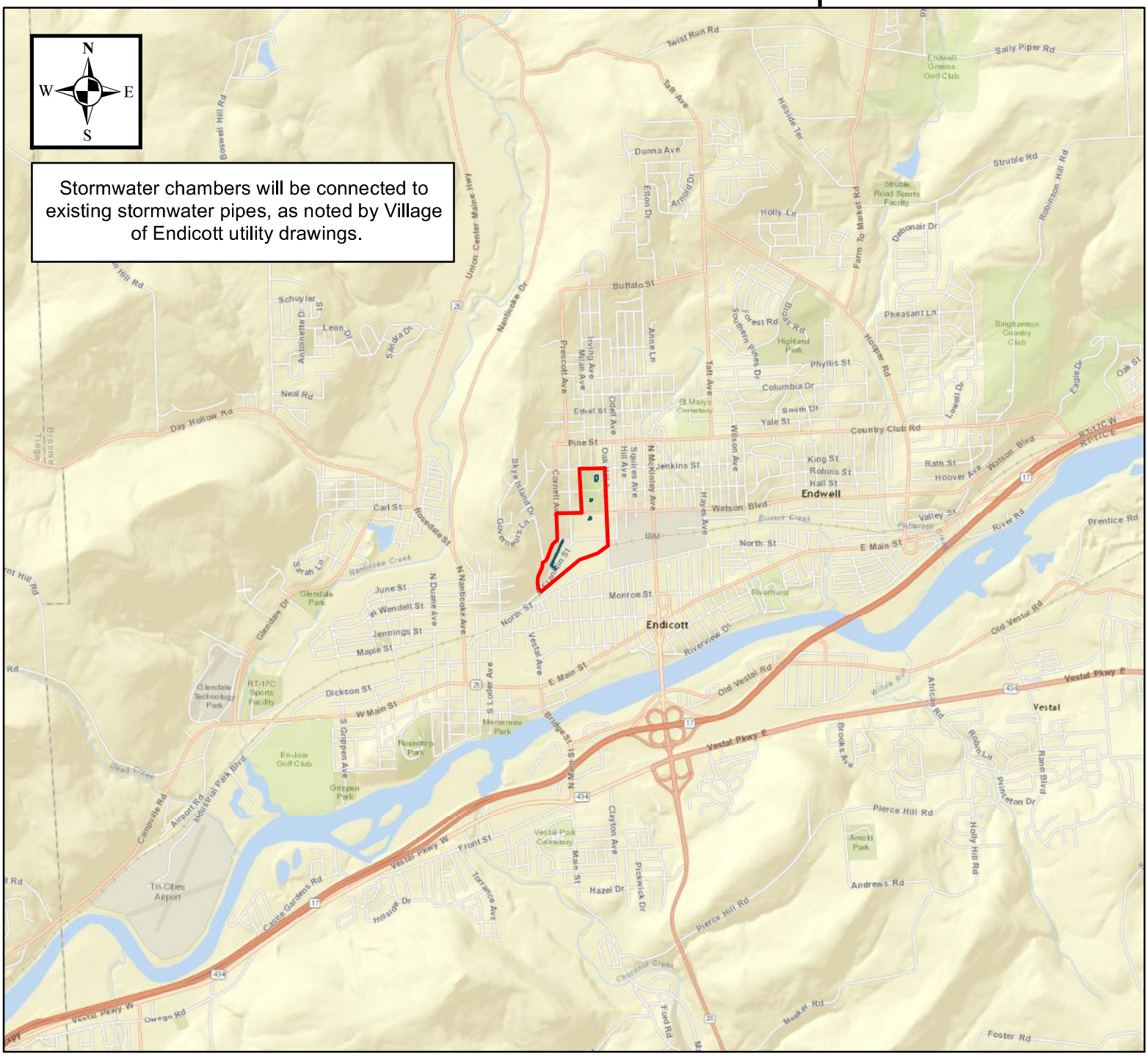
- [x] **All Layers**

- [x] Unique Geological Features
- [x] Waterbody Classifications for Rivers/Streams
- [x] Waterbody Classifications for Lakes
- [x] State Regulated Freshwater Wetlands
  - State Regulated Wetland Checkzone
- [x] Significant Natural Communities
  - Natural Communities Near This Location
- [x] Rare Plants or Animals

- Other Wetland Layers
- Reference Layers
- Tell Me More...
- Need A Permit?
- Contacts



Wild and Scenic Rivers Map



TECTONIC
Practical Solutions, Exceptional Service

0 2,500 5,000 10,000 Feet

1:50,000

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)
- Wild and Scenic Rivers

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/2/2017

Data Sources:
List of Wild, Scenic, and Recreational Rivers provided by the NYSDEC at http://www.dec.ny.gov/permits/32739.html

Attachment 4

Floodplain Management (EO 11988) and Protection of Wetlands (EO 11990) Determination

Central Endicott Drainage Improvements

EO 11988 Floodplain Management and EO 11990 Protection of Wetlands Determination

Community Reconstruction Program within NY State Community Development Block Grant Disaster Recovery Program

June 20, 2017

Overview - The proposed action for stormwater management improvements does not occur in a floodplain or result in any new construction in a wetland as shown in **Appendix I** and **Appendix II**. Therefore, no further compliance with 24 CFR §55 –Floodplain Management and Protection of Wetlands is required. This project involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program funding for adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system.

Description of Proposed Action & Land Use – The Central Endicott Drainage Improvements project activities will be located within and near George W. Johnson Park, and bounded by Ellis Avenue/Cornell Avenue to the west, Oak Hill Road to the east, Clark Street to the south, and East Franklin Street and Jenkins Street to the north in the Village of Endicott, Town of Union, Broome County, New York 13760. Based on County Assessment data, this 21.2-acre project area is located on four (4) parcels. These parcels are listed as Section-Block-Lot 157.06-1-10, 141.18-8-34, 141.18-4-50, and 141.18-4-22. The proposed funding involves a limited grant award of $2,470,830.00 for constructing these new stormwater mitigation and conveyance systems.

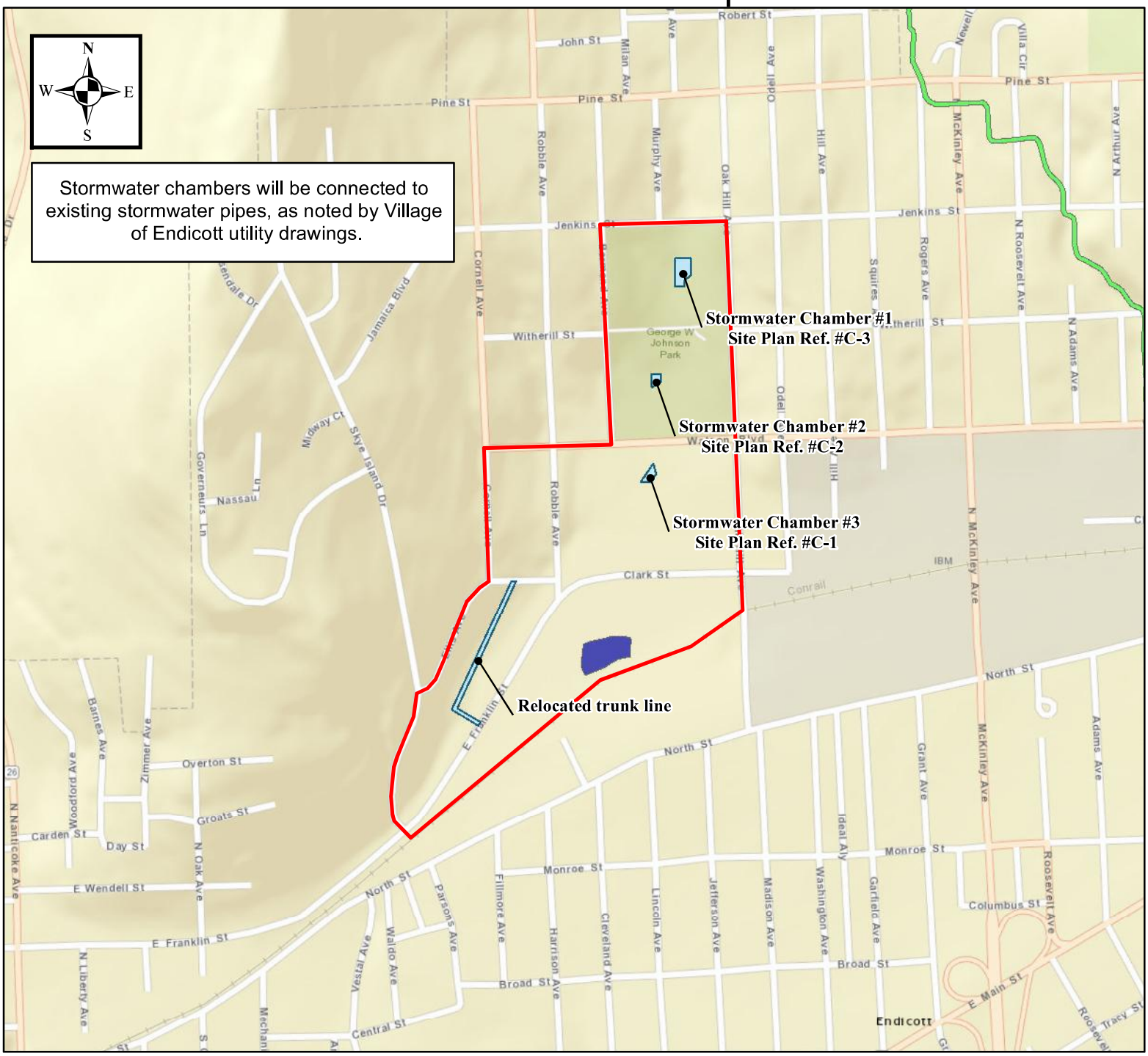
Applicable Regulatory Procedure Per EO 11988 – Based on online data, including data managed and updated by the U.S. Fish and Wildlife Service (USFWS) and New York State Department of Environmental Conservation (NYSDEC), there are no mapped wetlands in the proposed project sites. According to 24 CFR §55.20(b)(11), wetlands are defined as "areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction." The proposed action does not result in new construction in wetlands as defined in Executive Order 11990 (24 CFR §55.20(b)(8)). As such, no further compliance with 24 CFR §55 Floodplain Management and Protection of Wetlands is required.

Appendix II

USFWS NWI Map

NYSDEC Environmental Resources Map

USFWS NWI Map



TECTONIC
Practical Solutions, Exceptional Service

0 500 1,000 2,000 Feet

1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/2/2017

Data Sources:
Boundaries of Wetlands provided by the USFWS NWI.

USFWS NWI
https://www.fws.gov/wetlands/data/data-download.html

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)

USFWS NWI (NY)

- Freshwater Pond
- Riverine

Environmental Resource Mapper

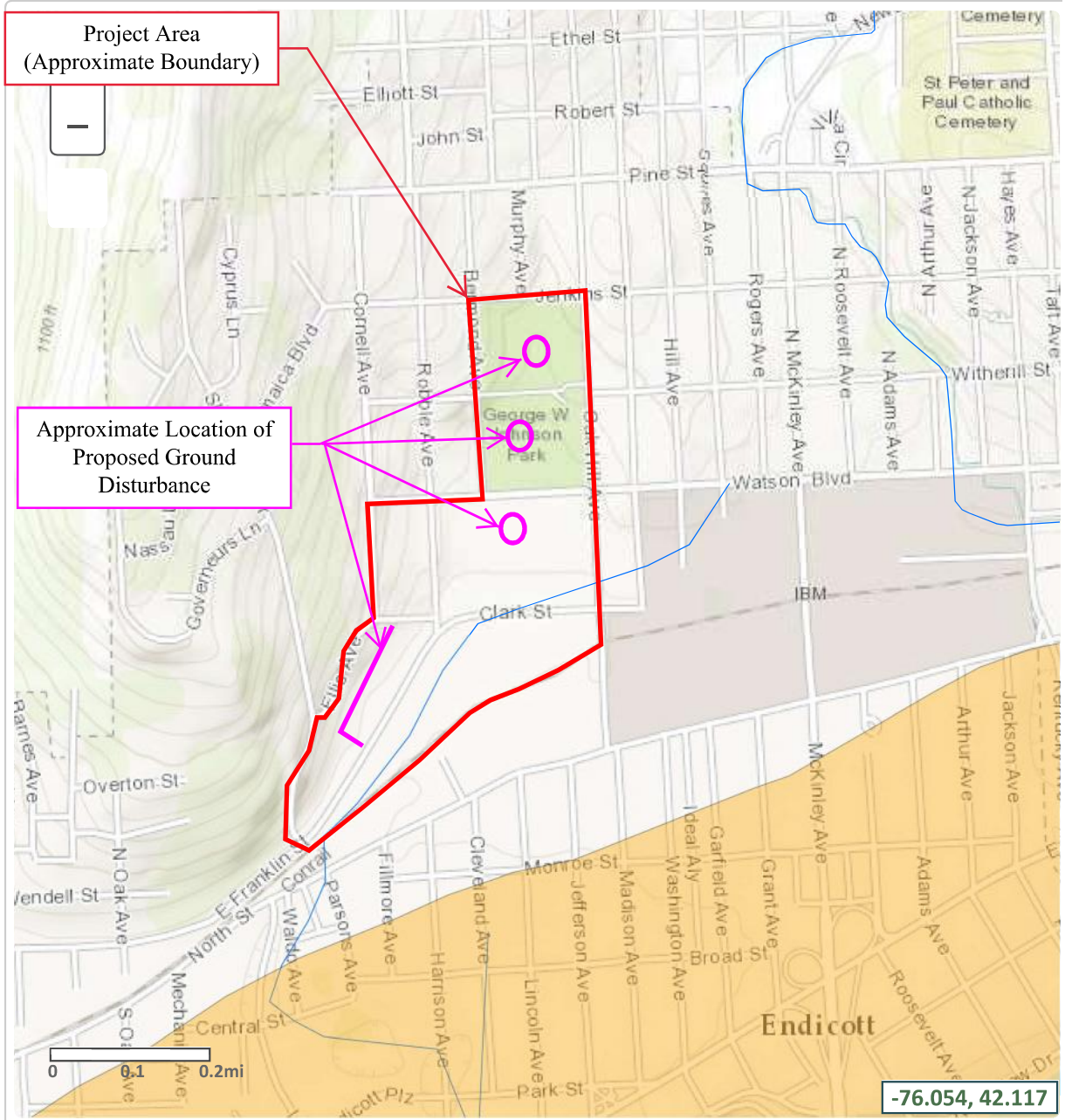
Base Map: Topographical

- Search
- Tools
- **Layers and Legend**

- [x] **All Layers**

- [x] Unique Geological Features
- [x] Waterbody Classifications for Rivers/Streams
- [x] Waterbody Classifications for Lakes
- [x] State Regulated Freshwater Wetlands
  - State Regulated Wetland Checkzone
- [x] Significant Natural Communities
  - Natural Communities Near This Location
- [x] Rare Plants or Animals

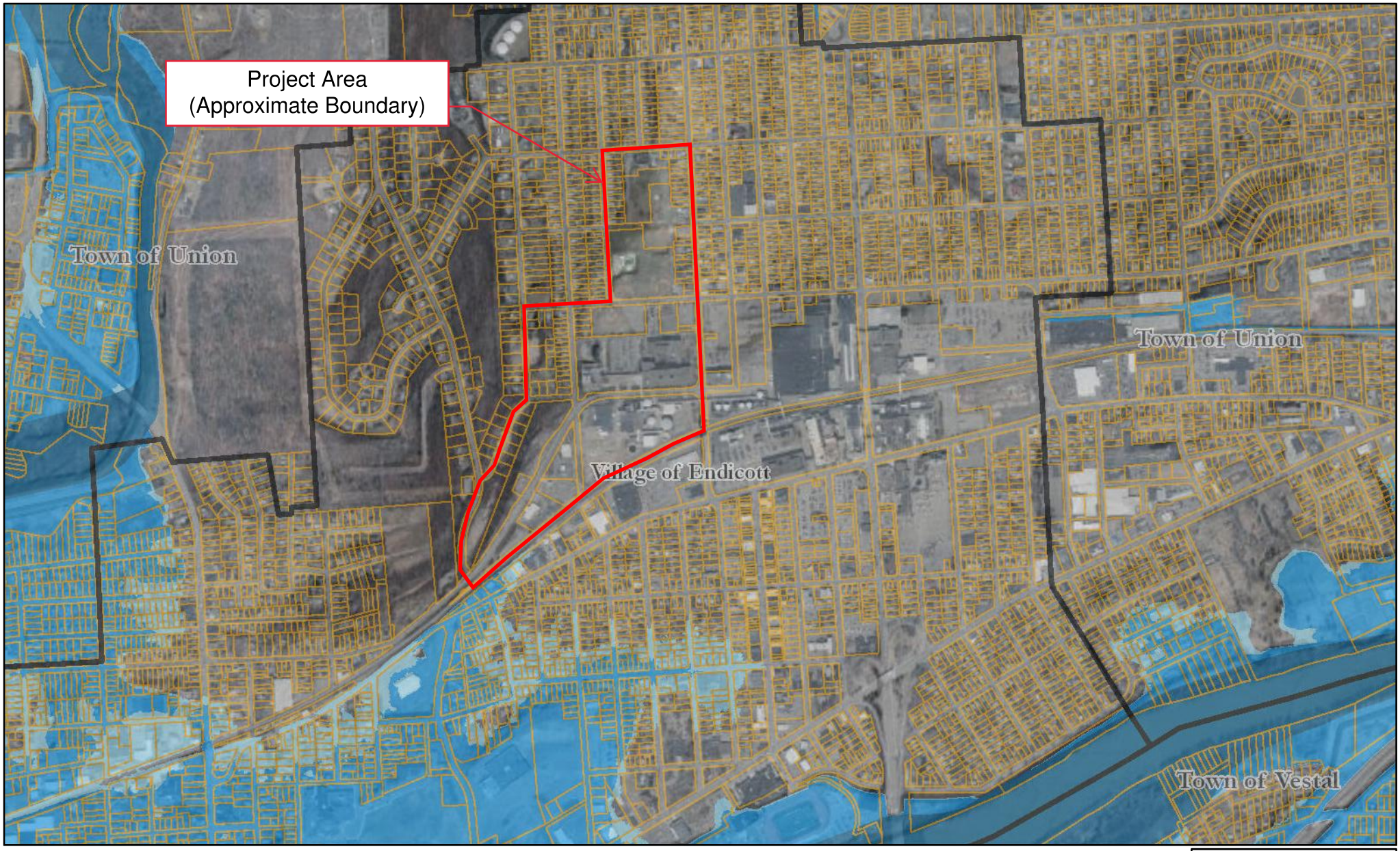
- Other Wetland Layers
- Reference Layers
- Tell Me More...
- Need A Permit?
- Contacts



Appendix 1

FEMA Firmette Maps

Broome County Preliminary FIRMette



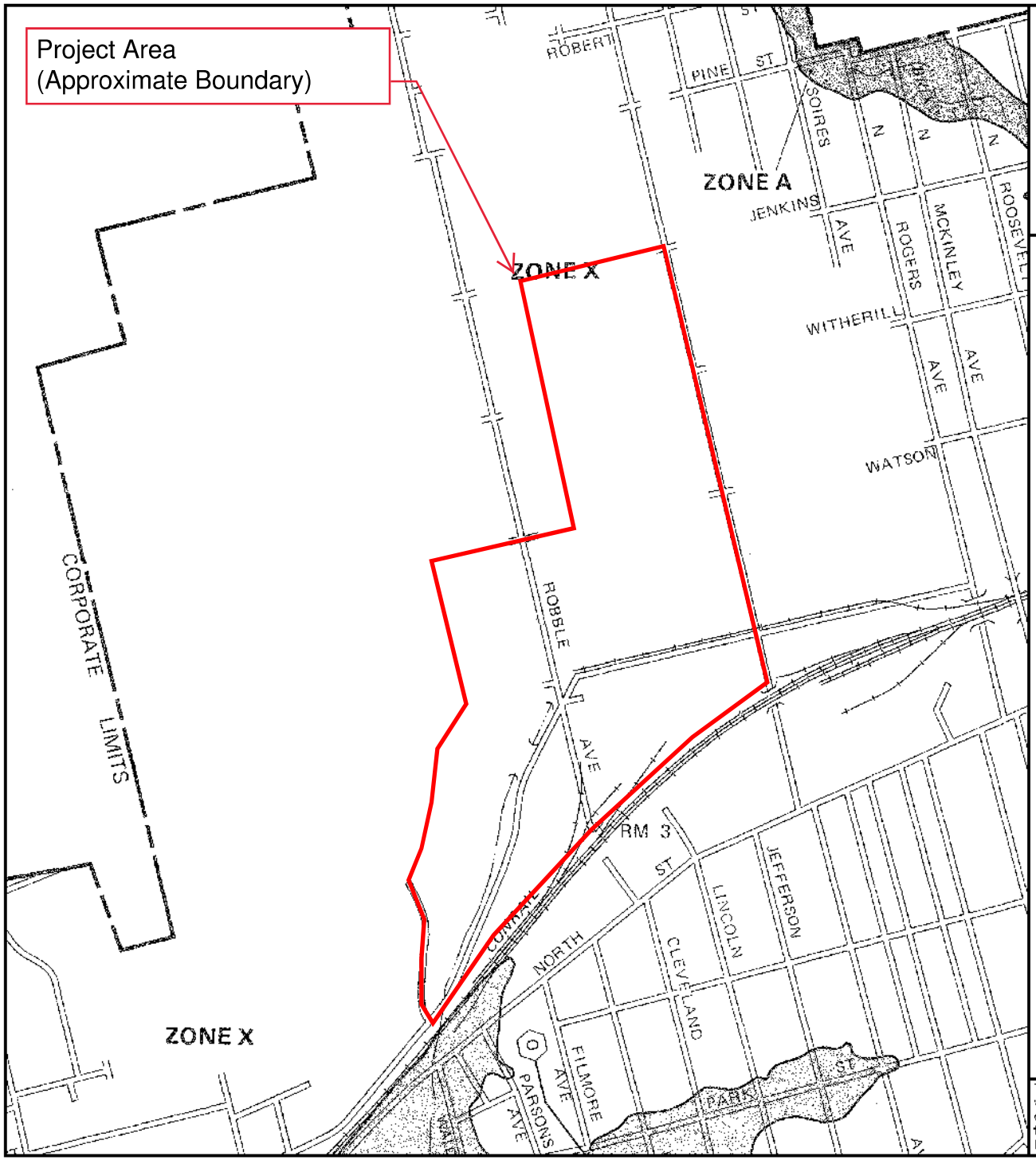
Parcels
Non-SFHA: 500 Year
SFHA: Floodway
SFHA: 100 Year

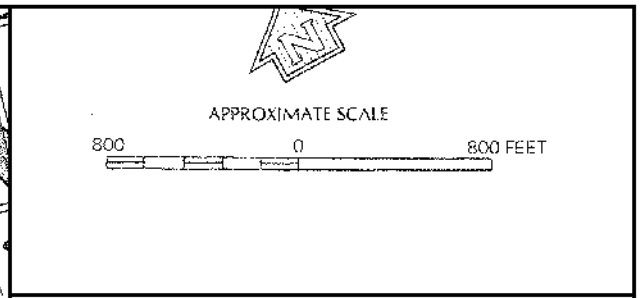
1 inch = 1,114 feet
0 690 1,380
ft

Broome County, NY
GIS
www.bcgis.com

N

DISCLAIMER: Broome County does not guarantee the accuracy of the data presented. Information should be used for illustrative purposes only.





NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

VILLAGE OF
ENDICOTT,
NEW YORK
BROOME COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
360045 0005 B

MAP REVISED:
SEPTEMBER 7, 1998

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Attachment 5

HUD Environmental Standards Review

Central Endicott Drainage Improvements
Environmental Standards Review

Property Location: Within and near George W. Johnson Park, and bounded by Ellis Avenue/Cornell Avenue to the west, Oak Hill Road to the east, Clark Street to the south, and East Franklin Street and Jenkins Street to the north in the Village of Endicott, Town of Union, Broome County, New York 13760NY

Introduction:
The purpose of this review is to ensure that the project complies with HUD environmental standards in relation to 24 CFR Part 58.5. -Properties that are proposed for use in HUD programs "must be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property."

A desktop review was performed to identify whether the Subject Property referenced in the title of this document complies with the following criteria:

(i) is not Listed on an EPA Superfund National Priorities or Comprehensive Environmental Response Superfund National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list;
(ii) is not located within 3,000 feet of a toxic or solid waste landfill site;
(iii) does not have an underground storage tank; and
(iv) is not known or suspected to be contaminated by toxic chemicals or radioactive materials.

Summary of Findings

Records Review for the Subject Property
Subject Property Description:
This environmental review was completed for the Central Endicott Drainage Improvements Project in Endicott, New York. The proposed project consists of the installation of underground stormwater detention systems near and within George W. Johnson Park and the installation of a 24" Reinforced Concrete Pipe (RCP) trunk line between Ellis Avenue and East Franklin Street. The areas of disturbance as noted on page C-5 of the project plans submitted by Griffiths Engineering will collectively be referred to as the Subject Property throughout the environmental review. This includes a portion of George W. Johnson Park and a small area south of Clark Street to E. Franklin Street. Addresses that were identified for the Subject Property include: 901 E. Franklin Street, 1001 Watson Blvd, 900 Watson Blvd, and 201 Oak Hill Ave. **Maps showing the locations of Superfund, potential hazardous waste and storage facilities (sites) are shown in the maps section attached to this summary of findings. None of the sites were determined to pose a threat to the proposed project.**

EPA Records:
The Subject Property is not listed on an EPA Superfund National Priorities or CERCLA list or equivalent State list. A review of the EPA Facilities Database provides no indication of past uses of the Subject Property that could have contaminated the Subject Property, or potentially adversely affect the occupants of the Subject Property.

Broome County and New York State Department of Environmental Conservation (NYSDEC) Records:
The Subject Property is not located within 3,000 feet of a toxic or solid waste landfill site. The Subject Property is not listed within the NYSDEC Bulk Storage Database. According to the NYSDEC Spill

Incidents Database, there was one spill reported on the Subject Property, **Spill report #1607989**. This spill was reported at George W. Johnson Park in November 2016. A geotechnical boring performed on the site found petroleum odors in the soil samples; these soil samples were analyzed, with semi-volatile organic compounds detected. The site is suspected to have historical fill, in many cases identified as being generated by the Endicott-Johnson Shoe Company. Based on the tests results provided, the NYSDEC is in agreement with the fill material being contaminated with petroleum and characterized as non-hazardous. The NYSDEC requests that any fill material removed during the installation of Chamber #3 be properly disposed of, and no additional fill material will be required to be removed beyond the excavation needed to properly install the stormwater system. Based on the subsurface investigation report, the NYSDEC closed this spill report on May 16, 2017. A spill closure by the NYSDEC indicates that the records and data submitted for the spill demonstrated that the necessary cleanup and removal actions have been completed and no further remedial actions are necessary under these spill reports. Please see NYSDEC Letter, Subsurface Investigation Report, and NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on or Within Close Proximity to the Site within this report (**Attachment 5**) for documentation containing the NYSDEC letter and spill information dated December 30, 2016 and Subsurface Investigation Report from LiRo Engineers, Inc. dated December 5, 2016.

The Subject Property is also listed in the Environmental Site Remediation Database two (2) times. The proposed area of disturbance located south of Clark Street and north of E. Franklin Street is on a parcel identified as 901 E. Franklin Street. A State Superfund Site, **Endicott-Johnson, Inc. (704018)**, is identified as a 5.5-acre lot located at 901 E. Franklin Street. The lot was once the location of a small manufacturing plant for the Endicott-Johnson Shoe Company, though it is currently vacant. Shoe cements (glues that hold shoes together) were manufactured on the site. Twelve underground storage tanks used for storing solvents and raw materials were once located on the property. Leakage from the tanks contaminated the site soils and groundwater with toluene, with most contaminants located approximately 8-12 feet below ground surface. This site was active from 1918 to 1983. Remedial measures at the site included vacuum extraction of contaminated soils and groundwater pumping and treating. Subsequent testing of groundwater on-site revealed that contamination had fallen below detection limits and it was decided that groundwater pumping and treating would no longer be necessary. Since 2002, groundwater monitoring shows that there is no longer any toluene contamination present. The last "hot spot" of contaminated soil was removed from the site in 2002, with clean fill brought to the site. Remediation at the site is complete and deed restrictions have been placed on the site. The NYSDEC Inactive Hazardous Waste Disposal registry notes the remedial efforts at the site have effectively mitigated the potential for on-site exposures to contaminants. Additionally, the proposed project does not involve the construction of any building structures. As such, this site is not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Additionally, the Subject Property is located within the **Endicott Area-Wide Investigation (704038)** New York State Superfund Site. The primary contaminants of concern are trichloroethylene (TCE) and perchloroethylene (PCE), affecting indoor air quality. Indoor air sampling has occurred in structures located in the Town of Union, with some homes requiring mitigation. Remedial actions include the containment of the TCE and PCE groundwater plume as well as pump treatment system. Properties are being monitored on a periodic basis by the NYSDEC and will be mitigated as necessary. However, the Subject Property is a zoned for open space, and the proposed project does not involve the construction of any occupied structures. As such, this investigation is not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. A review of the NYSDEC databases provided no indication of other past uses of the Subject Property that could contaminate the Subject Property or conflict with the intended utilization of the Subject Property.

Records Review for the Surrounding Properties

EPA Records:

There are 35 EPA-permitted hazardous waste, air emissions, and water discharger facilities located within 3,000 feet of the Subject Property. Of the 35 facilities, 31 have no violations reported at the facility. Facilities with no permit violations are not considered a hazard because the facilities are in compliance with permit conditions that are enforced and meet standards that protect public health and the environment by preventing releases to the environment. As such, these 31 facilities are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. There were two (2) facilities with no data records available, and two (2) facilities that have violations and are in non-compliance of permit conditions and identified below. The facilities are determined NOT to pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property as documented below.

Two (2) Toxics Release Inventory (TRI) facilities have no data available; **BAE Systems Controls** is an active TRI facility with data reported as of 2015, while **VMR Electronics** is an inactive facility with data reported since 2011. However, these facilities have no spills reported, and the chemical and TRI forms indicate the primary form of release at these two sites are via recycling. As such, these two facilities are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

The remaining two (2) facilities are **I3 Electronics Inc.** and **Endicott MS4 Storm Sewers**. **I3 Electronics Inc** is a permitted hazardous waste, air emissions, toxics release inventory, and water discharger facility. No violations have been reported for the facility under the Clean Air Act or Resource Conservation and Recovery Act. The facility has been in violation of the Clean Water Act for the past three quarters due to reportable non-compliance violations. The facility held a National Pollution Discharge Elimination System (NPDES) permit for "discharge and groundwater remediation." The facility held a major individual NPDES permit which expired in December 2014. The facility is located approximately within 1,000 feet of the Subject Property. The facility is listed within the Toxic Release Inventory (TRI), where chemicals have been released primarily through on- and off-site recycling, on- and off-site treatment, or disposal. The last reported release from this facility occurred in 2015, with the production-related waste being primarily recycled or transported to disposal facilities. This facility is located cross- and down-gradient of the Subject Property and the proposed project activities do not involve the construction of any occupied structures. As such, this facility is not considered a hazard that could conflict with the intended utilization of the Subject Property.

Endicott MS4 Storm Sewers is a general permit covered facility under the NPDES that is located throughout the Village of Endicott. The facility was previously in violation of the CWA for one quarter in 2014 due to permit schedule violations. The facility has been in compliance of the CWA for the past nine quarters. No hazardous substances are known to have been released to the environment from the storm sewers. This facility is not considered a hazard to that could conflict with the intended utilization of the Subject Property due to the nature of the violations and lack of reported releases into the environment.

NYSDEC Records:

A review of the NYSDEC Spill Incidents, Bulk Storage, and Environmental Site Remediation Databases resulted in the identification of: 13 spills located on properties within 1,000 feet of the Subject Property, and 21 bulk storage sites and seven (7) Environmental Remediation Sites within 3,000 feet of the Subject Property.

All 13 spills identified within 1,000 feet of the Subject Property have been closed by the NYSDEC. A spill closure by the NYSDEC indicates that the records and data submitted for the spill demonstrated that the necessary cleanup and removal actions have been completed and no further remedial actions are necessary

under these spill reports. As such, these 13 spills are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

The following 21 bulk storage sites were identified within the NYSDEC Bulk Storage Database.

1. **Parlor City Contracting Co (7-072710)** is an unregulated/ closed PBS site whose bulk storage permit expired in March 1992. Six tank records were identified for this site; all tanks have been closed and removed from the site. No spills were reported at this site. This site is not a concern to the Subject Property.
2. **Huron Real Estate Associates Inc (7-1160)** is an active Major Bulk Storage Facility located at the same property as **Huron Real Estate Associates LLC (7-000363)**. Tank information for this site is withheld from the Bulk Storage Database. Forty spills have been reported at this property; however, these spills have been closed and this site is located cross- and down-gradient of the Subject Property and any releases into the groundwater would travel away from the Subject Property. This site is not a concern to the Subject Property.
3. **Huron Real Estate Associates LLC (7-000363)** is an active Chemical Bulk Storage Facility (CBS) located at the same property as **Huron Real Estate Associates Inc (7-1160)**. Tank information for this site is withheld from the Bulk Storage Database. Forty spills have been reported at this property; however, these spills have been closed and this site is located cross- and down-gradient of the Subject Property and any releases into the groundwater would travel away from the Subject Property. This site is not a concern to the Subject Property.
4. **I3 Electronics (7-000091)** is an active CBS site located at the same address as Huron Real Estate. Tank information for this site is withheld from the Bulk Storage Database. Over 40 spills have been reported at this site; however, this site is located down-gradient of the Subject Property and any releases into the groundwater would travel away from the Subject Property. This site is not a concern to the Subject Property.
5. **Anderson Equipment Co (NY) Inc (7-600115)** is an active PBS site that is located across East Franklin Street from the Subject Property. Six tank records were identified for the site; all tanks are aboveground tanks which are currently in service. No spills were reported on this site within the NYSDEC Spill Incidents database. This site is not a concern to the Subject Property.
6. **Bae Systems Controls Inc (7-601433)** is an active PBS site. Four tank records were identified for this site; all tanks are aboveground and are currently in service. No spills were reported on this site within the NYSDEC Spill Incidents database. This site is not a concern to the Subject Property.
7. **Apple Food & Grocery #6. (7-392316)** is an active PBS site. Twelve tank records were identified for the site; eight of the tanks have been closed and removed from the site. The four remaining tanks are listed as in service: Two spills were reported on the site; both were closed by the NYSDEC. This site is not a concern to the Subject Property.
8. **First Baptist Church of Endicott (7-430471)** is an unregulated/closed PBS site whose bulk storage permit expired in February 1998. One tank record was identified for the site; the tank has been closed and removed. No spills were reported at this site. This site it not a concern to the Subject Property.
9. **Verizon New York Inc (NY73101) (7-415073)** is an active PBS site. Tank information for this site is withheld from the Bulk Storage Database. One spill was reported on this site which has been closed by the NYSDEC. This site is not a concern to the Subject Property.
10. **Newell's Automotive & Towing Service (7-182346)** is an unregulated/ closed PBS site whose bulk storage permit expired in October 1992. This facility is located at the same property as **Manley's Mighty Mart #23** and **Mirabito #90**. Six tank records were identified for this site; all of which have been closed and removed from the site. Two spills were reported on the site, both of which have been closed by the NYSDEC. This site is not a concern to the Subject Property.
11. **Mirabito #90 (7-601094)**, also known as **Manley's Mighty Mart #23**, is an active PBS site located at the same property as **Newell's Automotive & Towing Service**. Two tank records were identified for the site; two underground storage tanks which are listed as in service. Two spills were reported

on the site, both of which have been closed by the NYSDEC. This site is not a concern to the Subject Property.

12. **Kost Tire/ Auto Care (7-601107)**, also known as **Mr. Tire 1320**, is an active PBS site. One tank record was identified for the site; one aboveground storage tanks which is listed as in service. No spills were reported on this site. This site is not a concern to the Subject Property.
13. **Sales Bldg (7-298964)** is an unregulated/ closed PBS site whose bulk storage permit expired in June 1997. One tank record was identified for the site; an underground storage tank which was closed and removed from the site. No spills were reported on this site. This site is not a concern to the Subject Property.
14. **Southern Tier Stages Inc (7-601360)** is an active PBS site. This facility is located on the same property as **Union Forging Co. (7-072702)**. Three tank records were identified for this site. One aboveground tank has been closed and removed from the site. Two tanks are listed as in service; one aboveground and one underground tank. Two spills were reported at this site; both have been closed by the NYSDEC. This site is not a concern to the Subject Property.
15. **Union Forging Co. (7-072702)** is an unregulated/closed PBS site whose bulk storage permit expired in March 1997. This site is located at the same address as **Southern Tire Stages Inc (7-601360)**. Five tank records were identified for this site; all five tanks were either closed prior to 1991 or have been closed and removed from the site. Two spills were reported at this site; both have been closed by the NYSDEC. This site is not a concern to the Subject Property.
16. **Signorelli Garage (7-180947)** is an unregulated/closed PBS site whose bulk storage permit expired in February 2014. Eight tank records were identified for the site; seven of the tanks were closed prior to 1991 or have been closed and removed from the site. One tank was converted to non-regulated use. One spill was reported on this site which was closed by the NYSDEC. This site is not a concern to the Subject Property.
17. **Petr-all Corp #320 (7-186511)** is an unregulated/closed PBS site whose bulk storage permit expired in June 1997. Five tank records were identified for this site; all tanks have been closed and removed from the site. Two spills were reported at this site; both spills were closed by the NYSDEC. This site is not a concern to the Subject Property.
18. **Police/ Communications Depart (7-015385)** is an active PBS site located at the same property as **Fire Dept (7-015407)**. Two tank records were identified for this site. One underground storage tank was closed and removed from the site prior to March 1991. One underground storage tank is listed as in service. One spill was reported at this site; this spill has been closed by the NYSDEC. This site is not a concern to the Subject Property.
19. **Fire Dept (7-015407)** is an active PBS site is an active PBS site located at the same property as **Police/ Communications Depart (7-015385)**. Two tank records were identified for this site. One underground storage tank was closed and removed from the site prior to March 1991. One underground storage tank is listed as in service. One spill was reported at this site; this spill has been closed by the NYSDEC. This site is not a concern to the Subject Property.
20. **Fire Dept Village of Endicott (7-015393)** is an unregulated/closed PBS site whose bulk storage permit expired in September 1991. One tank record was identified for this site; this tank was closed and removed from the site prior to March 1991. One spill was reported at this site; this spill has been closed by the NYSDEC. This site is not a concern to the Subject Property.
21. **Goodyear 1124 (7-601352)** is an active PBS site. Two tank records were identified for this site. Two aboveground storage tanks are listed as in service. Two spills were reported at this site; both spills were closed by the NYSDEC. This site is not a concern to the Subject Property.

Spills reported at Bulk Storage Sites were investigated to determine if they were still currently open by the NYSDEC. If a spill was closed by the NYSDEC, then the records and the data submitted indicate that necessary cleanup and removal actions have been completed and no further remedial actions are necessary or the case was closed for administrative reasons (e.g. multiple reports of a single spill consolidated into a

single spill number). If the case has been administratively closed and did not meet NYSDEC closure criteria, then another spill report number would have been identified covering the case.

The registered tanks are permitted and regulated by NYSDEC which requires leak detection, containment and monitoring. Any site that has registered tanks and no reported or closed spills is not a hazard to the Subject Property.

Seven (7) Environmental Remediation Sites were identified within 3,000 feet of the Subject Property and are briefly discussed below:

Former IBM Endicott Facility[1] **(704014)** is a State Superfund site located approximately adjacent to the Subject Property. This site was first developed in 1850 and has been used for manufacturing and research and development since the early 1900's. Early industrial activity was associated primarily with shoe manufacturing by Endicott-Johnson Shoe Company and its predecessors in the western portion of the site. Associated on-site industries related to shoe manufacturing included leather tanning, box container manufacturing, chemical manufacturing, and an iron foundry. Solvents reportedly used by Endicott-Johnson Shoe Company as a part of its operations included carbon tetrachloride, trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), methylene chloride, methyl ethyl ketone, toluene, xylene, and mixtures containing aromatics (gasoline, rubber solvent and mineral spirits). IBM also operated on the site and manufactured electronics. The primary solvents used by IBM as part of its mainframe computer and electronic component manufacturing operations included TCE, PCE, TCA, methylene chloride, and Freon 113.

In December of 1979, a leak developed in an underground distribution pipeline that transported methyl chloroform. IBM estimated that about 4,100 gallons of the raw product flowed into the groundwater as a result. IBM investigated the hydrogeologic conditions at their facility property and the adjacent area and discovered concentrations of methyl chloroform, trichloroethylene, tetrachloroethylene, methylene chloride, freon, benzene, toluene and xylene in the upper alluvial aquifer beneath the IBM main site and extending into residential and commercial areas of the Village of Endicott. Clean up and monitoring of the groundwater contamination began in 1980 and continues today under the authority of a New York State Hazardous Waste Management Permit. The primary contaminants are methyl chloroform and trichloroethylene and their breakdown products. Contaminant concentrations are highest in the vicinity of the manufacturing complex along the railroad between Watson Boulevard and North Street and diminish with distance from the site. Lower levels of contamination extend as far as the Susquehanna River. Groundwater recovery wells are pumped to recover the contaminated groundwater and to prevent the plume from spreading further. The contaminated groundwater is treated and discharged under a SPDES permit. Over 60,000 gallons of raw solvent have been recovered from the site. Due to the remedial actions, the proposed project work scope, and the location of the site down-gradient from the Subject Property, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Keytonics, Inc. (704001) is a State Superfund site located approximately 500 feet south of the Subject Property. Small amounts of methylene chloride contaminated with various lacquers and epoxy finishes were dumped on the railroad bed located behind the plant facility. Methylene chloride is a highly volatile solvent and evaporated on-site. It was determined by the NYSDEC that the amount of methylene chloride dumped on the site is inconsequential and does not pose a significant threat to the environment or human health. This site is located within the groundwater contamination plume that originated from the Former IBM Endicott Facility, which is being remediated by groundwater recovery and treatment. This site is not

[1] NYSDEC, *Village of Endicott Environmental Investigations*. http://www.dec.ny.gov/chemical/47783.html

expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Schapiro's Fine Dry Cleaning (V00667) is a Voluntary Cleanup site that is located approximately 500 feet southeast of the Subject Property. Due to site conditions, direct contact with soil contamination is unlikely as the majority of the site is an active industrial facility that is covered with buildings and pavement. The area is served by a public water supply that is routinely tested to ensure it meets drinking water standards. The volatile organic compounds in the groundwater have potential to become soil vapor, allowing for soil vapor intrusion. However, soil vapor intrusion is limited to the area of the groundwater plume located south of the Former IBM Endicott Facility. Additionally, this plume has been reduced in size by 80% between 2004 and 2014[2]. As such, due to the on-going remediation efforts and location down-gradient from the Subject Property, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Old Village of Endicott Dump (704004) is a State Superfund site located approximately 2,000 feet south of the Subject Property. This dump received domestic refuse and reportedly received tanning wastes and other industrial wastes from the local manufacturing operations in the area. The tanning wastes and industrial solvents were reputedly received from the Endicott-Johnson Shoe Company, located in the vicinity. An Immediate Investigation Work Assignment (IIWA) was done at this site in 1997. The IIWA was done to reveal the source of the chlorinated solvent contaminant plume. No source of contamination was found and no source of any contaminants could be attributed to hazardous waste disposal at this site. There are no environmental problems associated with the disposal of hazardous waste at this site; therefore, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Temporal Study of Vapor Intrusion (704052) is a State Superfund site located approximately 3,000 feet south of the Subject Property. No description is available for this site per the NYSDEC Environmental Remediation Database. However, due to the distance and location of the site down-gradient from the Subject Property, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Union Forging Company (V00156) is a Voluntary Cleanup site located approximately 1,700 feet southwest of the Subject Property. This was the former site of the Union Forging Co. that forged small metal automotive parts and hand tools. Hydraulic oil used in the forging equipment was released to the environment which resulted in an impact to both site soils and groundwater. Chromium was also released to site soils. Completed activities include: a remedial investigation work plan (1997), a remedial investigation report (1998) and a final engineering report (2001). A Release letter was issued for this site in 2003. The site was reopened for investigation of offsite contamination of TCA and TCE. NYSDEC requested that an Environmental Site Remediation Database Search additional monitoring well be installed and sampled along with three other down-gradient wells near the southern property line. This sampling was completed in 2006. Results of the sampling showed levels of TCA and TCE above groundwater standards. Further investigation of offsite impacts, including soil vapor intrusion, is being considered. However, this site is located down-gradient from the Subject Property; as such, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Neil Guiles Property (704006) is a State Superfund site located approximately 2,700 feet southwest of the Subject Property. This site was previously used for the land spreading of sewage sludge from the Binghamton/ Johnson City wastewater treatment plant. Sampling performed in 1976 indicated the sludge

---

[2] Richmond, M. *Southern Tier town's "toxic plume" reduced by 80 percent, says DEC.* http://wrvo.org/post/southern-tier-towns-toxic-plume-reduced-80-percent-says-dec

contained elevated levels of cadmium, and additional sampling in 1981 showed high levels of PCBs. Land spreading ended at this site at that time. Additional sampling of the sludge in the lagoons in 1988-1989 indicated no hazardous waste was present, and no further actions were necessary. Due to the distance, lack of hazardous waste on-site, and location of the site down-gradient from the Subject Property, this site is not expected to adversely affect the health and safety of occupants or conflict with the intended utilization of the Subject Property.

Summary:

Based on a review of available environmental records for the Subject Property and surrounding area, the Subject Property is unlikely to contain hazardous materials, contamination, toxic chemicals and gases, or radioactive substances which would constitute a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. Therefore, a Phase I Environmental Site Assessment (ESA) or Phase II Investigation is not warranted. Maps, EPA reports, and NYSDEC reports are included at the end of this report.

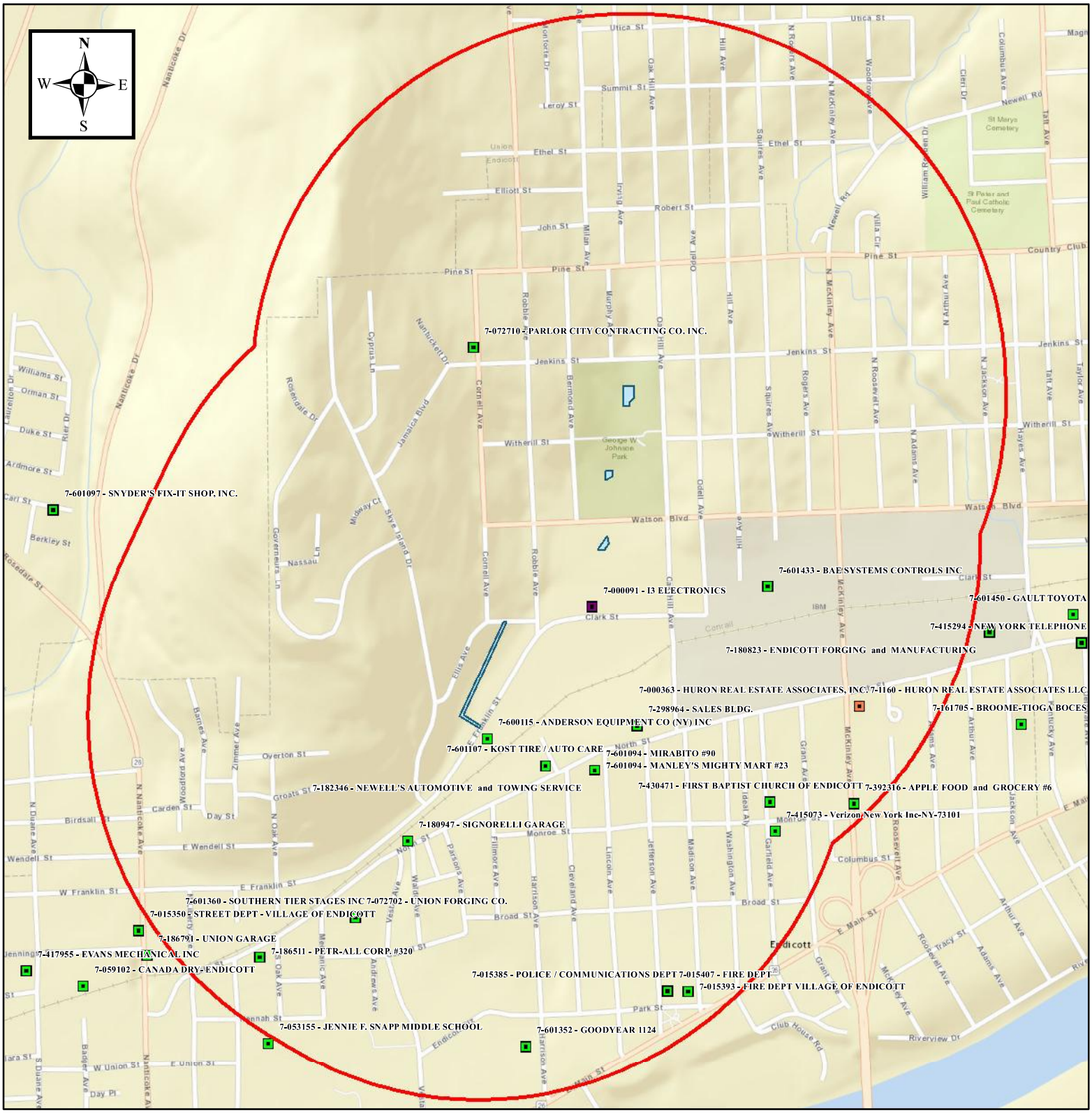
Data Sources:

Tectonic Engineering and Surveying Consultants, P.C. (Tectonic) has reviewed the following sources to make the above determinations: Hazardous Waste records contained in the RCRA, the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) for sites listed under the CERCLA (otherwise known as Superfund), EPA's Toxic Release Inventory Database (TRI), and the EPA Radiation Information Database (RADInfo).

Tectonic reviewed the NYSDEC Remedial Site Database to assess whether the site is registered as a NYS Superfund or Environmental Restoration site. The NYSDEC Environmental Remediation Database includes records of sites that are part of the NYS Superfund, Brownfield Cleanup, Environmental Restoration, and Voluntary Cleanup Programs. The Database also includes a Registry of Inactive Hazardous Waste Disposal Sites.

The NYSDEC Bulk Storage Database was reviewed for records of facilities that are or have been regulated according to one of the Bulk Storage Programs - Chemical Bulk Storage or Major Oil Facility. The NYSDEC Spill Incidents Database was used to determine the potential effects of spills on or near the Subject Property. A desktop review of Google Earth was used in conjunction with a map of active municipal landfills (provided by the NYSDEC) in determining whether there was a landfill within 3,000 feet of the Subject Property.

Maps



TECTONIC
Practical Solutions, Exceptional Service

0 500 1,000 2,000 Feet

1:13,000

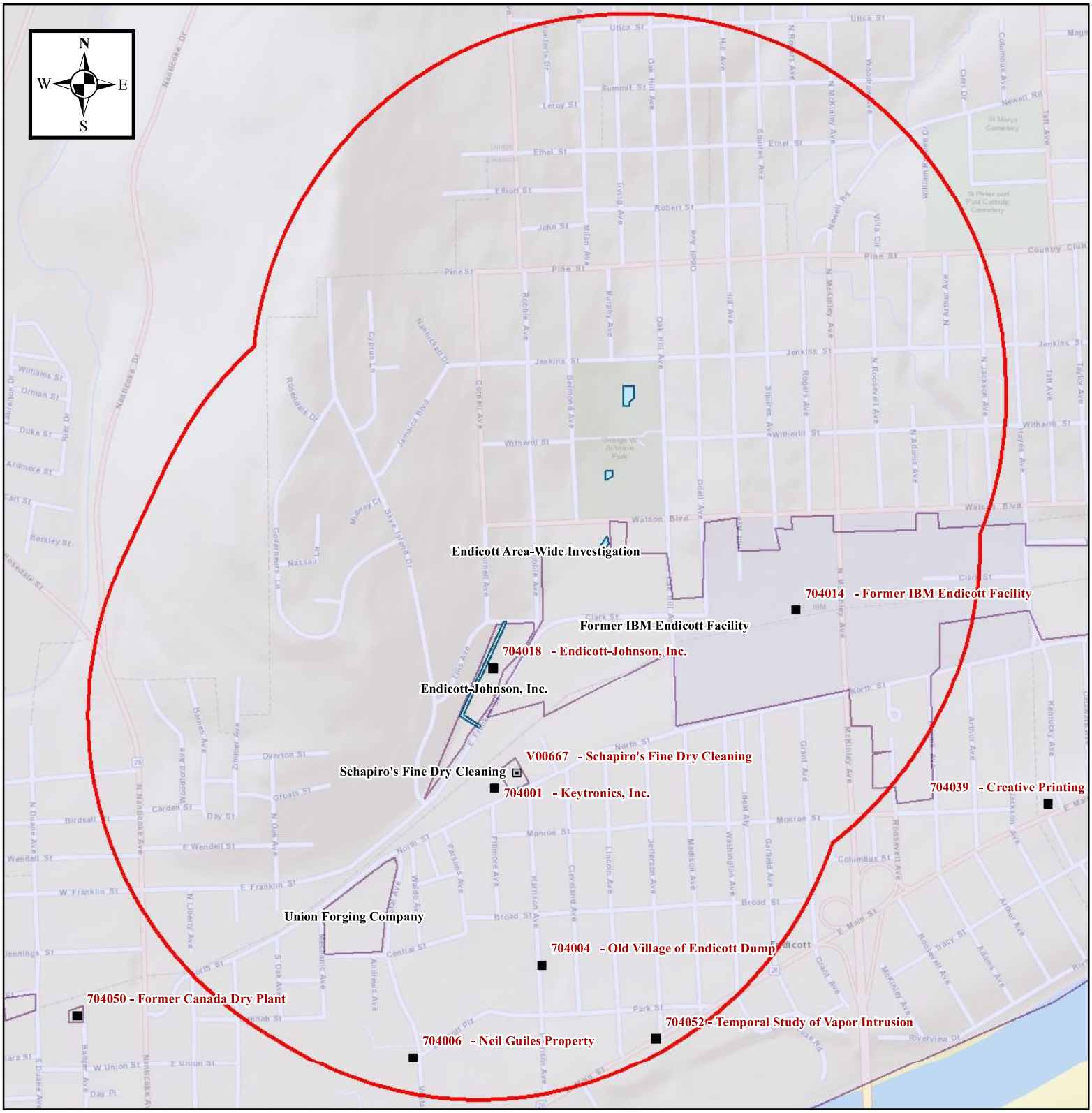
Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/8/2017

Source data: Environmental remediation sites listed in the NYSDEC Environmental Remediation Database. Properties listed on the NYSDEC Bulk Storage Database. Solid waste landfill information provide by NYSDEC.

Legend

- Proposed Area of Ground Disturbance (Approximate Boundary)
- Ground Disturbance Buffer (Approximately 3000ft)
- Chemical Bulk Storage
- Petroleum Bulk Storage
- Major Bulk Storage Facility
- Active Municipal Solid Waste Landfills



TECTONIC
Practical Solutions, Exceptional Service

0 500 1,000 2,000 Feet

1:13,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/8/2017

Source data: Environmental remediation sites listed in the NYSDEC Environmental Remediation Database. Properties listed on the NYSDEC Bulk Storage Database. Solid waste landfill information provide by NYSDEC.

