This appendix contains the following:

Task 120 – Preliminary Site Assessment
 Site 1 – City of Bridgeport Property
 Map 50.04, Block 3, Lots 1 and 2
 Main Street, Stratford, Connecticut
 August 13, 2009

The Appendices of this Report are not included herein.

Task 120 – Preliminary Site Assessment
 Site 2– Stratford Army Engine Plant Property
 Map 50.05 Block 4 Lot 2
 Main Street, Stratford
 August 13, 2009

The Appendices of this Report are not included herein.

- Record of Conversation dated April 28, 2010 with Ron Jennings, US EPA
- Record of Conversation dated April 28, 2010 with Ron Curren, CT DEP



TASK 120 - PRELIMINARY SITE ASSESSMENT SITE 1 - CITY OF BRIDGEPORT PROPERTY MAP 50.04, BLOCK 3, LOTS 1 and 2 MAIN STREET, STRATFORD, CONNECTICUT

FINAL DESIGN AND PERMITTING FOR THE RE-ALIGNMENT OF MAIN STREET (CT ROUTE 113)

Prepared for:

CITY OF BRIDGEPORT

URS Project No.: 38397085.00003

August 13, 2009

URS Corporation AES 500 Enterprise Drive, Suite 3B Rocky Hill, Connecticut 06067

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EXECUTIVE SUMMARY

This report presents the results of URS Corporation AES (URS) Task 120 Preliminary Site Assessment (Task 120) of the portions of parcels (proposed roadway) slated for potential acquisition for the re-alignment of Main Street (CT Route 113) in Stratford, Connecticut. The objective of the Task 120 was to evaluate site-specific environmental concerns and to serve as a basis for Task 210 and/or Task 220 activities in the future. The Task 120 was performed as defined under the on-call contaminated soil/groundwater scope of services, issued by the Connecticut Department of Transportation Division of Environmental Compliance to URS, dated October 1, 2003.

The Site consists of an approximately 79-acre irregularly-shaped property comprised of two parcels currently utilized by the City of Bridgeport as a runway clear-zone. The majority of the Site consists of undeveloped grassy land. The Site also contains smaller areas of wetlands and the Marine Basin, a small embayment of the Housatonic River. An access road for the Stratford Solid Waste Landfill at the north terminus of Short Beach Road is present along the southern border of the property. The northern portion of the landfill and its associated access road are located on the Bridgeport property, although outside of the proposed project area. The portion of the Site most relevant to the proposed realignment (along Main Street) consists of an unimproved paved area, which adjoins the currently vacant Stratford Army Engine Plant (SAEP) south parking lot, and the area along the east side of Main Street.

The Site formerly contained several buildings including a truck stop and a restaurant. Based on street directories, possible former occupants of the Site could have included boat renting, a horticultural business by the name of Farmer Snapper, a hotel and restaurant by the name of Howie's Rest, and the Happy Landing Inn, and the Dairy Store. All former Site structures had been removed by 1990. Fill material consisting of Airport Earthfill, demolition debris and Raymark Waste are present at the Site. Previous environmental investigations have identified the presence of contaminated soil and Raymark Waste at various locations at the Site.

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This assessment identified the following environmental concerns for the portion of the Site slated for potential acquisition, the proposed roadway:

1. Raymark Waste. So called Raymark Waste has been identified in two portions of the Site. Based on the results of soil samples collected at the Site, the Raymark Waste contains concentrations of asbestos, total mass and Synthetic Precipitation Leaching Procedure (SPLP) Metals, dioxins, pesticides, Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) and Volatile Organic Compounds (VOCs). The areas of the Site which contain the Raymark Waste are considered a portion of the Raymark Superfund site.

2. Contaminated Soil. Assessment activities of the Raymark Waste present at the Site identified the presence of contaminated soil at portions of the Site beyond the limits of the identified Raymark Waste. Soil beyond the limits of the Raymark Waste is contaminated with concentrations of asbestos, copper, lead, pesticides and PCBs.

3. Contaminated Groundwater: Groundwater in vicinity of the SAEP is impacted with minimal concentrations of chlorinated VOCs.

4. Former Truck Stop: A truck stop was formerly located in the southwestern portion of the Site along Main Street (CT Route 113). The former presence of a truck stop could indicate the former presence of gasoline and/or diesel fuel oil tanks associated with vehicle fueling operations and a fuel oil tank associated with the truck stop building. Furthermore, the former use of this portion of the Site by trucks could have resulted in incidental releases of gasoline and or diesel fuel in this location.

5. Former Building Structures: In addition to the truck stop, three other building structures previously existed on portions of the Site. One of these buildings was apparently a restaurant. The use of the other two former buildings is not known. There is the possibility that these former

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buildings could have had heating oil tanks, could have been used for industrial purposes and/or could have been painted with lead-based paint, all of which could have lead to impacts to soil and/or groundwater.

6. Earth Fill: One portion of the Site has been identified as an area where fill material, so called Airport Earth Fill, has been deposited. Portions of this area beyond the limits of the Raymark Waste are impacted with contaminants such as lead and asbestos.

7. Stratford Solid Waste Landfill: Although some distance from the project area portion of the Site, portions of the Stratford Solid Waste Landfill are located on the Site. Contaminants are known to commonly leach from landfills to soil and/or groundwater. While no specific reference to releases from the Stratford Solid Waste Landfill were identified by this assessment, there is a good possibility that releases have occurred from this landfill and that such releases could have impacted portions of the Site.

8. Solid Waste Disposal Area: The so called Raymark Waste identified in several portions of the Site and the Airport Earth Fill located near the project area may contain Solid Waste at a volume (greater than 10 cubic yards) that could subject the Site to the requirements of the Connecticut Solid Waste Regulations. Further assessment of the content of the identified Raymark Waste and airport earth fill may be required to refine this conclusion.

URS recommends collection and analysis of soil samples from the limits of the project area, planned soil excavation areas and/or areas proposed to be disturbed by the proposed roadway construction activities to more completely evaluate soil conditions and the existence of solid waste. If groundwater is anticipated to be encountered during the proposed roadway construction activities, URS would also recommend evaluation of impacts to groundwater in the project area portion of the Site. URS recommends completing at least seven (7) soil borings for this project-specific investigation.



1.0 INTRODUCTION

This report presents the results of URS Corporation AES'(URS) Task 120 Preliminary Site Assessment (Task 120) of the City of Bridgeport Parcels (the "Site" or "subject property") slated for potential acquisition for the re-alignment of a 2,200 foot long portion of Main Street (CT Route 113) in the vicinity of the Igor Sikorsky Memorial Airport in Stratford, Connecticut. The objective of the Task 120 was to evaluate site-specific environmental concerns and to serve as a basis for Task 210 and/or Task 220 activities in the future. A Site Location Map is included as **Figure 1**. A Site Plan is included as **Figure 2**.

1.1 SCOPE OF WORK

URS' scope of work included an inspection of the subject property to document current conditions, review of available environmental reports, inquiries and review of available files at City of Bridgeport offices, review of aerial photographs and street directories at the Connecticut State Library and conductance of a file review at the Connecticut Department of Environmental Protection (CTDEP) Records Center, and preparation of this Site Specific Report.

1.2 LIMITING CONDITIONS AND DATA GAPS

No conditions which would limit URS' ability to complete the scope of work were encountered during the performance of the Task 120.

1.3 LIMITATIONS OF THE ASSESSMENT

The work conducted by URS is limited to the services agreed to with City of Bridgeport as presented in the Exhibit E: Scope of Work Igor Sikorsky Memorial Airport AIP No. 3-09-0002-24 Final Design and Permitting for the Re-Alignment of Main Street (CT Route 113). No other services beyond those explicitly stated should be inferred or are implied.



URS has performed the scope of work set forth in the Exhibit E: Scope of Work Igor Sikorsky Memorial Airport AIP No. 3-09-0002-24 Final Design and Permitting for the Re-Alignment of Main Street (CT Route 113) (Proposal) between the City of Bridgeport, Connecticut and URS Corporation AES related to this project, in specific reliance on the understandings and agreements reached between URS and City of Bridgeport ("Client") as reflected in the Proposal and the written agreement between them (the "Agreement"). URS' scope of work was limited to that stated in the Agreement.

The report and any other information which URS prepared and submitted to Client in connection with this project (collectively, the "Report") are for the sole use and benefit of Client, the Connecticut Department of Transportation and the Federal Aviation Administration and may not be used or relied upon by any other person or entity without the prior written consent of Client and URS. Any such consent given by URS shall be deemed to be and shall be subject to the terms and conditions of the Proposals and the Agreement, including without limitation, the warranty, liability and indemnity terms thereof, and any person given such consent (the "Grantee") shall be deemed to have agreed to such terms and conditions by its use and reliance on the Report. Such Grantee must also agree not to reveal the contents of the Report to any other person or entity without the proper written consent of both Client and URS.

Client recognizes and agrees that:

- The information in the Report relates only to the properties specifically described in the Proposal and Report and was presented in accordance with and subject to the scope of work described in the Proposal which were specifically agreed to by Client;
- The information and conclusions provided in the Report apply only to the subject property
 as it existed at the time of URS' site inspection. Should Site use or conditions change or
 should there be changes in applicable laws, standards or technology, the information and
 conclusions in the Report may no longer apply;



- URS makes no representations regarding the value or marketability of this subject property or its suitability for any particular use, and none should be inferred based on the Report;
- The Report is intended to be used in its entirety and no excerpts may be taken to be representative of the findings of this investigation;
- URS' services in the development of this Report were conducted, within the limits prescribed by this Agreement, in a manner consistent with that level of care and skill ordinarily exercised by members of the same professions currently practicing in the same locality under similar conditions and no other guaranty, warranty, or representation, either express or implied, is included or intended herein; and,
- Comprehensive assessments of environmental land use issues and constraints of possible relevance (e.g. radon, mold, asbestos-containing materials, wetlands, sensitive habitats) were not included in the scope of services.



2.0 SITE DESCRIPTION

Information concerning the Site was obtained from a site inspection and review of available municipal and state records conducted on February 10 through February 16, 2009. Information from other referenced sources is also presented in the sections below.

2.1 PHYSICAL LOCATION AND DESCRIPTION OF SUBJECT PROPERTY

The Site consists of two contiguous parcels, a 77.64-acre parcel and a 1.41-acre parcel, both located on the east side of Main Street (Route 113), across from Runway 24 of the Igor Sikorsky Memorial Airport. The 77.64-acre parcel is identified in the Town of Stratford's Tax Assessor's records as Lot 1, Block 3 on Map 50.04, and the 1.41-acre parcel is identified as Lot 2, Block 3 on Map 50.04. These two properties comprise a portion of the proposed area to be used for the re-alignment of Main Street (Route 113) that would allow for proposed safety improvements to Runway 24. This assessment report will focuses on the western portion of the properties, the portion of the Site slated for potential acquisition, and the proposed roadway. The Site location is depicted on **Figure 1**. Portions of the Site including the portion slated for potential acquisition are illustrated on **Figure 2**.

The Site is an irregularly-shaped area currently utilized by the City of Bridgeport as a runway clear-zone. The majority of the Site consists of undeveloped grassy land. The Site also contains smaller areas of wetlands that are connected to the Marine Basin, a small embayment of the Housatonic River located to the east of the Site. The Marine Basin receives drainage from the surrounding land as well as a portion of the airport property via drainage channels. An access road to the Stratford Solid Waste Landfill at the north terminus of Short Beach Road is present along the southern border of the Site. The northern portion of the landfill and its associated access road are located on the Bridgeport property, although outside of the proposed project area.





The Site is bordered to the north by the currently vacant Stratford Army Engine Plant (SAEP) and other industrial properties associated with the SAEP further to the east along Sniffens Lane, to the east by residential properties, to the south by the Stratford Solid Waste Landfill and to the west/southwest by Main Street and then portions of the Igor Sikorsky Memorial Airport. Some shoreline residential communities are present to the east and south of the subject property beyond the Stratford Solid Waste Landfill.

The portion of the Site most relevant to the proposed realignment (the portion of the Site proposed for acquisition) consists of an unimproved paved area in the western portion of the Site and the area along the east side of Main Street.



3.0 SITE HISTORY

The historical use of the subject property was determined from a review of aerial photographs, land use maps and information presented in previous environmental site assessment reports. Site conditions documented in historical documents for the subject property, were reviewed and evaluated. Historical Site features are depicted on **Figure 3**.

3.1 PRIOR OWNERSHIP AND LAND USE

The Site is currently owned by the City of Bridgeport and, as presented in sections above, is comprised of two parcels. According to the Town of Stratford Tax Assessor, the parcel comprising the bulk of the subject property, the 77.64 acre parcel, identified as Lot 1, Block 3 of Map 50.04, was transferred to the City of Bridgeport from the Land and Home Development Company, Inc. on April 3, 1973. The second parcel, the 1.41-acres parcel identified as Lot 2, Block 3 of Map 50.04, was transferred from The Dairy Store of Bridgeport, Inc. to the City of Bridgeport on April 2, 1973. Copies of the Town of Stratford Assessor's property cards are included in **Appendix A**.

Based on information provided in the *Final Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24* (Final EIS), the larger parcel (Lot-1) comprising the Site was created through the acquisition of several smaller parcels by the City of Bridgeport. This includes a transfer of 1.54-acres in the vicinity of the current dirt access road (discussed in Section 5.1) from Henry De Julio to the City of Bridgeport on October 16, 1973, and a 2.25-acre easement acquired from the Land & Home Development Company, Inc. on June 30, 1974. This easement is reportedly located along the current eastern property boundary of Lot 1. In addition, documents reviewed indicate that there was a previous grant of land from the United States of America to the City of Bridgeport on February 8, 1949 of an estimated 35 acres.



Based on information obtained from the Final EIS and other historical sources discussed below, it is known that Main Street (CT Route 113) and the Marine Basin were present by the 1930s. Although no specific development or improvements were noted to be on the subject property and the airport had not been constructed, the area may have provided a point of access to the shoreline for recreational use. By 1951, the subject property was improved with at least one or two buildings, with clear pathways to both the shoreline and Marine Basin. Activities performed at the Site may have included boat renting, a horticultural business by the name of Farmer Snapper, and was also possibly occupied by a third building, a possible hotel and restaurant by the name of Howie's Rest and the Happy Landing Inn by 1960. A fourth structure was constructed on the Site (in Lot 2) by 1970 and, according to city directory listings, may have operated as the Dairy Store. By 1980, the Dairy Store and the two other buildings (discussed in Section 3.2) formerly present at the Site had been removed, and the areas may have been utilized for storage of trailers at that time. Some landfilling activities were taking place in areas throughout the Site. By 1990, the last remaining structure at the site, located at the access road entrance from Main Street, had been removed, and there is little evidence of any further significant activity at the Site. The City of Bridgeport had acquired much of this property by 1973 and the property has been utilized primarily as a runway clear-zone since.

