CORRECTIVE ACTION PLAN AMENDMENT FOR REMEDIATION OF SOIL AND BUILDING MATERIAL CONTAMINATION

DRAFT

SMS # 97-2235
FORMER FELLOWS GEAR SHAPER PROPERTY,
100 RIVER STREET
SPRINGFIELD, VERMONT

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EXECUTIVE SUMMARY

A Corrective Action Plan (CAP) Amendment was prepared by Stone Environmental Inc. (Stone), for the former Fellows Gear Shaper Facility, located at 100 River Street in Springfield, Vermont (the Site). The Site consists of a 255,000 square foot former manufacturing facility on two floors with several out buildings on approximately 6 acres. One Hundred River Street, LLC, the current property owner, has proposed a redevelopment strategy that requires alterations to the existing Site CAP. Remedial actions are necessary at the Site due to the presence of polychlorinated biphenyl (PCB), petroleum and chlorinated solvent contamination in soil, building materials, and groundwater that may pose a risk to human health if not mitigated. This document amends the CAP prepared by the Johnson Company dated October 20, 2009, and is required because the Site redevelopment plan that was in place when the CAP was prepared has since been altered. Specific alterations to the redevelopment plan include:

- Implementation of a stormwater management system;
- Abandoning an active electrical transformer room (T2);
- Abandoning a former water supply well with the Northern Loading Dock (Part NLD) area;
- Installation of an elevator and two (2) staircases within the former production area;
- Demolition of a portion of Parts D and F to provide a wider access road;
- Removal of window caulk from exterior sills of the Springfield Hospital area (Office);
- Installation of four (4) propane underground storage tanks;
- Installation of a handicap parking area in the former Part O and P area;
- Installation of sub-slab plumbing in the Springfield Hospital area;
- Installation of sheetrock and hat channel within the proposed restaurant area (Part C);
- Excavation and installation of foundations for new building facades in areas slated for demolition, specifically Parts A and O/P; and

To address these changes, a comprehensive soil management program is proposed to lessen the risk of exposure to Site workers and future occupants of the Site. Ancillary remedial activities are also covered within this CAP Amendment to address changes to proposed use of interior space, including installation of sheet rock and hat channel in the proposed restaurant, management of contaminated construction debris and oversight of construction/redevelopment activities.

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1. INTRODUCTION

This Corrective Action Plan (CAP) Amendment was prepared by Stone Environmental, Inc. (Stone) for the former Fellows Gear Shaper property located at 100 River Street in Springfield, Vermont (the Site or Property, Figures 1 and 2, Appendix B). Remedial actions are necessary at the Site due to the presence of polychlorinated biphenyl (PCB), petroleum and chlorinated solvent contamination in soil, building materials, and groundwater that may pose a risk to human health if not mitigated. This document amends the CAP prepared by the Johnson Company dated October 20, 2009, and is required because the Site redevelopment plan that was in place when the CAP was prepared has since been altered (Figure 3). Specific alterations to the redevelopment plan include:

- Implementation of a stormwater management system;
- Abandoning an active electrical transformer room (T2);
- Abandoning a former water supply well with the Northern Loading Dock (Part NLD) area;
- Installation of an elevator and two (2) staircases within the former production area;
- Demolition of a portion of Parts D and F to provide a wider access road;
- Removal of window caulk from exterior sills of the Springfield Hospital area (Office);
- Installation of four (4) propane underground storage tanks;
- Installation of a handicap parking area in the former Part O and P area;
- Installation of sub-slab plumbing in the Springfield Hospital area;
- Installation of sheetrock and hat channel within the proposed restaurant area (Part C);
- Excavation and installation of foundations for new building facades in areas slated for demolition, specifically Parts A and O/P; and

Other details presented within the CAP remain the same. A summary of prior Site investigations performed at the Site, the Site corrective action feasibility investigation (CAFI), and proposed reuse of each Site area are also presented within the CAP. Alterations to the proposed reuse presented within the CAP are listed in the Section 2.0.

1.1. Site Description

The Site consists of an approximately 6-acre parcel bordered to the east and northeast by the Black River, to west by Pearl Street, to the north by the Vermont Machine Tool property, the former Parks and Woolson machine tool company to the south east and private residences to the southwest. The Property slopes to the east such that the eastern portion of the Site is at a lower floor level than that adjacent to Park Street. The main production facility hereafter referred to as the main building, measures approximately 255,000 square feet on two (2) stories with the exception of the Office Area, which is three (3) stories. The majority of the Site, not covered by the main building, is covered with asphalt which serves as parking for the main building. There are currently three (3) outbuildings associated with the Property each located south of the main building: the former Boiler House, a sanitary sewer pump station owned and operated by the Town of Springfield, and a three (3) story cafeteria building with attached one (1) story garage.

1.2. Remedial Actions Completed to Date

Since the acceptance of the CAP, portions of the remedial plan have been implemented including:

- Cleaning, painting and installation of a vapor barrier and a 4-inch concrete cap in Part B, located in the northwestern corner of the main building;
- Demolition and removal of the Chip Shed;
- Demolition and removal of workshop and T1 transformer room, located immediately adjacent to the Boiler House; and
- Surface cleaning and installation of a vapor barrier and a 4-inch concrete cap in Parts C and E.

Clean-up verification sampling of Part B is scheduled to be performed within the next two (2) weeks. Confirmation sampling has been performed for Transformer Room 3 (TR3) and will be reported under separate cover. As further remedial activities are required for Parts C and E, specifically painting, verification sampling will be performed in the spring of 2011.

2. ALTERATIONS TO PROPOSED REUSE

Alterations to redevelopment plans developed prior to the approved CAP have resulted from changes to tenant needs, building design alterations, and civil site considerations. The following table provides an outline of previous proposed use and amended proposed use.

Table 1: Proposed Use by Area

Area	Description	Contamination (PCBs unless indicated)	CAP Proposed Use	Amended Proposed Use	Text Section
Part A	Upper level, western side of main building	0.51 to 5.4 mg/Kg in concrete 720 mg/Kg in conduit sludge	To be demolished and redeveloped as parking	No change	3.1
Part C	Upper level, northeastern corner	Non-detectable to 48.1 mg/Kg in concrete	Commercial	Restaurant or commercial	3.2
Part D/F	Former Machine Shop #2 Southernmost 25 feet of Machine Shop #2.	Non-detectable to 33 mg/Kg	Parking	Parking and partial demolition.	3.3
Part E	Lower level, former Machine Shop #4 Transformer room T2	Non-detectable to 21 mg/Kg	Undetermined Commercial/Industrial T2 to remain in use	Mini storage and offices T2 will be closed and sealed New elevator shaft	3.4 and 3.5
Part LMN	Upper level, small rooms on east side	0.86 to 11 mg/Kg	Commercial	Springfield Hospital Health Clinic and Offices	3.6
Part NLD	Upper level, northern loading dock	Non-detectable to 2.9 mg/Kg	Industrial, Supply well to remain in use	Industrial, Supply well to be abandoned	3.7
Part O/P	Upper level, wooden floor storage area	4.3 to 6 mg/Kg	Demolished for Access Drive	To be demolished to allow for Handicap Parking	3.8
Part Office	Former office area	Non-detectable to 0.83	Health Clinic	Health Clinic with structural changes	3.9

Area	Description	Contamination (PCBs unless indicated)	CAP Proposed Use	Amended Proposed Use	Text Section
Exterior	Stormwater Management System	<3.0 mg/Kg, TCE up to 0.73 mg/Kg	Not included in CAP	Stormwater	3.10
Exterior	Propane Fuel System	Petroleum contamination >6.0 ft	Not included in CAP	Propane Storage and delivery	3.11
Exterior	Waterline from existing 8 inch main to Mechanical Room	<3.0 mg/Kg, TCE up to 0.34 mg/Kg	Not included in CAP	Water Supply for Springfield Community Health Center	3.12

3. PROPOSED CORRECTIVE ACTION

The following sections provide details of the proposed corrective action measures for each area of the Site where current redevelopment objectives differ from those presented in the original CAP. Detailed costs estimates for each remedial action are provided in Table A1 of Appendix A. Costs to perform redevelopment objectives that are not considered necessary for protection of human health, such as installation of stormwater management features, among others, are not included within the costs presented herein. Costs to manage contaminated media generated during these activities, however, are included here.

For the purpose of transport and disposal cost estimates, Stone assumes that one (1) cubic yard (cubic yard) of soil weighs approximately one and a half (1.5) tons; 1 cubic yard of concrete weighs approximately two (2) tons.

3.1. Part A

Proposed use of Part A within the approved CAP has not changed; the area will be demolished to make way for exterior parking. Demolition debris was slated for transport to the Interstate Waste landfill in Moretown, Vermont for disposal as regulated, but non-hazardous waste. Due to concerns over liquid PCB wastes within the intra- and sub-slab cutting fluid delivery/return system, sampling was performed that indicated PCB contamination within intra-slab steel electrical conduit at a concentration in excess of 500 mg/Kg. The conduit is located within approximately 8,000 square feet of slab.

Due to the high PCB concentrations in the conduit, these materials will be extracted from the surrounding concrete slab and be disposed as high-level TSCA wastes at the Chemical Waste Management (CWM) Landfill in Model City, New York. The estimated cost to remove, transport and dispose of conduit wastes is $78,278 as summarized below.

Table 2: Contaminated Conduit Cost Summary.

Task	Unit Price		Unit	Quantity	Subtotal
Labor and Expense for conduit extraction	$65,000	/	ls	1	$65,000
Contractor Oversight	$3,274	/	ls	1	$3,300

Task	Unit Price		Unit	Quantity	Subtotal
Transport	$2,640	/	Trip	2	$5,280
Disposal	$105	/	Ton	45	$4,725
TOTAL					**$78,278**

3.2. Part C

The approved CAP specified the following remedial approach for the Part C area: 1) power washing of interior walls and floor; 2) installation of two coats of epoxy paint on the walls; and 3) installation of a vapor barrier and 4-inch lift of concrete over the existing floor.

Since the approval of the CAP, the One Hundred River Street, LLC has received proposals from interested parties to lease the Part C area of the site to be used as a restaurant. To enable easier up-fit of the proposed restaurant in Part C, specifically in regards to interior decorating, Stone proposes to augment the approved CAP to include installation of steel hat channel and sheet rock over the walls after they have been cleaned and painted. In this way, future tenants can perform basic interior decorating without the need for involvement by VT DEC or EPA Region I TSCA as long as the remedial barrier (the epoxy paint) is not penetrated.

The additional costs for installing hat channel and sheet rock over the painted walls of Part C are estimated at $11,160.

3.3. Part D and F

The approved CAP assumed the entirety of Part D and F areas would serve as parking areas in future Site redevelopment, and did not anticipate building demolition of the proposed southernmost 25 feet of these areas.

The current Site redevelopment plan specifies the widening of the driveway in these areas to enable safer, two-way access to the lower parking lot. Widening the driveway requires the removal of approximately 25 feet of the southern end of Machine Shop #2. The removal of this portion of Machine Shop #2, both upper and lower levels, will enable the driveway to widen from its current width of 25 feet to 50 feet. This portion of Machine Shop #2 includes a former loading dock, staircase and ramp to the former Chip Shed.

Pre-demolition waste characterization samples of representative materials (wood, concrete, and wipes of steel surfaces) were collected by Stone on February 11, 2011. These results, presented in Table 2, together with previously collected characterization samples indicate that wastes can be disposed as regulated wastes at the Interstate Wastes Landfill in Moretown, Vermont. Laboratory reports are provided in Appendix D.

Table 3: Pre-Demolition Characterization Sampling Results, Part D and F.

Analyte	CN-01	CN-02	CN-03	CN-04	CN-05	CN-06
Aroclor 1254	5.6 mg/Kg	0.76 mg/Kg	4.7 mg/Kg	2.7 mg/Kg	1.8 mg/Kg	10.0 mg/Kg
Aroclor 1260	2.6 mg/Kg	ND	3.2 mg/Kg	1.5 mg/Kg	0.91 mg/Kg	3.1 mg/Kg
Total PCBs	8.2 mg/Kg	0.76 mg/Kg	7.9 mg/Kg	4.2 mg/Kg	2.71 mg/Kg	13.1 mg/Kg

Analyte	CN-01	CN-02	CN-03	CN-04	CN-05	CN-06
Analyte	**WP-01**	**WP-02**	**WD-01**	**WD-02**	**WD-03**	
Aroclor 1254	<0.5 ug/100 cm^2	<0.5 ug/100 cm^2	16.0 mg/Kg	6.8 mg/Kg	4.3 mg/Kg	
Aroclor 1260	<0.5 ug/100 cm^2	<0.5 ug/100 cm^2	3.5 mg/Kg	3.1 mg/Kg	1.5 mg/Kg	
Total PCBs	<0.5 ug/100 cm^2	<0.5 ug/100 cm^2	19.5 mg/Kg	9.9 mg/Kg	5.8 mg/Kg	

Following removal of the Machine Shop #2 concrete slab, four (4) inches of soil from beneath the slab will be excavated and disposed as regulated wastes at the Moretown Landfill. Post-remedial verification samples will be collected to ensure that PCB concentrations in soils remaining in this area are less than the Site action level of 3 mg/Kg for PCBs. Twelve (12) proposed verification samples will be collected as displayed in Figure 6 and analyzed via EPA Method 8082 with manual Soxhlet extraction by AMRO Environmental Laboratories (AMRO) of Merrimack, New Hampshire. Following confirmation, the surface will be graded as deemed appropriate by the contracted civil engineer. An asphalt drive will be installed with curbing and architectural landscaping.

Based on estimates of demolition debris developed by the Site demolition contractor, the volume of debris slated for disposal is approximately 125 cubic yards (250 tons) of concrete (including slab, concrete walls and footings), 45 cubic yards (67.5 tons) of underlying soil and 260 cubic yards (120 tons) of construction debris. Costs for transport and disposal of these wastes are estimated at $56,800. Costs for demolition activities are not presented within this estimate.

3.4. Part E - Transformer Room 2 and Underground Vault

Redevelopment designs for Site electrical service has modified prior plans to make use of Transformer Room 2 (TR2), located on the ground floor adjacent to Part E. Electrical service will now make use of Transformer Room 1, accessed from the second floor in the area of the Northern Loading Dock, and a new electrical room to be located adjacent to the former southern loading dock. Transformers located within TR2 will be removed and recycled by Central Vermont Public Service. Following removal of TR2 transformers, a water barrier will be installed along the northern wall and the room will be sealed from future use using concrete masonry blocks. Costs to remove the transformers, install waterproofing and seal the room are estimated at $23,400.