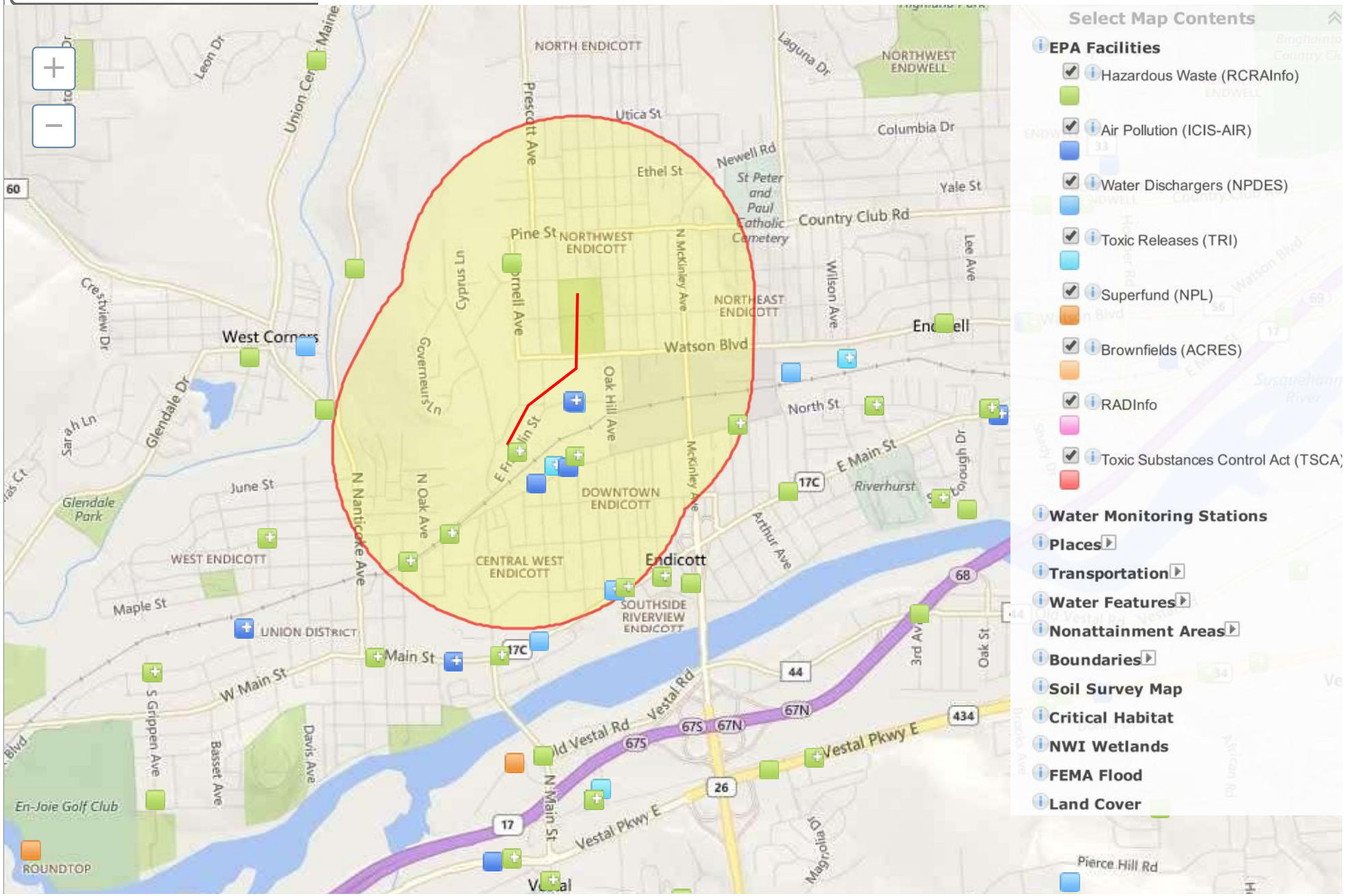
Legend

- Proposed Area of Ground Disturbance (Approximate Boundary)
- Ground Disturbance Buffer (Approximately 3000ft)
- NYS Superfund
- Brownfield Cleanup
- Environmental Restoration
- Voluntary Cleanup
- EPA RCRA
- NYSDEC Environmental Site Borders

NEPAssist

Home | Help

Find address or place | Basemap | Imagery | Draw | Erase | Bookmarks | Tools | More Data



U.S. EPA Reports for Properties Contiguous to the Subject Property

Detailed Facility Report

Facility Summary

BAE SYSTEMS CONTROLS INC
1098 CLARK ST, ENDICOTT, NY 13760

FRS (Facility Registry Service) ID: 110055497608
EPA Region: 02
Latitude: 42.10706
Longitude: -76.04999
Locational Data Source: TRIS
Industry: Computer and Electronic Product Manufacturing
Indian Country: N

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs in NC (Non-Compliance) (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
No data records returned										

Related Reports

Air Pollutant Report

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): 1376WBSYST198CL

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110055497608					N	42.10706	-76.04999
TRI	EP313	1376WBSYST198CL	Toxics Release Inventory	Last Reported for 2015			N	42.10706	-76.04999

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110055497608	BAE SYSTEMS CONTROLS INC	1098 CLARK ST, ENDICOTT, NY 13760
TRI	EP313	1376WBSYST198CL	BAE SYSTEMS CONTROLS INC	1098 CLARK ST, ENDICOTT, NY 13760

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Desc
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	1376WBSYST198CL	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
No data records returned						

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Non-compliance)/HPV (High Priority Violation)	Description	Current As Of	Qtrs in NC (Non-Compliance) (of 12)
No data records returned					

Three Year Compliance Status by Quarter

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS (Integrated Compliance Information System) Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP (Supplemental Environmental Project) Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned									

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
No data records returned							

Air Quality

Non-Attainment Area?	Pollutant(s)
No	Ozone
No	Lead
Yes	Particulate Matter
No	Sulfur Dioxide

Pollutants

TRI Pollution Prevention Report
Air Pollutant Report

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
1376WBSYST198CL	2015	4		0			4	1,474
1376WBSYST198CL	2014	3		0			3	1,344
1376WBSYST198CL	2013	3		0			3	1,460
1376WBSYST198CL	2012	3		0			3	16

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2015	2014	2013	2012	2011	2010	2009	2008	2007
LEAD	1,478	1,347	1,463	18					

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	97%	Households in Area:	20,852
Center Latitude:	42.10706	Water Area:	3%	Housing Units in Area:	22,337
Center Longitude:	-76.04999	Population Density:	1,738/sq.mi.	Households on Public Assistance:	474
Total Persons:	47,462	Percent Minority:	11%	Persons Below Poverty Level:	13,043

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	43,040 (91%)	Child 5 years and younger:	2,539 (5%)
African-American:	1,631 (3%)	Minors 17 years and younger:	9,802 (21%)
Hispanic-Origin:	1,290 (3%)	Adults 18 years and older:	37,660 (79%)
Asian/Pacific Islander:	1,473 (3%)	Seniors 65 years and older:	8,773 (18%)

American Indian:	71 (0%)
Other/Multiracial:	1,247 (3%)

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	1,186 (3.5%)	Less than $15,000:	2,577 (12.33%)
9th through 12th Grade:	2,087 (6.16%)	$15,000 - $25,000:	2,400 (11.48%)
High School Diploma:	9,774 (28.83%)	$25,000 - $50,000:	5,683 (27.19%)
Some College/2-yr:	10,485 (30.93%)	$50,000 - $75,000:	3,808 (18.22%)
B.S./B.A. or More:	10,369 (30.59%)	Greater than $75,000:	6,435 (30.79%)

Detailed Facility Report

Facility Summary

VMR ELECTRONICS

811 NORTH ST, ENDICOTT, NY 13760

FRS (Facility Registry Service) ID: 110041999665
EPA Region: 02
Latitude: 42.103998
Longitude: -76.05321
Locational Data Source: FRS
Industry: Electrical Equipment, Appliance, and Component Manufacturing
Indian Country: N

Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs in NC (Non-Compliance) (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
No data records returned										

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): 13670VMRLC811NS

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110041999665					N	42.103998	-76.05321
TRI	EP313	13670VMRLC811NS	Toxics Release Inventory	Last Reported for 2011			N	42.103998	-76.05321

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110041999665	VMR ELECTRONICS	811 NORTH ST, ENDICOTT, NY 13760
TRI	EP313	13670VMRLC811NS	VMR ELECTRONICS LLC	811 N ST, ENDICOTT, NY 13760

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Desc
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	13670VMRLC811NS	335931	Current-Carrying Wiring Device Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
No data records returned						

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Non-compliance)/HPV (High Priority Violation)	Description	Current As Of	Qtrs in NC (Non-Compliance) (of 12)
No data records returned					

Three Year Compliance Status by Quarter

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS (Integrated Compliance Information System) Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP (Supplemental Environmental Project) Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned									

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
No data records returned							

Air Quality

Non-Attainment Area?	Pollutant(s)
No	Ozone
No	Lead
Yes	Particulate Matter
No	Sulfur Dioxide

Pollutants

TRI Pollution Prevention Report

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
13670VMRLC811NS	2011			0			0	0
13670VMRLC811NS	2010		0	0			0	
13670VMRLC811NS	2009		0	0			0	

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2015	2014	2013	2012	2011	2010	2009	2008	2007
LEAD COMPOUNDS					0	0	0		

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	97%	Households in Area:	20,727
Center Latitude:	42.103998	Water Area:	3%	Housing Units in Area:	22,204
Center Longitude:	-76.05321	Population Density:	1,705/sq.mi.	Households on Public Assistance:	475
Total Persons:	47,046	Percent Minority:	11%	Persons Below Poverty Level:	12,999

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	42,674 (91%)	Child 5 years and younger:	2,512 (5%)
African-American:	1,626 (3%)	Minors 17 years and younger:	9,676 (21%)
Hispanic-Origin:	1,287 (3%)	Adults 18 years and older:	37,371 (79%)
Asian/Pacific Islander:	1,437 (3%)	Seniors 65 years and older:	8,752 (19%)
American Indian:	70 (0%)		

Other/Multiracial:	1,241 (3%)

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	1,180 (3.51%)	Less than $15,000:	2,539 (12.21%)
9th through 12th Grade:	2,087 (6.2%)	$15,000 - $25,000:	2,407 (11.57%)
High School Diploma:	9,721 (28.88%)	$25,000 - $50,000:	5,665 (27.24%)
Some College/2-yr:	10,449 (31.04%)	$50,000 - $75,000:	3,818 (18.36%)
B.S./B.A. or More:	10,228 (30.38%)	Greater than $75,000:	6,367 (30.62%)

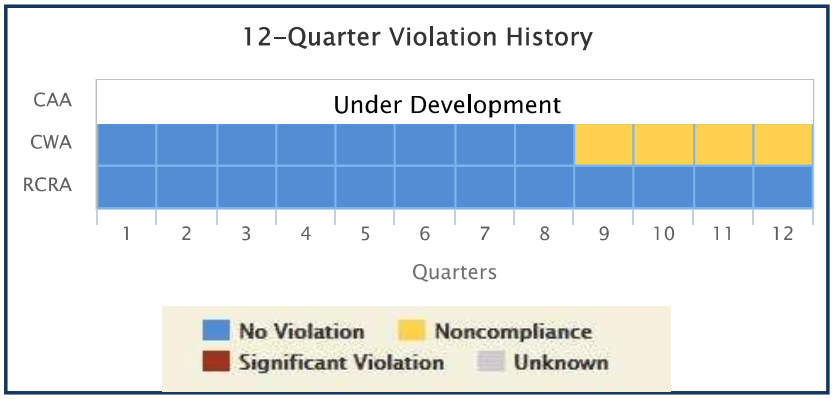
Detailed Facility Report

Facility Summary

I3 ELECTRONICS INC

1093 CLARK ST, ENDICOTT, NY 13760

FRS (Facility Registry Service) ID: 110041145926
EPA Region: 02
Latitude: 42.10701
Longitude: -76.05199
Locational Data Source: TRIS
Industry: Computer and Electronic Product Manufacturing
Indian Country: N



Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs in NC (Non-Compliance) (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
CAA	5	09/13/2016		0	0	--	--	--	--	--
CWA	8	11/17/2016	**Noncompliance**	4	0	--	--	--	--	--
RCRA	1	08/20/2014	**No Violation**	0	0	--	--	--	--	--

Related Reports

- Air Pollutant Report
- CWA Pollutant Loading Report
- CWA Effluent Charts
- CWA Effluent Limit Exceedances Report

Regulatory Information

Clean Air Act (CAA): Operating Major (NY0000007034600032)
Clean Water Act (CWA): Major, Permit Effective (NY0003808)
Resource Conservation and Recovery Act (RCRA): Active (H) LQG (NYR000109298)
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): 8380311
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): 13760NDCTT1701N

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110041145926					N	42.10701	-76.05199
EIS	CAA	8380311					N	42.106557	-76.045455

AIR	CAA	NY0000007034600032	Major Emissions	Operating	CAACFC, CAAMACT, CAANSR, CAAPARGDC, CAASIP, CAATVP		N		
ICP	CWA	NY0003808	Major: NPDES Individual Permit	Effective		12/31/2021	N	42.106972	-76.041861
TRI	EP313	13760NDCTT1701N	Toxics Release Inventory	Last Reported for 2015			N	42.10701	-76.05199
RCR	RCRA	NYR000109298	LQG	Active (H)			N	42.10598	-76.04352

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110041145926	I3 ELECTRONICS INC	1093 CLARK ST, ENDICOTT, NY 13760
EIS	CAA	8380311	ENDICOTT INTERCONNECT TECHNOLOGIES INC	1093 CLARK ST, ENDICOTT, NY 13760
AIR	CAA	NY0000007034600032	I3 ELECTRONICS HURON CAMPUS INDUSTRIAL WASTE TREATMENT PLANT	1093 CLARK ST, ENDICOTT, NY 13760
ICP	CWA	NY0003808	I3 ELECTRONICS HURON CAMPUS INDUSTRIAL WTP	1701 NORTH ST., ENDICOTT, NY 13760
TRI	EP313	13760NDCTT1701N	I3 ELECTRONICS INC	1701 N ST, ENDICOTT, NY 13760
RCR	RCRA	NYR000109298	I3 ELECTRONICS INC	1701 NORTH ST, ENDICOTT, NY 13760

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Desc
TRI	13760NDCTT1701N	3672	Printed Circuit Boards
AIR	NY0000007034600032	3672	Printed Circuit Boards
ICP	NY0003808	3471	Plating And Polishing

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	13760NDCTT1701N	334412	Bare Printed Circuit Board Manufacturing
TRI	13760NDCTT1701N	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
EIS	8380311	334412	Bare Printed Circuit Board Manufacturing
AIR	NY0000007034600032	334412	Bare Printed Circuit Board Manufacturing
RCR	NYR000109298	334412	Bare Printed Circuit Board Manufacturing
RCR	NYR000109298	334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
CAA	*NY0000007034600032*	*AIR*	*PCE On-Site*	*State*	*09/13/2016*	
CAA	NY0000007034600032	AIR	FCE On-Site	State	09/13/2016	
CAA	NY0000007034600032	AIR	FCE On-Site	State	09/28/2015	
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*EPA*	*02/10/2015*	
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*01/30/2015*	
CAA	*NY0000007034600032*	*AIR*	*TV ACC Receipt/Review*	*State*	*01/30/2015*	*Finding: No Facility Report Deviations*
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*07/22/2014*	
CAA	NY0000007034600032	AIR	FCE On-Site	State	03/18/2014	
CAA	*NY0000007034600032*	*AIR*	*PCE On-Site*	*State*	*03/07/2014*	
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*01/31/2014*	
CAA	*NY0000007034600032*	*AIR*	*TV ACC Receipt/Review*	*State*	*01/31/2014*	*Finding: No Facility Report Deviations*
CAA	*NY0000007034600032*	*AIR*	*TV ACC Receipt/Review*	*State*	*01/31/2014*	
CAA	NY0000007034600032	AIR	FCE On-Site	State	09/10/2013	
CAA	*NY0000007034600032*	*AIR*	*PCE On-Site*	*State*	*08/28/2013*	

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*07/24/2013*	
CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*01/23/2013*	
CAA	*NY0000007034600032*	*AIR*	*TV ACC Receipt/Review*	*State*	*01/23/2013*	
CAA	*NY0000007034600032*	*AIR*	*TV ACC Receipt/Review*	*State*	*01/23/2013*	*Finding: No Facility Report Deviations*
CAA	NY0000007034600032	AIR	FCE On-Site	State	08/28/2012	

CAA	*NY0000007034600032*	*AIR*	*PCE Off-Site*	*State*	*07/27/2012*	
CAA	*NY0000007034600032*	*AIR*	*PCE On-Site*	*State*	*06/13/2012*	
CWA	NY0003808	ICP	Evaluation	State	11/17/2016	
CWA	NY0003808	ICP	Reconnaissance without Sampling	State	06/29/2016	
CWA	*NY0003808*	*ICP*	*Reconnaissance without Sampling*	*State*	*06/29/2016*	
CWA	NY0003808	ICP	Evaluation	State	10/01/2015	
CWA	NY0003808	ICP	Reconnaissance without Sampling	State	02/27/2015	
CWA	*NY0003808*	*ICP*	*Reconnaissance without Sampling*	*State*	*02/27/2015*	
CWA	NY0003808	ICP	Evaluation	State	09/29/2014	
CWA	NY0003808	ICP	Evaluation	State	03/31/2014	
CWA	NY0003808	ICP	Evaluation	State	03/21/2013	
CWA	NY0003808	ICP	Sampling	EPA	08/07/2012	
RCRA	NYR000109298	RCR	COMPLIANCE EVALUATION INSPECTION ON-SITE	State	08/20/2014	No Violations Or Compliance Issues Were Found

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Non-compliance)/HPV (High Priority Violation)	Description	Current As Of	Qtrs in NC (Non-Compliance) (of 12)
CAA	NY0000007034600032	No		06/03/2017	0
CWA	NY0003808	No		12/31/2016	4
RCRA	NYR000109298	No		06/03/2017	0

Three Year Compliance Status by Quarter

Statute	Program/Pollutant/Violation Type				QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
	CAA (Source ID: NY0000007034600032)				07/01-09/30/14	10/01-12/31/14	01/01-03/31/15	04/01-06/30/15	07/01-09/30/15	10/01-12/31/15	01/01-03/31/16	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17
	Facility-Level Status				**No Viol**	**No Viol**										
	HPV History															
	Violation Type	**Agency**	**Programs**	**Pollutants**												
Historic Violations																

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13+
	CWA (Source ID: NY0003808)	01/01-03/31/14	04/01-06/30/14	07/01-09/30/14	10/01-12/31/14	01/01-03/31/15	04/01-06/30/15	07/01-09/30/15	10/01-12/31/15	01/01-03/31/16	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-06/02/17
	Facility-Level Status	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**In Viol**	**In Viol**	**In Viol**	**In Viol**	Und
	SNC (Significant Non-compliance)/RNC (Reportable Non-Compliance) History									N(RptViol)	N(RptViol)	N(RptViol)	N(RptViol)	

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
	RCRA (Source ID: NYR000109298)	07/01-09/30/14	10/01-12/31/14	01/01-03/31/15	04/01-06/30/15	07/01-09/30/15	10/01-12/31/15	01/01-03/31/16	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17
RCRA	**Facility-Level Status**												

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS (Integrated Compliance Information System) Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP (Supplemental Environmental Project) Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
NY0003808			020501030205	Patterson Creek-Susquehanna River	SUSQUEHANNA R	No		NUTRIENTS | ORGANIC ENRICHMENT/OXYGEN DEPLETION | OTHER CAUSE | PATHOGENS	No

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
02050103001134	Brixius Creek	No	Yes	Yes	No	No	No

Air Quality

Non-Attainment Area?	Pollutant(s)
No	Ozone
No	Lead
Yes	Particulate Matter
No	Sulfur Dioxide

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Pollution Prevention Report
Air Pollutant Report

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
13760NDCTT1701N	2015	8,304	766	0			9,070	88,766
13760NDCTT1701N	2014	8,252	820	0			9,072	75,913
13760NDCTT1701N	2013	12,151	413	0			12,564	110,528
13760NDCTT1701N	2012	12,572	556	0			13,128	139,689
13760NDCTT1701N	2011	16,035	544	0			16,579	181,489
13760NDCTT1701N	2010	22,568	1,555	0			24,123	208,338
13760NDCTT1701N	2009	17,872	756	3,447			18,628	281,882
13760NDCTT1701N	2008	14,055	1,830	57			15,885	445,161
13760NDCTT1701N	2007	6,817	1,657	702			8,474	418,374

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2015	2014	2013	2012	2011	2010	2009	2008	2007
BENZO(G,H,I)PERYLENE									
CERTAIN GLYCOL ETHERS	8,141	8,345	8,978	10,105	9,386	9,701	9,940	5,359	5,350
COPPER COMPOUNDS	88,445	76,546	104,714	120,107	171,227	177,274	260,343	436,148	416,204
ETHYLENE GLYCOL	21			28	40	1,423	3,503	60	584
FORMALDEHYDE					380	388	386	2,062	209
HYDROCHLORIC ACID (1995 AND AFTER ACID AEROSOLS ONLY)					2,187	2,187	2,248	2,258	880
LEAD COMPOUNDS	532	94	104	1,575	128	196	351	4,566	213
METHANOL						3,317		5,341	2,258

Chemical Name	2015	2014	2013	2012	2011	2010	2009	2008	2007
METHYL ETHYL KETONE									
NICKEL									
NICKEL COMPOUNDS						5,411			
NITRIC ACID	697					1,822	1,415		
POLYCYCLIC AROMATIC COMPOUNDS									
SULFURIC ACID (1994 AND AFTER ACID AEROSOLS ONLY)			3,111	3,111	4,017	4,017	4,015	3,997	
TETRABROMOBISPHENOL A				453	598	907	1,148	988	1,150
TOLUENE			6,185	17,438	10,105	25,818	17,163	267	

Demographic Profile

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	97%	Households in Area:	20,752
Center Latitude:	42.10701	Water Area:	3%	Housing Units in Area:	22,231
Center Longitude:	-76.05199	Population Density:	1,718/sq.mi.	Households on Public Assistance:	474
Total Persons:	47,184	Percent Minority:	11%	Persons Below Poverty Level:	12,994

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	42,818 (91%)	Child 5 years and younger:	2,523 (5%)
African-American:	1,627 (3%)	Minors 17 years and younger:	9,740 (21%)
Hispanic-Origin:	1,289 (3%)	Adults 18 years and older:	37,444 (79%)
Asian/Pacific Islander:	1,428 (3%)	Seniors 65 years and older:	8,720 (18%)
American Indian:	69 (0%)		
Other/Multiracial:	1,242 (3%)		

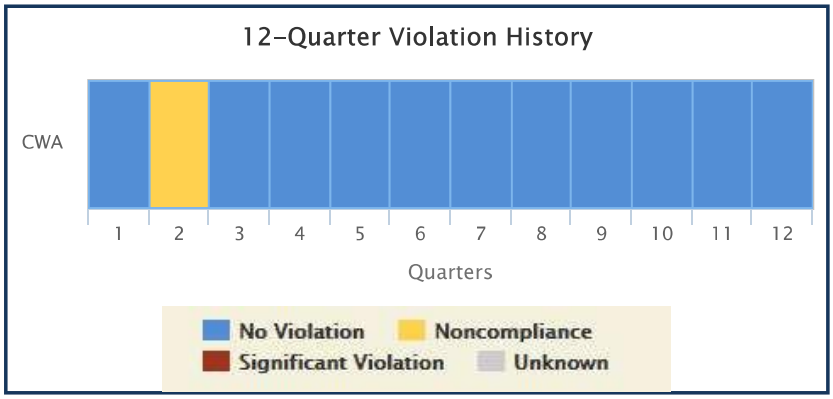
Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	1,183 (3.51%)	Less than $15,000:	2,547 (12.24%)
9th through 12th Grade:	2,090 (6.2%)	$15,000 - $25,000:	2,399 (11.53%)
High School Diploma:	9,751 (28.92%)	$25,000 - $50,000:	5,669 (27.25%)
Some College/2-yr:	10,441 (30.97%)	$50,000 - $75,000:	3,805 (18.29%)
B.S./B.A. or More:	10,252 (30.41%)	Greater than $75,000:	6,381 (30.68%)

Detailed Facility Report

Facility Summary

ENDICOTT MS4 STORM SEWERS
VILLAGE-WIDE, ENDICOTT, NY 13760

FRS (Facility Registry Service) ID: 110019190203
EPA Region: 02
Latitude: 42.098217
Longitude: -76.04947
Locational Data Source: NPDES
Industry: No description found
Indian Country: N



Enforcement and Compliance Summary

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs in NC (Non-Compliance) (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
CWA	1	03/05/2014	**No Violation**	1	0	--	--	--	--	--

Related Reports

- CWA Pollutant Loading Report
- CWA Effluent Charts
- CWA Effluent Limit Exceedances Report

Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): Minor, Permit Admin Continued (NYR20A149)
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110019190203					N	42.098217	-76.04947

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
ICP	CWA	NYR20A149	Minor: General Permit Covered Facility	Admin Continued	Storm Water Small MS4s	04/30/2017	N	42.098217	-76.04947

Facility Address

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110019190203	ENDICOTT MS4 STORM SEWERS	VILLAGE-WIDE, ENDICOTT, NY 13760
ICP	CWA	NYR20A149	ENDICOTT MS4 STORM SEWERS	VILLAGE-WIDE, UNION, NY 13760

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Desc
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
CWA	NYR20A149	ICP	Evaluation	State	03/05/2014	

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Non-compliance)/HPV (High Priority Violation)	Description	Current As Of	Qtrs in NC (Non-Compliance) (of 12)
CWA	NYR20A149	No		12/31/2016	1

Three Year Compliance Status by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13+
CWA (Source ID: NYR20A149)		01/01-03/31/14	04/01-06/30/14	07/01-09/30/14	10/01-12/31/14	01/01-03/31/15	04/01-06/30/15	07/01-09/30/15	10/01-12/31/15	01/01-03/31/16	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-06/02/17
	Facility-Level Status	**No Viol**	**In Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	**No Viol**	Und
	SNC (Significant Non-compliance)/RNC (Reportable Non-Compliance) History		V(NonRNCV)											
	Permit Schedule Violations													
CWA	Schedule Event achieved late but reported: MS4 Program Report		06-01-14-06-04-14											

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS (Integrated Compliance Information System) Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP (Supplemental Environmental Project) Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
NYR20A149			020501030205	Patterson Creek-Susquehanna River		No		MERCURY | NUTRIENTS | OTHER CAUSE | PATHOGENS | SEDIMENT	No

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
02050103000061	Susquehanna River	No	Yes	Yes	No	No	No

Air Quality

Non-Attainment Area?	Pollutant(s)
No	Ozone
No	Lead
Yes	Particulate Matter
No	Sulfur Dioxide

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	97%	Households in Area:	20,810
Center Latitude:	42.098217	Water Area:	3%	Housing Units in Area:	22,296
Center Longitude:	-76.04947	Population Density:	1,719/sq.mi.	Households on Public Assistance:	475

Total Persons:	47,245	Percent Minority:	11%	Persons Below Poverty Level:	13,033

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	42,756 (91%)	Child 5 years and younger:	2,527 (5%)
African-American:	1,636 (3%)	Minors 17 years and younger:	9,711 (21%)
Hispanic-Origin:	1,287 (3%)	Adults 18 years and older:	37,534 (79%)
Asian/Pacific Islander:	1,522 (3%)	Seniors 65 years and older:	8,821 (19%)
American Indian:	71 (0%)		
Other/Multiracial:	1,260 (3%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	1,174 (3.47%)	Less than $15,000:	2,564 (12.27%)
9th through 12th Grade:	2,082 (6.15%)	$15,000 - $25,000:	2,413 (11.54%)
High School Diploma:	9,714 (28.71%)	$25,000 - $50,000:	5,669 (27.12%)
Some College/2-yr:	10,491 (31%)	$50,000 - $75,000:	3,831 (18.33%)
B.S./B.A. or More:	10,379 (30.67%)	Greater than $75,000:	6,425 (30.74%)

NYSDEC Letter, Subsurface Investigation Report, and NYSDEC Reports for Spills, Environmental Remediation Sites, or Bulk Storage Sites Located on or Within Close Proximity to the Site

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 7
1679 NYS Route 11, Kirkwood, NY 13795
P: (607) 775-2545 | F: (607) 775-2019
www.dec.ny.gov

December 30, 2016

Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State St., 408 N, Hampton Plaza, Albany, NY 12207

Attn: Ms. Alicia Shultz -Senior Environmental Scientist

RE: Spill # 1607989
Central Endicott Drainage Project
George F. Johnson Park – Stormwater Chamber #3
Endicott – Broome County

Dear Ms. Shultz:

The Department has reviewed Li Ro Engineers, Inc. subsurface investigation and summary reports concerning the fill material associated with Stormwater Chamber #3 located in George F. Johnson Park in Endicott, NY. It was determined soil samples results obtained from fill material within the area of Chamber #3 detected petroleum compounds mostly within the SVOC range and additional results which characterized the fill as not being a hazardous waste.

In my experience of detecting PAH's in fill material where soil borings have found leather and/or rubber, in many cases the fill was identified as being generated by the Endicott-Johnson Shoe Company which historically placed manufacturing wastes within low lying areas in and around the Endicott-Johnson City area.

Based on test results provided, the Department is in agreement with Li Ro's conclusions of the fill material being contaminated with petroleum and characterized as non-hazardous. It is requested that any fill material removed during the installation of Chamber #3 be properly disposed. No additional fill material will be required to be removed beyond the excavation needed to properly install the stormwater system.

If you wish to dispose of the fill material in the Broome County Landfill, you can contact the Solid Waste Management Specialist - Ms. Laurie Haskell at 607-778-2932 who will need to review the site information and analytical results to consider acceptance of the waste or determine if additional sampling may be required.

If you have any questions, please contact me at (607) 775-2545 - Ext 120.

Sincerely,

John E. Okesson
Environmental Program Specialist
Region 7 – Kirkwood

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 7
Spill Number: 1607989

Spill Date/Time

Spill Date: 11/15/2016 **Spill Time:** 03:10:00 PM
Call Received Date: 11/15/2016 **Call Received Time:** 03:10:00 PM

Location

Spill Name: GEORGE F JOHNSON PARK -PARKING LOT
Address: WATSON BLVD
City: ENDCIOTT **County:** Broome

Spill Description

Material Spilled	Amount Spilled	Resource Affected
unknown petroleum	UNKNOWN	Soil

Cause: Other
Source: Institutional, Educational, Gov., Other
Waterbody:

Record Close

Date Spill Closed: 05/16/2017

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Refine This Search

LiRo Engineers, Inc.
A LiRo Group Company
Three Aerial Way, Syosset, NY 11791 Telephone 516.938.5476 Facsimile 516.937.5421

December 5, 2016

Ms. Alicia Shultz
Community Developer- Environmental Services
38-40 State St., 4N, Hampton Plaza
Albany, NY 12207

Re: Subsurface Investigation
George F. Johnson Park, Endicott, New York

Ms. Shultz:

LiRo Engineers, Inc. (LiRo) has been retained by the Governor's Office of Storm Recovery (GOSR) to conduct a soil investigation of the fill material associated with Stormwater Chamber #3 at the George F. Johnson Park in Endicott, New York (Site). The purpose of the soil investigation was to characterize the subsurface historical fill layer and determine whether it was hazardous.

Field Work

The field work of this investigation was conducted by our sub-consultant firm Foit-Albert Associates (Foit-Albert) on October 18, 2016. Four soil borings were advanced within the proposed stormwater chamber footprint during this investigation (approximate depth- 12-16 feet below grade [bg]). One soil sample was collected from each of these soil borings (SB-3, SB-5, SB-7, SB-10) and submitted for laboratory analysis. The soil sample locations are presented on Figure 1.

The subsurface soil was screened for organic vapors with a photoionization detector (PID). Elevated organic vapor concentrations (i.e., 80.1 parts per million [ppm) and a slight odor were observed in SB-5.

Laboratory Analysis and Results

The four soil samples were submitted to ALS Environmental of Middletown, Pennsylvania for the analysis of volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260, semi-volatile organic compounds (SVOCs) via USEPA Method 8270, metals via USEPA Method 6010, polychlorinated biphenyls (PCBs) via USEPA Method 8082, waste characterization parameters (corrosivity, ignitability, reactivity, paint filter, total sulfur, total organic halides), and toxicity via toxicity leachate procedure (TCLP) for VOCs, SVOCs, metals via USEPA Method 1311.

The analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Part 375 Unrestricted Use soil cleanup objectives (UUSCOs), Restricted Residential Use SCOs, and Commercial Use SCOs. The samples analyzed for toxicity via TCLP are compared to USEPA's Maximum Concentration of Contaminants for Toxicity Characteristic. The laboratory report and the chain of custody are included as Attachment 1.

DRAFT

VOCs

The analytical results of the VOC analysis are presented on Table 1.

Two VOCs were detected above their respective NYSDEC Part 375 SCOs. Acetone was detected above its respective Unrestricted Use SCO (concentration range- 0.095 milligrams per kilogram [mg/kg] – 0.34 mg/kg). Naphthalene was detected above its respective Commercial Use SCO (943 mg/kg in SB-5).

SVOCs

The analytical results of the SVOC analysis are presented on Table 2.

Nine SVOCs were detected above their respective NYSDEC Part 375 SCOs. A summary of the exceedances is provided in the table below.

Compound	***NYSDEC Part 375 Use Exceedance***	***Sample ID/Concentration***
Benzo(a)anthracene	RRUSCO (1.0 mg/kg)	SB-3 / 1.4 mg/kg ** SB-5 / 4.4 mg/kg ** SB-7 / 4.1 mg/kg **
Benzo(a)pyrene	CUSCO (1.0 mg/kg)	SB-3 / 1.3 mg/kg *** SB-5 / 5.4 mg/kg *** SB-7 / 4.3 mg/kg ***
Benzo(b)fluoranthene	RRUSCO (1.0 mg/kg) CUSCO (5.6 mg/kg)	SB-3 / 1.7 mg/kg ** SB-5 / 5.8 mg/kg *** SB-7 / 5.0 mg/kg **
Benzo(k)fluoranthene	RRUSCO (1.0 mg/kg)	SB-5 / 2.3 mg/kg ** SB-7- 1.9 mg/kg **
Chrysene	RRUSCO (1.0 mg/kg)	SB-3 / 1.4 mg/kg ** SB-5 / 4.5 mg/kg ** SB-7 / 3.9 mg/kg **
Dibenzo(a,h)anthracene	RRUSCO (0.33 mg/kg) CUSCO (0.56 mg/kg)	SB-5 / 0.93 mg/kg ** SB-7 / 0.52 mg/kg *
Indeno(1,2,3-cd)pyrene	RRUSCO (0.5 mg/kg)	SB-3 / 0.74 mg/kg ** SB-5 / 3.3 mg/kg ** SB-7 / 2.5 mg/kg **

Naphthalene	CUSCO (500 mg/kg)	SB-5 / 2,090 mg/kg ***
Phenol	UUSCO (0.33 mg/kg)	SB-5 / 0.59 mg/kg *

*- Exceedance of NYSDEC Part 375 UUSCO
**- Exceedance of NYSDEC Part 375 RRUSCO
***- Exceedance of NYSDEC Part 375 CUSCO

Metals

The analytical results of the metals analysis are presented on Table 3.

Seven metals were detected above their respective NYSDEC Part 375 SCOs. A summary of the exceedances is provided in the table below.

Compound	***NYSDEC Part 375 Category Exceedance***	***Sample ID/Concentration***
Arsenic	CUSCO (16.0 mg/kg)	SB-3 / 16.7 mg/kg *** SB-5 / 27.7 mg/kg ***
Cadmium	RRUSCO (4.3 mg/kg)	SB-5 / 5.4 mg/kg **
Copper	UUSCO (50 mg/kg)	SB-5 / 70.1 mg/kg * SB-7 / 92.3 mg/kg *
Lead	UUSCO (63 mg/kg)	SB-3 / 79.5 mg/kg * SB-5 / 128 mg/kg * SB-7 / 298 mg/kg * SB-10 / 142 mg/kg *
Mercury	UUSCO (0.18 mg/kg) RRUSCO (0.81 mg/kg) CUSCO (2.8 mg/kg)	SB-3 / 1.1 mg/kg ** SB-5 / 46.6 mg/kg *** SB-7 / 0.89 mg/kg ** SB-10 / 0.23 mg/kg *
Nickel	UUSCO (30 mg/kg)	SB-5 / 30.4 mg/kg *
Zinc	UUSCO (109 mg/kg)	SB-3 / 162 mg/kg * SB-5 / 335 mg/kg * SB-7 / 664 mg/kg *

*- Exceedance of NYSDEC Part 375 UUSCO
**- Exceedance of NYSDEC Part 375 RRUSCO
***- Exceedance of NYSDEC Part 375 CUSCO

PCBs

The analytical results of the PCB analysis are presented on Table 4.

No PCBs were detected above their respective NYSDEC Part 375 SCOs.

Waste Characterization Parameters

Toxicity- None of the soil samples exceeded the USEPA Maximum Concentration of Contaminants for Toxicity as a result of TCLP analysis.

Reactivity, Ignitability, Corrosivity. TOX, Paint Filter Test, Sulfur

None of these hazardous waste indicators were identified during the laboratory analysis except for sulfur, which was detected in all four samples (concentration range- 735 mg/kg - 7,250 mg/kg).

NYSDEC Spill No. 1607989

A spill was reported to the NYSDEC on November 15, 2016 by GOSR as a result of the elevated detections of petroleum-related compounds (e.g., naphthalene -943 mg/kg, several polycyclic aromatic hydrocarbons [PAHs]).

Discussion and Conclusion

A total of four soil samples were collected from the proposed stormwater chamber footprint during this investigation. The analytical results identified VOCs, SVOCs (specifically PAHs), and metals in the subsurface soil at concentrations above the NYSDEC Part 375 SCOs.

Acetone was identified at a concentrations above its respective Unrestricted Use SCO. The presence of acetone is likely a laboratory-introduced contaminant as it is a commonly used laboratory solvent. Naphthalene was identified above its respective Commercial Use SCO. Naphthalene is a coal tar or petroleum compound derivative, which may be indicative of petroleum-related contamination. Several PAHs and naphthalene were also identified above their respective Part 375 SCOs, which may also be indicative of petroleum-related contamination. Sever metals were identified above their respective Restricted Residential Use and Commercial Use SCOs, which is likely attributable to the presence of historical fill of undocumented origin.

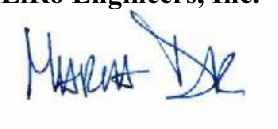
A spill was reported to the NYSDEC by the GOSR due to elevated detections of several petroleum-related compounds (e.g, naphthalene, PAHs). Spill No. 1607989 was assigned to Site on November 15, 2016. A copy of the spill record is included in Attachment 2.

The soil was also analyzed for toxicity and general waste characterization parameters. None of the soil samples were identified as hazardous (i.e., exceeded the USEPA MCL). Prior to disposal, any excavated soil/fill will likely need to be tested again depending on the permit requirements of the proposed disposal facility. Although the historical fill underlying the Site is not hazardous, the excavated material is contaminated and must be disposed of in accordance with the applicable local, State, and Federal regulations.

Should you have any questions, or require further information, please feel free to contact me at 516-595-2905.

Sincerely,

LiRo Engineers, Inc.



Maria Drakos
Project Scientist

Attachments

Figure

Legend

- **Soil Sample Location**

Central Endicott Drainage Improvements Project

George F. Johnson Park, Endicott, NY

Figure 1-Sample Location Map

Tables

Table 1- Summary of VOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3 (mg/kg)	SB-5 (mg/kg)	SB-7 (mg/kg)	SB-10 (mg/kg)
Acetone	0.05	100	500	0.17	ND	0.34	0.095
Acetonitrile	N/A	N/A	N/A	ND	ND	ND	ND
Acrolein	N/A	N/A	N/A	ND	ND	ND	ND
Acrylonitrile	N/A	N/A	N/A	ND	ND	ND	ND
Benzene	0.06	4.8	44	ND	ND	ND	ND
Benzyl Chloride	N/A	N/A	N/A	ND	ND	ND	ND
Bromobenzene	N/A	N/A	N/A	ND	ND	ND	ND
Bromochloromethane	N/A	N/A	N/A	ND	ND	ND	ND
Bromodichloromethane	N/A	N/A	N/A	ND	ND	ND	ND
Bromoform	N/A	N/A	N/A	ND	ND	ND	ND
Bromomethane	N/A	N/A	N/A	ND	ND	ND	ND
2-Butanone	0.12	100	500	0.030	ND	0.076	0.013
tert-Butyl Alcohol	N/A	N/A	N/A	ND	ND	ND	ND
n-Butylbenzene	12	100	500	ND	ND	0.0024	ND
tert-Butylbenzene	5.9	100	500	ND	ND	ND	ND
sec-Butylbenzene	11	100	500	ND	0.045	0.0033	ND
Carbon Disulfide	N/A	N/A	N/A	ND	ND	0.0023	ND
Carbon Tetrachloride	0.76	2.4	22	ND	ND	ND	ND
Chlorobenzene	1.1	100	500	ND	ND	ND	ND
Chlorodibromomethane	N/A	N/A	N/A	ND	ND	ND	ND
Chloroethane	N/A	N/A	N/A	ND	ND	ND	ND
Chloroform	0.37	49	350	ND	ND	ND	ND
Chloromethane	N/A	N/A	N/A	ND	ND	ND	ND
Chloroprene	N/A	N/A	N/A	ND	ND	ND	ND
3-Chloro-1-propene	N/A	N/A	N/A	ND	ND	ND	ND
o-Chlorotoluene	N/A	N/A	N/A	ND	ND	ND	ND
p-Chlorotoluene	N/A	N/A	N/A	ND	ND	ND	ND
Cyclohexane	N/A	N/A	N/A	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	N/A	N/A	N/A	ND	ND	ND	ND
1,2-Dibromoethane	N/A	N/A	N/A	ND	ND	ND	ND
Dibromomethane	N/A	N/A	N/A	ND	ND	ND	ND

Table 1- Summary of VOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3 (mg/kg)	SB-5 (mg/kg)	SB-7 (mg/kg)	SB-10 (mg/kg)
1,2-Dichlorobenzene	1.1	100	500	ND	ND	ND	ND
1,3-Dichlorobenzene	2.4	49	280	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	13	130	ND	ND	ND	ND
Dichlorodifluoromethane	N/A	N/A	N/A	ND	ND	ND	ND
1,1-Dichloroethane	0.27	26	240	ND	ND	ND	ND
1,2-Dichloroethane	0.02	3.1	30	ND	ND	ND	ND
1,1-Dichloroethene	0.33	100	500	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.25	100	500	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.19	100	500	ND	ND	ND	ND
1,3-Dichloropropane	N/A	N/A	N/A	ND	ND	ND	ND
2,2-Dichloropropane	N/A	N/A	N/A	ND	ND	ND	ND
1,2-Dichloropropane	N/A	N/A	N/A	ND	ND	ND	ND
1,1-Dichloropropene	N/A	N/A	N/A	ND	ND	ND	ND
cis-1,3-Dichloropropene	N/A	N/A	N/A	ND	ND	ND	ND
trans-1,3-Dichloropropene	N/A	N/A	N/A	ND	ND	ND	ND
1,4-Dioxane	0.1	13	130	ND	ND	ND	ND
Ethyl Methacrylate	N/A	N/A	N/A	ND	ND	ND	ND
Ethyl Acetate	N/A	N/A	N/A	ND	ND	ND	ND
Ethylbenzene	1	41	390	ND	ND	ND	ND
Freon 113	N/A	N/A	N/A	ND	ND	ND	ND
2-Hexanone	N/A	N/A	N/A	ND	ND	ND	ND
Isobutyl alcohol	N/A	N/A	N/A	ND	ND	ND	ND
Isopropylbenzene	N/A	N/A	N/A	ND	ND	0.0022	ND
p-Isopropyltoluene	N/A	N/A	N/A	ND	0.073	0.0026	ND
Methacrylonitrile	N/A	N/A	N/A	ND	ND	ND	ND
Methyl methacrylate	N/A	N/A	N/A	ND	ND	ND	ND
Methyl acetate	N/A	N/A	N/A	ND	0.26	ND	ND
Methyl cyclohexane	N/A	N/A	N/A	0.0024	ND	0.0039	ND
Methyl t-Butyl Ether	0.93	62	500	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	N/A	N/A	N/A	ND	ND	ND	ND
Methylene Chloride	0.05	100	500	ND	ND	ND	ND

Table 1- Summary of VOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3 (mg/kg)	SB-5 (mg/kg)	SB-7 (mg/kg)	SB-10 (mg/kg)
Naphthalene	12	100	500	0.0029	943	0.063	0.014
Propionitrile	N/A	N/A	N/A	ND	ND	ND	ND
n-Propylbenzene	3.9	100	500	ND	ND	0.0026	ND
Styrene	N/A	N/A	N/A	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	N/A	N/A	N/A	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	N/A	N/A	N/A	ND	ND	ND	ND
Tetrachloroethene	1.3	19	150	ND	ND	ND	ND
Toluene	0.7	100	500	ND	ND	ND	ND
Total Xylenes	0.26	100	500	ND	ND	ND	ND
1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	ND	ND	ND
1,1,1-Trichloroethane	0.68	100	500	ND	ND	ND	ND
1,1,2-Trichloroethane	N/A	N/A	N/A	ND	ND	ND	ND
Trichloroethene	0.47	21	200	ND	ND	ND	ND
Trichlorofluoromethane	N/A	N/A	N/A	ND	ND	ND	ND
1,2,3-Trichloropropane	N/A	N/A	N/A	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	52	190	0.0021	0.34	0.030	0.0021
1,3,5-Trimethylbenzene	8.4	52	190	ND	0.15	0.0031	ND
Vinyl Acetate	N/A	N/A	N/A	ND	ND	ND	ND
Vinyl Chloride	0.02	0.9	13	ND	ND	ND	ND
o-Xylene	N/A	N/A	N/A	ND	ND	0.0028	ND
mp-Xylene	N/A	N/A	N/A	ND	ND	ND	ND

Notes

Analyte exceeds NYSDEC Unrestricted Use SCOs

Analyte exceeds NYSDEC Restricted Residential Use SCOs

Analyte exceeds NYSDEC Commercial Use SCOs

Table 2- Summary of SVOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Restricted Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3	SB-5	SB-7	SB-10
Acenaphthene	20	100	500	0.15	0.92	1.6	0.14
Acenaphthylene	100	100	500	0.14	ND	ND	ND
Acetophenone	N/A	N/A	N/A	ND	0.24	0.26	ND
Aniline	N/A	N/A	N/A	ND	ND	ND	ND
Anthracene	100	100	500	0.68	3.0	2.3	0.15
Atrazine	N/A	N/A	N/A	ND	ND	ND	ND
Benzaldehyde	N/A	N/A	N/A	ND	ND	ND	ND
Benzidine	N/A	N/A	N/A	ND	ND	ND	ND
Benzo(a)anthracene	1	1	5.6	1.4	4.4	4.1	0.27
Benzo(a)pyrene	1	1	1	1.3	5.4	4.3	0.30
Benzo(b)fluoranthene	1	1	5.6	1.7	5.8	5.0	0.38
Benzo(g,h,i)perylene	100	100	500	0.68	3.4	2.4	0.21
Benzoic acid	N/A	N/A	N/A	ND	ND	ND	ND
Benzo(k)fluoranthene	0.8	1	56	0.63	2.3	1.9	ND
Benzyl Alcohol	N/A	N/A	N/A	ND	ND	ND	ND
Biphenyl	N/A	N/A	N/A	ND	0.17	0.35	ND
4-Bromophenyl-phenylether	N/A	N/A	N/A	ND	ND	ND	ND
Butylbenzylphthalate	N/A	N/A	N/A	ND	ND	ND	ND
Caprolactam	N/A	N/A	N/A	ND	ND	ND	ND
Carbazole	N/A	N/A	N/A	0.22	1.0	1.1	ND
4-Chloro-3-methylphenol	N/A	N/A	N/A	ND	ND	ND	ND
4-Chloroaniline	N/A	N/A	N/A	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	N/A	N/A	N/A	ND	ND	ND	ND
bis(2-Chloroethyl)ether	N/A	N/A	N/A	ND	ND	ND	ND
bis(2-Chloroisopropyl)ether	N/A	N/A	N/A	ND	ND	ND	ND
2-Chloronaphthalene	N/A	N/A	N/A	ND	ND	ND	ND
2-Chlorophenol	N/A	N/A	N/A	ND	ND	ND	ND
4-Chlorophenyl-phenylether	N/A	N/A	N/A	ND	ND	ND	ND
Chrysene	1	1	56	1.4	4.5	3.9	0.36
mp-Cresol	N/A	N/A	N/A	ND	0.41	0.52	ND
o-Cresol	0.33	100	500	ND	ND	ND	ND

Table 2- Summary of SVOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Restricted Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3	SB-5	SB-7	SB-10
Di-n-Butylphthalate	N/A	N/A	N/A	ND	ND	ND	ND
Di-n-Octylphthalate	N/A	N/A	N/A	ND	ND	ND	ND
Dibenzo(a,h)anthracene	0.33	0.33	0.56	0.19	0.93	0.52	0.057
Dibenzofuran	7	14	350	0.13	0.55	1.3	0.16
1,2-Dichlorobenzene	1.1	100	500	ND	ND	ND	ND
1,3-Dichlorobenzene	2.4	17	280	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	9.8	130	ND	ND	ND	ND
3,3-Dichlorobenzidine	N/A	N/A	N/A	ND	ND	ND	ND
2,4-Dichlorophenol	N/A	N/A	N/A	ND	ND	ND	ND
2,6-Dichlorophenol	N/A	N/A	N/A	ND	ND	ND	ND
Diethylphthalate	N/A	N/A	N/A	ND	ND	ND	ND
Dimethoate	N/A	N/A	N/A	ND	ND	ND	ND
2,4-Dimethylphenol	N/A	N/A	N/A	ND	ND	ND	ND
Dimethylphthalate	N/A	N/A	N/A	ND	ND	ND	ND
1,2-Dinitrobenzene	N/A	N/A	N/A	ND	ND	ND	ND
1,4-Dinitrobenzene	N/A	N/A	N/A	ND	ND	ND	ND
2,4-Dinitrophenol	N/A	N/A	N/A	ND	ND	ND	ND
2,4-Dinitrotoluene	N/A	N/A	N/A	ND	ND	ND	ND
2,6-Dinitrotoluene	N/A	N/A	N/A	ND	ND	ND	ND
Diphenylamine	N/A	N/A	N/A	0.44	3.1	1.7	ND
1,2-Diphenylhydrazine	N/A	N/A	N/A	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	N/A	N/A	N/A	0.12	ND	0.34	0.32
Fluoranthene	100	100	500	3.3	12.5	10.4	0.63
Fluorene	30	100	500	0.26	1.0	1.7	0.18
Hexachlorobenzene	0.33	0.33	6	ND	ND	ND	ND
Hexachlorobutadiene	N/A	N/A	N/A	ND	ND	ND	ND
Hexachlorocyclopentadiene	N/A	N/A	N/A	ND	ND	ND	ND
Hexachloroethane	N/A	N/A	N/A	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.74	3.3	2.5	0.20
Isophorone	N/A	N/A	N/A	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	N/A	N/A	N/A	ND	ND	ND	ND

Table 2- Summary of SVOCs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Restricted Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3	SB-5	SB-7	SB-10
2-Methylnaphthalene	N/A	N/A	N/A	0.37	5.9	1.7	0.50
2-Naphthylamine	N/A	N/A	N/A	ND	ND	ND	ND
Naphthalene	12	100	500	0.34	2090	3.1	1.0
2-Nitroaniline	N/A	N/A	N/A	ND	ND	ND	ND
3-Nitroaniline	N/A	N/A	N/A	ND	ND	ND	ND
4-Nitroaniline	N/A	N/A	N/A	ND	ND	ND	ND
Nitrobenzene	N/A	N/A	N/A	ND	ND	ND	ND
2-Nitrophenol	N/A	N/A	N/A	ND	ND	ND	ND
4-Nitrophenol	N/A	N/A	N/A	ND	ND	ND	ND
N-Nitrosodi-n-butylamine	N/A	N/A	N/A	ND	ND	ND	ND
N-Nitrosodiethylamine	N/A	N/A	N/A	ND	ND	ND	ND
N-Nitrosodimethylamine	N/A	N/A	N/A	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	N/A	N/A	N/A	ND	ND	ND	ND
N-Nitrosodiphenylamine	N/A	N/A	N/A	0.51	3.6	2.0	ND
N-Nitrosopyrrolidine	N/A	N/A	N/A	ND	ND	ND	ND
Pentachlorobenzene	N/A	N/A	N/A	ND	ND	ND	ND
Pentachlorophenol	0.8	6.7	6.7	ND	ND	ND	ND
Phenanthrene	100	100	500	2.4	10.9	10.2	0.71
Phenol	0.33	100	500	ND	0.59	ND	ND
Pyrene	100	100	500	2.6	11.5	9.0	0.51
Pyridine	N/A	N/A	N/A	ND	ND	ND	ND
Resorcinol	N/A	N/A	N/A	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	N/A	N/A	N/A	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	N/A	N/A	N/A	ND	ND	ND	ND
1,2,4-Trichlorobenzene	N/A	N/A	N/A	ND	ND	ND	ND
2,4,5-Trichlorophenol	N/A	N/A	N/A	ND	ND	ND	ND
2,4,6-Trichlorophenol	N/A	N/A	N/A	ND	ND	ND	ND

Notes

Analyte exceeds NYSDEC Unrestricted Use SCOs

Analyte exceeds NYSDEC Restricted Residential Use SCOs

Analyte exceeds NYSDEC Commercial Use SCOs

Table 3- Summary of Metals in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Restricted Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3	SB-5	SB-7	SB-10
Aluminum, Total	N/A	N/A	N/A	4390	4090	4320	4370
Antimony, Total	N/A	N/A	N/A	2.9	6.7	ND	ND
Arsenic, Total	13	16	16	16.7	27.7	12.9	6.6
Barium, Total	350	400	400	50.7	80.6	259	45.4
Beryllium, Total	7.2	72	590	ND	ND	ND	ND
Cadmium, Total	2.5	4.3	9.3	0.61	6.3	1.2	ND
Calcium, Total	N/A	N/A	N/A	17300	26900	23900	28100
Chromium, Total	N/A	290	N/A	130	33.6	77.9	27.3
Cobalt, Total	N/A	N/A	N/A	4.9	4.6	5.6	4.9
Copper, Total	50	270	270	38.7	70.1	92.3	26.0
Iron, Total	N/A	N/A	N/A	20300	14500	23500	14500
Lead, Total	63	400	1000	79.5	128	298	142
Magnesium, Total	N/A	N/A	N/A	3550	3730	3370	4170
Manganese, Total	1600	2000	10000	308	312	329	386
Mercury, Total	0.18	0.81	2.8	1.1	46.6	0.89	0.23
Nickel, Total	30	310	310	15.1	30.4	23.6	16.9
Potassium, Total	N/A	N/A	N/A	343	369	473	370
Selenium, Total	3.9	180	1500	ND	ND	ND	ND
Silver, Total	2	180	1500	ND	ND	ND	ND
Sodium, Total	N/A	N/A	N/A	444	538	1270	352
Thallium, Total	N/A	N/A	N/A	ND	ND	ND	ND
Vanadium, Total	N/A	N/A	N/A	16.4	14.0	21.8	21.4
Zinc, Total	109	10000	10000	162	335	664	94.1

Notes

Analyte exceeds NYSDEC Unrestricted Use SCOs

Analyte exceeds NYSDEC Restricted Residential Use SCOs

Analyte exceeds NYSDEC Commercial Use SCOs

Table 4- Summary of PCBs in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	NYSDEC Part 375 Unrestricted Use SCOs (mg/kg)	NYSDEC Part 375 Restricted Residential Use SCOs (mg/kg)	NYSDEC Part 375 Commercial Use SCOs (mg/kg)	SB-3	SB-5	SB-7	SB-10
Aroclor-1016	1.0	1.0	1.0	ND	ND	ND	ND
Aroclor-1221	1.0	1.0	1.0	ND	ND	ND	ND
Aroclor-1232	1.0	1.0	1.0	ND	ND	ND	ND
Aroclor-1242	1.0	1.0	1.0	ND	ND	ND	0.40
Aroclor-1248	1.0	1.0	1.0	ND	ND	ND	ND
Aroclor-1254	1.0	1.0	1.0	0.050	0.22	0.13	ND
Aroclor-1260	1.0	1.0	1.0	ND	ND	0.053	ND

Notes

Analyte exceeds NYSDEC Unrestricted Use SCOs

Analyte exceeds NYSDEC Restricted Residential Use SCOs

Analyte exceeds NYSDEC Commercial Use SCOs

Table 5- Summary of VOCs via TCLP in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	USEPA MCL (mg/L)	SB-3 (mg/L)	SB-5 (mg/L)	SB-7 (mg/L)	SB-10 (mg/L)
Benzene	0.5	ND	ND	ND	ND
2-Butanone (methyl ethyl ketone)	200.0	ND	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND	ND
Chlorobenzene	100.0	ND	ND	ND	ND
Chloroform	6.0	ND	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND	ND
1,1-Dichloroethene	0.7	ND	ND	ND	ND
Tetrachloroethene	0.7	ND	ND	ND	ND
Trichloroethene	0.5	ND	ND	ND	ND
Vinyl Chloride	0.2	ND	ND	ND	ND

Notes

Analyte exceeds the USEPA MCL

Table 6- Summary of SVOCs via TCLP in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	USEPA MCL (mg/L)	SB-3 (mg/L)	SB-5 (mg/L)	SB-7 (mg/L)	SB-10 (mg/L)
mp-Cresol	200.0	ND	ND	ND	ND
o-Cresol	200.0	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND
2,4-Dinitrotoluene	0.1	ND	ND	ND	ND
Hexachlorobenzene	0.1	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND
Hexachloroethane	3.0	ND	ND	ND	ND
Nitrobenzene	2.0	ND	ND	ND	ND
Pentachlorophenol	100.0	ND	ND	ND	ND
Pyridine	5.0	ND	ND	ND	ND
2,4,5-Trichlorophenol	400.0	ND	ND	ND	ND
2,4,6-Trichlorophenol	2.0	ND	ND	ND	ND

