



Consulting
Engineers
and Scientists

February 4, 2020

Project 181.02004.001

Mr. Paul Cohen
Town Manager
50 Billerica Road
Chelmsford, Massachusetts 01824
Email: PCohen@townofchelmsford.us

RE: Completion of Remedial Activities
Former Silicon Transistor Corporation (STC) Site
27 Katrina Road
Chelmsford, Massachusetts
MassDEP Release Tracking No. (RTN) 3-01205

Dear Mr. Cohen:

On behalf of the Town of Chelmsford, Ransom Consulting LLC (Ransom) has prepared this letter presenting a summary of the remedial activities recently completed at the above-referenced property (the "Site"). The remedial objective was to reduce chlorinated volatile organic compounds (CVOCS) in shallow soil and groundwater using *in-situ* chemical oxidation (ISCO) and in deeper soil and groundwater using *in-situ* bioremediation (ISB) in accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. In addition, remediation of polychlorinated biphenyl (PCB)-impacted concrete associated with the former Site building floor slab was completed in accordance with 40 CFR Part 761 – Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR §761, the "Federal PCB Regulations"). Remedial activities were performed by the Town using MassDevelopment Brownfields Cleanup Funding.

SITE DESCRIPTION

The Site consists of an approximately 3-acre parcel and includes a 34,000 square foot (SF) concrete slab from the former Site building, which was demolished in 2011. The slab serves as a measure to restrict exposure and prevent a migration pathway to underlying CVOC-contaminated soils and groundwater. The remainder of the Site not covered by the footprint of the slab consists of asphalt-paved and vegetated areas. The Site is secured by chain link fencing and two locked gates. The Site is located within a Zone II public water supply protection area.

The Site is located in an industrial park and is abutted by the Bruce Freeman Rail Trail to the north, beyond which is the Chelmsford Mall to the north and residential development to the northwest; to the northeast by an undeveloped parcel, beyond which is Katrina Road and River Meadow Brook; to the southeast by 11 Katrina Road (occupied by Kendall Boiler & Tank Co., Inc.); the south/southeast by 15

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12 Kent Way, Suite 100, Byfield, Massachusetts 01922-1221, Tel (978) 465-1822
2127 Hamilton Avenue, Hamilton, New Jersey 08619, Tel (609) 584-0090

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Former STC Site-Completion of Remedial Activities Chelmsford, Massachusetts

Katrina Road (occupied by Chadwick-Baross, Inc.); to the south by Katrina Road; and, to southwest by 25 Katrina Road. (occupied by JapEnamelec Corp.).

SITE BACKGROUND

A release of CVOCs to soil and groundwater was discovered at the Site during investigations conducted on behalf of Silicon Transistor Corporation (STC) in 1987 and 1988. The release was reported to the Massachusetts Department of Environmental Protection (MassDEP) in 1988 and MassDEP issued a Notice of Responsibility (NOR) to STC, dated November 18, 1988. MassDEP first listed the Site as a Location to be Investigated (LTBI) and a Priority Disposal Site on October 15, 1989. The primary suspected source of the CVOC release is a former “Microstrip” discharge pipe which was located at the northern portion of the former Site building and reportedly discharged waste to a “partially buried open top container which frequently overflowed”. Microstrip is a solvent containing “tetrachloroethylene (PCE), creosol and sulfonic acid”. Secondary suspect sources of petroleum hydrocarbons and metals releases to the environment include hazardous waste and chemical storage areas associated with the former STC facility.

The MCP “Disposal Site” includes the entire Site property and extends onto four downgradient parcels. The Site property was acquired by the Town in 2006 as a tax taking and was purchased by Katrina Road LLC (Owner) on July 12, 2018. Under Massachusetts General Law (M.G.L) Chapter 21E, municipalities are not considered “owners” or “operators” that have taken a site for non-payment of back taxes and are exempt from liability obligations, provided they meet the requirements of Chapter 21E, Section 2. The Town performed comprehensive response actions as an “Other Person”. The Owner provided the Town and Ransom with access and authorization to perform remedial actions.

A Site Location Map and a Site Plan are provided as Figures 1 and 2, respectively. Site Plan Details are included as Figure 3. The Zone II public water supply protection area is shown in the attached MassDEP Phase I Assessment Map. These figures are included as Attachment A.