TR2 utilizes an underground vault that receives water seeping into the room from the northern wall. The source of this water is believed to be from the Black River, which is located directly outside this room to the north. A 4-inch diameter floor drain located in the eastern side of TR2 that discharges directly to this vault. As of January, 2011, the vault was full of water. Previous volume determinations of the vault indicate that it is likely 1,000 gallons. Observations by Site maintenance manager, Ted Foster, suggest that this tank may contain an overfill drain that discharges to the Town of Springfield sanitary sewer system. Prior to sealing TR2, the underground vault will be pumped dry and filled with concrete. Water from the vault will be contained within 350 gallon totes and characterized prior to subsequent disposal by EPA Method 8082 with manual Soxhlet extraction. One sample will be collected for each matrix present (I.E., liquids and/or sludge).

Actual costs for disposal of tank contents will be developed upon receipt of characterization results; however, Stone assumes a unit price for disposal of these liquids of $3.50/gallon based on costs from other similar remedial projects. The total estimated cost to perform closure activities of Transformer Room 2 is $27,500.

3.5. Part E - Elevator Shaft and Staircases

Based on redevelopment designs by Springfield Hospital, the future tenant of the former Office and southeastern portion of Part E and LMN, an elevator will be installed in the area of the former "Olive Street" and two staircases installed (Figure 4); these items were not included in the CAP.

The redevelopment plan includes installation of two (2) staircases between the ground and third floor levels adjacent to the proposed restaurant area (Parts C) and between the ground and second floor in the former Machine Room 2 (MR2; Part G). Results from previous investigation indicate that PCB concentrations in concrete in these areas range from 0.86 to 48 mg/Kg. As such, concrete removed for the installation of the staircases will be disposed as regulated wastes at the Moretown Landfill. Assuming an average slab thickness of four (4) inches, and an area of 285 square feet, approximately 6.5 cubic yards. or 13 tons of concrete will be need disposal. The cost to transport and dispose of these wastes is estimated at $2,550.

The proposed elevator shaft will include a pit measuring 10 feet x 8 feet x 8 feet deep, for a total excavated volume of 640 cubic ft or approximately 24 cubic yards The elevator pit will be constructed of a poured concrete floor and concrete block walls. To prevent contaminated soil gas from potentially entering the building, the walls and floor of the pit will be treated with WR Grace below-grade waterproofing. Details regarding the waterproofing treatment are provided in Appendix C. The cost to install waterproofing of the proposed elevator pit is estimated at $1,450.

Existing Site concentration data indicate that soil in this area may be contain TCE; the closest soil boring (SB-4), located about 70 feet away, contained a maximum TCE concentration of 0.85 mg/Kg from the sample collected from 4 to 8 ft below ground surface (bgs). Excavation activities performed in this area should take consideration that TCE contamination may be encountered, and the worker breathing zone should be screened with photoionization detector (PID). Excavated soils, which would necessitate removal from the Site or placement in Site areas that require fill, should be characterized for VOCs and PCBs prior to placement or disposal. If characterization results are greater than the residential Regional Soil Screening Level (RSSL) for TCE of 2.8 mg/Kg or 3.0 mg/Kg for PCBs, disposal would be required according to the determined waste profile.

For the purpose of budgeting, Stone assumes that soils excavated from the elevator shaft pit will require offsite disposal as regulated, but non-hazardous wastes. The cost to transport and dispose of these soils is $4,800.

The total estimated costs for transport, disposal and oversight of stairwell and elevator installation activities is $10,300.

3.6. Part LMN

The approved CAP proposed that Part LMN will have commercial use. Alterations to the redevelopment plan since the CAP approval, the Springfield Community Health Center will be using Part LMN for patient exam rooms. No alterations to the CAP-approved remedial approach are proposed.

3.7. Part NLD

The approved CAP states that the Site water supply well, located within Part NLD, will remain in use for non-potable uses (e.g. toilets, etc.). Based on detections of TCE within the water supply well and costs to re-plumb existing water lines, the water supply well will be abandoned by a licensed Vermont well driller. The estimated cost to perform well abandonment is $7,800. No other alterations to the CAP-approved remedial approach are proposed.

3.8. Part O/P

The approved CAP states that Parts O/P will be demolished and fill installed (including the Southern Loading Dock); no end-use is presented within the CAP. Redevelopment plans now include construction of exterior handicap-accessible parking in Part O/P. Per the CAP, following complete removal of the concrete slab in this area, four (4) inches of underlying soil will be removed for disposal at the Moretown landfill. Confirmation sampling will be performed to ensure that remaining soils are less than 3.0 mg/Kg. If soils are determined to be greater than 3.0 mg/Kg, targeted soil excavation, transport and disposal will continue in areas of exceedance until remaining soils are lower than the Site action level. Following confirmation that remaining soils are lower than the Site action level for PCBs, an asphalt parking surface will be installed at grade with the southern access round-about and patient drop off area. Costs for installation of the asphalt parking surface have not been quoted, however based on industry standard unit costs (Vermont Agency of Transportation 2-year average, 2008 through 2009) and a square footage of 5,100 sq ft the estimated costs to install asphalt in Parts O/P is $13,700.

3.9. Part Office – Sub-Slab Drain Conduits and Former Elevator

As part of the up fitting of the former Office Area for the Springfield Hospital clinic, new drain and water lines will be installed. Where possible, these conduits will be co-located with the sub-slab depressurization (SSD) system; plans for the SSD system have been submitted by ATC Associates under separate cover. Layout of sub-slab conduits is provided in Figure 6 of Appendix B. Although not currently contracted to perform oversight of SSD installation, for budgeting purposes, Stone has included costs to provide oversight during these activities.

Prior environmental sampling (Johnson Company, 2008) and analysis of flooring within the former Office Area demonstrated that these materials are not contaminated with PCBs at concentrations that require regulated disposal and can be disposed as construction and demolition (C&D) debris. Soils removed from the sub-slab trenches, when not used as backfill, will be contained and characterized prior to disposal or used on Site for fill. Based on past Site use, Stone assumes that these soils will be suitable for fill on Site or disposal as clean fill.

Redevelopment plans for the former Office Area include abandonment of the former elevator, located mid-way along the western wall of the southern half of the building. Abandonment will include infilling of the elevator pit and installation of a new poured slab for each floor level. To ensure that the elevator pit does not serve as a preferential pathway for contaminated soil gas to enter the building, the walls and floor of the elevator pit will be first sealed with below-grade waterproofing, specifically WR Grace Preprufe 300R. Details regarding the waterproofing seal are provided as Appendix C.

The cost to perform oversight duties of all sub-slab conveyance, manage soils, and install waterproofing membrane within the elevator shaft is estimated to be $10,100.

3.10. Exterior Soil Excavation and Management Plan

The proposed redevelopment plan includes excavation within potentially contaminated areas for infrastructure installations. These infrastructure installations and associated remedial measures were not included in the CAP, and are discussed in Sections 3.6.1 through 3.6. For the purpose of cost estimating, Stone has made the following assumptions:

- Stormwater sewer conduits will be installed within trenches measuring 4 feet wide by 6 feet deep (cross sectional area of 24 square feet).
    - Due to the volume of piping and engineered fill, twenty percent of the volume generated during excavation of stormwater conduits will require transport to the Moretown Landfill for disposal.
- Stormwater catch basins will be installed within excavations measuring, on average, 12 ft x 12 ft in area by 8 feet deep.
    - Due to the volume of the catch basin and engineered fill, twenty-five percent of the volume generated during excavation of stormwater catch basins will require transport to the Moretown Landfill for disposal.
    - Ten (10) stormwater catch basins will be installed at the Site; no other stormwater management features are required at the Site.
- Potable water conveyance will be installed within trenches measuring 4 feet wide by 6 feet deep.
- Sanitary sewer will be installed within trenches measuring 4 feet wide by 8 feet deep or installed within the same trench as the potable water conveyance. For the purpose of budgeting, Stone has assumed that this conduit will be installed in a separate trench parallel to the water line discussed above.
- Foundation excavations will measure 6 feet wide by 6 feet deep.
    - Due to the volume of the foundation and footing, twenty five percent of the volume generated during excavation of foundations will require transport to the Moretown Landfill for disposal.
- A 20 percent slough factor (due to sidewall collapse) has been used to generate soils volume from proposed excavation specified volume.

- An additional 20 percent is added to the excavation volume for waterlines, sanitary sewer, stormwater sewers and catch basins to account for adequate sloping and bedding for these conveyances.
- Soil weight will average 1.5 tons per cubic yard
- Concrete weight will average 2.0 tons per cubic yard
- Transport of soil and concrete wastes will occur within tandem dump trucks capable of carrying 18 tons of material.
- Wastes will be disposed as regulated wastes at the Interstate Wastes Landfill in Moretown, Vermont.

3.10.1. Stormwater System

Installation of proposed stormwater infrastructure at the Site will require approximately 560 feet of trenching, cutting 60 feet of concrete slab, and installation of ten (10) stormwater catch basins (Figures 3 and 4, Appendix A). Contaminated soils may be encountered in nearly all proposed stormwater installations, as summarized in Table 3 below. To prevent risk of exposure from contaminated soils, all excavation activities will be performed by OSHA HAZWOPER certified operators under the Site Health and Safety Plan (HASP). Soils will be managed based on their known or determined waste characterization results. Excess soils (i.e., those not going back into the excavation) excavated for stormwater infrastructure or building footings in areas where no prior characterization data are available will be temporarily contained on and beneath polyethylene sheeting until waste characterization sampling results are presented by the laboratory. Soils in areas where PCB contamination is known to be less than 3 mg/Kg will be used as backfill within the excavation if deemed suitable based on texture. Soils greater than 3 mg/Kg but less than 50 mg/Kg will be transported to Moretown Landfill for disposal as regulated wastes. Stone does not anticipate soils excavated from these areas will be greater than 50 mg/Kg, however, if encountered, these soils would be transported to the Model City landfill. Table A2 in Appendix A presents details on soil volume calculations.

Table 4: Contaminated Soils Management Summary.

Feature/ Sewer ID	Description	Total Volume (cubic yards)	Contaminant Concentrations (mg/Kg)	Management Practice
SS1	Part A conduit to saw cut	212	PCBs < 3.0[1]	Characterize and dispose of excess soils at Moretown
SS2	Sewer within saw cut through building	90 soil 6 concrete	PCBs up to 19 mg/Kg in concrete Unknown in soil	Dispose concrete at Moretown. Characterize underlying soils, dispose/backfill as appropriate.
SS3	Sewer from building to discharge point.	226	PCBs < 3.0 TCE up to 730 mg/Kg	Characterize and dispose of excess soils at Moretown
SS4	Sewer along Black River retaining wall	168	PCBs unknown	Backfill as appropriate. Characterize and dispose excess soil at Moretown
SS5	Sewer within stand-alone catch basin adjacent pump house	19	PCBs < 3.0 mg/Kg Petroleum contamination at	Backfill as appropriate. Characterize and dispose excess soil at Moretown

Feature/ Sewer ID	Description	Total Volume (cubic yards)	Contaminant Concentrations (mg/Kg)	Management Practice
			depth (12 to 16 ft)	

[1]Pending confirmation sampling results and subsequent excavation, as needed.

To better manage TCE contaminated soils in the area of SB-2, prior to excavation of stormwater infrastructure, further characterization of soils within the SB-2 TCE source area will be performed. Characterization sampling will include excavation of test pits along the proposed SS1 at 10 and 20 feet on either side of SB-2 (Figure 3, Appendix B). Discrete soil samples will be collected directly from the test pit side wall at 2, 4 and 6 ft bgs and field preserved in methanol. Soil samples will be transported under chain of custody to AMRO Environmental Laboratories (AMRO) in Merrimack, New Hampshire for VOC analysis by EPA Method 8260b.

The estimated cost to manage, transport and dispose of these soils are $84,200 as outlined in Table 4 below. Percentage for regulated disposal is estimated based on excess volume calculations per each features design specification in addition to expected volume for disposal due to known or probable contamination.

Table 5: Summary Cost Estimate, Proposed Stormwater Management System Soils Disposal and Transport.

Feature/Sewer ID	Total Volume (yd^3)	Percent for Regulated Disposal	Estimated Disposal Volume (yd^3)	Cost [1]
SS1	212	25%	52.9	Transport:$1,800 Disposal: $7,200
SS2	Soil: 90 Concrete: 6.4	25% 100%	22.4 6.4	Transport: $1100 Disposal: $4,200
SS3	226	40%	90.6	Transport: $3,000 Disposal: $12,300
SS4	168	25%	42	Transport: $1,400 Disposal: $5,700
SS5	19	25%	4.7	Transport:$200 Disposal:$600
Catch Basins (all)	597	25%	194	Transport:$6,500 Disposal: $26,500
			Total	Transport: $14,000 Disposal: $56,500

[1]Costs for disposal and transport are based on an assumed $90.75 per ton for disposal and $400 for every 18 cubic yards transport.

3.10.2. Proposed Water Supply Line

To provide adequate pressure and volume for the Springfield Hospital fire suppression system, a 6-inch diameter water supply line will be installed from the current system (8-inch water main) in the courtyard between the Boiler House and former Office Area (Figure 3). This water line will be installed within a four (4) foot wide trench at a depth of approximately six (6) feet bgs and extend from the southwest corner of the Office Area to the Springfield Hospital mechanical room. When possible, excavated soils will be backfilled. Due to the possibility of encountering contaminated soils during the excavation of this trench, Site utility and excavation contractors will be subject to the HASP. Stone will provide oversight during performance of these activities and provide breathing space screening using a PID. Soils that are found to be in excess of the RSSL will require transport and disposal at the Moretown Landfill. For budgeting purposes, Stone assumes that approximately 25 percent of the excavated volume will require disposal.

Table 6: Summary Cost Estimate, Proposed Water Line Soils Disposal and Transport.

Feature/Sewer ID	Total Volume (yd^3)	Percent for Regulated Disposal	Estimated Disposal Volume (yd^3)	Cost
Proposed Water Line	142	25%	35.5	Transport:$1,200 Disposal: $4,800

3.10.3. Proposed Floor Drain Sewer

Installation of new heating system appliances within the Springfield Community Health Center require a floor drain be installed within the mechanical room that is proposed for immediately north of the former southern loading dock. The proposed redevelopment plan indicates that this line will be connected to the municipal sewer system service main located adjacent to the southern end of the Office Area. Due to Vermont Water Supply Rule requirements, the proposed floor drain sewer will require a separate trench, located 10 feet away from the proposed new water line (Figure 4).

When possible, excavated soils will be backfilled. Due to the possibility of encountering contaminated soils during the excavation of this trench, Site utility and excavation contractors will be subject to the HASP. Stone will provide oversight during performance of these activities and provide breathing space screening using a PID. Soils that are found to be in excess of the RSSL will require transport and disposal at the Moretown Landfill. For budgeting purposes, Stone assumes that approximately 25 percent of the excavated volume will require disposal.

