



# CREDERE ASSOCIATES, LLC

776 Main Street  
Westbrook, Maine 04092  
Phone: 207-828-1272  
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October 18, 2016

Mr. Nicolas Hodgkins  
Maine Department of Environmental Protection  
Bureau of Remediation and Waste Management  
Division of Remediation  
Voluntary Response Action Program  
17 State House Station  
Augusta, Maine 04333-0017

**Subject: Voluntary Response Action Program Work Plan  
50 India Street (Map 28, Lot P023)  
Portland, Maine**

Dear Mr. Hodgkins:

On behalf of cPort Credit Union (cPort), Credere Associates, LLC (Credere) has prepared this work plan (the Work Plan) for the property located at 50 India Street (Map 28, Lot P023) in Portland, Maine (the Site). The current owner of the Site is Port City Glass; however, cPort intends to acquire the Site to develop as a credit union branch with residential and/or commercial condos on the upper floors.

Credere is concurrently submitting a Voluntary Response Action Program (VRAP) Application for Technical Assistance to the Maine Department of Environmental Protection (DEP). This work plan will supplement the application in that it provides the means of assuring the following:

- Soil and fill at the Site will be properly managed, characterized for offsite disposal as special waste at a licensed facility, and/or covered with an engineered barrier system
- Underground storage tanks (USTs) will be properly removed in accordance with Maine DEP Chapter 691 Rules for Underground Storage Facilities (Chapter 691)
- Possible soil-vapor will be mitigated through installation of a sub-slab ventilation system as a best management practice.

A September 2015 Phase I Environmental Site Assessment (ESA) by Drumlin Environmental, LLC (Drumlin) completed for the adjoining portion of the 50 India Street parcel, excluding the Site, indicated a UST removal permit was issued in 1969 by the City Code Enforcement Department. A ground penetrating radar (GPR) survey completed during a subsequent December 2015 Phase II Investigation by Drumlin indicated the USTs on the adjoining 50 India Street parcel had been removed. Based on this information, it was considered possible the USTs were also removed from the Site; however, the three metal ports observed during the Site

reconnaissance suggested the USTs or associated piping may still be in place. Credere completed a GPR survey at the Site in April 2016 and confirmed at least one anomaly typical of a UST was present as well as several additional anomalies that may be tank graves or degraded USTs. Suspect UST locations and anomalies are shown on **Figure 2**. For purposes of this VRAP Work Plan, these anomalies are presumed to be USTs that will require removal.

Fire debris and ash associated with the Great Portland Fire that wiped out the Site and rest of the India Street neighborhood typically contains polycyclic aromatic hydrocarbon (PAHs), and metals, which would have been deposited across the area. After the fire, the neighborhood was reconstructed and likely partially filled using typical urban fill materials consisting of bricks, coal ash, glass and other anthropogenic materials as they were readily available at the time. Assessment of the adjoining 50 and 62 India Street properties indicated lead concentrations in soil as high as 12,000 milligrams per kilogram (mg/kg), which is well above the Maine DEP Remedial Action Guidelines (RAGs) for lead that range between 340 to 1,100 mg/kg depending on exposure scenario. Additionally, PAHs, cadmium, and arsenic concentrations also exceeded their respective RAGs. These concentrations were not attributed to a point source but rather to urban fill, indicating these impacts are likely ubiquitous in the area and are likely also present at the Site.

Although no analytical data has been collected specifically at the Site, due to the small size of the property and types of contamination documented on adjoining and nearby properties, COCs are assumed to be similar to adjoining properties and those typical of urban fill. Therefore, COCs associated with presumed urban fill at the Site include PAHs and metals (particularly lead, arsenic, and cadmium). Additionally, petroleum hydrocarbon fractions and target compounds are considered COCs associated with the historical UST(s).

Based on the proposed redevelopment of the Site as a credit union branch with residential/commercial condos, potential receptors at the Site include construction/excavation workers during construction of the new Site building and utility work, employees and patrons of the credit union, and occupants (i.e., residents) of the upper floor condos. Based on these receptors, the expected exposure pathways to COCs include:

- Possible inhalation of vapors in open excavations or via vapor intrusion into future Site buildings if petroleum contamination is identified associated with the USTs;
- Active ingestion by construction workers using poor hygiene practices during construction;
- Dermal absorption through direct contact with impacted soil by residents, construction workers, patrons, or commercial works; and,
- Incidental uptake of impacted soil in the form of dust by residents, patrons, commercial workers, and construction workers.

The following sections present the cleanup approach to address these COCs and associated exposure pathways during redevelopment.



## **UST Removal**

As the first phase of redevelopment, the Site will be staged for construction with perimeter fencing and the GPR anomalies will be investigated by test pitting. For purposes of this Work Plan, the anomalies are presumed to be gasoline and fuel oil USTs as their characteristics indicate as such. Therefore, if the anomalies are confirmed to be USTs, they will be registered with the Maine DEP and removed in accordance with the Maine DEP Chapter 691. Credere will facilitate notification to Maine DEP for the Owner via a Notice of Intent (NOI) to Remove an Underground Oil Storage Tank Facility at least 10 days prior to the scheduled removal. The NOI will be submitted to Maine DEP, the City of Portland Fire Department, the certified UST installer, and Credere. The Maine DEP VRAP Project Manager will also be notified of the scheduled removal to allow for possible oversight.