3.2 AERIAL PHOTOGRAPHS

Historical aerial photography available at the Connecticut State Library for the years 1934, 1951, 1965, 1970, 1980, 1986, 1990 and 1995 were reviewed for this assessment. Historical aerial photographs are included in **Appendix B**. A summary of the information discerned from these aerial photographs is presented below:

• <u>1934</u>: The 1934 photograph shows the subject property area to be mostly undeveloped, although one or possibly two dirt paths or roads are observed within the subject property. These paths appear to provide access to the Marine Basin and the shoreline east of the



Site. A road is present in the current location of Main Street (Route 113) and appears to possibly be unpaved. A building is depicted to northwest of the Site on the current SAEP property with the roof clearly labeled with the word "SIKORSKY" (this portion has been cropped from the photo in the attached copy). The surrounding areas appear to be either tidal wetlands, filled material, or shoreline cottage communities. Small vessel traffic is present in the Marine Basin.

- 1951: The 1951 photograph depicts two buildings present in the eastern portion of the Site. Two dirt roads are present on the Site, one leading east through the Site to the beach area northeast of the Site, and the other leading to the southeast corner of the Marine Basin. Several buildings and a large parking area are present on the property to the north of the Site, the current SAEP property. Airport runways and several buildings are present on the property to the west of the Site. Due to the small scale of the photograph, further details of the subject property are difficult to discern. The surrounding areas appear to be a mix of industrial and undeveloped parcels, with some surrounding coastal residential communities.
- 1965: The 1965 photograph depicts the subject property with several improvements present. A structure is present in the northwestern corner of the Site, the portion of the Site that currently contains asphalt pavement. Three buildings are present in the western central portion of the Site along Main Street (Route 113). What appear to be vehicles or trucks are also present on the Site adjacent to the observed structures in the western portion of the Site. Automobile parking and an apparent wastewater lagoon are present on the property to the north of the Site. A drainage channel extends from the wastewater lagoon on the SAEP property to the Marine Basin. A structure that appears to be an automotive service station based on the presence of two fuel pumps or islands and several apparent automobiles are present on the property between Main Street (Route 113) and the current Short Beach Road south of the Site.
- <u>1970</u>: Due to the poor coverage of the Site area and quality of the 1970 aerial photograph, details of Site are difficult to discern. However, the Site appears to be



developed in a configuration similar to that observed in the 1965 photograph. What appears to be trucks are present in the area of the structures in western portion of the Site. Although the photograph resolution of this area is poor, the automobile service station located to the south of the Site appears to be inactive, and the structures at that site may no longer be present. Other areas depicted in the photograph appear similar to the appearance in the 1965 photograph.

- 1980: The 1980 aerial photograph indicates significant changes on the Site from the 1970 aerial photograph. Only one of the formerly observed buildings, the south-eastern most of the four, is present in this photograph. What appears to be equipment or a trailer is present. A drainage channel leading from beneath Main Street (Route 113) to the Marine Basin is present. An area that contains many small items that could be debris is present in the interior of the Site, off a dirt roadway east of one of the drainage channels. The portion of the Site south of the drainage channel from Main Street (Route 113) to the Marine Basin also contains these same small items or debris spread about the property in this area. South of the subject property, the Stratford Solid Waste Landfill appears to be in full operation. The suspected former automotive service station located on the property at the intersection of Short Beach Road and Main Street (Route 113) is no longer present. A different building and an asphalt paved parking area are now present on this property.
- 1986: The Site depicted in the 1986 aerial photograph is relatively similar to that depicted in the 1980 photograph. The equipment or trailer storage observed in the northwest portion of the Site is no longer present. The remaining structure is shown in the center of the circular configuration of the current dirt access road in the southern portion of the Site. In addition, there appears to be additional filling and possible excavation activity at the interior Site location east of the drainage channel. Surrounding areas appear to be relatively unchanged from the 1980 photograph.
- <u>1990</u>: The Site depicted in the 1990 photographs is relatively similar to that depicted in the 1986 photograph. No structures are present on the Site. Suspected prior filling



activities on the eastern part of the Site are no longer present, and the Site appears similar to its current configuration and use. The building previously present on the property south of the Site (between Short Beach Road and Main Street) is no longer present. The structures that are believed to be wastewater lagoons (based on other information presented below) on the SAEP are no longer present and the parking area of the SAEP property appears to be partially covered with water.

• <u>1995</u>: The 1995 aerial photograph does not indicate any significant changes form the 1990 photograph.

3.3 CITY DIRECTORIES

Historical city directories for the Town of Stratford available at the Connecticut State Library were reviewed at periodic intervals to obtain previous Site use information. City directories for the Town of Stratford prior to 1965 and for the years from 1980 through 1991 were not available for review. According to the Town of Stratford Assessor's office, the Site has no actual address, and is identified only as "Main Street". A business identified in the Final EIS as formerly present at the Site is identified in the city directories with a street address of 18 Main Street. 550 Main Street is the given address for the neighboring SAEP facility. The following information believed to be relevant to the Site is as follows:

1960

- - Main Street/Stratford Road
 - National Lead Co. Office
 - Great Lakes Carbon Corp.
- o 18 Main Street
 - Johnson Motor Lines
 - Happy Landing Inn
 - Howie's Rest
 - Farmer Snapper Garden Implements
 - (Off) Boat Renting



- Civil Aeronautics
- Socony Mobil Oil Co. Inc.

• 1965

- o 18 Main Street
 - Sealand Service Inc. Brokers
 - McCollough William Transportation
 - Howie's Rest
 - Farmer Snapper Garden Implements
- o 50 Main Street
 - Prussians Drive-In Rest
 - Lycoming Recreation Field

• <u>1971</u>

- o 18 Main Street
 - Sealand Service Inc. Brokers
 - McCollough William Transportation
 - Howie's Rest
 - Farmer Snapper Garden Implements
- o 50 Main Street
 - Prussians Drive-In Rest
 - Dairy Stores, Inc.
 - Lycoming Recreation Field
- o 248 Main Street
 - Goloz, Victor
- o 122 Main Street
 - Fraust, Warren
 - Friedman, Irving

1975

- -- Main Street
 - Georgia Pacific Flight Dept.
 - Knickerbocker Aviation
 - AVCO Lycoming Div. Hangar & Flight Office



- Sikorsky Div. of United Aircraft Corp.
- Barbour Daniels Electronics
- o 42 Main Street
 - Lofan, Stan
- o -- Main Street
 - Great Lakes Carbon Corp.
 - Business Wings, Inc.

1979

- o 18 Main Street
 - Vacant
- o 5 Main (Off)
 - Vacant
- -- Main Street
 - Georgia Pacific Flight Dept.
 - Knickerbocker Aviation
 - Sikorsky Div. of United Aircraft Corp.
 - Barbour Daniels Electronics
- o 42 Main Street
 - Loban Aircraft, Inc.
- -- Main Street
 - Great Lakes Carbon Corp.
 - *NL Industries, Inc.*

• <u>1992</u>

- o 18 Main Street
 - Marceyunias, Edward
- o 118 Main Street
 - Vacant
- o 134 Main Street
 - Kaltisas, Stathis
- o 200 Main Street
 - Peter Pan Pizza





- 295 Main Street
 - Windsock Inn, Inc.
- o 400 Main Street
 - Edwards Package Store
- o 510 Main Street
 - Grace A

1997

- o 18 Main Street
 - Marceyunias, Edward
- o 118 Main
 - Vacant
- o 134 Main Street
 - Boothe Memorial Park
- o 295 Main Street
 - Windsock Inn, Inc.

• 2007

- o 295 Main Street
 - Windsock Inn, Inc.
- o 425 Main Street
 - Shoreline Aviation
- o 342 Main Street
 - Mattey, E.
 - Moore, Elisa



4.0 FINAL ENVIRONMENTAL IMPACT STATEMENT, URS GREINER, 1999

The Final EIS was reviewed for information relating to past uses and the environmental conditions of the subject property. As part of the Final EIS, sites related to the project with the potential for hazardous materials and/or environmental contamination were evaluated in accordance with a Phase I/II Environmental Due Diligence Audit (EDDA). The Final EIS included assessment of the current Site and other surrounding areas.

The Final EIS included a figure titled Exhibit III-16 that illustrates EDDA Phase II soil sample locations and sites of potential hazmat/environmental contamination concern. This figure presented the following information relevant to the Site:

- 1. The former location of a truck stop on the Site and associated sampling locations;
- 2. The location of earth fill (Airport Earthfill) on the Site and associated sampling locations;
- 3. The former location of a gasoline station and associated sampling locations on the property to the south of the Site;
- 4. The location of the Stratford Solid Waste Facility to the south of the Site; and,
- 5. Two locations of former wastewater lagoons on the SAEP property to the north of the Site.

Based on the preliminary evaluation of these sites as they related to proposed improvements which encompassed a large area within and surrounding the airport, several of these locations were selected for further study. Those areas which were studied as part of the EDDA investigation were described in the Final EIS as follows:



Table 1 – Potential Hazardous Materials Sites Identified in 1999 Final EIS Investigated in Phase II EDDA.

Site ID	Name	Location	Description
В	Former Motor Vehicle Service Station	South End of Main Street/Former intersection of Short Beach Road	Now vacant, contained fuel storage tanks, soil contamination not found, groundwater contamination not known.
D	Former Truck Stop	150' East of Runway 24	Former site of truck loading and unloading.
E-3	Airport Earthfill	400' to 800' East of Runway 24, East of Main Street	Fill material reported to potentially contain material from the former Raymark facility. Soil tests show only trace levels of asbestos.

A preliminary screening and soil sampling investigation was conducted within these areas, as well as several others throughout the airport area. This investigation was conducted 1997. Historical sampling locations are illustrated on <u>Figure 4</u>. A summary of the results of this investigation is as follows:

- <u>Site B Former Motor Vehicle Service Station</u>: Soil samples from two locations, B-1 and B-2, were screened with an organic vapor analyzer¹. The Final EIS indicates that no readings were observed above detection limits.
- <u>Site D Former Truck Stop</u>: Soil samples from two locations, D-3 and D-4, were screened with an organic vapor analyzer¹. The EIS indicates that no readings were observed above detection limits.
- Site E-3 Airport Earthfill: Soil samples from six locations, E-29 through E-34, were analyzed with an organic vapor analyzer and tested for petroleum hydrocarbons, asbestos, Polychlorinated Biphenyls (PCBs) and lead. Although the text and tables of the Final EIS discussing these results are contradictory, a review of the data provided in the Final EIS

¹ Note: PID readings are a screening tool only and do not definitively rule out soil impact.



indicates that lead was detected at a concentration greater than 400 milligrams per kilograms (mg/kg) in one of these soil samples. Asbestos was not detected in the samples, and moderate to trace concentrations of PCBs, Total Petroleum Hydrocarbons (TPH), and/or lead were detected in all of the samples. The following table presents summary of the analytical results from the EDDA:

Table 2. Summary of Analytical Results of 1997 EDDA

Sample ID	TPH (mg/kg)	Lead (mg/kg)	PCB (Aroclor 1268) (µg/kg)	Asbestos (%)
E-29	125	69	170	ND
E-30	<30	430	51	ND
E-31	150	24	ND	ND
E-32	300	203	ND	ND
E-33	290	397	690	ND
E-34	<30	92	ND	ND

mg/kg = milligrams per kilograms

ug/kg = micrograms per kilograms

ND = Not detected

Detailed information on the sample collection depth or methods involved were not presented in the EDDA or Final EIS. Copies of the relevant portion of the Final EIS and the entire EDDA appendix are included in **Appendix C**.



5.0 SITE INSPECTION

Observations concerning the subject property were obtained from a site inspection conducted on February 10, 2009. The site inspection consisted of a visual inspection of the Site and adjoining properties, which included the portion of the vacant parcel owned by the City of Bridgeport maintained as a runway clear-zone (the Site) and a nearby triangular vacant grassy parcel to the south, bounded by Main Street (Route 113), Dorne Drive (formerly the intersection of Main Street and Short Beach Road), and an access road to the Stratford Solid Waste Landfill. Portions of the Site and relevant features are illustrated on <u>Figure 2</u>. Photographs of the subject property and related areas identified above are included in <u>Appendix D</u>.

5.1 CURRENT USES OF THE SITE

The Site consists of an approximately 79-acre parcel of land currently utilized as an airport runway clear-zone. The Site consists mostly of grassy undeveloped open land, wetlands, marshes and drainage channels that are connected to the Marine Basin, a small embayment of the Housatonic River located to the east of the Site. The Site also contains a small asphalt paved area located in the western portion of the Site, unpaved dirt access roadways to several shoreline residential units along the mouth of the Housatonic River, and artificial drainage channels.

Although not specifically inspected for this evaluation as this area is some distance from the portion of the Site proposed for the re-alignment of Main Street, the majority of the eastern portion of the property consists of undeveloped grassy areas with some areas of inland wetlands. According to a Final EIS and discussed in greater detail below, a smaller portion of the wetlands present at the Site are tidally-influenced in the vicinity of the drainage channels leading to Marine Basin.

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A sidewalk is present along the east side of Main Street (Route 113) throughout the Site. Several aviation-related structures (small beacons/towers) are present along the western edge of the subject property along Main Street (CT Route 113). Based on identified manholes observed during the site visit, sewer and electric lines are present on the Site along the northeast side of Main Street (CT Route 113).

A manhole structure was observed in the central portion of the asphalt paved area in the northwestern corner of the subject property. URS could not determine the use or purpose of this structure.

A variety of scrap metal, concrete, rebar, and general construction and demolition debris was observed throughout the Site. The majority of this debris appears to be concentrated along two drainage channels which traverse the property. One of these channels runs from the former SAEP property south to the Marine Basin. The other drainage ditch emerges from an outfall east of Main Street (Route 113) and travels east where it merges with the other drainage ditch and eventually discharges to the Marine Basin.

A groundwater monitoring well labeled as MW-11 was observed to the east of the asphalt paved portion of the Site.