Table 7: Summary Cost Estimate, Proposed Water Line Soils Disposal and Transport.

Feature/Sewer ID	Total Volume (yd^3)	Percent for Regulated Disposal	Estimated Disposal Volume (yd^3)	Cost
Proposed Floor Drain Sewer	207	25%	51.9	Transport:$1,800 Disposal: $7,000

3.10.4. Foundation Excavations

New exterior walls are to be installed in several areas of the Site (Figure 3 and 4). Each wall requires the installation of a frost wall foundation. Based on the location of these proposed foundations within areas of potential contamination, excess soils will be contained and characterized prior to disposal. Soils found to contain PCB concentrations less than 3 mg/Kg will be used as backfill within the excavation, as deemed suitable by their texture and the needs of the construction contractor. Soils with PCB concentrations greater than 3 mg/Kg but less than 50 mg/Kg will be transported to Moretown Landfill for disposal as regulated wastes. Stone does not anticipate soils excavated from these areas to be greater than 50 mg/Kg, however, if encountered, these soils would be transported to the Model City landfill.

For the purpose of budgeting, Stone assumes that twenty percent of excavated soils will require disposal at Moretown Landfill and that no soils will require disposal at Model City. Volumes of each proposed building foundation excavation are provided in the table below.

Table 8: Summary Cost Estimate, Proposed Foundation Soils Disposal and Transport.

Feature/Sewer ID	Total Volume (yd^3)	Percent for Regulated Disposal	Estimated Disposal Volume (yd^3)	Cost
Part A Foundations	466	25%	83.3	Transport:$3,900 Disposal: $15,900
Part O/P Foundations	187	25%	46.7	Transport: $1,500 Disposal: $6,400
			TOTAL	Transport: $5,400 Disposal: $22,300

3.10.5. Propane Tanks and Supply Line

Four (4), 1000-gallon propane underground storage tanks (USTs) will be installed due south of the former Boiler House in the location of the former fuel oil UST (Figure 5). These tanks measure 16 feet long and 3.75 feet in diameter and will be set such that the top of the tank is approximately two (2) feet bgs. For purposes of volume calculation, Stone assumes that an excavation measuring 20 ft x 30 ft x 6 feet deep will be required for the installation of the tanks. Although the former fuel oil UST excavation was backfilled with clean fill, separation between contaminated soils left in place and clean fill cannot be maintained during the excavation for the new propane USTs. As such, any excess soil removed during the installation of these USTs shall be stockpiled on polyethylene sheeting and characterized for VOCs and PCBs. For budgeting purposes, Stone assumes that these soils will require disposal as regulated waste at the Moretown Landfill. The cost to transport and dispose of these soils is estimated at $27,100 based on an estimated volume of 160 cubic yards or 240 tons.

The propane supply line from the UST area will traverse east of the Boiler House to the proposed mechanical room located adjacent to the former truck loading dock (Figure 3). The supply line will be set within a four (4) foot wide trench at a depth of three (3) feet and be a total length of 200 feet. Soils in the area immediately

down gradient of SB-2 will be contained upon excavation for the supply line and disposed in the same manner as those for the stormwater sewer SS2. Other soils will be used as backfill, as deemed appropriate based on their texture relative to the application. For budgeting purposes, Stone assumes that approximately 40 linear feet of this trenching,(cross sectional area of 12 square feet) producing 27 tons of soil, performed for the installation of the fuel line will contain soils that will require off Site disposal. The cost to transport and dispose of these soils is estimated at $3,600.

Table 9: Summary Cost Estimate, Proposed Propane System Soils Disposal and Transport.

Feature/Sewer ID	Total Volume (yd^3)	Percent for Regulated Disposal	Estimated Disposal Volume (yd^3)	Cost
Proposed Propane USTs	160	100%	160	Transport:$ 5,300 Disposal: $21,800
Propane Fuel Line	107	20%	21.3	Transport: $ 700 Disposal: $2,900
			TOTAL	Transport: $6,000 Disposal: $24,700

4. SCHEDULE

After approval of the CAP Amendment, the proposed schedule for completion of the corrective action plan is provided in Table 8 below. For all PCB-related issues presented herein, an addendum to the accepted notification of risk-based cleanup will be submitted to the EPA Region I TSCA coordinator. The EPA requires 30 to 60 days to approve the notification.

Table 10: Proposed Schedule.

Task	Responsible Party	Duration	Anticipated Start Date
Part C			
Hat Channel	Construction Contractor	1 week	April 2011
Part D/F			
Demolition	Gurney Brothers	1 week	April 2011
Confirmation Sampling and Reporting	Stone	4 weeks	April 2011
Part E			
Elevator Pit	HP Cummings	1 week	March 2011
T2 Closure	Stone/Construction Contractor	1 week	April 2011
Staircase Installation	Demolition Contractor	1 week	April 2011
Part Office			
Elevator Pit Abandonment	HP Cummings	1 week	February 2011
Sub-slab drains	HP Cummings	2 weeks	February 2011
Exterior Soil Management	Gurney Brothers	3 months	April 2011

APPENDICES

APPENDIX A: TABLES

Table A1: 100 River Street CAP Amendment Cost Estimate Detail

DETAILED FEE JUSTIFICATION & SCOPE DETAILS

	RATE PER UNIT	UNIT	AMT	SUB-TOTAL		Scope Details
1 Part A Conduit Disposal						Costs for disposal and transport of PCB contaminated steel conduit within Part A
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	4	$360			1) Wastes will be removed from the concrete slab and cut into 1-foot sections for disposal at the CWM Landfill in Model City, New York.
Staff Scientist	$75.00 / hour	36	$2,700			2) Transport will be provided by Ameritech at $4,500 per load
Accountant 2	$55.00 / hour	0.5	$28			3) Stone will provide 1 day of oversight for each week of work.
Professional Services Summary		40.5		$3,088		4) Removal and loading of conduit wastes will require 2 weeks to perform.
Contractor Expense						
Demoltion (Gurney Brothers Construction)	$65,000 / ls	1	$65,000			
Transport (Ameritech)	$2,640 / trip	2	$5,280			
Disposal (CWM)	$105 / ton	45	$4,725			
Subcontractor Summary				$75,005		
Expenses*						
Mileage	$1 / mile	170	$94			
Communications	$91 / task	1	$91			
Expense Summary				*$186*		
TASK SUBTOTAL					**$78,278**	
2 Part C Hat Channel						Costs for installation of 7/8" steel hat channel and 1/2 inch sheetrock within Part C (proposed restaurant).
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	1	$90			1) Hat Channel @ $12.50 per linear foot of wall, installed.
Staff Scientist	$75.00 / hour	13	$975			2) Sheetrock @ 1.5 per square foot, installed.
Accountant 2	$55.00 / hour	0.5	$28			3) Stone will provide Site inspection during the first day on installation.
Professional Services Summary		14.5		$1,093		4) A total of 290 linear feet (12 ft tall) will be covered.
Contractor Expense						
Hat Channel (TBD)	$12.50 / ln ft	290	$3,625			
Sheet Rock (TBD)	$1.50 / sq ft	3450	$5,175			
Subcontractor Summary				$9,943		
Expenses*						
Mileage	$1 / mile	170	$94			
Communications	$32 / task	1	$32			
Expense Summary				*$127*		
TASK SUBTOTAL					**$11,163**	
3 Part D/F - Demolition						Remove southernmost 250 feet of Part D/F to allow for wider access road. Dispose of debris as regulated wastes at Moretown Landfill. Remove 4 inches of underlying soil. Perform post-removal verification sampling and analysis.
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	3	$270			1) Stone will provide oversight for 1 day each week.
Staff Scientist	$75.00 / hour	39	$2,925			2) Demolition/Excavation will be completed in 3 weeks.
Technician 2	$65.00 / hour	12	$780			3) A total of 317.5 tons of concrete and soil will be generated for disposal at Moretown Landfill.
Accountant 2	$55.00 / hour	0.5	$28			4) 260 yards of wood debris will be generated for disposal.
Professional Services Summary		54.5		$4,003		5) 18 soil samples will be collected following building and slab removal (total includes field quality control samples).
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	20	$1,540			
Subcontractor Summary		20		$1,540		
Contractor Expense						
Transport (Gurney Brothers Construction)	$400 / trip	20	$8,000			
Wood Transport & Dispoal (Interstate Waste)	**$113 / ton**	**120**	**$13,485**			
Concrete and Soil Disposal (Interstate Waste)	$90.75 / ton	318	$28,813			
Subcontractor Summary				$50,298		
Expenses*						
Mileage	$1 / mile	510	$283			
Sampling consumables	$8.00 / sample	20	$176			
Per diem	$56 / day	2	$123			
Lodging	$110 / day	2	$242			
Communications	$118 / task	1	$118			
Expense Summary				*$943*		
TASK SUBTOTAL					**$56,783**	
4 Transformer Room T2 Closure						Costs to abandon Transformer Room 2. Pump, Clean and fill underground vault. Install waterproofing membrance along northern wall. Remove and recycle Site transformers. Install concrete masonry wall over doorways. Provide contractor oversight of activities.
Professional Services						
Project Scientist	$90.00 / hour	2	$180			
Staff Scientist	$75.00 / hour	26	$1,950			
Technician 2	$65.00 / hour	13	$845			
Accountant 2	$55.00 / hour	0.5	$28			
Professional Services Summary		41.5		$3,003		
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	2	$154			
Subcontractor Summary		2		$154		
Contractor Expense						
Transformer Removal (TBD)	$15,000 / ls	1	$15,000			
Vault Closure	$2,500 / ls	1	$2,500			
Disposal	$3.50 / gallon	1000	$3,500			
Masonry	$1,500 / ls	1	$1,500			
Waterproofing	$1,450 / ls	1	$1,450			
Subcontractor Summary				$23,950		
Expenses*						
Mileage	$1 / mile	510	$283			
Communications	$89 / task	1	$89			
Expense Summary				*$372*		
TASK SUBTOTAL					**$27,478**	

Table A1: 100 River Street CAP Amendment Cost Estimate Detail

DETAILED FEE JUSTIFICATION & SCOPE DETAILS

	RATE PER UNIT	UNIT	AMT	SUB-TOTAL		Scope Details
5 Stairwell Installation						Costs for disposal and transport of PCB contaminated concrete for installation of two (2) stairwells within the Site building.
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	1	$90	PM		1) Stairwells measure 285 square ft with 0.4 ft thickness.
Staff Scientist	$75.00 / hour	13	$975	oversite		2) Concrete debris will be transported to Moretown Landfill by Gurney Brothers Construction and will be timed such that loads may be combined with other wastes for disposal at Moretown.
Accountant 2	$55.00 / hour	0.5	$28			3) Removal of the slabs will require 1 day to complete.
Professional Services Summary		14.5			$1,093	
Contractor Expense						
Transport (Gurney Brothers Construction)	$400.00 / trip	0.6	$240			
Disposal (Interstate Waste	$90.75 / ton	12	$1,089			
Subcontractor Summary					$1,329	
Expenses*						
Mileage	$1 / mile	170	$94			
Communications	$32 / task	1	$32			
Expense Summary					*$127*	
TASK SUBTOTAL					**$2,548**	
6 Elevator Shaft Excavation						Costs for disposal and transport of PCB/TCE contaminated soil for installation of an elevator adjacent to the Office.
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	1	$90	PM		1) Elevator shall measure 80 square feet in area and 8 feet deep.
Staff Scientist	$75.00 / hour	13	$975	oversite		2) Soils will be transported by Gurney Brothers Excavation for dispoal at Moretown Landfill. .
Accountant 2	$55.00 / hour	0.5	$28			3) Removal of the soils will require 1 day to complete.
Professional Services Summary		14.5			$1,093	4) Waste characterization sampling (VOCs and PCBs) will be performed by Stone.
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	1	$77			
Amro - EPA Method 8260	$98 / sample	1	$108			
Subcontractor Summary		2			$185	
Contractor Expense						
Transport (Gurney Brothers Construction)	$400 / trip	2.4	$960			
Waterproofing (HP Cummings)	$1,450 / ls	1	$1,450			
Disposal (Interstate Waste)	$90.75 / ton	42.7	$3,875			
Subcontractor Summary					$6,285	
Expenses*						
Mileage	$1 / mile	170	$94			
Communications	$32 / task	1	$32			
Expense Summary					*$127*	
TASK SUBTOTAL					**$7,689**	
7 Part NLD Well Abandonment						Costs to abandon water supply well within Part NLD. Well pump and supply line will be pulled. Well will be pressure grouted from the bottom up using Portland cement.
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	4	$360	PM		1) Wells is 8-inch diameter steel casing with pit.
Staff Scientist	$75.00 / hour	36	$2,700	oversight		2) Pump is set at 360', total well depth is 400'
Accountant 2	$55.00 / hour	0.5	$28			3) Riser pipe is 2" OD galvanized steel.
Professional Services Summary		40.5			$3,088	4) Well is positioned within the Northern Loading Dock area with overhead clearance of 12 feet.
Contractor Expense						
Well Abandonment	$10 / lf	400	$4,000			
Subcontractor Summary					**$4,000**	
Expenses*						
Mileage	$1 / mile	170	$94			
Lodging	$110 / day	2	$242			
PID	$90 / day	3	$297			
Communications	$91 / task	1	$91			
Expense Summary					*$725*	
TASK SUBTOTAL					**$7,812**	
8 Part O/P Paving						Install 4 inches of asphalt over 5,100 square feet that comprises the former Parts O, P and southern loading dock areas.
Contractor Expense						Assumptions:
Paving (TBD)	$111 / ton	123	$13,668			1) Asphalt costs: $110.76/ton
Subcontractor Summary					$13,668	2) Density of asphalt of 145 lbs/cubic foot.
TASK SUBTOTAL					**$13,668**	
9 Part Office - Sub-slab conveyance installation						Costs to provide oversight during subslab conduit installation, elevator shaft abandonment.
Professional Services						Assumptions:
Project Scientist	$90.00 / hour	7	$630	PM		1) Stone will provide oversight for 1 day per week during installation of water conveyance and continuously for SSD system installation.
Staff Scientist	$75.00 / hour	79	$5,925	oversite		2) Water conveyance will require 2 weeks to complete
Accountant 1	$55.00 / hour	1	$55			3) SSD system will require 1 week to complete.
Professional Services Summary		87			$6,610	Costs to install SSD system are not included herein.
Contractor Expense						
Elevator Membrane	$1,450 / ls	1	$1,450			
Disposal (Interstate Waste	$90.75 / ton		$0			
Subcontractor Summary					$1,450	
Expenses*						
Mileage	$1 / mile	400	$222			
Per diem	$56 / day	5	$308			
Lodging	$110 / day	5	$605			
PID	$90 / day	7	$693			
Communications	$195 / task	1	$195			
Expense Summary					*$2,023*	
TASK SUBTOTAL					**$10,083**	