Notes

Analyte exceeds the USEPA MCL

Table 7- Summary of Metals via TCLP in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	USEPA MCL (mg/L)	SB-3 (mg/L)	SB-5 (mg/L)	SB-7 (mg/L)	SB-10 (mg/L)
Arsenic, Total	5.0	ND	ND	ND	ND
Barium, Total	100.0	ND	ND	ND	ND
Cadmium, Total	1.0	ND	ND	ND	ND
Chromium, Total	5.0	ND	ND	ND	ND
Mercury, Total	0.2	ND	ND	ND	ND
Lead, Total	5.0	0.058	0.073	0.11	0.13
Selenium, Total	1.0	ND	ND	ND	ND
Silver, Total	5.0	ND	ND	ND	ND

Notes

Analyte exceeds the USEPA MCL

Table 8- Summary of RCRA Characteristics in Soil, George F. Johnson Park, Endicott, New York

ANALYTE	SB-3	SB-5	SB-7	SB-10
Ignitability	Not ignitable	Not ignitable	Not ignitable	Not ignitable
Sulfide, Reactive	ND	ND	ND	8.4
Cyanide, Reactive	ND	ND	ND	ND
Halogen, Total Organic (TOX)	ND	ND	ND	ND
Corrosivity, as pH	7.70	7.80	7.66	8.27
Free Liquids (Paint Filter)	Negative	Negative	Negative	Negative
Sulfur	7250	2330	2930	735

Attachment 1- Laboratory Report

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

October 28, 2016

Ms. Karen Carling
Foit-Albert Associates
435 New Karner Road
Albany, NY 12205

Certificate of Analysis

Project Name:	**2016-SOIL TESTING - NY SITE**	Workorder:	**2183601**
Purchase Order:		Workorder ID:	**Endicott**

Dear Ms. Carling:

Enclosed are the analytical results for samples received by the laboratory on Thursday, October 20, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2183601 Endicott

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2183601001	SB-3	Solid	10/18/2016 11:15	10/20/2016 08:58	Collected by Client
2183601002	SB-5	Solid	10/18/2016 12:00	10/20/2016 08:58	Collected by Client
2183601003	SB-7	Solid	10/18/2016 14:15	10/20/2016 08:58	Collected by Client
2183601004	SB-10	Solid	10/18/2016 15:00	10/20/2016 08:58	Collected by Client

SAMPLE SUMMARY

Workorder: 2183601 Endicott

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

PROJECT SUMMARY

Workorder: 2183601 Endicott

Sample Comments

Lab ID: 2183601002 **Sample ID:** SB-5 **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid

Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
2-Butanone	ND		ug/L	200	SW846 8260B			10/24/16 19:19	TMP	E
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Chloroform	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Trichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:19	TMP	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.9		%	62 - 133	SW846 8260B			10/24/16 19:19	TMP	E
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			10/24/16 19:19	TMP	E
Dibromofluoromethane (S)	89		%	78 - 116	SW846 8260B			10/24/16 19:19	TMP	E
Toluene-d8 (S)	98		%	76 - 127	SW846 8260B			10/24/16 19:19	TMP	E
VOLATILE ORGANICS										
Acetone	168		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Acetonitrile	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Acrolein	ND		ug/kg	43.6	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Acrylonitrile	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Benzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Benzyl Chloride	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Bromobenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Bromochloromethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Bromodichloromethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Bromoform	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Bromomethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
2-Butanone	30.0		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
tert-Butyl Alcohol	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
n-Butylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
tert-Butylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
sec-Butylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Carbon Disulfide	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Carbon Tetrachloride	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Chlorobenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Chlorodibromomethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B

ALS Environmental
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid
Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Chloroethane	ND		ug/kg	4.4	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Chloroform	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Chloromethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Chloroprene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
3-Chloro-1-propene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
o-Chlorotoluene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
p-Chlorotoluene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Cyclohexane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.4	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2-Dibromoethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Dibromomethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2-Dichlorobenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,3-Dichlorobenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,4-Dichlorobenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Dichlorodifluoromethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1-Dichloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2-Dichloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1-Dichloroethene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
cis-1,2-Dichloroethene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
trans-1,2-Dichloroethene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,3-Dichloropropane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
2,2-Dichloropropane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2-Dichloropropane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1-Dichloropropene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
cis-1,3-Dichloropropene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
trans-1,3-Dichloropropene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,4-Dioxane	ND		ug/kg	65.3	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Ethyl Methacrylate	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Ethyl Acetate	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Ethylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Freon 113	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
2-Hexanone	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Isobutyl alcohol	ND		ug/kg	43.6	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Isopropylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
p-Isopropyltoluene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Methacrylonitrile	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Methyl methacrylate	ND		ug/kg	4.4	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Methyl acetate	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid

Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Methyl cyclohexane	2.4		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Methyl t-Butyl Ether	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Methylene Chloride	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Naphthalene	2.9		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Propionitrile	ND		ug/kg	8.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
n-Propylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Styrene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Tetrachloroethene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Toluene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Total Xylenes	ND		ug/kg	5.2	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2,4-Trichlorobenzene	ND		ug/kg	4.4	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1,1-Trichloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,1,2-Trichloroethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Trichloroethene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Trichlorofluoromethane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2,3-Trichloropropane	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,2,4-Trimethylbenzene	2.1		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Vinyl Acetate	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Vinyl Chloride	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
o-Xylene	ND		ug/kg	1.7	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
mp-Xylene	ND		ug/kg	3.5	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	56 - 124	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
4-Bromofluorobenzene (S)	113		%	51 - 128	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Dibromofluoromethane (S)	110		%	62 - 123	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
Toluene-d8 (S)	99.1		%	59 - 131	SW846 8260C	10/18/16 11:25	TMP	10/24/16 16:19	TMP	B
SEMIVOLATILES										
Acenaphthene	152		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Acenaphthylene	138		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Acetophenone	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Aniline	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Anthracene	679		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Atrazine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid
Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Benzaldehyde	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzidine	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzo(a)anthracene	1420		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzo(a)pyrene	1300		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzo(b)fluoranthene	1660		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzo(g,h,i)perylene	682		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzoic acid	ND		ug/kg	633	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzo(k)fluoranthene	625		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Benzyl Alcohol	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Biphenyl	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Bromophenyl-phenylether	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Butylbenzylphthalate	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Caprolactam	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Carbazole	221		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Chloro-3-methylphenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Chloroaniline	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
bis(2-Chloroethoxy)methane	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
bis(2-Chloroethyl)ether	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
bis(2-Chloroisopropyl)ether	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Chloronaphthalene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Chlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Chlorophenyl-phenylether	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Chrysene	1430		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
mp-Cresol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
o-Cresol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Di-n-Butylphthalate	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Di-n-Octylphthalate	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Dibenzo(a,h)anthracene	194		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Dibenzofuran	127		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,2-Dichlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,3-Dichlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,4-Dichlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
3,3-Dichlorobenzidine	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4-Dichlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,6-Dichlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Diethylphthalate	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Dimethoate	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4-Dimethylphenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid

Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Dimethylphthalate	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,2-Dinitrobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,4-Dinitrobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4-Dinitrophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4-Dinitrotoluene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,6-Dinitrotoluene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Diphenylamine	436		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,2-Diphenylhydrazine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
bis(2-Ethylhexyl)phthalate	124		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Fluoranthene	3250		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Fluorene	261		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Hexachlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Hexachlorobutadiene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Hexachlorocyclopentadiene	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Hexachloroethane	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Indeno(1,2,3-cd)pyrene	740		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Isophorone	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Methyl-4,6-dinitrophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Methylnaphthalene	371		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Naphthylamine	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Naphthalene	337		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Nitroaniline	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
3-Nitroaniline	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Nitroaniline	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Nitrobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Nitrophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
4-Nitrophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitrosodi-n-butylamine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitrosodiethylamine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitrosodimethylamine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitroso-di-n-propylamine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitrosodiphenylamine	511		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
N-Nitrosopyrrolidine	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Pentachlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Pentachlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Phenanthrene	2370		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Phenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Pyrene	2640		ug/kg	58.6	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid

Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyridine	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Resorcinol	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,3,4,6-Tetrachlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
1,2,4-Trichlorobenzene	ND		ug/kg	117	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4,5-Trichlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2,4,6-Trichlorophenol	ND		ug/kg	235	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	98.8		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Fluorobiphenyl (S)	64.6		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
2-Fluorophenol (S)	62.9		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Nitrobenzene-d5 (S)	68.7		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Phenol-d5 (S)	69.7		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
Terphenyl-d14 (S)	77		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/21/16 20:49	CGS	E
PCBs										
Total Polychlorinated Biphenyl	0.050		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1016	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1221	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1232	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1242	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1248	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1254	0.050		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Aroclor-1260	ND		mg/kg	0.039	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	85		%	49 - 115	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
Tetrachloro-m-xylene (S)	74.2		%	27 - 137	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:03	EGO	E
WET CHEMISTRY										
Corrosivity as pH	7.70	2	pH_Units		SW846 9045D			10/26/16 04:33	MSA	E
Cyanide, Reactive	ND		ppm	10	SW-846 7.3CN	10/26/16 12:00	AHI	10/27/16 07:38	KXK	E
Free Liquids	Negative				SW846 9095B			10/27/16 07:15	SDL	E
Halogen, Total Organic (TOX)	ND		mg/kg	6.0	SW846 9023			10/27/16 11:29	PAG	E
Ignitability	Not ignitable	1			SW846 1030			10/24/16 11:00	SDL	E
Moisture	17.0		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
Sulfide, Reactive	ND		ppm	6.2	SW846 7.3	10/26/16 12:00	AHI	10/26/16 17:30	AHI	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid

Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Total Solids	83.0		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
Lead, Total	0.058		mg/L	0.033	SW846 6010C	10/25/16 10:35	OTD	10/27/16 14:04	SRT	E
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/25/16 02:30	MNP	10/25/16 09:34	MNP	E2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:17	TSS	E
METALS										
Sulfur	7250		mg/kg	12.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Aluminum, Total	4390		mg/kg	12.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Antimony, Total	2.9		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Arsenic, Total	16.7		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Barium, Total	50.7		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Beryllium, Total	ND		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Cadmium, Total	0.61		mg/kg	0.60	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Calcium, Total	17300		mg/kg	12.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Chromium, Total	130		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Cobalt, Total	4.9		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Copper, Total	38.7		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Iron, Total	20300		mg/kg	12.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Lead, Total	79.5		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Magnesium, Total	3550		mg/kg	12.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Manganese, Total	308		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Mercury, Total	1.1		mg/kg	0.060	SW846 7471B	10/25/16 10:30	MNP	10/25/16 13:38	MNP	E3
Nickel, Total	15.1		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Potassium, Total	343		mg/kg	60.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Selenium, Total	ND		mg/kg	6.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Silver, Total	ND		mg/kg	0.60	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Sodium, Total	444		mg/kg	60.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Thallium, Total	ND		mg/kg	3.6	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Vanadium, Total	16.4		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
Zinc, Total	162		mg/kg	2.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 12:53	TSS	E1
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601001** Date Collected: 10/18/2016 11:15 Matrix: Solid
Sample ID: **SB-3** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
o-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Pentachlorophenol	ND		ug/L	120	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Pyridine	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
2,4,5-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
2,4,6-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	84.8		%	47 - 128	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
2-Fluorobiphenyl (S)	65.9		%	52 - 118	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
2-Fluorophenol (S)	66		%	20 - 87	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Nitrobenzene-d5 (S)	80.9		%	27 - 139	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Phenol-d5 (S)	43.6		%	10 - 81	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E
Terphenyl-d14 (S)	85.2		%	46 - 133	SW846 8270D	10/25/16 13:25	JXD	10/26/16 09:29	CGS	E

Brad W. Kintzer
Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
2-Butanone	ND		ug/L	200	SW846 8260B			10/24/16 19:36	TMP	E
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Chloroform	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Trichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:36	TMP	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.1		%	62 - 133	SW846 8260B			10/24/16 19:36	TMP	E
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			10/24/16 19:36	TMP	E
Dibromofluoromethane (S)	88.7		%	78 - 116	SW846 8260B			10/24/16 19:36	TMP	E
Toluene-d8 (S)	96.9		%	76 - 127	SW846 8260B			10/24/16 19:36	TMP	E
VOLATILE ORGANICS										
Acetone	ND		ug/kg	384	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Acetonitrile	ND		ug/kg	767	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Acrolein	ND		ug/kg	959	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Acrylonitrile	ND		ug/kg	192	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Benzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Benzyl Chloride	ND		ug/kg	192	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Bromobenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Bromochloromethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Bromodichloromethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Bromoform	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Bromomethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
2-Butanone	ND		ug/kg	384	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
tert-Butyl Alcohol	ND		ug/kg	384	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
n-Butylbenzene	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
tert-Butylbenzene	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
sec-Butylbenzene	44.5		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Carbon Disulfide	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Carbon Tetrachloride	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Chlorobenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Chlorodibromomethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Chloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Chloroform	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Chloromethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Chloroprene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
3-Chloro-1-propene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
o-Chlorotoluene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
p-Chlorotoluene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Cyclohexane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2-Dibromo-3-chloropropane	ND		ug/kg	268	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2-Dibromoethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Dibromomethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2-Dichlorobenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,3-Dichlorobenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,4-Dichlorobenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Dichlorodifluoromethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1-Dichloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2-Dichloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1-Dichloroethene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
cis-1,2-Dichloroethene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
trans-1,2-Dichloroethene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,3-Dichloropropane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
2,2-Dichloropropane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2-Dichloropropane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1-Dichloropropene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
cis-1,3-Dichloropropene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
trans-1,3-Dichloropropene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,4-Dioxane	ND		ug/kg	12300	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Ethyl Methacrylate	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Ethyl Acetate	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Ethylbenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Freon 113	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
2-Hexanone	ND		ug/kg	192	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Isobutyl alcohol	ND		ug/kg	2880	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Isopropylbenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
p-Isopropyltoluene	72.7		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Methacrylonitrile	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Methyl methacrylate	ND		ug/kg	115	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Methyl acetate	263		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid
Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Methyl cyclohexane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	192	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Methylene Chloride	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Naphthalene	943000		ug/kg	38400	SW846 8260C	10/18/16 12:00	JAH	10/25/16 18:38	DD	A
Propionitrile	ND		ug/kg	384	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
n-Propylbenzene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Styrene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1,1,2-Tetrachloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Tetrachloroethene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Toluene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Total Xylenes	ND		ug/kg	115	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2,4-Trichlorobenzene	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1,1-Trichloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,1,2-Trichloroethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Trichloroethene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Trichlorofluoromethane	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2,3-Trichloropropane	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,2,4-Trimethylbenzene	343		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
1,3,5-Trimethylbenzene	148		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Vinyl Acetate	ND		ug/kg	192	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Vinyl Chloride	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
o-Xylene	ND		ug/kg	38.4	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
mp-Xylene	ND		ug/kg	76.7	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	71 - 146	SW846 8260C	10/18/16 12:00	JAH	10/25/16 18:38	DD	A
1,2-Dichloroethane-d4 (S)	123		%	71 - 146	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
4-Bromofluorobenzene (S)	123		%	46 - 138	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
4-Bromofluorobenzene (S)	119		%	46 - 138	SW846 8260C	10/18/16 12:00	JAH	10/25/16 18:38	DD	A
Dibromofluoromethane (S)	98.5		%	42 - 143	SW846 8260C	10/18/16 12:00	JAH	10/25/16 18:38	DD	A
Dibromofluoromethane (S)	111		%	42 - 143	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
Toluene-d8 (S)	97.3		%	54 - 141	SW846 8260C	10/18/16 12:00	JAH	10/25/16 18:38	DD	A
Toluene-d8 (S)	109		%	54 - 141	SW846 8260C	10/18/16 12:00	JAH	10/25/16 04:33	SYB	A
SEMIVOLATILES										
Acenaphthene	920		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Acenaphthylene	ND		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Acetophenone	235		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Aniline	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Anthracene	2970		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Atrazine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzaldehyde	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzidine	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzo(a)anthracene	4380		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzo(a)pyrene	5360		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzo(b)fluoranthene	5780		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzo(g,h,i)perylene	3400		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzoic acid	ND		ug/kg	655	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzo(k)fluoranthene	2300		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Benzyl Alcohol	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Biphenyl	168		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Bromophenyl-phenylether	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Butylbenzylphthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Caprolactam	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Carbazole	1030		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Chloro-3-methylphenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Chloroaniline	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
bis(2-Chloroethoxy)methane	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
bis(2-Chloroethyl)ether	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
bis(2-Chloroisopropyl)ether	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Chloronaphthalene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Chlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Chlorophenyl-phenylether	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Chrysene	4480		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
mp-Cresol	406		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
o-Cresol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Di-n-Butylphthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Di-n-Octylphthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Dibenzo(a,h)anthracene	932		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Dibenzofuran	551		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,2-Dichlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,3-Dichlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,4-Dichlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
3,3-Dichlorobenzidine	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4-Dichlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
2,6-Dichlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Diethylphthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Dimethoate	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4-Dimethylphenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Dimethylphthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,2-Dinitrobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,4-Dinitrobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4-Dinitrophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4-Dinitrotoluene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,6-Dinitrotoluene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Diphenylamine	3090		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,2-Diphenylhydrazine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
bis(2-Ethylhexyl)phthalate	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Fluoranthene	12500		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
Fluorene	1010		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Hexachlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Hexachlorobutadiene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Hexachlorocyclopentadiene	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Hexachloroethane	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Indeno(1,2,3-cd)pyrene	3280		ug/kg	60.7	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Isophorone	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Methyl-4,6-dinitrophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Methylnaphthalene	5940		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Naphthylamine	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Naphthalene	2090000		ug/kg	30300	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
2-Nitroaniline	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
3-Nitroaniline	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Nitroaniline	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Nitrobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Nitrophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
4-Nitrophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitrosodi-n-butylamine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitrosodiethylamine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitrosodimethylamine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitroso-di-n-propylamine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitrosodiphenylamine	3620		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
N-Nitrosopyrrolidine	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Pentachlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Pentachlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Phenanthrene	10900		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
Phenol	593		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Pyrene	11500		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
Pyridine	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Resorcinol	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,3,4,6-Tetrachlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
1,2,4-Trichlorobenzene	ND		ug/kg	121	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4,5-Trichlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2,4,6-Trichlorophenol	ND		ug/kg	243	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
2,4,6-Tribromophenol (S)	0		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
2,4,6-Tribromophenol (S)	91.8		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Fluorobiphenyl (S)	0		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
2-Fluorobiphenyl (S)	62.6		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
2-Fluorobiphenyl (S)	60.4		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
2-Fluorophenol (S)	0		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
2-Fluorophenol (S)	56.2		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
2-Fluorophenol (S)	58.1		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Nitrobenzene-d5 (S)	67		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
Nitrobenzene-d5 (S)	0		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
Nitrobenzene-d5 (S)	86.8		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Phenol-d5 (S)	0		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
Phenol-d5 (S)	61.9		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Phenol-d5 (S)	57.9		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
Terphenyl-d14 (S)	67.4		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:14	CGS	E
Terphenyl-d14 (S)	0		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/26/16 03:15	GEC	E
Terphenyl-d14 (S)	75.3		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/24/16 17:42	CGS	E
PCBs										
Total Polychlorinated Biphenyl	0.22		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1016	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1221	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1232	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1242	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1248	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid

Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1254	0.22		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Aroclor-1260	ND		mg/kg	0.038	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	112		%	49 - 115	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
Tetrachloro-m-xylene (S)	68.3		%	27 - 137	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:15	EGO	E
WET CHEMISTRY										
Corrosivity as pH	7.80	2	pH_Units		SW846 9045D			10/26/16 04:36	MSA	E
Cyanide, Reactive	ND		ppm	10	SW-846 7.3CN	10/26/16 12:00	AHI	10/27/16 07:38	KXK	E
Free Liquids	Negative				SW846 9095B			10/27/16 07:15	SDL	E
Halogen, Total Organic (TOX)	ND		mg/kg	5.9	SW846 9023			10/27/16 11:50	PAG	E
Ignitability	Not ignitable	1			SW846 1030			10/24/16 11:00	SDL	E
Moisture	17.6		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
Sulfide, Reactive	ND		ppm	6.2	SW846 7.3	10/26/16 12:00	AHI	10/26/16 17:30	AHI	E
Total Solids	82.4		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
METALS										
Sulfur	2330		mg/kg	11.7	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Aluminum, Total	4090		mg/kg	11.7	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Antimony, Total	6.7		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Arsenic, Total	27.7		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Barium, Total	80.6		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Beryllium, Total	ND		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Cadmium, Total	6.3		mg/kg	0.58	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Calcium, Total	26900		mg/kg	11.7	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Chromium, Total	33.6		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Cobalt, Total	4.6		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Copper, Total	70.1		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Iron, Total	14500		mg/kg	11.7	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Lead, Total	128		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Magnesium, Total	3730		mg/kg	11.7	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Manganese, Total	312		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Mercury, Total	46.6		mg/kg	3.0	SW846 7471B	10/25/16 10:30	MNP	10/25/16 14:12	MNP	E3
Nickel, Total	30.4		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Potassium, Total	369		mg/kg	58.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Selenium, Total	ND		mg/kg	5.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Silver, Total	ND		mg/kg	0.58	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601002** Date Collected: 10/18/2016 12:00 Matrix: Solid
Sample ID: **SB-5** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sodium, Total	538		mg/kg	58.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Thallium, Total	ND		mg/kg	3.5	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Vanadium, Total	14.0		mg/kg	1.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
Zinc, Total	335		mg/kg	2.3	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:04	TSS	E1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Lead, Total	0.073		mg/L	0.033	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/25/16 02:30	MNP	10/25/16 09:37	MNP	E2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:21	TSS	E
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
o-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Pentachlorophenol	ND		ug/L	120	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Pyridine	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
2,4,5-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
2,4,6-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	71.6		%	47 - 128	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
2-Fluorobiphenyl (S)	46.4	3	%	52 - 118	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
2-Fluorophenol (S)	42.7		%	20 - 87	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Nitrobenzene-d5 (S)	56.5		%	27 - 139	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Phenol-d5 (S)	28.7		%	10 - 81	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E
Terphenyl-d14 (S)	77.8		%	46 - 133	SW846 8270D	10/25/16 13:25	JXD	10/26/16 10:48	CGS	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID:	**2183601002**	Date Collected:	10/18/2016 12:00	Matrix:	Solid
Sample ID:	**SB-5**	Date Received:	10/20/2016 08:58		

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid

Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
2-Butanone	ND		ug/L	200	SW846 8260B			10/24/16 19:53	TMP	E
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Chloroform	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Trichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			10/24/16 19:53	TMP	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	91.2		%	62 - 133	SW846 8260B			10/24/16 19:53	TMP	E
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			10/24/16 19:53	TMP	E
Dibromofluoromethane (S)	85.2		%	78 - 116	SW846 8260B			10/24/16 19:53	TMP	E
Toluene-d8 (S)	95.9		%	76 - 127	SW846 8260B			10/24/16 19:53	TMP	E
VOLATILE ORGANICS										
Acetone	339		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Acetonitrile	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Acrolein	ND		ug/kg	46.4	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Acrylonitrile	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Benzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Benzyl Chloride	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Bromobenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Bromochloromethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Bromodichloromethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Bromoform	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Bromomethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
2-Butanone	75.5		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
tert-Butyl Alcohol	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
n-Butylbenzene	2.4		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
tert-Butylbenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
sec-Butylbenzene	3.3		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Carbon Disulfide	2.3		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Carbon Tetrachloride	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Chlorobenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Chlorodibromomethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid

Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Chloroethane	ND		ug/kg	4.6	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Chloroform	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Chloromethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Chloroprene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
3-Chloro-1-propene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
o-Chlorotoluene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
p-Chlorotoluene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Cyclohexane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.6	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2-Dibromoethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Dibromomethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2-Dichlorobenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,3-Dichlorobenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,4-Dichlorobenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Dichlorodifluoromethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1-Dichloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2-Dichloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1-Dichloroethene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
cis-1,2-Dichloroethene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
trans-1,2-Dichloroethene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,3-Dichloropropane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
2,2-Dichloropropane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2-Dichloropropane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1-Dichloropropene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
cis-1,3-Dichloropropene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
trans-1,3-Dichloropropene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,4-Dioxane	ND		ug/kg	69.7	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Ethyl Methacrylate	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Ethyl Acetate	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Ethylbenzene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Freon 113	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
2-Hexanone	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Isobutyl alcohol	ND		ug/kg	46.4	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Isopropylbenzene	2.2		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
p-Isopropyltoluene	2.6		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Methacrylonitrile	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Methyl methacrylate	ND		ug/kg	4.6	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Methyl acetate	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid
Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Methyl cyclohexane	3.9		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Methyl t-Butyl Ether	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Methylene Chloride	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Naphthalene	63.3		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Propionitrile	ND		ug/kg	9.3	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
n-Propylbenzene	2.6		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Styrene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Tetrachloroethene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Toluene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Total Xylenes	ND		ug/kg	5.6	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2,4-Trichlorobenzene	ND		ug/kg	4.6	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1,1-Trichloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,1,2-Trichloroethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Trichloroethene	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Trichlorofluoromethane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2,3-Trichloropropane	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,2,4-Trimethylbenzene	30.0		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
1,3,5-Trimethylbenzene	3.1		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Vinyl Acetate	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Vinyl Chloride	ND		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
o-Xylene	2.8		ug/kg	1.9	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
mp-Xylene	ND		ug/kg	3.7	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	56 - 124	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
4-Bromofluorobenzene (S)	124		%	51 - 128	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Dibromofluoromethane (S)	109		%	62 - 123	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
Toluene-d8 (S)	104		%	59 - 131	SW846 8260C	10/18/16 14:15	TMP	10/24/16 16:43	TMP	B
SEMIVOLATILES										
Acenaphthene	1580		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Acenaphthylene	ND		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Acetophenone	256		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Aniline	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Anthracene	2260		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Atrazine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid
Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Benzaldehyde	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzidine	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzo(a)anthracene	4050		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzo(a)pyrene	4290		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzo(b)fluoranthene	4980		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzo(g,h,i)perylene	2420		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzoic acid	ND		ug/kg	818	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzo(k)fluoranthene	1880		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Benzyl Alcohol	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Biphenyl	349		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Bromophenyl-phenylether	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Butylbenzylphthalate	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Caprolactam	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Carbazole	1080		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Chloro-3-methylphenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Chloroaniline	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
bis(2-Chloroethoxy)methane	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
bis(2-Chloroethyl)ether	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
bis(2-Chloroisopropyl)ether	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Chloronaphthalene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Chlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Chlorophenyl-phenylether	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Chrysene	3890		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
mp-Cresol	519		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
o-Cresol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Di-n-Butylphthalate	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Di-n-Octylphthalate	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Dibenzo(a,h)anthracene	517		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Dibenzofuran	1290		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,2-Dichlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,3-Dichlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,4-Dichlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
3,3-Dichlorobenzidine	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4-Dichlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,6-Dichlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Diethylphthalate	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Dimethoate	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4-Dimethylphenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid

Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Dimethylphthalate	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,2-Dinitrobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,4-Dinitrobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4-Dinitrophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4-Dinitrotoluene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,6-Dinitrotoluene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Diphenylamine	1740		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,2-Diphenylhydrazine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
bis(2-Ethylhexyl)phthalate	341		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Fluoranthene	10400		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Fluorene	1680		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Hexachlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Hexachlorobutadiene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Hexachlorocyclopentadiene	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Hexachloroethane	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Indeno(1,2,3-cd)pyrene	2500		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Isophorone	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Methyl-4,6-dinitrophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Methylnaphthalene	1720		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Naphthylamine	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Naphthalene	3070		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Nitroaniline	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
3-Nitroaniline	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Nitroaniline	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Nitrobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Nitrophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
4-Nitrophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitrosodi-n-butylamine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitrosodiethylamine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitrosodimethylamine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitroso-di-n-propylamine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitrosodiphenylamine	2040		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
N-Nitrosopyrrolidine	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Pentachlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Pentachlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Phenanthrene	10200		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Phenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Pyrene	9020		ug/kg	75.8	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid

Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyridine	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Resorcinol	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,3,4,6-Tetrachlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
1,2,4-Trichlorobenzene	ND		ug/kg	152	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4,5-Trichlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2,4,6-Trichlorophenol	ND		ug/kg	303	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	103		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Fluorobiphenyl (S)	66.4		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
2-Fluorophenol (S)	68.6		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Nitrobenzene-d5 (S)	74.8		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Phenol-d5 (S)	73.2		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
Terphenyl-d14 (S)	77.6		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/21/16 21:39	CGS	E
PCBs										
Total Polychlorinated Biphenyl	0.25		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1016	ND		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1221	ND		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1232	ND		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1242	ND		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1248	ND		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1254	0.13		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Aroclor-1260	0.053		mg/kg	0.049	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	79.4		%	49 - 115	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
Tetrachloro-m-xylene (S)	62.5		%	27 - 137	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:26	EGO	E
WET CHEMISTRY										
Corrosivity as pH	7.66	2	pH_Units		SW846 9045D			10/26/16 04:39	MSA	E
Cyanide, Reactive	ND		ppm	10.0	SW-846 7.3CN	10/26/16 12:00	AHI	10/27/16 07:38	KXK	E
Free Liquids	Negative				SW846 9095B			10/27/16 07:15	SDL	E
Halogen, Total Organic (TOX)	ND		mg/kg	7.8	SW846 9023			10/27/16 12:11	PAG	E
Ignitability	Not ignitable	1			SW846 1030			10/24/16 11:00	SDL	E
Moisture	36.1		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
Sulfide, Reactive	ND		ppm	6.3	SW846 7.3	10/26/16 12:00	AHI	10/26/16 17:30	AHI	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid

Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Total Solids	63.9		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
METALS										
Sulfur	2930		mg/kg	14.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Aluminum, Total	4320		mg/kg	14.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Antimony, Total	ND		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Arsenic, Total	12.9		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Barium, Total	259		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Beryllium, Total	ND		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Cadmium, Total	1.2		mg/kg	0.70	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Calcium, Total	23900		mg/kg	14.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Chromium, Total	77.9		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Cobalt, Total	5.6		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Copper, Total	92.3		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Iron, Total	23500		mg/kg	14.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Lead, Total	298		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Magnesium, Total	3370		mg/kg	14.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Manganese, Total	329		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Mercury, Total	0.89		mg/kg	0.071	SW846 7471B	10/25/16 10:30	MNP	10/25/16 13:42	MNP	E3
Nickel, Total	23.6		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Potassium, Total	473		mg/kg	69.9	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Selenium, Total	ND		mg/kg	7.0	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Silver, Total	ND		mg/kg	0.70	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Sodium, Total	1270		mg/kg	69.9	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Thallium, Total	ND		mg/kg	4.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Vanadium, Total	21.8		mg/kg	1.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
Zinc, Total	664		mg/kg	2.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:08	TSS	E1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Lead, Total	0.11		mg/L	0.033	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/25/16 02:30	MNP	10/25/16 09:38	MNP	E2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:25	TSS	E
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601003** Date Collected: 10/18/2016 14:15 Matrix: Solid
Sample ID: **SB-7** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
o-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Pentachlorophenol	ND		ug/L	120	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Pyridine	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
2,4,5-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
2,4,6-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86.1		%	47 - 128	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
2-Fluorobiphenyl (S)	67		%	52 - 118	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
2-Fluorophenol (S)	64.2		%	20 - 87	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Nitrobenzene-d5 (S)	82.5		%	27 - 139	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Phenol-d5 (S)	43.3		%	10 - 81	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E
Terphenyl-d14 (S)	82.8		%	46 - 133	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:15	CGS	E

Brad W. Kintzer
Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
2-Butanone	ND		ug/L	200	SW846 8260B			10/24/16 20:10	TMP	E
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Chloroform	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Trichloroethene	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			10/24/16 20:10	TMP	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.2		%	62 - 133	SW846 8260B			10/24/16 20:10	TMP	E
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			10/24/16 20:10	TMP	E
Dibromofluoromethane (S)	86.9		%	78 - 116	SW846 8260B			10/24/16 20:10	TMP	E
Toluene-d8 (S)	97.4		%	76 - 127	SW846 8260B			10/24/16 20:10	TMP	E
VOLATILE ORGANICS										
Acetone	94.6		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Acetonitrile	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Acrolein	ND		ug/kg	31.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Acrylonitrile	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Benzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Benzyl Chloride	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Bromobenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Bromochloromethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Bromodichloromethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Bromoform	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Bromomethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
2-Butanone	12.9		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
tert-Butyl Alcohol	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
n-Butylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
tert-Butylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
sec-Butylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Carbon Disulfide	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Carbon Tetrachloride	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Chlorobenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Chlorodibromomethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Chloroethane	ND		ug/kg	3.1	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Chloroform	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Chloromethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Chloroprene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
3-Chloro-1-propene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
o-Chlorotoluene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
p-Chlorotoluene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Cyclohexane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2-Dibromoethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Dibromomethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2-Dichlorobenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,3-Dichlorobenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,4-Dichlorobenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Dichlorodifluoromethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1-Dichloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2-Dichloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1-Dichloroethene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
cis-1,2-Dichloroethene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
trans-1,2-Dichloroethene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,3-Dichloropropane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
2,2-Dichloropropane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2-Dichloropropane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1-Dichloropropene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
cis-1,3-Dichloropropene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
trans-1,3-Dichloropropene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,4-Dioxane	ND		ug/kg	46.9	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Ethyl Methacrylate	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Ethyl Acetate	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Ethylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Freon 113	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
2-Hexanone	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Isobutyl alcohol	ND		ug/kg	31.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Isopropylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
p-Isopropyltoluene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Methacrylonitrile	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Methyl methacrylate	ND		ug/kg	3.1	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Methyl acetate	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Methyl cyclohexane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Methyl t-Butyl Ether	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Methylene Chloride	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Naphthalene	13.9		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Propionitrile	ND		ug/kg	6.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
n-Propylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Styrene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Tetrachloroethene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Toluene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Total Xylenes	ND		ug/kg	3.8	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2,4-Trichlorobenzene	ND		ug/kg	3.1	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1,1-Trichloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,1,2-Trichloroethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Trichloroethene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Trichlorofluoromethane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2,3-Trichloropropane	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,2,4-Trimethylbenzene	2.1		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
1,3,5-Trimethylbenzene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Vinyl Acetate	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Vinyl Chloride	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
o-Xylene	ND		ug/kg	1.3	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
mp-Xylene	ND		ug/kg	2.5	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	56 - 124	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
4-Bromofluorobenzene (S)	125		%	51 - 128	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Dibromofluoromethane (S)	111		%	62 - 123	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
Toluene-d8 (S)	105		%	59 - 131	SW846 8260C	10/18/16 15:00	TMP	10/24/16 17:06	TMP	B
SEMIVOLATILES										
Acenaphthene	143		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Acenaphthylene	ND		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Acetophenone	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Aniline	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Anthracene	147		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Atrazine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Benzaldehyde	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzidine	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzo(a)anthracene	268		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzo(a)pyrene	299		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzo(b)fluoranthene	375		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzo(g,h,i)perylene	212		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzoic acid	ND		ug/kg	596	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzo(k)fluoranthene	ND		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Benzyl Alcohol	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Biphenyl	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Bromophenyl-phenylether	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Butylbenzylphthalate	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Caprolactam	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Carbazole	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Chloro-3-methylphenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Chloroaniline	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
bis(2-Chloroethoxy)methane	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
bis(2-Chloroethyl)ether	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
bis(2-Chloroisopropyl)ether	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Chloronaphthalene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Chlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Chlorophenyl-phenylether	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Chrysene	356		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
mp-Cresol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
o-Cresol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Di-n-Butylphthalate	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Di-n-Octylphthalate	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Dibenzo(a,h)anthracene	57.0		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Dibenzofuran	164		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,2-Dichlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,3-Dichlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,4-Dichlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
3,3-Dichlorobenzidine	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4-Dichlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,6-Dichlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Diethylphthalate	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Dimethoate	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4-Dimethylphenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Dimethylphthalate	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,2-Dinitrobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,4-Dinitrobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4-Dinitrophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4-Dinitrotoluene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,6-Dinitrotoluene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Diphenylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,2-Diphenylhydrazine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
bis(2-Ethylhexyl)phthalate	319		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Fluoranthene	633		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Fluorene	178		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Hexachlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Hexachlorobutadiene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Hexachlorocyclopentadiene	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Hexachloroethane	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Indeno(1,2,3-cd)pyrene	202		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Isophorone	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Methyl-4,6-dinitrophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Methylnaphthalene	495		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Naphthylamine	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Naphthalene	1020		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Nitroaniline	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
3-Nitroaniline	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Nitroaniline	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Nitrobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Nitrophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
4-Nitrophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitrosodi-n-butylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitrosodiethylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitrosodimethylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitroso-di-n-propylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitrosodiphenylamine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
N-Nitrosopyrrolidine	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Pentachlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Pentachlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Phenanthrene	709		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Phenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Pyrene	514		ug/kg	55.2	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyridine	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Resorcinol	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,3,4,6-Tetrachlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
1,2,4-Trichlorobenzene	ND		ug/kg	110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4,5-Trichlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2,4,6-Trichlorophenol	ND		ug/kg	221	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	94.1		%	19 - 132	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Fluorobiphenyl (S)	69.1		%	40 - 110	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
2-Fluorophenol (S)	64.3		%	26 - 116	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Nitrobenzene-d5 (S)	72.1		%	38 - 112	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Phenol-d5 (S)	60.7		%	35 - 111	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
Terphenyl-d14 (S)	77		%	45 - 126	SW846 8270D	10/21/16 02:35	CMA	10/24/16 18:31	CGS	E
PCBs										
Total Polychlorinated Biphenyl	0.40		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1016	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1221	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1232	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1242	0.40		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1248	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1254	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Aroclor-1260	ND		mg/kg	0.037	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	72.2		%	49 - 115	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
Tetrachloro-m-xylene (S)	73.3		%	27 - 137	SW846 8082A	10/24/16 01:25	CMA	10/25/16 20:38	EGO	E
WET CHEMISTRY										
Corrosivity as pH	8.27	2	pH_Units		SW846 9045D			10/26/16 04:42	MSA	E
Cyanide, Reactive	ND		ppm	10	SW-846 7.3CN	10/26/16 12:00	AHI	10/27/16 07:38	KXK	E
Free Liquids	Negative				SW846 9095B			10/27/16 07:15	SDL	E
Halogen, Total Organic (TOX)	ND		mg/kg	5.4	SW846 9023			10/27/16 13:27	PAG	E
Ignitability	Not ignitable	1			SW846 1030			10/24/16 11:00	SDL	E
Moisture	12.3		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
Sulfide, Reactive	8.4		ppm	6.2	SW846 7.3	10/26/16 12:00	AHI	10/26/16 17:30	AHI	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid

Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Total Solids	87.7		%	0.1	S2540G-11			10/24/16 14:23	VKB	E
METALS										
Sulfur	735		mg/kg	10.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Aluminum, Total	4370		mg/kg	10.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Antimony, Total	ND		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Arsenic, Total	6.6		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Barium, Total	45.4		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Beryllium, Total	ND		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Cadmium, Total	ND		mg/kg	0.54	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Calcium, Total	28100		mg/kg	10.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Chromium, Total	27.3		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Cobalt, Total	4.9		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Copper, Total	26.0		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Iron, Total	14500		mg/kg	10.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Lead, Total	142		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Magnesium, Total	4170		mg/kg	10.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Manganese, Total	386		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Mercury, Total	0.23		mg/kg	0.056	SW846 7471B	10/25/16 10:30	MNP	10/25/16 13:43	MNP	E3
Nickel, Total	16.9		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Potassium, Total	370		mg/kg	53.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Selenium, Total	ND		mg/kg	5.4	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Silver, Total	ND		mg/kg	0.54	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Sodium, Total	352		mg/kg	53.8	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Thallium, Total	ND		mg/kg	3.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Vanadium, Total	21.4		mg/kg	1.1	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
Zinc, Total	94.1		mg/kg	2.2	SW846 6010C	10/24/16 13:41	TRR	10/26/16 13:11	TSS	E1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Lead, Total	0.13		mg/L	0.033	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/25/16 02:30	MNP	10/25/16 09:39	MNP	E2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/25/16 10:35	OTD	10/26/16 17:29	TSS	E
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E

ALS Environmental
34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2183601 Endicott

Lab ID: **2183601004** Date Collected: 10/18/2016 15:00 Matrix: Solid
Sample ID: **SB-10** Date Received: 10/20/2016 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
o-Cresol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Pentachlorophenol	ND		ug/L	120	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Pyridine	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
2,4,5-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
2,4,6-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	66.2		%	47 - 128	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
2-Fluorobiphenyl (S)	48.5	3	%	52 - 118	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
2-Fluorophenol (S)	40.7		%	20 - 87	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Nitrobenzene-d5 (S)	53.6		%	27 - 139	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Phenol-d5 (S)	27.5		%	10 - 81	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E
Terphenyl-d14 (S)	73.2		%	46 - 133	SW846 8270D	10/25/16 13:25	JXD	10/26/16 11:41	CGS	E

Brad W. Kintzer
Mr. Brad W Kintzer
Project Coordinator

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2183601001	1	SB-3	SW846 1030	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2183601001	2	SB-3	SW846 9045D	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2183601002	1	SB-5	SW846 1030	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2183601002	2	SB-5	SW846 9045D	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2183601002	3	SB-5	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 46.4 and the control limits were 52 to 118. This result was reported at a dilution of 1.				
2183601003	1	SB-7	SW846 1030	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2183601003	2	SB-7	SW846 9045D	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2183601004	1	SB-10	SW846 1030	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2183601004	2	SB-10	SW846 9045D	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2183601004	3	SB-10	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 48.5 and the control limits were 52 to 118. This result was reported at a dilution of 1.				

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1

2183601

Project Name: Endicott
Project Number:
Project Manager: Karen Carling
Report CC: KCarling@Foit-Albert.com
Company/Address: Foit-Albert, 435 New Karner Rd, Albany NY. 12205
Phone #: (518) 452-1037
Email: KCarling@Foit-Albert.com
Sampler's Signature:
Sampler's Printed Name: Karen Carling

ANALYSIS REQUESTED (Include Method Number and Container)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs 8260 • 624 • CLP	GC/MS SVOAs 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Corrisivity	total organic halides	ignitibility, sulfur (total)	Reactivity	Paint filter	TCLP SVOC + VOC	TCLP metals	REMARKS/ ALTERNATE DESCRIPTION
SB-3		10/18/16	1115	Soil	8	X	X			X	X		X	X	X	X	X	X	X	
SB-5		10/18/16	1200	Soil	8	X	X			X	X		X	X	X	X	X	X	X	
SB-7		10/18/16	1415	Soil	8	X	X			X	X		X	X	X	X	X	X	X	
SB-10		10/18/16	1500	Soil	8	X	X			X	X		X	X	X	X	X	X	X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

AT 10/20/16
3-8oz Jars
1-4oz Jar
1-2oz Jar
1-40mL MeOH
2-40mL DI

AT 10/20/16

	Y	N	Initials
Custody Seals Present?			AT
(if present) Seals Intact?			
Received on Ice?			
COC/Lbls Complete			
Cont in Good Cond?			
Correct Containers?			
Correct Samp Vol?			
Correct Preservation?			
Headspace/Volatiles?			

Cooler Temp: 0.0 °C
Cooler #:
Therm ID: 14352
Ship Carrier: FedEx UPS DHL
Tracking #: 6470830 99051

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
Standard
REQUESTED REPORT DATE

REPORT REQUIREMENTS
X I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

STATE WHERE SAMPLES WERE COLLECTED

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Karen Carling	Printed Name: DINA Ayers	Printed Name: DINA Ayers	Printed Name: Adam Townsend	Printed Name	Printed Name
Firm: Foit-Albert	Firm: ALS	Firm: ALS	Firm: ALS	Firm	Firm
Date/Time: 10/18/16 1400	Date/Time: 10/19/16 1400	Date/Time: 10/19/16 1700	Date/Time: 10/20/16 0858	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

© 2012 by ALS Group

Attachment 2- NYSDEC Spill Record

NYSDEC SPILL REPORT FORM

DEC REGION: 7 **SPILL NUMBER:** 1607989

SPILL NAME: GEORGE F JOHNSON PARK -PARKING LOT **DEC LEAD:** JEOKESSO

CALLER NAME: ALICIA SHULTZ **NOTIFIER'S NAME:** SAME

CLR'S AGENCY: NYSHCR **NOTIFIER'S AGENCY:**

CALLER'S PHONE: (518) 474-0647 **NOTIFIER'S PHONE:**

SPILL DATE: 11/15/2016 **SPILL TIME:** 3:10 pm **DISPATCHER:**

CALL RECEIVED DATE: 11/15/2016 **RECEIVED TIME:** 3:10 pm

SPILL LOCATION

PLACE: GEORGE F JOHNSON PARK -PARKING LOT **COUNTY:** Broome

STREET: WATSON BLVD **TOWN/CITY:** Union

COMMUNITY: ENDCIOTT

CONTACT: **CONTACT PHONE:**

CONT. FACTOR: Other **SPILL REPORTED BY:** Other

FACILITY TYPE: Institutional, Educational, Gov., Other **WATERBODY:**

CALLER REMARKS:

Geotechnical boring installed for Central Endicott Drainage Improvement Project site was found to have petroleum odors and soil samples taken detected petroleum compounds. Consultant will provide report to DEC for review.

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
unknown petroleum	Petroleum			Soil,

POTENTIAL SPILLERS

COMPANY	ADDRESS	CONTACT
Unknown	NY	

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure

DEC REMARKS:

PIN **T & A** **COST CENTER**

CLASS: C4 **CLOSE DATE:** **MEETS STANDARDS:** False

Created On: 11/16/2016

Date Printed: 11/16/2016 Last Updated: 11/16/2016

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Endicott-Johnson, Inc.
Site Code: 704018
Program: State Superfund Program
Classification: C
EPA ID Number:

Location

DEC Region: 7
Address: Franklin Street
City: Endicott (V) Zip: 13760
County: Broome
Latitude: 42.1058727
Longitude: -76.05524048
Site Type: STRUCTURE
Estimated Size: 5.5 Acres

Institutional And Engineering Controls

Control Type:
Deed Restriction

Control Elements:
Ground Water Use Restriction
Landuse Restriction
Site Management Plan

Site Owner(s) and Operator(s)

Current Owner Name: Titan Services Group
Current Owner(s) Address: 1701 North Street
Endicott,NY, 13760
Owner(s) during disposal: ENDICOTT-JOHNSON, INC.

Hazardous Waste Disposal Period

From: 1918 **To:** 1983

Site Description

Location: The property is a 5.5 acre lot located at 901 Franklin Street in Endicott, NY. Site Features: The property is a vacant lot. The surface of the site is relatively flat with the exception of the northern edge, which rises abruptly approximately 7 feet to the original elevation. Franklin Street runs along the southeast boundary of the parcel. Current Zoning/Use(s): The parcel is zoned for Industrial use, but currently is not being used for any purpose. Site buildings were demolished in the 1980's and the property is vacant and undeveloped. Historical Use(s): The site was the location of a small manufacturing plant for the Endicott-Johnson Shoe Manufacturing Company. There were two buildings on the property which were used for manufacturing shoe "cements" (cements are the glues used to hold shoes together). There were twelve underground tanks on the property that were used for storing solvents and raw materials used in making the shoe cements. Leakage from and around the underground tanks resulted in contamination of the environment. Site Geology and Hydrogeology: The natural soils at the site consist of gravels, sands, silts, and clays of glacial and glacial-lacustrine origin. The regional groundwater system consists of an upper and lower aquifer separated by an impermeable layer of silt and clay. At the site, groundwater is encountered at approximately 5 to 10 feet below ground surface and generally flows south to southwest.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

toluene

Site Environmental Assessment

Nature and Extent of Contamination: Remediation at the site is complete. Deed restrictions are in place to address residual contamination in groundwater (above standards) and in soil gas. Prior to remediation, the primary contaminant of concern was toluene in soil and groundwater. Other volatile organics (both halogenated and non-halogenated) were detected during the investigation. A "legacy site" soil vapor investigation was performed in 2006 and 2007, and it was determined that while contaminated vapors exist on site, the site did not present a vapor contamination threat to off-site properties.

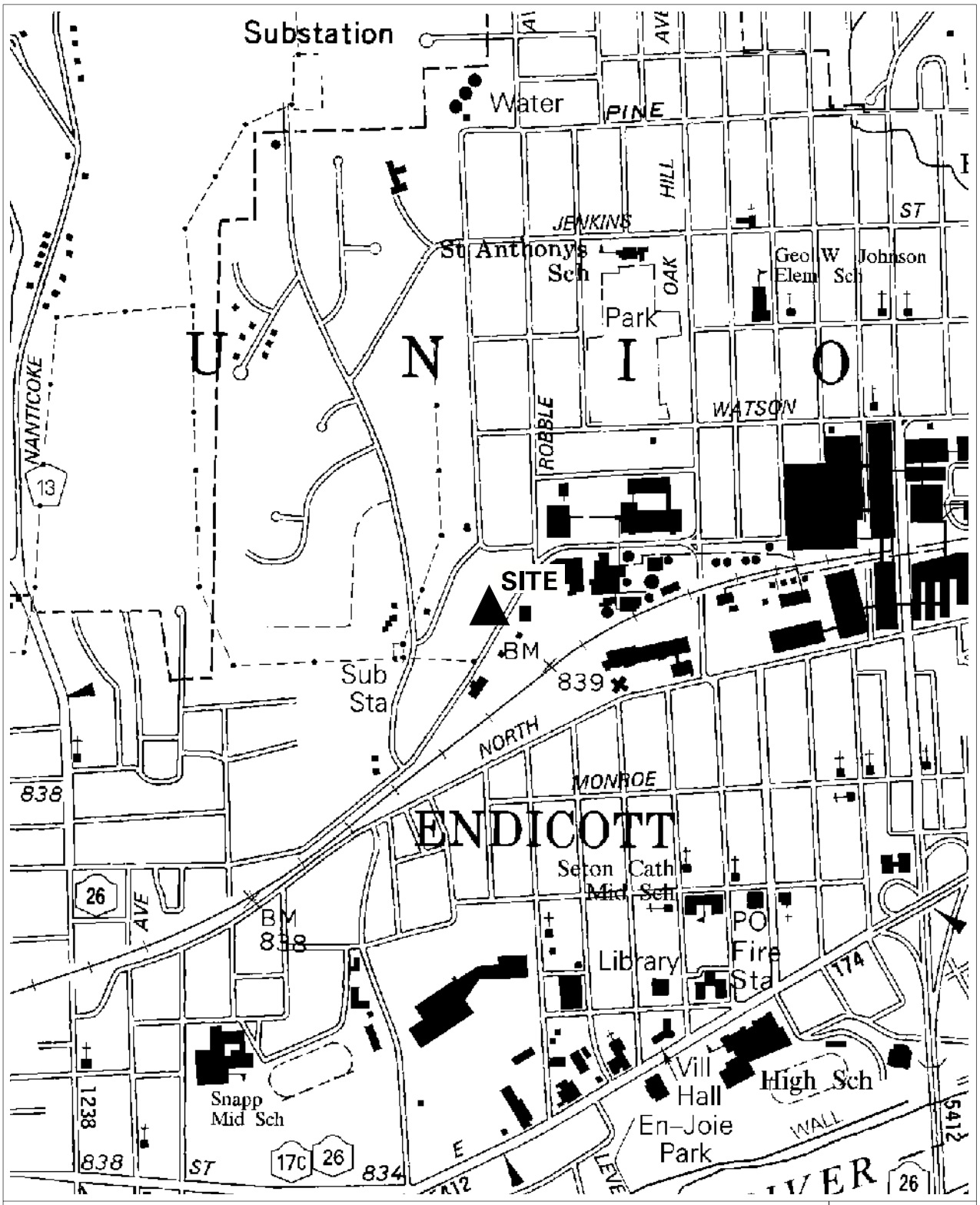
Site Health Assessment

People are not expected to come into direct contact with contaminants in the soil because the majority of the contamination has either been remediated or removed. People may come into direct contact with contaminants in groundwater if they dig below the surface. People are not drinking contaminated groundwater associated with the site because the area is served by a public water supply that obtains its water from a different source not affected by this contamination. Volatile organic compounds in the groundwater may move into the on-site soil vapor (air spaces within the soil), which in turn may move into any future buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor

intrusion. The potential for soil vapor intrusion to occur will be evaluated for any future on-site buildings. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

For more Information: E-mail Us

Refine This Search



Site Location Map

704018 Endicott-Johnson, Inc.

Map source: NYSDOT 1:24,000-scale planimetric quadrangles

N

0 250 500 750 1000

FEET

Scale 1:12,000

April 1, 2002

County: Broome

Site Name: **Endicott-Johnson, Inc.** **Site Code:** **704018**
Class Code: **4** Region: **7** County: **Broome** EPA Id:
Address: **Franklin Street / Endicott, NY 13760**
Latitude: **42° 6' 21"** Longitude: **76° 3' 19"**
Site Type: **Dump** Estimated Size: **1 Acres**

Site Owner / Operator Information:
Current Owner(s) Name: **Endicott-Johnson, Inc.**
Current Owner(s) Address: **1100 East Main Street / Endicott, NY 13760**
Owner(s) during disposal: **Endicott-Johnson, Inc.**
Operator(s) during disposal: **Endicott-Johnson, Inc.**
Stated Operator(s) Address: **1100 East Main Street / Endicott, NY 13760**
Hazardous Waste Disposal Period: **From: 1918 To: 1983**

Site Description:
The Endicott-Johnson property is currently a vacant lot which was the original site of a small manufacturing plant for the Endicott-Johnson Shoe Manufacturing Company. There were two buildings on the property which were used for manufacturing shoe "cements" (cements are the glues used to hold shoes together). There were twelve underground tanks on the property that were used for storing solvents and raw materials used in making the shoe cements. In 1983 the tanks were excavated and the following year the two buildings were demolished. The tanks were removed by CECOS International and soil sampling was done at that time. Four groundwater monitoring wells were installed on the property in 1983 and were sampled in 1984. Analysis of the samples has confirmed low level contamination by several different constituents (listed below). Most of the contaminants that were found are approximately 8-12 feet below the surface. A Consent Order (CO) was finalized in September of 1986. The CO required the responsible party to implement a Remedial Investigation/Feasibility Study (RI/FS) at the site. The results of the RI/FS confirmed the presence of contamination in both soil and groundwater. The RI/FS report was approved by the DEC on October 20, 1989. The Record of Decision (ROD) was signed on November 1, 1990. The remedial measure selected includes vacuum extraction of contaminated soil, and groundwater pumping and treating (air stripping). A CO for design and construction was signed on May 14, 1991. Subsequent testing of the groundwater revealed that contamination by non-halogenated solvents had fallen below detection limits. Consequently, it was decided that groundwater pumping and treating would no longer be necessary, unless the contamination returned. A vapor extraction system (VES) was installed in 1993 and was operated until 1997. As of 2002, groundwater monitoring continues to show that there is no longer any toluene contamination present. Confirmatory soil sampling done to close down the VES found one soil "Hot Spot" left on site. This "Hot Spot" was removed in October 2002 and clean fill brought to the site..

Confirmed Hazardous Waste Disposal:	Quantity:
Monochloroethane	unknown
Dichloroethane	unknown
1,1,1-Trichloroethane (TCA)	unknown
Benzene	unknown
Toluene	unknown
Acetone	unknown
2-Butanone (a.k.a. Methyl-Ethyl-Ketone; MEK)	unknown
Ethyl acetate	unknown

Analytical Data Available for: **Groundwater Soil**
Applicable Standards Exceeded in: **Groundwater**
Geotechnical Information:
Soil/Rock Type: **Glacial till.**
Depth to Groundwater: **Range: 10 to 15 feet.**

Legal Action: Type: **State Consent Order** Status: **Order Signed**
Remedial Action: **Complete** Nature of action: **Vacuum extraction + groundwater pump & treat.**

Assessment of Environmental Problems:
Contamination of soil and groundwater had been confirmed. Groundwater contamination was eliminated by E-J's pump and treat system. A vapor extraction system was installed to clean up soil contamination. In 2002 a remaining "hot spot" was eliminated via a soil removal activity.