In accordance with Chapter 691 Section 11.A(1), UST removal will be completed by a Maine Certified Oil Tank Installer and include the following:

- Emptying and cleaning identified tanks of all liquid and accumulated sludge
- Proper removal of tanks, piping and other facility components including any identified USTs, piping, and the fill ports and concrete pad
- Offsite scrapping of the tanks and piping and proper disposal of any accumulated drums of sludge and cleaning liquid
- Completion of a Site Assessment in accordance with Appendix P of Chapter 691
- Removal, characterization, and offsite disposal of any petroleum saturated soil

If petroleum saturated soil removal is required, Maine DEP will be notified within 2 hours of discovery. The UST excavation will be stabilized and waste characterization samples will be collected as the petroleum will likely be comingled with urban fill and would not qualify for virgin petroleum status. Waste characterization will be collected in accordance with the attached Soil Management Plan (SMP) and a waste profile will be submitted to a licensed disposal facility for acceptance. Upon acceptance, petroleum saturated soil will be removed in accordance with the SMP.

Confirmatory screening will be conducted in accordance with Appendix P and Q of Chapter 691 and will be overseen by a Maine Certified Geologist. Soil will be field screened in accordance with the *Compendium of Field Testing of Soil Samples for Gasoline and Fuel Oil*, dated October 15, 2012, using a Thermo 580B OVM PID (or similar) calibrated with a 100 parts per million by volume (ppm<sub>v</sub>) isobutylene gas standard and an instrument response factor of 1.0. Soil (200 grams) will be placed in a metalized polyethylene bag and screened with the PID. Additionally, oleophilic dye tests will be used to identify possible fuel oil releases. The water/soil shake test will be used to ensure petroleum saturated soil, if encountered, has been adequately removed.

Once the petroleum saturated soil excavation extent has been determined, field screening samples will be collected in triplicate from the north, east, south, and west sidewalls, from the base of the excavation, from every 10 feet along identified piping (biased toward elbows or joints), and from the area of the fill port concrete pad. As additional soil excavation is required



as part of the construction phase of the project, confirmatory soil laboratory samples to satisfy the requirements of the closure assessment will be collected from the final extent of the foundation excavation to documents conditions to remain at the Site.

A UST Closure Report including the information contained in Appendix P of Chapter 691 will be submitted to DEP within 30 days of the final foundation excavation and the Removal Confirmation form will also be submitted.

### **Soil Management**

After removal of the USTs and petroleum saturated soil, if encountered, remaining urban fill or residual petroleum impacted soil will be characterized and removed for offsite disposal to accommodate basement construction, or will be covered by an engineered barrier. Maine DEP will be notified of the schedule for soil removal.

Based on the currently available information, impacted soil would meet the definition of a “special waste” as presented in the Maine DEP’s Maine Solid Waste Management Rules: Chapter 400 upon removal from the Site. Soil at the Site has not been assessed for hazardous waste characterization at this time. The waste profile and facility acceptance will be submitted to the Maine DEP VRAP prior to soil removal. Due to space constraints, removed soil will be temporarily stockpiled within the building footprint, in containers, or live loaded for offsite disposal in accordance with the SMP included as **Attachment A**.

As no Site-specific data has been collected to date and to satisfy the requirements of the UST Closure Assessment, three laboratory soil samples will be collected from the base of the foundation excavation to document soil conditions to remain onsite. If residual petroleum evidence is present at the base of the excavation, field screening will be used to select at least one laboratory sample from the highest PID screening locations. Samples may also be biased to evidence of urban fill or other evidence of contamination to document worst case scenario to remain onsite. Samples will be submitted for laboratory analysis of extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), lead, cadmium, and arsenic.

The remaining impacted soil will be left in place and will be covered with an engineered barrier system to limit exposure to the soil through direct contact. The engineered barrier system will consist primarily of the impermeable Site building foundation, and limited areas of concrete walkways, or landscaping that will consist of a marker layer and 12 inches of documented clean fill material beneath the landscaping. Specific details for the engineered barrier system are included in the SMP.

Following the completion of special waste soil removal and disposal activities, and the construction of the engineered barrier system over remaining impacted soil, a summary of completed actions and the applicable disposal documentation will be submitted to the Maine DEP. The engineered barrier system will be maintained and inspected annually in accordance with an Environmental Management Plan (EMP) to be submitted with the Remediation Summary Report at the completion of the project.



### **Vapor Intrusion**

As the vapor pathway has not been assessed per Section 6.4 of the Maine DEP Petroleum Guidelines, a sub-slab ventilation system and a vapor barrier will be installed beneath the building's foundation as a best management practice to prevent any possible vapor that may build up beneath the Site building from migrating to indoor air. This precautionary measure will assure possible volatiles from releases from the USTs or other surrounding property impacts will not impact indoor air.

The ventilation system will consist of perforated piping installed in a gravel bed beneath the foundation that will ventilate via a vertical vent above the roofline. The vapor barrier will consist of impermeable polyethylene sheeting, or similar, to line the foundation and further prevent vapor migration.

### **Groundwater Management**

Groundwater at the Site has not been assessed, and is not anticipated to be encountered within the depth of planned excavation at the Site. If encountered, the SMP will be revised to include groundwater management procedures.

### **Institutional Controls**


Following completion of the soil cover system and redevelopment of the Site, a Declaration of Environmental Covenant (DEC) will be filed prohibiting extraction of groundwater. The DEC will also include details regarding the requirements for maintenance of the engineered barrier in accordance with the EMP.