COMPLETION OF REMEDIAL ACTIVITIES

Ransom submitted a Phase IV Remedy Implementation Plan (RIP) Completion Report (dated January 13, 2020) to MassDEP to address the completion of activities performed to reduce CVOC source contaminant impacts in shallow soil and groundwater using ISCO remediation and in intermediate soil and groundwater using ISB. Ransom conducted the oversight of our subcontractor, XDD Environmental (XDD) of Stratham, New Hampshire as they completed remedial activities from November 2018 to June 2019. Remedial activities were performed at the STC Site property and included off-site groundwater monitoring under access agreements. Three post-injection groundwater monitoring events were conducted. There is no evidence of groundwater contaminant impacts at Chelmsford Water District Wells. The ISCO and ISB treatment area design objectives were met and/or exceeded, with evidence of contaminant mass destruction.

Ransom submitted a Self-Implementing Plan (SIP) Completion Report (dated December 20, 2019) to the United States Environmental Protection Agency (EPA) to document the remediation and disposal of

building materials and soils impacted by PCBs. Ransom performed the oversight of its subcontractor Trident Environmental Group (Trident) during the remediation of PCB-impacted concrete. Consistent with the objectives outlined in the 2011 SIP and 2019 SIP Modification, the cleanup goal for building materials and soil at the Site was to reduce PCB concentrations to below 1 milligram per kilogram (mg/kg). Based on the remediation activities completed at the Site and the verification sampling, PCB concentrations have been reduced to less than 1 mg/kg. Therefore, the remediation goals in the SIP and SIP Modification have been achieved.

TRANSFER OF PARTY UNDERTAKING FUTURE RESPONSE ACTIONS

Ransom, on behalf of the Town, submitted a “Letter to Discontinue Response Actions”, dated January 13, 2020 to MassDEP. On January 16, 2020, a Tier Classification Transfer was submitted by the Town and New Horizons LLC (on behalf of Katrina Road LLC) to MassDEP, which transfers the responsibility of future MCP response actions from the Town of Chelmsford to Katrina Road LLC.

On January 16, 2020, New Horizons LLC, on behalf of Katrina Road LLC, submitted a Remedy Operation Status (ROS). Additional future measures, as outlined in the Phase V ROS, are obligated by the Property Owner, Katrina Road, LCC, and include the following:

1. Groundwater monitoring is necessary as an effective measure to assess the control of groundwater conditions subsequent to the completion of *in-situ* remediation, including ongoing reduction of contaminant concentrations and potential migration, for up to up to 20 years.
2. Monitoring and maintenance are required to ensure the integrity of the building slab as an impermeable barrier, thereby avoiding infiltration of rainwater and to ensure the control of the contaminant plume.

Ransom points out that future measures are anticipated to be implemented at the Site as remedial action alternatives (RAAs), which include the following:

1. Implementation of engineering controls, including a passive or active sub-slab vapor depressurization system (SSDS) and vapor barrier for future buildings as necessary to mitigate potential vapor intrusion impacts to receptors at the Site. These measures, if implemented, are anticipated to require ongoing monitoring and maintenance and will be incorporated in the Phase V ROS.
2. Implementation of a Notice of Activity and Use Limitation (AUL) is necessary to maintain the concrete building slab, engineering controls, and management of contaminated soils that may be potentially disturbed during future development activities.

Former STC Site-Completion of Remedial Activities
Chelmsford, Massachusetts

Please do not hesitate to contact me at (978) 998-2503 or tracey.costa@ransomenv.com with any questions on this matter.

Sincerely,

RANSOM CONSULTING, LLC



Digitally signed by Tracey Costa
Date: 2020.02.04 16:51:26 -05'00'