Assessment of Health Problems:
Groundwater and subsurface soils at this site were contaminated with volatile organic compounds. The area is served by a municipal water supply. The site is fenced. Remedial efforts at this site have effectively mitigated the potential for on-site exposures to contaminants.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Endicott Area-Wide Investigation
Site Code: 704038
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 7
Address: Endicott Area-Wide Investigation
City: Endicott Zip: 13760-
County: Broome
Latitude: 42.1274687
Longitude: -76.049682008
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Site Document Repository

Name: GEORGE F. JOHNSON MEMORIAL LIBRARY
Address: 1001 PARK STREET
ENDICOTT,NY 13760

Site Description

In 1979, IBM in Endicott reported a spill of 4,100 gallons of TCA. The first comprehensive hydrogeologic report prepared by IBM occurred in 1980 and indicated a much larger solvent plume was present (TCE, PCE, DCA, DCE, methylene chloride, vinyl chloride, and Freon). Groundwater remediation (pump and treat) and monitoring began in 1979-1980 and has been continuing ever since. Groundwater contamination from the former IBM facility has resulted in detectable levels of contaminants in indoor air in structures, including off-site locations in the

Village of Endicott and Town of Union. TCE and PCE are the primary contaminants of concern with respect to indoor air. See site #704014 for more information. In 2003, the NYSDEC determined that it was necessary to do further investigation in Endicott beyond the solvent plume area that IBM claimed responsibility for. This site (Endicott Area Wide Study) encompasses most of the town of Union (about 20 square miles) which includes the Village of Endicott. A standby consultant was tasked by the NYSDEC to perform a Phase 1 records search and a Preliminary Site Investigation in Endicott to identify additional sources of groundwater, soil gas, and indoor air pollution. The consultant was also tasked with indoor air sampling and mitigating structures with soil vapor intrusion issues as necessary. Indoor air testing was completed in 74 structures during the heating seasons of 2004 and 2005. The DEC's consultant completed the Phase 1 work, combining several databases from Broome County, interviewing local officials, and using Sanborn maps to identify properties that may have contributed to solvent contamination in Endicott. Preliminary Site Assessment work plans were developed for two areas (South Central Endicott and East Endicott) and field work has been completed in one area (South Central Endicott.) The consultant's contract expired and the DEC hired a second contractor to pick up where the first left off. Site Assessment work plans for all seven areas were developed and implemented. All of the field work and reports are complete and in the local document repository. Indoor air testing has been performed every heating season since the start of the project through 2009. Some homes continue to be monitored on a periodic basis. Several homes have been mitigated as a result of the indoor air sampling effort. The investigation is completed and no further action is anticipated at this time. If continued monitoring indicates a vapor intrusion issue, mitigation systems can be installed as needed.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

Site Environmental Assessment

Groundwater contamination from various sources has resulted in detectable levels of contaminants in indoor air in a few structuresin the Village of Endicott and Town of Union. TCE and PCE are the primary contaminants of concern with respect to indoor air. Properties are being monitored on a periodic basis and will be mitigated as necessary.

---

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 79 Rows: 1 to 50

Export XLS | Export CSV | First 50 | Previous 50 | Next 50 | Last 50

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	8001317	12/12/1980	ENDICOTT	Broome	ENDICOTT	NORTH ST.
2.	8601740	06/12/1986	Spill Number 8601740	Broome	ENDICOTT	NORTH STREET
3.	8602991	07/30/1986	Spill Number 8602991	Broome	ENDICOTT	NORTH ST.
4.	8603612	09/02/1986	IBM	Broome	ENDICOTT	1701 NORTH ST.
5.	8606259	01/05/1987	IBM ENDICOTT	Broome	ENDICOTT	NORTH STREET
6.	8700973	05/04/1987	END FORGING, NORTH STREET	Broome	ENDICOTT	NORTH STREET
7.	8809619	03/14/1989	UNION FORGING	Broome	ENDICOTT	500 NORTH STREET
8.	8902293	06/05/1989	IBM ENDICOTT	Broome	ENDICOTT	1701 NORTH ST.
9.	8902978	06/22/1989	IBM - CHLORINE GAS	Broome	ENDICOTT	1701 NORTH ST.
10.	8905064	08/21/1989	IBM - BUILDING 18	Broome	ENDICOTT	1701 NORTH ST.
11.	8911282	02/27/1990	SPEEDYTUNE	Broome	ENDICOTT	NANTICOKE AVE.& NORTH ST.
12.	9010209	09/28/1990	C&F AUTO	Broome	ENDICOTT	305 NORTH ST.
13.	9007132	09/28/1990	IBM ENDICOTT	Broome	ENDICOTT	1701 NORTH ST. TANK #62
14.	9008830	11/12/1990	IBM - ENDICOTT	Broome	ENDICOTT	NORTH ST.- BULD. # 39
15.	9008927	11/14/1990	IBM - BUILD #39	Broome	ENDICOTT	1701 NORTH ST. BUILD #39
16.	9013134	03/25/1991	IBM - ENDICOTT	Broome	ENDICOTT	1701 NORTH ST.
17.	9100812	04/19/1991	NEWELL'S SUNOCO	Broome	ENDICOTT	906 - 908 NORTH ST.
18.	9101758	05/14/1991	IBM ENDICOTT	Broome	ENDICOTT	1701 NORTH ST. BLDG. 39
19.	9107503	10/14/1991	IBM - BLDG. 18	Broome	ENDICOTT	1701 NORTH ST.
20.	9107662	10/17/1991	IBM ENDICOTT	Broome	ENDICOTT	NORTH STREET
21.	9107898	10/24/1991	IBM - BUILDING 39	Broome	ENDICOTT	BLDG. 39 NORTH ST.
22.	9108218	10/31/1991	IBM - ENDICOTT	Broome	ENDICOTT	IBM - 1701 NORTH ST.

23.	9201211	04/30/1992	TCE NANTICOKE & NORTH ST.	Broome	ENDICOTT	NANTICOKE & NORTH STS.
24.	9207527	09/29/1992	UNION FORGING	Broome	ENDICOTT	UNION FORGING - NORTH ST.
25.	9301032	04/21/1993	ENDICOTT JOHNSON	Broome	ENDICOTT	1001 NORTH ST
26.	9311981	01/10/1994	IBM- ENDICOTT	Broome	ENDICOTT	1701 NORTH ST.
27.	9312306	01/19/1994	IBM- FREON #22	Broome	ENDICOTT	1701 NORTH ST.
28.	9313796	02/22/1994	306 NORTH ST.	Broome	ENDICOTT	306 NORTH ST.
29.	9315266	03/27/1994	306 NORTH ST.	Broome	ENDICOTT	306 NORTH ST.
30.	9401776	05/05/1994	IBM	Broome	ENDICOTT	NORTH ST.
31.	9407395	09/01/1994	IBM ENDICOTT	Broome	ENDICOTT	1701 NORTH ST.
32.	9501385	05/03/1995	CLOSEDOWN - UNION FORGING	Broome	ENDICOTT	500 NORTH ST.
33.	9504863	07/21/1995	IBM - ENDICOTT	Broome	ENDICOTT	1701 NORTH ST.
34.	9512599	01/10/1996	IBM	Broome	ENDICOTT	1701 NORTH STREET
35.	9604088	06/25/1996	IBM CORPORATION	Broome	ENDICOTT	1701 NORTH STREET
36.	9705511	08/05/1997	NORTH ST CAR WASH	Broome	ENDICOTT	NORTH ST
37.	9710895	12/27/1997	IBM ENDICOTT	Broome	ENDICOTT	1701 NORTH STREET
38.	9711287	01/08/1998	IBM CORPORATION	Broome	ENDICOTT	1701 NORTH STREET
39.	9805970	08/13/1998	IBM CORPORATION	Broome	ENDICOTT	1701 NORTH STREET
40.	9865075	12/07/1998	GAULT CHEVROLET	Broome	ENDICOTT	2507 NORTH STREET
41.	0100228	04/06/2001	ALL ABOUT HAIR	Broome	ENDICOTT	1100 NORTH ST
42.	0110491	02/01/2002	IBM B-57	Broome	ENDICOTT	1701 NORTH STREET
43.	0111853	03/15/2002	IBM	Broome	ENDICOTT	1701 NORTH STREET
44.	0207889	10/30/2002	IBM	Broome	ENDICOTT	1701 NORTH ST
45.	0210784	01/28/2003	WASTE TREATMENT PLANT	Broome	ENDICOTT	1701 NORTH STREET
46.	0211358	02/13/2003	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1701 NORTH STREET
47.	0303154	06/25/2003	EDNDICOTT INTERCONNECT	Broome	ENDICOTT	B-57/1701 NORTH ST
48.	0303380	06/30/2003	IBM	Broome	ENDICOTT	NORTH ST
49.	0305088	08/13/2003	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1701 NORTH STREET
50.	0365048	08/29/2003	ENDICOTT FORGING	Broome	ENDICOTT	

1901 NORTH
STREET

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 79 Rows: 51 to 79

Export XLS | Export CSV | First 50 | Previous 50 | Next 50 | Last 50

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
51.	0310190	12/02/2003	COMPANY	Broome	ENDICOTT	BUILD. 46 1701 NORTH STR
52.	0312029	01/27/2004	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1701 NORTH STREET
53.	0400713	04/21/2004	SHAPIROS	Broome	ENDICOTT	800 NORTH STREET
54.	0650359	08/13/2004	1800 NORTH STREET	Broome	ENDICOTT	1800 NORTH STREET
55.	0405904	08/30/2004	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1701 NORTH ST.
56.	0411510	01/26/2005	CLOSED GAS STATION	Broome	ENDICOTT	100 NORTH MCKINLEY AVE
57.	0550396	06/03/2005	AREA WIDE STUDY - BORING	Broome	ENDICOTT	NORTH STREET & VESTAL ROAD
58.	0550397	06/03/2005	AREA WIDE STUDY - BORING	Broome	ENDICOTT	NORTH STREET & LODER AVE.
59.	0505498	08/04/2005	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1701 NORTH ST.
60.	0510232	11/29/2005	ENDICOTT BLDG 21	Broome	ENDICOTT	1701 NORTH STREET
61.	0511528	01/05/2006	ENDICOTT BLDG 45	Broome	ENDICOTT	1701 NORTH STREET
62.	0512038	01/19/2006	HURON CAMPUS	Broome	ENDICOTT	1701 NORTH STREET
63.	0512303	01/24/2006	EIT - BUILDING 53	Broome	ENDICOTT	1701 NORTH STREET
64.	0650072	04/12/2006	1 NORTH PAGE AVENUE	Broome	ENDICOTT	1 NORTH PAGE AVENUE
65.	0613640	03/21/2007	BUILDING 53-1	Broome	ENDICOTT	1701 NORTH STREET
66.	0902845	06/10/2009	SIGNORELLI GARAGE	Broome	ENDICOTT	525 NORTH STREET
67.	0904995	06/10/2009	KOPY PROPERTY	Broome	ENDICOTT	2213 NORTH STREET
68.	1012567	03/17/2011	PARKING LOT	Broome	ENDICOTT	NORTH ST AND HAYES AVE

69.	1104907	07/29/2011	HURON INC	Broome	ENDICOTT	1701 NORTH ST
70.	1107132	09/07/2011	REPAIR GARAGE	Broome	ENDICOTT	525 NORTH ST
71.	1212687	11/27/2012	HURON PARKING LOT	Broome	ENDICOTT	NORTH ST - BUILDING 14 & 18
72.	1311103	02/25/2014	MANLEY'S MIGHTY MART # 23	Broome	ENDICOTT	906 NORTH ST
73.	1402524	06/09/2014	HURON -BUILDING 47 (IIII)	Broome	ENDICOTT	MCKINLEY AVE/NORTH ST
74.	1411234	02/26/2015	HURON CAMPUS-NEAR BUILD #39	Broome	ENDICOTT	NORTH STREET
75.	1500942	04/27/2015	SANITARY SEWER MANHOLE	Broome	ENDICOTT	1701 NORTH ST
76.	1503296	06/24/2015	BAE SYSTEMS	Broome	ENDICOTT	1301 NORTH ST
77.	1505065	08/11/2015	I3 ELECTRONICS	Broome	ENDICOTT	1701 NORTH ST
78.	1509645	12/23/2015	COMMERCIAL	Broome	ENDICOTT	2107 NORTH ST
79.	1607786	11/09/2016	INDUSTRIAL	Broome	ENDICOTT	1701 NORTH ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 2 Rows: 1 to 2

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	0400595	04/19/2004	ON STREET	Broome	ENDICOTT	ROBBLE AVE EXT
2.	1603607	07/13/2016	HURON	Broome	ENDICOTT	OAK HILL AND ROBBLE ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 15 Rows: 1 to 15

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	8604776	10/27/1986	ENDICOTT	Broome	ENDICOTT	OAK HILL & CLARK STS.
2.	8904091	07/25/1989	IBM - COOPER CHLORIDE	Broome	ENDICOTT	CLARK ST.
3.	9005091	08/07/1990	BASWS TRANSPORTAION	Broome	ENDICOTT	CLARKE ST. & ROBLE AVE.
4.	9502998	06/09/1995	DEVECCIO TRUCKING	Broome	ENDICOTT	CLARK ST.
5.	9702335	05/23/1997	WASTE TREATMENT PLANT	Broome	ENDICOTT	CLARK ST
6.	9800968	04/22/1998	IBM ENDICOTT	Broome	ENDICOTT	CLARK AND ROBLE ST
7.	0750563	07/16/2007	WEITZSMAN & SON SCRAP METAL	Broome	ENDICOTT	CLARKE ST
8.	0706385	09/07/2007	BUILD ING 21-2	Broome	ENDICOTT	1093 CLARKE STREET
9.	0809360	11/18/2008	PARKING LOT - OFF CLARK STREET	Broome	ENDICOTT	CLARK STREET
10.	1100777	04/22/2011	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1093 CLARK ST
11.	1103183	06/21/2011	WASTEWATER TREATMENT PLANT	Broome	ENDICOTT	1093 CLARK STREET
12.	1200307	04/11/2012	HURON CAMPUS	Broome	ENDICOTT	CLARK ST & HILL AVE
13.	1215896	02/26/2013	EIT WASTE WATER TREATMENT PLANT	Broome	ENDICOTT	CLARK STREET
14.	1216274	03/11/2013	ENDICOTT INTERCONNECT	Broome	ENDICOTT	1093 CLARK ST
15.	1510680	02/03/2016	HURON CAMPUS	Broome	ENDICOTT	OAK HILL & CLARK ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 2 Rows: 1 to 2

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	8910134	01/23/1990	PICCIANO CONSTRUCTION	Broome	ENDICOTT	EAST FRANKLIN ST.
2.	1306154	09/11/2013	ODORS - FRANKLIN STREET	Broome	ENDICOTT	FRANKLIN STREET

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 7 Rows: 1 to 7

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	8604776	10/27/1986	ENDICOTT	Broome	ENDICOTT	OAK HILL & CLARK STS.
2.	9305985	08/12/1993	SEWAGE BREAK	Broome	ENDICOTT	OAK HILL AVE.
3.	9401738	05/02/1994	310-312 OAK HILL AVE.	Broome	ENDICOTT	310-312 OAK HILL AVE.
4.	9865105	02/05/1999	OAK HILL AVE & UTICA ST	Broome	ENDICOTT	OAK HILL AVE. & UTICA ST.
5.	0751032	10/24/2007	ZUNIC RESIDENCE	Broome	ENDICOTT	616 OAK HILL AVE
6.	1510680	02/03/2016	HURON CAMPUS	Broome	ENDICOTT	OAK HILL & CLARK ST
7.	1603607	07/13/2016	HURON	Broome	ENDICOTT	OAK HILL AND ROBBLE ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 4 Rows: 1 to 4

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	9113107	03/26/1991	ENDWELL RADIATOR	Broome	UNION (T)	3120 WATSON BLVD
2.	9506355	08/23/1995	TC AUTO	Broome	UNION (T)	3009 WATSON BLVD
3.	9865017	08/21/1998	GOLF COURSE	Broome	UNION (T)	WATSON BLVD.
4.	1010545	01/11/2011	MANLEY'S MIGHTY MART 18	Broome	UNION	3117 WATSON BLVD

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 5 Rows: 1 to 5

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	0110520	02/02/2002	Spill Number 0110520	Broome	ENDICOTT	1400 WATSON BLVD
2.	0707646	10/11/2007	POLE#54	Broome	ENDICOTT	2909 WATSON BLVD
3.	1107329	09/10/2011	2507 WATSON BLVD	Broome	ENDICOTT	2507 WATSON BLVD
4.	1311548	03/11/2014	FORMER GAS STATION	Broome	ENDICOTT	3138 WATSON BLVD
5.	1511005	02/16/2016	ROADWAY-HURON COMPLEX	Broome	ENDICOTT	OFF WATSON BLVD AND HAYES AVE

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Spill Incidents Database Search Results

Record Count: 1 Rows: 1 to 1

Export XLS Export CSV

	Spill Number	Date Spill Reported	Spill Name	County	City/Town	Address
1.	1301062	05/01/2013	VIVONA PROPERTY	Broome	ENDICOTT	2101 WITHERILL ST

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-072710
Status: Unregulated/Closed
Expiration Date: 03/24/1992
Site Type: PBS
Site Name: PARLOR CITY CONTRACTING CO. INC.
Address: 303 CORNELL AVE. P.O. BOX 30
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: PARLOR CITY CONTRACTING CO. INC.
303 CORNELL AVE. P.O. BOX 30 . ENDICOTT , NY. 13760
Mail Contact: PARLOR CITY CONTRACTING CO. INC.
303 CORNELL AVE. P.O. BOX 30 . ENDICOTT , NY. 13760

Tank Information

6 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	1000
002	Underground including vaulted with no access for inspection	Closed - Removed	1000
003	Underground including vaulted with no access for inspection	Closed - Removed	1000
004	Underground including vaulted with no access for inspection	Closed - Removed	1000
005	Underground including vaulted with no access for inspection	Closed - Removed	1000
006	Underground including vaulted with no access for inspection	Closed - Removed	1000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-000363
Status: Active
Expiration Date: 03/28/2018
Site Type: CBS
Site Name: HURON REAL ESTATE ASSOCIATES, INC.
Address: 1701 NORTH ST.
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: HURON REAL ESTATE ASSOCIATES, LLC.
1701 NORTH ST. . ENDICOTT, NY. 13760

Tank Information

Tank Information withheld (not releaseable under Freedom of Information Law) in accordance with Public Officers Law Sections 86.5, 87.2(f), 89.5(a)(1)(1-a)

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-1160
Status: Active
Expiration Date: 03/31/2017
Site Type: MOSF
Site Name: HURON REAL ESTATE ASSOCIATES LLC
Address: 1701 NORTH STREET
Locality: ENDICOTT
State: NY
Zipcode: 13760-5553
County: Broome

Owner(s) Information

Facility Owner: HURON REAL ESTATE ASSOCIATES LLC
1701 NORTH STREET . ENDICOTT, NY. 13760-5553

Tank Information

Tank Information withheld (not releaseable under Freedom of Information Law) in accordance with Public Officers Law Sections 86.5, 87.2(f), 89.5(a)(1)(1-a)

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-000091
Status: Active
Expiration Date: 11/01/2017
Site Type: CBS
Site Name: I3 ELECTRONICS
Address: 1701 NORTH ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: HURON REAL ESTATE ASSOCIATES LLC
1701 NORTH ST . ENDICOTT, NY. 13760

Tank Information

Tank Information withheld (not releaseable under Freedom of Information Law) in accordance with Public Officers Law Sections 86.5, 87.2(f), 89.5(a)(1)(1-a)

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-600115
Status: Active
Expiration Date: 02/19/2017
Site Type: PBS
Site Name: ANDERSON EQUIPMENT CO (NY) INC
Address: 720 EAST FRANKLIN ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: ANDERSON EQUIPMENT CO (NY) INC
2140 MILITARY RD . TONAWANDA, NY. 14150
Mail Contact: ANDERSON EQUIPMENT CO (NY) INC
100 WASHINGTON PIKE . BRIDGEVILLE, PA. 15017

Tank Information

6 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
250	Aboveground on saddles, legs, stilts, rack or cradle	In Service	8000
252	Aboveground on saddles, legs, stilts, rack or cradle	In Service	750
254A	Aboveground on saddles, legs, stilts, rack or cradle	In Service	250
254B	Aboveground on saddles, legs, stilts, rack or cradle	In Service	250
254C	Aboveground on saddles, legs, stilts, rack or cradle	In Service	250
254D	Aboveground on saddles, legs, stilts, rack or cradle	In Service	250

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-601433
Status: Active
Expiration Date: 04/23/2017
Site Type: PBS
Site Name: BAE SYSTEMS CONTROLS INC
Address: 1098 CLARK ST BUILDING 57
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: BAE SYSTEMS CONTROLS INC
1098 CLARK ST . ENDICOTT, NY. 13760
Mail Contact: BAE SYSTEMS CONTROLS INC
1098 CLARK ST . ENDICOTT, NY. 13760

Tank Information

4 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Aboveground - in contact with impervious barrier	In Service	870
002	Aboveground - in contact with impervious barrier	In Service	870
003	Aboveground - in contact with impervious barrier	In Service	870
004	Aboveground - in contact with impervious barrier	In Service	870

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-392316
Status: Active
Expiration Date: 12/26/2021
Site Type: PBS
Site Name: APPLE FOOD & GROCERY #6
Address: 100 NORTH MCKINLEY AVE
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: HARJIT KAUR
3109 BELMONT AVE . VESTAL, NY. 13850
Mail Contact: APPLE FOOD & GROCERY
3109 BELMONT AVE . VESTAL, NY. 13850

Tank Information

12 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	3000
002	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	3000
003	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	3000
004	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	3000
005	Underground including vaulted with no access for inspection	Closed - Removed	1000
006	Underground including vaulted with no access for inspection	Closed - Removed	6000
007	Underground including vaulted with no access for inspection	Closed - Removed	6000

008	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	275
009	Underground including vaulted with no access for inspection	In Service	12000
010A	Underground including vaulted with no access for inspection	In Service	4000
010B	Underground including vaulted with no access for inspection	In Service	4000
010C	Underground including vaulted with no access for inspection	In Service	4000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-430471
Status: Unregulated/Closed
Expiration Date: 02/03/1998
Site Type: PBS
Site Name: FIRST BAPTIST CHURCH OF ENDICOTT
Address: 1406 MONROE ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: FIRST BAPTIST CHURCH OF ENDICOTT
1406 MONROE ST. . ENDICOTT , NY. 13760
Mail Contact: FIRST BAPTIST CHURCH OF ENDICOTT
1406 MONROE ST. . ENDICOTT , NY. 13760

Tank Information

1 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	6600

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-415073
Status: Active
Expiration Date: 08/26/2017
Site Type: PBS
Site Name: VERIZON NEW YORK INC (NY73101)
Address: 101 GARFIELD AVE
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Tank Information

Tank Information withheld (not releaseable under Freedom of Information Law) in accordance with Public Officers Law Sections 86.5, 87.2(f), 89.5(a)(1)(1-a)

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-182346
Status: Unregulated/Closed
Expiration Date: 10/06/1992
Site Type: PBS
Site Name: NEWELL'S AUTOMOTIVE & TOWING SERVICE
Address: 906-908 NORTH ST.
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: DAVID NEWELL
573 RHODES RD. . APALACHIN , NY. 13732
Mail Contact: NEWELLS AUTOMOTIVE & TOWING SERVICE
906-908 NORTH ST. . ENDICOTT , NY. 13760

Tank Information

6 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	4000
001FO	Underground including vaulted with no access for inspection	Closed - Removed	550
002	Underground including vaulted with no access for inspection	Closed - Removed	4000
002WO	Underground including vaulted with no access for inspection	Closed - Removed	550
003	Underground including vaulted with no access for inspection	Closed - Removed	4000
004	Underground including vaulted with no access for inspection	Closed - Removed	4000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-601094
Status: Active
Expiration Date: 05/23/2017
Site Type: PBS
Site Name: MIRABITO #90
Address: 906 NORTH ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: MANLEYS MIGHTY MART LLC
1249 FRONT ST . BINGHAMTON, NY. 13905
Mail Contact: MIRABITO HOLDINGS INC
49 COURT ST . BINGHAMTON, NY. 13902

Tank Information

2 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001A	Underground including vaulted with no access for inspection	In Service	10000
001B	Underground including vaulted with no access for inspection	In Service	5000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-298964
Status: Unregulated/Closed
Expiration Date: 06/30/1997
Site Type: PBS
Site Name: SALES BLDG.
Address: 1079 NORTH ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: ENDICOTT JOHNSON CORP.
1100 E. MAIN ST. . ENDICOTT , NY. 13760
Mail Contact: ENDICOTT JOHNSON CORP.
1100 E. MAIN ST. . ENDICOTT , NY. 13760

Tank Information

1 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
A01	Underground including vaulted with no access for inspection	Closed - Removed	15000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-601107
Status: Active
Expiration Date: 07/21/2021
Site Type: PBS
Site Name: MR TIRE 1320
Address: 807 NORTH ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: M KOST
2 GRISWOLD ST . BINGHAMTON, NY. 13904
Mail Contact: MONRO MUFFLER
200 HOLLEDER PKWY . ROCHESTER, NY. 14615

Tank Information

1 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Aboveground on saddles, legs, stilts, rack or cradle	In Service	500

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-601360
Status: Active
Expiration Date: 12/29/2021
Site Type: PBS
Site Name: SOUTHERN TIER STAGES INC
Address: 500 NORTH ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: 500 NORTH STREET LLC
500 NORTH ST . ENDICOTT, NY. 13760
Mail Contact: SOUTHERN TIER STAGES INC
500 NORTH ST . ENDICOTT, NY. 13760

Tank Information

3 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	In Service	12000
15W40	Aboveground on saddles, legs, stilts, rack or cradle	In Service	275
WASTE	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	275

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-072702
Status: Unregulated/Closed
Expiration Date: 03/24/1997
Site Type: PBS
Site Name: UNION FORGING CO.
Address: 500 NORTH ST.
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: UIS INC.
600 FIFTH AVE. . NEW YORK , NY. 10020
Mail Contact: UNION FORGING CO.
500 NORTH ST. . ENDICOTT , NY. 13760

Tank Information

5 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
002	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	12000
004	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	17500
005	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	21175
006	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	10000
007	Aboveground on saddles, legs, stilts, rack or cradle	Closed - Removed	10000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-180947
Status: Unregulated/Closed
Expiration Date: 02/15/2014
Site Type: PBS
Site Name: SIGNORELLI GARAGE
Address: 525 NORTH ST.
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: ANTHONY SIGNORELLI
519 AIREY AVE. . ENDICOTT, NY. 13760
Mail Contact: ANTHONY SIGNORELLI
519 AIREY AVE. . ENDICOTT, NY. 13760

Tank Information

8 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	3000
002	Underground including vaulted with no access for inspection	Closed - Removed	3000
003	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	4000
004	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	4000
005	Aboveground on saddles, legs, stilts, rack or cradle	Tank Converted to Non-Regulated use	500
006	Underground including vaulted with no access for inspection	Closed - Removed	3000
007	Underground including vaulted with no access for inspection	Closed - Removed	4000

008	Underground including vaulted with no access for inspection	Closed - Removed	4000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-186511
Status: Unregulated/Closed
Expiration Date: 06/18/1997
Site Type: PBS
Site Name: PETR-ALL CORP. #320
Address: 306 NORTH ST.
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: PETR-ALL CORP.
6567 KINNE RD. . DEWITT, NY. 13214
Mail Contact: PETR-ALL CORP.
6567 KINNE RD. . DEWITT, NY. 13214

Tank Information

5 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed - Removed	6000
002	Underground including vaulted with no access for inspection	Closed - Removed	8000
003	Underground including vaulted with no access for inspection	Closed - Removed	2000
004	Underground including vaulted with no access for inspection	Closed - Removed	2000
005	Underground including vaulted with no access for inspection	Closed - Removed	2000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-015385
Status: Active
Expiration Date: 09/02/2021
Site Type: PBS
Site Name: POLICE / COMMUNICATIONS DEPT
Address: 1101 PARK ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: VILLAGE OF ENDICOTT
1009 EAST MAIN ST . ENDICOTT, NY. 13760
Mail Contact: VILLAGE OF ENDICOTT
1009 EAST MAIN ST . ENDICOTT, NY. 13760

Tank Information

2 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	5000
002	Underground including vaulted with no access for inspection	In Service	4000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-015407
Status: Active
Expiration Date: 09/02/2021
Site Type: PBS
Site Name: FIRE DEPT
Address: 1101 PARK ST
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: VILLAGE OF ENDICOTT
1009 EAST MAIN ST . ENDICOTT, NY. 13760
Mail Contact: VILLAGE OF ENDICOTT
1009 EAST MAIN ST . ENDICOTT, NY. 13760

Tank Information

2 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	2000
002	Underground including vaulted with no access for inspection	In Service	5000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-015393
Status: Unregulated/Closed
Expiration Date: 09/02/1991
Site Type: PBS
Site Name: FIRE DEPT VILLAGE OF ENDICOTT
Address: 224 MADISON AVE
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: VILLAGE OF ENDICOTT
MUNICIPAL BLDG 1009 E MAIN ST . ENDICOTT , NY. 13760
Mail Contact: VILLAGE OF ENDICOTT
MUNICIPAL BLDG 1009 E MAIN ST . ENDICOTT , NY. 13760

Tank Information

1 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Underground including vaulted with no access for inspection	Closed Prior to 03/1991	2000

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Bulk Storage Database Search Details

Facility Information

Site No.: 7-601352
Status: Active
Expiration Date: 06/03/2020
Site Type: PBS
Site Name: GOODYEAR 1124
Address: 300 HARRISON AVE
Locality: ENDICOTT
State: NY
Zipcode: 13760
County: Broome

Owner(s) Information

Facility Owner: M L GALESI REALTY LLC
PO BOX 609 . SPRING LAKE, NJ. 07762
Mail Contact: GOODYEAR 1124
300 HARRISON AVE . ENDICOTT, NY. 13760

Tank Information

2 Tanks Found

Tank No	Tank Location	Status	Capacity (Gal.)
001	Aboveground - in contact with impervious barrier	In Service	235
002	Aboveground - in contact with impervious barrier	In Service	250

Refine This Search

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Former IBM Endicott Facility
Site Code: 704014
Program: State Superfund Program
Classification: 02
EPA ID Number:

Location

DEC Region: 7
Address: 1701 North Street
City: Endicott Zip: 13760
County: Broome
Latitude: 42.09977079
Longitude: -76.06354422
Site Type:
Estimated Size: 135 Acres

Site Owner(s) and Operator(s)

Current Owner Name: Huron Real Estate Associates, LLC
Current Owner(s) Address: 1701 North Street
Endicott,NY, 13760
Owner(s) during disposal: IBM CORPORATION - ENDICOTT FACILITY
Current On-Site Operator: IBM Corporate Environmental Affairs
Stated Operator(s) Address: 8976 Wellington Road
Manassas,VA 20110

Site Document Repository

Name: NYSDEC
Address: 625 Broadway
Albany,NY 12233-7017
Name: George F. Johnson Memorial Library
Address: 1001 Park Street
Endicott,NY 13760
Name: NYSDEC - Region 7
Address: 615 Erie Blvd. West
Syracuse,NY 13204

Hazardous Waste Disposal Period

From: 1979 Spill **To:** 1979 Spill

Site Description

Location: The former IBM Endicott facility is located in the Village of Endicott and in the Town of Union in Broome County, New York. The 135-acre facility lies along and on either side of a railroad corridor in the village and in the town. The central portion of the facility is approximately at the intersection of McKinley Avenue and the railroad in the village. Portions of the facility extend westward to Robble Avenue, northward to Watson Boulevard, eastward to Harding Avenue, and southward to south of North Street. Site Features: The site includes numerous current and former manufacturing buildings, office buildings, and ancillary support facilities. Paved parking areas are generally located around the periphery of the site buildings. An east-west railroad corridor bisects the facility and several public and private roadways intersect or transect the facility. Commercial, industrial, and residential areas surround the facility on all sides. The former Endicott Forging facility, a State Superfund site, is adjacent to the southeast portion of the former IBM facility. The Susquehanna River is approximately one mile south of the facility. Brixius Creek, a small tributary to the Susquehanna, passes along the eastern edge of the facility. The facility is served by municipal water supply, sanitary sewers and storm sewers. A private well field also supplies production water for manufacturing purposes. Current Zoning and Land Use: The former IBM Endicott facility property is currently zoned Commercial Industrial. The facility is currently owned by Huron Real Estate Associates, LLC, a real estate leasing and property management company. Huron leases manufacturing and office space in the facility to a variety of tenants. Occupancy and use of the facility changes from time to time as tenant needs and availability of leasable space changes. Most of the facility footprint is currently occupied or available for occupancy. An exception is the group of buildings in the oldest portion of the facility (informally known as the Old Group buildings) located along the north side of North Street east of McKinley Avenue. Past Use of the Site: The site was first developed by the Erie-Lackawanna Railroad around 1850. Additional development occurred beginning in 1901 by predecessors to the Endicott-Johnson Corporation, and beginning in 1904 by predecessors to the IBM Corporation. The site has a history of manufacturing and research and development beginning in the early 1900s. Early industrial activity was associated primarily with shoe manufacturing by Endicott-Johnson and its predecessors in the western portion of the site. Associated on-site industries related to shoe manufacturing included leather tanning, box container manufacturing, chemical manufacturing, and an iron foundry. The railroad transported raw materials (including chemicals) to the site and finished products from the site. Solvents reportedly used by Endicott-Johnson as a part of its operations included carbon tetrachloride, trichloroethene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), methylene chloride, methyl ethyl ketone, toluene, xylene, and mixtures containing aromatics (gasoline, rubber solvent and mineral spirits). Endicott-Johnson ceased manufacturing operations in the village by about 1980. IBM and its predecessors also operated at the site beginning in the early 1900s in the Old Group buildings east of McKinley Avenue. IBM gradually expanded into areas previously occupied by Endicott-Johnson as the latter company reduced its manufacturing capacity. Mechanical business machines were manufactured by IBM and its predecessors until the 1950s. From the 1950s to the

early 1980s, the facility was engaged primarily in the manufacture of mid-range, mainframe computers. In the early 1980s, operations at the facility primarily shifted to the manufacture of components (circuit cards, circuit panels, and ceramic substrates) in support of other IBM electronics manufacturing activities. The primary solvents used by IBM as part of its mainframe computer and electronic component manufacturing operations included TCE, PCE, TCA, methylene chloride, and Freon 113. The site was sold to Huron Real Estate Associates, LLC in 2002. IBM has reduced its presence and manufacturing capacity at the site since that time. Operable Units: The former IBM Endicott site is divided into seven operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Boundaries of the operable units at the Endicott site are generally defined by the limits of hydraulic capture in the various components of the groundwater remediation program or by convenient geographical features. The various Operable Units at the former IBM Endicott facility are identified in the Consent Order and are described below. Operable Unit 5 (OU5) is the subject of this document. Records of Decision were issued previously for OUs 3, 4 and 6. Records of Decision will be issued for OUs 1, 2, and 7 in the future. A site location map is attached as Figure 1. An area designation map is attached as Figure 2. □ Operable Unit 1 (OU1), also known as the Railroad Corridor Source Area, is the on-site source area in the main plant area where the bulk of contaminant releases occurred. OU1 generally incorporates the central portion of the facility from the railroad corridor northward. □ Operable Unit 2 (OU2), also known as the North Street Area, is the on-site portion of the main plant area south of the railroad and generally north of North Street. For purposes of investigation and remediation, OU1 and OU2 are usually considered together because they are both on-site areas separated only by the railroad. □ Operable Unit 3 (OU3), also known as the Southern Area, is the southern portion of the groundwater plume associated with the OU1 and OU2 source areas. OU3 extends approximately from Monroe Street southward to the Susquehanna River, and from just west of McKinley Avenue to just east of Arthur Avenue. For purposes of investigation and remediation, OU3 is generally considered together with an area identified in the Consent Order as Off-Site Capture Zone A because the two areas are contiguous and together represent the off-site plume area south of the main plant area. Off-Site Capture Zone A is the northern portion of the off-site groundwater plume associated with the OU1 and OU2 on-site source areas. Off-Site Capture Zone A extends approximately from North Street southward to north of Broad Street, and from just west of Jefferson Avenue to just east of McKinley Avenue. See attached Figure 3. □ Operable Unit 4 (OU4), also known as the Ideal Cleaners Area, is the source area and groundwater plume associated with the former dry cleaning operation. Operable Unit 4 lies east of Off-Site Capture Zone A and extends southward from North Street to approximately Monroe Street. An area identified in the Consent Order as Off-Site Capture Zone B is part of OU4. Off-Site Capture Zone B is the plume area associated with the former Ideal Cleaners and extends from the source area to a line of extraction wells located along Monroe Street between Adams Avenue and the alley east of McKinley Avenue. □ Operable Unit 5 (OU5), also known as the Building 57 Area, is the source area and groundwater plume associated with Building 57/57A which is separate from and east of the main facility. OU5 includes Building

57/57A east of Hayes Avenue and north of the railroad tracks, as well as a former parking lot (known as Parking Lot 26) south of the railroad tracks. Operable Unit 6 (OU6) is the bedrock groundwater plume and includes all facility-related contamination in the bedrock aquifer. Operable Unit 7 (OU7), also known as the Northwestern Area, is the source area and groundwater plume associated with historic releases in this area. OU7 includes the portion of the former IBM facility northwest of the main facility and located west of Oak Hill Avenue and north of the railroad tracks. Site Geology and Hydrogeology: The geology of the site is characterized by a sequence of unconsolidated glacial and post-glacial sediments overlying a buried bedrock valley. Three separate water-bearing units are defined in the vicinity of the site: the Upper Aquifer, the Lower Aquifer, and the Bedrock Aquifer. The Upper Aquifer extends beneath the site and is the water-bearing unit most impacted by site-related contamination. Natural groundwater flow in all three units is to the south, ultimately discharging to the Susquehanna River. Groundwater withdrawals and injections for water supply or remediation purposes have altered the natural flow regime by creating artificial discharge and recharge points. Depth to groundwater in the vicinity of the site varies from about 10 to 40 feet below ground surface under pumping conditions.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
1,1-dichloroethane
tetrachloroethene (PCE)
vinyl chloride
xylene (mixed)
1,1-dichloroethene
benzene
dichloroethene (cis-1,2-)
1,1,1-trichloroethane
toluene
1,1,2-trichloro-1,2,2-triflouroethane
trichloroethene (TCE)

Site Environmental Assessment

Nature and Extent of Contamination Operable Unit 1 (Railroad Corridor Source Area), Soil: The primary contaminant of concern in OU1 soils is 1,1,1-trichloroethane (TCA). TCA was found at up to 48 parts per million (ppm) at depth (17 feet below ground surface) near the railroad tracks between Buildings 46 and 48. Trichloroethene (TCE) was detected at 14 ppm in the same location. Groundwater data suggests that inaccessible areas (i.e., beneath Building 47) may have isolated areas of soil contamination resulting from leaks from solvent/waste tanks and/or pipelines. Operable Unit 1 (Railroad Corridor Source Area), Groundwater: The primary contaminants of concern in OU1 groundwater are tetrachloroethene (PCE), TCE, TCA, Freon 113, and their respective breakdown products. Highest concentrations of all these are found in the immediate vicinity of the railroad.

Highest concentrations are as follows: PCE 12,000 parts per billion (ppb); TCE 1,600 ppb; cis-1,2-DCE (a breakdown product) 16,000 ppb; TCA 88,000 ppb; 1,1-DCA (a breakdown product) 21,000 ppb; Freon-113 4,300 ppb. Operable Unit 2 (North Street Area), Soil: The primary contaminant of concern in OU2 soils is TCA. TCA was found at up to 11,000 ppm at depth (17 feet below ground surface) in one localized area north of Building 18 in the vicinity of a former TCA underground storage tank that was removed in 1980. TCE, toluene, and Freon 113 are found in a few localized areas, but at much lower concentrations (less than 100 ppm). Groundwater data suggests that inaccessible areas (i.e., beneath Buildings 18 and 41) may have isolated areas of soil contamination resulting from leaks from solvent/waste tanks and/or pipelines. Operable Unit 2 (North Street Area), Groundwater: The primary contaminants of concern in OU2 groundwater are TCE, TCA, and their respective breakdown products. Highest concentrations are found between Buildings 18 and 41. Highest TCE concentration is 15,000 ppb. Highest TCA concentration is 4,200 ppb. Contaminant concentrations decline rapidly south of North Street. Operable Unit 3 (Southern Area) and Off-Site Capture Zone A, Soil: OU3 and Off-Site Capture Zone A are off-site areas. There is no site-related soil contamination in off-site areas. Operable Unit 3 (Southern Area) and Off-Site Capture Zone A, Soil Vapor: The primary contaminant of concern in OU3 and Off-Site Capture Zone A soil vapor is TCE. Concentrations range from 33,000 µg/m3 to non-detect. Concentrations are highest near the plant (opposite Building 41 along North Street) and decline with distance to the south. Most areas are less than 350 µg/m3. Operable Unit 3 (Southern Area) and Off-Site Capture Zone A, Groundwater: The primary contaminant of concern in OU3 and Off-Site Capture Zone A groundwater is TCE. Concentrations in most areas are below the groundwater standard of 5 ppb. A couple areas have concentrations of 20-30 ppb. In a localized area immediately south of North Street across from Building 18, several wells have TCE concentrations between 1,700 ppb and 13,000 ppb. Operable Unit 4 (Ideal Cleaners Area), Soil: Soil contamination in OU4 is not significant. The remedy for OU4 (in-situ thermal treatment) has effectively removed PCE-related contamination from soil. The highest post-treatment PCE concentration in soil was 0.125 ppm. Operable Unit 4 (Ideal Cleaners Area), Groundwater: The primary contaminant of concern in OU4 is cis-1,2-DCE, a breakdown product of PCE. PCE has essentially been eliminated from the plume following in-situ thermal treatment of the source zone. Breakdown products are also decreasing in area and concentration. A localized area immediately south of the source zone has residual cis-1,2-DCE concentrations greater than 50 ppb, with one monitoring well showing a concentration of 66 ppb. Operable Unit 5 (Building 57 Area), Soil: Soil excavation and in-situ thermal treatment IRMs have removed areas of significant soil contamination. The highest remaining contaminant concentrations are within the allowable limit for residential use: 11 ppm (TCA) and 7.7 ppm (TCE), both in the Parking Lot 26 area of OU5. In the Building 57/57A portion of OU5, all remaining soil contamination is below criteria for unrestricted use. Operable Unit 5 (Building 57 Area), Groundwater: The primary contaminant of concern remaining in OU5 groundwater is Freon 113. One on-site well within the Freon source area has concentrations up to 7,000 ppb and a nearby off-site well has concentrations up to 8,700 ppb. Two other wells have concentrations up to 450 ppb. Other wells are near or below the groundwater standard for Freon 113. Other site-related contaminants (TCE, TCA, and their respective breakdown products) range in concentration from non-

detect up to approximately 120 ppb. Operable Unit 6 (Bedrock Aquifer), Groundwater: The primary contaminants of concern in OU6 groundwater (the bedrock aquifer) are TCE and its breakdown products. TCE is found at concentrations up to 1000 ppb. Breakdown products (primarily cis-1,2-DCE) are found at concentrations up to 1900 ppb. Operable Unit 7 (Northwest Area), Soil: An area of soil contamination that pre-dated IBM□s acquisition of the property was removed by IBM upon its purchase of the property in 1984. Excavated soil was contaminated with PCE, TCE, TCA, toluene, and chromium associated with Endicott-Johnson manufacturing activities. Operable Unit 7 (Northwest Area), Groundwater: The primary contaminants of concern in OU7 groundwater are TCE, TCA, and their breakdown products. All are relatively small in area and low in concentration. TCE is found in two small, localized areas south of Clark Street at concentrations of 12 ppb and 23 ppb. Other contaminants are generally near the groundwater standard.

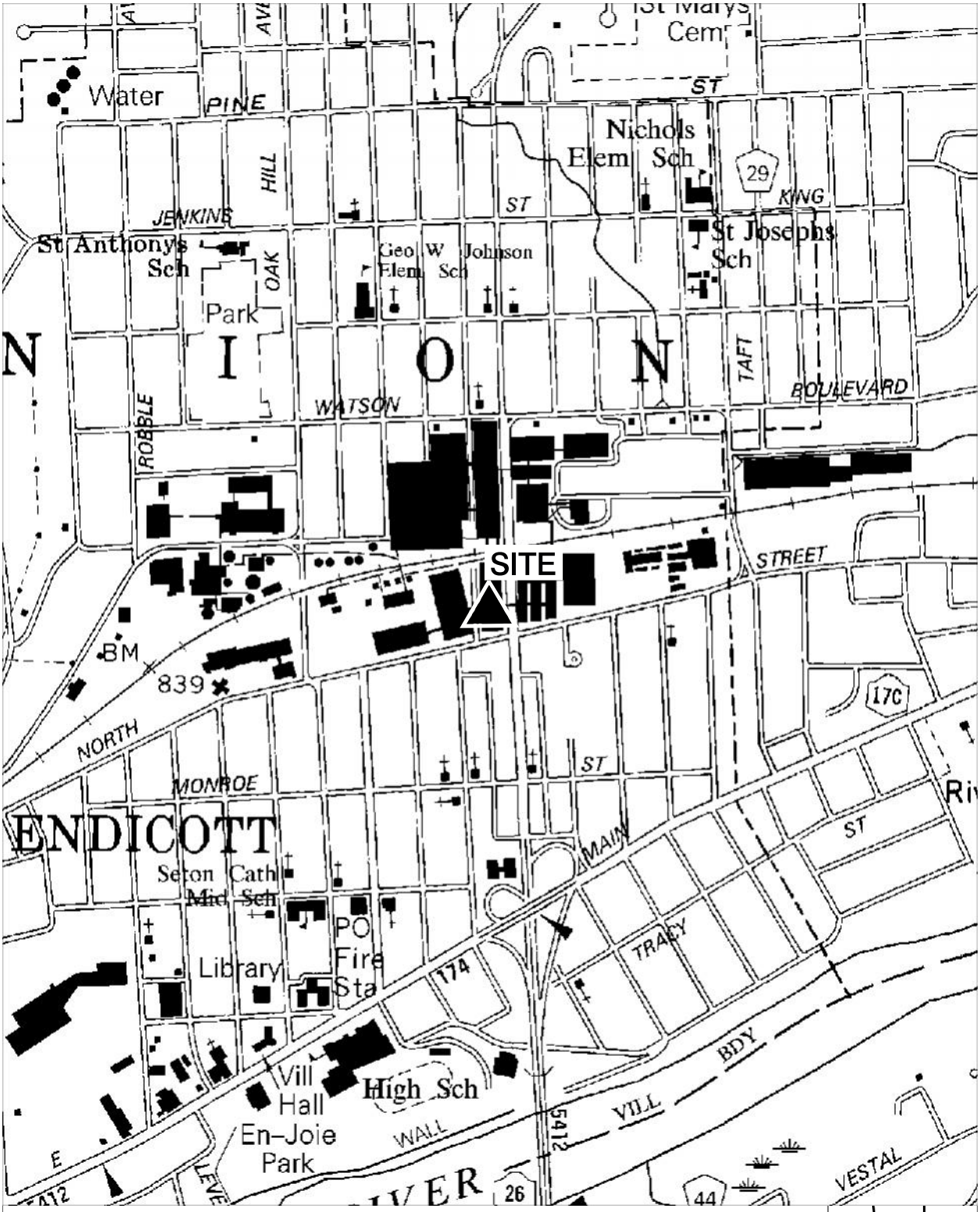
Site Health Assessment

Direct contact with contaminants in soil is unlikely since the majority of the site is an active industrial facility that is covered with buildings and pavement. In addition, access is restricted, further limiting the potential for contact exposures. People are not drinking the contaminated groundwater because the area is served by a public water supply that is routinely tested to ensure that it meets drinking water standards. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the overlying buildings, is referred to as soil vapor intrusion. Soil vapor intrusion and the potential for soil vapor intrusion has been identified in both on- and off-site buildings. The on-site indoor air results indicate that either the air levels are consistent with background indoor air levels and are not of concern or that levels are below or slightly above the NYSDOH air guidelines. In the later, the possibility of health effects in workers exposed to these levels is low, but monitoring within the on-site occupied buildings is on-going. NYSDOH has recommended that reasonable and practical actions be taken to reduce indoor air concentrations within the on-site buildings to the extent that is possible. Mitigation systems (systems that ventilate/remove the air beneath the building) have been and will be installed in all buildings within the off-site defined soil vapor intrusion mitigation area to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings. The responsible party will also continue to track properties within the soil vapor intrusion mitigation area to identify new or modified buildings that might require mitigation systems.

For more Information: E-mail Us

Return To Results

Refine This Search



Site Location Map

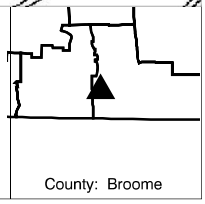
IBM Corporation - Endicott Facility

Map Source: NYSDOT 1:24,000-scale planimetric quadrangles

N

0 250 500 750 1000 Feet

Scale: 1:12,000
April 1, 2003



County: Broome

Site Name: **IBM Corporation - Endicott Facility** **Site Code:** **704014**
Class Code: **4** Region: **7** County: **Broome** EPA Id: **NYD002233039**
Address: **1701 North Street / Endicott, NY 13760 (Locality: Union)**
Latitude: **42° 5' 59"** Longitude: **76° 3' 49"**
Site Type: Estimated Size: **220 Acres**

Site Owner / Operator Information:
Current Owner(s) Name: **Huron Real Estate Associates**
Current Owner(s) Address: **1701 North Street / Endicott, NY 13760**
Owner(s) during disposal: **IBM Corporation - Endicott Facility**
Operator(s) during disposal: **IBM Corporation - Endicott Facility**
Stated Operator(s) Address: **1701 North Street / Endicott, NY 13760**
Hazardous Waste Disposal Period: **From: 1940 To: 1981**

Site Description:
In December of 1979, a leak developed in an underground distribution pipeline that transported methyl chloroform. IBM estimated that about 4,100 gallons of the raw product flowed into the groundwater as a result. IBM investigated the hydrogeologic conditions at their facility property and the adjacent area and discovered concentrations of methyl chloroform, trichloroethylene, tetrachloroethylene, methylene chloride, freon, benzene, toluene and xylene in the upper alluvial aquifer beneath the IBM main site and extending into residential and commercial areas of the Village of Endicott. Clean up and monitoring of the groundwater contamination began in 1980 and continue today under the authority of a New York State Hazardous Waste Management Permit. The primary contaminants are methyl chloroform and trichloroethylene and their breakdown products. Contaminant concentrations are highest in the vicinity of the manufacturing complex along the railroad between Watson Boulevard and North Street and diminish with distance from the site. Lower levels of contamination extend as far as the Susquehanna River. Groundwater recovery wells are pumped to recover the contaminated groundwater and to prevent the plume from spreading further. The contaminated groundwater is treated and discharged under a SPDES permit. Over 60,000 gallons of raw solvent has been recovered from the site. In 2002, IBM initiated a study to determine if vapors from the contaminated groundwater were entering structures located above the plume and impacting indoor air. Indoor air testing indicated the presence of contaminants that could be attributed to the groundwater plume. Indoor air testing will continue through 2003. IBM has offered to install ventilation systems at structures where testing has indicated that the groundwater plume has impacted indoor air quality. On November 1, 2002, IBM sold the Endicott facility to Huron Real Estate Associates. IBM maintains liability for these corrective action programs under the authority of the Hazardous Waste Management Permit.

Confirmed Hazardous Waste Disposal:	**Quantity:**
Methylene chloride	unknown
Methyl chloroform	unknown
Tetrachloroethylene (PCE or "perc.")	unknown
Trichloroethylene (TCE)	unknown
Benzene	unknown
Toluene	unknown
Xylene	unknown
Freon	unknown

Analytical Data Available for: **Groundwater Soil**
Applicable Standards Exceeded in: **Groundwater Drinking Water**
Geotechnical Information:
Soil/Rock Type: **Sand, silt and gravel.**
Depth to Groundwater: **Range: 10 to 30 feet.**

Legal Action: Type: **State Haz Waste Permit** Status:
Remedial Action: **In Progress Complete** Nature of action: **Groundwater pump & treat + ventilation systems.**

Assessment of Environmental Problems:
Groundwater contamination is present at levels that exceed the applicable Part 703 groundwater standards. Indoor air concentrations exceed the draft EPA guidance values.

Assessment of Health Problems:
Significant groundwater contamination exists within the aquifer beneath this site. However, routine monitoring of public water supply wells does not show any violation of drinking water maximum contaminant levels for organic chemicals. September 2002 soil gas investigation revealed a potential for exposure to VOCs in indoor air. Basement level soil gas samples collected in November 2002 define extent of soil vapor impacts within the study area and show that significant potential for exposure to VOCs in indoor air exists. Subsequent indoor air samples collected from within buildings located above the soil vapor plume show low level impacts. The likelihood of health effects associated with exposure to VOCs at the levels measured is low. Indoor air sampling is expected to continue through 2003. IBM has begun installing soil vapor ventilation systems in those buildings impacted by soil gas originating from the groundwater contaminant plume. These systems are designed to minimize exposure to VOCs from soil gas by capturing the gas before it enters the building.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Keytronics, Inc.
Site Code: 704001
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 7
Address: 707 North Street
City: Endicott Zip: 13760
County: Broome
Latitude: 42.10320007
Longitude: -76.05515976
Site Type:
Estimated Size: 1 Acres

Site Owner(s) and Operator(s)

Current Owner Name: Robert, Michael and Jeff Shapiro
Current Owner(s) Address: 707 NORTH STREET
ENDICOTT,NY, 13760
Owner(s) during disposal: KEYTRONICS, INC.
Current On-Site Operator: KEYTRONICS, INC.
Stated Operator(s) Address:
,ZZ
Current On-Site Operator: KEYTRONICS, INC.
Stated Operator(s) Address: 707 NORTH STREET
ENDICOTT,NY 13760
Current On-Site Operator: Keytronics, Inc.
Stated Operator(s) Address: NORTH STREET
ENDICOTT,NY 13760

Site Description

Flat topography: Commercial/light industrial area Nearest water body: Susquehanna River; approx. 2500 feet away Nearest water supply: Village water supply well; approx. 3000 feet away This site is occupied by a manufacturing plant and parking area and is located in a commercial and light industrial part of the Village of Endicott. The products that are manufactured at this facility include electronic coils and conductors. Methylene chloride was used as a solvent in the manufacturing process. After the methylene chloride became contaminated with various lacquers and epoxy finishes, it was dumped in small quantities on a railroad bed behind the plant facility and allowed to evaporate. A Phase I report was completed in June of 1983 for this facility. The Keytronics site was identified as being in the immediate proximity of the groundwater contamination plume that had originated from the IBM Endicott facility. It has been determined that the amount of methylene chloride that was dumped at this site is inconsequential and does not pose a significant threat to the environment or to human health. The waste methylene chloride was collected at individual work stations and disposed periodically in quantities of no more than one pint at a time. This site is within the limits of the IBM Endicott groundwater contamination plume, which is being remediated by groundwater recovery and treatment.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

methylene chloride

Site Environmental Assessment

The amount of methylene chloride dumped on this property is small. This highly volatile solvent has evaporated on-site. Keytronics, Inc., appears to be located within limits of IBM Endicott's groundwater contamination plume, which is currently being remediated.

---

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Schapiro's Fine Dry Cleaning
Site Code: V00667
Program: Voluntary Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 7
Address: 709 North Street
City: Endicott (V) Zip: 13760-
County: Broome
Latitude: 42.10354636
Longitude: -76.05449615
Site Type:
Estimated Size: 0.48 Acres

Institutional And Engineering Controls

Control Type:
Deed Restriction

Site Owner(s) and Operator(s)

Current Owner Name: RMJ Realty, LLC
Current Owner(s) Address: 417 Meeker Road
Vestal,NY, 13850
Current On-Site Operator: SCHAPIROS FORMAL SHOP INC.
Stated Operator(s) Address: 709 NORTH STREET
ENDICOTT,NY 13760

Site Description

Location: The Schapiros Fine Dry Cleaning site is located in an urban area. The site is bounded on the south by North Street and on the north by railroad tracks. Site Features: The site is developed with a multiple story commercial building and is currently owned by RMJ Realty, LLC. Surrounding the building are areas of asphalt pavement. Current Zoning and Land Use: The site is currently active, and is zoned for commercial use. Adjacent properties to the east and west are used for commercial purposes. Properties south of North Street, across the street from the site, include residential and commercial uses. The railroad tracks north of the site are an active line. Past Use of the Site: Dry cleaning operations using tetrachloroethene (PCE) were conducted on the site from late 1981 until 1999, when the dry cleaning solvent was switched to a petroleum based compound. The dry cleaning machines used for cleaning with PCE were located in the south central portion of the on-site building. There were no known leaks or releases of PCE within the facility. PCE was recycled within the machines and delivered to the site on an "as needed" basis to replenish the machines, and pumped directly from the delivery vehicle into the machines. PCE was never stored on-site, except as used in the dry cleaning machines. Releases of PCE to the environment may have occurred from leaks at the dry cleaning machines and from residual solvents that drained from dry clean machine filters after they were removed from the machines and temporarily stored on-site prior to replacement or disposal.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type
tetrachloroethene (PCE)

Site Environmental Assessment

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminant of concern that are site related appear to be PCE, which is related to past operational history. A contaminant of concern is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Soil Investigation results from soil quality sampling indicated presence of only PCE; however, concentrations were less than unrestricted use soil cleanup objectives (SCOs). Soil samples were collected in the vadose zone from the ground surface a depth of 20 feet below ground surface. The highest concentration of PCE detected on-site was 0.034 parts per million (ppm) and occurred underneath the building in sample collected from the depth interval 16 to 20 feet bgs. The highest concentration of PCE off-site was 0.30 ppm and occurred near the filter shed in sample collected from the depth interval 0 to 2 feet bgs. The unrestricted use SCO for PCE is 1.3 ppm. The SVE IRM has been applied in the areas with highest concentration PCE in

soils. Groundwater - The primary contaminant of concern in groundwater consists of PCE. The lateral and vertical distribution of contamination in groundwater indicates the presence of a narrow groundwater plume that extends to the west from the site building and the former shed area. The plume does not appear to extend to the south. Results at the time of the investigation indicated PCE concentrations higher than the groundwater standard of 5 parts per billion (ppb) for PCE existed at four wells. The maximum concentration of PCE for these wells in 2006 ranged from 120 to 270 ppb. Based on sampling conducted in February 2015, maximum concentration of PCE for these wells ranged from 4.7 to 31 ppb. The improvements to groundwater quality may be attributed in part to the SVE IRM and possible natural attenuation. In 2015, no other volatile organic compounds (VOCs) were detected at concentrations higher than their respective groundwater standard at the site or in the immediate off-site area that is monitored. Soil Vapor Soil vapor underlying the on-site building and the building at 703-707 North Street have been impacted by PCE at levels that warranted vapor mitigation. The highest concentration of PCE in sub-slab soil vapors on-site were 132,000 micrograms per cubic meter (ug/m3). The highest concentration of PCE in sub-slab soil vapors at 703-707 North Street were 8,144 ug/m3). The on-site and off-site buildings were mitigated through the installation of SSD systems. Potential exposures related to soil vapor intrusion into buildings on-site (existing or future) will continue to be addressed by the site remedial program.