Table A1: 100 River Street CAP Amendment Cost Estimate Detail

DETAILED FEE JUSTIFICATION & SCOPE DETAILS

	RATE PER UNIT	UNIT	AMT	SUB-TOTAL		Scope Details
10 Stormwater Management System - Conduit						Disposal and transport costs associated with management of contaminated soils from installation of Site stormwater management features. Perform test pitting, sampling and analysis to determine the presence/absence/concentrations of TCE along proposed stormwater infrastructure. Assumptions: 1) Stormwater infrastructure will include: 574 feet of stormwater sewer and 10 catch basins. 2) Total volume for disposal for soils from the stormwater system excavations will be 377 cubic yards. 3) Stone will provide oversight 1 day a week for the duration of excavations. 4) Stormwater infrastructure will require 6 weeks to complete.
Professional Services						
Project Scientist	$90.00 / hour	8	$720	PM		
Staff Scientist	$75.00 / hour	78	$5,850	oversite		
Technician 2	$65.00 / hour	12	$780	sampling		
Accountant 2	$55.00 / hour	2	$110			
Professional Services Summary		100		$7,460		
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	12	$924			
Amro - EPA Method 8260	$98 / sample	12	$1,294			
Subcontractor Summary		24		$2,218		
Contractor Expense						
Transport (Gurney Brothers Construction)	$400 / trip	18.4	$7,360			
Disposal (Interstate Waste	$90.75 / ton	721	$65,431			
Subcontractor Summary		739		$72,791		
Expenses*						
Mileage	$0.51 / mile	1190	$661			
Sampling consumables	$8.00 / sample	24	$211			
PID	$90 / day	6	$594			
Communications	$220 / task	1	$220			
Expense Summary				*$1,686*		
TASK SUBTOTAL					**$84,155**	
11 Propane Tanks and Supply Line						Costs for oversight during installation of Propane USTs and Fuel Line Assumptions: 1) Dimension of propane UST excavation is 30 x 20 x 6 ft 2) Dimension of the supply line is 100 x 4 x 3 ft. 3) Approximatley 40 feet of the trench will contain soil that is greater than the RSSL for TCE that will require disposal as regulated by non-hazardous wastes at Moretown Landfill. 4) Stone will provide oversight for each day of installation. 5) Estimated time to complete installation is 5 days.
Professional Services						
Project Scientist	$90.00 / hour	2	$180	PM		
Staff Scientist	$75.00 / hour	53	$3,975	oversite		
Accountant 2	$55.00 / hour	0.5	$28			
Professional Services Summary		55.5		$4,183		
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	2	$154			
Amro - EPA Method 8260	$98 / sample	2	$216			
Subcontractor Summary		4		$370		
Contractor Expense						
Transport (Gurney Brothers Construction)	$400.00 / trip	15.1	$6,040			
Disposal (Interstate Waste	$90.75 / ton	272	$24,684			
Subcontractor Summary				$30,724		
Expenses*						
Mileage	$1 / mile	170	$94			
Sampling consumables	$8.00 / sample		$0			
Per diem	$56 / day	5	$308			
Lodging	$110 / day	5	$605			
PID	$90 / day	5	$495			
Communications	$123 / task	1	$123			
Expense Summary				*$1,626*		
TASK SUBTOTAL					**$36,902**	
12 Water Line Installation						Costs for soil management and contractor oversight during installation of water line adjacent to Office. Assumptions: 1) Dimension of excavation is 114 x 4 x 6 feet. 2) Approximatley 40 feet of the trench will contain soil that is greater than the RSSL that will require disposal as regulated by non-hazardous wastes at Moretown Landfill. 3) Stone will provide oversight for 1 day of installation.
Professional Services						
Project Scientist	$90.00 / hour	1	$90	PM		
Staff Scientist	$75.00 / hour	13	$975	oversite		
Accountant 2	$55.00 / hour	0.5	$28			
Professional Services Summary		14.5		$1,093		
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	2	$154			
Amro - EPA Method 8260	$98 / sample	2	$216			
Subcontractor Summary		4		$370		
Contractor Expense						
Transport (Gurney Brothers Construction)	$400.00 / trip	14	$5,600			
Disposal (Interstate Waste	$90.75 / ton	250	$22,688			
Subcontractor Summary				$28,288		
Expenses*						
Mileage	$1 / mile	170	$94			
PID	$90 / day	2	$198			
Communications	$32 / task	1	$32			
Expense Summary				*$325*		
TASK SUBTOTAL					**$30,074**	
13 Flor Drain Sewer Line Installation						Costs for soil management and contractor oversight during installation of a floor drain sewer line adjacent to Office. Assumptions: 1) Dimension of excavation is 125 x 4 x 8 feet. 2) Approximatley 40 feet of the trench will contain soil that is greater than the RSSL that will require disposal as regulated by non-hazardous wastes at Moretown Landfill. 3) Stone will provide oversight for 1 day of installation.
Professional Services						
Project Scientist	$90.00 / hour	1	$90	PM		
Staff Scientist	$75.00 / hour	13	$975	oversite		
Accountant 2	$55.00 / hour	0.5	$28			
Professional Services Summary		14.5		$1,093		
Subcontractors*						
Amro - EPA Method 8082	$70 / sample	2	$154			
Amro - EPA Method 8260	$98 / sample	2	$216			
Subcontractor Summary		4		$370		
Contractor Expense						
Transport (Gurney Brothers Construction)	$400.00 / trip	14	$5,600			
Disposal (Interstate Waste	$90.75 / ton	250	$22,688			
Subcontractor Summary				$28,288		
Expenses*						
Mileage	$1 / mile	170	$94			
PID	$90 / day	2	$198			
Communications	$32 / task	1	$32			
Expense Summary				*$325*		
TASK SUBTOTAL					**$30,074**	

Table A1: 100 River Street CAP Amendment Cost Estimate Detail

DETAILED FEE JUSTIFICATION & SCOPE DETAILS

		RATE PER UNIT	UNIT	AMT	SUB-TOTAL		Scope Details
14	**Foundation Excavation**						Costs for disposal and transport of contaminated soils encountered during foundation excavation activities.
	Professional Services						Assumptions:
	Project Scientist	$90.00 / hour	3	$270	PM		1) Stone will provide oversight for 1 day each week of foundation activities.
	Staff Scientist	$75.00 / hour	39	$2,925	oversite		2) Foundation excavations will require 3 weeks to perform
	Accountant 2	$55.00 / hour	0.5	$28			3) Soils will be determined to be <3.0 mg/Kg for PCBs prior to start of excavations.
	Professional Services Summary		42.5		$3,223		4) Excess soils will be no more than 20% of the excavation volume.
	Contractor Expense						5) Foundations will be a total length of 490 ft, x 6 ft wide x 5 ft deep.
	Transport (Gurney Brothers Construction)	$400.00 / trip	13.6	$5,440			6) Remaining soils will be suitable for backfill.
	Disposal (Interstate Waste	$90.75 / ton	245	$22,234			
	Subcontractor Summary				$27,674		
	Expenses*						
	Mileage	$1 / mile	510	$283			
	PID	$90 / day	3	$297			
	Communications	$95 / task	1	$95			
	Expense Summary				*$675*		
	TASK SUBTOTAL					**$31,572**	
	PROJECT TOTAL					***$428,279***	

*

Stone Environmental's standard mark-up on all subcontractor and reimbursable project expenses is 10%. In addition, telecommunication charges are applied at a rate of 2.95% of professional services.

Table A2: Bulk Remedial Waste Management Plan

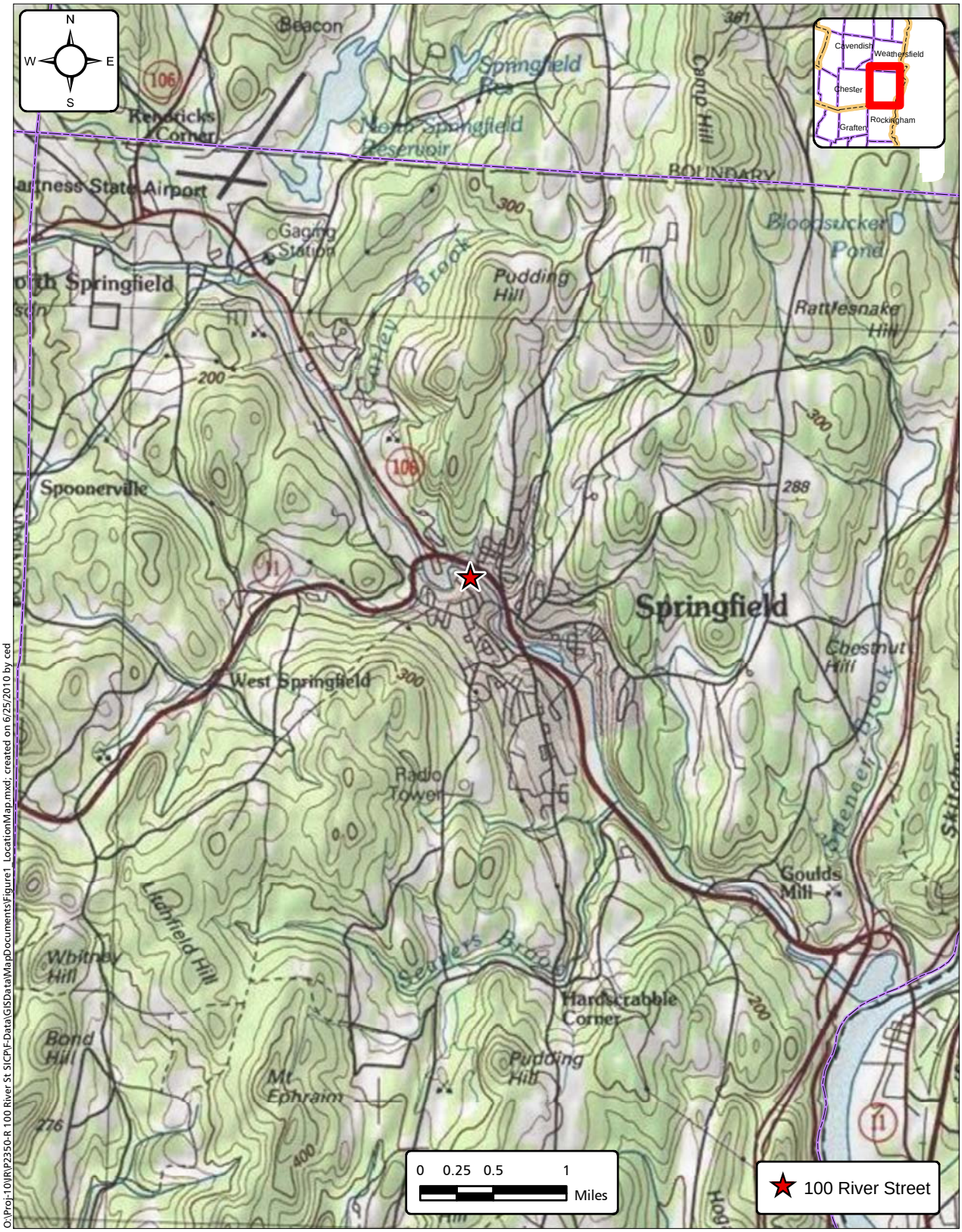
Text Section	Area	Feature ID	Description	Contamination	Length (ft)	Width (ft)	Area (ft^2)	Depth (ft)	Volume (ft^3)	Volume (yd^3)	Percent for Disposal (%)	Volume for Disposal (yd^3)	Tonnage for Disposal (tons)	Disposal Cost[1]	Trips[2]	Tranport Costs	Total T&D
3.1	Part A		Electrical Conduit	>500 mg/Kg for PCBs	Estimated by Contractor								45	$ 4,725	2	$ 5,280	$ 10,005
3.3	Part D/F		Concrete demolition debris	PCBs between 0.76 and 13.1 mg/Kg in concrete	Estimated by contractor							125	250	$ 22,688	13.9	$ 5,555.56	$ 28,243.06
			Wood Debris	PCBs between 5.8 and 19.5 mg/Kg in wood	Estimated by contractor							260	119.6	$ 10,854		$ 2,631.20	$ 13,484.90
			Soil	Unknown, assume between 3 and 50 mg/Kg	Estimated by contractor							45	67.5	$ 6,126	3.8	$ 1,500.00	$ 7,625.63
3.5	Part E	Elevator	Proposed elevator in southeastern Part E	Unknown, assume between 3 and 50 mg/Kg	8	10	80	8	768.00	28	100	28.4	42.7	$ 3,872	2.4	$ 948.15	$ 4,820.15
		S1	western staircase	PCBs ~1.4 mg/Kg in concrete	13	16	208	0.3	74.88	3	100	2.8	5.5	$ 503	0.3	$ 123.26	$ 626.62
		S2	eastern staircase	PCBs between 7.2 and 16 mg/Kg in concrete	13	16	208	0.3	74.88	3	100	2.8	5.547	$ 503	0.3	$ 123.26	$ 626.62
3.10	Exterior Soils	Stormwater Sewers															
		SS1	Part A stormwater conveyance	PCBs < 3.0 mg/Kg	170	4	680	6	5,712.00	212	25	52.9	79.3	$ 7,199.50	4.4	$ 1,762.96	$ 8,962.46
		SS2	Sewer within saw cut through building	Soil unknown for PCBs	72	4	288	6	2,419.20	90	25	22.4	33.6	$ 3,049.20	1.9	$ 746.67	$ 3,795.87
			Concrete	PCBs in concrete 4.0 to 19.0 mg/Kg	72	4	288	0.5	172.80	6	100	6.4	12.8	$ 1,161.60	0.7	$ 284.44	$ 1,446.04
		SS3	Sewer from building to discharge point.	PCBs < 3.0 mg/Kg, TCE up to 730 mg/Kg	182	4	728	6	6,115.20	226	40	90.6	135.9	$ 12,332.32	7.5	$ 3,019.85	$ 15,352.17
		SS4	Sewer along Black River retaining wall	Unknown PCBs	135	4	540	6	4,536.00	168	25	42.0	63.0	$ 5,717.25	3.5	$ 1,400.00	$ 7,117.25
		SS5	Sewer within stand-alone catch basin adjacent pump house	Xylenes at 900 mg/Kg, Total TMBs at 719 mg/Kg	15	4	60	6	504.00	19	25	4.7	7.0	$ 635.25	0.4	$ 155.56	$ 790.81
		Catch Basins								720.7					18.4		
		CB1	Catch basin, north end of Part A	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB2	Catch basin, south end of Part A	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB3	Catch basin, adjacent saw cut, west side	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB4	Catch basin, adjacent saw cut, west side	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB5	Catch basin, adjacent saw cut, east side	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB6	Catch basin, adjacent saw cut, east side	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB7	Catch basin north of Boiler House	PCBs < 3.0 mg/Kg, TCE up to 730 mg/Kg	12	12	144	8	1,612.80	60	100	59.7	89.6	$ 8,131.20	5.0	$ 1,991.11	$ 10,122.31
		CB8	Catch basin at outfall to Black River from SS3 and SS4	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB9	Catch basin at southern end of SS4	PCBs < 3.0 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
		CB10	Catch basin south of Pump House	Xylenes at 900 mg/Kg, Total TMBs at 719 mg/Kg	12	12	144	8	1,612.80	60	25	14.9	22.4	$ 2,032.80	1.2	$ 497.78	$ 2,530.58
										597		194		26426		6471	
		W1	Proposed waterline	Low level TCE, cis-DCE, unknown PCBs	114	4	456	6	3,830.40	142	25	35.5	53.2	$ 4,828	3.0	$ 1,182.22	$ 6,010.12
		FD1	Proposed floor drain sewer line, located parallel to W1	Low level TCE, cis-DCE, unknown PCBs	125	4	500	8	5,600.00	207	25	51.9	77.8	$ 7,058	4.3	$ 1,728.40	$ 8,786.73
		Foundations															
		F1a	Foundation for new southern and western facades adjacent Part	Clean to <3.0 prior to installation	250	6	1500	5	9000	333	25	83.3	125.0	$ 11,343.75	6.9	$ 2,777.78	$ 14,121.53
		F1b	Potential foundation along southern edge of Part B	Clean to <3.0 prior to installation	100	6	600	5	3600	133	25	33.3	50.0	$ 4,537.50	2.8	$ 1,111.11	$ 5,648.61
		F2	Foundation of new façade along proposed handicap parking lot	Unknown PCBs, Low level TCE, cis-DCE	140	6	840	5	5040	187	25	46.7	70.0	$ 6,352.50	3.9	$ 1,555.56	$ 7,908.06
		Propane Tank	4 USTs south of Boiler House		30	20	600	6	4,320.00	160	100	160.0	240.0	$ 21,780.00	13.3	$ 5,333.33	$ 27,113.33
		Fuel Line	From Propane tanks to mechanical room.		200	4	800	3	2,880.00	107	20	21.3	32.0	$ 2,904.00	1.8	$ 711.11	$ 3,615.11