5.2 ADJOINING LAND USE

The property to the northwest of the Site contains a vacant industrial facility which was formerly occupied by the SAEP. This property currently contains a large asphalt paved parking area and several large buildings and an abandoned wastewater treatment plant. Residential structures, a marina and portions of the Marine Basin are located to the east of the Site. Portions of the Marine Basin and the Stratford Solid Waste Landfill are located to the south of the Site.

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5.3 CURRENT SITE CONDITIONS

5.3.1 Hazardous Materials/Hazardous Substances

No hazardous materials or substances were observed at the Site during the site inspection.

5.3.2 Hazardous and Special Waste

No hazardous waste was observed at the Site during the site inspection. Approximately one hundred (100) cubic yards of what appeared to be construction and demolition debris, consisting of concrete, rebar and scrap metal, were observed in the vicinity of drainage channels on the Site. This material is considered Bulky Waste which is considered a type of Special Waste. The approximate location(s) of this debris is identified on **Figure 2**.

5.3.3 Underground Storage Tanks

No underground storage tanks (USTs) or evidence of the presence of USTs were observed on the Site during the site inspection.

5.3.4 Aboveground Storage Tanks

No aboveground storage tanks (ASTs) were observed on the Site during the site inspection.

5.3.5 Drums and Containers

No drums or containers were observed on the Site during the site inspection. The solid waste debris discussed above in Section 5.1 was not observed to contain any drums or containers.

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5.3.6 PCB-Containing Equipment

No potentially PCB-containing equipment was observed on the Site during the site inspection.

5.3.7 Solid Waste

Other than the bulky waste discussed in Section 5.3.2 no significant volumes of solid waste were observed at the Site during the site inspection.

5.3.8 Water Supply and Monitoring Wells

No water supply wells were observed on the Site during the site inspection. One apparent groundwater monitoring well was identified in the portion of the Site to the east of the asphalt paved area in the northwest portion of the Site. This groundwater monitoring well is approximately two hundred (200) feet from the adjoining property to the northwest of the Site.

5.3.9 Pits, Ponds and Lagoons

No pits, ponds or lagoons were observed at the Site during the site inspection. Two drainage channels traverse the property before merging and discharging to the western end of Marine Basin. One of these drainage channels flows southeasterly from the former SAEP facility until meeting the other drainage channel just west of the Marine Basin. The other drainage channel emerges from beneath Main Street and travels east to the Marine Basin.





5.3.10 Other Physical Evidence of Contamination

Physical evidence of contamination (i.e., oil or chemical stains, soil discoloration or stressed vegetation) was not observed on the Site during the site inspection.



6.0 REGULATORY AGENCY REVIEWS

6.1 LOCAL REGULATORY AGENCY RECORD REVIEWS

URS completed a review of local municipal records within the Town of Stratford, Connecticut on February 10, 2009. Records on file with the Town of Stratford Tax Assessor's office, Health Department, Building Department and Fire Marshall's office were reviewed. Presented below is relevant information from this inquiry and review of Town files.

Property cards and maps from the Town of Stratford Tax Assessor's office indicate the subject property as a combination of two parcels fronting the east side of Main Street that are owned by the City of Bridgeport. Information regarding the acreage, zoning, general land use characteristics and ownership were also obtained. According to maps reviewed at the Town of Stratford's Assessor's office, the northern portion of the Stratford Solid Waste Landfill and associated access road (Landfill Access Road) are located on the Site. However, this area of the parcel is outside of the proposed project area and is therefore not a focus of this evaluation.

No records were available for review at the Town of Stratford Health Department office that would indicate the presence of potable or public supply water wells at the Site or surrounding area. Officials at the Town of Stratford Health Department stated they were not aware of any complaints or enforcement actions pertinent to the Site.

The Building Department had no records pertinent to the Site.

Numerous records related to properties on Main Street in Stratford were obtained from the Town of Stratford Fire Marshall's office. The majority of these records pertained to UST closures and testing at the Igor Sikorsky Memorial Airport and the Textron Lycoming and AVCO (former occupants of the SAEP) facility. Records in the file indicated that USTs have been or are



currently in use at the Igor Sikorsky Memorial Airport facility and/or the SAEP facility. Documents observed in the file were not specific as to the location of the specific UST's or their current status. No records related to the Site, or the former automotive service station south of the Site were identified.

Copies of information obtained during the conductance of this review are presented in $\underline{\mathbf{Appendix}}$ $\underline{\mathbf{A}}$.

6.2 CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION FILE REVIEW

URS conducted a file review at the CTDEP Records Center on February 17, 2009. URS requested files pertaining to the Site under names of the following facilities that have been referenced in relation to the Site:

- Igor Sikorsky Memorial Airport
- Stratford Army Engine Plant
- Textron
- AVCO
- Allied Signal
- Textron Lycoming
- Great Lakes Carbon Co.
- National Lead Co.
- Raymark
- City of Bridgeport

A summary of the relevant information obtained by the CTDEP file review is presented in the sections below.



Former Raymark Facility

URS was in possession of a map prepared by Tetra Tech NUS, Inc. (Tetra Tech) titled Soil Sample Locations, Raymark-OUG, Stratford, Connecticut. URS acquired this map during previous work related to this Site. This map presented information that wastes generated by Raymark Industries, Inc. were present at the Site. Information obtained from this map is illustrated on <u>Figure 4</u>. Based on this information, URS requested information related to "Raymark" within the Town of Stratford. Due to the large volume of files associated with this facility, remediation files were reviewed for information relevant to the Site.

URS reviewed the report titled *Draft Final Remedial Investigation, Raymark – OU6 – Commercial Properties, Stratford, Connecticut*, dated December 2003 (DFRI). This report was prepared by Tetra Tech in order to evaluate the nature and extent of contamination in the soils or sediment at twenty seven (27) properties where Raymark Industries, Inc. facility, located in Stratford, Connecticut disposed of its waste. The Site was identified by this report as being a location with the potential to have fill material meeting the definition of "Raymark Waste" and not having been the subject of a removal action at the time of report, December 2003.

According to the DFRI, twenty-four (24) soil borings (BA2-201 through BA2-223 and BA2-205A) were advanced at the Site to depths of fourteen (14) feet below grade surface (bgs). A total of 101 soil samples were collected from 43 locations (including surface samples) at the Site. The report's summary of findings of the investigation includes:

- Asbestos was detected in 42 of the 100 samples collected. Asbestos at greater than 1% was detected in 12 of the 100 samples, at depths ranging to 6 feet bgs.
- One soil sample (BA2-205A) was analyzed for dioxins, which were detected in the sample with a toxicity equivalent of 0.011 ug/kg.
- Lead exceeding the CTDEP Industrial/Commercial Direct Exposure Criteria (DEC) regulatory standard of 1,000 mg/kg at five locations (BA2-208, BA2-212, BA2-213, BA2-



- 219, and BA2-222) is generally located in the eastern portion of the subject property. One sample from these five locations was analyzed for metals following extraction by the Synthetic Precipitation Leaching Procedure (SPLP), and results did not exceed GB Pollutant Mobility Criteria (PMC).
- Pesticides were rarely detected at the Site, although several pesticides were detected in samples collected from the western portion of the Site at concentrations exceeding the GB PMC.
- Up to 100 soil samples were collected and analyzed for PCBs. Aroclor 1268 was detected in approximately two dozen samples. Detected concentrations in two locations (BA2-201 and BA2-219) exceeded the DEC.
- Three soil samples were collected and analyzed for Semi-Volatile Organic Compounds (SVOCs). Eleven SVOC constituents were detected in these samples at concentrations exceeding the DEC and/or GB PMC.
- Three soil samples were collected and analyzed for Volatile Organic Compounds (VOCs) from the Site during the May 2003 investigation. Two VOCs were detected at concentrations below the DEC and GB PMC.
- The Tetra Tech report states that pesticides and SVOCs are potentially leaching into groundwater from contaminated soils due to the lack of an impervious surface at these locations.
- A figure provided in this report also presented other sampling locations BA2 A+200, BA2 B+200, BA2 C+200, BA2 D+200, BA2 E+00, BA2 F+00, BA2 A+552, BA2 B+400, BA2 B+518, BA2 C+400, BA2 D+351, BA2 E+280 and BA2 E+200. The report did not discuss these sampling locations. This same figure presented an outline of two areas of Raymark Waste. These soil borings and the areas of the Raymark Waste are illustrated on **Figure 4**. A table of analytical data did present analytical results of these other samples. According to Tables included as Appendix C to the DFRI, samples collected from these locations were also analyzed for some portion of the above referenced constituents.

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This report stated that based on a standardized definition of "Raymark Waste" using certain combinations of identifying constituents and concentrations, Raymark Waste areas were identified at the Site after investigation activities at the site in May 2003. Fill material present at the Site (not necessarily Raymark Waste) included potentially asbestos containing material (PACM), asbestos fibers, asphalt, brick, concrete, glass, plastic and possible sludge. A Human Health Risk Assessment was also performed for the Site to evaluate the potential current or future risks to the public from chemicals detected at the site.

This Human Health Risk Assessment concluded that the reasonable maximum exposure (RME) risk estimate for the commercial worker exposed to Raymark Waste soils at the Airport Property does not exceed the United States Environmental Protection Agency (EPA) target cancer risk range or the CTDEP target total risk level of 10^{-5} for multiple contaminants. However, cancer risk estimates for benzo(a)pyrene and dibenzo(a,h)anthracene are greater than the CTDEP target risk level for single contaminants of 10^{-6} .

The report also identifies several other sites for the purpose of potential investigation in order to determine the presence of Raymark Waste. At least two of these potential locations appear (no mapping of the areas was presented) to be within the subject property, but not necessarily within the area of the proposed project. These areas include "Site 12-Airport Clear Zone" and "Area North of Marine Basin, East of Site 12". The report does not present information indicating that these areas were subsequently investigated.

Locations of the Tetra Tech soil borings and sample locations are depicted on <u>Figure 4</u>. Copies of relevant report information and the associated data are included in <u>Appendix E</u>.



Stratford Army Engine Plant (SAEP)

A large volume of CTDEP files relevant to the SAEP were reviewed for information pertinent to the subject property. Of several dozen remediation files, multiple groundwater monitoring reports were noted along with a variety of correspondence, pictures, and other miscellaneous information. URS reviewed the available data and has summarized the data relevant to the Site below.

The currently vacant SAEP facility (also previously known as Allied Signal Aerospace and Textron Lycoming) abuts the Site to the north. According to the Final EIS, previously discussed, this site previously contained three wastewater lagoons in a location to the north of, yet close to, the Site. Most notably, three wastewater sludge and one larger equalization lagoon were historically operated at the facility as part of their wastewater treatment process.

In 1987, these lagoons were closed, i.e. filled and capped. However, contaminated soil beneath the water table was not removed prior to capping, preventing a "clean" closure under Resource Conservation and Recovery Act (RCRA) guidelines. These former lagoons are adjacent to the northern property line of the Site as illustrated on <u>Figure 4</u>.

According to groundwater monitoring reports reviewed, including a *Summary of Detected Compounds and Constituents*, 1981-1998, prepared for Allied Signal Engines by Sound Environmental Solutions, dated May 26, 1998, a network of monitoring wells exists at the SAEP facility to monitor groundwater quality as part of the RCRA closure plan. Four of these monitoring wells, MW-9S, MW-9I, MW-9D and MW-11, are located on the subject property. Monitoring wells MW-9S, MW-9I, MW-9D are located north of the proposed project area beyond the drainage channel and were unknown and not observed at the time of the Site visit. Monitoring well MW-11 is within the property area, near the proposed re-aligned road location, and is believed to be the monitoring well observed during the Site inspection.





Available information, including the 2006 Annual Summary Report, RCRA Groundwater Monitoring Program, Stratford Army Engine Plant, Stratford, Connecticut, prepared by Sound Environmental Solutions in February 2007, was reviewed to assess the status of this groundwater monitoring well and the area groundwater quality in general. According to the information reviewed, the shallow groundwater flow direction at the groundwater monitoring well MW-11 location and at the subject property is, in general, to the east towards the local drainage channels and the Housatonic River. However, there also appear to be localized radial flows around the former lagoons themselves, tidal interaction between the drainage and groundwater flows, and a more southerly groundwater flow in the deeper aquifers.

Based on information obtained from the reviewed groundwater monitoring reports, groundwater appears to be approximately 3 feet below grade at groundwater monitoring well MW-11. This well appears to have been sampled annually since at least 1995. A cursory review of analytical data for monitoring well MW-11 from the years 1995 through 1998 and April 2004 through November 2006 did not reveal significant impacts to groundwater quality at this location. During the three sampling events in October 2004, September 2005 and November 2006, only trace estimated levels of VOCs (chlorobenzene and chloroform at 0.8 micrograms per liter (μ g/L) and 0.8 μ g/L, respectively) were detected during the 2006 sampling event. Zinc was the only nonorganic constituent detected (17.8 μ g/L) during the same time period above estimated or minimum laboratory detection levels, and at concentrations which are below applicable CTDEP regulatory criteria. Similar data was observed for the annual sampling events conducted at monitoring well MW-11 during the 1995 through 1998 time period.

Other Information

Several maps contained within the reviewed groundwater monitoring reports depicted the SAEP groundwater monitoring wells. A diagram contained within a report identified as *Surface Impoundment Closure Certification* prepared by Metcalf & Eddy in August 1992 presented the



location of AVCO groundwater monitoring wells. These groundwater monitoring wells are depicted on <u>Figure 4</u>. URS could not confirm that the wells illustrated on the Sound Environmental Solutions plan are the same wells illustrated on the Metcalf & Eddy plan. Copies of these plans and relevant report information are included in <u>Appendix A</u>.

6.3 ENVIRONMENTAL PROTECTION AGENCY (EPA) WEBSITE

URS reviewed portions of the *Remedial Investigation Volume I of II Raymark-OU6-Additional Properties Stratford Connecticut*, dated April 2004 available on the EPA Superfund website. This report prepared by Tetra Tech presented the same information as discussed above. Additional documentation located in the file review or from the EPA Superfund website indicates that while preparation of a feasibility study is underway to address this (the subject property) and the other Raymark sites in Stratford, a long-term plan has yet to be developed. Short-term plans for the Site include the installation of fencing and signage, with estimated costs for long-term capping or removal of the waste currently at approximately \$1 million. URS contacted the identified EPA listed State Agency Contact, Mr. Ron Curren of the CTDEP, to inquire about the Site. According to Mr. Curren, the portions of the Site which contain the Raymark Waste are considered part of the Raymark superfund site. Mr. Curren confirmed that currently there is no plan to remediate the Raymark Waste present at the Site. URS also contacted the EPA Raymark Site Regional Project Manager, Mr. Ron Jennings, to inquire about the Site. Mr. Jennings confirmed information presented by Mr. Curren and stated that there is nothing preventing disturbance of the superfund site.