### **Closing**

We hope the information included in this document meets the requirements for the development of a No Action Assurance Letter (NAAL) to ensure liability protection for cPort, their successors, assigns, lenders, and fiduciaries as provided by the VRAP.

If any questions or concerns arise during your review of this submittal, please do not hesitate to contact the undersigned at (207) 828-1272 extension 15 or [adrouin@crederellc.com](mailto:adrouin@crederellc.com).

Sincerely,  
Creder Associates, LLC

  
Allison Drouin, PG  
Project Geologist



Robert I. Patten, P.E., L.S.P., LEED-AP  
Vice President

cc: Gene Ardito, cPort Credit Union

Attachment A – Soil Management Plan



**Attachment A**  
**Soil Management Plan**





October 18, 2016

Mr. Gene Ardito  
cPort Credit Union  
50 Riverside Industrial Parkway  
Portland, Maine 04103

RE: **Soil Management Plan**  
cPort Credit Union Redevelopment  
50 India Street (Map 28, Lot P023)  
Portland, Maine

Dear Mr. Ardito:

The following document describes methods and procedures to be used during remediation activities at the 50 India Street property (Map 28, Lot P023) in Portland, Maine (the Site). The activities and practices described below will be implemented in conjunction with the associated Voluntary Response Action Program (VRAP) Work Plan and are necessary to fulfill the applicable regulatory requirements and to manage potential risk to human and environmental receptors associated with contaminated soil. Included in this Soil Management Plan (SMP) are:

- A description of soil conditions and associated regulatory applicability
- A listing of proper health and safety work practices and protective equipment for use during Site work activities
- A description of onsite soil management procedures including soil handling, stockpiling, and dust control for use during Site work activities
- A description of the onsite soil reuse procedures including the soil engineered barrier system
- A summary of the methods to be used for the proper transport and disposal of excess soil that may be generated during redevelopment
- A basic summary of procedures for management groundwater if encountered during construction activities

## 1. INTRODUCTION AND APPLICABILITY

The 0.0598-acre Site is located at 50 India Street, and is identified by the City of Portland as Map 28, Lot P023. The Site is currently undeveloped with the exception of asphalt paving and a three port concrete pad near the western corner of the Site. No operations are currently taking place at the Site; however, there are plans for redevelopment of the Site by cPort Credit Union as



a credit union branch with upper floor residential and/or commercial condos. **Figure 1** shows the location of the Site in Portland, and **Figure 2** shows pertinent Site features.

The Site was developed as early as 1851. Original use/occupants of the Site are not known; however, any original development was destroyed by the Great Portland Fire on July 4, 1866. By 1886, the Site was redeveloped with a store and barber shop with an address of 35-39 Middle Street. The Site continued to be occupied by a store through at least 1924 and the building was likely removed sometime between 1924 and 1938. The Site remained vacant through 1949 when it was redeveloped with the larger 50 India Street (then 35-39 Middle Street) property to the northwest as Jenney service station. The service building was located on the adjoining portion of the property relative to the Site. However, three 2,000-gallon gasoline underground storage tanks (USTs) were present on the Site, and the gasoline dispensers were located approximately at the proposed lot line. By 1967, the service station was vacant; it is not known if or when the USTs were removed. The Site remained associated with the 50 India Street property and undeveloped since closure of the service station; however, the Site was subdivided from the larger 50 India Street property in early 2016. The adjoining portion of the former 50 India Street now has an address of 58 India Street.

A September 2015 Phase I Environmental Site Assessment (ESA) by Drumlin Environmental, LLC (Drumlin) completed for the adjoining portion of the 50 India Street parcel, excluding the Site, indicated a UST removal permit was issued in 1969 by the City Code Enforcement Department. A ground penetrating radar (GPR) survey completed during a subsequent December 2015 Phase II Investigation by Drumlin indicated the USTs on the adjoining 50 India Street parcel had been removed. Based on this information, it was considered possible the USTs were also removed from the Site; however, the three metal ports observed during the Site reconnaissance suggest the USTs or associated piping may still be in place. Credere completed a GPR survey at the Site in April 2016 and confirmed at least one anomaly typical of a UST was present as well as several additional anomalies that may be tank graves or degraded USTs. Suspect UST locations and anomalies are shown on **Figure 2**.

Fire debris and ash associated with the Great Portland Fire that wiped out the Site and rest of the India Street neighborhood typically contains polycyclic aromatic hydrocarbon (PAHs), dioxins, and metals, which would have been deposited across the area. After the fire, the neighborhood was reconstructed and likely partially filled using typical urban fill materials consisting of bricks, coal ash, glass and other anthropogenic materials as they were readily available at the time. Assessment of the adjoining 50 and 62 India Street properties indicated lead concentrations in soil as high as 12,000 milligrams per kilogram (mg/kg), which is well above the Maine DEP Remedial Action Guidelines (RAGs) for lead that range between 340 to 1,100 mg/kg depending on exposure scenario. Additionally, PAHs, cadmium, and arsenic concentrations also exceeded their respective RAGs. These concentrations were not attributed to a point source but rather to urban fill, indicating these impacts are likely ubiquitous in the area and are likely also present at the Site.