[1] Cost for disposal for regulated waste at Moretown Landfill is $90.75/ton. Costs for hazardous waste disposal at CWM Landfill is $105/ton.

[2] Transport Capacity for soil and concrete wastes to Moretown Landfill is based on 18 tons/truck. Other transportation costs quoted by contractor.

3 Tranport costs for soil and conrete wastes to Moretown Landfill is based on $400 per 18 ton load. Transport Costs

APPENDIX B: FIGURES



O:\Proj-10\R\P2350-R 100 River St SIC\F-Data\GIS\Data\MapDocuments\Figure1_LocationMap.mxd; created on 6/25/2010 by ced

Figure 1: Site Location Map

Springfield, Vermont

Sources: ESRI: US Topo Map

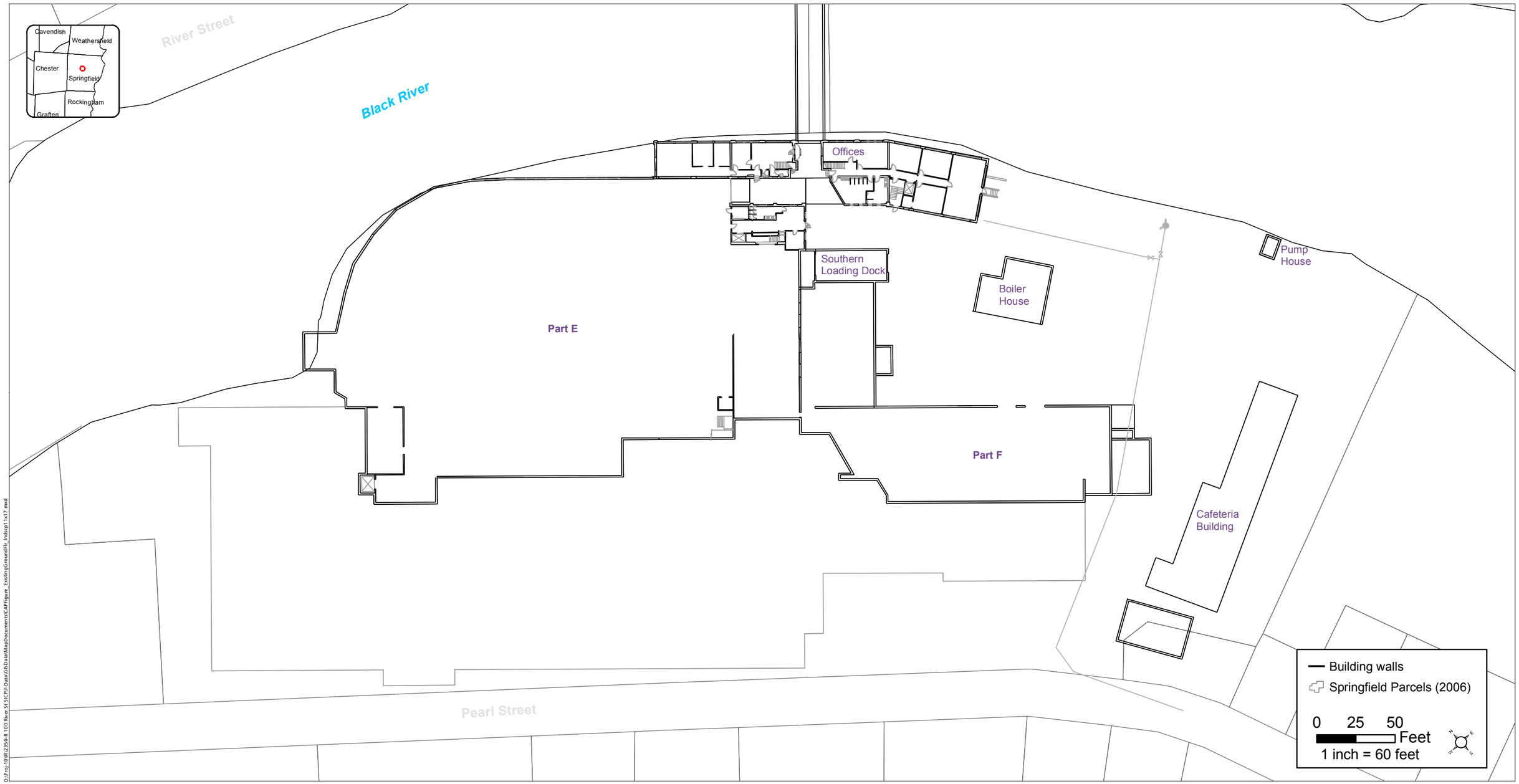


Figure 2: Existing Conditions First Floor

100 River Street, Springfield, Vermont

Sources: Triad Architects: Building Plans; Engineering Ventures: Water lines; VCGI: Springfield parcel boundaries.

STONE ENVIRONMENTAL INC

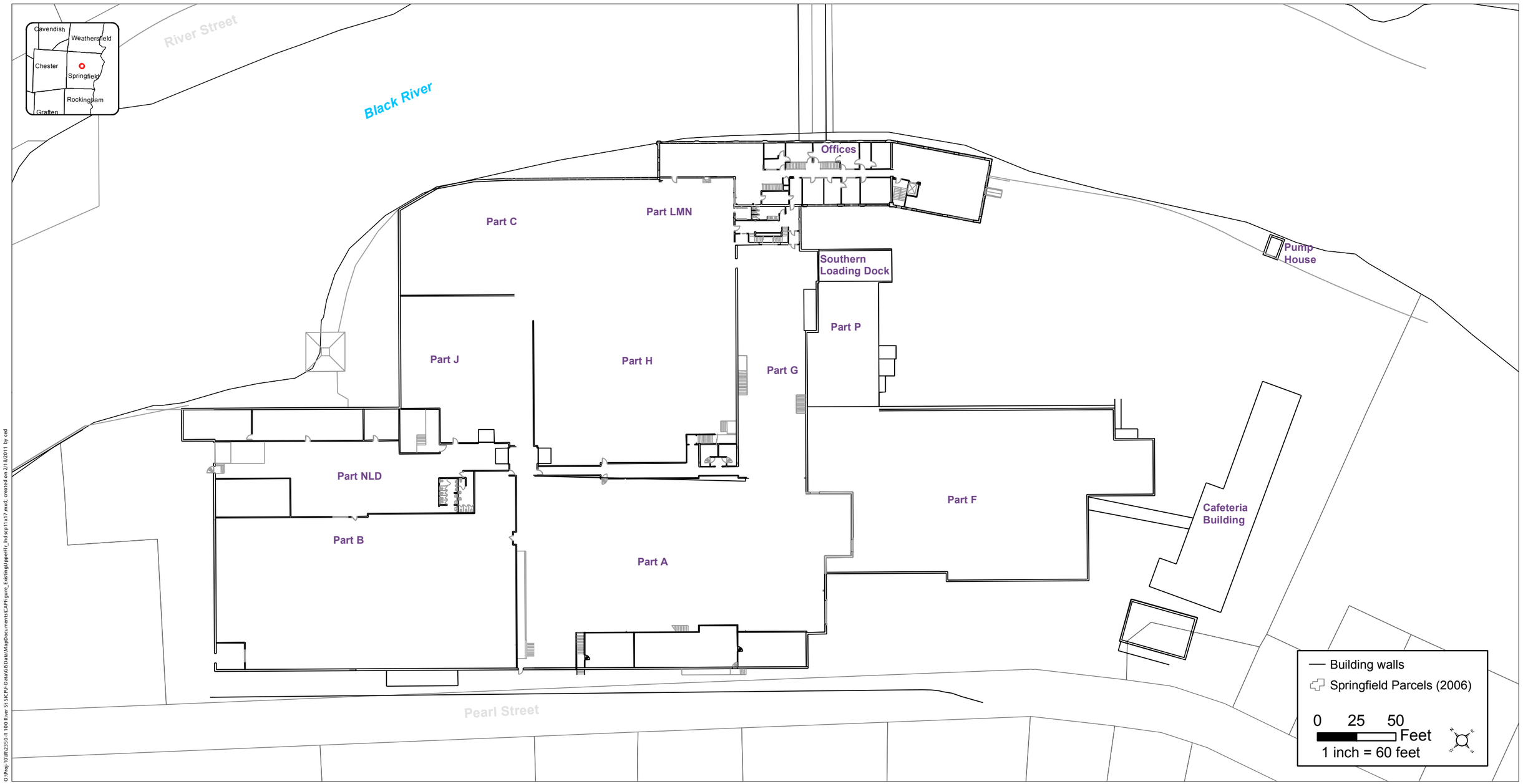


Figure 3: Existing Conditions Second Floor

100 River Street, Springfield, Vermont

Sources: Triad Architects: Building Plans; Engineering Ventures: Water lines; VCGI: Springfield parcel boundaries.

STONE ENVIRONMENTAL INC

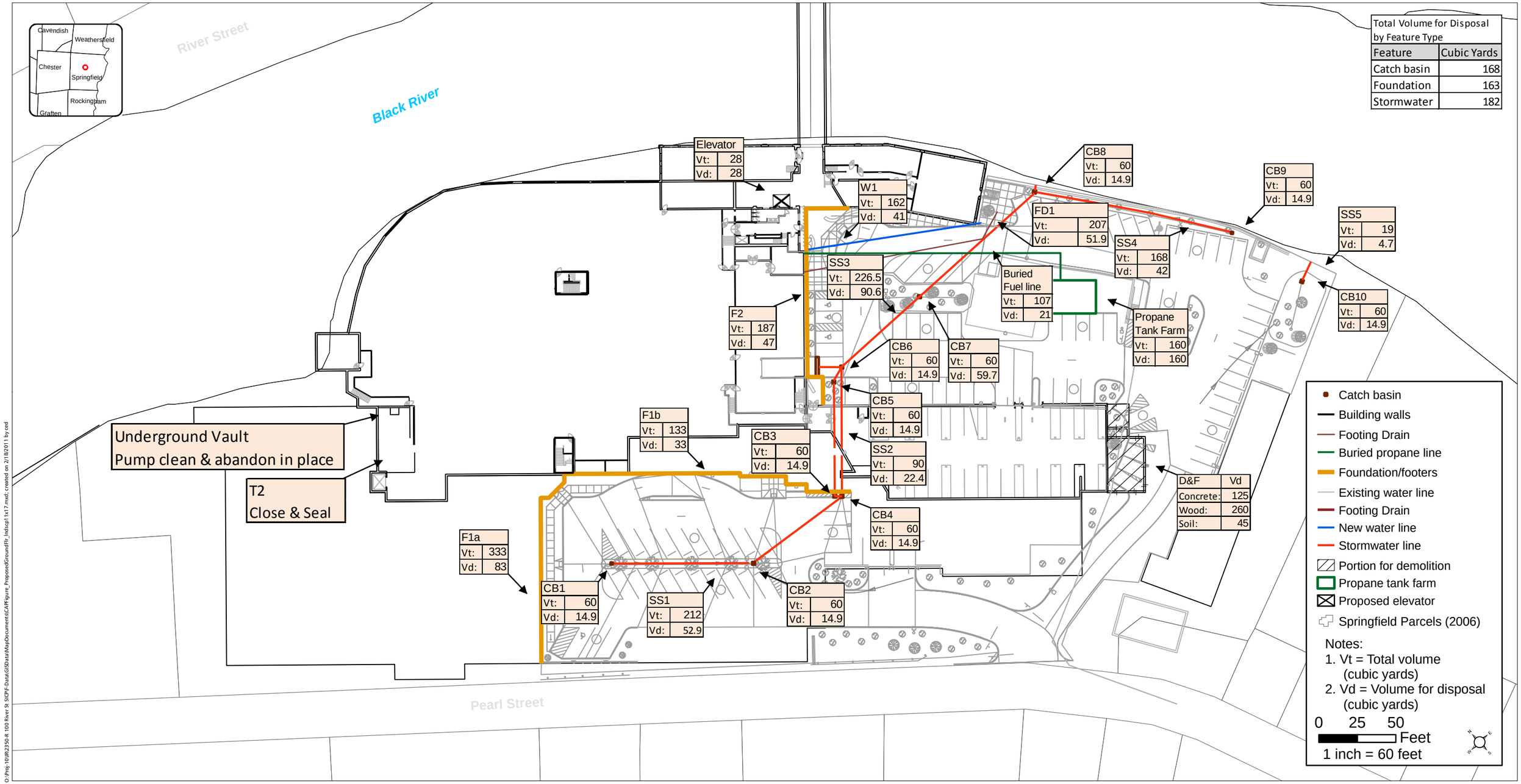


Figure 4: Proposed Conditions First Floor with Estimated Volumes for Disposal

100 River Street, Springfield, Vermont

Sources: Triad Architects: Building Plans; Engineering Ventures: Water and stormwater lines; VCGI: Springfield parcel boundaries.