Copies of other related EPA or CTDEP documents are included in **Appendix A**.



7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

The Site consists of an approximately 79-acre irregularly-shaped property comprised of two parcels currently utilized by the City of Bridgeport as a runway clear-zone. The majority of the Site consists of undeveloped grassy land. The Site also contains smaller areas of wetlands and the Marine Basin, a small embayment of the Housatonic River. An access road for the Stratford Solid Waste Landfill at the north terminus of Short Beach Road is present along the southern border of the property. The northern portion of the landfill and its associated access road are located on the Bridgeport property, although outside of the proposed project area. The portion of the Site most relevant to the proposed realignment (along Main Street) consists of an unimproved paved area, which adjoins the former SAEP south parking lot, and the area along the east side of Main Street.

The Site formerly contained several buildings including a truck stop and a restaurant. Based on street directories, possible former occupants of the Site could have included, boat renting, a horticultural business by the name of Farmer Snapper, a hotel and restaurant by the name of Howie's Rest and the Happy Landing Inn, and the Dairy Store. All former Site structures had been removed by 1990. Fill material consisting of Airport Earthfill, demolition debris and Raymark Waste are present at the Site. Previous environmental investigations have identified the presence of contaminated soil and Raymark Waste at various locations at the Site.

This assessment identified the following environmental concerns for the proposed roadway portion of the Site:

1. Raymark Waste. So called Raymark Waste has been identified in two portions of the Site. Based on the results of soil samples collected at the Site, the Raymark Waste contains

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concentrations of asbestos, total mass and SPLP Metals, dioxins, pesticides, PAHs, PCBs and VOCs. The areas of the Site which contain the Raymark Waste are considered a portion of the Raymark Superfund site.

- **2. Contaminated Soil.** Assessment activities of the Raymark Waste present at the Site identified the presence of contaminated soil at portions of the Site beyond the limits of the identified Raymark Waste. Soil beyond the limits of the Raymark Waste is contaminated with concentrations of asbestos, copper, lead, pesticides and PCBs.
- **3. Contaminated Groundwater:** Groundwater in vicinity of the SAEP is impacted with minimal concentrations of chlorinated VOCs.
- **4. Former Truck Stop:** A truck stop was formerly located in the southwestern portion of the Site along Main Street (CT Route 113). The former presence of a truck stop could indicate the former presence of gasoline and/or diesel fuel oil tanks associated with vehicle fueling operations and a fuel oil tank associated with the truck stop building. Furthermore, the former use of this portion of the Site by trucks could have resulted in incidental releases of gasoline and or diesel fuel in this location.
- **5. Former Building Structures:** In addition to the truck stop, three other building structures previously existed on portions of the Site. One of these buildings was apparently a restaurant. The use of the other two former buildings is not known. There is the possibility that these former buildings could have had heating oil tanks, could have been used for industrial purposes and/or could have been painted with lead-based paint, all of which could have lead to impacts to soil and/or groundwater.

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6. Earth Fill: One portion of the Site has been identified as an area where fill material, so called Airport Earth Fill, has been deposited. Portions of this area beyond the limits of the Raymark Waste are impacted with contaminants such as lead and asbestos.

7. Stratford Solid Waste Landfill: Although some distance from the project area portion of the Site, portions of the Stratford Solid Waste Landfill are located on the Site. Contaminants are known to commonly leach from landfills to soil and/or groundwater. While no specific reference to releases from the Stratford Solid Waste Landfill were identified by this assessment, there is a good possibility that releases have occurred from this landfill and that such releases could have impacted portions of the Site.

8. Solid Waste Disposal Area: The so called Raymark Waste identified in several portions of the Site and the Airport Earth Fill located near the project area may contain Solid Waste at a volume (greater than 10 cubic yards) that could subject the Site to the requirements of the Connecticut Solid Waste Regulations. Further assessment of the content of the identified Raymark Waste and airport earth fill may be required to refine this conclusion.

7.2 RECOMMENDATIONS

URS recommends collection and analysis of soil samples from within the limits of the project area, planned soil excavation areas and/or areas proposed to be disturbed by the proposed roadway construction activities to evaluate soil conditions and the existence of solid waste. If groundwater is anticipated to be encountered during the proposed roadway construction activities, URS recommends evaluation of impacts to groundwater in the project area portion of the Site. URS recommends completing at least seven (7) soil borings for this project-specific investigation. Proposed soil boring locations are identified on **Figure 5**.



8.0 REFERENCES

- Draft Final Remedial Investigation, Volume I of II, Text, Table, and Figures, Raymark OU6 Commercial Properties, Stratford, Connecticut, Response Action Contract (RAC), Region 1. Tetra Tech NUS, Inc. December 2003.
- Remedial Investigation, Volume I of II, Raymark OU6 Additional Properties Stratford, Connecticut, Response Action Contract (RAC), Region 1. Tetra Tech NUS, Inc. April 2004.
- Final Environmental Impact Statement/Environmental Impact Evaluation for the Improvements to Runway 6-24, Volume 1; URS Greiner, May 1999.
- 2006 Annual Summary Report, RCRA Groundwater Monitoring Program. Stratford Army Engine Plant, Stratford, Connecticut. Sound Environmental Solutions, February 2007.
- Stratford Pathways and Plan, Housatonic River Greenway Project. Greater Bridgeport Regional Planning Agency, revised February 2008.
- Summary of Detected Compounds and Constituents, 1981 1998, AlliedSignal Engines, Stratford, Connecticut. Sound Environmental Solutions, May 26, 1998.
- Phase I/II Environmental Due Diligence Audit (EDDA) for Sikorsky Memorial Airport (Stratford, Connecticut), Prepared in Support of the Environmental Impact Statement/Impact Evaluation for the Proposed Runway 6-24 Improvements. URS Greiner, January 1999.
- Town of Stratford Municipal Office Records. Records on file with the Town of Stratford Health Department, Building Department, Fire Marshall, Engineering Department, and Conservation Commission.
- United States Geological Survey (USGS), 7.5 Minute Topographic Map, U.S. Department of Interior, Geological Survey, scale 1:24,000.
- Mr. Ron Curren, Connecticut Department of Environmental Protection, Personal communication, April 29, 2009.

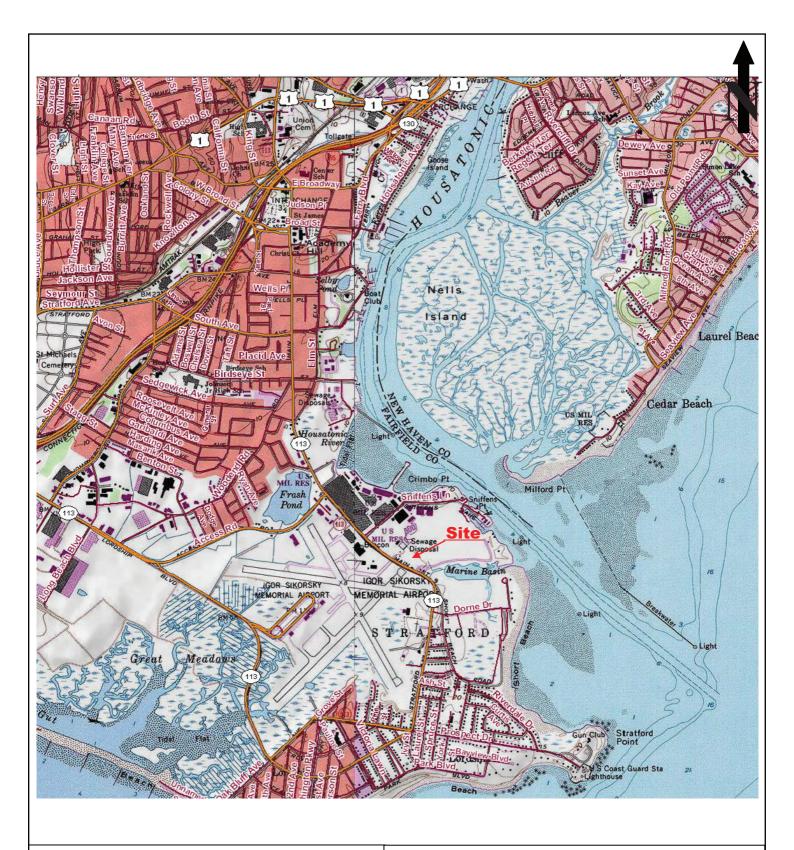




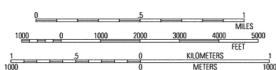
Mr. Ron Jennings, United States Environmental Protection Agency, Personal communication, June 4, 2009.