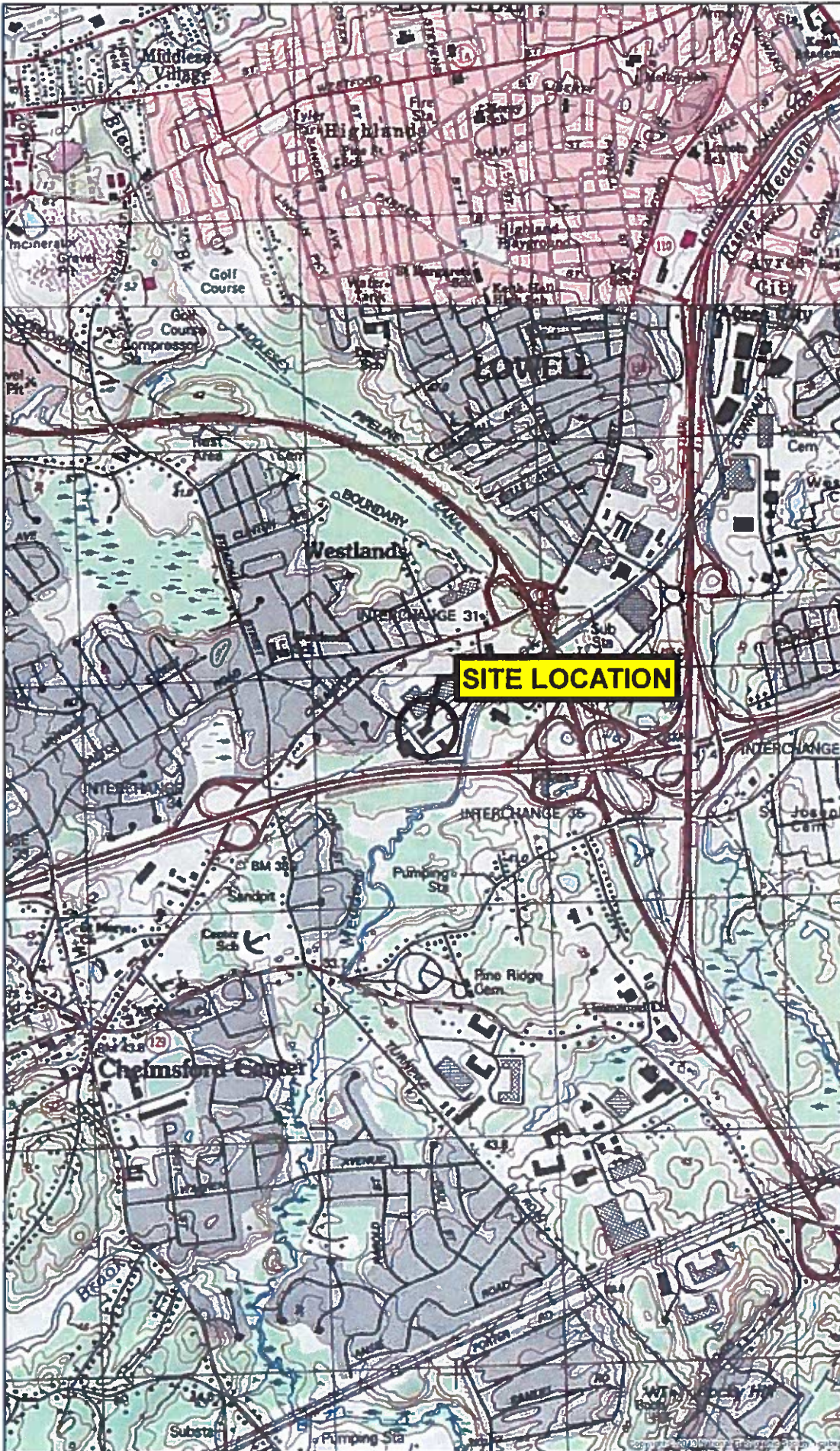
Tracey A. Costa, LSP, CHMM, TURP, ENV-SP, LEED Green Associate
Senior Project Manager

TAC/TJS:cnt
Attachment

ATTACHMENT A

Site Plans

**Summary of Remedial Activities
Former Silicon Transistor Corporation (STC) Site
27 Katrina Road
Chelmsford, Massachusetts
MassDEP Release Tracking No. (RTN) 3-01205**



Notes

1. Data Source: 2013 National Geographic Society, I-cubed
2. USGS Quad Name: Lowell & Billerica, Massachusetts
3. Latitude: 42°38'30.978"N
 Longitude: 71°20'3.208"W

Scale and Orientation



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 50 Billerica Road
 Chelmsford, Massachusetts