Site Health Assessment

Measures are in place to control the potential for coming in contact with subsurface soil and groundwater contamination remaining on the site. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Sub-slab depressurization systems (system that ventilate/remove the air beneath the building) have been installed in the on-site building and one off-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings. Sampling indicates soil vapor intrusion as a result of this site is not a concern for other off-site structures.

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Old Village of Endicott Dump
Site Code: 704004
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 7
Address: Harrison Avenue
City: Endicott Zip: 13760
County: Broome
Latitude: 42.099301697
Longitude: -76.053686119
Site Type:
Estimated Size: 28 Acres

Site Owner(s) and Operator(s)

Current Owner Name: Village of Endicott DPW
Current Owner(s) Address: C/O MUNICIPAL BUILDING
ENDICOTT,NY, 13760
Owner(s) during disposal: VILLAGE OF ENDICOTT DPW
Current On-Site Operator: Village of Endicott DPW
Stated Operator(s) Address: C/O MUNICIPAL BUILDING
ENDICOTT,NY 13760

Site Description

The Old Village of Endicott Dump is located under the Endicott shopping plaza, the Philadelphia Sales Store and the Jennie F. Snapp School. Part of the dump was paved over to create a parking lot for the Endicott shopping plaza. Over time the landfill settled unevenly and caused the parking lot to buckle in numerous areas, and to undermine sections of the plaza's

foundation. This dump received domestic refuse and reportedly received tanning wastes and other industrial wastes from the local manufacturing operations in the area. The tanning wastes and industrial solvents were reputedly received from the Endicott Johnson Shoe Manufacturing Plant, located in the vicinity. There is concern that industrial wastes are leaching into the groundwater and impacting the village water supply wells, which are located within 1000 feet of the dump site. Low levels of chlorinated solvents have been detected in groundwater samples taken from monitoring wells that were installed following a petroleum spill that occurred nearby in 1988. These monitoring wells are located downgradient from the site. Chlorinated solvent contamination has also been noted in one of the production wells for the Village of Endicott located on South Street. A storm sewer line runs passes thru the dump to the Susquehanna River. Monitoring wells were installed near the edge of the property downgradient from the main section of the landfill. An Immediate Investigation Work Assignment (IIWA) was done at this site in 1997. The IIWA was done to reveal the source of the chlorinated solvent contaminant plume. No source of contamination was found and no source of any contaminants could be attributed to hazardous waste disposal at this site.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

naphthalene

chlorinated solvents

Site Environmental Assessment

There are no environmental problems associated with the disposal of hazardous waste at this site.

---

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Temporal Study of Vapor Intrusion
Site Code: 704052
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 7
Address: 1009 East Main Street
City: Endicott Zip: 13760
County: Broome
Latitude: 42.097702977
Longitude: -76.050250021
Site Type:
Estimated Size: 0 Acres

Site Owner(s) and Operator(s)

Site Description

Description Not Available

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Union Forging Company
Site Code: V00156
Program: Voluntary Cleanup Program
Classification: C
EPA ID Number:

Location

DEC Region: 7
Address: 500 North Street
City: Endicott Zip: 13760
County: Broome
Latitude: 42.12672549
Longitude: -75.74735109
Site Type:
Estimated Size: 6.5 Acres

Site Owner(s) and Operator(s)

Site Description

This site is located in an urban portion of Broome County, NY. This site is bordered by Vestal Ave., Mechanic St., Cental Ave. and North St. in the Village of Endicott. There are no permanent structures located at this site and the site is currently not being used. The surrounding parcels are both residential and commercial. This was the former site of the Union Forging Co. that forged small metal automotive parts and hand tools. Hydraulic oil used in the forging equipment was released to the environment which resulted in an impact to both site soils and groundwater. Chromium was also released to site soils. Completed activities include: a remedial investigation work plan (1997), a remedial investigation report (1998) and a final engineering report(2001). A Release letter was issued for this site in 2003. The site was re-opened for investigation of offsite contamination of TCA and TCE. NYSDEC requested that an

additional monitoring well be installed and sampled along with three other downgradient wells near the southern property line. This sampling was completed in 2006. Results of the sampling showed levels of TCA and TCE above groundwater standards. Further investigation of offsite impacts, including soil vapor intrusion is being considered.

Contaminants of Concern (Including Materials Disposed)

Contaminant Name/Type

Site Environmental Assessment

The primary contaminants of concern at this site include chromium and petroleum hydrocarbons (hydraulic oil). Site soils and groundwater were impacted due to both surface and subsurface diposal. Previous exceedances of standards, criteria and guidance values include petroleum hydrocarbons and chromium for both site soils and groundwater. This site is located over a federally designated sole source aquifer. This site does not present a significant threat to the environment. In 2005, low levels of VOCs were found in monitoring wells at the perimeter of the site. the impact of these low levels is being evaluated.

Site Health Assessment

The site is a fenced vacant lot located in a mixed commercial and residential neighborhood. Exposures to contaminated groundwater and soils are not expected because the surrounding area is served by public water and contaminated soil has been removed for proper off-site disposal. An investigation is currently in progress to evaluate the potential for exposures associated with soil vapor intrusion on-site and in nearby structures.

For more Information: E-mail Us

Return To Results

Refine This Search

Environmental Site Remediation Database Search Details

Site Record

Administrative Information

Site Name: Neil Guiles Property
Site Code: 704006
Program: State Superfund Program
Classification: N *
EPA ID Number:

Location

DEC Region: 7
Address: Foster Road
City: Vestal Zip: 13850
County: Broome
Latitude: 42.097217751
Longitude: -76.057483472
Site Type:
Estimated Size: 63 Acres

Site Owner(s) and Operator(s)

Current Owner Name: Neil Guiles
Current Owner(s) Address: FOSTER ROAD
VESTAL,NY, 13850
Current Owner Name: Neil Guiles Excavating and Paving
Current Owner(s) Address: FOSTER ROAD
VESTAL,NY, 13850
Owner(s) during disposal: NEIL GUILES
Current On-Site Operator: Neil Guiles
Stated Operator(s) Address: FOSTER ROAD
VESTAL,NY 13850

Site Description

This site was used for the landspreading of sewage sludge from the Binghamton/Johnson City wastewater treatment plant. Sludge was applied to about 63 acres of farmland and stored in two on-site lagoons. In 1976, samples collected by the sewage board showed that the sludge con- tained high levels of cadmium. Further sampling in 1981 detected high levels of PCB's. As a result of this finding, landspreading was no longer allowed. The on-site lagoons still contain sludge, and as of

1988, no remedial action has occurred here. In September 1985 the DEC and the Binghamton-Johnson City Joint Sewage Board met to address the closure of this site. Closure plans are s till being evaluated at this time. Additional sampling of the upper and lower lagoons is scheduled for the spring of 1989. A Phase I study was completed for this site in September of 1988. Sampling of the sludge in the lagoon s has shown that no hazardous waste is present, and no further will be necessary.

Site Environmental Assessment

No hazardous waste was found at this site.

---

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Refine This Search

Attachment 6

Section 7 Documents:
NHP Documentation
& USFWS Consultation Letter

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

November 16, 2016

Kaitlin Larson
Tectonic Engineering & Surveying Consultants P.C.
70 Pleasant Hill Road
Mountainville, NY 10953

Re: Central Endicott Drainage Improvements
Town/City: Union County: Broome

Dear Ms. Larson:

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

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

☐ The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on 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 resources may be required to fully assess impacts on biological resources.

☐ This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage Database. Your project may require additional review or permits; 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 7 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

1355

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

February 27, 2017

Ms. Robyn Niver
Endangered Species Biologist
U.S. Fish & Wildlife Service
New York Field Office
3817 Luker Road
Cortland, NY 13045

Re: ESA/MBTA/BGEPA Consultation
New York Rising Community Reconstruction Program
Central Endicott Drainage Improvements (Proposed Project)
Village of Endicott, Town of Union, Broome County, New York

Dear Ms. Niver:

The Governor's Office of Storm Recovery (GOSR), operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation (HTFC), was established to aid the statewide recovery of disaster-affected communities in New York State. GOSR is administering a U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant for Disaster Recovery (CDBG-DR), including the New York Rising Community Reconstruction (NYRCR) Program. The environmental review for projects funded under the NYRCR Program are processed on a case by case basis in accordance with the United States Fish and Wildlife Service (USFWS) New York Field Office's online project review process.

The purpose of this letter is to provide the USFWS New York Field Office notice of the Proposed Project and to document compliance with Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), as well as the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712), and the Bald and Golden Eagle Protection Act of 1940 (BGEPA) (54 Stat. 240, as amended; 16 U.S.C. 668-668c). As discussed below, we have reviewed the project and found that the Proposed Project does not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat. We are submitting project materials to document the determination made by GOSR that the Proposed Project may affect the Northern Long-eared Bat (NLEB), but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule. If the USFWS does not respond within 30 days from submittal of this document, then GOSR may presume that its determinations are informed by the best available information and its project responsibilities under Section 7 with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic Biological Opinion (BO).

Proposed Project Overview

The Village of Endicott proposes to construct stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The potential drainage improvements for this project focus primarily on reducing peak

inflows that enter the project area through the use of underground detention facilities. The rerouting of the 24" Reinforced Concrete Pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street is also included.

The locations for underground storage focused on logical areas adjacent to the incoming trunk lines that could be installed without affecting the land use and function of the detention areas. To this end, three locations were selected within the municipally-owned George W. Johnson Park to install underground detention storage systems. For this project, a proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The average total footprint of the systems is approximately 6,475 square feet.

The premise of the underground storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system. This usually consists of a small overflow pipe that reconnects to the outlet storm line. The storage effect reduces peak flows as well as provides flood storage underground as opposed to above ground flooding.

In addition to the inclusion of the underground detention systems, the Proposed Project will include relocating the connection of the 24" reinforced concrete pipe trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. Although the stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, it does remove a significant inflow at the critical flooding location at the East Franklin Street/Clark Street/Robble Avenue intersection. The relocation of the concrete pipe will require the removal of approximately 1.3 acres of trees. The locations of the Proposed Project activities are identified on the enclosed street map, USGS topographic map, and aerial photograph, in **Attachment 1**. Proposed Project plans are included in **Attachment 2**.

Compliance

The USFWS New York Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of a species under the jurisdiction of the USFWS within the Proposed Project area. The USFWS IPaC Resource List is included as **Attachment 3**, and the USFWS Official Species List is included as **Attachment 4**. The USFWS indicates that one listed species may occur within the vicinity of the Proposed Project area, the *Myotis septentrionalis* (NLEB - threatened). There are no critical habitats for this species, or any other species within the Proposed Project area.

The IPaC Resource List indicates that there are 18 species of migratory birds protected by the MBTA and BGEPA that could potentially be affected by the Proposed Project, including the *Haliaeetus leucocephalus* (bald eagle). The New York State Department of Environmental Conservation (NYSDEC) Plan for Bald Eagles in New York State[1] provides a map of bald eagle breeding territories in the state. There are no known breeding bald eagles within the vicinity of the Proposed Project; therefore, no adverse impacts to breeding bald eagles are expected as a result of the Proposed Project. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance.

According to USFWS documentation, the NLEB roosts underneath tree bark, in cavities, and in the crevices of dead and live trees. Breeding begins in late summer or early fall when males begin to swarm near hibernacula. After copulation, females store sperm during hibernation until spring. In spring, they emerge from their hibernacula, ovulate and the stored sperm fertilizes an egg. After fertilization, pregnant females migrate to summer areas where they roost in small colonies and give birth to a single pup. Maternity colonies of females and young generally have 30 to 60 bats at the beginning of the summer, although larger maternity

colonies have also been seen. Most bats within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located within the species' range. Young bats start flying by 18 to 21 days after birth. NLEBs emerge at dusk to feed. They primarily fly through the understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

Suitable summer habitat for NLEBs is present within the vicinity of the project area. The Proposed Project involves the removal of approximately 1.3 acres of trees for the relocation of the 24" reinforced concrete pipe stormwater connection. All tree removal is recommended to be performed during the winter season (November 1 – March 31) and no tree cutting will occur during the pup season between June 1 and July 31 to protect pups, which would not be able to fly during this timeframe. Prior to the initiation of any construction, bright orange construction fencing and flagging would be used to demarcate trees to be protected compared with those to be cut.

A request for species records within the Proposed Project area was submitted to the NYSDEC Natural Heritage Program (NHP) on October 18, 2016. On November 16, 2016, a response was received with no indication of any records of rare or state-listed animals or plants, or significant natural communities at the site of in its immediate vicinity. The NYSDEC NHP response is included as **Attachment 5**.

NYSDEC prepared a Bat Occurrences Map (**Attachment 6**) identifying known NLEB hibernacula. The Proposed Project area is not situated near (within 0.25 miles) a known NLEB hibernacula location. According to the data provided by USFWS, no known maternity roosts are located in Broome County or within 150' of the Proposed Project area.

The Proposed Project will not disturb hibernating NLEBs in a known hibernaculum, alter the entrance or interior environment of a known hibernaculum, remove any trees within 0.25 miles of a known hibernaculum, or cut or destroy known occupied maternity roost trees or any other trees within a 150-foot radius from the maternity roost tree. Additionally, no tree cutting will occur between June 1 and July 31 to prevent impacts to pups. GOSR recommends that tree cutting occur between November 1 and March 31 but this may not be feasible due to construction schedules which have not been finalized. Therefore, as indicated in **Attachment 7**, GOSR has determined that the Proposed Project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

Conclusions

Project implementation would be conditioned upon issuance of applicable federal and state permits and would be constructed in accordance with federal and state permit conditions. The Proposed Project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat. GOSR has determined, based on best available data, that the Proposed Project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, GOSR may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, "Programmatic Biological Opinion (BO) on the Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions."

GOSR understands that the USFWS presumes that all activities are implemented as described herein. GOSR will promptly report any departures from the described activities to the USFWS. GOSR will provide the USFWS with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the USFWS upon finding a dead, injured, or sick NLEB.

For additional information, please contact me by email at Alicia.Shultz@nyshcr.org or by telephone at (518) 474-0647.

Sincerely,

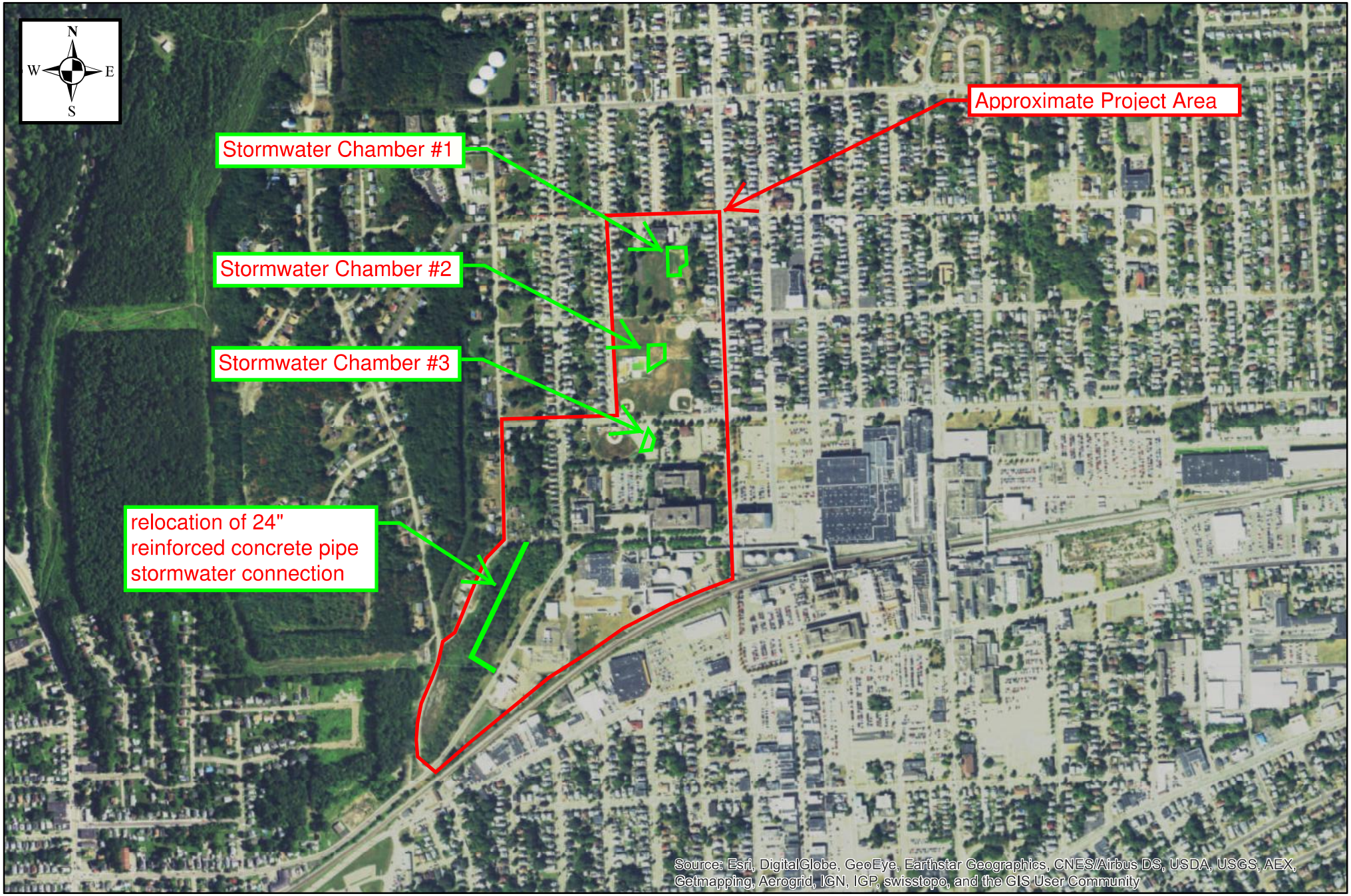
Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State Street, 408N Hampton Plaza
Albany, NY 12207

Attachments:

Attachment 1: Proposed Project Location Maps
(Aerial Photograph, Street Map, and USGS Topographic Map)
Attachment 2: Proposed Project Plans
Attachment 3: IPaC Resource List
Attachment 4: USFWS Official Species List
Attachment 5: NYSDEC NHP Response
Attachment 6: NYSDEC Bat Occurrences Map
Attachment 7: NLEB 4(d) Rule Streamlined Consultation Form

[1] "NYSDEC Conservation Plan for Bald Eagles in New York State." January 2015.

Attachment 1

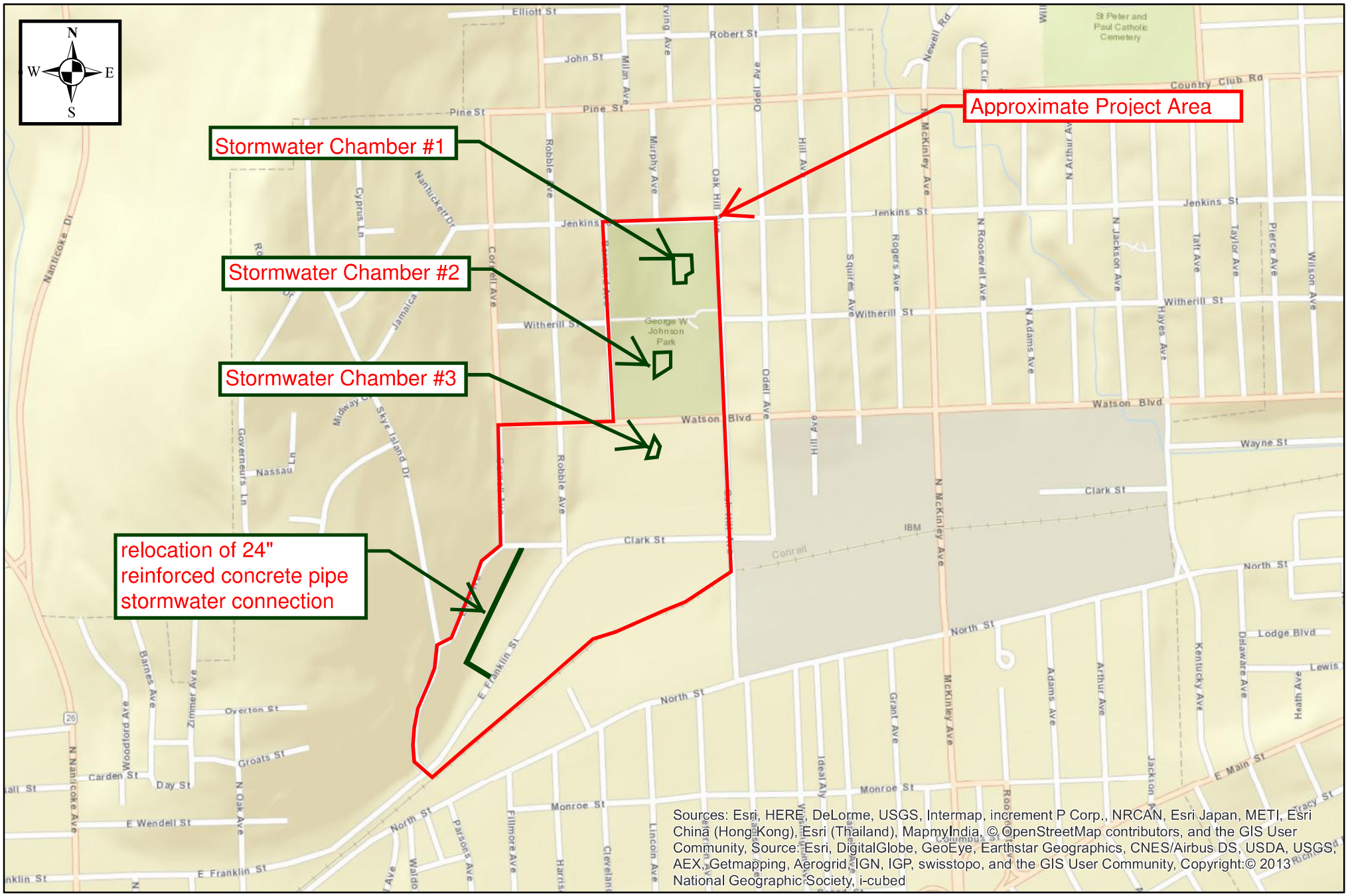


Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Aerial Photograph
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



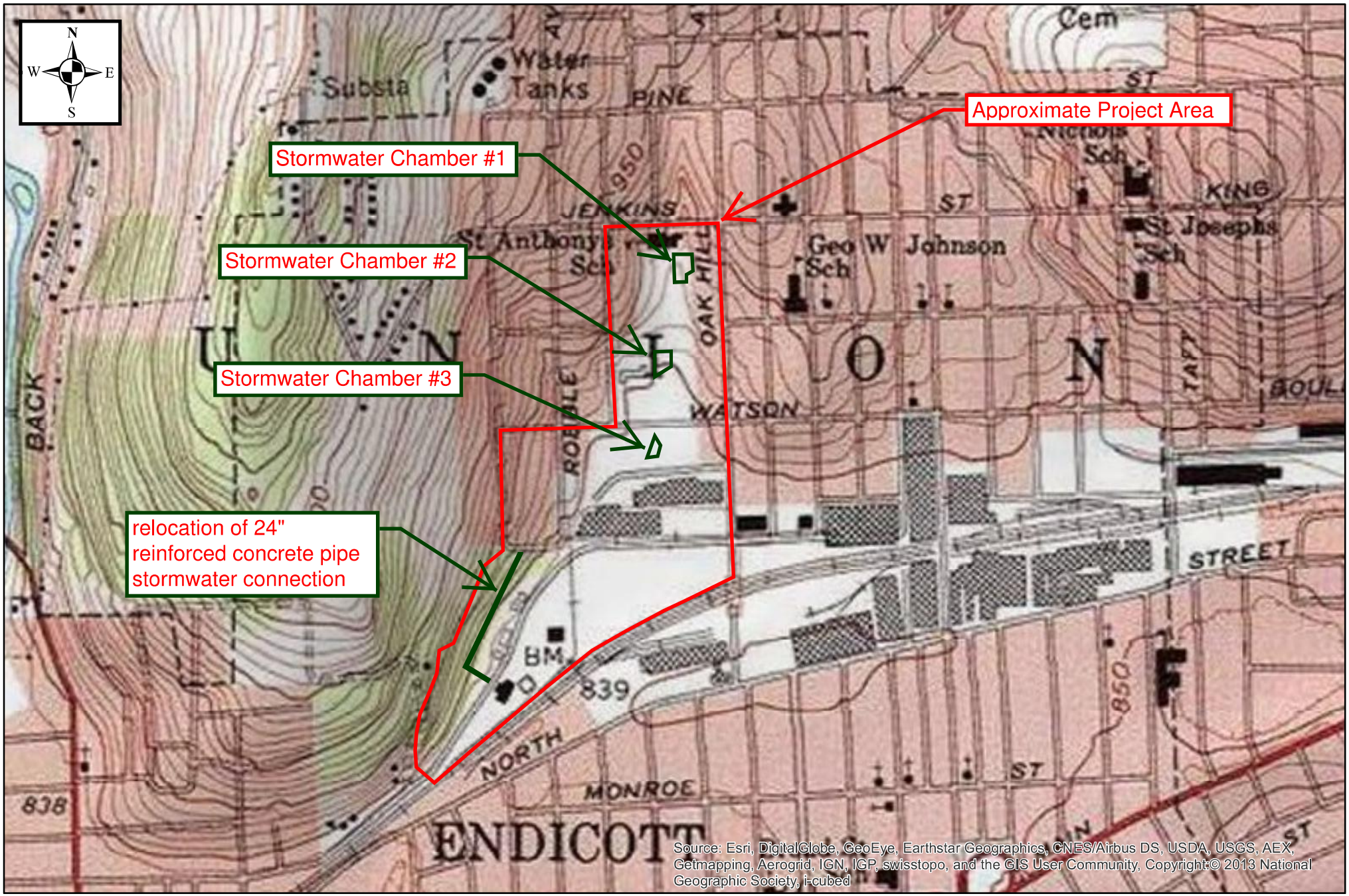
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Street Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Topographic Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000

Attachment 2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

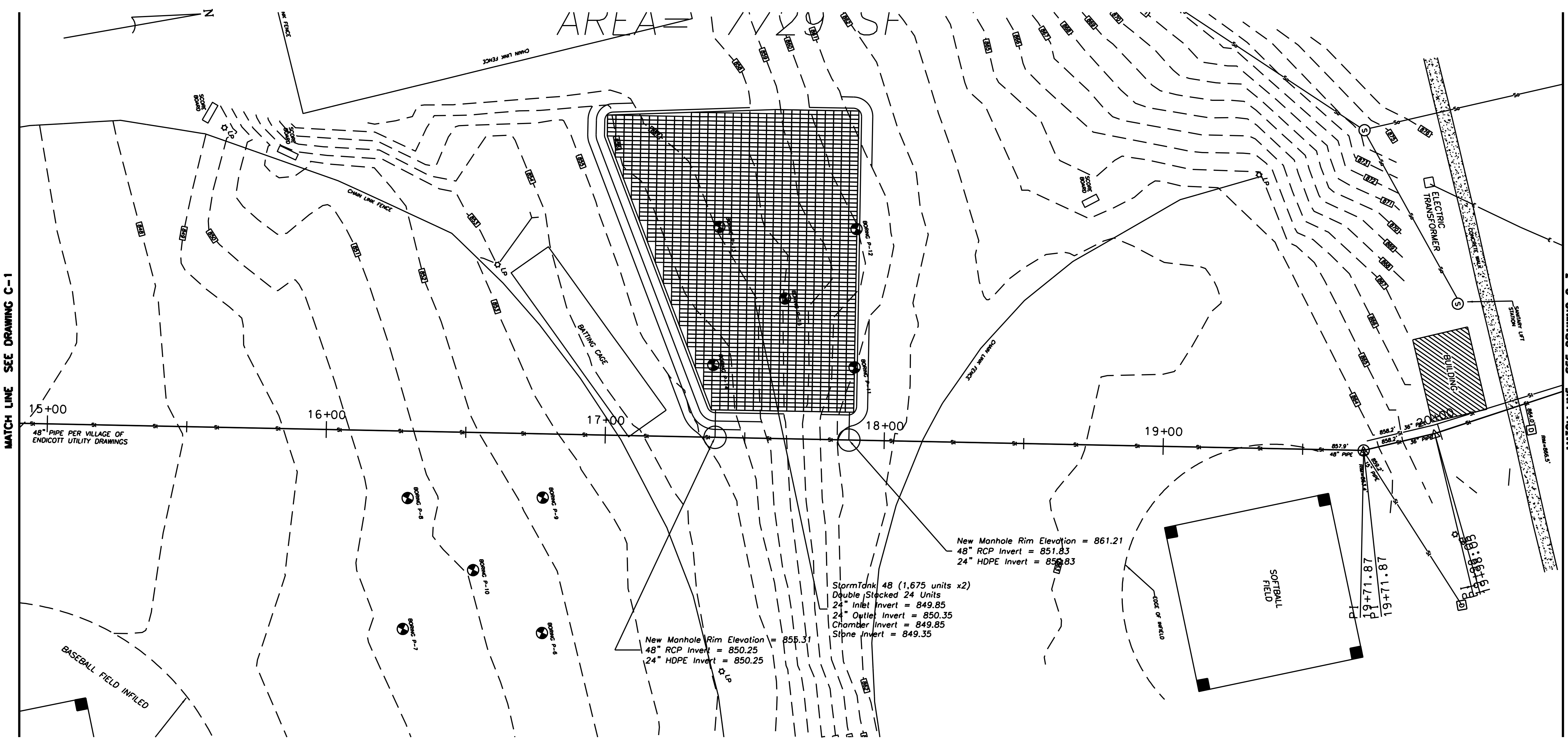
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

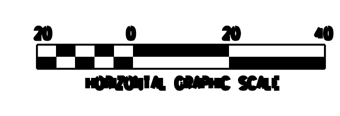
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1





GRIFFITHS

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2016	Rev.:
Drawn by: CSS	Chd by: DC	Project No.: 2016-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.		Plot Scale: AS NOTED

Drawing Name:
SITE LAYOUT PLAN

Project Location:
VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name:
CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:
C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

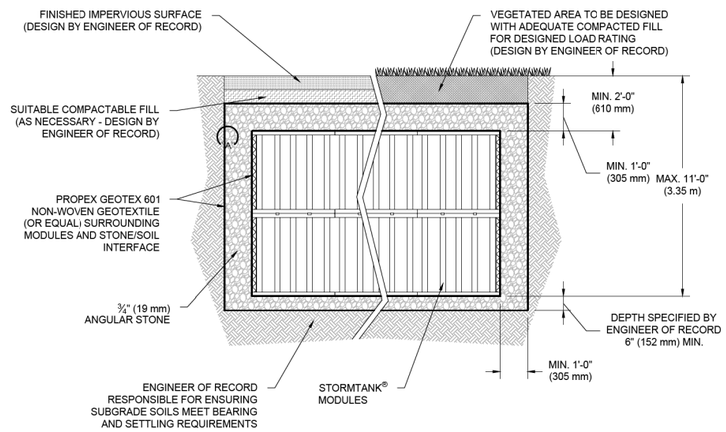
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

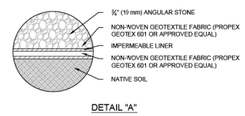
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

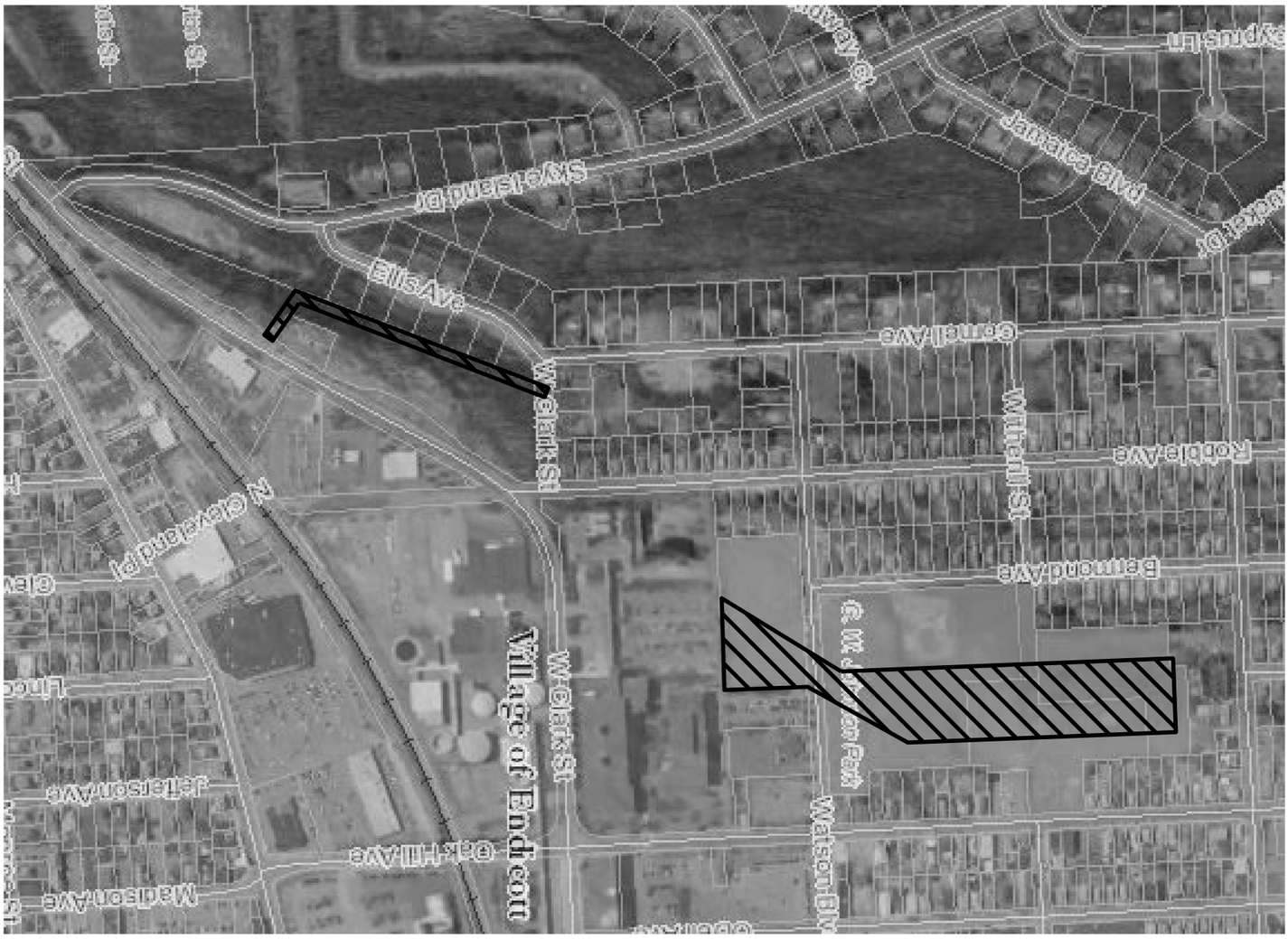
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

Attachment 3

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

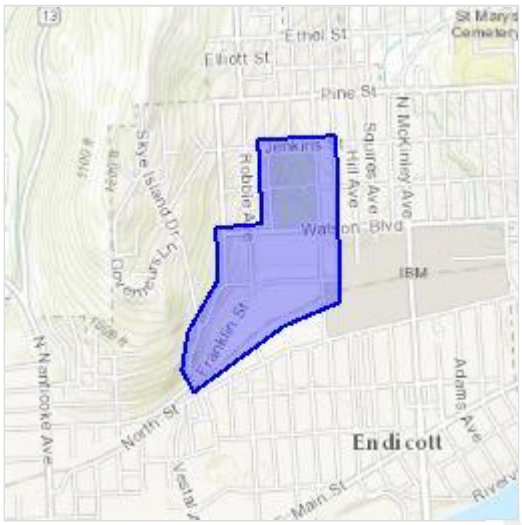
Project information

NAME

Central Endicott Drainage Improvements

LOCATION

Broome County, New York



DESCRIPTION

Stormwater
management improvements

Not for consultation

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9349

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

Endangered species

This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.

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 either from the Regulatory Review section in IPaC 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 creating a project and making a request from the Regulatory Review section.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

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

Not for Consultation

Mammals

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

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

Birds are protected under the Migratory Bird Treaty Act

[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Not for consultation

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
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location, not a list of every bird species you may find in this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus http://ecos.fws.gov/ecp/species/6582	Breeding
Bald Eagle Haliaeetus leucocephalus http://ecos.fws.gov/ecp/species/1626	Year-round
Black-billed Cuckoo Coccyzus erythropthalmus http://ecos.fws.gov/ecp/species/9399	Breeding
Blue-winged Warbler Vermivora pinus	Breeding
Canada Warbler Wilsonia canadensis	Breeding
Golden-winged Warbler Vermivora chrysoptera http://ecos.fws.gov/ecp/species/8745	Breeding
Kentucky Warbler Oporornis formosus	Breeding
Least Bittern Ixobrychus exilis http://ecos.fws.gov/ecp/species/6175	Breeding
Louisiana Waterthrush Parkesia motacilla	Breeding
Olive-sided Flycatcher Contopus cooperi http://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon Falco peregrinus http://ecos.fws.gov/ecp/species/8831	Breeding

Not for consultation

Pied-billed Grebe Podilymbus podiceps	Breeding
Prairie Warbler Dendroica discolor	Breeding
Red-headed Woodpecker Melanerpes erythrocephalus	Breeding
Short-eared Owl Asio flammeus http://ecos.fws.gov/ecp/species/9295	Wintering
Willow Flycatcher Empidonax traillii http://ecos.fws.gov/ecp/species/3482	Breeding
Wood Thrush Hylocichla mustelina	Breeding
Worm Eating Warbler Helmitheros vermivorum	Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance

Not for consultation

and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

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 NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Not for consultation

Facilities

Wildlife refuges

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

THERE ARE NO REFUGES 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.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

FRESHWATER POND
- PUBHx

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Not for consultation

Not for consultation

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.

Not for consultation

Attachment 4

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
PHONE: (607)753-9334 FAX: (607)753-9699
URL: www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Code: 05E1NY00-2017-SLI-1255 February 24, 2017
Event Code: 05E1NY00-2017-E-03263
Project Name: Central Endicott Drainage Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (

http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Central Endicott Drainage Improvements

Official Species List

Provided by:

New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
(607) 753-9334
http://www.fws.gov/northeast/nyfo/es/section7.htm

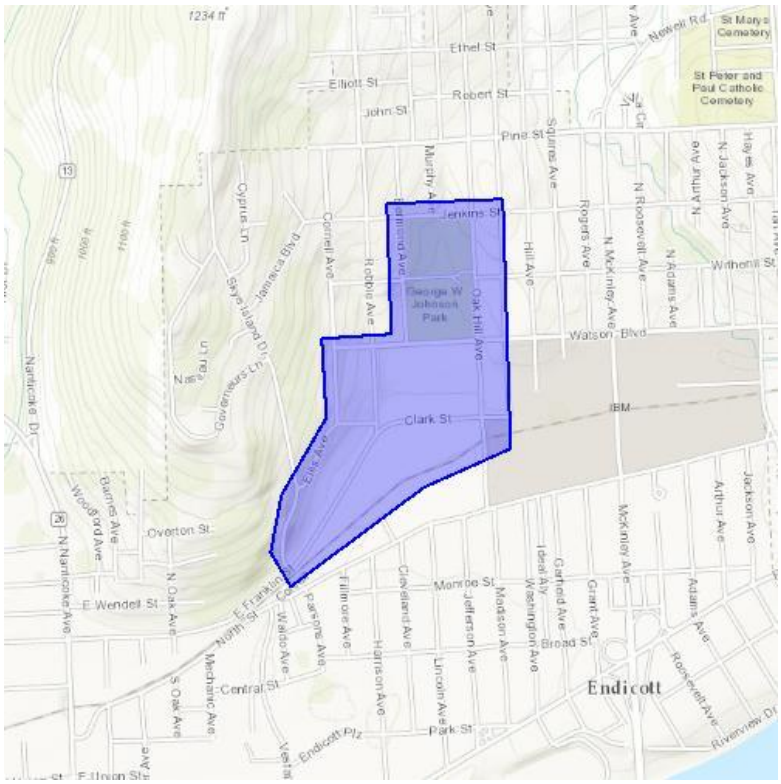
Consultation Code: 05E1NY00-2017-SLI-1255
Event Code: 05E1NY00-2017-E-03263

Project Type: Federal Grant / Loan Related

Project Name: Central Endicott Drainage Improvements
Project Description: Stormwater management improvements

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-76.04888677597047 42.10616675229462, -76.0521697998047 42.105084215292564, -76.05723381042482 42.10233003046773, -76.05794191360475 42.10325341212217, -76.05757713317873 42.104861337732835, -76.05588197708131 42.10707415877569, -76.05601072311403 42.10927098383743, -76.05339288711549 42.10941425239271, -76.05358600616456 42.11302769665166, -76.04918718338014 42.113186874480945, -76.04888677597047 42.10616675229462)))

Project Counties: Broome, NY

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat *(Myotis septentrionalis)* Population: Wherever found	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Attachment 5

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

November 16, 2016

Kaitlin Larson
Tectonic Engineering & Surveying Consultants P.C.
70 Pleasant Hill Road
Mountainville, NY 10953

Re: Central Endicott Drainage Improvements
Town/City: Union County: Broome

Dear Ms. Larson:

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

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

☐ The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on 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 resources may be required to fully assess impacts on biological resources.

☐ This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage Database. Your project may require additional review or permits; 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 7 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

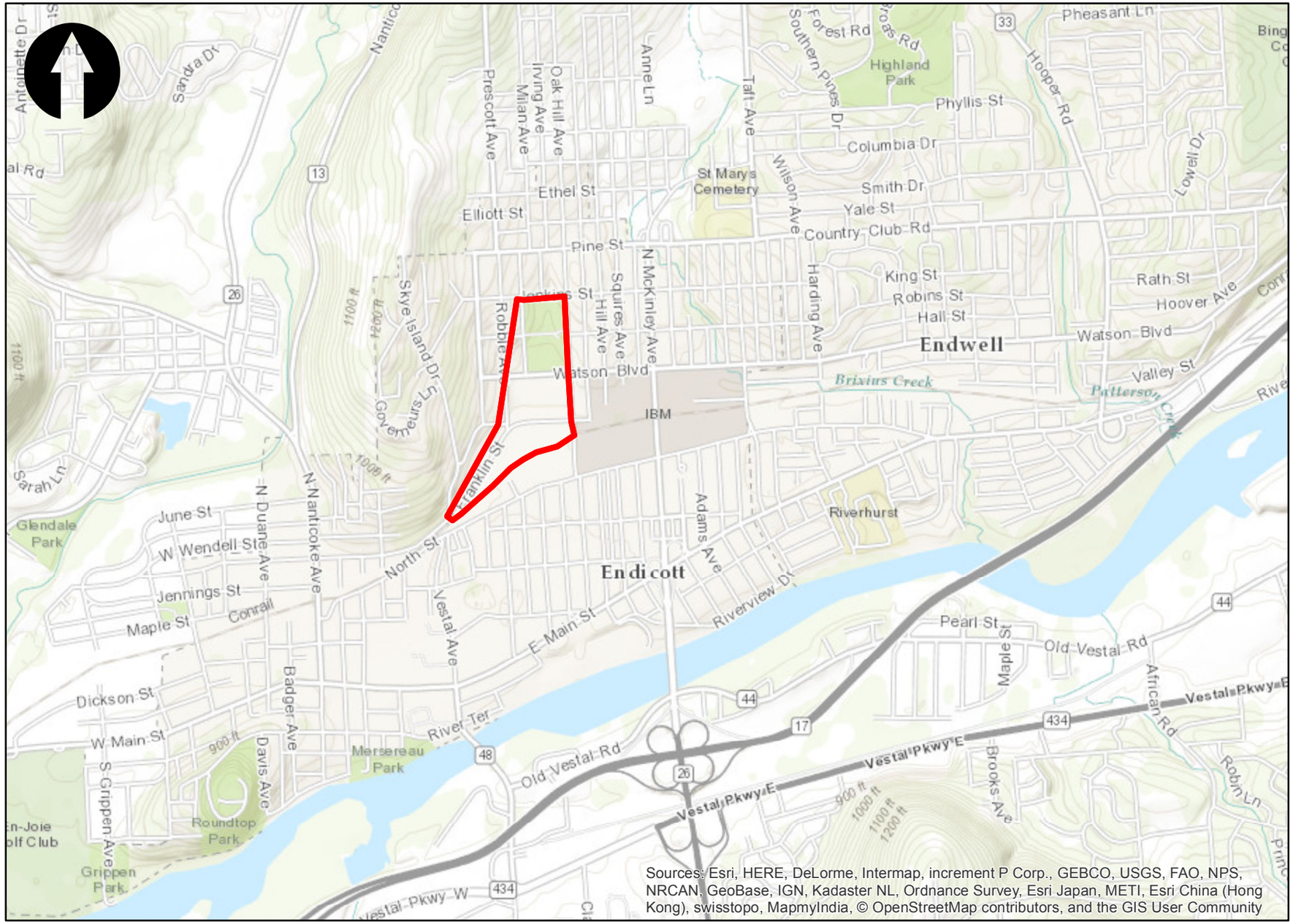
1355

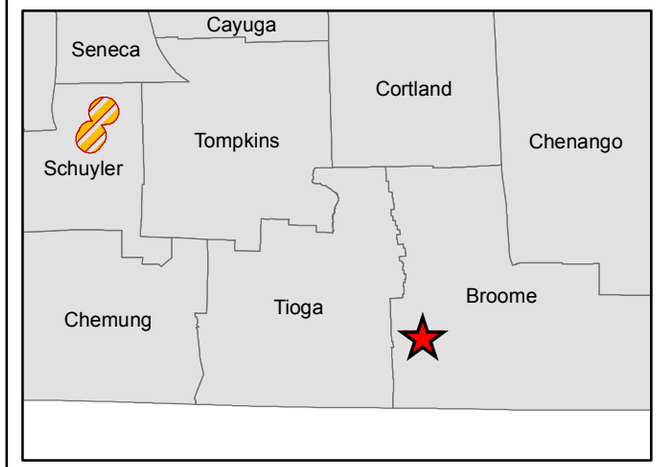
Attachment 6

NYS Resources Map

Central Endicott Drainage Improvements
Town of Union, Broome County

Prepared by AMB on 2/24/2017





Approximate Project Area

Bat Occurrences

Indiana Bat

Northern Long-eared Bat

Disclaimer: this map was prepared by the NYSDEC using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited.

NEW YORK STATE OF OPPORTUNITY

Department of Environmental Conservation

0 0.25 0.5 1 1.5 2 Miles

1 inch = 3,000 feet

Attachment 7

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3]:

Alicia Shultz
Community Developer - Environmental Services
New York State Homes and Community Renewal
38-40 State Street, Hampton Plaza
Albany NY 12207
(518) 474-0647
Alicia.Shultz@nyshcr.org

Project Name: Central Endicott Drainage Improvements (Proposed Project)

Project Location: Project locations shown in Attachment 2.

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

Basic Project Description: Project description described in detail within ESA/MBTA/BGEPA Consultation.

General Project Information	**YES**	**NO**
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☐	☒
Estimated total acres of forest conversion	~1.3 acres	
If known, estimated acres[5] of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31[6]		
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☒
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____ Date Submitted: February 16, 2017

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreages in April to October.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife
625 Broadway, 5th Floor, Albany, NY 12233-4750
P: (518) 402-8924 | F: (518) 402-8925
www.dec.ny.gov

December 27, 2016

Mr. Thomas J. King
Governor's Office of Storm Recovery
99 Washington Avenue
Suite 1224
Albany NY 12260

RE: Central Endicott Drainage Improvements
Town of Union, Broome County, NY

Dear Mr. King,

We received your jurisdictional inquiry request for the project involving the construction of storm water management improvements for a portion of central Endicott, Town of Union, Broome County. It is our understanding that four underground storage systems will be constructed and installed, that approximately 950 feet of concrete pipe will be relocated, new manholes will be installed, utilities will be relocated, and areas disturbed by the flooding from Tropical Storm Lee will be restored and repaired. Based on our understanding of the project and review of the maps provided in the application for funding prepared by Hunt, Guillot, & Associates, LLC in December 2015, and the NYS Resources map created by Amanda Bailey on 12/22/2016 (attached), we have the following comments on the project:

STATE-LISTED SPECIES

All threatened or endangered species are subject to regulation under Article 11, Title 5 of the Environmental Conservation Law and a permit is required for a taking of that species pursuant to 6 NYCRR Part 182. Besides death of individuals, taking includes harassment, interference with essential behaviors, and adverse modification of habitat. **If the site is in close proximity to known occurrences of state-protected species, additional information on the proposal will be required by the appropriate regional office for a determination on the need for an incidental take permit.**

DEC has reviewed the State's Natural Heritage records for state-listed bat species. This site is in close proximity to known occurrences of the following protected species:

Common Name	Scientific Name	State Status	Federal Status

We have reviewed the available information in the New York Natural Heritage Program database on known occurrences of rare or state-listed bat species. This project area does not occur in the immediate vicinity of known occurrences of rare or state-listed bat species (see NYS Resources map, attached). The major concern for bat species in relation to this project would be the destruction of potential roosts and roosting habitat that may occur if tree clearing is required. Because this project does not take place within known occupied habitat, there are no restrictions on cutting.

The absence of data does not necessarily mean that any rare or state-listed bat species do not exist on or adjacent to the proposed site. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence of all rare or state-listed bat species. To avoid potential take, DEC *recommends* that any tree clearing be conducted between November 1 and March 31, when bats are inactive in hibernation sites. DEC also recommends that all snag and cavity trees remain uncut, unless their removal is necessary for protection of human life and property. For more information, please refer to the DEC Northern long-eared bat protective measures guidance, available at: http://www.dec.ny.gov/animals/106090.html.

This document is only intended to address state-listed bat species. Other rare or state-listed species, natural communities or other significant habitats may exist within the project area and would require additional review. 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.

OTHER

USFWS Cortland Field Office

If a federal agency is involved in the project, or if federal funding is used, there are additional considerations for federally listed species. Section 7(a)(1) of the Endangered Species Act requires federal agencies to use their authorities to conserve listed species. Section 7(a)(2) requires federal agencies to consult on any action that may affect a listed species.

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

Amanda Bailey

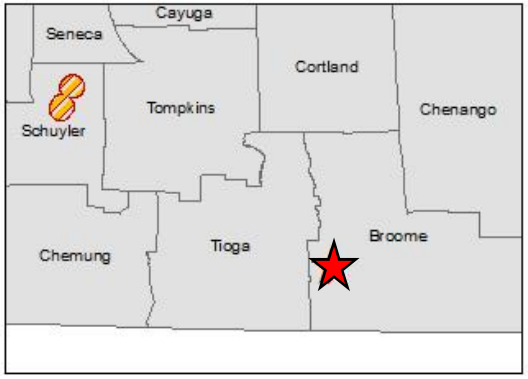
Amanda Bailey
Division of Fish and Wildlife
Amanda.bailey@dec.ny.gov
518-402-8859

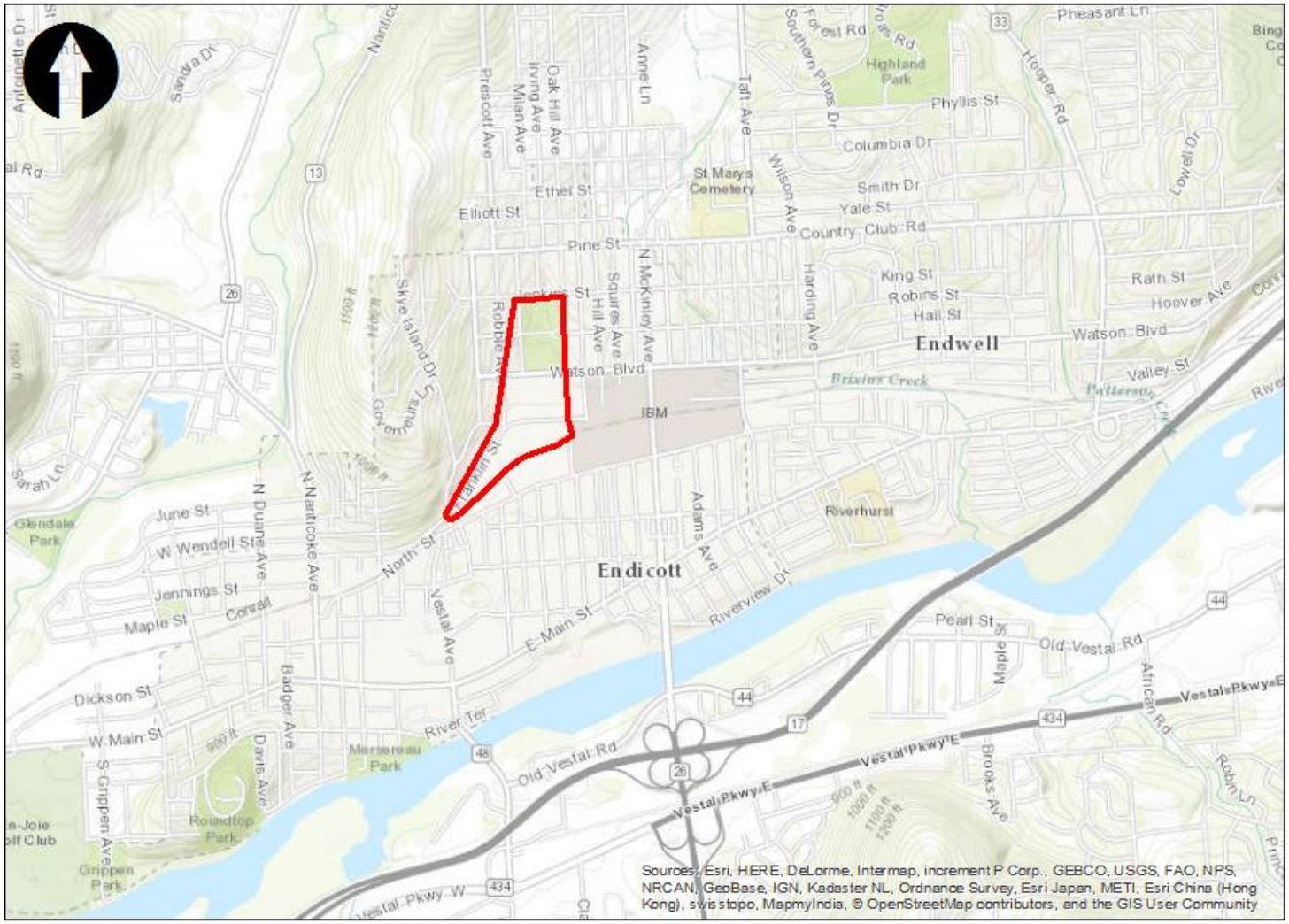
Cc: Alicia Shultz, Governor's Office of Storm Recovery
May O'Malley, NYSDEC Division of Environmental Permits
Steven Joule, NYSDEC Regional Wildlife Manager, Region 7
Joseph Dlugolenski, NYSDEC Deputy Regional Permit Administrator, Region 7

NYS Resources Map

Central Endicott Drainage Improvements
Town of Union, Broome County

Prepared by AMB on 12/22/2016





Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Approximate Project Area

Bat Occurrences

Indiana Bat

Northern Long-eared Bat

NEW YORK STATE OF OPPORTUNITY

Department of Environmental Conservation

0 0.25 0.5 1 1.5 2 Miles

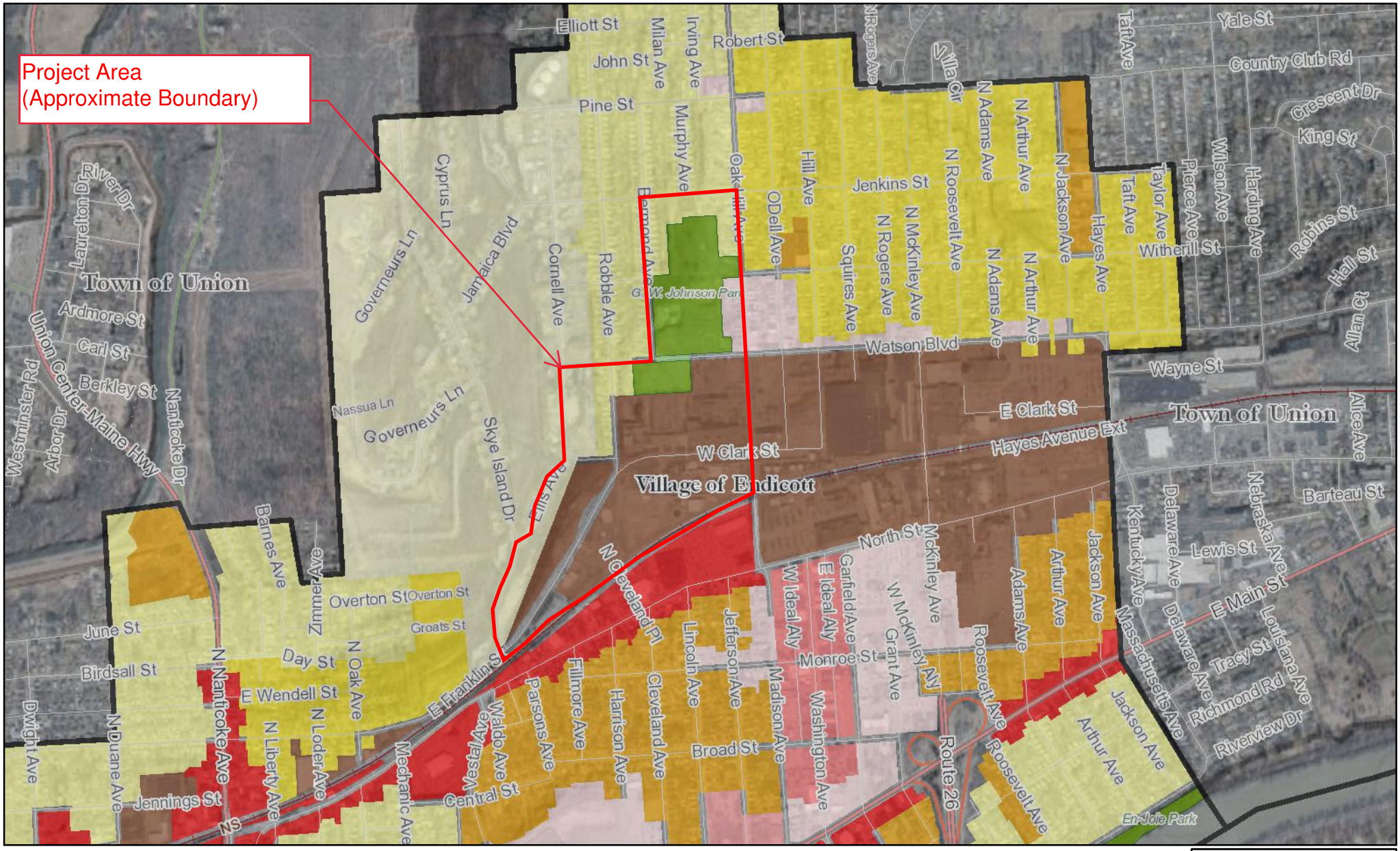
1 inch = 3,000 feet

Disclaimer: this map was prepared by the NYSDEC using the most current data available. It is deemed accurate but is not guaranteed. NYSDEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data. This map may contain information that is considered sensitive and therefore the distribution of this map is strictly prohibited.

