August 4, 2010 Project 091.06085

Mr. Tod Dana
Dana/Fisher LLC
Post Office Box 169
Portland, Maine 04112

RE: Geotechnical Engineering Report
Proposed Restaurant
231 York Street Property
Portland, Maine

Dear Mr. Dana:

Ransom Environmental Consultants, Inc. (Ransom) is pleased to present our geotechnical report for the above referenced property (Site). This work was performed in general accordance with our Proposal for Geotechnical Engineering Services dated October 5, 2009. Recommendations for design and construction of foundations and ground floors for the proposed building are included herein.

DESCRIPTION OF SITE AND PROPOSED CONSTRUCTION

The Site consists of an approximately 0.09 acre parcel of land located at 231 York Street in Portland, Maine. The Site is currently developed with a two-story wood-framed building, formerly the Ice House restaurant, with an associated concrete patio. An approximately 330 square-foot (sf), two story residential structure with a finished floor elevation (El.) at approximately 81.6 feet is located in the northwestern portion of the Site. Existing topography generally slopes downward from approximately El. 84 feet at the north corner of the Site to El. 75 feet adjacent to York Street.

Our understanding of the currently proposed construction, and existing and proposed grades are based on correspondence with you and review of the plans titled “Site Plan” and “Grading and Utility Plan,” by Sebago Technics of Westbrook, Maine, latest revision dated April 21, 2010.

The proposed project consists of demolishing the existing Ice House restaurant building and constructing a new approximately 2,500 sf building on the property. The existing residential structure located in the northwest portion of the Site is planned to remain as part of the proposed restaurant. Plans indicate finished floor level for the proposed building is El. 76.8 feet. Based on conversations with you, we understand that a partially below-grade basement is planned. Finished basement floor level is anticipated to approximately 8 feet below the first floor level, which corresponds to approximately El. 68.8 feet. Cuts ranging from approximately 6 to 11 feet are planned to achieve the basement floor elevation. An approximately 5-foot high retaining wall is planned at the northern corner of the proposed building. A

Site Location Map, and a Subsurface Exploration Plan showing the proposed Site layout are provided as Figure 1 and Figure 2, respectively (included as Attachment A).

Foundation loads and settlement tolerances for the building were not provided. It is understood that an assumed allowable foundation contact pressure of 2,000 pounds per square foot was used for design purposes.

SCOPE OF SERVICES

This investigation was performed to obtain site-specific subsurface soil information and make geotechnical evaluations and recommendations for the proposed redevelopment project. As completed, Ransom's scope of services for this geotechnical investigation included the following items:

1. Arranged to have the explorations performed by a drilling subcontractor, and contacted DigSafe and non-member utilities to provide utility clearance for the test borings.

2. Provided technical monitoring for the subsurface investigation, and prepared test boring logs.

3. Evaluated acquired field data with respect to the proposed redevelopment, and prepared this geotechnical investigation report presenting our findings, evaluations, and recommendations for design and construction of proposed foundations and slab-on-grade floors.

SUBSURFACE EXPLORATION

Subsurface investigations were conducted on August 2, 2010 and consisted of two test borings, designated B101 and B102, advanced at the approximate locations shown on Figure 2. Exploration locations were established in the field by Ransom by taping from identifiable Site features.

Drilling was performed by Northern Test Boring, Inc., of Gorham, Maine using 2¼-inch inside-diameter hollow-stem augers. Split-barrel sampling with standard penetration tests (American Society for Testing and Materials [ASTM] D 1586-08a) were conducted near ground surface, at 4 feet, and at 5-foot intervals thereafter using an automatic-trip hammer. Test Borings were advanced to depths of approximately 21 feet below ground surface (bgs). Refusal was not encountered in either of the test borings.

A Ransom representative monitored exploration activities, collected soil samples, and prepared field boring logs. Soil samples were placed in sealed containers and returned with the field exploration logs to Ransom's office for further analysis. Soil samples were visually classified in general accordance with visual manual procedures (ASTM D 2488) and described using modified Burmister Soil Classification System descriptors.