Credere prepared a Phase I Environmental Site Assessment (ESA) for the Site on behalf of cPort dated March 24, 2016. Based on review of historical sources, environmental databases,





interviews, User provided information, Site reconnaissance, and judgment by the Environmental Professional; the following recognized environmental conditions (RECs) and other environmental finding were identified:

- REC #1 – Possible release of petroleum from existing historical or former USTs
- REC #2 – Soil impacts from the Great Fire of 1866 and previously documented urban fill in the Site vicinity
- Environmental Finding #1 – Potential requirement for inclusion of sub-slab ventilation system and vapor barrier in new construction if the Site proceeds through the Maine DEP VRAP process

Based on the above Site history, Credere has made the following assumptions regarding contamination at the Site to be addressed by the associated work plan:

- Urban fill is likely present at the Site that will require proper management and handling as special waste during redevelopment
- At least one UST is present at the Site that will require removal in accordance with Maine DEP Chapter 691 Rules for Underground Storage Facilities, and any associated petroleum saturated soil will require removal from the Site
- Residual contamination/urban fill left onsite will require engineering and institutional control to prevent exposure Site occupants
- The Site building will require construction of a sub-slab ventilation system as a best management practice regardless of volatile sub-slab conditions

## **2. GENERAL HEALTH AND SAFETY PLAN DURING SOIL EXCAVATION AND HANDLING**

The following serves as guidelines for health and safety procedures to be employed during general construction activities at the Site involving exposure to impacted soil. It is the responsibility of each individual contractor to develop and implement their own health and safety plan specific to the work to be performed.

Although no analytical data has been collected specifically at the Site, due to the small size of the property and types of contamination documented on adjoining and nearby properties, COCs are assumed to be similar to adjoining properties and those typical of urban fill. Therefore, COCs associated with presumed urban fill at the Site include PAHs and metals (particularly lead, arsenic and cadmium). Additionally, petroleum hydrocarbon fractions and target compounds are considered COCs associated with the historical UST(s).

As this SMP is only applicable through completion of construction at the Site, potential receptors include construction/excavation workers, utility workers, and environmental contractors during redevelopment. Based on these receptors, the expected exposure pathways to COCs include:

- Possible inhalation of vapors in open excavations if petroleum contamination is identified associated with the USTs;



- Active ingestion by construction workers using poor hygiene practices during construction;
- Dermal absorption through direct contact with impacted soil and,
- Incidental uptake of impacted soil in the form of dust.

As such, the utilization of basic personal protective equipment (PPE) will minimize the potential for human exposure while conducting remediation/redevelopment activities at the Site.

### **Training**

All personnel who will be directly handling or otherwise may be exposed to impacted soil shall have 40 hour Occupational Safety & Health Administration (OSHA) CFR 1910.120 training, 3 days of supervised field experience, and current 8-hour OSHA refresher training.

### **Personal Protective Equipment**

Based on the hazard evaluation, Level D PPE has been initially designated for all personnel who will be directly handling or otherwise may be exposed to impacted soil at the Site. The contractor's Health and Safety Officer may upgrade PPE to Level C or higher if additional hazards are identified during Site work.

Specific Level D PPE to be used at the Site includes the following:

- Steel toe work boots with latex over boots as required
- Safety glasses with side shields
- Work gloves
- Nitrile inner gloves
- Hard hat
- Coveralls (optional)

### **Work Zone Monitoring**

Considering the urban nature of the project, the property boundaries should be monitored for ambient dust levels to ensure fugitive dust is not migrating from the Site onto adjoining or nearby properties. As a general rule of thumb, visible ambient dust should be controlled using wet suppressant methods and any stockpiles should be covered during down time. Access should be limited to applicable personnel during periods when impacted soil is exposed at the surface.

Due to the potential for impacts to ambient air during construction, the work zone should be monitored periodically using a photoionization detector (PID), particularly when petroleum impacted soil and/or groundwater is exposed or disturbed. Ambient air should not exceed 10 parts per million by volume (ppm<sub>v</sub>) sustained for a 15 minute period.



### **General Operating Procedures**

In addition to the above basic health and safety guidelines, the following procedures should be followed during activities conducted at the Site which create the potential for exposure to impacted soil:

- Work involving excavation or management of impacted soil conducted at the Site shall be directed by a Qualified Environmental Professional (QEP).
- The Site shall be surveyed and cleared by DigSafe.
- All equipment used during excavation activities shall be properly cleaned and decontaminated prior to leaving the Site.
- Any indication of conditions more hazardous than those anticipated, or the observation of circumstances that would render the above basic health and safety procedures inappropriate, shall result in the evacuation of the work area and a reassessment of health and safety procedures by a QEP.

### **3. SOIL MANAGEMENT**

The following section provides procedures for the excavation, re-use, storage, and disposal of excess soil or petroleum saturated soil generated during redevelopment activities at the Site.

#### **Soil Stockpiling and Storage**

Soil removal is planned in conjunction with installation of the Site building basement of the new Site building. Petroleum saturated soil may also require excavation. Additionally, removal of soil may be necessary for other construction, or utility work at the Site. Due to space constraints, stockpiling of soil is not likely. However, impacted soil excavated from the Site may be temporarily stored or removed following waste disposal characterization and acceptance at an appropriately licensed receiving facility. Soil removed from the Site should be placed atop 20-mil polyethylene sheeting to prevent contamination of surrounding cover materials, and securely covered by 10-mil or 20-mil polyethylene sheeting. Berms shall be constructed around the edges of the stockpiles, the base shall be sloped to create leachate collection points, and storm water runoff will be diverted away from any soil stockpile or storage area when feasible.