STONE ENVIRONMENTAL INC

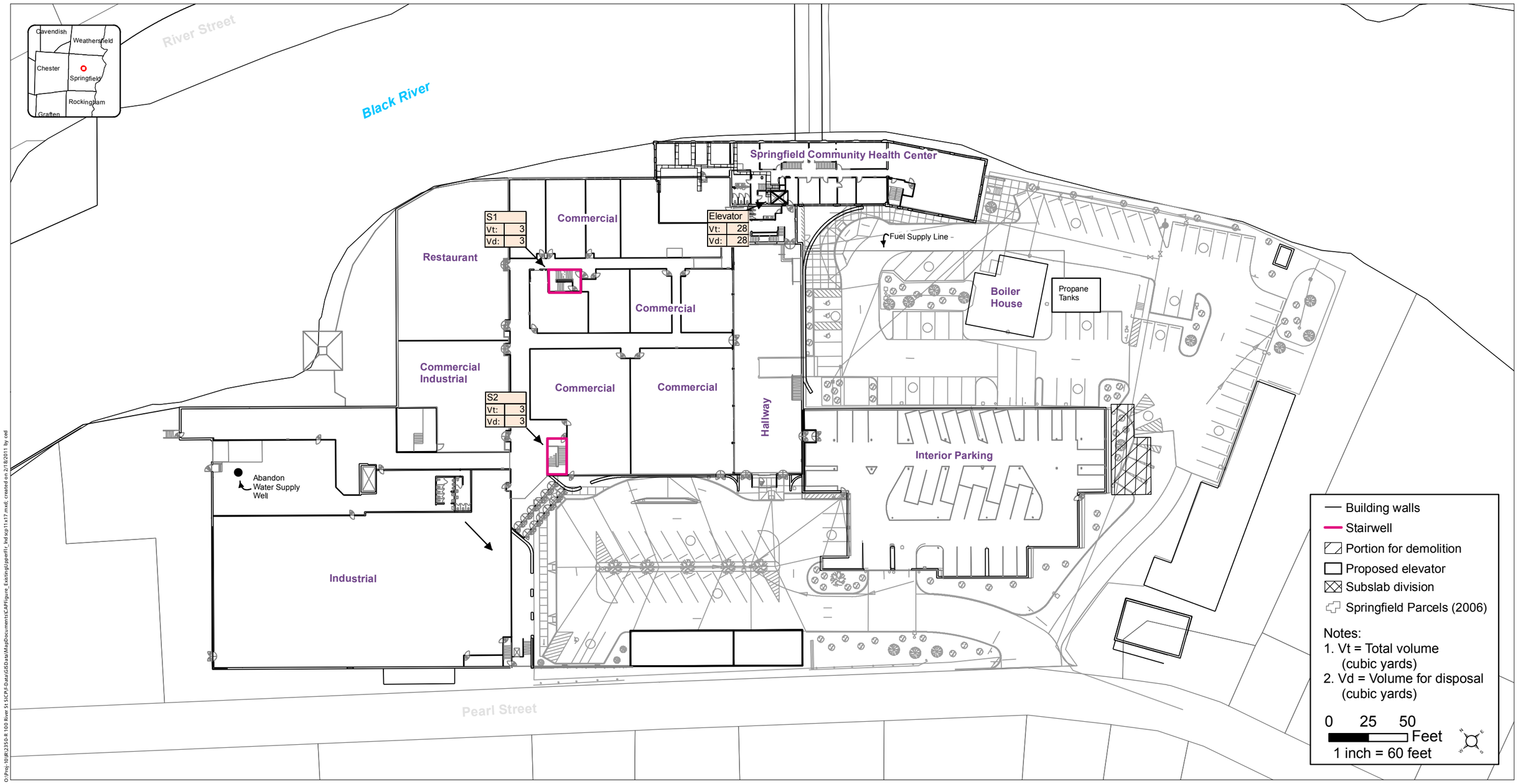


Figure 5: Proposed Conditions Second Floor with Estimated Volumes for Disposal

100 River Street, Springfield, Vermont

Sources: Triad Architects: Building Plans; Engineering Ventures: Water lines; VCGI: Springfield parcel boundaries.

STONE ENVIRONMENTAL INC

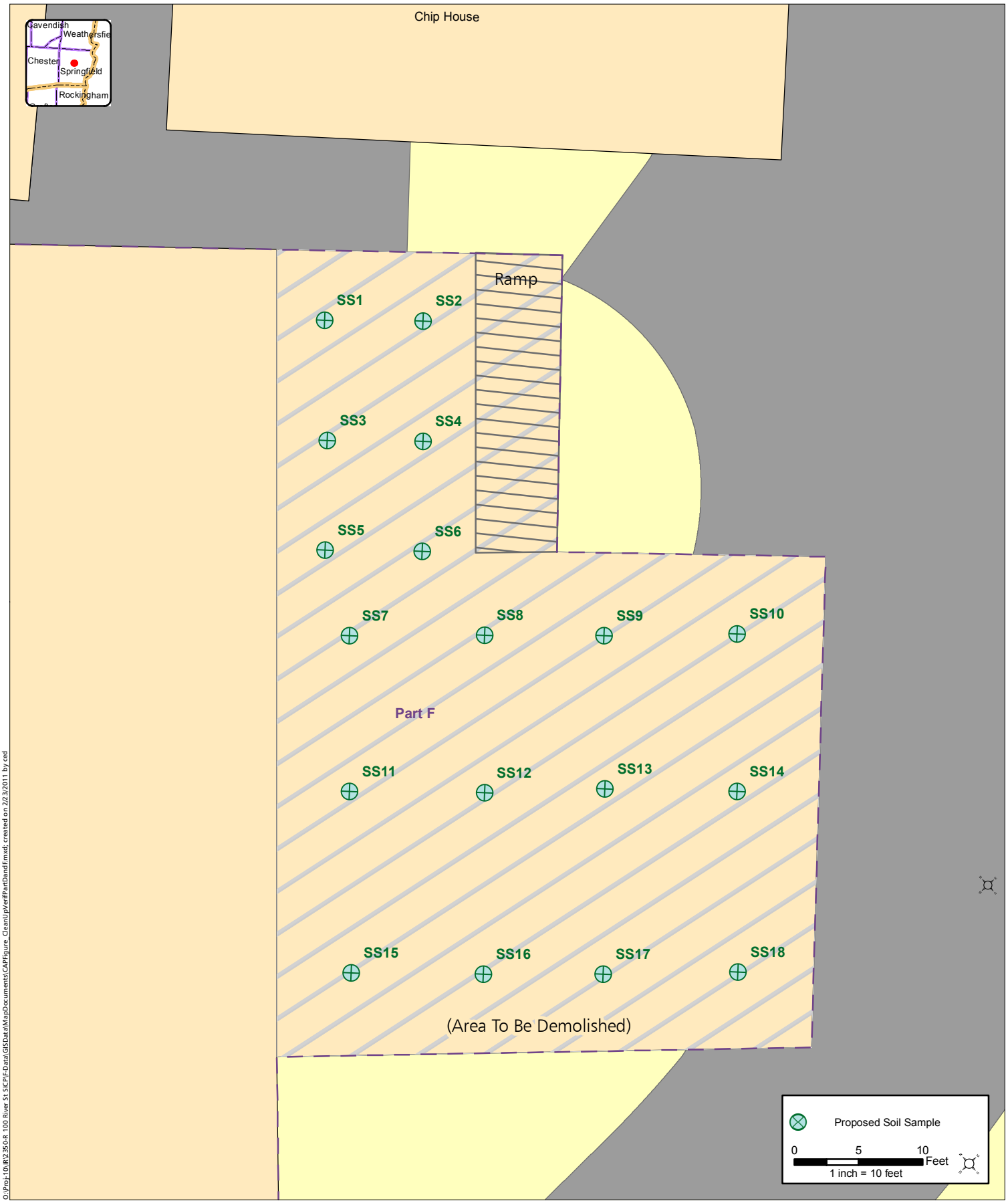
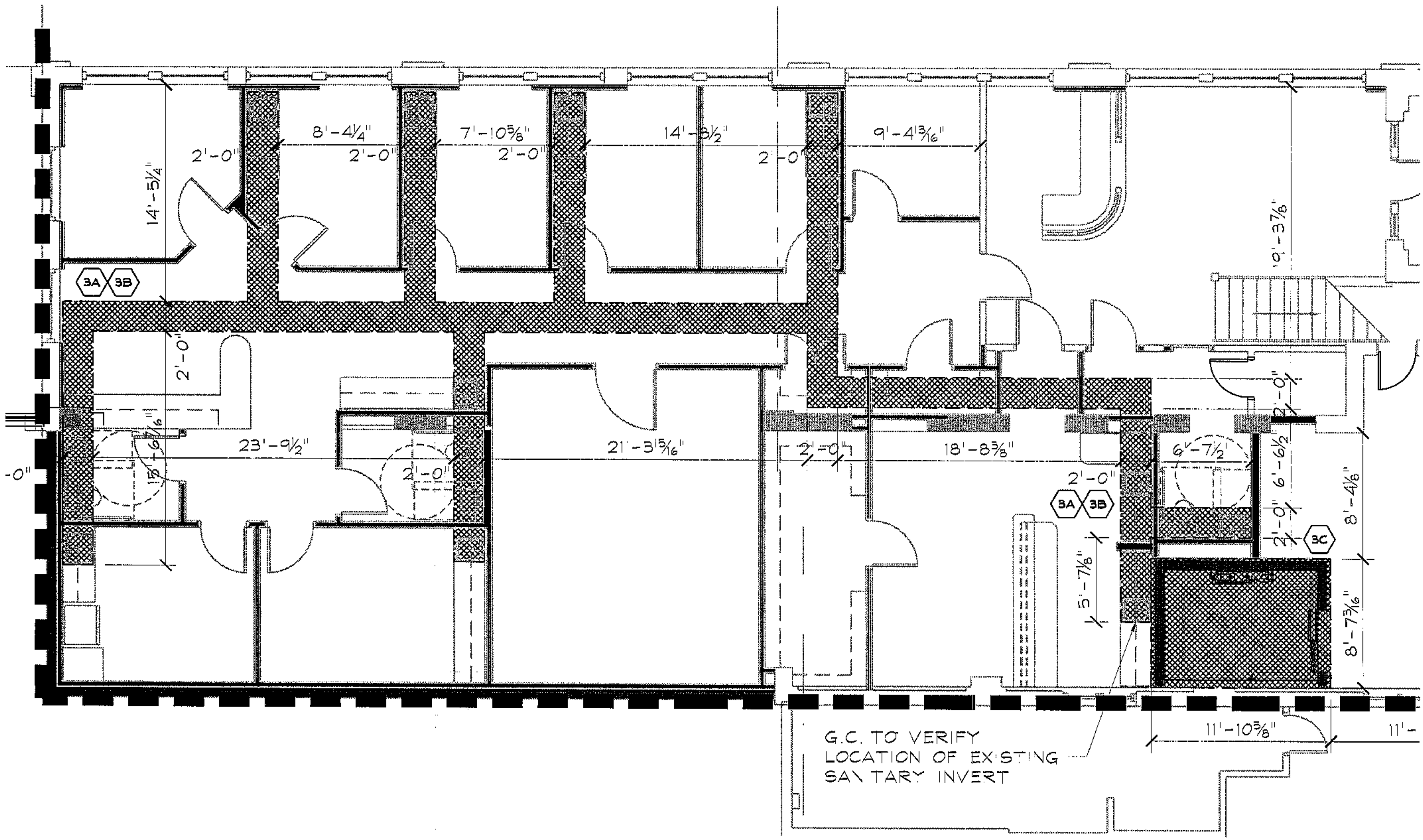


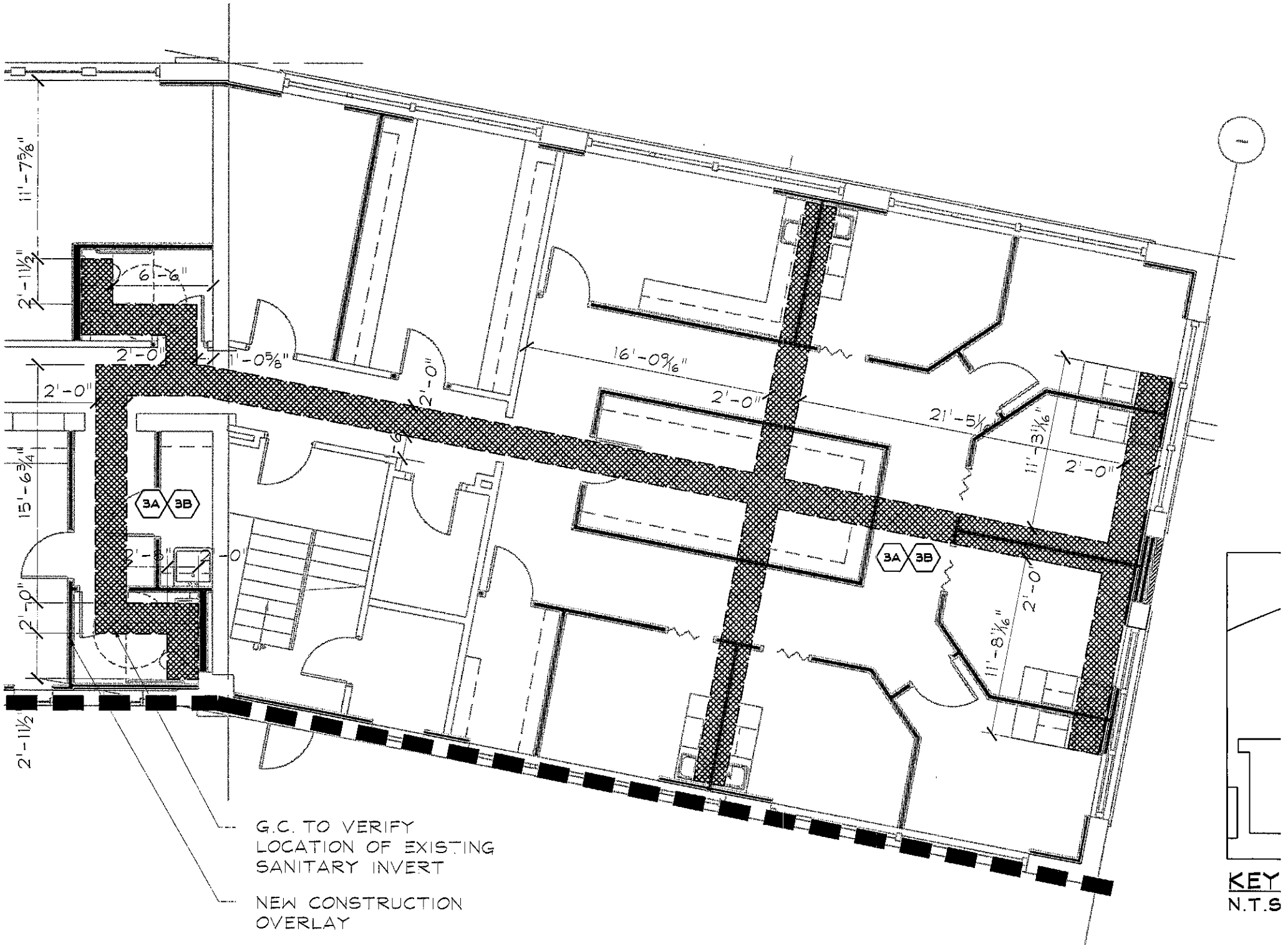
Figure 6: Proposed Clean Up Verification Sample Locations; Part D & F

100 River Street, Springfield, Vermont

Sources: Building footprints and previous sample locations taken from Johnson Company CAD files; VCGI: Springfield parcel boundaries.