Final test boring logs were prepared based on the field logs and visual classification of soil samples. The final test boring logs are included in Attachment B. Stratification lines shown on the boring logs represent approximate boundaries between soil types encountered. The actual transitions will be more gradual and may vary over short distances.

SUBSURFACE CONDITIONS

Subsurface Soils

Ground surface at the exploration locations consists of concrete or asphalt. Concrete was encountered at B101, and was observed to be approximately 4 inches thick. Asphalt was observed at B102 and was observed to be approximately 1½ inches thick.

Fill was encountered in B102 to a depth of approximately 3.5 feet bgs. The fill is generally described as medium dense, brown, fine to coarse sand, trace gravel and silt. Deleterious materials (i.e. brick, glass, plastic, etc.) were not observed within the fill.

Glacial till deposits were encountered below the surficial concrete or fill in each test boring, and extended to the termination depth of each boring. The glacial till is generally described as medium dense to very dense, brown, fine to medium sand, some to little silt, trace gravel. Portions of the glacial till were observed to contain a greater percentage of silt and/or trace clay. Additionally, occasional seams of fine to medium sand were observed within the glacial till.

Please refer to the boring logs for soil descriptions at specific locations and depths.

Groundwater

Groundwater was encountered in the test borings at depths ranging from approximately 8.0 to 8.4 feet bgs, corresponding to approximately El. 66.6 feet and El. 70 feet in borings B101 and B102, respectively. Water levels were measured in the borings upon completion of drilling and may not represent stabilized groundwater levels.

Groundwater levels at the Site will fluctuate due to season, temperature, precipitation, nearby underground utilities, and construction activity in the area. Therefore, water levels during and following construction may vary from the water levels observed in the test borings.

Bedrock

The explorations were advanced to depths of approximately 21 feet bgs. Refusal surfaces and/or bedrock were not encountered in either of the explorations.

GENERAL EVALUATION

Geotechnical engineering evaluations for this project are based on the subsurface conditions interpreted from and between two widely spaced test borings, and the design information currently available. Should differing information become known prior to or during construction, the following evaluations and recommendations should be reviewed by Ransom.

Based on the estimated existing ground surface elevations, cuts of approximately 6 to 11 feet will be required to achieve an anticipated basement floor level of El. 68.8 feet for the proposed building. Cuts of approximately 8 to 13 feet will likely be required to achieve bottom of foundation level for the proposed building.

Plans indicate the proposed building will be offset 10 feet from the adjacent building which borders the northeast side of the Site, and will directly abut the existing structure at the northwest corner of the Site which is to be incorporated into the proposed restaurant. The possible existence of basements and the foundation elevations of these two existing structures are currently unknown to Ransom. Evaluations regarding temporary earth support measures for the proposed construction and the potential need for foundation support of the existing structures are beyond the scope of our work. The Contractor responsible for the work should engage a Professional Engineer licensed in the State of Maine to evaluate the need for, and design of temporary earth and foundation support measures.

The subsurface conditions at the site are generally suitable for supporting the proposed building on conventional shallow spread footing foundations with a slab-on-grade basement floor. Foundation and basement floor subgrades are anticipated to consist of naturally deposited glacial till.

Based on soils encountered in the test borings, the existing fill and glacial till soils do not appear suitable for use as structural fill due to the relatively high percentage of fines, but may be used as common fill to raise grades beneath pavement sections or in landscaped areas. The glacial till is moisture sensitive and highly frost susceptible. Due to the moisture sensitive nature the glacial till might be difficult to place and compact. The moisture content of the soil will need to be tightly controlled for placement and compaction to the required density.

RECOMMENDATIONS

The recommendations provided below are based on interpretations of subsurface conditions at the Site and generally accepted geotechnical engineering principles. The recommendations below are provided for use in design and construction of foundations and slab-on-grade floors for the proposed building. Foundation design and construction will be greatly influenced by subsurface conditions at the Site. It is recommended that foundation design and construction be in accordance with all applicable ordinances, regulations, and rules.