Attachment 7

Broome County Municipal Zoning Map,
NYS Agricultural Districts Map,
USDA NRCS Soil Resource Map,
USDA Soil Properties Rating Report,
USDA NRCS Shallow Excavations
Suitabilities and Limitations Map,
& USDA NRCS Farmland Suitabilities
and Limitations Map

Village of Endicott



Open Space District	Urban Two Family	Central Business District	Industrial
Suburban Single Family	Urban Multi-Family	Commercial Office	
Urban Single Family	Neighborhood Commercial	General Commercial	

1 inch = 1,051 feet

0 650 1,300

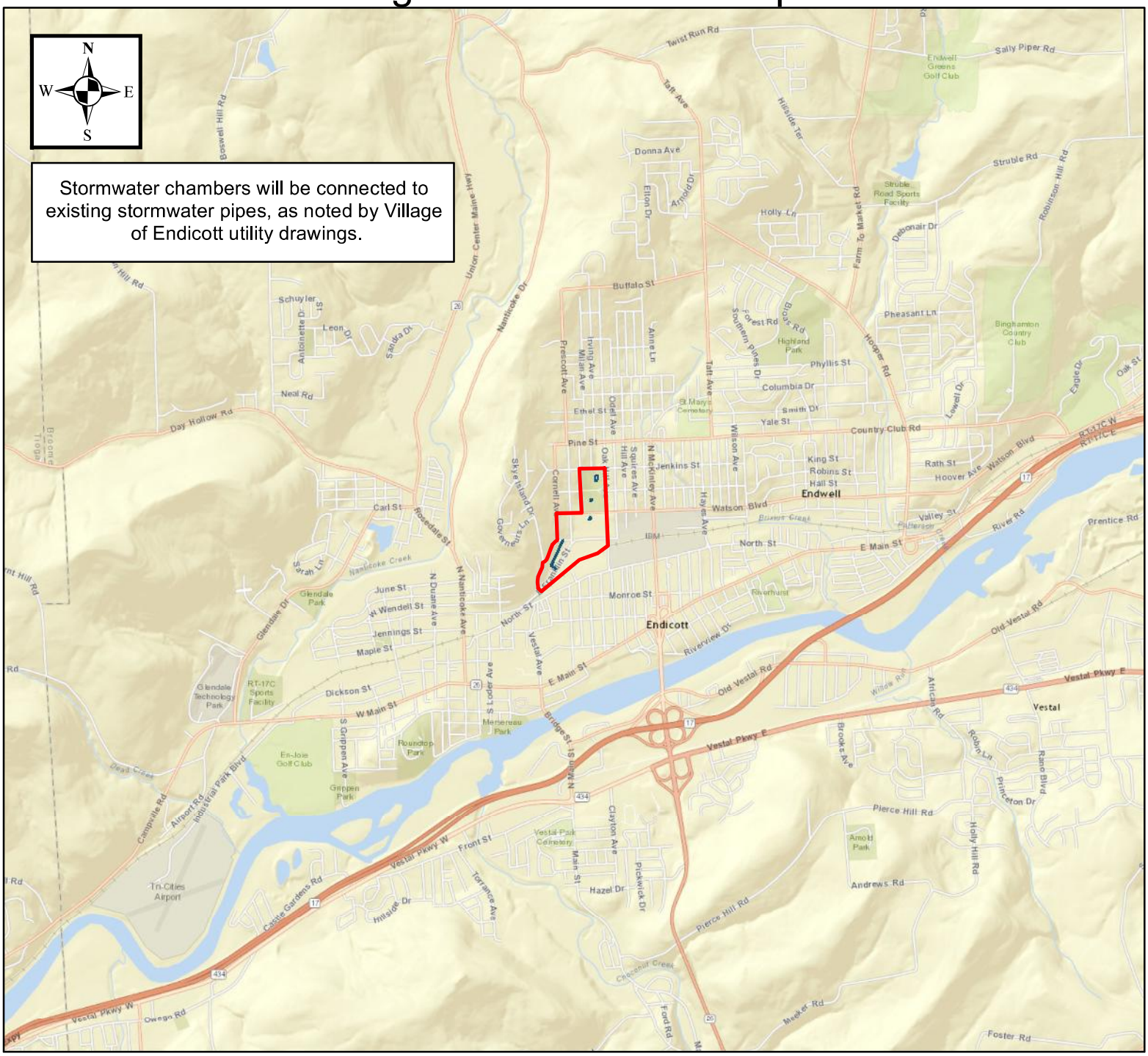
ft

Broome County, NY GIS www.bcgis.com

N

DISCLAIMER: Broome County does not guarantee the accuracy of the data presented. Information should be used for illustrative purposes only.

Agricultural District Map



TECTONIC
Practical Solutions, Exceptional Service

0 2,500 5,000 10,000 Feet

1:50,000

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)
- Agricultural Districts (2016)

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/2/2017

NYS Agricultural District Map data provided by Cornell University Geospatial Information Repository and available at http://cugir.mannlib.cornell.edu/datatheme.jsp?id=2

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Broome County, New York

Central Endicott Drainage Improvements

June 2, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface..... 2
How Soil Surveys Are Made..... 5
Soil Map..... 8
Soil Map (Central Endicott Drainage Improvements)..... 9
Legend..... 10
Map Unit Legend (Central Endicott Drainage Improvements)..... 11
Map Unit Descriptions (Central Endicott Drainage Improvements)..... 11
Broome County, New York..... 13
Cw—Cut and fill lands, loamy materials..... 13
Cy—Cut and fill lands, silty materials..... 14
LdD—Lordstown channery silt loam, 15 to 25 percent slopes..... 15
LoE—Lordstown and Oquaga channery silt loams, 25 to 35 percent slopes..... 16
MhD—Bath channery silt loam, 15 to 25 percent slopes..... 18
VoC—Volusia channery silt loam, 8 to 15 percent slopes..... 20
Soil Information for All Uses..... 22
Suitabilities and Limitations for Use..... 22
Building Site Development..... 22
Shallow Excavations (Central Endicott Drainage Improvements)..... 22
Land Classifications..... 28
Farmland Classification (Central Endicott Drainage Improvements)..... 29
References..... 34

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Central Endicott Drainage Improvements)

Map Scale: 1:6,530 if printed on A portrait (8.5" x 11") sheet.

Meters
0 50 100 200 300

Feet
0 300 600 1200 1800

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- 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
- Spoil Area
- Stony Spot
- Very Stony Spot
- 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 1:15,800.

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: Broome County, New York
Survey Area Data: Version 14, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

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 (Central Endicott Drainage Improvements)

Broome County, New York (NY007)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
Cw	Cut and fill lands, loamy materials	17.6	21.5%
Cy	Cut and fill lands, silty materials	52.5	63.9%
LdD	Lordstown channery silt loam, 15 to 25 percent slopes	0.0	0.0%
LoE	Lordstown and Oquaga channery silt loams, 25 to 35 percent slopes	0.1	0.1%
MhD	Bath channery silt loam, 15 to 25 percent slopes	5.2	6.4%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	6.7	8.2%
Totals for Area of Interest		**82.1**	**100.0%**

Map Unit Descriptions (Central Endicott Drainage Improvements)

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, 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 and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils 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. Other minor components, however, have properties and behavioral 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*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one 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.

Broome County, New York

Cw—Cut and fill lands, loamy materials

Map Unit Setting

National map unit symbol: 9pxf
Mean annual precipitation: 36 to 45 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 110 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, loamy, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Loamy

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 70 inches: channery loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Mardin

Percent of map unit: 5 percent
Hydric soil rating: No

Volusia

Percent of map unit: 5 percent
Hydric soil rating: No

Canaseraga

Percent of map unit: 5 percent
Hydric soil rating: No

Dalton

Percent of map unit: 5 percent
Hydric soil rating: No

Cy—Cut and fill lands, silty materials

Map Unit Setting

National map unit symbol: 9pxg
Mean annual precipitation: 36 to 45 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 110 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, silty, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Silty

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 70 inches: silt loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Unadilla

Percent of map unit: 5 percent
Hydric soil rating: No

Fluvaquents

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Scio

Percent of map unit: 5 percent

Hydric soil rating: No

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Udifluvents

Percent of map unit: 5 percent
Hydric soil rating: No

LdD—Lordstown channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2wzmr
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Lordstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lordstown

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till derived from sandstone and siltstone

Typical profile

Ap - 0 to 7 inches: channery silt loam
Bw1 - 7 to 17 inches: channery silt loam
Bw2 - 17 to 26 inches: channery silt loam
C - 26 to 30 inches: very channery silt loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Mardin
Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Cadosia, very stony
Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Arnot
Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, interfluve, crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

LoE—Lordstown and Oquaga channery silt loams, 25 to 35 percent slopes

Map Unit Setting
National map unit symbol: 9pxn
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 45 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 110 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Oquaga and similar soils: 40 percent
Lordstown and similar soils: 40 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oquaga

Setting

Landform: Benches, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till with lithology dominated by reddish sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: channery silt loam
H2 - 6 to 32 inches: very channery silt loam
H3 - 32 to 36 inches: bedrock

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Lordstown

Setting

Landform: Benches, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from sandstone and siltstone

Typical profile

H1 - 0 to 7 inches: channery silt loam
H2 - 7 to 26 inches: channery silt loam
H3 - 26 to 28 inches: very channery silt loam
H4 - 28 to 32 inches: bedrock

Properties and qualities

Slope: 25 to 35 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Mardin
Percent of map unit: 5 percent
Hydric soil rating: No

Arnot
Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 5 percent
Hydric soil rating: Unranked

Cattaraugus
Percent of map unit: 5 percent
Hydric soil rating: No

MhD—Bath channery silt loam, 15 to 25 percent slopes

Map Unit Setting
National map unit symbol: 2v316
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition
Bath and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bath

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw1 - 9 to 15 inches: channery silt loam
Bw2 - 15 to 25 inches: channery loam
E - 25 to 29 inches: channery loam
Bx - 29 to 52 inches: very channery silt loam
C - 52 to 72 inches: very channery silt loam

Properties and qualities

Slope: 15 to 25 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 26 to 38 inches to fragipan
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Lordstown

Percent of map unit: 10 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountaintop, side slope, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: No

VoC—Volusia channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2srfj
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Volusia and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Volusia

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 15 inches: channery silt loam
Eg - 15 to 17 inches: channery silt loam
Bx1 - 17 to 29 inches: channery loam
Bx2 - 29 to 54 inches: channery loam
C - 54 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Mardin

Percent of map unit: 6 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chippewa

Percent of map unit: 4 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Shallow Excavations (Central Endicott Drainage Improvements)

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by

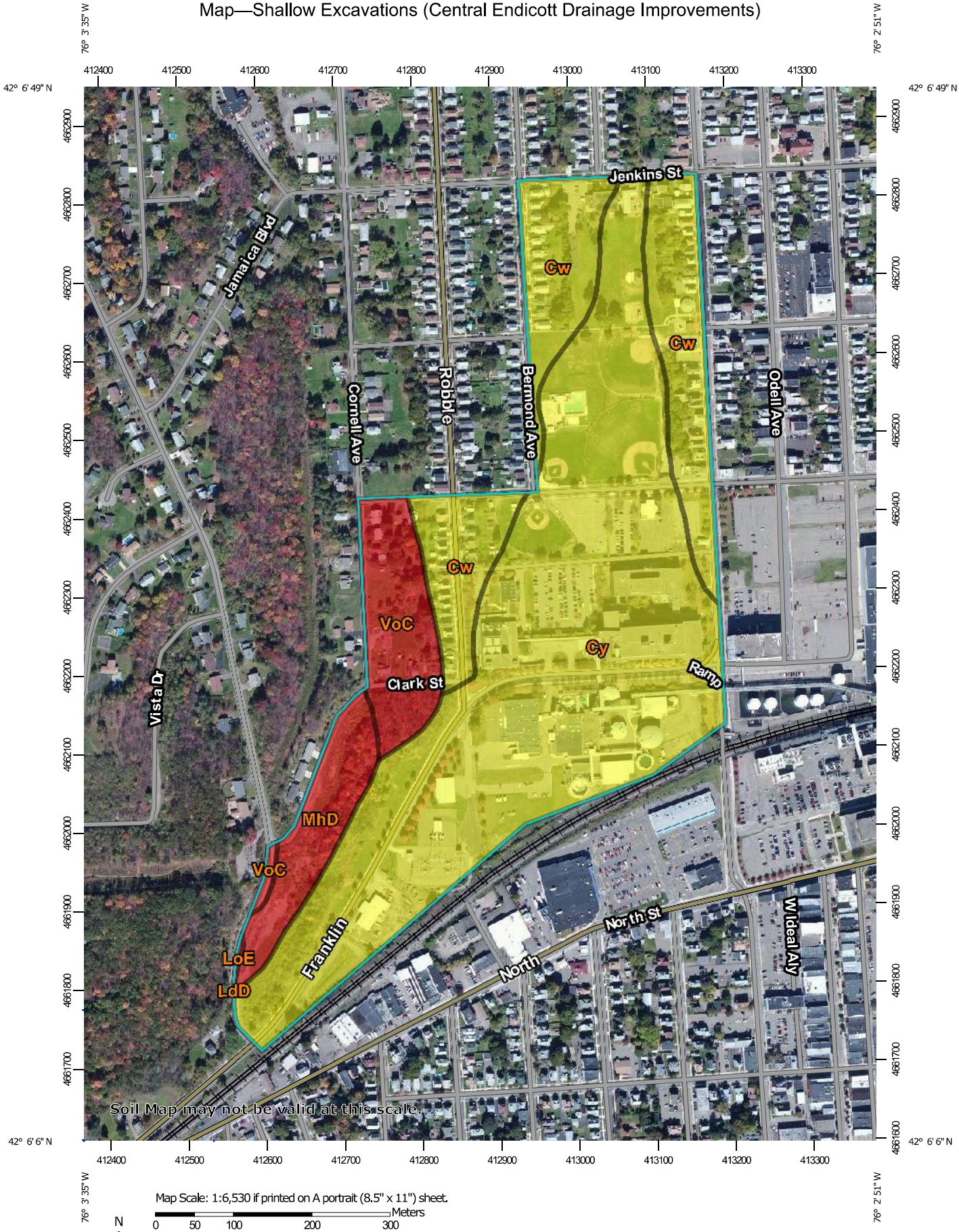
special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Shallow Excavations (Central Endicott Drainage Improvements)



Map Scale: 1:6,530 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Lines

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Points

Very limited

Somewhat limited

Not limited

Not rated or not available

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 1:15,800.

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: Broome County, New York
Survey Area Data: Version 14, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

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.

Tables—Shallow Excavations (Central Endicott Drainage Improvements)

Shallow Excavations— Summary by Map Unit — Broome County, New York (NY007)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
Cw	Cut and fill lands, loamy materials	Somewhat limited	Udorthents, loamy (80%)	Depth to saturated zone (0.35)	17.6	21.5%
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
Cy	Cut and fill lands, silty materials	Somewhat limited	Udorthents, silty (75%)	Depth to saturated zone (0.35)	52.5	63.9%
				Dusty (0.01)		
				Unstable excavation walls (0.01)		
LdD	Lordstown channery silt loam, 15 to 25 percent slopes	Very limited	Lordstown (85%)	Depth to hard bedrock (1.00)	0.0	0.0%
				Slope (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (5%)	Depth to saturated zone (1.00)		
				Slope (0.63)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Cadosia, very stony (5%)	Slope (1.00)		
				Large stones (0.10)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Arnot (5%)	Depth to hard bedrock (1.00)		
				Slope (0.04)		
				Unstable excavation walls (0.01)		

Shallow Excavations— Summary by Map Unit — Broome County, New York (NY007)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
				Dusty (0.01)		
LoE	Lordstown and Oquaga channery silt loams, 25 to 35 percent slopes	Very limited	Oquaga (40%)	Depth to hard bedrock (1.00)	0.1	0.1%
				Slope (1.00)		
				Dusty (0.01)		
				Unstable excavation walls (0.01)		
			Lordstown (40%)	Depth to hard bedrock (1.00)		
				Slope (1.00)		
				Dusty (0.01)		
				Unstable excavation walls (0.01)		
MhD	Bath channery silt loam, 15 to 25 percent slopes	Very limited	Bath (85%)	Slope (1.00)	5.2	6.4%
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Lordstown (10%)	Depth to hard bedrock (1.00)		
				Slope (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (5%)	Depth to saturated zone (1.00)		
				Slope (0.63)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
VoC	Volusia channery silt loam, 8 to 15 percent slopes	Very limited	Volusia (90%)	Depth to saturated zone (1.00)	6.7	8.2%
				Slope (0.63)		
				Dense layer (0.50)		

Shallow Excavations— Summary by Map Unit — Broome County, New York (NY007)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (6%)	Slope (1.00)		
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Chippewa (4%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
Totals for Area of Interest					**82.1**	**100.0%**

Shallow Excavations— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	70.1	85.4%
Very limited	12.0	14.6%
Totals for Area of Interest	**82.1**	**100.0%**

Rating Options—Shallow Excavations (Central Endicott Drainage Improvements)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (Central Endicott Drainage Improvements)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Map—Farmland Classification (Central Endicott Drainage Improvements)

Map Scale: 1:6,530 if printed on A portrait (8.5" x 11") sheet.

Meters

0 50 100 200 300

Feet

0 300 600 1200 1800

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Water Features

MAP INFORMATION

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Broome County, New York
Survey Area Data: Version 14, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

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.

Table—Farmland Classification (Central Endicott Drainage Improvements)

Farmland Classification— Summary by Map Unit — Broome County, New York (NY007)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Cw	Cut and fill lands, loamy materials	Not prime farmland	17.6	21.5%
Cy	Cut and fill lands, silty materials	Not prime farmland	52.5	63.9%
LdD	Lordstown channery silt loam, 15 to 25 percent slopes	Not prime farmland	0.0	0.0%
LoE	Lordstown and Oquaga channery silt loams, 25 to 35 percent slopes	Not prime farmland	0.1	0.1%
MhD	Bath channery silt loam, 15 to 25 percent slopes	Not prime farmland	5.2	6.4%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance	6.7	8.2%
Totals for Area of Interest			**82.1**	**100.0%**

Rating Options—Farmland Classification (Central Endicott Drainage Improvements)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Attachment 8

State Historic and Tribal Historic Preservation Office Documentation:

SHPO Response
Delaware Tribe Response
Oneida Indian Nation Response
Stockbridge-Munsee Community Band of Mohicans
Affidavit of Mailing for THPO
Letter Sent to Delaware Nation
Letter Sent to Delaware Tribe of Indians
Letter Sent to Oneida Indian Nation
Letter Sent to Seneca Cayuga Tribe
Letter Sent to Stockbridge-Munsee Community Band of Mohicans
Letter sent to Tuscarora Nation

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 13, 2017

Ms. Dina Peoples
Geologist II
Tectonic Engineering
70 Pleasant Hill Road
Mountainville, NY 10953

Re: HUD
Central Endicott Drainage Study
Village of Endicott, Broome County, NY
17PR01763

Dear Ms. Peoples:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials 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).

Based on the information provided, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. Should the project design be changed SHPO recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

cc: Andrea Gievers, Tectonic

Delaware Tribe Historic Preservation Representatives
P.O. Box 64
Pocono Lake, PA 18347
sbachor@delawaretribe.org

June 1, 2017

Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, Hampton Plaza
Albany, NY 12207

Re: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Ms. Shultz,

Thank you for sending the Delaware Tribe additional information regarding the above referenced project. Our review indicates that there are no culturally significant areas within the proposed project area. We have no objection to the proposed project.

In the event a concentration of artifacts and/or in the unlikely event any human remains are accidentally unearthed during the project that all work is halted until the Delaware Tribe of Indians is informed of the inadvertent discovery and a qualified archaeologist can evaluate the find.

We appreciate your cooperation and look forward to working together on our shared interests in preserving Delaware cultural heritage. If you have any questions, feel free to contact this office by phone at (610) 761-7452 or by e-mail at sbachor@delawaretribe.org..

Sincerely,

Susan Bachor
Delaware Tribe Historic Preservation Representative

Gievers, Andrea

From: Jesse Bergevin <jbergevin@oneida-nation.org>
Sent: Monday, May 1, 2017 1:47 PM
To: Barthelme, Mary (STORMRECOVERY)
Cc: Shultz, Alicia (NYSHCR); Gievers, Andrea
Subject: RE: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Mary,

I have reviewed the materials provided for this project and it appears, from my review, that the project lies outside of the Oneida aboriginal territory.

Thank you,

Jesse Bergevin | Historic Resources Specialist
Oneida Indian Nation | 2037 Dream Catcher Plaza, Oneida, NY 13421-0662
jbergevin@oneida-nation.org | www.oneidaindiannation.com
315.829.8463 Office | 315.829.8473 Fax

From: Barthelme, Mary (STORMRECOVERY) [mailto:Mary.Barthelme@stormrecovery.ny.gov]
Sent: Tuesday, April 18, 2017 10:30 AM
To: Jesse Bergevin
Cc: Shultz, Alicia (NYSHCR); Gievers, Andrea
Subject: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear Jesse,

Please see the attached consultation for the above-mentioned project.

A hard copy is being sent today by mail. Please let me know if you have any questions.

Thank you,

Mary Barthelme

Mary Barthelme
Environmental and Historic Preservation Specialist
Governor's Office of Storm Recovery
99 Washington Avenue, Suite 1224, Albany NY 12260
O: (518) 473-0154 I C: (646) 706-6748 I F: (518) 474-6102 I
Mary.Barthelme@stormrecovery.ny.gov
www.stormrecovery.ny.gov

*This email and any attachments to it are intended only for the identified recipients as **Draft & Confidential.** It may contain proprietary or otherwise legally protected information of GOSR. Any unauthorized use or disclosure of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and delete or otherwise destroy the email and all attachments immediately*

From: Bonney Hartley
To: Barthelme, Mary (STORMRECOVERY)
Cc: Shultz, Alicia (NYSHCR); Gievers, Andrea
Subject: RE: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York
Date: Monday, May 15, 2017 1:56:41 PM

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Dear Mary:
On behalf of Stockbridge-Munsee Community I have completed review of the Central Endicott Drainage Improvements project and determined that we do not have significant cultural resource concerns.
As always, should any cultural resources inadvertently be discovered during construction, we request immediate notice.
Thank you,
Bonney

Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Mohican Tribal Historic Preservation
New York Office
65 1st Street
Troy, NY 12180
(518) 244-3164
Bonney.Hartley@mohican-nsn.gov
www.mohican-nsn.gov

From: Barthelme, Mary (STORMRECOVERY) [mailto:Mary.Barthelme@stormrecovery.ny.gov]
Sent: Tuesday, April 18, 2017 10:33 AM
To: Bonney Hartley
Cc: Shultz, Alicia (NYSHCR); Gievers, Andrea
Subject: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear Bonney,

Please see the attached consultation for the above-mentioned project.

A hard copy is being sent today by mail. Please let me know if you have any questions.

Thank you,

Mary Barthelme

Mary Barthelme
Environmental and Historic Preservation Specialist
Governor's Office of Storm Recovery
99 Washington Avenue, Suite 1224, Albany NY 12260
O: (518) 473-0154 I C: (646) 706-6748 I F: (518) 474-6102 I
Mary.Barthelme@stormrecovery.ny.gov
www.stormrecovery.ny.gov

*This email and any attachments to it are intended only for the identified recipients as **Draft & Confidential.** It may contain proprietary or otherwise legally protected information of GOSR. Any unauthorized use or disclosure of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and delete or otherwise destroy the email and all attachments immediately*

Affidavit of Mailing

STATE OF NEW YORK)
: SS. :
COUNTY OF ALBANY)

MARY BARTHELME, being duly sworn, deposes and says:

1. I am over the age of eighteen years.
2. On April 18, 2017, I mailed true and correct copies of the annexed Central Endicott Drainage Improvements Tribal Consultations dated April 18, 2017 by placing the same in first class post-paid envelopes addressed: SEE ATTACHED LIST.
3. On said day, I deposited said envelopes in a mailbox at 99 Washington Avenue, Albany, New York 12210.

Mary Barthelme

Sworn to before me this
21st day of April, 2017

Notary Public

Stephanie Maier
Notary Public, State of New York
Qualified in Rensselaer County
No. 01MA6337406
Commission Expires February 22, 2020

Ms. Thane Joyal
Attorney at Law, Counsel to
Onondaga Nation
512 Jamesville Avenue
Syracuse, NY 13210

Anthony Gonyea, Faithkeeper-Beaver Clan
Onondaga Nation
RR#1, Box 245
Onondaga Nation via Nedrow, NY 13120

Chet Brooks, Chief
Delaware Tribe of Indians, Delaware
Tribal Headquarters
5100 Tuxedo Blvd
Bartlesville, OK 74006

Leo Henry, Chief
Tuscarora Nation of New York
2006 Mt. Hope Road, Tuscarora
Nation
Lewiston, NY 14092

William Fisher, Chief
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345-3220

Irving Powless, Chief
Onondaga Nation
RR#1, Box 319-B
Onondaga Nation via Nedrow, NY
13120

Shannon Holsey, President
Stockbridge-Munsee Community,
Band of the Mohicans
N8476 Moh He Con Nuck Road
Bowler, WI 54416

Paul Barton, THPO Representative
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345-3220

Ray Halbritter, Nation Representative
Oneida Indian Nation
5218 Patrick Road
Verona, NY 13478

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

April 18, 2017

Kerry Holton, President
Delaware Nation
P.O. Box 825
Anadarko, OK 73005

Re: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear President Kerry Holton:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470a), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, the Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: The Proposed Project involves the construction of stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. In addition, the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street will be rerouted. The project locations are identified on the enclosed maps.

Project Description: CDBG-DR funding is proposed for the construction of stormwater management improvements. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. The three underground detention storage systems will be located wholly within the municipally owned George W. Johnson Park (Park). These locations were identified as the most suitable areas situated adjacent to the incoming trunk lines where installation would have little effect on the existing land use and function of the designated areas. A proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The total estimated footprint of the proposed underground detention storage systems is approximately 6,475 square feet.

The Proposed Project also includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. The stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, however, it will remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

The premise of the proposed underground detention storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, generally consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The underground storage detention systems should effectively reduce peak flows and provide underground flood storage and control, thus, mitigating aboveground flooding in the project area. In addition, the 24" RCP trunk line relocation will mitigate flooding by removing a significant inflow at a critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

During Tropical Storm Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott. This caused the central portion of Endicott to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the project target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the project target area during future storm events. The project will mitigate the flooding risks of the Village by providing an adequate stormwater management system.

A New York State Historic Preservation Office (SHPO) concurrence letter was received on April 13, 2017 regarding this project indicating that no historic properties will be affected. The SHPO response is included with this letter.

With this letter, GOSR respectfully submits for your review the attached documentation for the proposed project described herein. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State St. 408N, Hampton Plaza
Albany, New York 12207

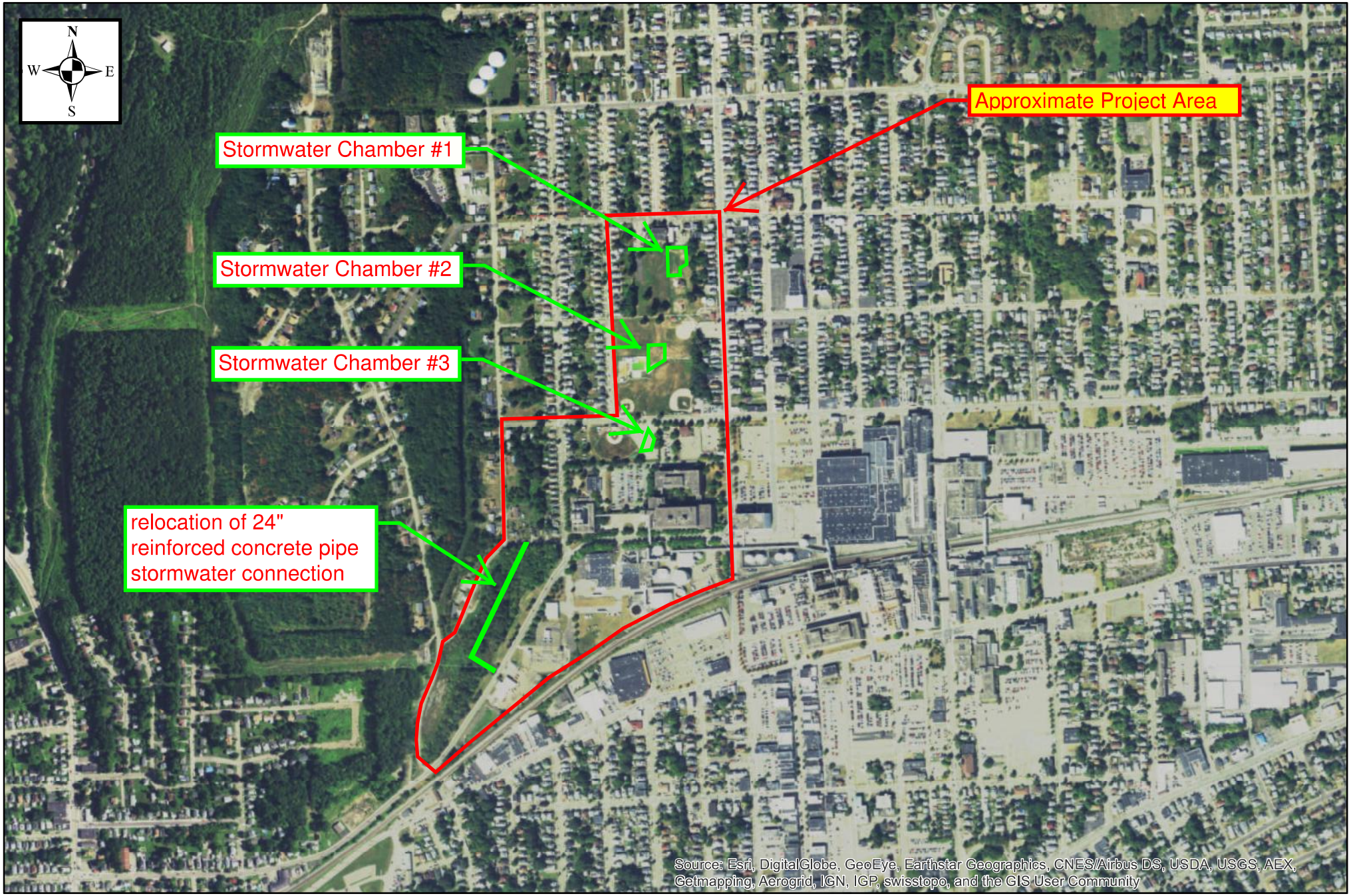
If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosures:
Project Location Maps
Project Site Plans
NY State Historic Preservation Office Letter

Electronic letter sent to:
Kim Penrod, Director of Cultural Resources/Section 106
Delaware Nation
P.O. Box 825
Anadarko, OK 73005

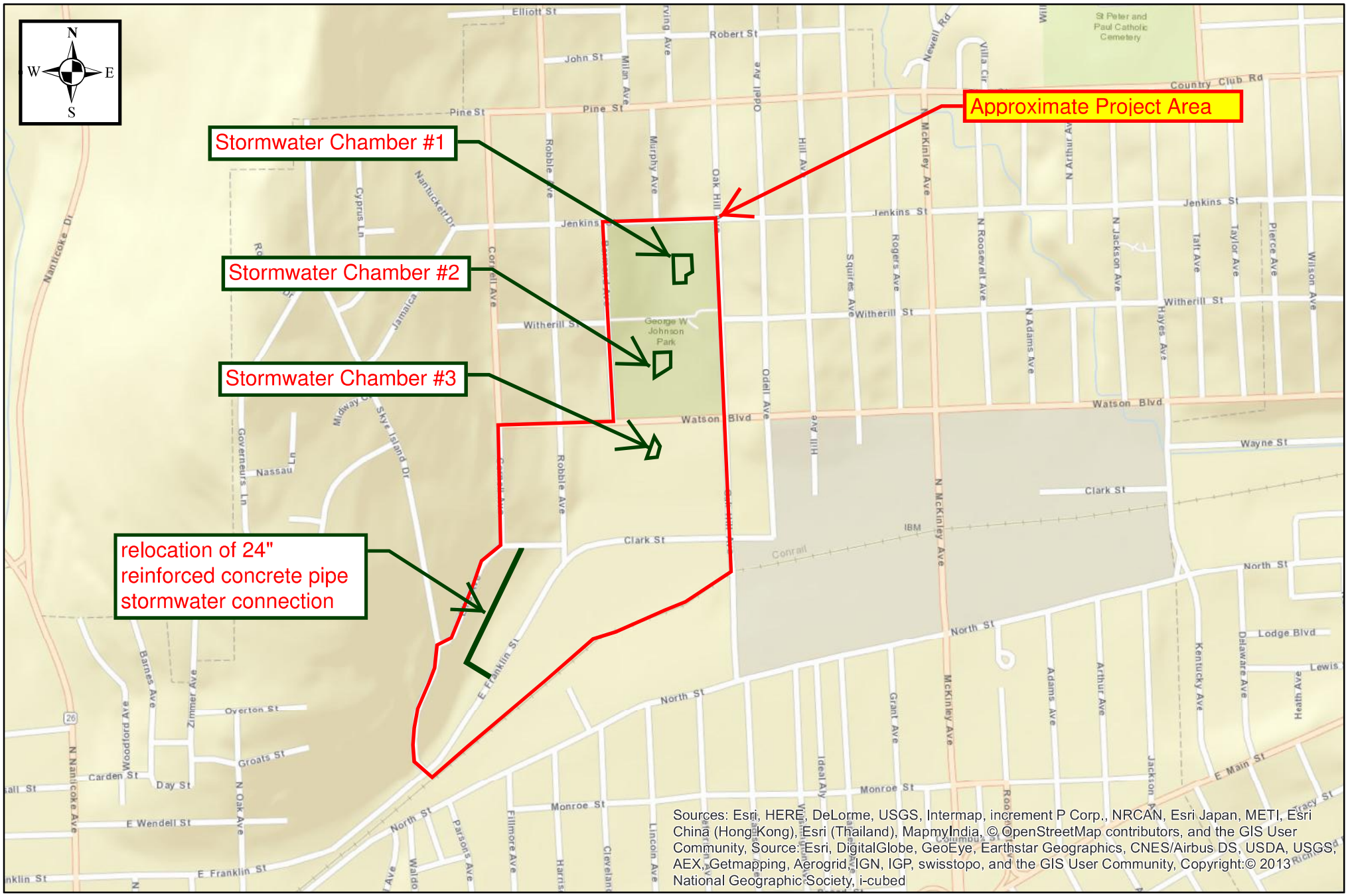


Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Aerial Photograph
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



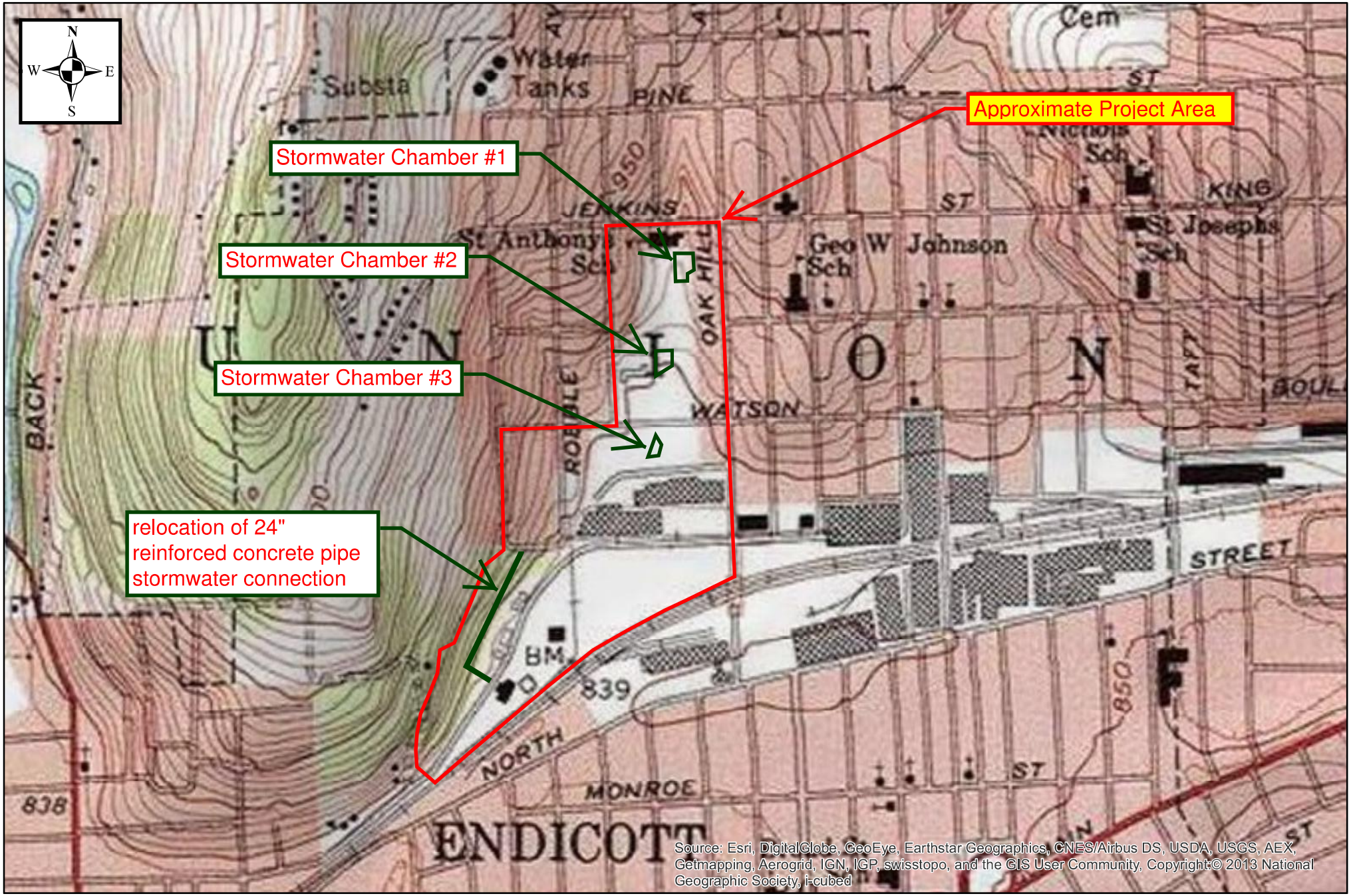
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Street Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Topographic Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

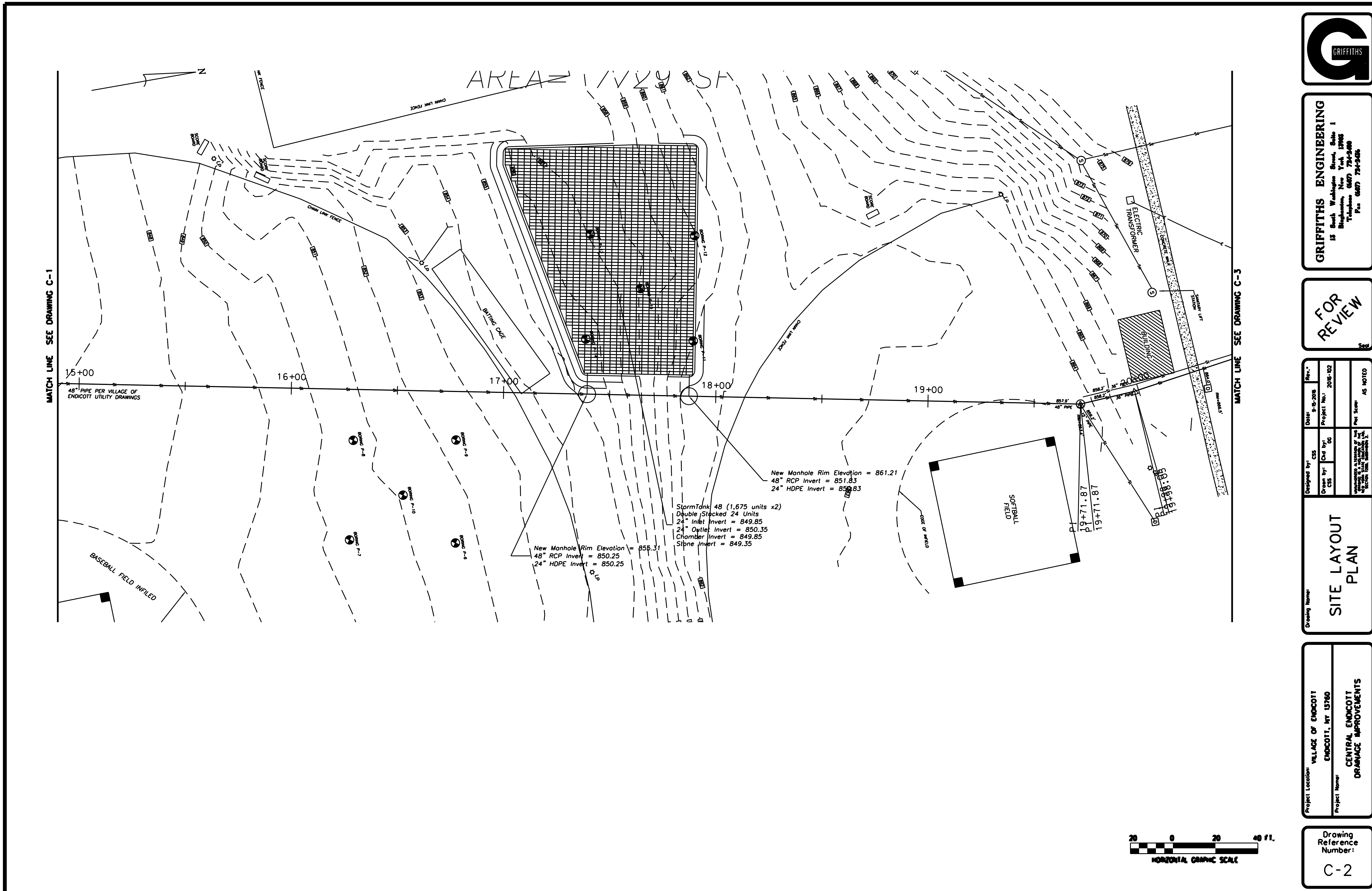
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1


AREA= 17,029 SF
CHAIN LINK FENCE
SCORE BOARD
LP
BATTING CAGE
BORING P-6
BORING P-7
BORING P-8
BORING P-9
BORING P-10
BORING P-11
BORING P-12
BORING P-13
BORING P-14
15+00
16+00
17+00
18+00
19+00
20+00
48" PIPE PER VILLAGE OF ENDICOTT UTILITY DRAWINGS
New Manhole Rim Elevation = 855.31
48" RCP Invert = 850.25
24" HDPE Invert = 850.25
StormTank 48 (1,675 units x2)
Double Stacked 24 Units
24" Inlet Invert = 849.85
24" Outlet Invert = 850.35
Chamber Invert = 849.85
Stone Invert = 849.35
New Manhole Rim Elevation = 861.21
48" RCP Invert = 851.83
24" HDPE Invert = 850.83
BASEBALL FIELD INFILED
SOFTBALL FIELD
EDGE OF INFIELD
ELECTRIC TRANSFORMER
CONCRETE WALK
SANITARY LIFT STATION
BUILDING
857.9' 48" PIPE
858.2' 36" PIPE
15" PIPE
PI 19+71.87
PI 19+98.05
MATCH LINE SEE DRAWING C-1
MATCH LINE SEE DRAWING C-3
20 0 20 40 FT.
HORIZONTAL GRAPHIC SCALE
GRIFFITHS
GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436
FOR REVIEW
Seal
Designed by: CSS
Date: 9-15-2016
Rev.:
Drawn by: CSS
Ckd by: DC
Project No.: 2016-102
Plot Scale: AS NOTED
Drawing Name: SITE LAYOUT PLAN
Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760
Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS
Drawing Reference Number: C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

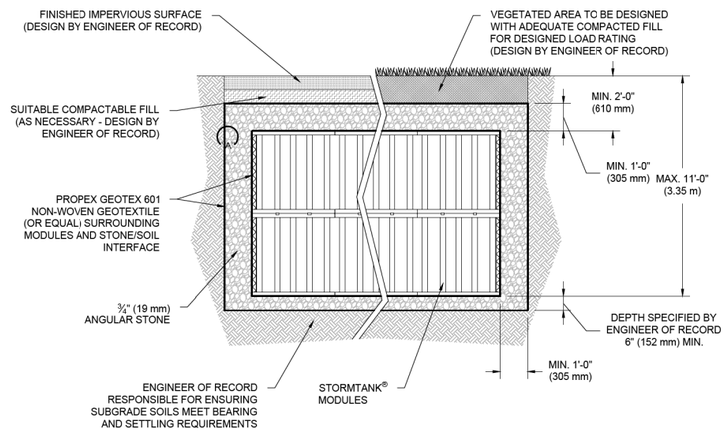
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

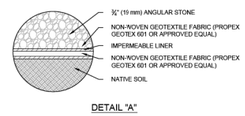
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

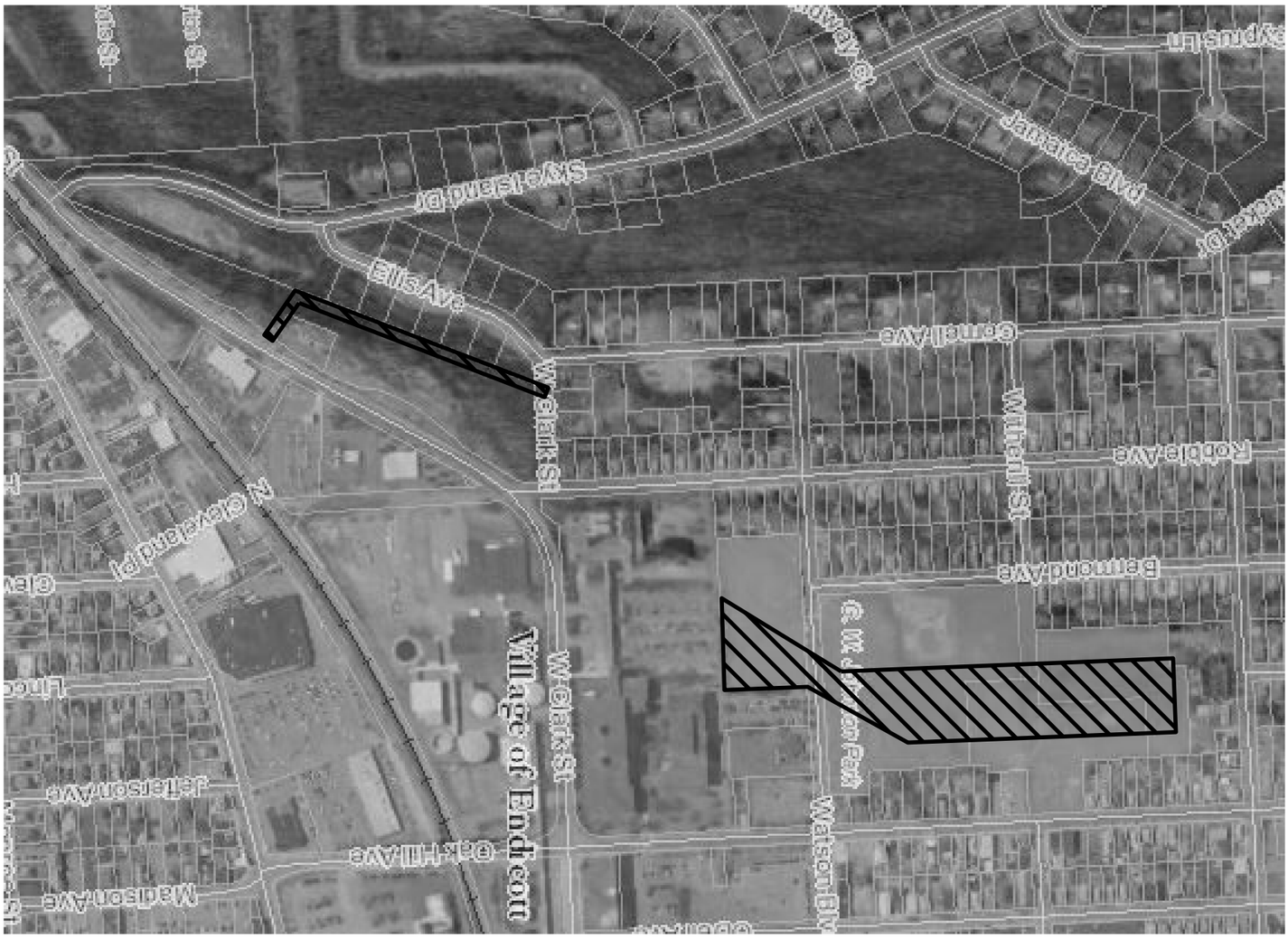
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 13, 2017

Ms. Dina Peoples
Geologist II
Tectonic Engineering
70 Pleasant Hill Road
Mountainville, NY 10953

Re: HUD
Central Endicott Drainage Study
Village of Endicott, Broome County, NY
17PR01763

Dear Ms. Peoples:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials 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).

Based on the information provided, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. Should the project design be changed SHPO recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

cc: Andrea Gievers, Tectonic

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

April 18, 2017

Irving Powless, Chief
Onondaga Nation
RR#1, Box 319-B
Onondaga Nation via Nedrow, NY 13120

Re: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear Chief Irving Powless:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470a), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, the Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: The Proposed Project involves the construction of stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. In addition, the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street will be rerouted. The project locations are identified on the enclosed maps.

Project Description: CDBG-DR funding is proposed for the construction of stormwater management improvements. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. The three underground detention storage systems will be located wholly within the municipally owned George W. Johnson Park (Park). These locations were identified as the most suitable areas situated adjacent to the incoming trunk lines where installation would have little effect on the existing land use and function of the designated areas. A proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The total estimated footprint of the proposed underground detention storage systems is approximately 6,475 square feet.

The Proposed Project also includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. The stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, however, it will remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

The premise of the proposed underground detention storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, generally consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The underground storage detention systems should effectively reduce peak flows and provide underground flood storage and control, thus, mitigating aboveground flooding in the project area. In addition, the 24" RCP trunk line relocation will mitigate flooding by removing a significant inflow at a critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

During Tropical Storm Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott. This caused the central portion of Endicott to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the project target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the project target area during future storm events. The project will mitigate the flooding risks of the Village by providing an adequate stormwater management system.

A New York State Historic Preservation Office (SHPO) concurrence letter was received on April 13, 2017 regarding this project indicating that no historic properties will be affected. The SHPO response is included with this letter.