Soil may be more conveniently live loaded into trucks for offsite disposal at an appropriately licensed facility or temporarily stored within secure, water resistant, DOT-approved bulk containers. Stockpiled or containerized soil will be stored within a secure area of the Site and properly labeled to minimize potential contact. In addition, soil stockpiled or otherwise stored at the Site will be inspected daily for tears, holes, or other failures in the polyethylene sheeting or storage container.

If petroleum saturated soil is encountered, soil will be left in the UST excavation until waste characterization samples can be analyzed and soil can be live loaded.



### *Dust Control*

Dust control requirements will be a contractual responsibility of the contractor for the Site and will be documented by the Owner's QEP during remediation activities. Dust control measures shall be employed by the contractor during excavation and grading, and to control dust around stockpiles, haul roads, and any other exposed soils.

- At a minimum, wet suppression shall be used to provide temporary control of dust. Wet suppression will be applied on a routine basis and/or as directed by the Owner's QEP to adequately control dust. Depending upon weather conditions and work activity, several wet suppression applications per day, and/or the use of granular calcium chloride or similar commercially manufactured dust control agents, may be necessary to adequately control dust.
- Water runoff generated by dust control will be retained and disposed in accordance with the requirements of the appropriate regulatory agencies.
- Vehicles leaving the Site shall have no mud or dirt on the vehicle body or wheels. Any foreign matter on the vehicle body or wheels will be physically removed prior to vehicles entering a public roadway or adjoining mill driveways. Vehicles will not be permitted to leave the Site with exterior mud or dirt that has the potential to be deposited on public roadways.

### **Onsite Reuse of Soil**

Given the design plans and size of the Site, onsite relocation is not anticipated to be possible for this Site. After adequate soil removal, all areas of the Site should be covered according to the below specifications:

- All features and subsurface infrastructure will be installed and the grading of impacted materials shall be completed consistent with the design requirements for the Site.
- Any excess or future identified impacted soil that cannot be re-used at the Site will be removed in accordance with this section of this SMP.
- The engineered barrier system will cover the entire Site and will consists of the following in each of the areas:
  - Landscaped Areas: A permeable geotextile fabric or similar material, such as snow fence will be placed as a marker layer directly over the impacted soil to indicate the distinction between the clean fill cover and the underlying impacted soil to remain at the Site. A minimum of 12 inches of clean fill will be placed as cover material over the marker layer. The source of fill will be documented to be a local native source or will be documented to be clean through analytical testing. The covered areas will be loamed, seeded, mulched, or otherwise permanently stabilized to prevent erosion and damage to the soil cover. If the marker layer must be compromised to facilitate landscape installation, a replacement marker layer shall be installed prior to the placement of any new non-impacted material.
  - Building Foundation and Concrete Areas: Areas planned for impermeable construction (e.g., concrete walkways and the Site building foundation) will be



installed directly over the impacted soil. A separate marker layer will not be necessary below impermeable surfaces since these materials will serve as the marker layer. The geotextile marker layer will extend from landscaped areas to the exterior limit of these impermeable areas.

- Each covered area will be graded so that the stormwater runoff is directed to an appropriate area.
- Additional sub-base materials may be necessary beyond the minimum cover requirements discussed herein to maintain the structural integrity of the proposed site features.

An engineered barrier system schematic is included as **Figure 1**.

### **Offsite Soil Disposal/Recycling**

Excess impacted soil that cannot be reused will be transported and disposed offsite in accordance with applicable federal and state regulations. Written Maine DEP approval is required prior to removal of impacted soil from the Site; however, Maine DEP's No Action Assurance Letter (NAAL) constitutes approval for soil removal associated with the initial redevelopment covered by this SMP. The following subsections provide appropriate procedures for the characterization and offsite disposal of special waste soil.

#### *Waste Characterization Sampling*

Waste characterization sampling will be required in order to meet facility acceptance requirements. As such, the QEP will collect representative samples from the special waste soil for analysis by an independent, Maine-certified laboratory. At a minimum, and in accordance with disposal facility requirements, laboratory criteria will include, but may not be limited to, the following analyses:

- Total petroleum hydrocarbons (TPH)
- Volatile organic compounds (VOC)
- Semi-volatile organic compounds (SVOC)
- Polychlorinated biphenyls (PCB)
- RCRA 8 Metals
- Pesticides
- Herbicides
- pH
- Ignitibility, conductivity, and reactivity (sulfide and cyanide)
- Additional toxicity characteristics leaching procedure (TCLP) analysis, where necessary

Following receipt of the results of the above analyses, an appropriate disposal or recycling method will be selected and a waste profile will be prepared and submitted to the facility for acceptance prior to shipping.



Generally, soil is planned to be pre-characterized during the UST removal phase of the project (Phase 1) to allow for live loading of material due to space constraints.

### *Soil Transport and Recycling/Disposal*

Following facility acceptance, impacted soil will be removed from the Site for proper recycling or disposal. The loading of impacted soil will be conducted in accordance with the requirements of this SMP. Impacted soil loading and transport activities will be overseen by the owner's QEP. Equipment used for the transport of impacted soil will be properly licensed in accordance with applicable state and federal regulations. Haul truck cargo areas shall be securely and completely covered during material transport on public roadways.