FIGURES





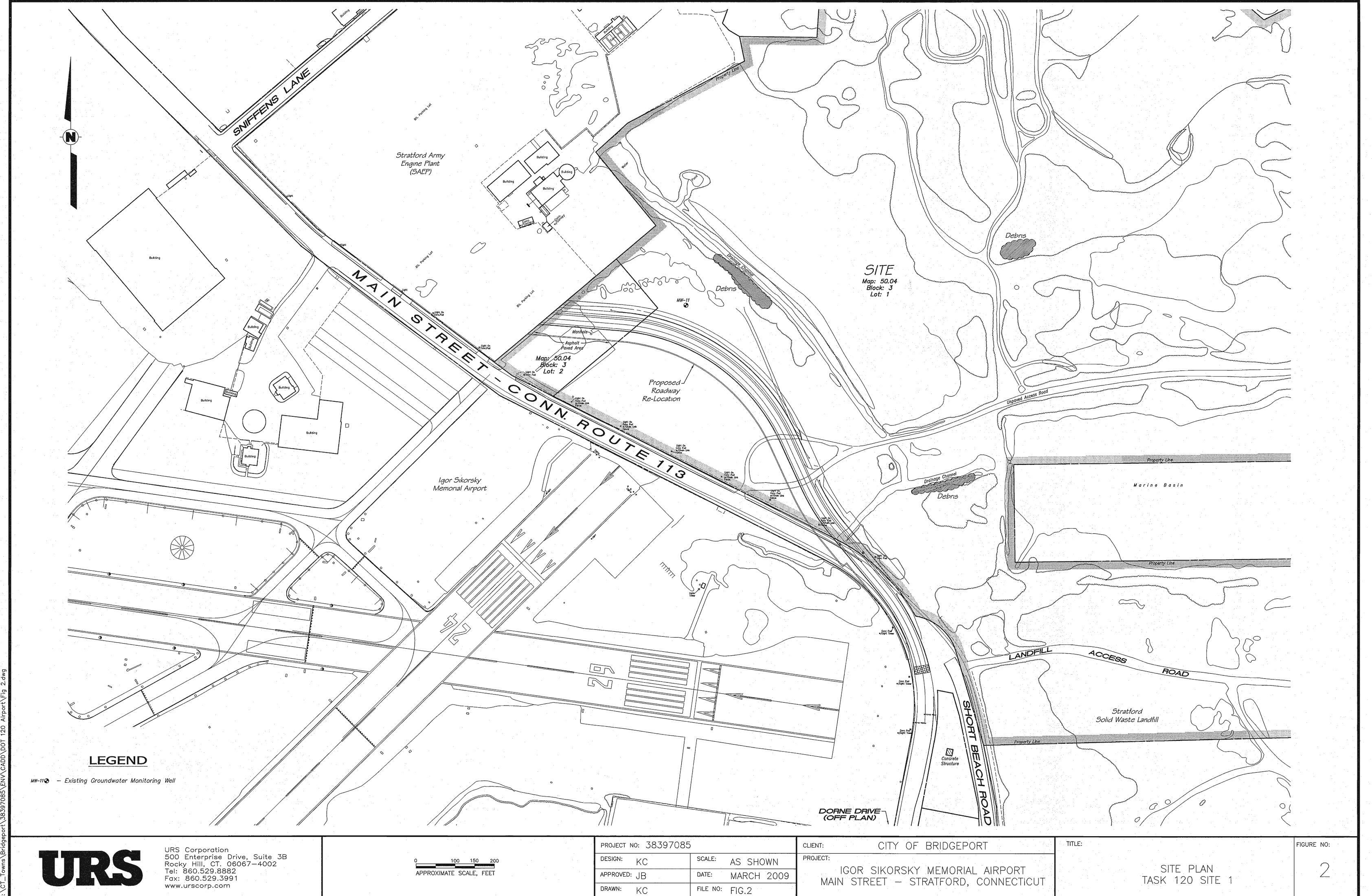


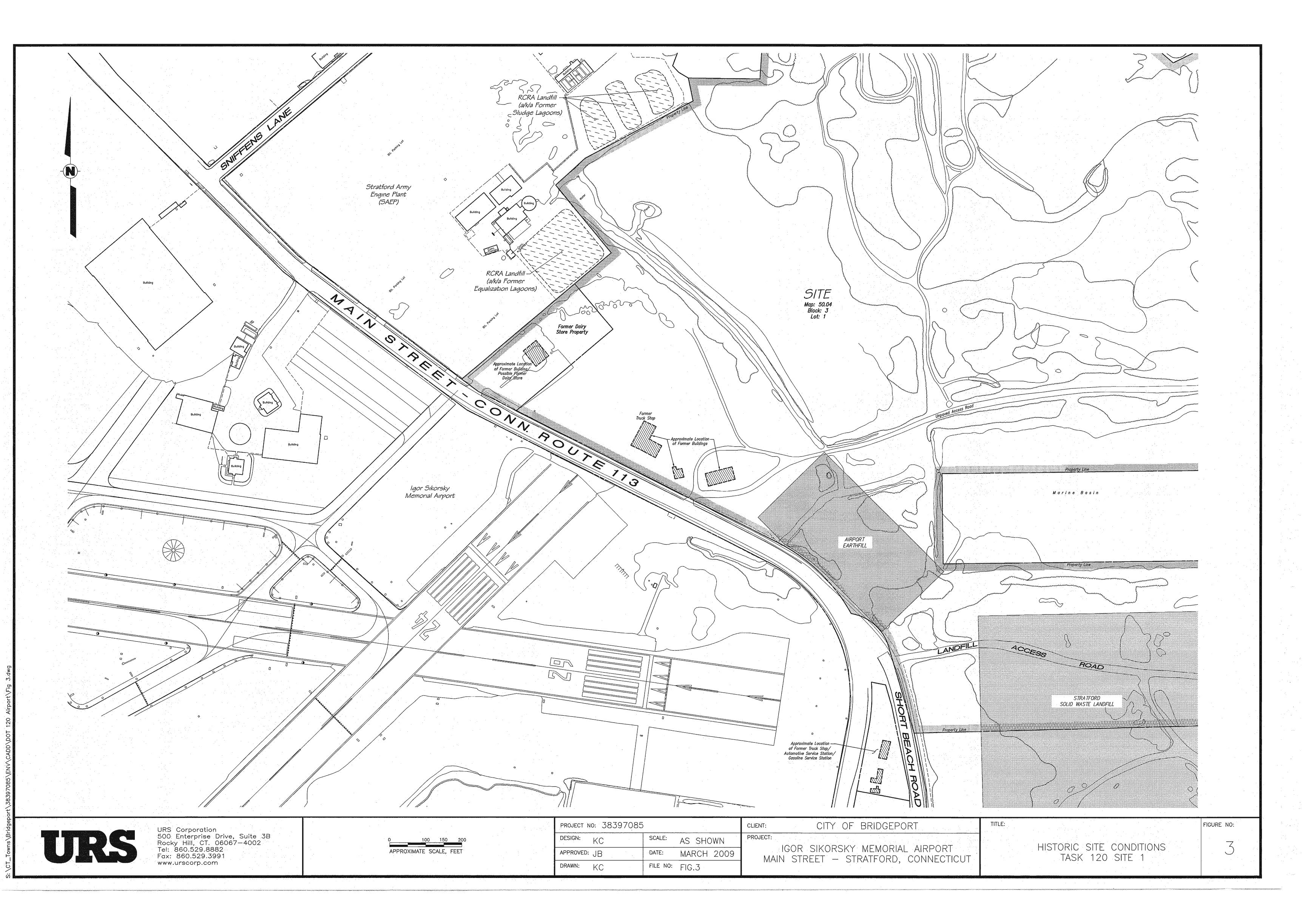
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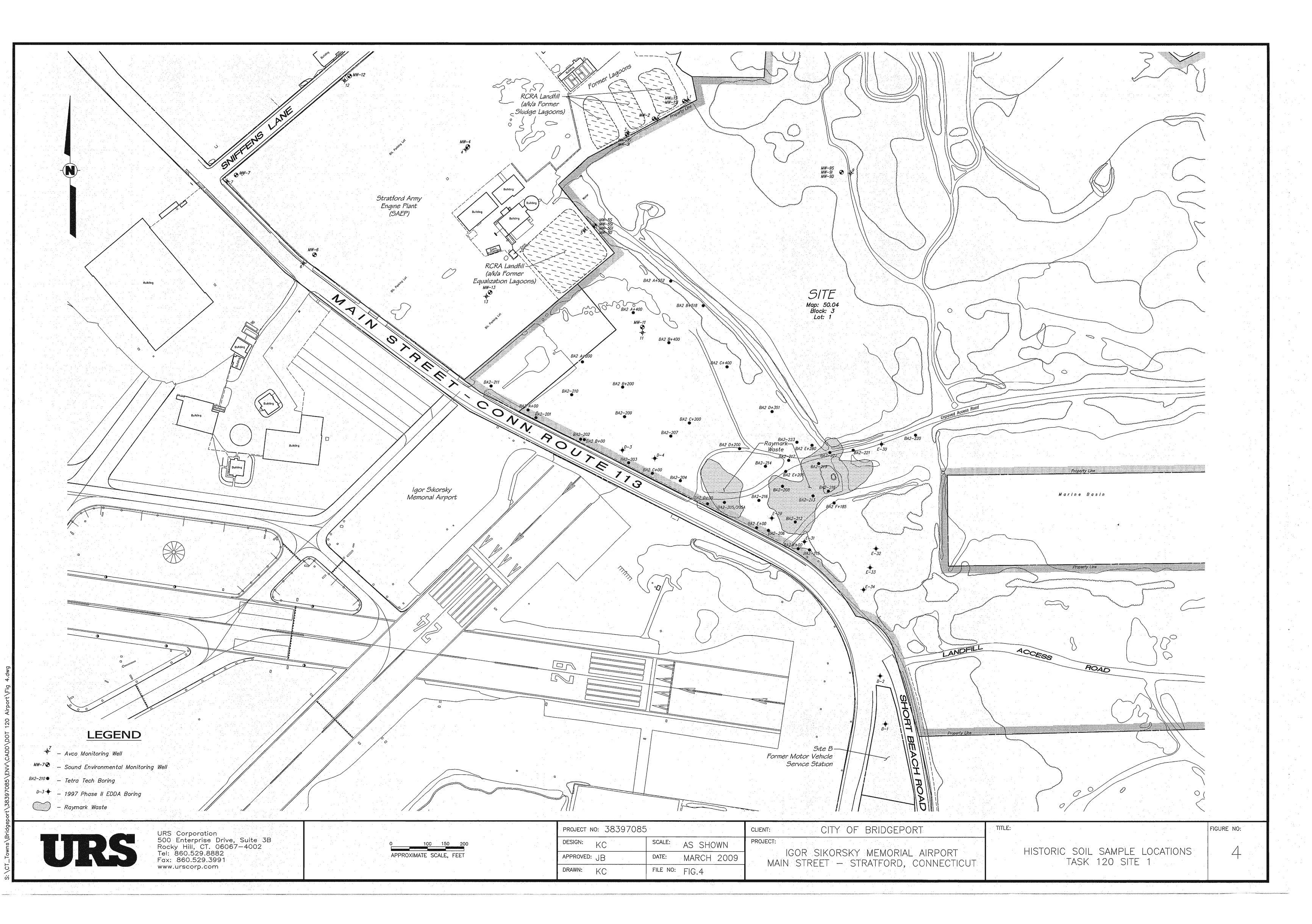
Figure 1 Site Location Map

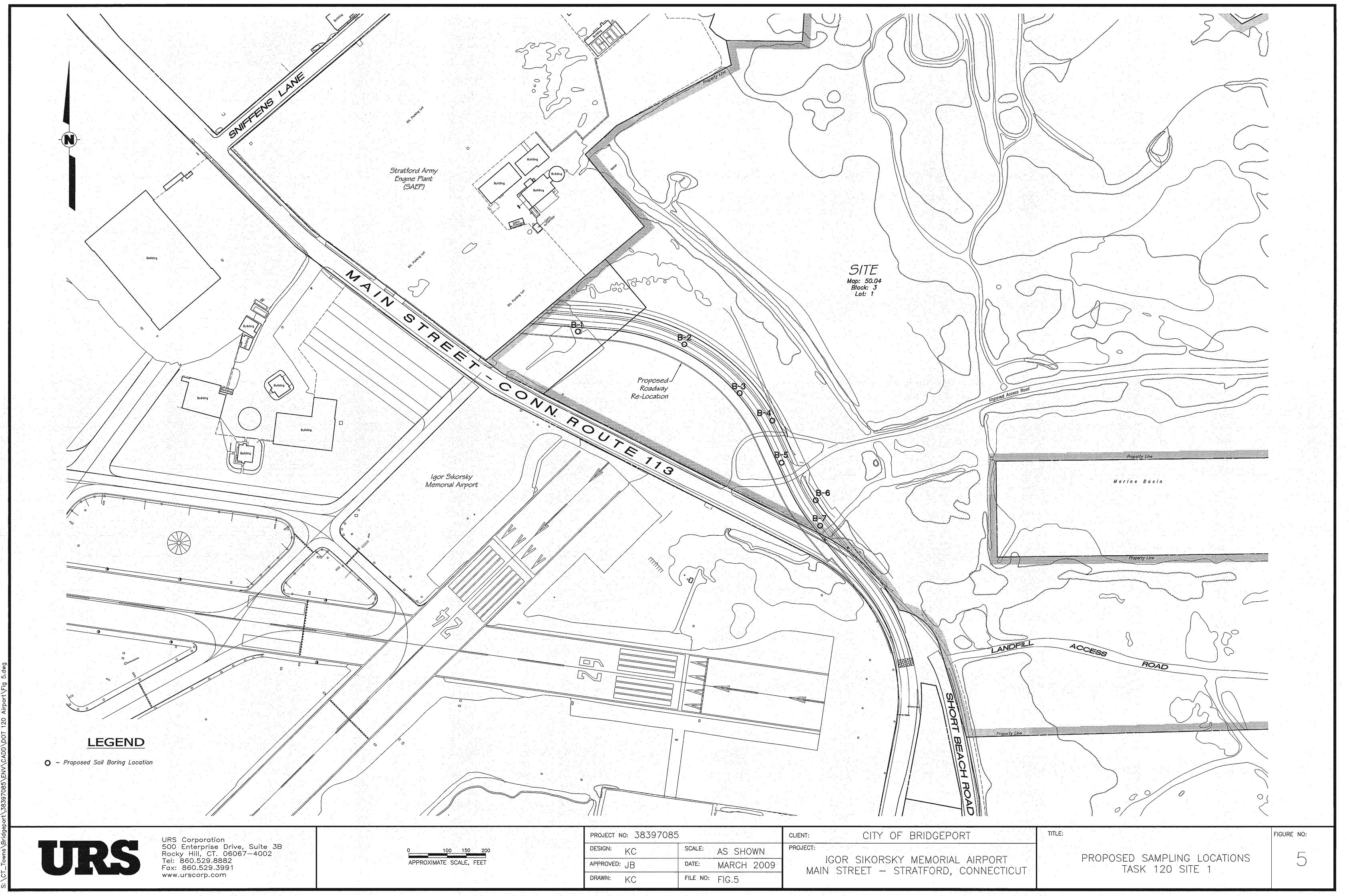
Igor Sikorsky Memorial Airport Task 120 Preliminary Site Assessment – Site 1 Stratford, Connecticut

Job No.: 36937085.00003 URS Corporation AES











TASK 120 - PRELIMINARY SITE ASSESSMENT SITE 2 – STRATFORD ARMY ENGINE PLANT PROPERTY MAP 50.05, BLOCK 4, LOT 2 MAIN STREET, STRATFORD

FINAL DESIGN AND PERMITTING FOR THE RE-ALIGNMENT OF MAIN STREET (CT ROUTE 113)

Prepared for:

CITY OF BRIDGEPORT

URS Project No.: 38397085.00003

August 13, 2009

URS Corporation AES 500 Enterprise Drive, Suite 3B Rocky Hill, Connecticut 06067



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FIGURES

Figure 1 - Site Location Map

Figure 2 - Site Plan

Figure 3 – Proposed Sampling Locations

APPENDICES

Appendix A – Municipal and CTDEP Documents

Appendix B – Aerial Photographs

Appendix C – Final 1999 EIS Excerpts

Appendix D – Site Photographs



EXECUTIVE SUMMARY

This report presents the results of URS Corporation AES (URS) Task 120 Preliminary Site Assessment (Task 120) of the portions of parcels (proposed roadway) slated for the re-alignment of Main Street (CT Route 113) in Stratford, Connecticut. The objective of the Task 120 was to evaluate site-specific environmental concerns and to serve as a basis for Task 210 and/or Task 220 activities in the future.

The Site consists of an approximately 21.53-acre parcel containing a paved parking lot (the South Parking Lot) and several buildings and structures, including an unused wastewater clarifier, an unused wastewater equalization tank, and two grassy "landfill" areas [Resource Conservation Recovery Act (RCRA) landfills]. The Site was formerly occupied by the Stratford Army Engine Plant (SAEP) and is currently vacant. Previous investigations have identified the presence of contaminated soil and groundwater at this parcel although not necessarily in the vicinity of the proposed roadway.

This assessment identified the following environmental concerns for the portion of the Site for the proposed roadway:

- 1. Former Soil Stockpile. Petroleum contaminated soil was formerly stockpiled in the southeast portion of the South Parking Lot. This material was later used as fill material in an area east of the South Parking Lot as approved by the Connecticut Department of Environmental Protection (CTDEP). The former presence of the petroleum impacted soil and the filling may have resulted in impacts to soil and groundwater in this South Parking Lot.
- **2. Contaminated Groundwater**. Groundwater in the vicinity of the project area portion of this Site has been monitored as part of the RCRA closure of several waste water sludge lagoons (a/ka/RCRA landfills) located to the east of this area. The monitoring has identified concentrations of

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Volatile Organic Compounds (VOCs) in groundwater in the vicinity of the proposed roadway area.

3. FOSFT. The Army has implemented a Finding of Suitability for Early Transfer (FOSFT) for the entire SAEP site. The FOSFT includes land use restrictions such as no residential use and no use of groundwater. This deed restriction may convey with the property or may require the application of an Environmental Land Use Restriction.

URS notes that other potential environmental concerns exist within the Site parcel (21.53 acres) including former plating and manufacturing areas, the closed RCRA lagoons and the former wastewater treatment plant. However, as these areas are located some distance from the proposed roadway, the portion of the Site slated for potential acquisition, the potential for an environmental concern to the project area is minimal relative to disturbance of soil. Some of these areas of concern may have the potential to affect groundwater in the project area.

URS recommends collection and analysis of soil samples from the limits of the project area, planned soil excavation areas and/or areas proposed to be disturbed by the proposed roadway construction activities to more completely evaluate soil conditions. If groundwater is anticipated to be encountered during the proposed roadway construction activities, URS would also recommend evaluation of impacts to groundwater in the project area portion of the Site. URS recommends completing at least three (3) soil borings for this project-specific investigation.



1.0 INTRODUCTION

This report presents the results of URS Corporation AES (URS) Task 120 Preliminary Site Assessment (Task 120) of portions of the parcel (proposed roadway) known as 550 Main Street (the "Site" or "subject property") slated for potential acquisition for the re-alignment of a 2,200 foot long portion of Main Street (CT Route 113) in the vicinity of the Igor Sikorsky Memorial Airport in Stratford, Connecticut. The objective of the Task 120 was to evaluate site-specific environmental concerns and to serve as a basis for Task 210 and/or Task 220 activities in the future. A Site Location Map is included as **Figure 1**. A Site Plan is included as **Figure 2**.