APPENDIX C: SPECIFICATIONS


G.C. TO VERIFY
LOCATION OF EXISTING
SANITARY INVERT
3A
3B
3C
14'-5¼"
8'-4¼"
7'-10⅝"
9'-4¹³⁄₁₆"
23'-9½"
21'-3¹⁵⁄₁₆"
18'-8⅜"
6'-7½"
6'-6½"
5'-7⅛"
8'-4⅛"
8'-7³⁄₁₆"
11'-10⅜"
2'-0"


11'-7⅝"
2'-11½"
6'-6"
2'-0"
1'-0⅝"
2'-0"
16'-0⅜"
2'-0"
21'-5½"
11'-3⅛"
2'-0"
15'-6¾"
3A
3B
2'-8"
2'-0"
3A
3B
11'-8⅛"
2'-0"
2'-0"
2'-11½"
G.C. TO VERIFY
LOCATION OF EXISTING
SANITARY INVERT
NEW CONSTRUCTION
OVERLAY
KEY
N.T.S

GRACE

PREPRUFE® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites

Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe bond to concrete prevents ingress or migration of water around the structure.

The Preprufe R System includes:

- **Preprufe 300R**—heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R**—thinner grade for blindside, zero property line applications against soil retention systems.
- **Preprufe Tape LT**—for covering cut edges, roll ends, penetrations and detailing (temperatures between 25°F (-4°C) and 86°F (+30°C)).
- **Preprufe Tape HC**—as above for use in Hot Climates (minimum 50°F (10°C)).
- **Bituthene® Liquid Membrane**—for sealing around penetrations, etc.

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete, carton forms or well rolled and compacted sand or crushed stone substrate; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.

Advantages

- **Forms a unique continuous adhesive bond to concrete poured against it**—prevents water migration and makes it unaffected by ground settlement beneath slabs
- **Fully-adhered watertight laps** and detailing
- **Provides a barrier to water, moisture and gas**—physically isolates the structure from the surrounding ground
- **BBA Certified** for basement Grades 2, 3, & 4 to BS 8102:1990
- **Zero permeance** to moisture
- **Solar reflective**—reduced temperature gain
- **Simple and quick to install**—requiring no priming or fillets
- **Can be applied to permanent formwork**—allows maximum use of confined sites
- **Self protecting**—can be trafficked immediately after application and ready for immediate placing of reinforcement
- **Unaffected by wet conditions**—cannot activate prematurely
- Inherently waterproof, non-reactive system:
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- **Chemical resistant**—effective in most types of soils and waters, protects structure from salt or sulphate attack

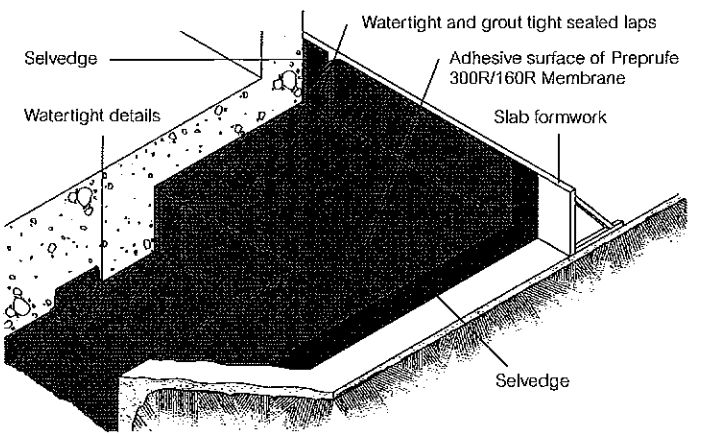
Installation

The most current application instructions, detail drawings and technical letters can be viewed at www.graceconstruction.com. Technical letters are provided for the following subjects to assist in the installation of Preprufe:

- Chemical Resistance
- Minimizing Concrete Shrinkage and Curling
- Rebar Chairs on Preprufe 300R Membrane
- Removal of Formwork Placed Against Preprufe Membranes
- Winter Lap Sealing and the use of Preprufe Tape LT

For other technical information contact your local Grace representative.

Preprufe 300R & 160R membranes are supplied in rolls 4 ft (1.2 m) wide, with a selvedge on one side to provide self-adhered laps for continuity between rolls. The rolls of Preprufe Membrane and Preprufe Tape are interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.



Drawings are for illustration purposes only.
Please refer to www.graceconstruction.com for specific application details.

Substrate Preparation

All surfaces—It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability (see Figure 1).

Horizontal—The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. The surface does not need to be dry, but standing water must be removed.

Vertical—Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment.

Membrane Installation

Preprufe can be applied at temperatures of 25°F (-4°C) or above. When installing Preprufe in cold or marginal weather conditions 55°F (<13°C) the use of Preprufe Tape LT is recommended at all laps and detailing. Preprufe Tape LT should be applied to clean, dry surfaces and the release liner must be removed immediately after application.

Horizontal substrates—Place the membrane HDPE film side to the substrate with the clear plastic release liner facing towards the concrete pour. End laps should be staggered to avoid a build up of layers. Leave plastic release liner in position until overlap procedure is completed (see Figure 2).

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Refer to Grace Tech Letters for information on suitable rebar chairs for Preprufe.

Vertical substrates—Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the the clear plastic release liner facing towards the concrete pour. The membrane may be installed in any convenient length. Secure the top of the membrane using a batten such as a termination bar or similar 2 in. (50 mm) below the top edge (see Figure 3). Fastening can be made through the selvedge so that the membrane lays flat and allows firmly rolled overlaps. Immediately remove the plastic release liner. Any additional fasteners must be covered with a patch of Preprufe Tape (see Figure 4).

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

Roll ends and cut edges—Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe Tape LT (or HC in hot climates) centered over the lap and roll firmly. Immediately remove printed plastic release liner from the tape.

Details

Refer to Preprufe Field Application Manual, Section V Application Instructions or visit www.graceconstruction.com. This Manual gives comprehensive guidance and standard details for:

- internal and external corners
- penetrations
- tiebacks
- columns
- grade beam pilecaps
- tie-ins
- terminations

Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by jet washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and allow to dry. Repair small punctures (0.5 in. (12 mm) or less) and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 6 in. (150 mm) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly. Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic release liner from tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh Preprufe Tape, rolling firmly. Alternatively, use a hot air gun or similar to activate adhesive and firmly roll lap to achieve continuity.

Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe R Membrane and Tape.

It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

Preprufe membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of 6000 psi (40 N/mm^2) will typically require a cure time of approximately 6 days at an average ambient temperature of 25°F (-4°C), or 2 days at 70°F (21°C).

Figure 1

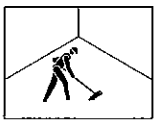


Figure 2

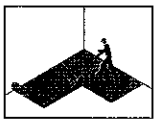


Figure 3

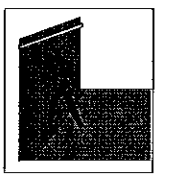
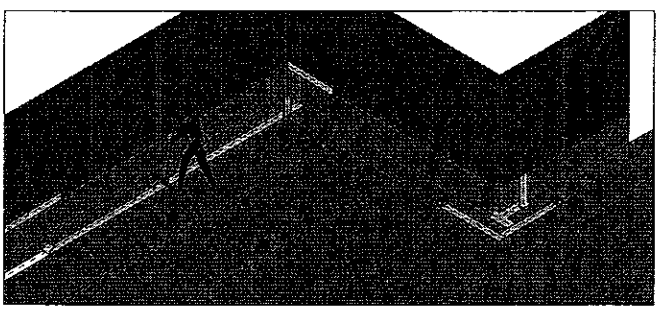


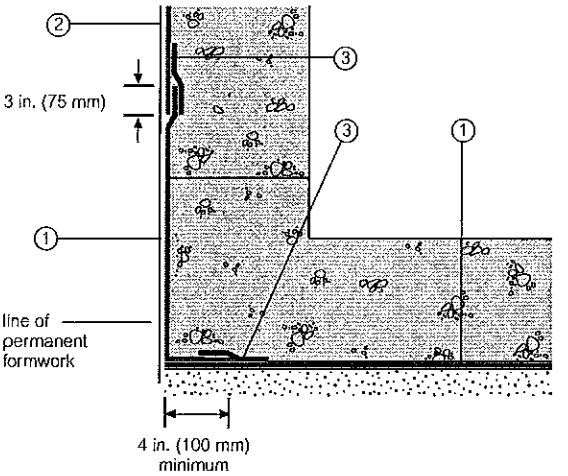
Figure 4



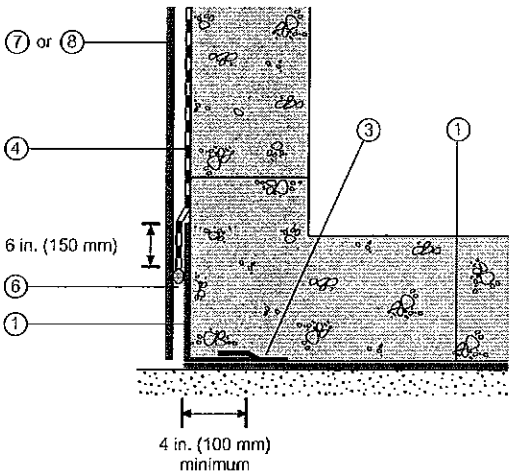
Detail Drawings

Details shown are typical illustrations and not working details. For a list of the most current details, visit us at www.graceconstruction.com. For technical assistance with detailing and problem solving please call toll free at 866-333-3SBM (3726).

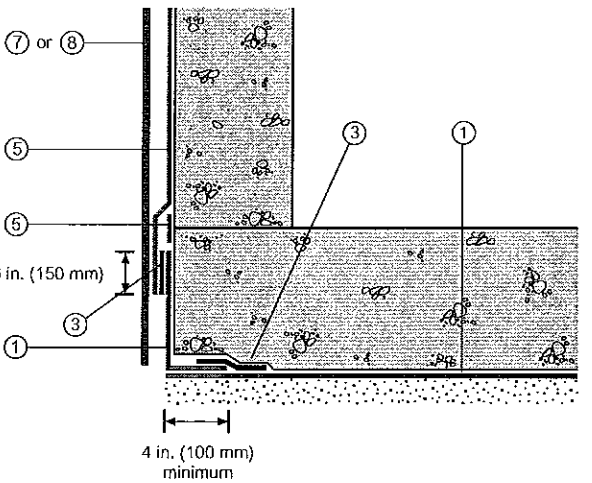
Wall base detail against permanent shutter



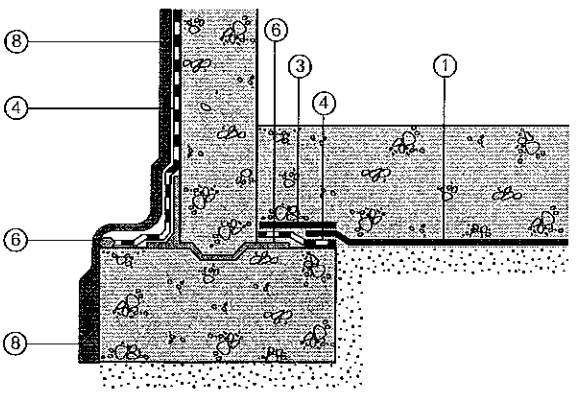
Bituthene wall base detail (Option 1)



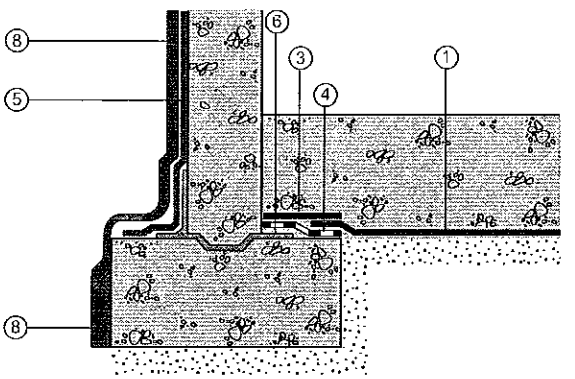
Procor wall base detail (Option 1)



Bituthene wall base detail (Option 2)



Procor wall base detail (Option 2)



1 Preprufe 300R
2 Preprufe 160R
3 Preprufe Tape
4 Bituthene
5 Procor
6 Bituthene Liquid Membrane
7 Protection
8 Hydroduct®

Supply

Dimensions (Nominal)	Preprufe 300R Membrane	Preprufe 160R Membrane	Preprufe Tape (LT or HC*)
Thickness	0.046 in. (1.2 mm)	0.032 in. (0.8 mm)	
Roll size	4 ft x 98 ft (1.2 m x 30 m)	4 ft x 115 ft (1.2 m x 35 m)	4 in. x 49 ft (100 mm x 15 m)
Roll area	392 ft² (36 m²)	460 ft² (42 m²)	
Roll weight	108 lbs (50 kg)	92 lbs (42 kg)	4.3 lbs (2 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)	3 in. (75 mm)
* LT denotes Low Temperature (between 25°F (-4°C) and 86°F (+30°C)) HC denotes Hot Climate (50°F (>+10°C))			
Ancillary Products			
Bituthene Liquid Membrane—1.5 US gal (5.7 liter) or 4 US gal (15.1 liter)			

Physical Properties

Property	Typical Value 300R	Typical Value 160R	Test Method
Color	white	white	
Thickness	0.046 in. (1.2 mm) nominal	0.032 in. (0.8 mm) nominal	ASTM D3767
Low temperature flexibility	Unaffected at -10°F (-23°C)	Unaffected at -10°F (-23°C)	ASTM D1970
Resistance to hydrostatic head, minimum	231 ft (70 m)	231 ft (70 m)	ASTM D5385, modified[1]
Elongation, minimum	300%	300%	ASTM D412, modified[2]
Tensile strength, film, minimum	4000 psi (27.6 MPa)	4000 psi (27.6 MPa)	ASTM D412
Crack cycling at -10°F (-23°C), 100 cycles	Unaffected	Unaffected	ASTM C836
Puncture resistance, minimum	221 lbs (990 N)	100 lbs (445 N)	ASTM E154
Peel adhesion to concrete, minimum	5.0 lbs/in. (880 N/m) width	5.0 lbs/in. (880 N/m) width	ASTM D903, modified[3]
Lap peel adhesion	2.5 lbs/in. (440 N/m) width	2.5 lbs/in. (440 N/m) width	ASTM D1876, modified[4]
Permeance to water vapor transmission, maximum	0.01 perms (0.6 ng/(Pa x s x m²))	0.01 perms (0.6 ng/(Pa x s x m²))	ASTM E96, method B
Water absorption, maximum	0.5%	0.5%	ASTM D570
Methane permeability	9.1 mls/m²/day	N/A	University of London, QMW College[3]
Permeability[5] (hydraulic conductivity)	K=<1.4 x 10^{-11}cm.s^{-1}	K=<1.4 x 10^{-11}cm.s^{-1}	ASTM D5084-90

Footnotes:

1. Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 0.125 in. (3 mm) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.
2. Elongation of membrane is run at a rate of 2 in. (50 mm) per minute.
3. Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.
4. The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 2 in. (50 mm) per minute at 25°F (-4°C).
5. Result is lower limit of apparatus. Membrane therefore considered impermeable.

Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions.

Specimen performance and formatted clauses are also available.

NOTE: Use Preprufe Tape to tie-in Procor with Preprufe.

Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

PF-111E Printed in U.S.A. 3/07 FA/LI/1M

GRACE

APPENDIX D: LABORATORY REPORT

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 · FAX: (603) 429-8496

February 21, 2011

ANALYTICAL TEST RESULTS

Daniel Voisin
Stone Environmental, Inc.
535 Stone Cutters Way
3 rd Floor
Montpelier, VT 05602
TEL: (802) 229-1875
FAX: (802) 229-5417

Subject: 102350-R 100 River St. Workorder No.: 1102028

Dear Daniel Voisin:

AMRO Environmental Laboratories Corp. received 20 samples on 2/14/2011 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 31 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.
Lab Order: 1102028
Date Received: 2/14/2011

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1102028-01A	AMR-DF-CN-01	2/11/2011	12:30 PM
1102028-02A	AMR-DF-CN-02	2/11/2011	12:29 PM
1102028-03A	AMR-DF-CN-03	2/11/2011	12:40 PM
1102028-04A	AMR-DF-CN-04	2/11/2011	12:45 PM
1102028-05A	AMR-DF-CN-05	2/11/2011	12:50 PM
1102028-06A	AMR-DF-CN-06	2/11/2011	12:55 PM
1102028-07A	AMR-DF-CN-03-FD	2/11/2011	12:40 PM
1102028-08A	AMR-NLD-WP-01	2/11/2011	11:00 AM
1102028-09A	AMR-NLD-WP-01-FD	2/11/2011	11:00 AM
1102028-10A	AMR-NLD-OL-01	2/11/2011	11:12 AM
1102028-11A	AMR-NLD-WP-02	2/11/2011	11:17 AM
1102028-12A	AMR-NLD-WP-03	2/11/2011	11:21 AM
1102028-13A	AMR-NLD-WP-04	2/11/2011	11:30 AM
1102028-14A	AMR-NLD-WP-05	2/11/2011	11:35 AM
1102028-15A	AMR-DF-WP-01	2/11/2011	12:00 PM
1102028-16A	AMR-DF-WP-02	2/11/2011	12:00 PM
1102028-17A	AMR-DF-WD-01	2/11/2011	12:10 PM
1102028-18A	AMR-DF-WD-02	2/11/2011	12:15 PM
1102028-19A	AMR-DF-WD-03	2/11/2011	1:05 PM
1102028-20A	AMR-DF-WD-02-FD	2/11/2011	1:00 PM

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
W	Post-digestion spike for Furnace AA analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
*	Duplicate analysis not within control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
#	See Case Narrative

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-01 **Collection Date:** 2/11/2011 12:30:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-01 **Matrix:** SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1221	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1232	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1242	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1248	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1254	5,600	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1260	2,600	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1262	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Aroclor 1268	ND	490		µg/Kg	10	2/15/2011 4:26:00 PM
Surr: Tetrachloro-m-xylene	70.5	30-150		%REC	10	2/15/2011 4:26:00 PM
Surr: Decachlorobiphenyl	119	30-150		%REC	10	2/15/2011 4:26:00 PM

Lab ID: 1102028-02 **Collection Date:** 2/11/2011 12:29:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-02 **Matrix:** SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1221	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1232	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1242	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1248	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1254	760	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1260	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1262	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Aroclor 1268	ND	480		µg/Kg	10	2/15/2011 4:52:00 PM
Surr: Tetrachloro-m-xylene	38.5	30-150		%REC	10	2/15/2011 4:52:00 PM
Surr: Decachlorobiphenyl	36.3	30-150		%REC	10	2/15/2011 4:52:00 PM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-03
Collection Date: 2/11/2011 12:40:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-03
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1221	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1232	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1242	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1248	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1254	4,700	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1260	3,200	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1262	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Aroclor 1268	ND	990		µg/Kg	10	2/15/2011 5:18:00 PM
Surr: Tetrachloro-m-xylene	213	30-150	S	%REC	10	2/15/2011 5:18:00 PM
Surr: Decachlorobiphenyl	233	30-150	S	%REC	10	2/15/2011 5:18:00 PM

Lab ID: 1102028-04
Collection Date: 2/11/2011 12:45:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-04
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1221	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1232	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1242	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1248	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1254	2,700	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1260	1,500	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1262	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Aroclor 1268	ND	500		µg/Kg	10	2/15/2011 5:45:00 PM
Surr: Tetrachloro-m-xylene	118	30-150		%REC	10	2/15/2011 5:45:00 PM
Surr: Decachlorobiphenyl	108	30-150		%REC	10	2/15/2011 5:45:00 PM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-05 **Collection Date:** 2/11/2011 12:50:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-05 **Matrix:** SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1221	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1232	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1242	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1248	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1254	1,800	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1260	910	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1262	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Aroclor 1268	ND	490		µg/Kg	10	2/15/2011 6:37:00 PM
Surr: Tetrachloro-m-xylene	119	30-150		%REC	10	2/15/2011 6:37:00 PM
Surr: Decachlorobiphenyl	131	30-150		%REC	10	2/15/2011 6:37:00 PM

Lab ID: 1102028-06 **Collection Date:** 2/11/2011 12:55:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-06 **Matrix:** SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1221	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1232	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1242	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1248	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1254	10,000	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1260	3,100	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1262	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Aroclor 1268	ND	500		µg/Kg	10	2/15/2011 7:04:00 PM
Surr: Tetrachloro-m-xylene	84.3	30-150		%REC	10	2/15/2011 7:04:00 PM
Surr: Decachlorobiphenyl	107	30-150		%REC	10	2/15/2011 7:04:00 PM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-07
Collection Date: 2/11/2011 12:40:00 PM
Collection Time:
Client Sample ID: AMR-DF-CN-03-FD
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1221	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1232	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1242	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1248	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1254	3,300	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1260	2,400	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1262	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Aroclor 1268	ND	990		µg/Kg	10	2/15/2011 7:30:00 PM
Surr: Tetrachloro-m-xylene	162	30-150	S	%REC	10	2/15/2011 7:30:00 PM
Surr: Decachlorobiphenyl	230	30-150	S	%REC	10	2/15/2011 7:30:00 PM

Lab ID: 1102028-08
Collection Date: 2/11/2011 11:00:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-01
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1254	73	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1260	42	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/15/2011 7:56:00 PM
Surr: Decachlorobiphenyl	88.9	33-144		%REC	10	2/15/2011 7:56:00 PM
Surr: Tetrachloro-m-xylene	98.3	35-141		%REC	10	2/15/2011 7:56:00 PM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-09
Collection Date: 2/11/2011 11:00:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-01-FD
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1254	31	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1260	15	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/15/2011 8:23:00 PM
Surr: Decachlorobiphenyl	122	33-144		%REC	10	2/15/2011 8:23:00 PM
Surr: Tetrachloro-m-xylene	88.3	35-141		%REC	10	2/15/2011 8:23:00 PM

Lab ID: 1102028-10
Collection Date: 2/11/2011 11:12:00 AM
Collection Time:
Client Sample ID: AMR-NLD-OL-01
Matrix: OIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA 8082		**SW8082**				Analyst: **KA**
Aroclor 1262	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1268	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1016	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1221	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1232	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1242	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1248	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1254	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Aroclor 1260	ND	45		mg/Kg	10	2/16/2011 4:16:00 AM
Surr: Tetrachloro-m-xylene	93.5	35-141		%REC	10	2/16/2011 4:16:00 AM
Surr: Decachlorobiphenyl	122	33-144		%REC	10	2/16/2011 4:16:00 AM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-11
Collection Date: 2/11/2011 11:17:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-02
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1254	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1260	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/15/2011 8:49:00 PM
Surr: Decachlorobiphenyl	112	33-144		%REC	10	2/15/2011 8:49:00 PM
Surr: Tetrachloro-m-xylene	105	35-141		%REC	10	2/15/2011 8:49:00 PM

Lab ID: 1102028-12
Collection Date: 2/11/2011 11:21:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-03
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1254	84	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1260	58	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Aroclor 1268	11	5.0		ug/Wipe	10	2/16/2011 12:16:00 PM
Surr: Decachlorobiphenyl	1,940	33-144	S	%REC	10	2/16/2011 12:16:00 PM
Surr: Tetrachloro-m-xylene	96.0	35-141		%REC	10	2/16/2011 12:16:00 PM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-13
Collection Date: 2/11/2011 11:30:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-04
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1254	120	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1260	20	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/15/2011 11:53:00 PM
Surr: Decachlorobiphenyl	93.1	33-144		%REC	10	2/15/2011 11:53:00 PM
Surr: Tetrachloro-m-xylene	97.3	35-141		%REC	10	2/15/2011 11:53:00 PM

Lab ID: 1102028-14
Collection Date: 2/11/2011 11:35:00 AM
Collection Time:
Client Sample ID: AMR-NLD-WP-05
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1254	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1260	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/16/2011 12:20:00 AM
Surr: Decachlorobiphenyl	126	33-144		%REC	10	2/16/2011 12:20:00 AM
Surr: Tetrachloro-m-xylene	85.0	35-141		%REC	10	2/16/2011 12:20:00 AM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-15
Collection Date: 2/11/2011 12:00:00 PM
Collection Time:
Client Sample ID: AMR-DF-WP-01
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1254	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1260	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/16/2011 12:46:00 AM
Surr: Decachlorobiphenyl	77.2	33-144		%REC	10	2/16/2011 12:46:00 AM
Surr: Tetrachloro-m-xylene	93.0	35-141		%REC	10	2/16/2011 12:46:00 AM

Lab ID: 1102028-16
Collection Date: 2/11/2011 12:00:00 PM
Collection Time:
Client Sample ID: AMR-DF-WP-02
Matrix: WIPE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1221	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1232	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1242	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1248	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1254	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1260	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1262	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Aroclor 1268	ND	5.0		ug/Wipe	10	2/16/2011 1:38:00 AM
Surr: Decachlorobiphenyl	110	33-144		%REC	10	2/16/2011 1:38:00 AM
Surr: Tetrachloro-m-xylene	109	35-141		%REC	10	2/16/2011 1:38:00 AM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-17
Collection Date: 2/11/2011 12:10:00 PM
Collection Time:
Client Sample ID: AMR-DF-WD-01
Matrix: WOOD

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1221	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1232	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1242	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1248	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1254	16,000	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1260	3,500	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1262	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Aroclor 1268	ND	1,800		µg/Kg	20	2/16/2011 2:47:00 PM
Surr: Tetrachloro-m-xylene	118	30-150		%REC	20	2/16/2011 2:47:00 PM
Surr: Decachlorobiphenyl	122	30-150		%REC	20	2/16/2011 2:47:00 PM

Lab ID: 1102028-18
Collection Date: 2/11/2011 12:15:00 PM
Collection Time:
Client Sample ID: AMR-DF-WD-02
Matrix: WOOD

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1221	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1232	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1242	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1248	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1254	6,800	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1260	3,100	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1262	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Aroclor 1268	ND	1,100		µg/Kg	10	2/16/2011 2:31:00 AM
Surr: Tetrachloro-m-xylene	111	30-150		%REC	10	2/16/2011 2:31:00 AM
Surr: Decachlorobiphenyl	110	30-150		%REC	10	2/16/2011 2:31:00 AM

AMRO Environmental Laboratories Corp.

Date: *17-Feb-11*

CLIENT: Stone Environmental, Inc.
Project: 102350-R 100 River St.

Lab Order: 1102028

Lab ID: 1102028-19
Collection Date: 2/11/2011 1:05:00 PM
Collection Time:
Client Sample ID: AMR-DF-WD-03
Matrix: WOOD

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1221	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1232	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1242	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1248	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1254	4,300	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1260	1,500	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1262	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Aroclor 1268	ND	1,000		µg/Kg	10	2/16/2011 2:57:00 AM
Surr: Tetrachloro-m-xylene	94.3	30-150		%REC	10	2/16/2011 2:57:00 AM
Surr: Decachlorobiphenyl	95.2	30-150		%REC	10	2/16/2011 2:57:00 AM

Lab ID: 1102028-20
Collection Date: 2/11/2011 1:00:00 PM
Collection Time:
Client Sample ID: AMR-DF-WD-02-FD
Matrix: WOOD

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS BY EPA8082		**SW8082**				Analyst: **KA**
Aroclor 1016	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1221	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1232	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1242	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1248	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1254	4,900	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1260	2,500	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1262	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Aroclor 1268	ND	1,200		µg/Kg	10	2/16/2011 3:50:00 AM
Surr: Tetrachloro-m-xylene	134	30-150		%REC	10	2/16/2011 3:50:00 AM
Surr: Decachlorobiphenyl	88.8	30-150		%REC	10	2/16/2011 3:50:00 AM