With this letter, GOSR respectfully submits for your review the attached documentation for the proposed project described herein. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

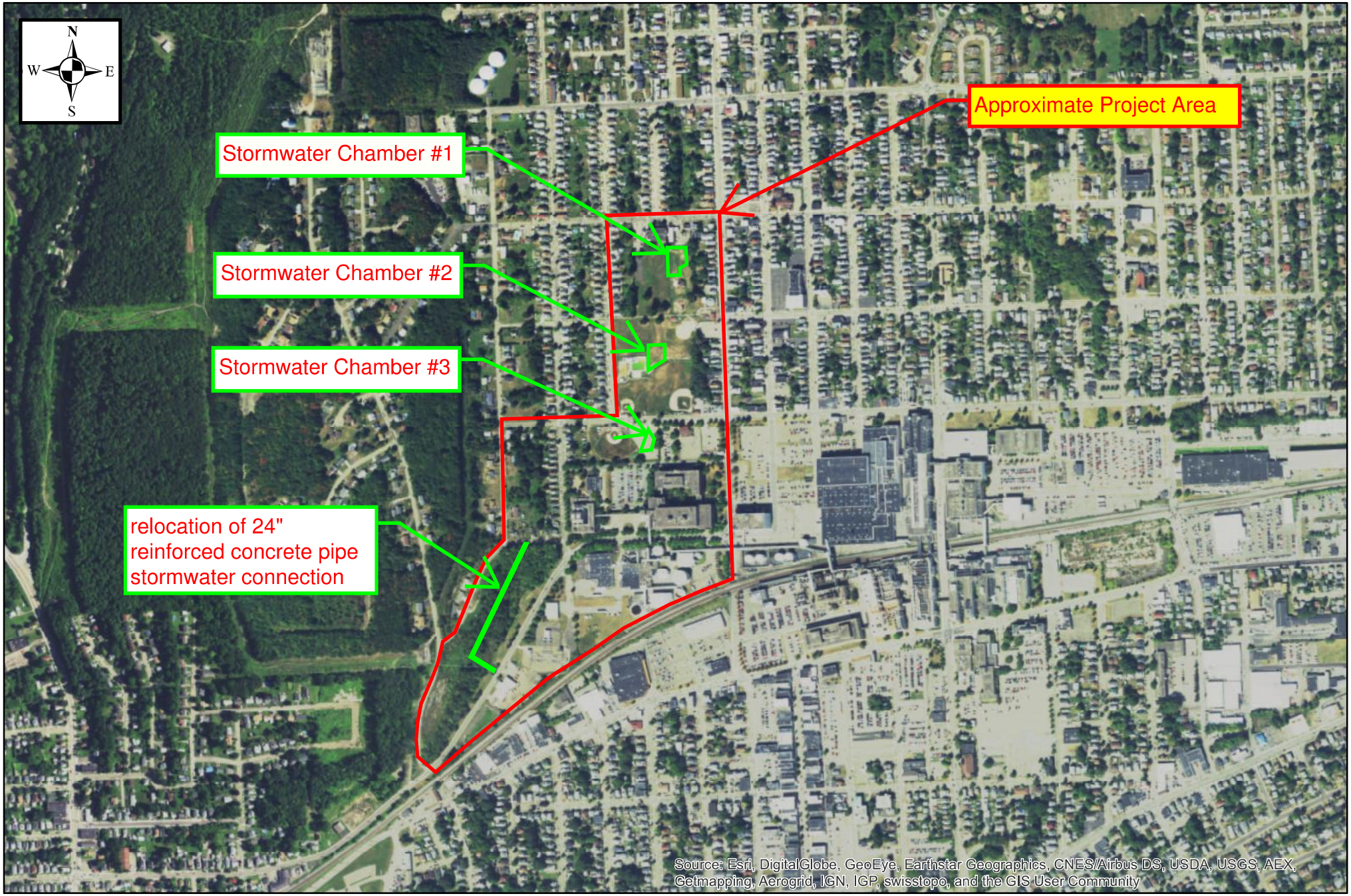
Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State St. 408N, Hampton Plaza
Albany, New York 12207

If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosures:
Project Location Maps
Project Site Plans
NY State Historic Preservation Office Letter



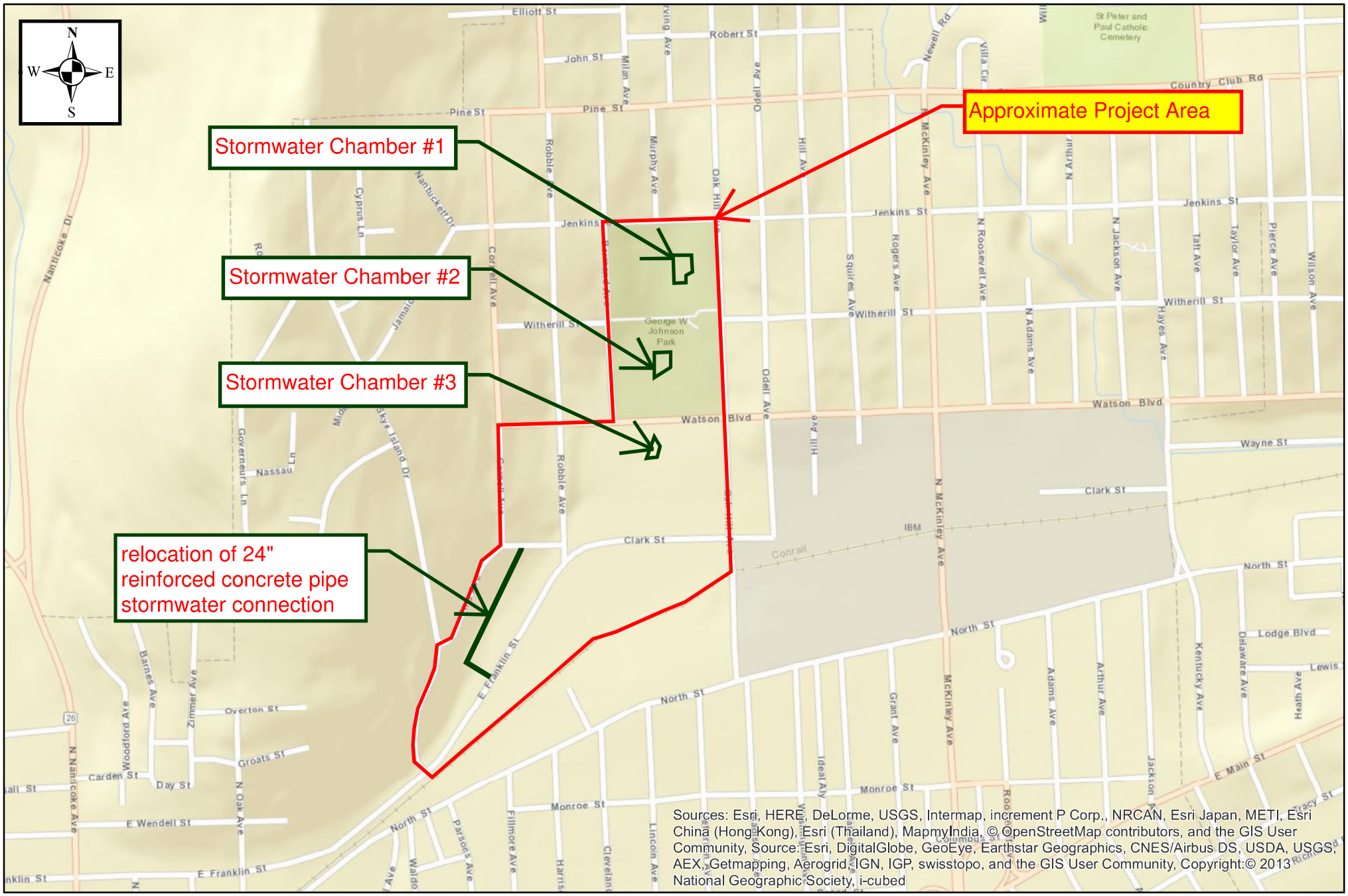
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Aerial Photograph
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



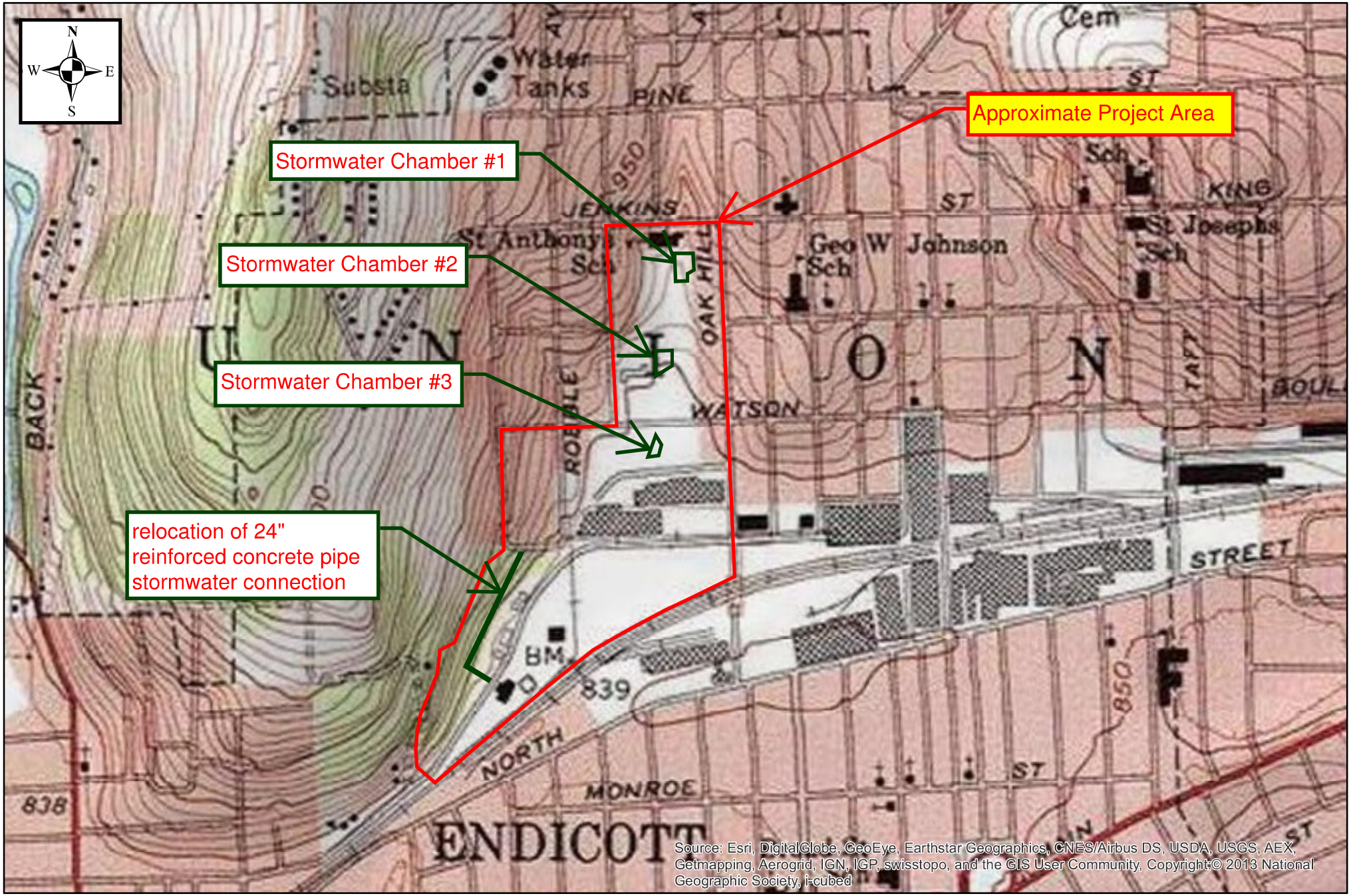
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Street Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Topographic Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

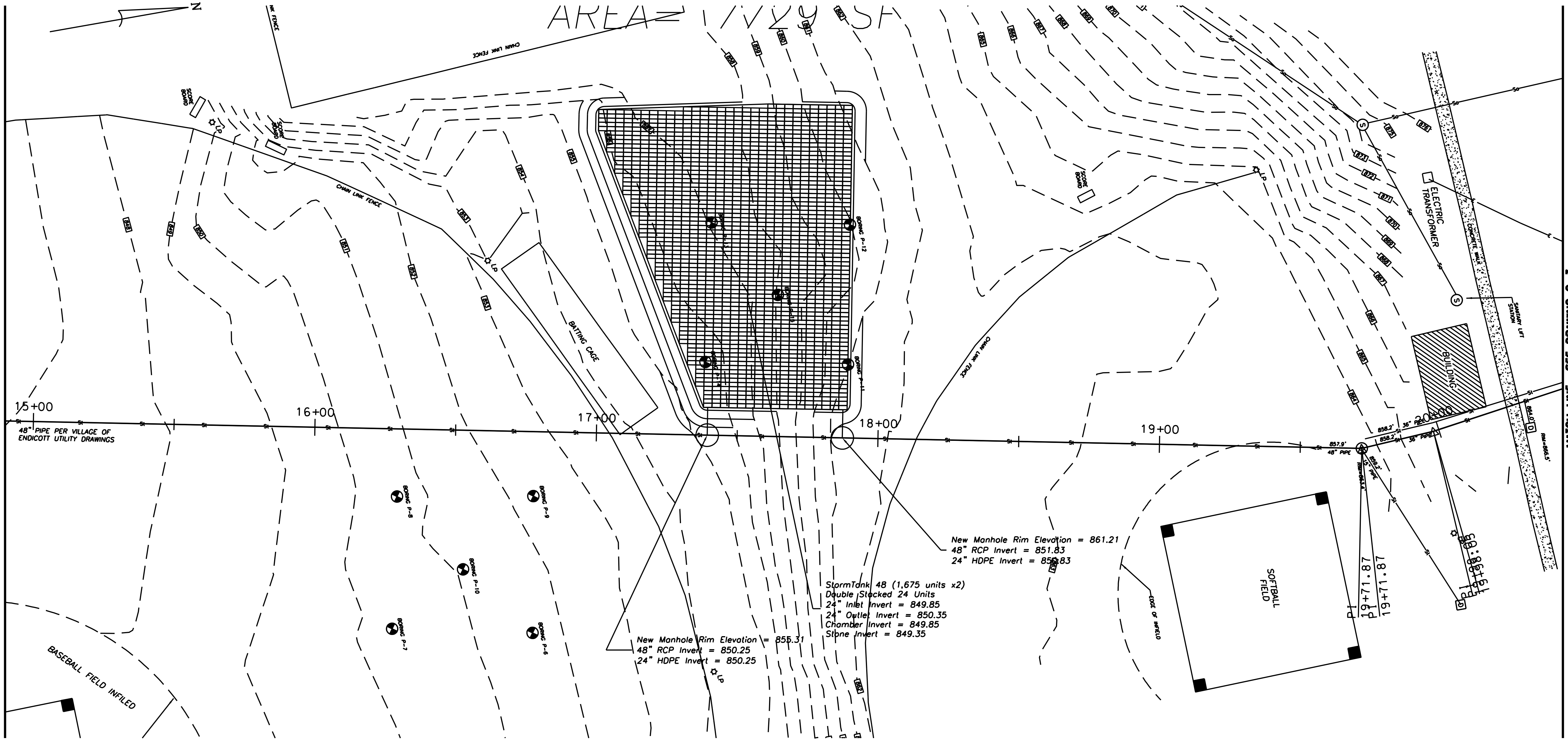
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1



GRIFFITHS

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2015	Rev.:
Drawn by: CSS	Ckd by: DC	Project No.: 2015-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.		Plot Scale: AS NOTED

Drawing Name:
SITE LAYOUT PLAN

Project Location:
VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name:
CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:
C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

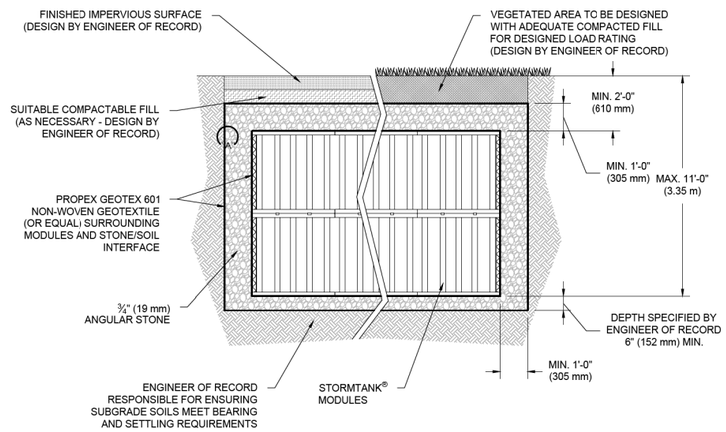
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

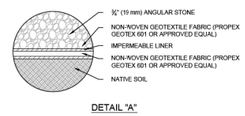
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

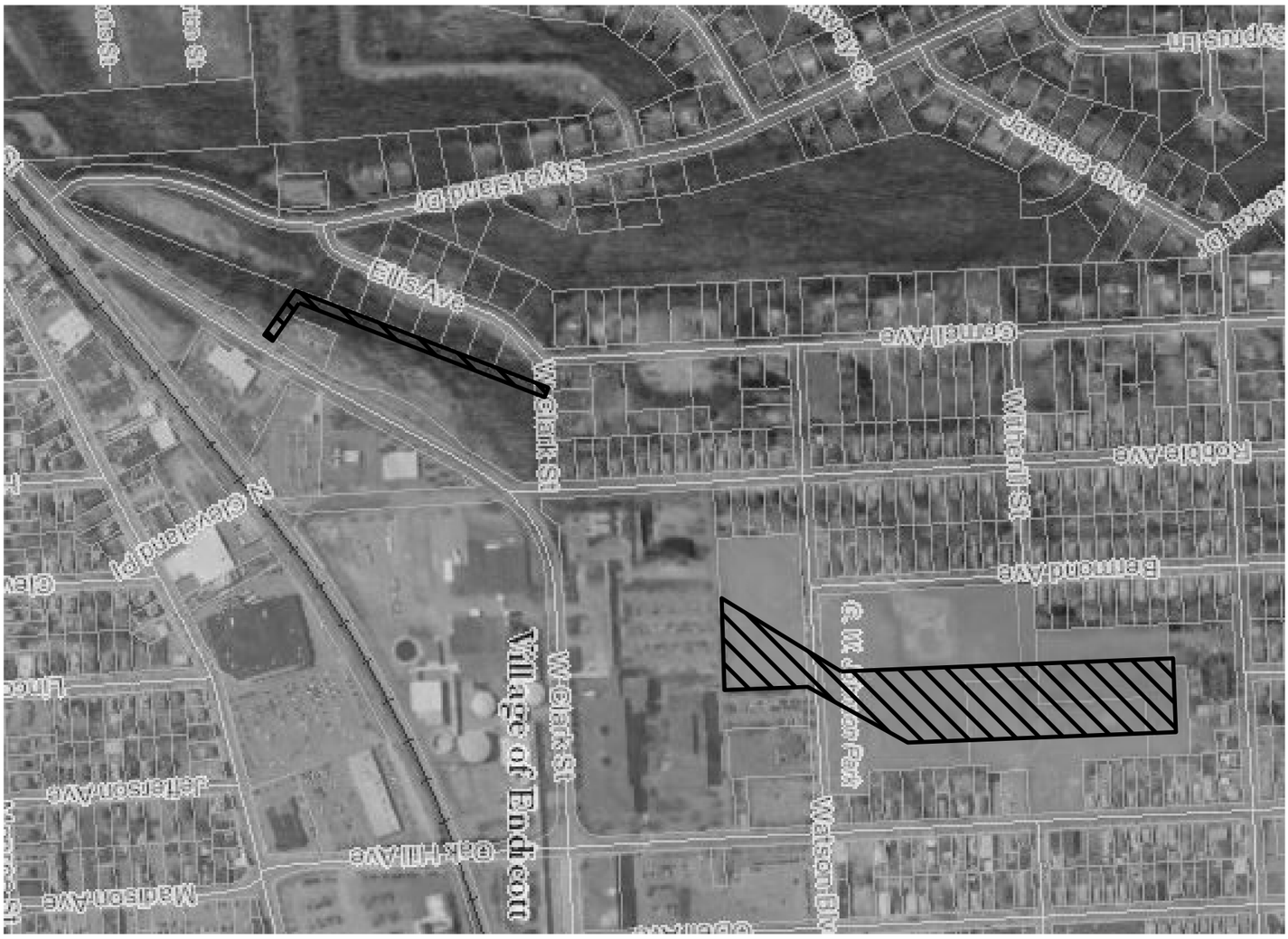
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 13, 2017

Ms. Dina Peoples
Geologist II
Tectonic Engineering
70 Pleasant Hill Road
Mountainville, NY 10953

Re: HUD
Central Endicott Drainage Study
Village of Endicott, Broome County, NY
17PR01763

Dear Ms. Peoples:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials 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).

Based on the information provided, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. Should the project design be changed SHPO recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

cc: Andrea Gievers, Tectonic

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

April 18, 2017

William Fisher, Chief
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345-3220

Re: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear Chief William Fisher:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470a), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, the Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: The Proposed Project involves the construction of stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. In addition, the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street will be rerouted. The project locations are identified on the enclosed maps.

Project Description: CDBG-DR funding is proposed for the construction of stormwater management improvements. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. The three underground detention storage systems will be located wholly within the municipally owned George W. Johnson Park (Park). These locations were identified as the most suitable areas situated adjacent to the incoming trunk lines where installation would have little effect on the existing land use and function of the designated areas. A proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The total estimated footprint of the proposed underground detention storage systems is approximately 6,475 square feet.

The Proposed Project also includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. The stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, however, it will remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

The premise of the proposed underground detention storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, generally consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The underground storage detention systems should effectively reduce peak flows and provide underground flood storage and control, thus, mitigating aboveground flooding in the project area. In addition, the 24" RCP trunk line relocation will mitigate flooding by removing a significant inflow at a critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

During Tropical Storm Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott. This caused the central portion of Endicott to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the project target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the project target area during future storm events. The project will mitigate the flooding risks of the Village by providing an adequate stormwater management system.

A New York State Historic Preservation Office (SHPO) concurrence letter was received on April 13, 2017 regarding this project indicating that no historic properties will be affected. The SHPO response is included with this letter.

With this letter, GOSR respectfully submits for your review the attached documentation for the proposed project described herein. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State St. 408N, Hampton Plaza
Albany, New York 12207

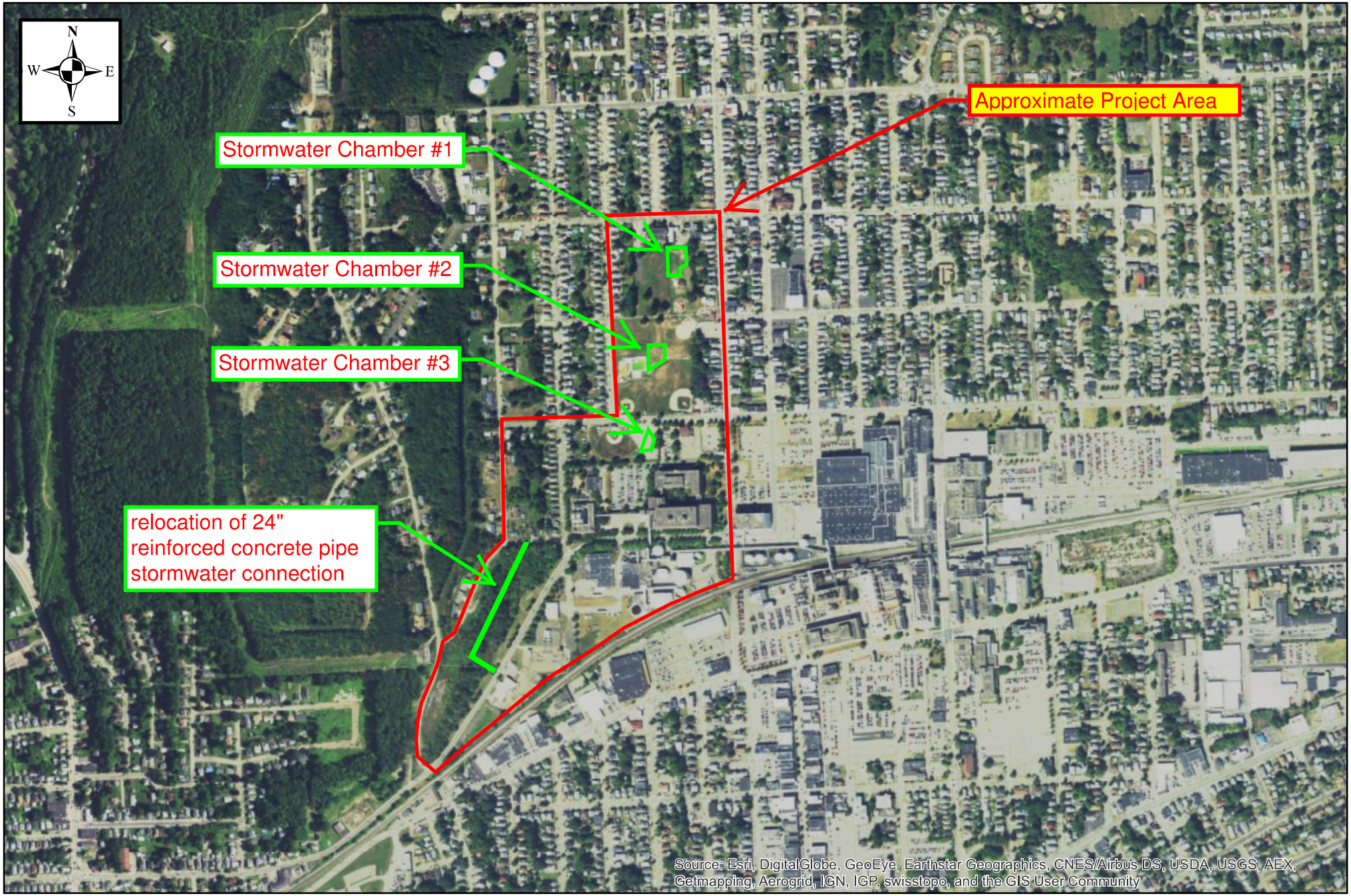
If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosures:
Project Location Maps
Project Site Plans
NY State Historic Preservation Office Letter

Electronic letter sent to:
Paul Barton, THPO Representative
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345-3220

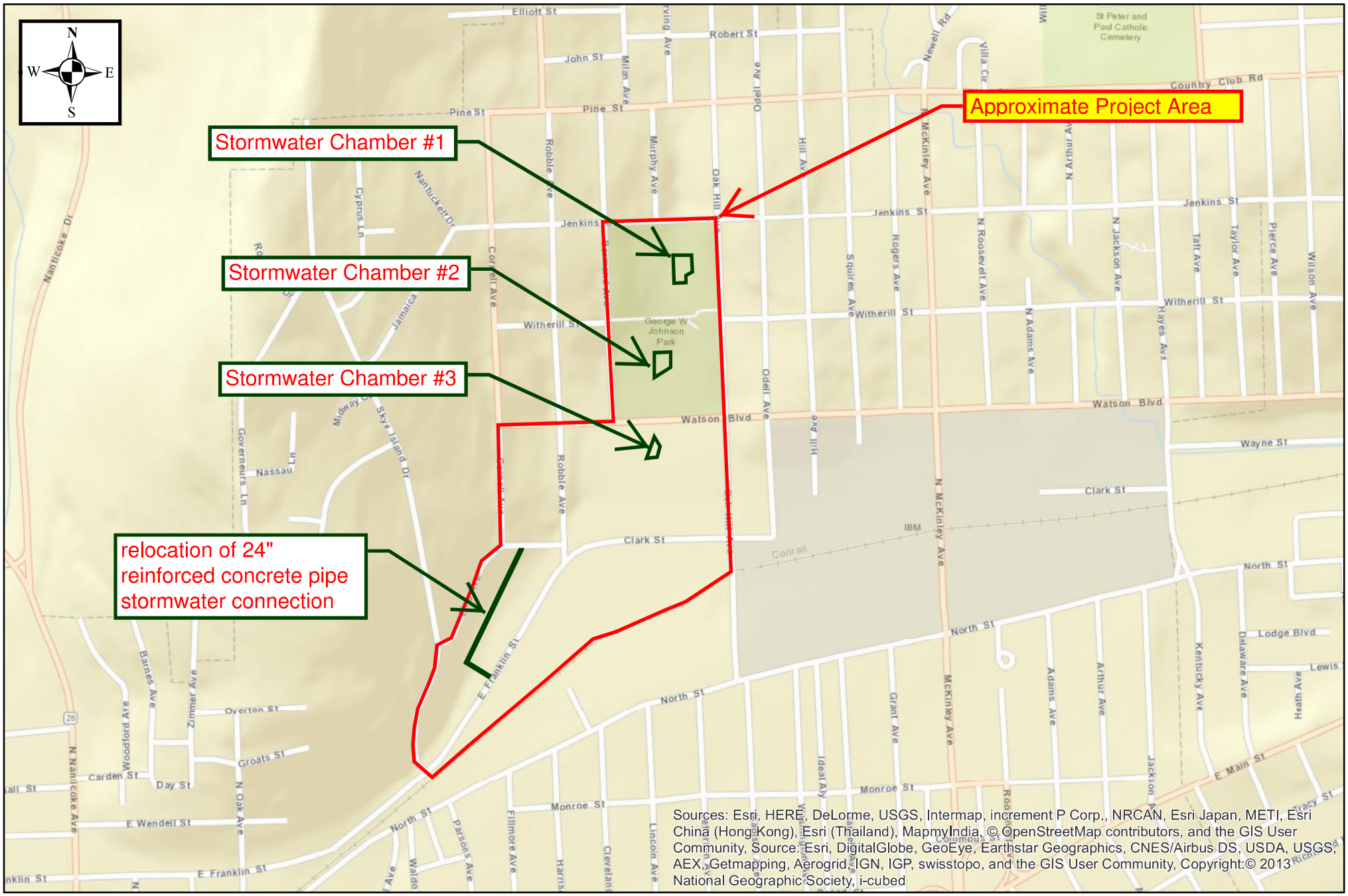


Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Aerial Photograph
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



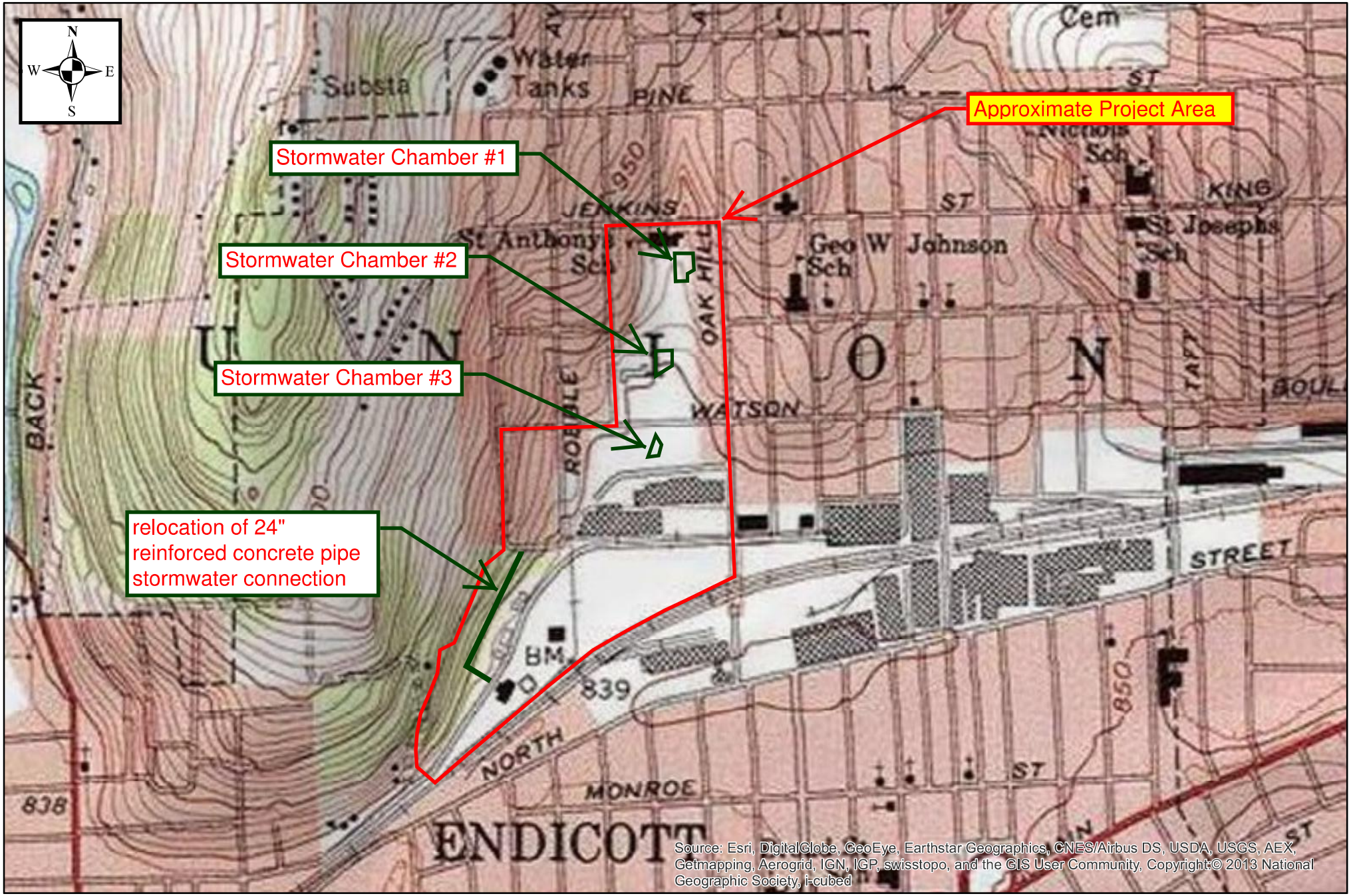
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Street Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Topographic Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

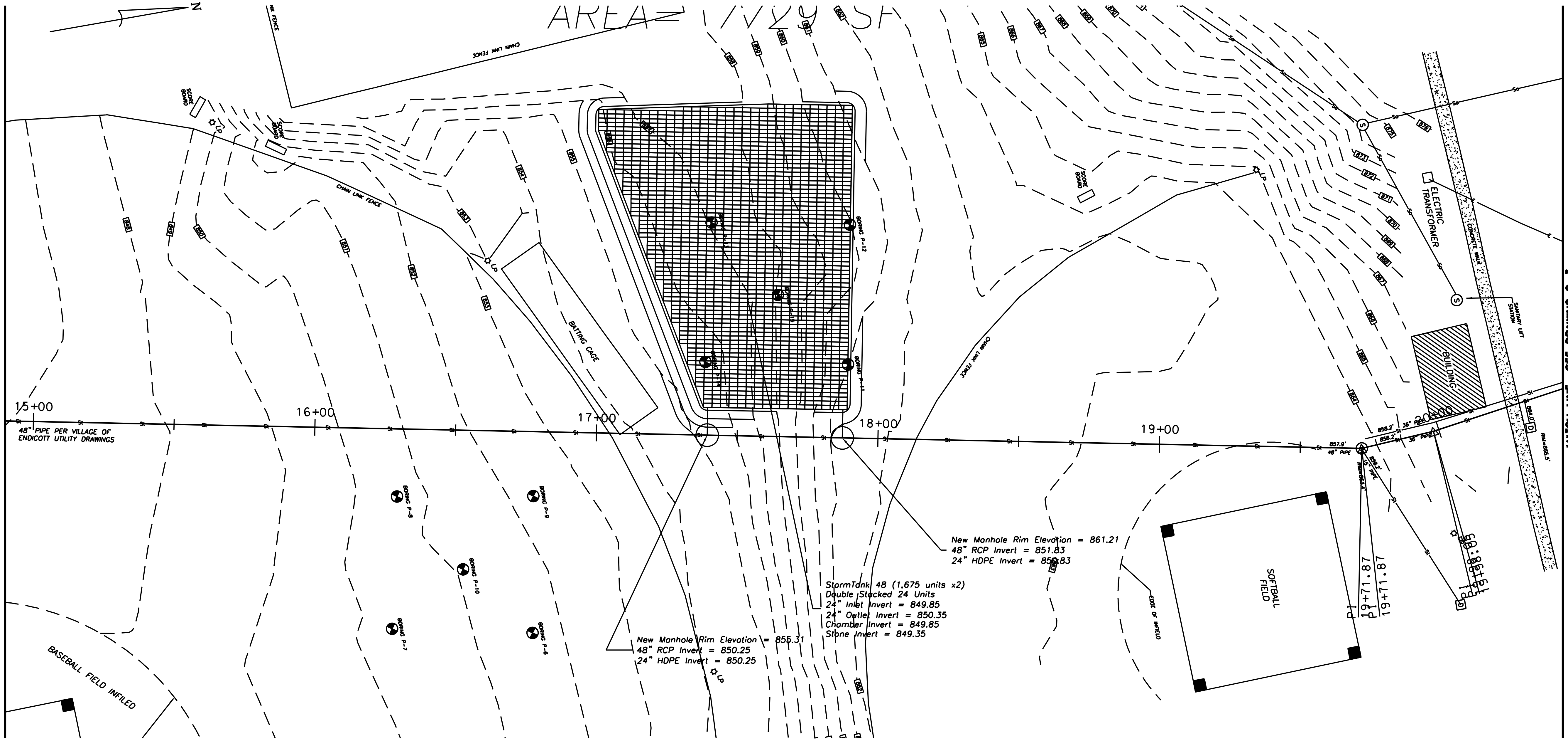
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1



GRIFFITHS

GRIFFITHS ENGINEERING

13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2016	Rev.:
Drawn by: CSS	Chd by: DC	Project No.: 2016-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.		Plot Scale: AS NOTED

Drawing Name:

SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

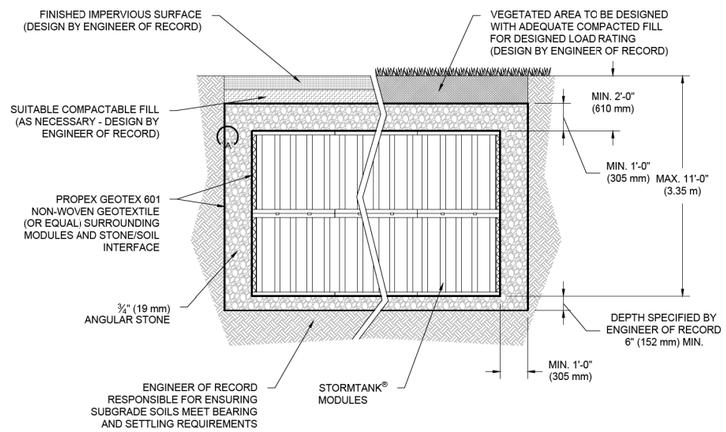
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

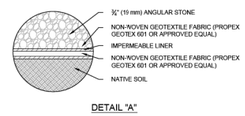
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

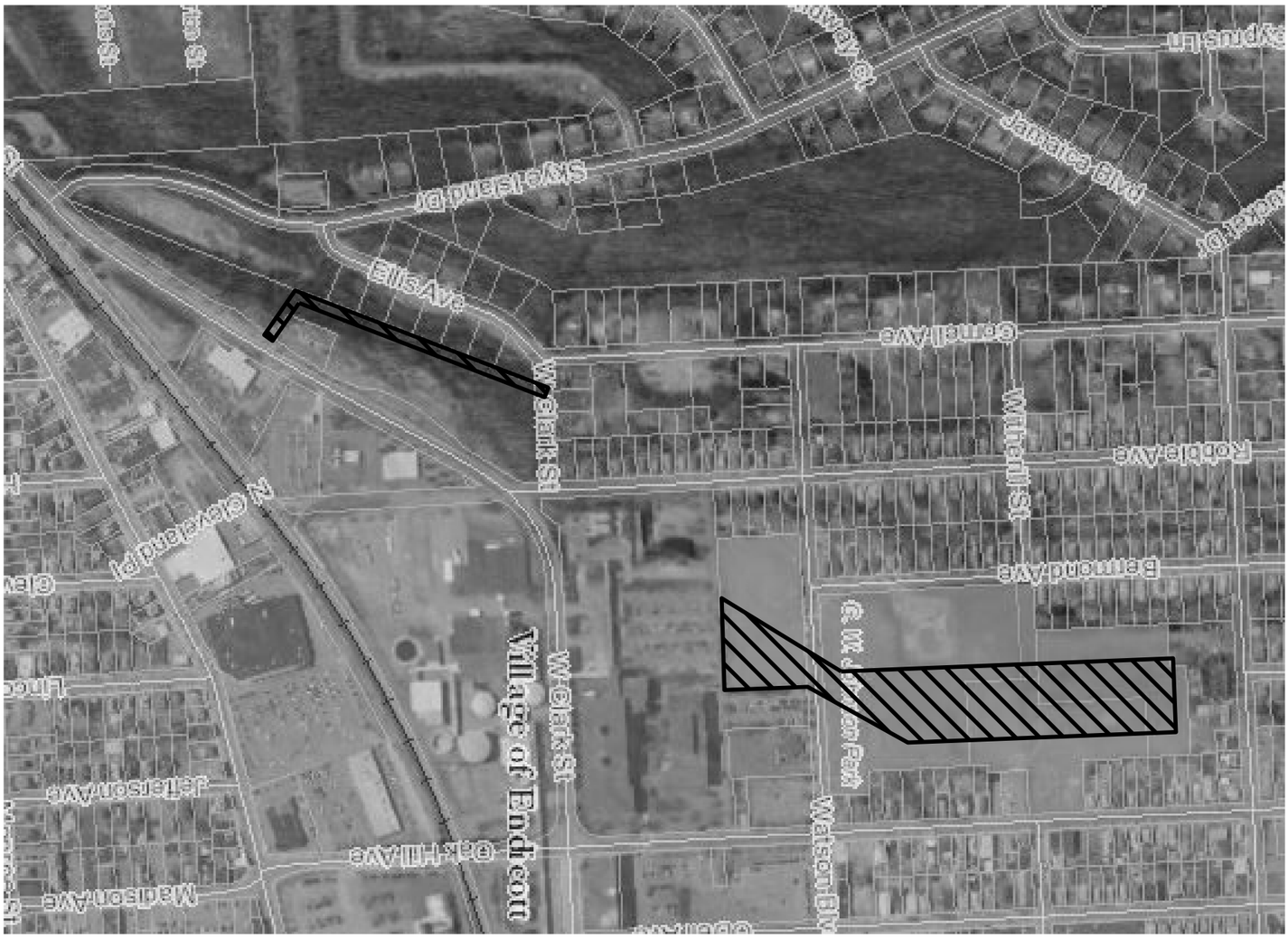
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 13, 2017

Ms. Dina Peoples
Geologist II
Tectonic Engineering
70 Pleasant Hill Road
Mountainville, NY 10953

Re: HUD
Central Endicott Drainage Study
Village of Endicott, Broome County, NY
17PR01763

Dear Ms. Peoples:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials 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).

Based on the information provided, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. Should the project design be changed SHPO recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

cc: Andrea Gievers, Tectonic

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

April 18, 2017

Leo Henry, Chief
Tuscarora Nation of New York
2006 Mt. Hope Road, Tuscarora Nation
Lewiston, NY 14092

Re: Section 106 Compliance for Central Endicott Drainage Improvements, Village of Endicott, Town of Union, Broome County, New York

Dear Chief Leo Henry:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation to respond with any concerns or comments.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470a), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action. This consultation is being sent to the Delaware Nation, Delaware Tribe of Indians, Oneida Indian Nation, Onondaga Nation, Stockbridge-Munsee Community Band of Mohicans, the Tuscarora Nation of New York, and the Seneca-Cayuga Nation.

Area of Potential Effect: The Proposed Project involves the construction of stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. In addition, the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street will be rerouted. The project locations are identified on the enclosed maps.

Project Description: CDBG-DR funding is proposed for the construction of stormwater management improvements. The Proposed Project will focus primarily on reducing peak inflows in the area through the use of underground storage detention systems. The three underground detention storage systems will be located wholly within the municipally owned George W. Johnson Park (Park). These locations were identified as the most suitable areas situated adjacent to the incoming trunk lines where installation would have little effect on the existing land use and function of the designated areas. A proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The total estimated footprint of the proposed underground detention storage systems is approximately 6,475 square feet.

The Proposed Project also includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. The stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, however, it will remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

The premise of the proposed underground detention storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, generally consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The underground storage detention systems should effectively reduce peak flows and provide underground flood storage and control, thus, mitigating aboveground flooding in the project area. In addition, the 24" RCP trunk line relocation will mitigate flooding by removing a significant inflow at a critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

During Tropical Storm Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott. This caused the central portion of Endicott to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the project target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the project target area during future storm events. The project will mitigate the flooding risks of the Village by providing an adequate stormwater management system.

A New York State Historic Preservation Office (SHPO) concurrence letter was received on April 13, 2017 regarding this project indicating that no historic properties will be affected. The SHPO response is included with this letter.

With this letter, GOSR respectfully submits for your review the attached documentation for the proposed project described herein. If the Area of Potential Effect encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days or sooner. Additionally, please indicate if there are other sources of information or other parties, Nations, Tribes, or members of the public you believe should be included in the consultation process. Please respond by email or in writing to the address listed below.

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
38-40 State St. 408N, Hampton Plaza
Albany, New York 12207

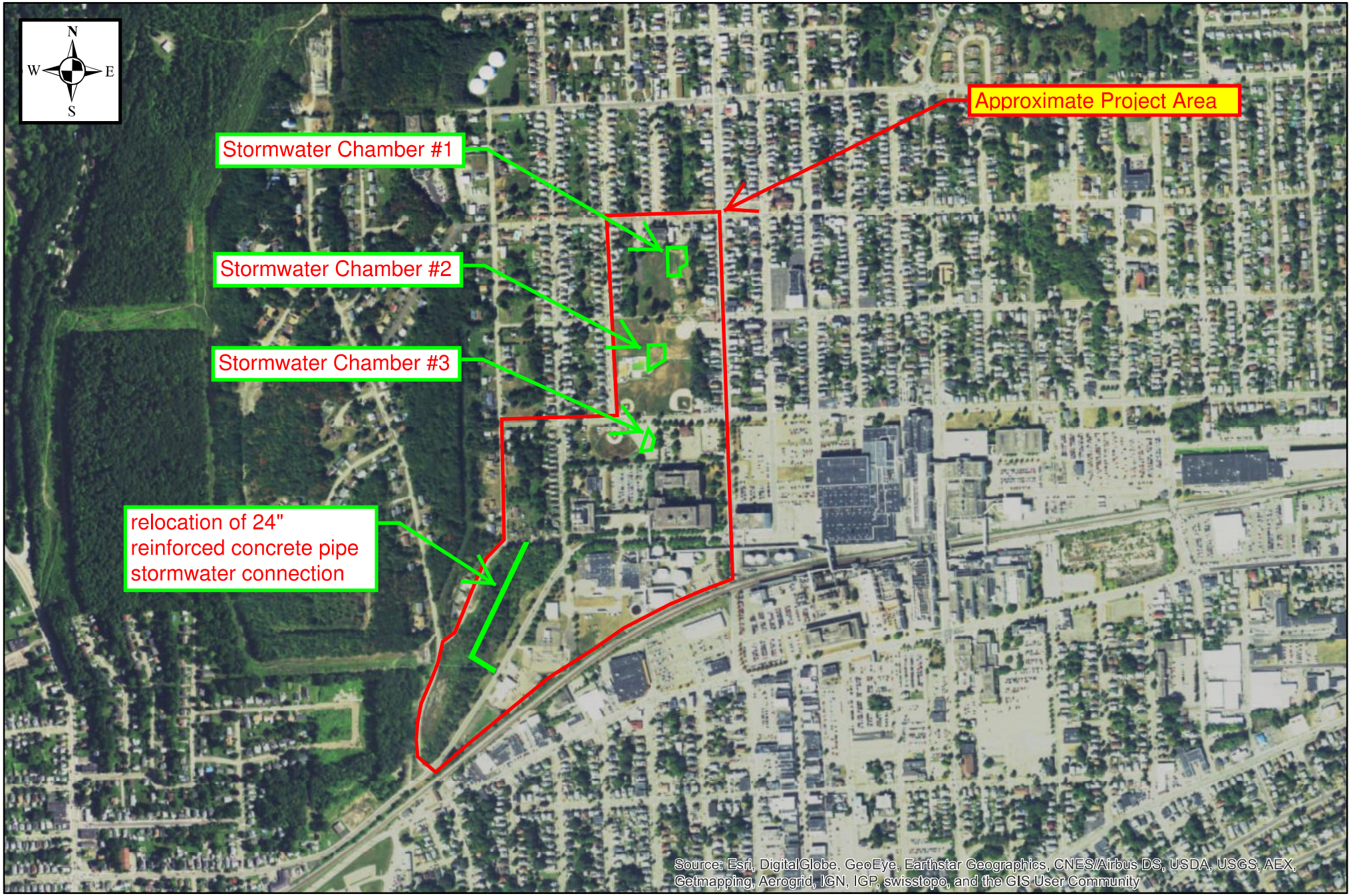
If you have any questions or require additional information regarding this request, please feel free to contact me at (518) 474-0647 or via email at Alicia.Shultz@nyshcr.org. Thank you for your time and consideration.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery

Enclosures:
Project Location Maps
Project Site Plans
NY State Historic Preservation Office Letter

Electronic letter sent to:
Mr. Bryan Printup, Nation Rep. for Section 106
Tuscarora Nation of New York
5226 E. Walmore Road, Tuscarora Nation
Lewiston, NY 14092

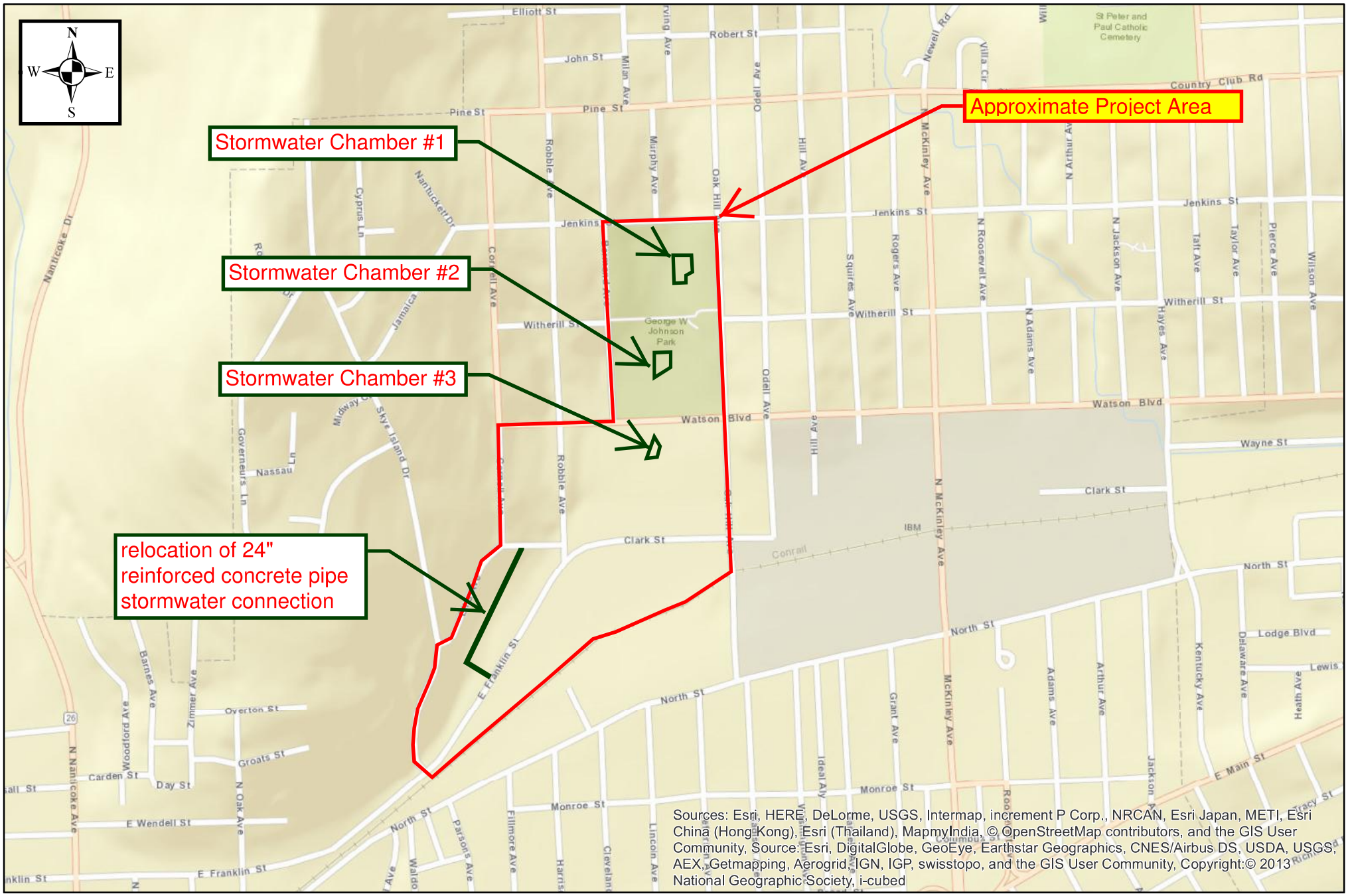


Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Aerial Photograph
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



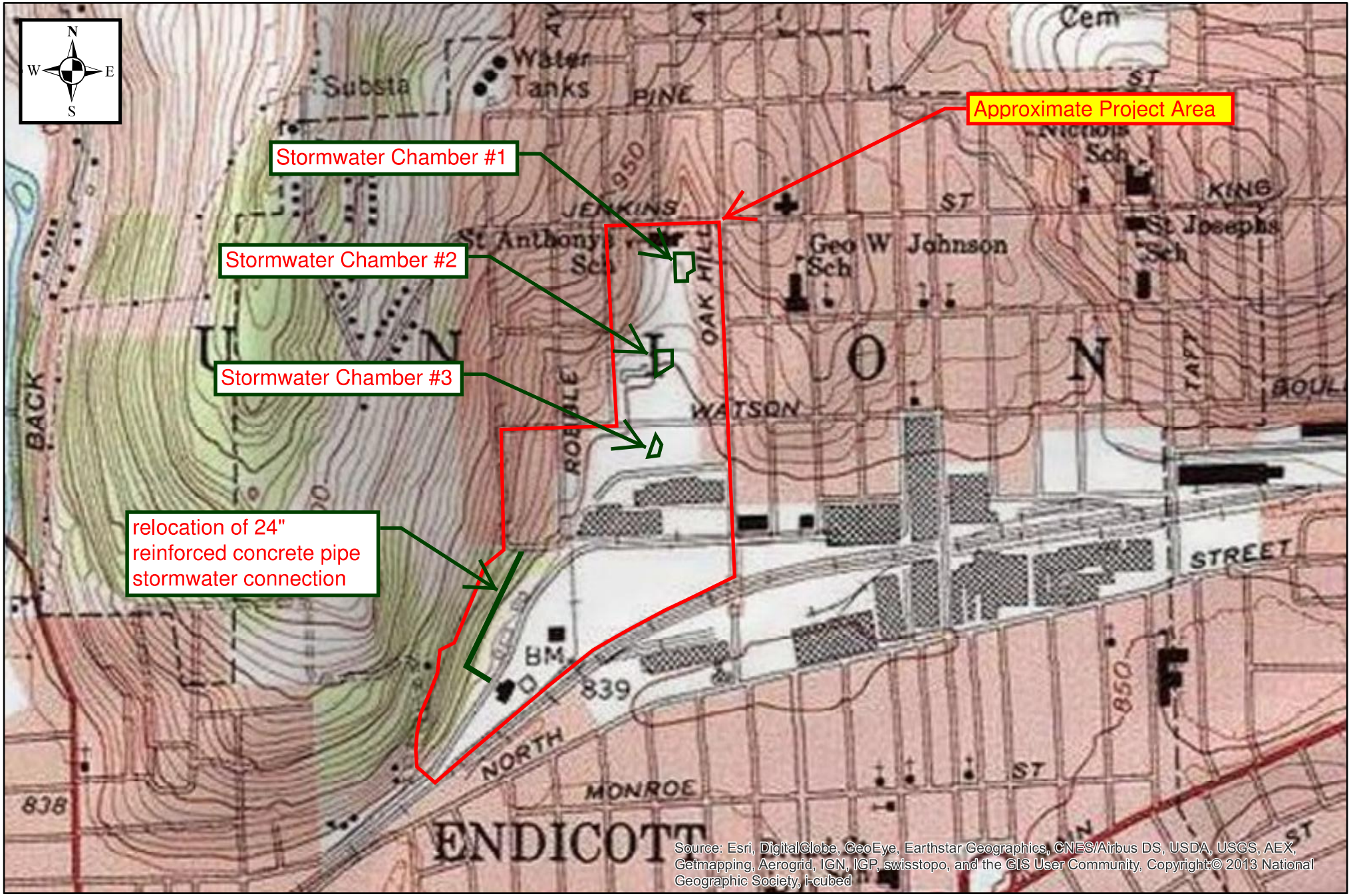
TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Street Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000



TECTONIC
Practical Solutions, Exceptional Service

Tectonic
70 Pleasant Hill Road
Mountainville, N.Y. 10953
845.534.5959 voice
845.534.5999 fax
www.tectonicengineering.com

Topographic Map
Central Endicott Drainage Study
Project Location Map
Endicott, NY
Broome County

0 250 500 1,000 Feet

1:10,000

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

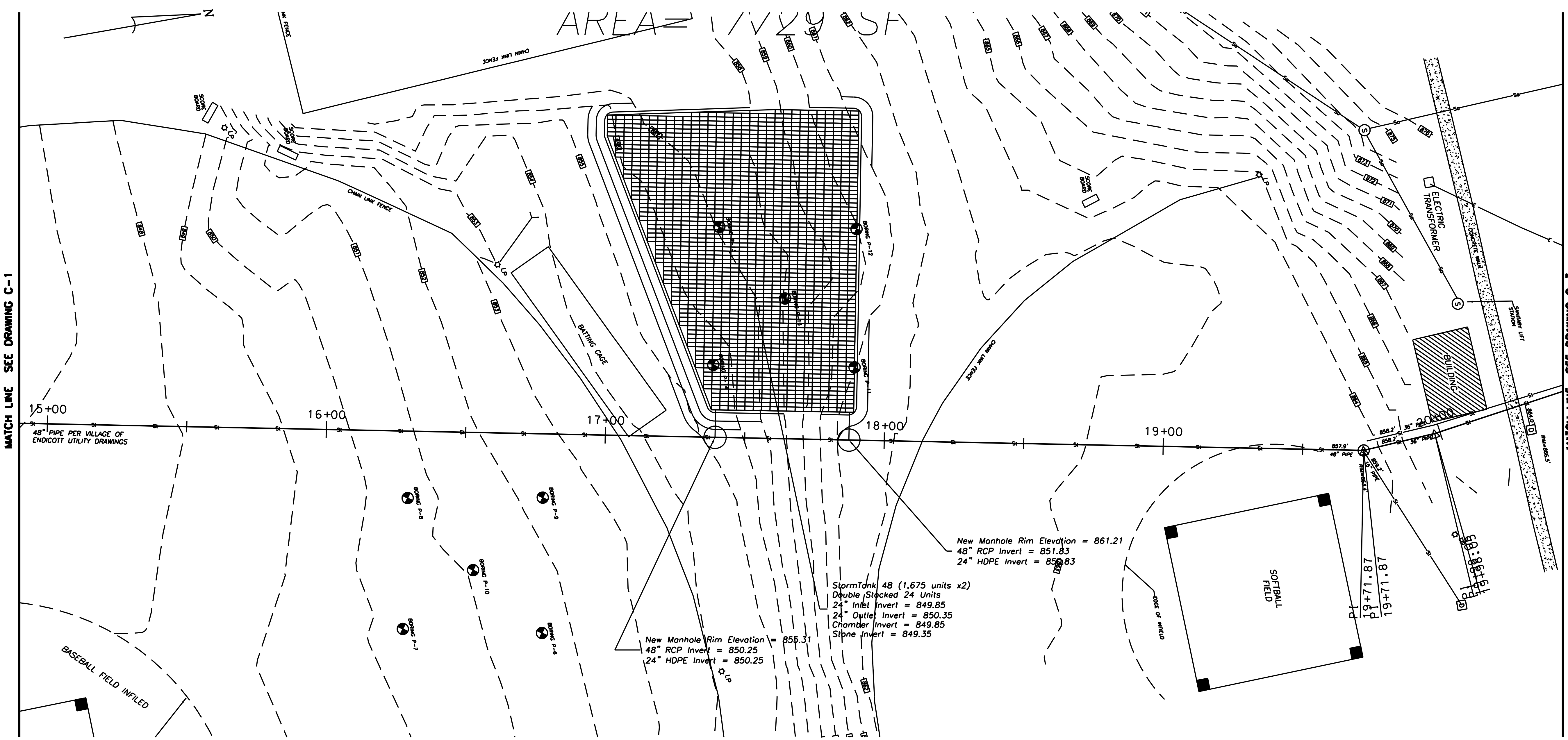
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1



GRIFFITHS

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2016	Rev.:
Drawn by: CSS	Ckd by: DC	Project No.: 2015-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.		Plot Scale: AS NOTED

Drawing Name:
SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:
C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

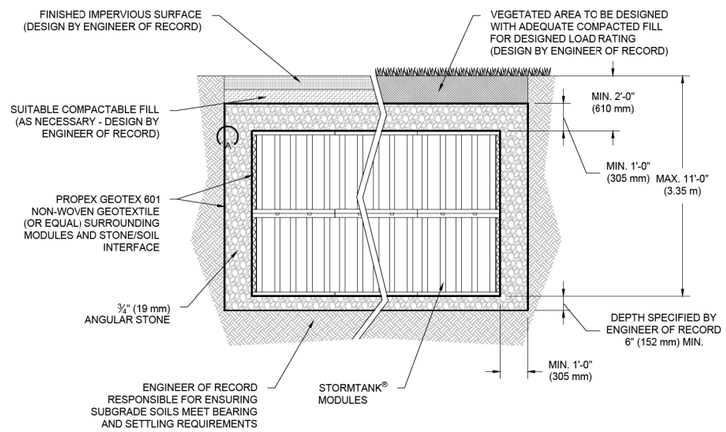
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

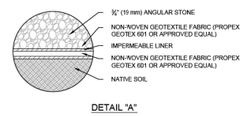
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

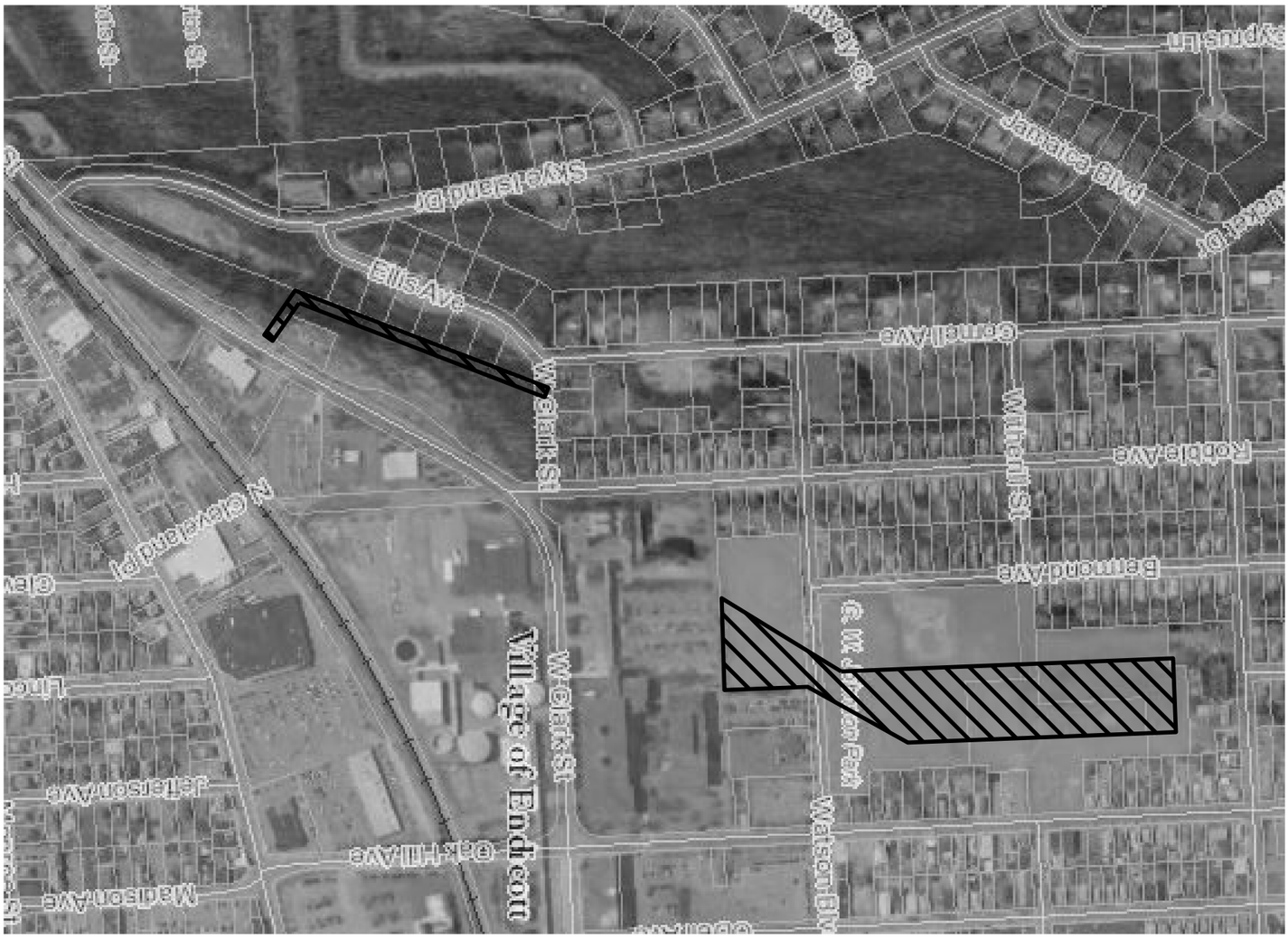
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 13, 2017

Ms. Dina Peoples
Geologist II
Tectonic Engineering
70 Pleasant Hill Road
Mountainville, NY 10953

Re: HUD
Central Endicott Drainage Study
Village of Endicott, Broome County, NY
17PR01763

Dear Ms. Peoples:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials 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).