Each shipment of impacted soil will be accompanied by appropriate transport documentation, such as a hazardous waste manifest or bill of lading. An official record of each shipment of impacted soil from the Site, including tonnage, will be presented to the owner's QEP following delivery to the receiving facility.

### **Backfill Materials**

Backfill materials shall be sourced from a local native source.

## **4. GROUNDWATER MANAGEMENT**

Groundwater is not anticipated to be encountered within the depth of the foundation excavation. However, as groundwater at the Site has not been assessed, the use of groundwater at the Site as a potable water source or otherwise (e.g., hand washing, etc.) should be prohibited and all potable water should be provided to the Site via a public water source. If groundwater is encountered and requires management during construction, this SMP will be revised and submitted to Maine DEP for their review prior to handling of groundwater.



## 5. PROJECT CONTACTS

Depending on the complexity of the issue, the following people will be able to answer questions or refer inquiries to the correct person.

50 India Street Site – Contact Information Site Soil Management Plan		
Organization	Person	Phone Number
Property Owner cPort Credit Union	Gene Ardito	(207) 253-4111
Environmental Professional Credere Associates, LLC	Allison Drouin	(207) 828-1272 x15
Engineer Blais Engineering	Steve Blais	(207) 837-8721
Maine DEP	Chris Redmond	(207) 215-8597

If there are any questions, please contact the undersigned.

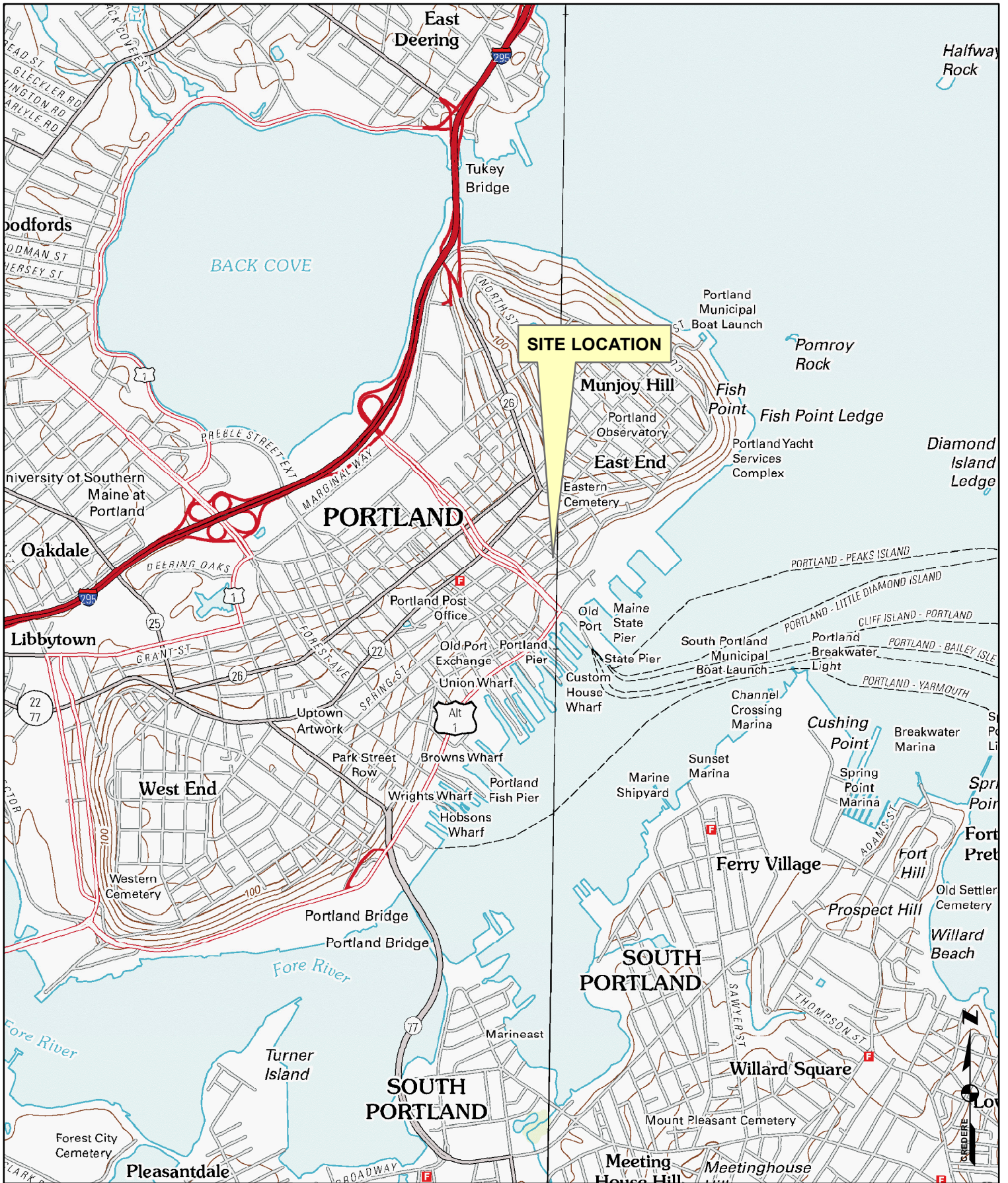
Sincerely,  
**Credere Associates, LLC**

  
Allison Drouin, PG  
Geologist

  
Rip Patten, PE, LSP, LEED-AP  
Vice President

Attachments: Figure 1 – Site Location Plan  
Figure 2 – Detailed Site Plan  
Figure 3 - Engineered Barrier System Schematic