1.1 SCOPE OF WORK

URS' scope of work included an inspection of the subject property to document current conditions, review of available environmental reports, inquiries and review of available files at City of Bridgeport offices, review of aerial photographs and street directories at the Connecticut State Library and conductance of a file review at the Connecticut Department of Environmental Protection (CTDEP) Records Center, and preparation of this Site Specific Report.

1.2 LIMITING CONDITIONS AND DATA GAPS

Because the Site was vacant, fenced and no contact person was located at the Site, URS was unable to access the Site and reviewed the current Site conditions from beyond the fence along the Site boundary. No other conditions that would limit URS' ability to complete the scope of work were encountered during the performance of the Task 120.

1.3 LIMITATIONS OF THE ASSESSMENT

The work conducted by URS is limited to the services agreed to with City of Bridgeport as presented in the Exhibit E: Scope of Work Igor Sikorsky Memorial Airport AIP No.3-09-0002-



24 Final Design and Permitting for the Re-Alignment of Main Street (CT Route 113). No other services beyond those explicitly stated should be inferred or are implied.

URS has performed the scope of work set forth in the Exhibit E: Scope of Work Igor Sikorsky Memorial Airport AIP No. 3-09-0002-24 Final Design and Permitting for the Re-Alignment of Main Street (CT Route 113) (Proposal) between the City of Bridgeport, Connecticut and URS Corporation AES related to this project, in specific reliance on the understandings and agreements reached between URS and City of Bridgeport ("Client") as reflected in the Proposal and the written agreement between them (the "Agreement"). URS' scope of work was limited to that stated in the Agreement.

The report and any other information which URS prepared and submitted to Client in connection with this project (collectively, the "Report") are for the sole use and benefit of Client, the Connecticut Department of Transportation and the Federal Aviation Administration and may not be used or relied upon by any other person or entity without the prior written consent of Client and URS. Any such consent given by URS shall be deemed to be and shall be subject to the terms and conditions of the Proposals and the Agreement, including without limitation, the warranty, liability and indemnity terms thereof, and any person given such consent (the "Grantee") shall be deemed to have agreed to such terms and conditions by its use and reliance on the Report. Such Grantee must also agree not to reveal the contents of the Report to any other person or entity without the proper written consent of both Client and URS.

Client recognizes and agrees that:

- The information in the Report relates only to the properties specifically described in the Proposal and Report and was presented in accordance with and subject to the scope of work described in the Proposal which were specifically agreed to by Client;
- The information and conclusions provided in the Report apply only to the subject property as it existed at the time of URS' site inspection. Should Site use or conditions change or



- should there be changes in applicable laws, standards or technology, the information and conclusions in the Report may no longer apply;
- URS makes no representations regarding the value or marketability of this subject property or its suitability for any particular use, and none should be inferred based on the Report;
- The Report is intended to be used in its entirety and no excerpts may be taken to be representative of the findings of this investigation;
- URS' services in the development of this Report were conducted, within the limits prescribed by this Agreement, in a manner consistent with that level of care and skill ordinarily exercised by members of the same professions currently practicing in the same locality under similar conditions and no other guaranty, warranty, or representation, either express or implied, is included or intended herein; and,
- Comprehensive assessments of environmental land use issues and constraints of possible relevance (e.g. radon, mold, asbestos-containing materials, wetlands, sensitive habitats) were not included in the scope of services.



2.0 SITE DESCRIPTION

Information concerning the Site was obtained from site inspection and review of available municipal and state records conducted on February 10 through February 16, 2009. Information from other referenced sources is also presented in the sections below.

2.1 PHYSICAL LOCATION AND DESCRIPTION OF SUBJECT PROPERTY

The Site consists of a 21.53-acre parcel located on the east side of Main Street, north of the east end of Runway 24 of the Igor Sikorsky Memorial Airport. The 21.53-acre parcel is identified in the Town of Stratford's Tax Assessor's records as Lot 4, Block 2 on Map 50.05. This parcel was formerly part of the now vacant Stratford Army Engine Plant (SAEP). A portion of the southwestern corner of the property is an area proposed for the re-alignment of Main Street (Route 113) that would allow for proposed safety improvements to Runway 24. As requested under the authorizing scope of work, this assessment report will focus on the southern portion of the property, the portion of the Site slated for potential acquisition, the proposed roadway. The Site location is depicted on **Figure 1**. Portions of the Site including the portion slated for potential acquisition are illustrated on **Figure 2**.

The Site is an irregularly-shaped area currently owned by the United States government. The property is improved with several structures and buildings which were operated as part of the currently vacant SAEP, a wastewater clarifier and an additional structure which housed the facility's wastewater treatment equalization tanks. More than half of the Site is improved with an asphalt-paved parking area, known as the South Parking Lot of the SAEP.

This parcel is bordered to the north by Sniffens Lane and the remainder of the SAEP facility, to the east by portions of the SAEP facility and portions of a vacant lot owned by the City of Bridgeport currently operated as a runway clear-zone, to the south by other portions of the





vacant lot owned by the City of Bridgeport, and to the south and west by portions of the Igor Sikorsky Memorial Airport.

The portion of the Site most relevant to the proposed realignment (the portion of the Site proposed for acquisition) consists of a portion of the South Parking Lot.



3.0 SITE HISTORY

The historical use of the subject property was evaluated from a review of aerial photographs, land use maps and information presented in previous environmental site assessment reports. Site conditions documented in historical documents for the subject property, were reviewed and evaluated. Historical Site features are depicted on **Figure 2**.

3.1 PRIOR OWNERSHIP AND LAND USE

The Site is currently owned by the United States of America. According to the Town of Stratford Tax Assessor, the parcel is identified as Lot 4, Block 2 of Map 50.05 on Stratford Tax Assessor's maps. The parcel was taken by the United States of America from the Land and Home Development Company, Inc. in May of 1957. According to information presented in the Final Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24 (Final EIS), discussed elsewhere in this report, the City of Bridgeport was granted a 21.53-acre easement over this parcel on July 24, 1979. Copies of the Town of Stratford Assessor's property cards are included in **Appendix A**.

Based on information provided in the Final EIS, Main Street (CT Route 113) in this area of Stratford was active by the 1930s. The earliest buildings were constructed originally for the manufacture of aircraft for the Sikorsky Aircraft Corporation by 1929. The plant (SAEP) expanded for mass production of aircraft for World War II. During this time, extensive areas of wetlands and shoreline were filled in order to allow for additional space for the expansion. After a three-year period in which the plant was idle from 1948 to 1951, the plant was used to produce reciprocating aircraft engines, nose cones for intercontinental ballistic missile re-entry vehicles, and turbine engines for both commercial and military applications.



While the US Government (US Army) still owns the Site and adjacent properties (a total of approximately 78 acres with over 50 buildings), the SAEP has been a contractor-operated facility operated by the following business entities:

- Sikorsky Aero Engineering Corporation/Sikorsky Aircraft Corporation;
- Vought-Sikorsky Aircraft/Chance Vought Aircraft;
- Avco Corporation/Air Force Plant No. 43/Bridgeport Lycoming Division;
- Stratford Army Engine Plant/Army Engine Plant Stratford/Avco Lycoming/Textron Lycoming Stratford Division;
- Stratford Army Engine Plant/Allied Signal; and,
- Stratford Army Engine Plant.

The manufacturing and testing of aircraft engines required machining, electrochemical machining, electroplating, corrosion prevention, degreasing, painting and engine testing. Chlorinated solvents and plating solutions were the major chemical groups used for the degreasing and plating operations. Support activities included maintenance, storage of raw materials and wastes, storage of petroleum products for heating, emergency power and engine testing, industrial wastewater treatment, and waste recycling/recovery.

3.2 AERIAL PHOTOGRAPHS

Historical aerial photography available at the Connecticut State Library for the years 1934, 1951, 1965, 1970, 1980, 1986, 1990 and 1995 were reviewed. Historical aerial photographs are included in **Appendix B**. A summary of the information discerned from these aerial photographs is presented below:

• 1934: The 1934 photograph shows the subject property area to be mostly undeveloped. A dirt road partially appears at the current Sniffen Lane location. A road is present in the current location of Main Street (Route 113) and appears to be unpaved. A building is depicted on the Site with the roof clearly labeled with the word "SIKORSKY" (this



portion has been cropped from the photo in the attached copy). This building is part of a cluster of several buildings which appear to be part of what would become the SAEP. However, these buildings appear to be located north of the Site parcel. The surrounding areas appear to be either tidal wetlands or shoreline cottage communities.

- 1951: The 1951 photograph shows several large industrial buildings and a large parking area present on the Site. Airport runways and several buildings are present on the property to the west of the Site. Due to the small scale of the photograph, further details of the subject property are difficult to discern. The surrounding areas appear to be a mix of industrial and undeveloped parcels, with some surrounding coastal residential communities.
- 1965: The 1965 photograph shows automobile parking in the SAEP South Parking Lot and what appears to be a wastewater lagoon northeast of the south Parking Lot. Much of the South Parking Lot, between the wastewater lagoon and Main Street, appears to be either discolored or unpaved. A drainage channel extends from the wastewater lagoon through the adjacent property to the Marine Basin, a small embayment of the Housatonic River south of the Site. A least three buildings are present on the neighboring property to the south of the Site.
- <u>1970</u>: Only a small portion of the Site is covered by this photograph. The southwest corner of the South Parking Lot with parked vehicles is depicted in the photograph. The conditions and structures present on neighboring property to the south appear similar those depicted in the 1965 photograph.
- 1980: The 1980 photograph shows the southern portion of the Site similar to what is depicted in the 1970 photograph. The facility appears to be active. The wastewater treatment lagoon is present northeast of the South Parking Lot. Two or three (one appears empty) other apparent lagoons are present further east of the observed wastewater lagoon. The clarifier and Building 18 are visible in this photograph. Structures from the neighboring property to the south have been removed with the exception of one



building. The development of the surrounding areas, including the airport facility to the west, appears similar to previous photographs.

- 1986: The 1986 photograph shows the entire South Parking Lot vacant. Four lagoons, the wastewater lagoon and three other lagoons further east are present. Some structure that appears to be a soil stockpile and either some construction equipment and/or another soil stockpile are present in the southwest corner of the South Parking Lot. The equalization tanks are visible. Surrounding areas appear to be relatively unchanged from the 1980 photograph.
- <u>1990</u>: The 1990 photograph depicts the South Parking Lot filled with vehicles. The previously observed three lagoons are not present in this photograph. The southwestern corner of the South Parking Lot appears covered with a dark substance that appears to be flood water.
- <u>1995</u>: No significant changes were observed in the 1995 photograph.

3.3 CITY DIRECTORIES

Historical city directories for the Town of Stratford available at the Connecticut State Library were reviewed at periodic intervals to obtain previous Site use information. City directories for the Town of Stratford prior to 1965 and for the years from 1980 through 1991 were not available for review. Based on other information discussed in this report, 550 Main Street is the given address for the Site. The following tenants were identified at this address:

1960

- 550 Main Street
 - Lycoming Div. AVCO

1965

- o 550 Main Street
 - AVCO Lycoming Div. Hangar & Flight Office
 - Great Lakes Carbon Corp.
 - National Lead Co.



- Jomar's Rest.
- Bridgeport Flight Service
- Barbour Daniels Electronics

• <u>1971</u>

- o 550 Main Street
 - AVCO Lycoming Div. Hangar & Flight Office
 - Great Lakes Carbon Corp.
 - National Lead Co.
 - Windsock Inn Rest.
 - Bridgeport Flight Service
 - Aero-Pix Service of CT
 - Barbour Daniels Electronics

• <u>1975</u>

- o 550 Main Street
 - AVCO Lycoming Div. AVCO Corporation

1979

- o 550 Main Street
 - AVCO Lycoming Div. AVCO Corporation

1992

- o 550 Main Street
 - AVCO Credit Union
 - Textron Lycoming

1997

- o 550 Main Street
 - Allied Signal Aerospace

2007

- o 550 Main Street
 - CT Air & Space Ctr
 - US Defense Contract Management



4.0 FINAL ENVIRONMENTAL IMPACT STATEMENT, URS GREINER. 1999

As part of this Task 120, URS reviewed the Final EIS for information relating to past uses and environmental conditions of the subject property. As part of the Final EIS, sites related to the project with the potential for hazardous materials and/or environmental contamination were evaluated in accordance with a Phase I/II Environmental Due Diligence Audit. The Final EIS included assessment of the current Site and other surrounding areas. Excerpts from the Final EIS are included in **Appendix C**.

The Final EIS included a figure titled Exhibit III-16. This figure illustrated the locations of two wastewater lagoons on the SAEP property to the north of the Site.

Based on the preliminary evaluation of these sites as they related to proposed improvements which encompassed a large area within and surrounding the airport, several of the locations identified in the Final EIS were selected for further study. The SAEP property (the subject of this Task 120) is referred to as the Department of Defense (DOD) site in the Final EIS. The DOD (SAEP) facility was not included in this additional study.

However, the Final EIS does describe the DOD Closed Landfills (two landfills) as the former site of industrial wastewater equalization and sludge lagoons, which were capped under a Federal/State closure program. Each of the landfills is approximately 2 acres in size, and located along the southern edge of the SAEP property. One of the landfills is the former location of the wastewater lagoon formerly located north of the South Parking Lot. The second landfill is the former location of the three other lagoons located further east of the south Parking Lot. The former lagoons and current landfills are illustrated on **Figure 2**. The equalization and sludge lagoons were closed in 1987 under RCRA. However, the Final EIS states that this was not a "Clean Closure" in that contaminated soils below the water table was not removed nor was groundwater remediation conducted. Therefore, post-closure care includes groundwater





monitoring, cover inspection, maintenance, and restricted access for an uncertain duration which could extend beyond 30 years.

The Final EIS indicates that disturbance of these landfills or immediately surrounding areas would require modification of the closure plan and potential management of contaminated soil and groundwater.



5.0 SITE INSPECTION

Observations concerning the Site were obtained from a site inspection conducted on Tuesday, February 10, 2009. The URS site inspection included a visual inspection of the Site from the property perimeter and from adjacent properties because URS was not provided access to the Site and because the entire proposed roadway area is visible from the Site perimeter. Portions of the Site and relevant features are identified on <u>Figure 2</u>. Photographs of the subject property and related areas are included in <u>Appendix D</u>.