Site Preparation

As part of site development, the existing Ice House restaurant building will be razed. Foundation elements, pavements, and underground utilities should be removed from within the proposed building footprint. Where existing foundation elements may conflict with proposed pavements or utilities outside of the proposed building footprint, they should be removed to a depth of at least 2 feet below the affected utility or finish pavement grade.

All existing underground utilities should be relocated outside the limits of the proposed building. Utilities associated with past usages which have been abandoned in-place below the proposed building should be removed. Underground pipes or utility conduits outside of the proposed addition footprint that will be abandoned in-place should have their ends filled with concrete and capped.

All topsoil, organic material, frozen soil, concrete, pavement, and other unsuitable materials should be removed from areas to receive new construction.

Exposed subgrades beneath and within 10 feet of the proposed building area and beneath proposed pavements should be proof rolled with at least four complete passes, perpendicular to each other, using a large vibratory drum roller. Compaction should be non-vibratory on glacial till subgrades, or if pumping or weaving occurs. Unstable areas would be characterized by weaving or rutting of more than 1 inch. Any unstable areas observed during proof rolling should be undercut a minimum of 12 inches and replaced with compacted structural fill, crushed stone or common fill; selection of the backfill material should depend on the location (proposed building area or pavements), weather, and soil conditions encountered during construction.

Compaction, Fill, and Backfill

The following materials and compaction efforts are recommended for use in areas of fill and backfill.

Type	**Screen or Sieve Size**	**Screen or Sieve Size**	**Compaction**
Structural Fill	150 mm (6 inches)*	100	95% of ASTM D 1557 Maximum 12-inch lifts
	75 mm (3 inch)	70–100	
	4.75 mm (#4)	35–70	
	425 µm (#40)	5–35	
	75 µm (#200)	0–5	
Common Fill	8 inches	100	92% of ASTM D 1557 Maximum 12-inch lifts

*Maximum 3 inches particle size within 12 inches of foundations and slabs.

Structural fill should be a well-graded sand and gravel mixture free of ice, snow, roots, topsoil, organic and other deleterious materials.

Structural fill is recommended for use as backfill against foundations and as fill beneath the proposed building as needed. Compacted structural fill below foundations and ground floor slabs should extend to the limits defined by a 1H:1V line sloped down and away from the bottom outside edge of foundations and floor slabs supported by fill. In confined areas and within 4 feet of foundation walls, structural fill should be placed in lifts not exceeding 6 inches in uncompacted thickness and be compacted with hand-operated compaction equipment.

Crushed stone should be used in lieu of structural fill when subgrades become disturbed, soft and/or wet. Crushed stone, when used, should be wrapped in a geotextile filter fabric, such as Mirafi 140N or equal.

Common fill may be used to raise grades below pavements or in landscaped areas, as needed. Common fill should consist of inorganic soil free of ice, snow, roots, topsoil, loam, organic, and or other deleterious materials.

Based on soils encountered in the test borings, the existing fill and naturally deposited glacial till soils do not appear suitable for use as structural fill due to the relatively high percentage of fines, but may be used as common fill. The moisture content will need to be tightly controlled to achieve the specified compaction.

Soils proposed for reuse should be segregated and stockpiled. Prior to reuse on the Site, grain-size distribution testing will be required of proposed fill soils in order to evaluate their suitability for reuse. The moisture-density relationship (Proctor test) of soil confirmed for use as fill will be required to provide compaction criteria for use during fill placement.

Earthwork in Wet Environments

Care must be taken to avoid disturbing glacial till subgrades by keeping construction traffic off subgrades during wet conditions and/or inclement weather until a firm fill layer has been placed. It will be important to divert runoff, provide positive grading to shed seepage and runoff, and roll exposed subgrades to reduce rutting, ponding, and surface water infiltration. Subgrade soils which become wet and/or soft should be over-excavated and replaced with crushed stone.