Site Address

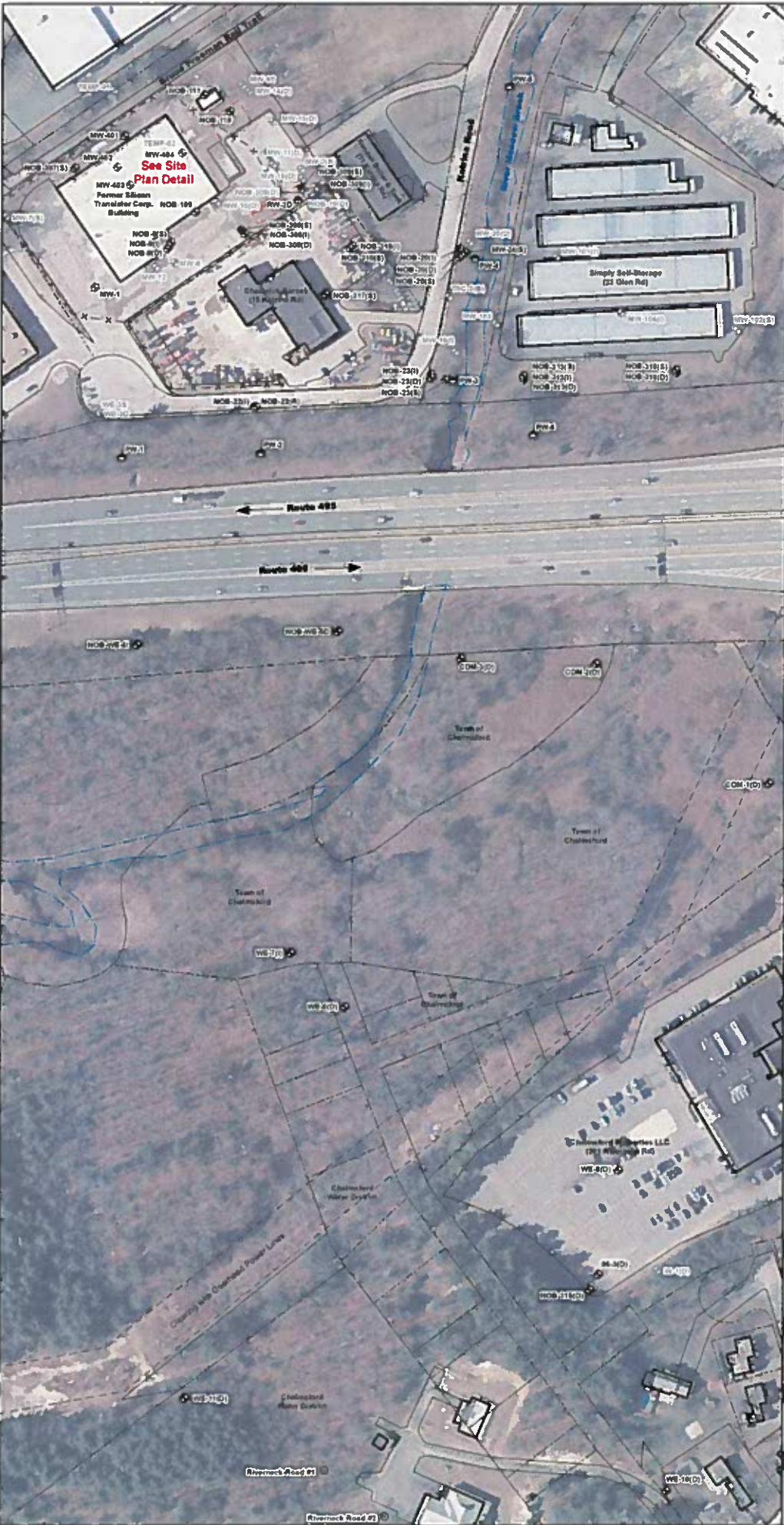
Former Silicon Transistor
 Corporation Property
 Chelmsford, Massachusetts

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Figure 1
 Site Location Map

Legend & Notes

- Parcel Boundary
- Former Leaching Fields
- Fence
- Existing Monitoring Well
- Existing Recovery Well
- Vapor Point
- Porewater Sample
- Soil Boring
- Private Well
- Destroyed or Missing Well
- Decommissioned Well



Notes
 1. MassGIS USGS High Resolution Orthomosaic, 2013-2014
 2. Some features are approximate in location and scale

Scale and Orientation

 1 inch = 150 feet

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 Chelmsford, Massachusetts

Site Address
 Former Silicon Transistor
 Corporation Property
 Chelmsford, Massachusetts

181 02004 Feb

Figure 2
Site Plan



- Legend & Notes**
- - - Parcel Boundary
 - - - Former Leaching Fields
 - - - Fence
 - ⊕ Existing Monitoring Well
 - ⊕ Existing Recovery Well
 - ⊕ Vapor Point
 - ⊕ Perowater Sample
 - ⊕ Soil Boring
 - ⊕ Destroyed or Missing Well
 - ⊕ Decommissioned Well
 - ⊕ MOP Monitoring Well

Notes

1. Modified 10/05 High Resolution Office Agency 2015 2015
2. Same locations and coordinates as original well logs



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Site Address
Former Siblein Transistor
Corporation Property
Chelmsford, Massachusetts