5.1 CURRENT USES OF THE SITE

The Site consists of a 21.53-acre parcel containing a paved parking lot (the South Parking Lot) and several buildings and structures, including an unused wastewater clarifier, an unused wastewater equalization tank, and two grassy "landfill" areas (RCRA landfills discussed above). The South Parking lot and the landfill areas are enclosed with a chain-link fence which separates the former landfill areas, the South Parking lot, and the adjacent property to the south. Several monitoring wells were observed within the fenced landfill areas. The Site is no longer active, and these structures do not appear to be in use at this time.

Based on information referenced elsewhere in this report, the Site, as part of the overall SAEP facility, is maintained by a small staff and security is conducted by the United States Army Contracting Office. In addition, at least a portion of the now mostly vacant facility is managed by PointStratford as is indicated by a sign at the front door of the main facility to the north of Site.

There is a sidewalk running along the east side of Main Street throughout the Site. There appears to be a utility corridor, including sewer and electric lines, also running along the east side of Main Street.



5.2 ADJOINING/SURROUNDING LAND USE

The property to the south of the Site is an undeveloped property owned by the City of Bridgeport and is currently used as an airport runway clear-zone. Portions of the Igor Memorial Airport are also located to the south of the Site. Main Street (CT Route 113) and then portions of the Igor Sikorsky Memorial Airport are located to the west of the Site. Sniffens Lane, the remainder of the SAEP facility across Sniffens Lane, and the Housatonic River are located to the north of the Site. Other portions of the SAEP and portions of the undeveloped property owned by the City of Bridgeport are located to the east of the Site.

5.3 CURRENT SITE CONDITIONS

Because URS was not provided access to the Site, the observations reported below are therefore only relevant to the southern portion of the Site and not the entire Site. The entire portion of the proposed roadway was visible from the perimeter of the Site.

5.3.1 Hazardous Materials/Hazardous Substances

No hazardous material or substances were observed during the site inspection.

5.3.2 Hazardous and Special Waste

No hazardous and/or special waste was observed during the site inspection.

5.3.3 Underground Storage Tanks

No underground storage tanks (USTs) or evidence of the presence of USTs were observed during the site inspection.

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5.3.4 Aboveground Storage Tanks

Although no aboveground storage tanks (ASTs) were observed within the proposed project location, at least one (1) AST was observed next to one of the existing Site buildings (Building 18) and the former equalization lagoon. URS could not discern the contents of this tank. A secondary containment berm is in place surrounding the AST.

5.3.5 Drums and Containers

No drums or containers, other than discussed in other sections of this report, were observed during the site inspection.

5.3.6 PCB-Containing Equipment

No potentially Polychlorinated Biphenyl (PCB)-containing equipment was observed on this portion of the Site during the site inspection.

5.3.7 Solid Waste

No solid waste was observed during the inspection.



5.3.8 Water Supply and Monitoring Wells

URS observed two monitoring wells in the South Parking Lot of the Site, which based on site maps provided, are MW-13 and MW-6. URS observed a well cluster to the northeast of one of the RCRA landfills. The groundwater monitoring well locations are illustrated on **Figure 2**.

5.3.9 Pits, Ponds and Lagoons

A small body of surface water was observed between the former waster equalization and sludge lagoons, which feeds a drainage channel running to the south through the adjacent property.

5.3.10 Other Physical Evidence of Contamination

Physical evidence of contamination (i.e., oil or chemical stains, soil discoloration or stressed vegetation) was not observed on the day of the inspection.

5.4 SITE CONTACT INFORMATION

URS contacted Mr. Pete Szemanski, installation manager for the SAEP, to inquire about the Site history and environmental concerns. Mr. Szemanski directed URS to Mr. Wess Laparl of Anderson Mulholland and Associates, Inc., the environmental consultant for the Site. Mr. Laparl provided the following relevant information:

- Soils in the vicinity of the project area (South Parking Lot) have been evaluated for the presence of contaminants by only one soil sample collected from this area;
- Soil analytical data from a soil boring drilled in the general vicinity of the former soil pile
 in the South Parking Lot indicated the presence of very minimal concentrations of Volatile
 Organic Compounds (VOCs) and Polycyclic Aromatic Hydrocarbons (PAHs) in the
 analyzed soil sample.
- Groundwater in this general area is impacted with minimal concentrations of VOCs;



- Recent groundwater data for groundwater monitoring wells MW-6 and MW-11 indicated the groundwater did not contain VOCs during a November 2007 sampling event;
- The Army has applied a Finding of Suitability for Early Transfer (FOSFT) to the entire SAEP property. This FOSFT consists of land use restrictions such as no residential use and no use of the groundwater; and,
- Such restrictions will convey with the deed to the Site or portions of the Site and may also require the application of an Environmental Land Use Restriction in lieu of the FOSFT if the property or portions of the property are transferred.

A copy of the information provided my Mr. Laparl is included in **Appendix A**.



6.0 REGULATORY AGENCY REVIEWS

6.1 LOCAL REGULATORY AGENCY RECORD REVIEWS

URS completed a review of local municipal records within the Town of Stratford, Connecticut on February 10, 2009. Records on file with the Town of Stratford Tax Assessor's office, Health Department, Building Department and Fire Marshall's office were reviewed. Presented below is the relevant information from this inquiry and review of Town files.

Property cards and maps from the Town of Stratford Tax Assessor's office were reviewed for information regarding the acreage, zoning, general land use characteristics, and ownership. According to maps reviewed at the Town of Stratford's Assessor's office, the Site is 21.53 acres and owned by the United States of America.

No records were available for review at the Town of Stratford Health Department office that would indicate the presence of potable or public water supply wells at the Site or surrounding area. Officials at the Town of Stratford Health Department stated they were not aware of any complaints or enforcement actions pertinent to the Site.

No information relevant to the environmental condition of the Site was identified from records reviewed from the Town of Stratford Building Department.

Numerous records related to properties on Main Street in Stratford were obtained from the Town of Stratford Fire Marshall's office. The majority of these records pertained to UST closures and testing at the Igor Sikorsky Memorial Airport, Textron Lycoming and AVCO Corporation (AVCO) (former occupants of the SAEP) facility. Records in the file indicated that USTs have been or are currently in use at the Igor Sikorsky Memorial Airport facility and/or the SAEP facility. Documents observed in the file were not specific as to the location of the USTs or their



current status. Copies of information obtained during the conductance of this review are presented in **Appendix A**.

6.2 CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION FILE REVIEW

URS conducted a file review at the CTDEP Records Center on February 17, 2009. URS requested files pertaining to the Site under names of the following facilities that have been referenced in relation to the Site:

- Stratford Army Engine Plant
- Textron
- AVCO
- Allied Signal
- Textron Lycoming
- Great Lakes Carbon Co.
- National Lead Co.

A summary of the relevant information obtained by the CTDEP file review is presented in the sections below.

Environmental Condition Assessment Form

An Environmental Condition Assessment Form (ECAF) was filed for the site in 2003. Based on information contained therein, Building B-6, located on the SAEP property south of Sniffens Lane, was utilized for raw material testing. Spent plating bath solution produced a metal hydroxide sludge, which was pumped to one of the sludge lagoons, which are now closed RCRA disposal units. An equalization lagoon was also used to allow untreated liquid wastes from the metals plating processes to mix. The liquids were then pumped to holding tanks located in the chemical waste treatment plant in Building B-18 and were pH adjusted prior to cyanide



destruction. Chromium reduction and coagulation occurred in additional tanks. After processing through the clarifier, supernatant was discharged to the Housatonic River and sludge was discharged to three sludge lagoons located south of Building B-6. The following is a list of hazardous and petroleum substances formerly handled by the SAEP according to the 2003 ECAF:

- Ammonia;
- Aluminum sulfate (alum);
- Calcium chromate (chromic acid);
- Copper cyanide;
- Chromium cyanide;
- Sodium cyanide;
- Tetrachoroethene;
- Trichloroethene;
- 1,1,1-Trichloroethane;
- Leaded Gasoline;
- Unleaded Gasoline;
- Diesel #1;
- Diesel #2;
- Fuel Oil #6;
- Jet Fuel A;
- Jet Fuel-4; and,
- Jet Fuel-5.

Under the Defense Base Closure and Realignment Act of 1990, the Defense Base Closure and Realignment Commission recommended the closure of the SAEP in July 1995. The installation closed on September 30, 1998.



Buildings 34 and 65 Fill Material Placement

A report entitled *Human Health and Environmental Risk Evaluation for Fill Material*, prepared by Wehran Envirotech, dated March 3, 1993 was reviewed for this assessment. This report stated that Textron Lycoming (former occupant of the Site) had excavated approximately 10,000 cubic yards (cy) of soil from construction sites located at Buildings 34 and 65 within the facility. This excavated material also included approximately 200 cy of construction debris created from a construction project at Building 16 of the facility. The report requests approval for onsite reuse of the soil and construction debris to fill depressions and correct several large saddle depressions in the parking lot at the south end of the facility. This material was already being stockpiled in the southwestern corner of the facility's South Parking Lot. The risk evaluation presented information regarding groundwater flow direction and the quality of the soil which indicated that reuse and placement of the fill material in the manner described within would not create a significant risk to human health or the environment.

A letter from Edward Parker of the CTDEP, dated May 31, 1994, to Textron Lycoming responded to the proposal for the reuse of the fill material. The response approves the proposal to reuse the petroleum-impacted soil for the project, utilizing a plan of field screening to ensure that no soils exceeding a 500 parts per million threshold for total petroleum hydrocarbons were used in the project. Additional information discussed in Section 6.3 of this report indicates that this fill material (from Building 65) was also found to be impacted with chromium. In addition, the approval stated that notice would be entered on the property deed to document the reuse of the contaminated soil.



Stewardship Permit

A Final Decision was issued by the Commissioner of the CTDEP on October 2, 2008, issuing the United States Army Stewardship Permit to perform site-wide environmental investigation and cleanup ("closure", "post-closure care" and "corrective action measures") at the former hazardous waste storage, treatment and disposal facility in accordance with applicable state laws and regulations. The permittee (US Army) is to comply with terms and conditions contained in the permit, which included detailed requirements for Standard Facility Conditions, Authorized Activities, and a Compliance Schedule. Copies of these attached requirements and schedules were not attached to the document copy within the file.

RCRA Groundwater Monitoring Reports

A multitude of groundwater monitoring reports for the Site were obtained and summarily reviewed. Included among these documents were the 2005 Annual Summary Report and the 2006 Annual Summary Report for the RCRA Groundwater Monitoring Program for the Stratford Army Engine Plant (Site) and the 2006 Annual Summary Report, RCRA Groundwater Monitoring Program, Stratford Army Engine Plant, Stratford, Connecticut, prepared by Sound Environmental Solutions in February 2007.

According to these reports, a network of monitoring well and monitoring well clusters is located at the Site. A total of twenty (20) monitoring wells at eleven (11) locations are located in the vicinity of the now-closed wastewater equalization and sludge lagoons, both within the Site property and within adjacent properties. At least one of the shallow groundwater monitoring wells, MW-13, will be in close proximity to or within the proposed project area. This well is located in the South Parking Lot. The next nearest monitoring well to the proposed project location is MW-6, located along Main Street, northwest of groundwater monitoring well MW-13.





According to the 2006 Annual Summary Report, monitoring well MW-13 had been sampled semi-annually in Spring and Fall from 2004 through 2006. The samples from MW-13 were analyzed for several constituents, including halogenated VOCs, aromatic VOCs, total and dissolved metals, and other conventional water quality parameters (e.g. pH, chloride, total organic halogens, etc...). Trace to minimal concentrations of several compounds have been detected at this location within the 2004 through 2006 timeframe, including minimal concentrations of chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, methylene chloride, tetrachloroethene, trichloroethene, and dissolved cadmium, chromium, lead, and zinc. According to the 2006 Annual Report, 1,2-dichloroethene, methylene chloride, vinyl chloride, arsenic and chromium were detected in a sample collected from monitoring well MW-6 in September 2006. This report stated that detected concentration of arsenic at this location exceeded Connecticut regulatory criteria, although numerical data for this sampling event was not obtained for this report.

According to information presented in an analytical data table acquired at the CTDEP Records Center, concentrations of several VOCs [chlorobenzene at 1 microgram per Liter ($\mu g/L$)], 1,4-dichlorobenzene (2.1 $\mu g/L$), 1,2-dichloroethene (0.3 $\mu g/L$), trichloroethene (3 $\mu g/L$), tetrachloroethene (3 $\mu g/L$), chlorobenzene (1 $\mu g/L$), 1,2-dichlorobenzene (2.1 $\mu g/L$)] were detected in the groundwater sample collected from groundwater monitoring well MW-13 during the most recent sampling event in November 2006.

According to information presented in the 2006 Annual Summary Report, shallow groundwater flow at the MW-11 location and at the Site in general, is to the east towards the local drainage ditches and the Housatonic River. However, there is also a localized radial flow around the former lagoons themselves, tidal interaction between the drainage and groundwater flow, and a more southerly groundwater flow in the deeper aquifers. Groundwater appears to be approximately 2.5 to 3 feet below grade at the groundwater monitoring well MW-13 location.



Other Information

Several maps contained within the reviewed groundwater monitoring reports depicted the SAEP groundwater monitoring wells. A diagram contained within a report identified as *Surface Impoundment Closure Certification* prepared by Metcalf & Eddy in August 1992 presented the location of AVCO groundwater monitoring wells. These groundwater monitoring wells are depicted on <u>Figure 2</u>. URS could not confirm that the wells illustrated on the Sound Environmental Solutions plan are the same wells illustrated on the Metcalf & Eddy plan. Copies of these plans and relevant report information are included in <u>Appendix A</u>.

6.3 ENVIRONMENTAL PROTECTION AGENCY (EPA) WEBSITE

Additional documentation from the EPA website indicates that numerous subsurface environmental investigations have identified the following facility-wide areas of environmental concern:

- Intertidal Flats where runoff and effluent have contaminated sediments with PCBs and metals (not in project area);
- Shoreline Fill Area where subsurface soil and groundwater are contaminated with fuel-related and halogenated VOCs, PAHs, and metals (not in project area);
- Plating and Manufacturing Area, where "greenish-blue" groundwater pumped from the area has been documented to contain metals (including chromium and lead), halogenated VOCs, PAHs, and cyanide (not in project area);
- Building B-2/North Parking Lot/West Parking Lot area, where subsurface soils comprise
 ash and cinder fill and contain PAHs and groundwater is contaminated with halogenated
 VOCs (not in project area);
- Building B-65, where chromium- and petroleum-contaminated soils were discovered (not in project area);

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- Research and Development Area, where subsurface soil and groundwater contamination is suspected (not in project area);
- South Parking Lot/Chemical Waste Treatment Plant/Closed Lagoons area, where halogenated VOCs and metals have been detected in groundwater (Project Area), and;
- Testing Area, where subsurface soils are contaminated with fuel-related and halogenated VOCs and PAHs, and groundwater is contaminated with halogenated VOCs (not in project area).