Temporary Excavations and Dewatering

Construction site safety, means and methods, and sequencing of construction activities is the sole responsibility of the Contractor. Under no circumstances should the following information be interpreted to mean that Ransom is assuming responsibility for construction site safety, trench protection, or the Contractor’s responsibilities. Such responsibility is not being implied and should not be inferred.

All temporary excavations should be performed according to OSHA Standards (29 CFR 1926 Subpart P). Temporary unbraced excavations within the existing fill, newly compacted fill, and naturally deposited glacial till encountered in the explorations (OSHA Type C) should be cut no steeper than one and one half horizontal to one vertical (1.5:1V) under dry soil or dewatered conditions, to a maximum depth of 12 feet.

Stockpiles should be placed at a distance at least the height of the excavation away from the top of the excavation. Care should be taken during earthwork activities to avoid disturbing soils from within the foundation bearing zone (described as the area beneath 1H:1V line sloped down and away from the bottom outside edge of foundations and floor slabs) of the existing Site building to remain and the adjacent property building. Excavations adjacent to existing structures, sidewalks, streets, and utilities should be properly shored to prevent shifting and/or settlement of these structures. Shoring and temporary foundation support of existing structures, if required, should be designed by a Professional Engineer licensed in the State of Maine.

Groundwater levels were observed at depths ranging from approximately 8.0 to 8.4 feet bgs, which corresponds to approximately El. 66.6 feet to El. 70 feet, during the subsurface investigation. Groundwater levels at the Site are anticipated to change as a result of the proposed construction. Dewatering requirements will vary across the Site based on groundwater levels encountered during construction and soil type. The glacial till soils will have relatively low permeability.

In general, it should be practicable to accomplish construction dewatering of foundation and shallow utility excavations through sumps and open pumping methods. Surface water runoff should be directed away from excavations to reduce dewatering efforts and to protect subgrades from becoming soft and unstable. Excavation, filling, foundation and floor slab construction, and utility installation and backfilling should be completed in dry conditions. Excavation side slopes should be monitored for potential seepage and maintained to promote stability, accordingly. The contractor should be aware of the potential affects dewatering may have on adjacent structures, and should use care to ensure shifting and/or settlement of these structures does not occur.

<u>Foundations</u>

For the purposes of seismic design, the soil profile is classified as Site Class D (Stiff soil, average N values greater than 15 and less than 50) according to *Minimum Design Loads for Buildings and Other Structures* (ASCE 7-10) published by American Society of Civil Engineers (ASCE). The soil profile Site Class is based on the conditions encountered to a maximum depth of 21 feet bgs within the proposed building area, and assumes conditions similar to those encountered to a depth of 21 feet bgs continues below the depth of explorations. The Site soils are not susceptible to liquefaction to the depth explored.

The proposed building may be supported by spread and continuous footings bearing on undisturbed glacial till, or compacted structural fill or crushed stone place above undisturbed glacial till. Footings should be proportioned for a maximum allowable contact pressure of 3,000 pounds per square foot. Minimum footing width should be in accordance with structural design and building code requirements, and not less than 3 feet for spread footings and 2 feet for continuous footings. Total and differential settlements are anticipated to be less than 1 inch and ½ inch, respectively.

Lateral loads may be resisted by friction between the bottoms of the foundations and subgrade, and the passive earth pressure against the sides of foundations. A friction coefficient of 0.35 and an equivalent fluid pressure of 200 pounds per cubic foot should be used for foundation design.

Foundations exposed to exterior or unheated spaces should be placed a minimum of 4 feet below the adjacent finished site grades or floor slabs to provide adequate frost protection. Interior foundations surrounded by heated spaces should be placed a minimum of 2 feet below floor slabs. If exposure to freezing is anticipated during or after construction, interior foundations should be lowered to the depth recommended for exterior foundations.