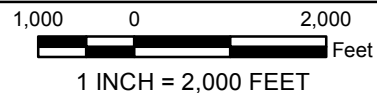
DRAWN BY: MAK      DATE: 09/29/16  
 CHECKED BY: ASD    PROJECT: 16001335

**Creder Associates, LLC**

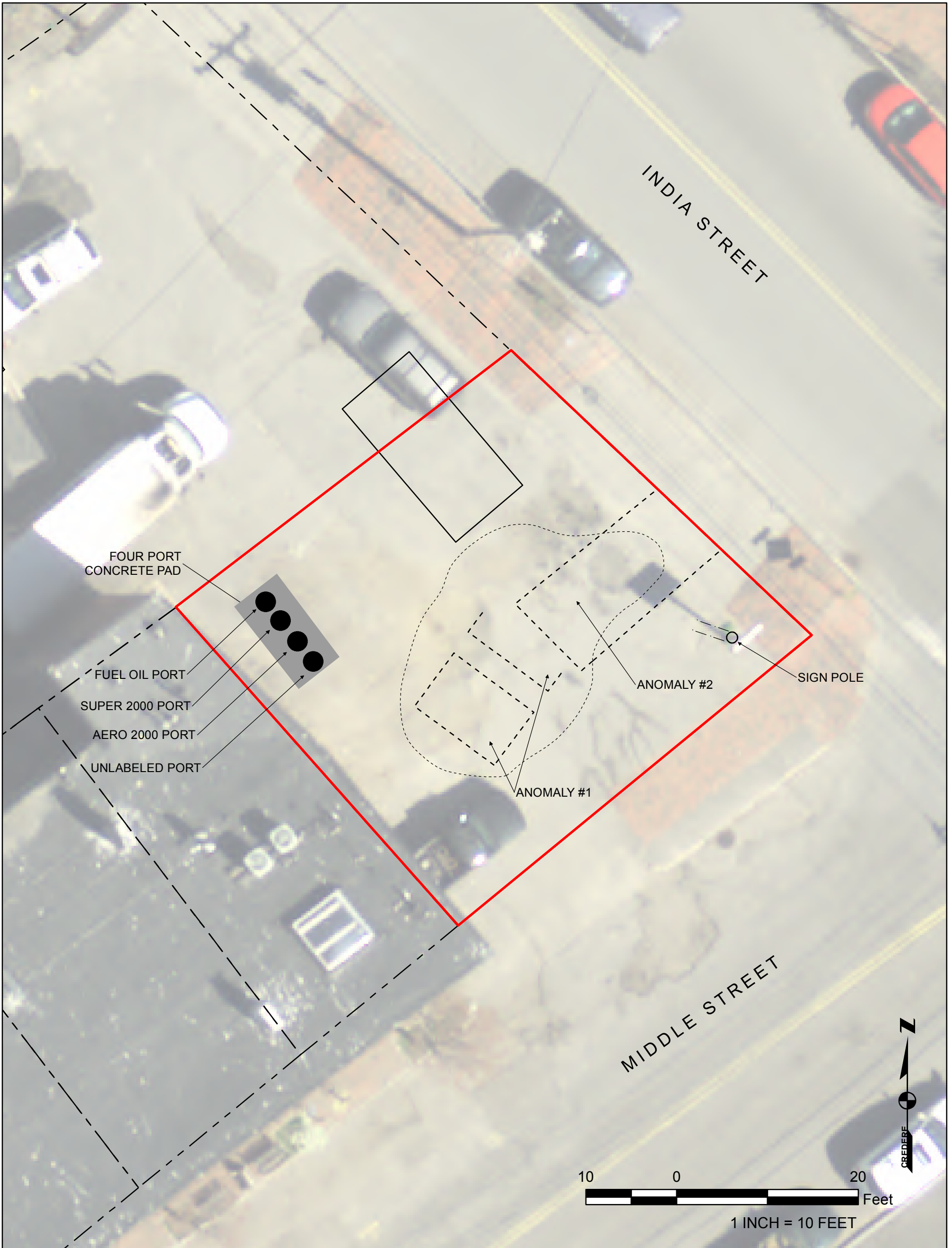
776 MAIN STREET  
 WESTBROOK, MAINE  
 Tel. 207.828.1272  
 Fax 207.887.1051  
 WWW.CREDERELLC.COM