According to EPA website, the remedial investigation of the facility is ongoing, with regular reporting to the CTDEP of newly-discovered or confirmed threats to the environment.



7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

The Site consists of an approximately 21.53-acre parcel containing a paved parking lot (the South Parking Lot) and several buildings and structures, including an unused wastewater clarifier, an unused wastewater equalization tank, and two grassy "landfill" areas (closed RCRA landfills discussed above). The Site was formerly occupied by the SAEP and is currently vacant. Previous investigations have identified the presence of contaminated soil and groundwater at this parcel although not necessarily in the vicinity of the proposed roadway, the portion of the Site slated for potential acquisition.

This assessment identified the following environmental concerns for the proposed roadway portion of the Site:

- 1. Former Soil Stockpile. Petroleum contaminated soil was formerly stockpiled in the southeast portion of the South Parking Lot. This material was later used as fill material in an area east of the South Parking Lot as approved by the CTDEP. The former presence of the petroleum impacted soil and the filling may have resulted in impacts to soil and groundwater in this South Parking Lot.
- 2. Contaminated Groundwater. Groundwater in the vicinity of the project area portion of this Site has been monitored as part of the RCRA closure of several waste water sludge lagoons (a/ka/RCRA landfills) located to the east of this area. The monitoring has identified concentrations of VOCs in groundwater in the vicinity of the proposed roadway area.
- **3. FOSFT.** The Army has implemented a FOSFT for the entire SAEP site. The FOSFT includes land use restrictions such as no residential use and no use of groundwater. This deed restriction

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may convey with the property or may require the application of an Environmental Land Use Restriction.

URS notes that other potential environmental concerns exist within the Site parcel (21.53 acres) including former plating and manufacturing areas, the closed RCRA lagoons and the former wastewater treatment plant. However, as these areas are located some distance from the proposed roadway, the portion of the Site slated for potential acquisition, the potential for an environmental concern to the project area is minimal relative to disturbance of soil. Some of these areas of concern may have the potential to affect groundwater in the project area.

7.2 RECOMMENDATIONS

URS recommends collection and analysis of soil samples from within the limits of the project area, planned soil excavation areas and/or areas proposed to be disturbed by the proposed roadway construction activities to more completely evaluate soil conditions. If groundwater is anticipated to be encountered during the proposed roadway construction activities, URS recommends evaluation of impacts to groundwater in the project area portion of the Site. URS recommends completing at least three (3) soil borings for this project-specific investigation. Proposed soil boring locations are identified on <u>Figure 3</u>.

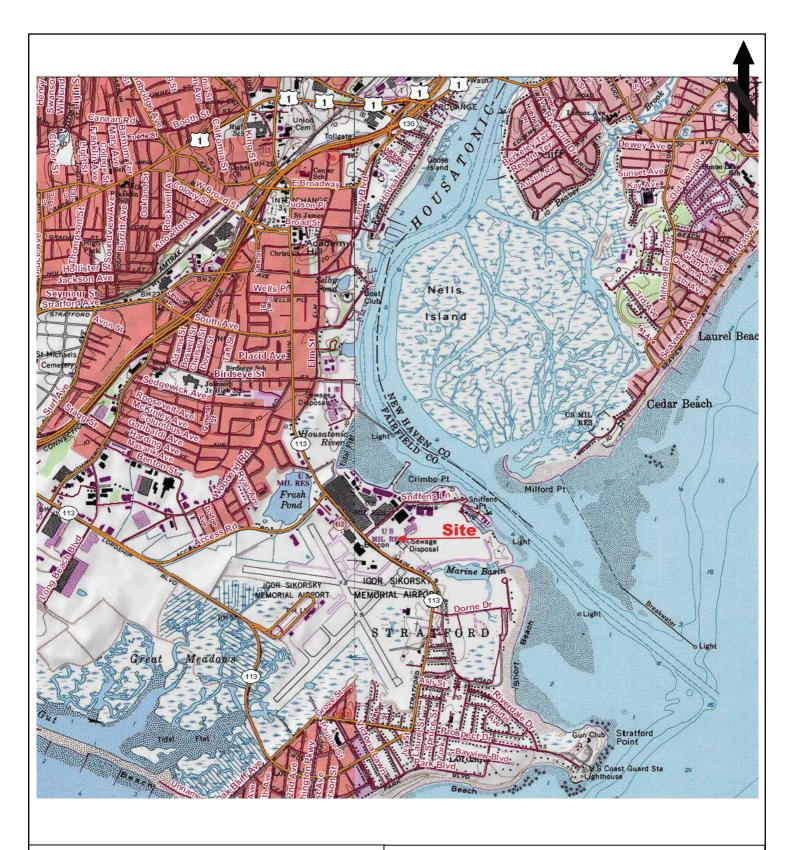


8.0 REFERENCES

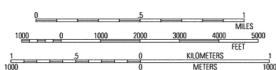
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FIGURES





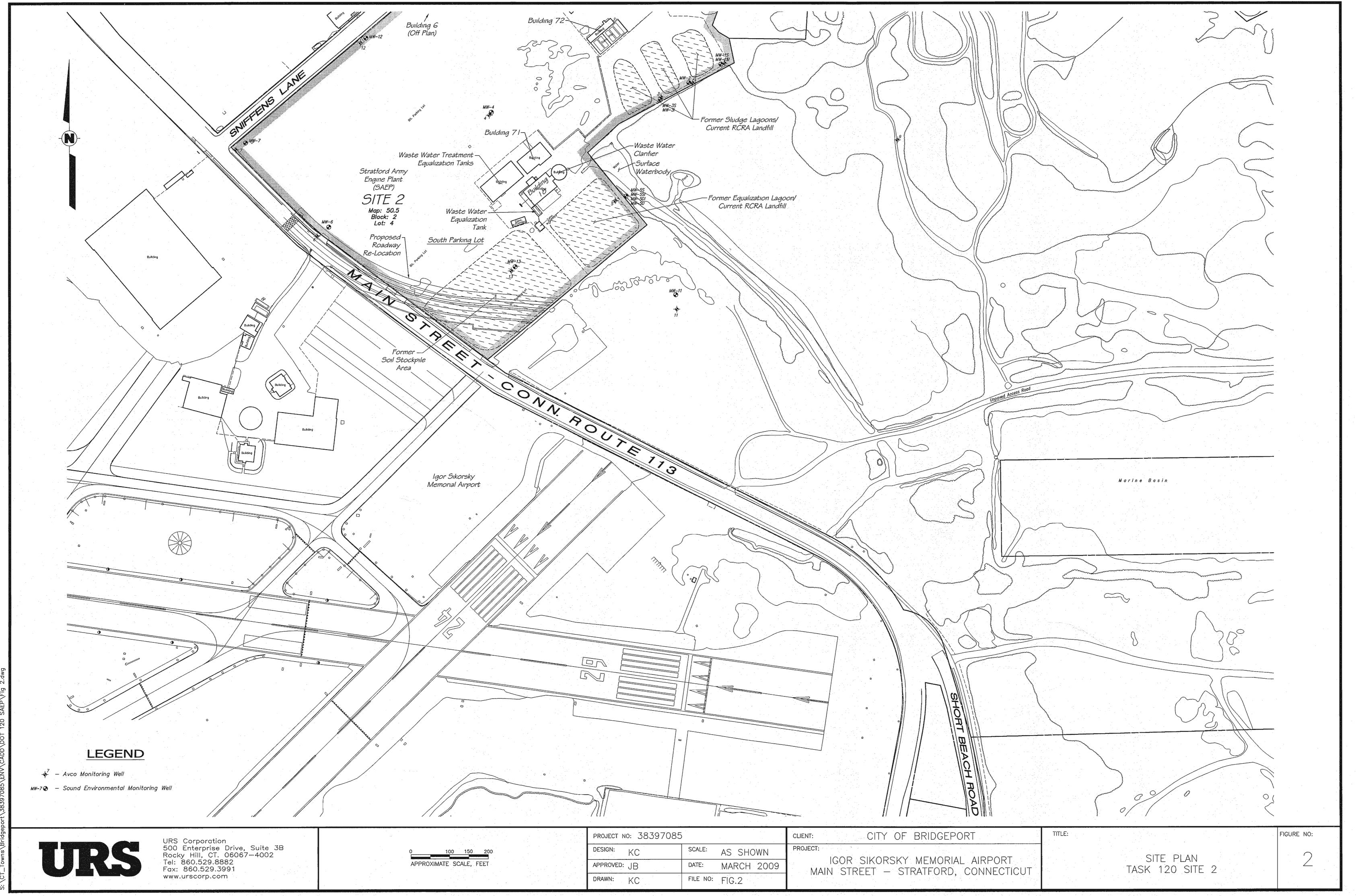


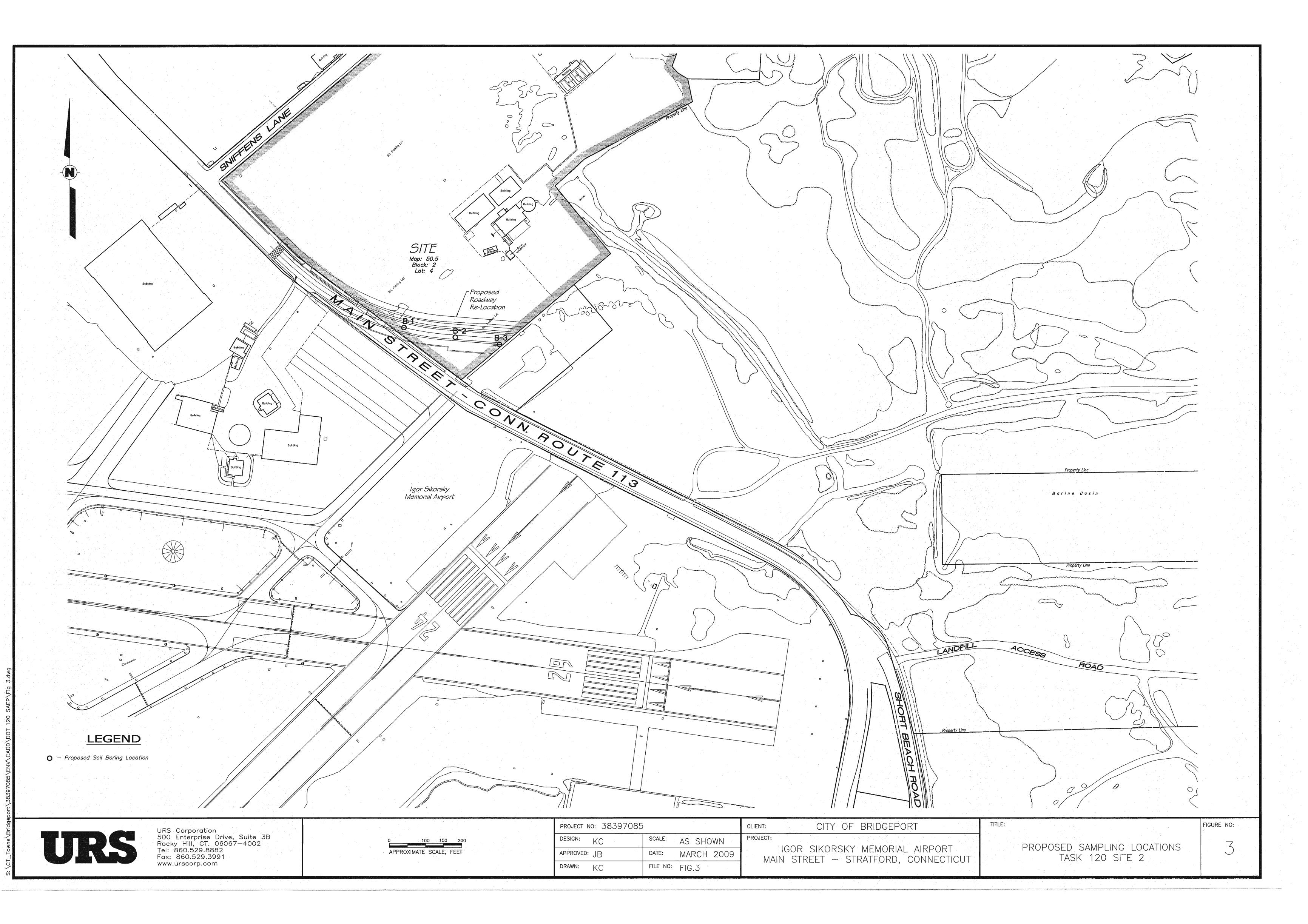
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Figure 1 Site Location Map

Igor Sikorsky Memorial Airport Task 120 Preliminary Site Assessment – Site 2 Stratford, Connecticut

Job No.: 36937085.00003 URS Corporation AES







URS CORPORATION RECORD OF CONVERSATION

Spoke With				
Name:	Phone Number:	Recorded By:		
Ron Jennings	(617) 918-1242	John Brogden		
Company:		Date:	Time:	
US Environmental Protection Agency		4/28/	2010	
Client:		Phone Number: Extension:		
Project Information & Routing				
	☐ Outgoing		For Information:	For Action:
	Memorial Airport	Route To:		
Project Name:Igor I Sikorsky N				
38397150				
Billable to Project:38397150				
Items Discussed				
kept informed of activities and wor also stated EPA may want a deed		ties encroacr	Tupori Kayinark was	te areas. R. Jennings



URS CORPORATION RECORD OF CONVERSATION

Spoke With					
Name:	Phone Number:	Recorded By:			
Ron Curren	(860) 424-3764		John Brogden		
Company:		Date:	Time:		
CT Department of Environmental Protection Client:		4/28/2010 Phone Number: Extension:			
Project Information & Routing					
☐ Incoming (☐ Outgoing		For Information:	For Action:	
Project Name: Igor I Sikorsky I	Memorial Airport	Route To:			
Billable to Project:38397150					
Items Discussed					
in accordance with regulations. R hazardous waste/soil present at s application of an environmental la	ite. R. Curren stated that CT [DEP would e			