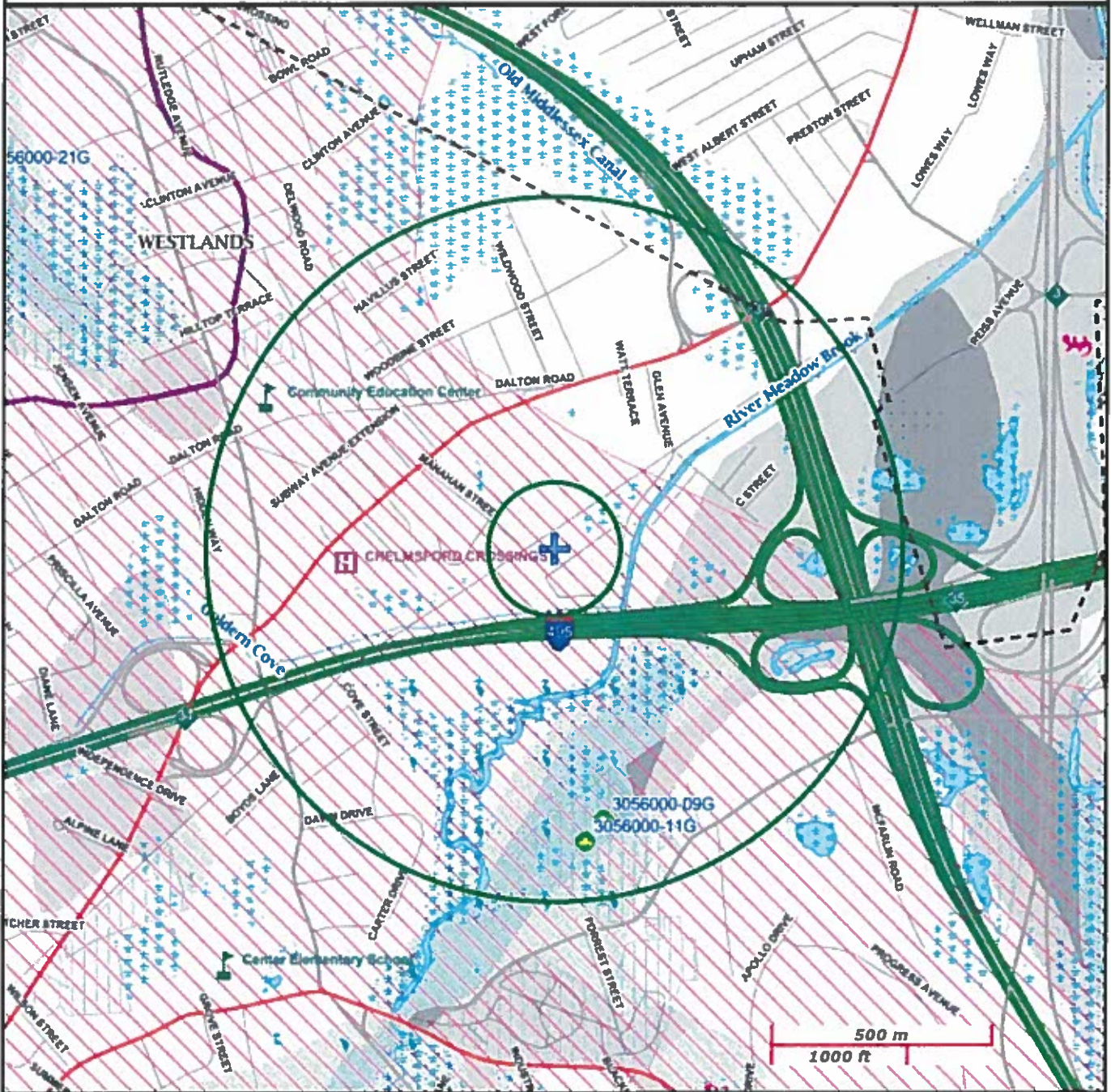
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Figure 3
Site Plan Detail

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
 FORMER STC PROPERTY
 27 KATRINA ROAD CHELMSFORD, MA
 3-000001205
NAD83 UTM Meters:
 4719989mN, 308533mE (Zone: 19)
 October 28, 2018

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: <http://www.mass.gov/mgis/>



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, MWPA, Zone A	
Boundaries: Town, County, DEP Region, Train, Powerline, Pipeline, Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat	
Basins: Major, PWS, Streams Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog	
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain, Protected Open Space, ACEC	
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab, Vernal Pool: Cert., Potential	
	Solid Waste Landfill, PWS: Com. GW SW, Emerg., Non-Com	