Based on the information provided, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. Should the project design be changed SHPO recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

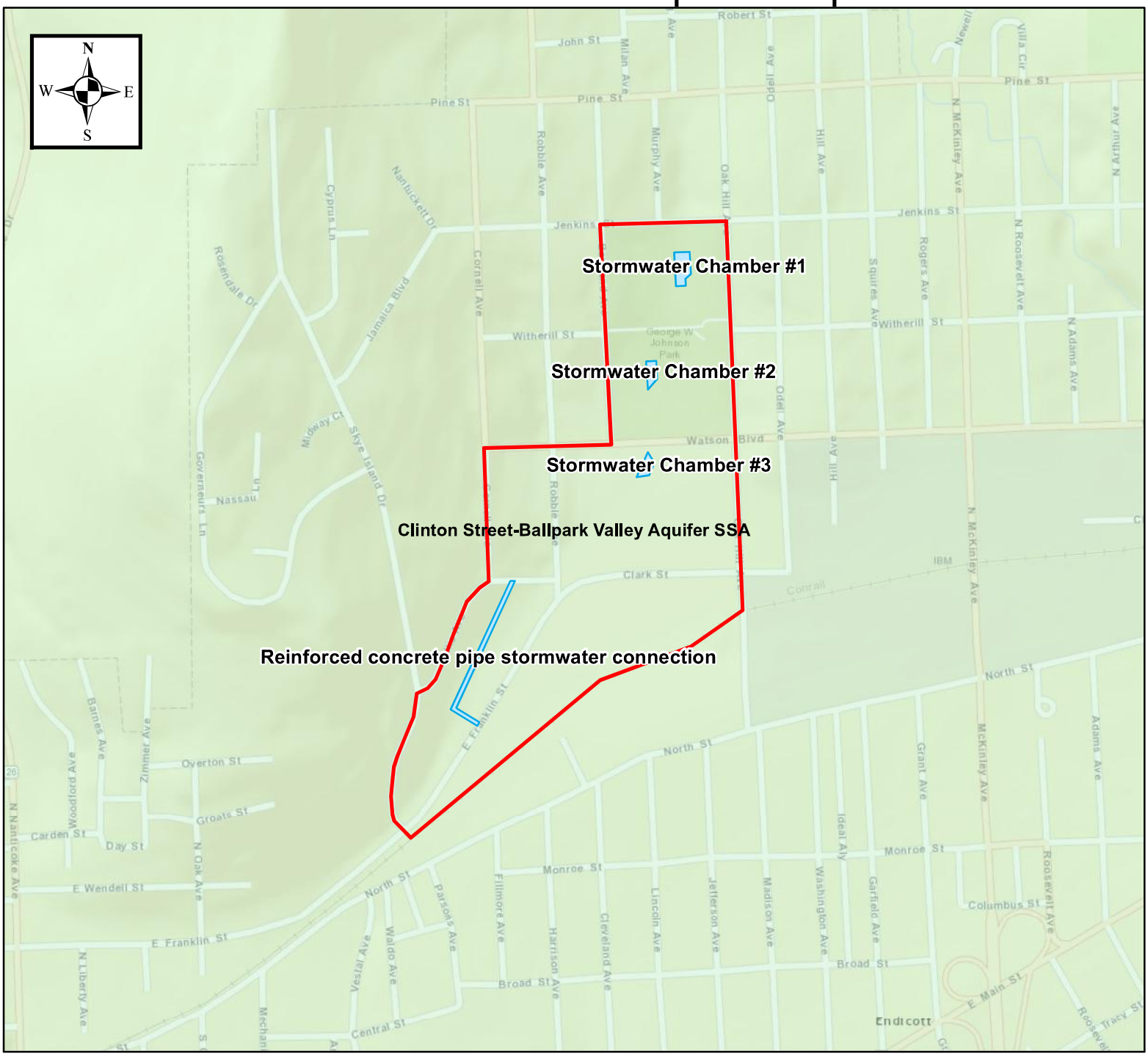
Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov via e-mail only

cc: Andrea Gievers, Tectonic

Attachment 9

EPA Sole Source Aquifer Map & Documentation

EPA Sole Source Aquifer Map



TECTONIC
Practical Solutions, Exceptional Service

0 500 1,000 2,000 Feet

1:10,000

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

- Project Area (Approximate Boundary)
- Proposed Work Area (Approximate Boundary)
- EPA Sole Source Aquifer

Created: 3/23/2017
Source data: Sole Source Aquifer map data provided by EPA.

https://www.epa.gov/dwssa

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

APR 14 2017

Ms. Alicia Shultz
Senior Environmental Scientist
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State Street, 408N
Hampton Plaza
Albany, NY 12207

Dear Ms. Shultz:

This is in response to your e-mail dated March 29, 2017 to the U.S. Environmental Protection Agency (EPA) requesting a Sole Source Aquifer (SSA) review of the proposed "Central Endicott Drainage Improvements" project located in the Village of Endicott, Town of Union, Broome County, New York. The project is to receive funding from the U.S. Department of Housing and Urban Development's Community Development Block Grant – Disaster Recovery (CDBG-DR) program. The project site is located in the Clinton Street Ballpark Aquifer System, designated by the EPA as a Sole Source Aquifer on January 14, 1985 (citation 50 CFR 2025). Therefore, our review has been conducted in accordance with Section 1424(e) of the Safe Drinking Water Act (SDWA).

We note that during Tropical Storm Lee, 6-12 inches of rain led to immense flooding in the Village causing the central portion of Endicott to experience the flooding of streets, underpasses, infrastructure, and residential and commercial properties. The information provided states that the storm event overwhelmed the existing stormwater system, which inundated the target area during and immediately following the storm; the flooding rendered emergency response operations and evacuation efforts ineffective. The proposed project aims to mitigate the flooding risks of the Village by improving the stormwater management system and involves adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system.

The proposed project involves the excavation of three stormwater detention chambers – two in George W. Johnson Park and one in a ballfield adjacent to the park. The information provided indicates that the floor of each chamber would be lined with a non-woven geotextile that allows water to infiltrate downward very slowly; there are solid covers on the sides and the top of the units that would prevent material from washing into them.

It is our understanding that each chamber would be equipped with a commercial stormwater storage system known as the Brentwood StormTank that consists of open, stacked, plastic modules that leave a very large open space, yet provide structural support for whatever will be reconstructed over the top of the chambers. Stormwater is diverted into each of the detention chambers through pipes leading from the existing stormwater trunk line; the chambers are 10 to 20 feet to one side of that line. The chambers will have capacities in the range of 183 thousand to 280 thousand gallons and a total capacity of 724,000 gallons.[1]

We note that the bulk of the water detained in each chamber would re-enter the trunk line through a pipe on the other south side of the chamber (downstream). It is our understanding that the trunk line is split in six locations – three places for pipe inlets to the three chambers and three for pipe outlets from the chambers. Inlet and outlet pipes are all 24-inch diameter high-density polyethylene (HDPE) and would communicate with the trunk line through manholes at the six locations.

Based on the information provided, we understand that the chambers are slightly more than 5 feet deep, but groundwater is greater than 10 feet below grade, which we believe should be an adequate separation distance. In addition to these detention chambers, the applicant would like to install an HDPE bypass to the existing 24-inch diameter, reinforced concrete (RCP) stormwater trunk line near Clark Street. We note that the stormwater will eventually re-enter a 48-inch diameter RCP downstream along West Franklin Street. It is our understanding that the bypass would serve to divert a significant quantity of water at the flood-prone East Franklin/Clark/Robble Avenue intersection. Following construction, we strongly encourage the planting of native vegetation wherever possible. Please see our recommendations below on environmentally-friendly landscaping and stormwater.

Based on the information provided, the project satisfies the requirements of Section 1424(e) of the SDWA. Please be advised that meeting the requirements of 1424(e) does not preclude the need to meet National Environmental Policy Act (NEPA) requirements to address direct, indirect, and cumulative impacts. This review does not constitute a review under Section 309 of the Clean Air Act; EPA therefore reserves the right to review additional environmental documents on this project.

EPA offers the following for your consideration to reduce environmental impacts and to create a more sustainable project.

Clean Diesel:
Implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

- Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and

[1] These numbers refer to the chamber capacities after the storage system structures described above have been introduced.

- Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

For more information on diesel emission controls in construction projects, please see: http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf

Stormwater:
We emphasize the importance of Low Impact Development (LID) principles such as minimizing effective imperviousness to create site drainage, and the planting of native and non-invasive vegetation on the project site for stormwater management purposes. Other LID practices can include bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. For further information, please see the following website: http://water.epa.gov/polwaste/green/

Encourage cost-efficient, environmentally-friendly landscaping:
There are many benefits to making greener landscaping choices. For additional information, please see the following website:
http://www2.epa.gov/greenerproducts/identifying-greener-landscaping-choices

Energy-Efficiency:
Energy-efficient technologies should be incorporated into all aspects of the project. Please see the following website: http://www.energystar.gov

If you have any questions concerning this matter or would like additional information, please feel free to contact Rajini Ramakrishnan of my staff at (212) 637-3731.

Sincerely yours,

Grace Musumeci, Chief
Environmental Review Section

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

LISA BOVA-HIATT
Executive Director

March 28, 2017

Ms. Grace Musumeci
U.S. Environmental Protection Agency
Region II Main Regional Office
290 Broadway, 25th Floor
New York, NY 10007

Re: Sole Source Aquifer Analysis - CDBG-DR Program
Central Endicott Drainage Improvements
Village of Endicott, Town of Union, Broome County, New York

Dear Ms. Musumeci:

The Governor's Office of Storm Recovery (GOSR), operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation, was established to aid the statewide recovery of disaster-affected communities in New York State. GOSR is administering a U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant for Disaster Recovery (CDBG-DR). 24 C.F.R. Part 58 requires GOSR to review projects for conformance with the Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300(f) *et seq.*, and 21 U.S.C. 349) as amended, and Environmental Protection Agency ("EPA") regulations pertaining to Sole Source Aquifers found at 40 C.F.R. Part 149. On behalf of GOSR, please find enclosed the sole source aquifer review information for one such project.

Project Description

The Town of Union has applied for CDBG-DR funding to construct stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. During Tropical Storm Lee, 6-12 inches of rain led to massive flooding in the Village of Endicott. This caused the central portion of Endicott to experience flooding of streets, underpasses, infrastructure, and residential and commercial properties. The storm event overwhelmed the existing stormwater system, which inundated the target area during and immediately following the storm. The flooding rendered emergency response operations and evacuation efforts ineffective. The inadequate drainage system increases safety risks for the residents of the target area. The project will mitigate the flooding risks of the Village by providing an adequate stormwater management system. Detailed project site location maps, project summary, and site plans are included in the annexed Attachments.

In accordance with the Memorandum of Understanding ("MOU") between EPA and HUD dated August 24, 1990, GOSR hereby requests an Initial Screen/Preliminary Review for the project. Please review the attached documentation, including Attachment 2.A and 3 to the MOU. Responses can be sent to me via email at Alicia.Shultz@nyshcr.org. In accordance with the MOU, please respond within fifteen days. If you have any questions, please call me at (518) 474-0647.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State St., 408 N, Hampton Plaza
Albany, NY 12207

Enclosures:

2.A Non-housing/Project Activity Initial Screen Criteria
3 SSA Preliminary Review Information Requirements

Attachments:

A. Aerial Photograph, Street Map, and Topographic Map (showing project locations)
B. Project Summary; Site Plans; Sole Source Aquifer Map; Drinking Water Well Map

Enclosure 2a

ATTACHMENT 2.A

NON-HOUSING/PROJECT ACTIVITY INITIAL SCREEN CRITERIA

The following list of criteria questions are to be used as an initial screen to determine which **non-housing** projects/activities should be forwarded to the Environmental Protection Agency (EPA) for Preliminary Sole Source Aquifer (SSA) Review. (For housing projects/activities, see Attachment 2.B) If any of the questions are answered affirmatively, then **Attachment 3**, SSA Preliminary Review Requirements, should also be completed. The application/final statement, this Attachment, **Attachment 3**, and any other pertinent information should then be forwarded to EPA at the address below.

Any project/ activity not meeting the criteria in this Attachment, but suspected of having a potential adverse effect on the Sole Source Aquifer should also be forwarded.

CRITERIA QUESTIONS	YES	NO	N/A
1. Is the project/activity located within a currently designated or proposed groundwater sensitive area such as a special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.? [Information confirmed by NYS Department of Environmental Conservation] See ½ Mile Buffer and Source Water Assessment Program [SWAP] analysis map in **Attachment B**.	☒	☐	☐
2. Is the project/activity located within a one half mile radius (2640 feet) of a current or proposed public water supply well or wellfield? See ½ Mile Buffer and Source Water Assessment Program [SWAP] analysis map in **Attachment B**.	☐	☒	☐

3. Will the project/activity include or directly cause (check appropriate items):

	YES	NO	N/A
construction or expansion of solid waste disposal, recycling or conversion facilities	☐	☒	☐
construction or expansion or closure of landfills	☐	☒	☐
construction or expansion of water supply facilities	☐	☒	☐
construction or expansion of on-site wastewater treatment plants or sewage trunk lines	☐	☒	☐
construction or expansion of gas or petroleum trunk lines greater than 1320 feet	☐	☒	☐
construction or expansion of railroad spurs or similar extensions	☐	☒	☐
construction or expansion of municipal sewage treatment plants	☐	☒	☐

4. Will the project/activity include storage or handling of any hazardous constituents as listed in Attachment 4, Hazardous Constituents.	☐	☒	☐
5. Will the project/activity include bulk storage of petroleum in underground or above ground tanks in excess of 1,100 gallons? (Please give what assurance they are done in a proper manner.)	☐	☒	☐
6. Will the project/ activity require a federal or state discharge elimination permit or modification of an existing permit?	☒	☐	☐

This attachment was completed by:

Name:	Alicia Shultz
Title:	Senior Environmental Scientist
Address:	Governor's Office of Storm Recovery New York State Homes & Community Renewal 38-40 State St., 408 N, Hampton Plaza Albany, NY 12207
Telephone number:	(518) 474-0647
Date:	March 28, 2017

Enclosure 3

ATTACHMENT 3

SSA PRELIMINARY REVIEW INFORMATION REQUIREMENTS

Where currently available, the information in this Attachment should be provided to the Environmental Protection Agency (see address below) along with the application/final statement; Attachment 2.A, Non-Housing Initial Screen Criteria or Attachment 2.B, Housing Initial Screen Criteria; and any other information which may be pertinent to a Sole Source Aquifer review. Where applicable, indicate the source of your information.

I. Project/Activity Location	**Enclosed?**	
	Yes	No
1. Provide the geographic location and total acreage of the project/activity site. Include a site map which identifies the site in relation to the surrounding area. See **Attachment A**. The total project area covers approximately 85 acres, while the proposed area of disturbance is approximately 1.25 acres.	☒	☐
2. If applicable, identify which groundwater sensitive areas (Special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.) the project/activity is located within or adjacent to. See ½ Mile Buffer and Source Water Assessment Program [SWAPP] analysis map in **Attachment B**.	☒	☐

II. Nature of Project/Activity	**Enclosed?**	
	Yes	No
3. Provide a general narrative describing the project/activity including but not limited to: type of facility; type of activities to be conducted; number and type of units; number of residents, etc. Provide the general layout of the project/activity site and site-plan if available. See Project Summary in **Attachment B**.	☒	☐

III. Public Water Supply	**Enclosed?**	
	Yes	No
4. Provide a description of plans to provide water supply. Water supply is not necessary for the project.	☐	☒
5. Provide the location of nearby existing or proposed public water supply wells or wellfields within one half mile radius (2640 feet) of the project/activity. Provide the name of the supplier(s) of those wells or wellfields. This information should be available from the local health department, State health department or the State environmental agency. See **Attachment B**.	☒	☐

IV. Wastewater and Sewage Disposal	**Enclosed?**	
	Yes	No
6. Provide a description of plans to handle wastewater and sewage disposal. If the project/activity is to be served by existing public sanitary sewers provide the name of the sewer district. The project will not generate wastewater or sewage.	☐	☒
7. Provide a description of plans to handle storm water runoff. The project involves increasing the capacity of the existing municipal stormwater retention system and improving the stormwater conveyance system. See the detailed Project Summary in **Attachment B**.	☒	☐
8. Identify the location, design, size of any on-site recharge basins, dry wells, leaching fields, retention ponds, etc. See Location Maps in **Attachment A**, and Project Summary in **Attachment B**.	☒	☐

V. Use, Storage, Transport of Hazardous or Toxic Materials *(Applies only to non-housing projects/activities)*	**Enclosed?**	
	Yes	No
9. Identify any products listed in Attachment 4, Hazardous Constituents, of the Housing and Urban Development-Environmental Protection Agency Memorandum of Understanding which may be used, stored, transported, or released as a result of the project not related to construction. None. The project involves increasing the capacity of the existing municipal stormwater retention system and improving the stormwater conveyance system.	☐	☒
10. Identify the number and capacity of underground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site. There are three underground storage chambers proposed to be installed for stormwater retention and conveyance. There are no other known underground storage tanks at the project sites.	☒	☐
11. Identify the number and capacity of above ground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site. There are no aboveground storage tanks at the project sites.	☒	☐

This form was completed by:

Name: Alicia Shultz

Title: Senior Environmental Scientist

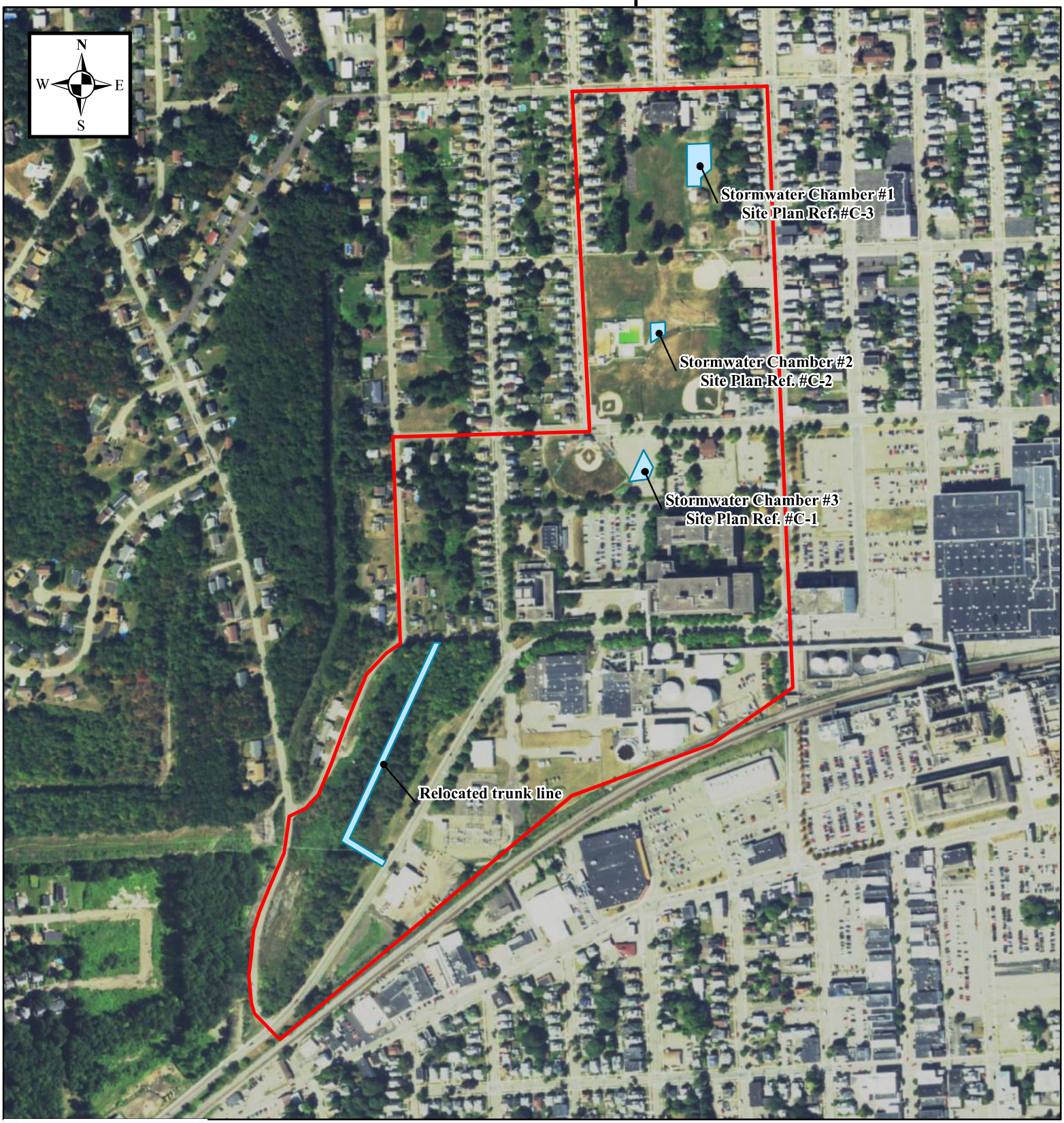
Address: Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State St., 408 N, Hampton Plaza
Albany, NY 12207

Telephone number: (518) 474-0647

Date: March 28, 2017

Attachment A

Location Map



TECTONIC
Practical Solutions, Exceptional Service

0 250 500 1,000 Feet

1:6,000

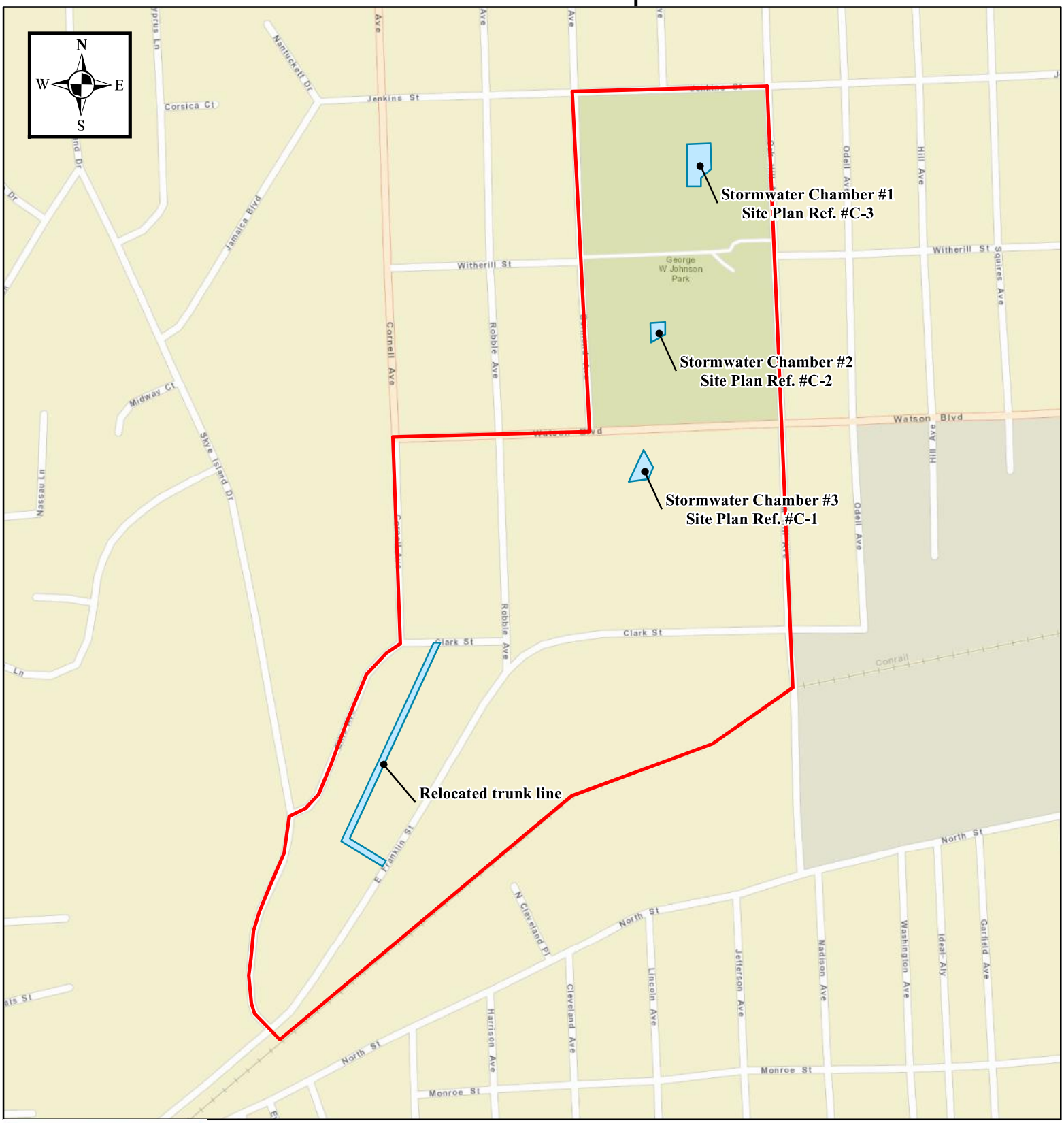
Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

Project Area (Approximate Boundary)

Proposed Work Area (Approximate Boundary)

Location Map



TECTONIC
Practical Solutions, Exceptional Service

0 250 500 1,000 Feet

1:6,000

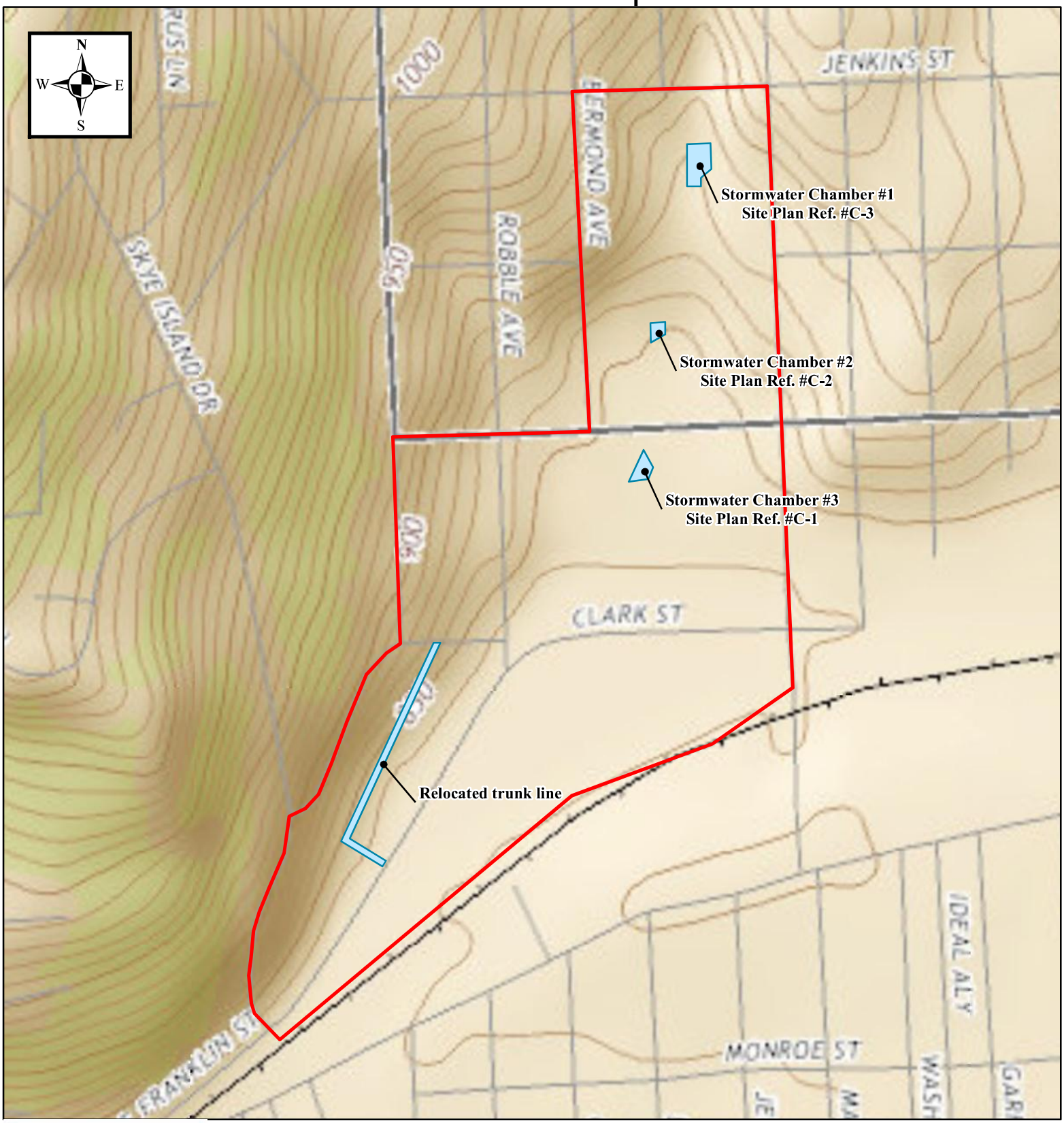
Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Legend

Project Area (Approximate Boundary)

Proposed Work Area (Approximate Boundary)

Location Map



TECTONIC
Practical Solutions, Exceptional Service

0 250 500 1,000 Feet

1:6,000

Legend

- Project Area (Approximate Boundary)
- Proposed Work Area (Approximate Boundary)

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Attachment B

Central Endicott Drainage Improvements
Town of Union, Village of Endicott
Broome County
PROJECT SUMMARY

The Village of Endicott proposes to construct stormwater management improvements for the central part of Endicott by adding capacity to the municipal stormwater retention system and improving the stormwater conveyance system. The potential drainage improvements for this Project focus primarily on reducing peak inflows that enter the Project area through the use of underground detention facilities. The rerouting of the 24" reinforced concrete pipe (RCP) trunk line entering the stormwater collection system from Cornell Avenue and Clark Street is also included.

The locations for underground storage focused on logical areas adjacent to the incoming trunk lines that could be installed without effecting the land use and function of the detention areas. To this end, three locations were selected within the municipally owned George W. Johnson Park (Park) to install underground detention storage systems. For this Project, a proprietary system of underground storage chambers (Brentwood StormTank) surrounded by crushed stone was selected. Each underground chamber system within the Park consists of a double stack of 18" or 30" tall StormTank chambers, with an average of 2,878 chambers at each location. The individual chamber dimensions are 36" long x 18" wide x 18" or 30" high. The average total footprint of the systems is approximately 6,475 square feet.

The premise of the underground storage systems is to temporarily store stormwater runoff underground and then slowly release the stormwater through a controlled release system, usually consisting of a small overflow pipe that then reconnects to the existing municipal stormwater system. The storage effect reduces peak flows as well as provides flood storage underground as opposed to above ground flooding.

In addition to the inclusion of the underground detention systems, the proposed Project includes relocating the connection of the 24" RCP trunk line collecting the Cornell Avenue drainage area further west along East Franklin Street. Although the stormwater from this system will eventually reenter the 48" RCP outfall trunk line along East Franklin Street, it does remove a significant inflow at the critical flooding location at the East Franklin Street/ Clark Street/ Robble Avenue intersection.

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York, 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

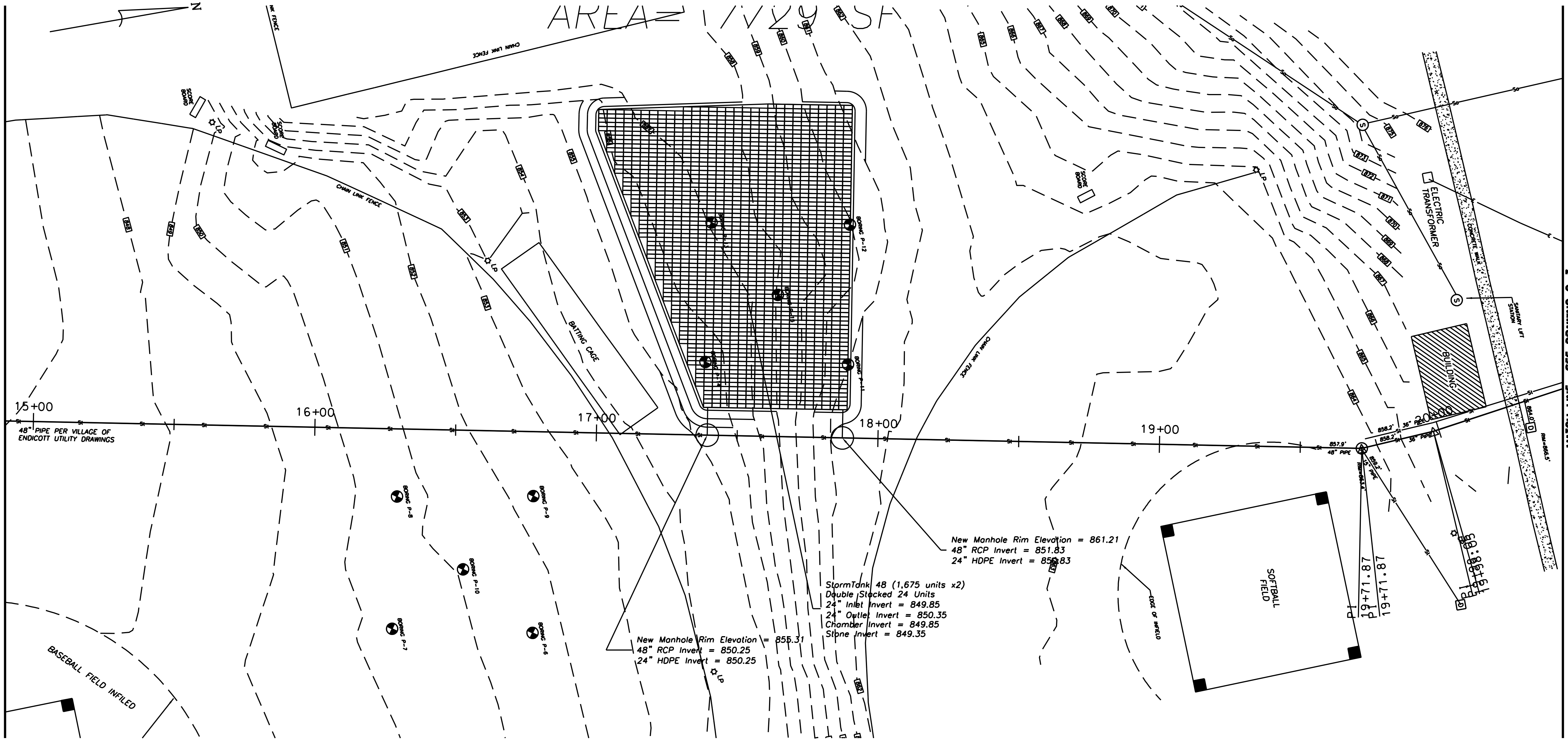
Designed by: CSS
Drawn by: CSS
Chk by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

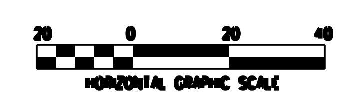
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-1





GRIFFITHS

GRIFFITHS ENGINEERING

13 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2400
Fax (607) 724-2436

FOR REVIEW

Seal

Designed by: CSS	Date: 9-15-2016	Rev.:
Drawn by: CSS	Chkd by: DC	Project No.: 2016-102
UNAUTHORIZED ALTERATION OF THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, SECTION 7209, SUBDIVISION 2.		Plot Scale: AS NOTED

Drawing Name:

SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-2

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

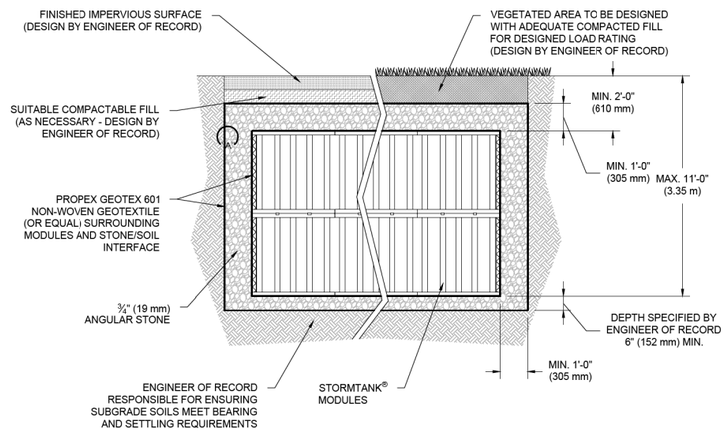
Designed by: CSS
Drawn by: CSS
Chd by: DG
Date: 9-15-2016
Project No.: 2016-102
Rev.#
Plot Scale: AS NOTED

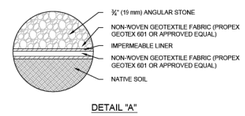
Drawing Name: SITE LAYOUT PLAN

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number: C-3





DETAIL "A"

GRIFFITHS

GRIFFITHS ENGINEERING
15 South Washington Street, Suite 1
Binghamton, New York 13903
Telephone (607) 724-2480
Fax (607) 724-2486

FOR REVIEW

Seal

Date: 8-9-2015 | Rev.#

Designed by: CSS | Project No.: 2015-102

Drawn by: CSS | Chd by: DC | Fnl Scale: AS NOTED

DOCUMENTS & STRUCTURE OF THE GRIFFITHS ENGINEERING, P.C. SHALL BE THE PROPERTY OF THE GRIFFITHS ENGINEERING, P.C.

Drawing Name:

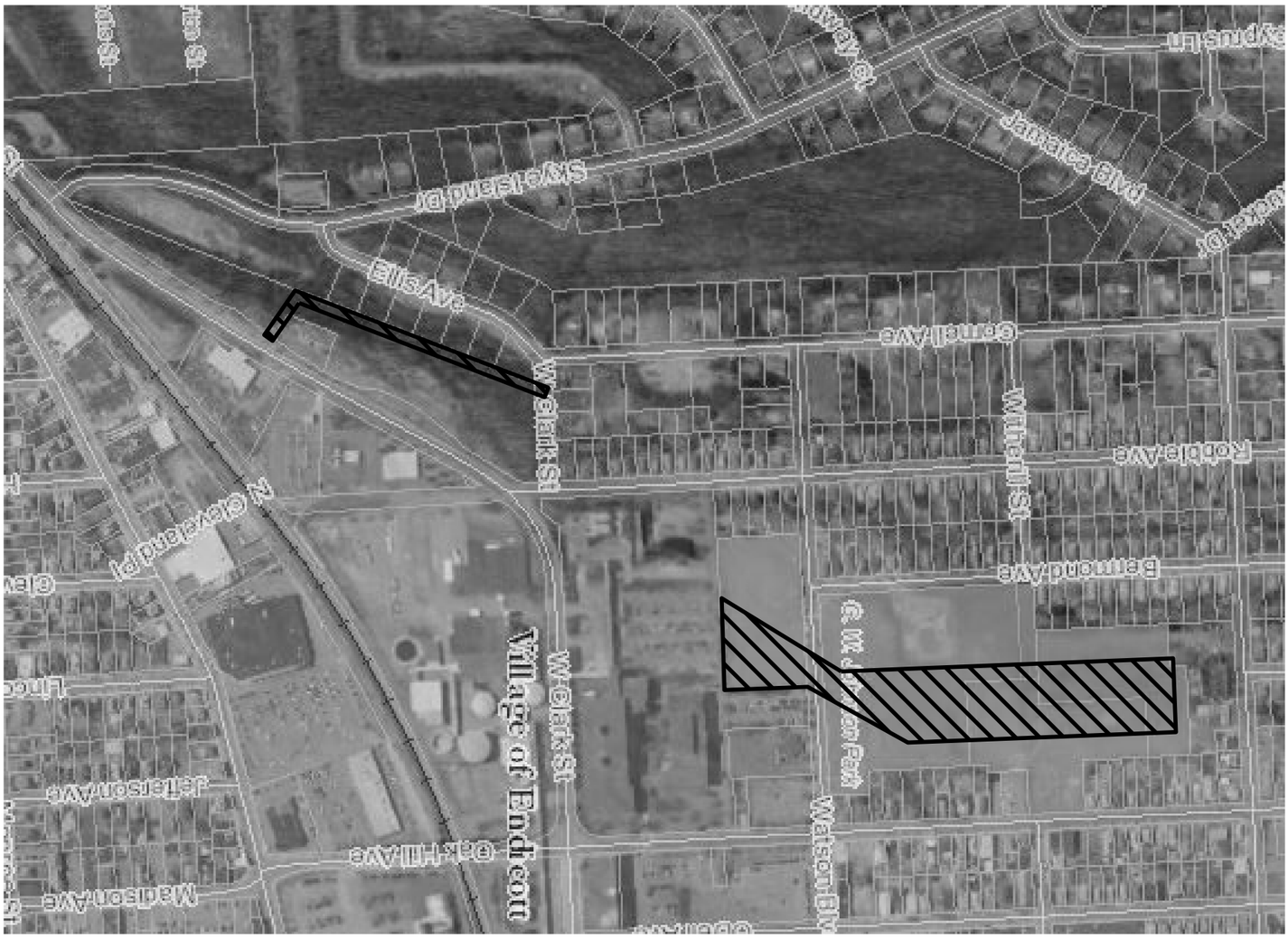
STORMTANK DETAILS

Project Location: VILLAGE OF ENDICOTT
ENDICOTT, NY 13760

Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS

Drawing Reference Number:

C-4



N

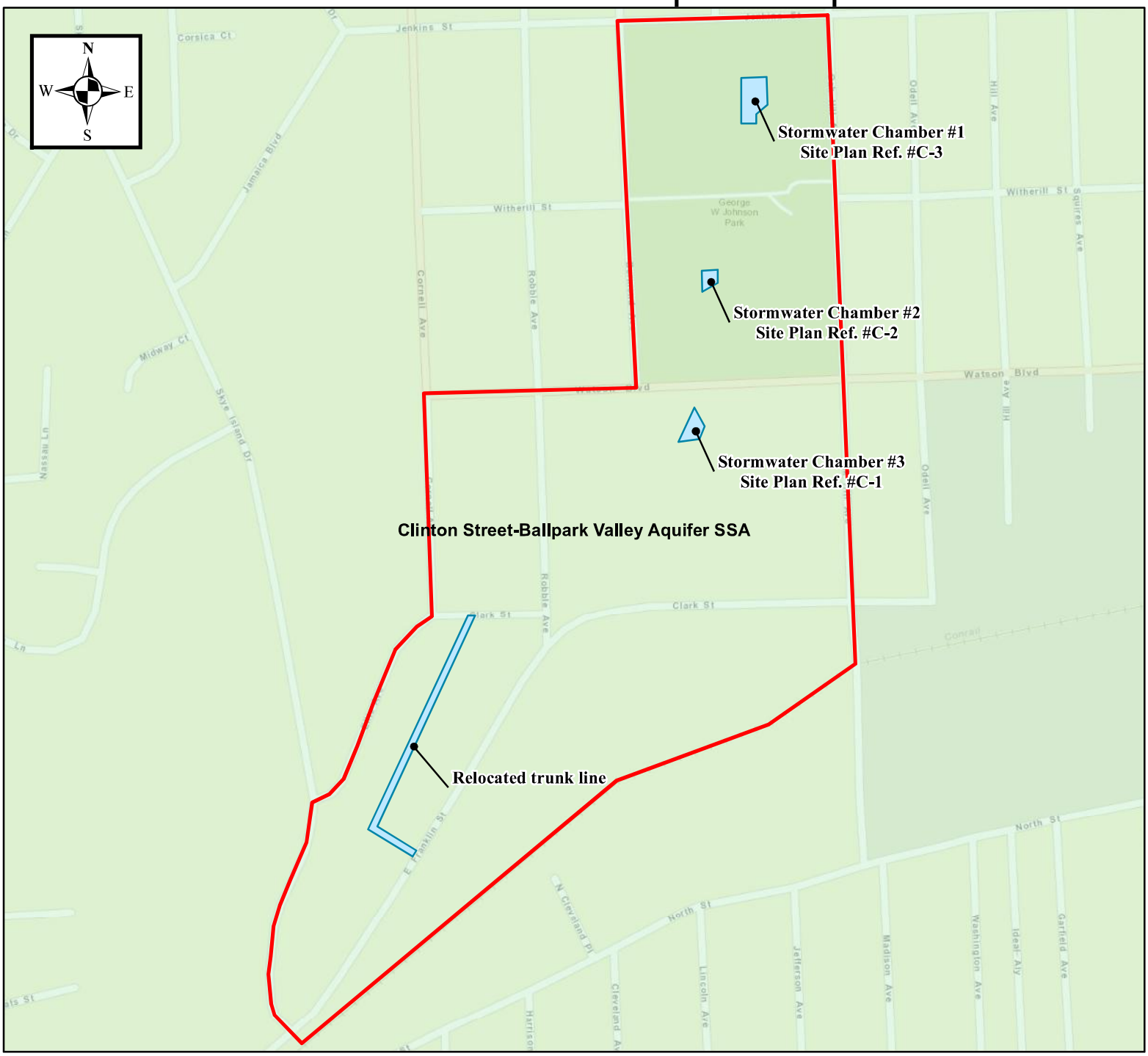
AREA OF DISTURBANCE

Drawing Reference Number: C-5	Project Location: VILLAGE OF ENDICOTT, ENDICOTT, NY 13760	Drawing Name: DISTURBANCE AREA PLAN	Designed by: CSS; Date: 9-15-2015; Rev.: *
	Project Name: CENTRAL ENDICOTT DRAINAGE IMPROVEMENTS		Drawn by: CSS; Chk'd by: DG; Project No.: 2015-102
			Plot Scale: AS NOTED

FOR REVIEW

GRIFFITHS ENGINEERING
13 South Washington Street, Suite 1
Binghamton, New York 13905
Telephone (607) 724-2400
Fax (607) 724-2436

EPA Sole Source Aquifer Map



TECTONIC
Practical Solutions, Exceptional Service

0 250 500 1,000 Feet

1:6,000

Legend

- Project Area (Approximate Boundary)
- Proposed Work Area (Approximate Boundary)
- EPA Sole Source Aquifer

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

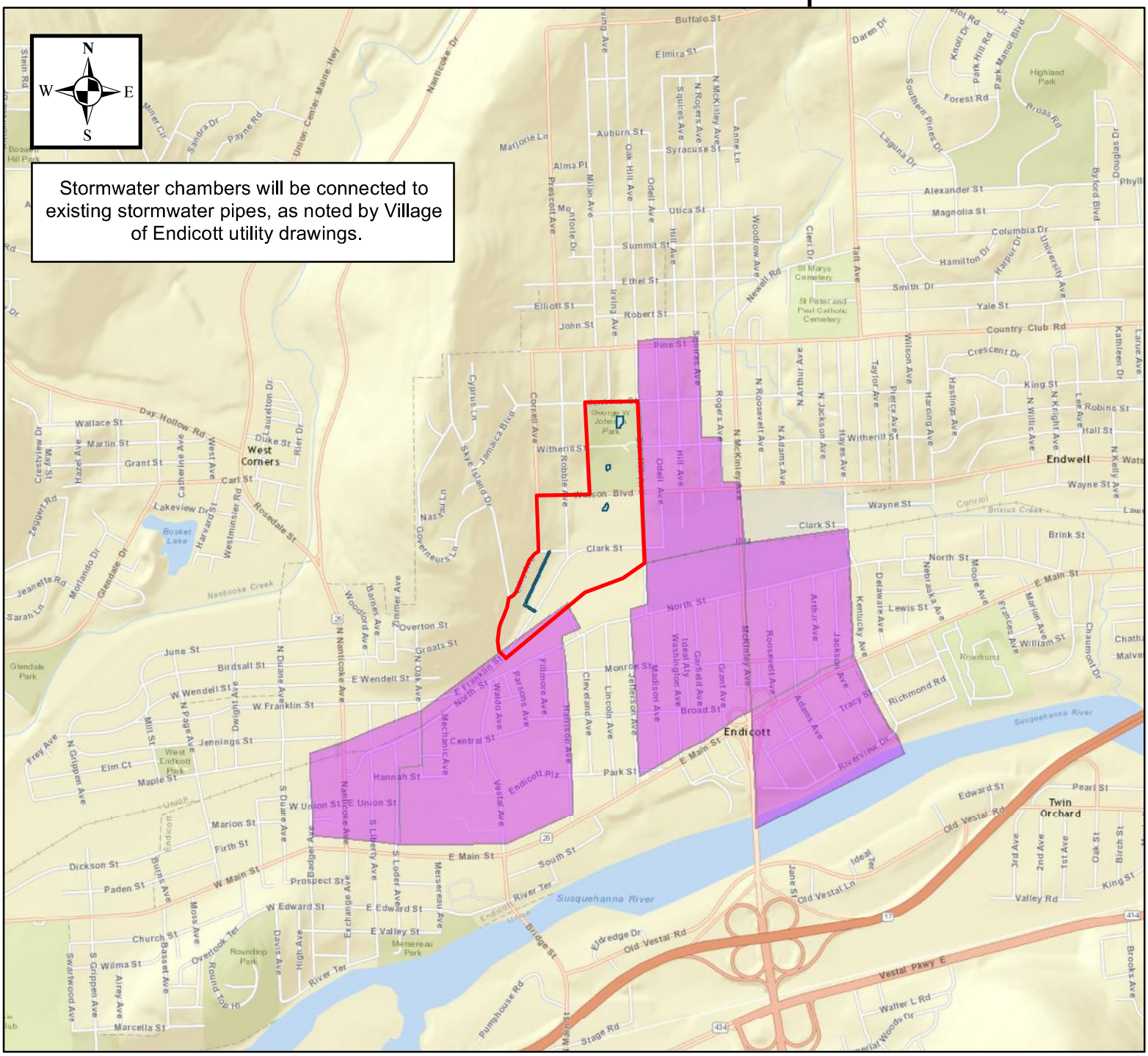
Created: 3/23/2017
Source data: Sole Source Aquifer map data provided by EPA.

https://www.epa.gov/dwssa

Attachment 10

Potential Environmental Justice Areas Map

Environmental Justice Map



TECTONIC
Practical Solutions, Exceptional Service

0 1,250 2,500 5,000 Feet

1:24,000

Legend

- Project Area (Approximate Boundary)
- Proposed Area of Ground Disturbance (Approximate Boundary)
- Potential Environmental Justice Areas

Central Endicott Drainage Study
Village of Endicott
Town of Union
Broome County, New York

Created: 6/2/2017

Potential Environmental Justice Areas provided by The Office of Environmental Justice and available at http://www.dec.ny.gov/public/899.html

Attachment 11

Permit Documentation

Note: Any permits received for this project will be appended to the environmental review record at a later date.