# FIGURE 1 SITE LOCATION PLAN

50 INDIA STREET (MAP 28, LOT P023)  
PORTLAND, MAINE 04101

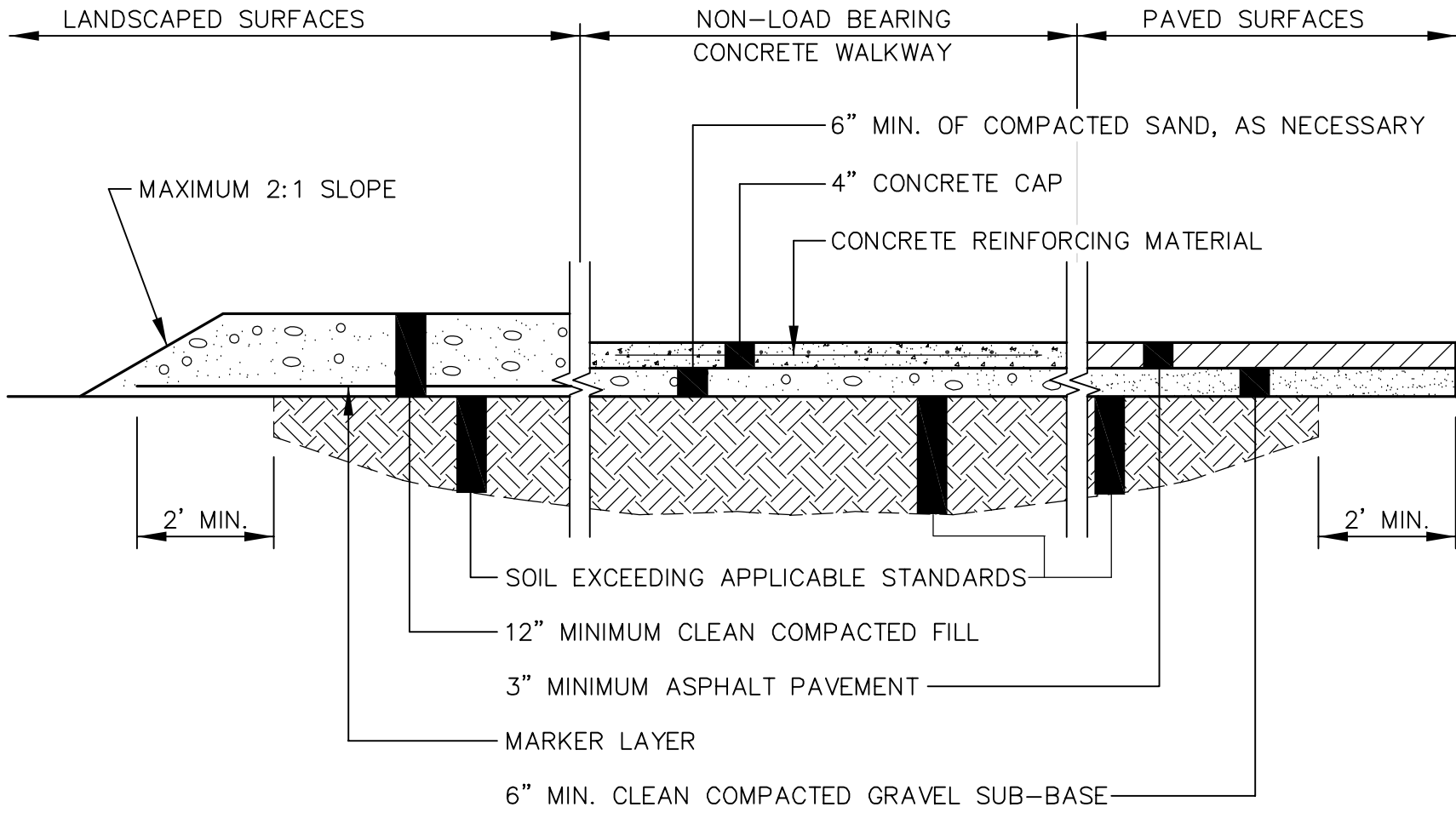






NOTE:  
 EXISTING CONDITION FEATURES ON THIS PLAN ARE APPROXIMATE AND BASED ON INFORMATION OBTAINED FROM THE MAINE OFFICE OF GIS, MARCH 10, 2016, EDR RADIUS MAP, AND GROUND PENETRATING RADAR (GPR) SURVEY PERFORMED ON APRIL 18, 2016.

DRAWN BY: <b>MAK</b>	DATE: <b>4/19/2016</b>	<b>FIGURE 2 DETAILED SITE PLAN</b>	<ul style="list-style-type: none"> <li><span style="color: red;">—</span> SITE BOUNDARY AND GPR SURVEY EXTENT</li> <li>- - - 1 FOOT DEEP PIPE</li> <li>- - - GPR ANOMALY</li> <li>- - - EXTENT OF BROKEN ASPHALT</li> <li>□ CONCRETE PAD</li> <li>□ APPROXIMATE PARCEL BOUNDARY</li> </ul>
CHECKED BY: <b>ASD</b>	PROJECT: <b>16001335</b>		
<p><b>Credere Associates, LLC</b>        776 MAIN STREET        WESTBROOK, MAINE        Tel. 207.828.1272        Fax 207.887.1051        WWW.CREDERELLC.COM</p>		<p><b>50 INDIA STREET (MAP 28, LOT P028)        PORTLAND, MAINE 04101</b></p>	



**NOTE**

THE QUANTITIES IDENTIFIED ARE MINIMUM REQUIREMENTS FOR ADDRESSING THE IDENTIFIED CONTAMINATED SOILS. ADDITIONAL SUB-BASE MATERIALS MAY BE REQUIRED IN AREAS PROPOSED FOR ASPHALT PAVING AND/OR CONCRETE SIDEWALKS AS NECESSARY AND IF APPLICABLE, TO MAINTAIN STRUCTURAL INTEGRITY OF THESE MATERIALS.

DRAWN BY: MTG DATE: 09/29/2016  
 CHECKED BY: RIP PROJECT: 13001213

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**ENGINEERED BARRIER SYSTEM SCHEMATIC**

50 INDIA STREET (MAP 28, LOT P023)  
 PORTLAND, MAINE 04101

SKETCH NO:  
**FIGURE 3**

SCALE:  
**N.T.S.**