Foundation and floor slab subgrades consisting of naturally deposited glacial till should be rolled and granular fill subgrades should be compacted with vibratory compaction equipment. Following rolling or compaction and before placement of concrete, care should be taken to limit disturbance to foundation subgrades. Foundation subgrades should be free of all loose soil, water, snow, frost, or other deleterious materials. Any loose, soft, or disturbed soils should be removed and replaced with a minimum of 12 inches of compacted structural fill or crushed stone prior to concrete placement.

Foundation and floor slab subgrades should not be allowed to freeze. Freezing of foundation and floor slab subgrades could result in frost heaving and post construction settlement. If freezing occurs, the frozen soils should be removed and replaced with compacted structural fill or crushed stone.

<u>Foundation Drainage</u>

Foundation perimeter drains and floor slab underdrains are recommended to reduce the potential for water to collect around the foundations and below basement floor slabs. Perimeter drains should be installed adjacent to and along the outside perimeter of exterior footings.

Two floor slab underdrains oriented parallel to one another should be spaced about 20 feet on-center. The underslab drains should be located at least 18 inches below the bottom of the lowest floor slab, and tie into the foundation perimeter drain system. Pipe invert should be a minimum of 3 inches above the bottom of the underdrain stone.

Foundation perimeter and underslab drains should consist of 4-inch diameter perforated polyvinyl chloride (PVC) or Advanced Drainage Systems drain pipe embedded within at least 6 inches of underdrain stone. The underdrain stone should be completely wrapped with a geotextile such as Mirafi 140N or equivalent to prevent clogging. Drains should be sloped to allow for gravity flow and may discharge to daylight or an approved storm drain system. Multiple outlets should be provided so as not to be dependent upon a single flow path.

Underdrain stone should consist of *State of Maine Department of Transportation Standard Specifications Revision of December 2002*, 703.22 Underdrain Backfill Material, Type C.

Additionally, an impervious cover should be placed at the exterior ground surface adjacent to the proposed building to reduce infiltration of surface runoff. Roof drains should not be connected to perimeter foundation or underslab drains.

Floor Slabs

The basement floor slabs may be designed as slabs-on-grade bearing on a minimum of 12 inches of compacted structural fill. A subgrade modulus of 200 pounds per cubic inch should be used for design of all slabs-on-grade. Fill used to raise grade beneath the floor slabs should consist of compacted structural fill or crushed stone. A vapor barrier is recommended to reduce moisture infiltration into the proposed building.

Exterior slabs at entrances and loading areas should be underlain by at least 4 feet of structural fill or free draining material such as crushed stone. Surrounding areas should be pitched to drain away to reduce moisture and the potential for frost heave.

Earth-Retaining Structures

We understand a partially below-grade basement is planned as part of the proposed building. The basement floor is anticipated to be approximately 8 feet below the first floor level. The below-grade basement walls should be designed to resist lateral pressures generated by soil backfill materials and any temporary or permanent surcharge loads. At-rest conditions should be used for the design of walls that are not free to deflect or rotate. Walls that are free to deflect or rotate may be designed using active conditions. Assuming adequate drainage will be installed, hydrostatic forces have not been accounted for. If drainage systems are not included in the design, the lateral pressures provided herein should be modified accordingly to include hydrostatic forces.

The following parameters are based on Rankine's Lateral Earth Pressure Theory and should be used to compute the lateral earth pressures for flexible and rigid walls constructed with level backfill, whichever apply.

	Active	**At-Rest**
Coefficient of Lateral Earth Pressure	0.33	0.5
Equivalent Fluid Unit Weight, pounds per cubic foot (pcf)	45	68

Construction Quality Control

Ransom should be provided the opportunity to review the final design and specifications to ensure recommendations presented herein have been properly interpreted and applied. It is recommended that all fill, backfill, and compaction be inspected and tested by a qualified firm to verify that material placement and compaction meet the project specifications. Ransom should review all soil inspection and testing reports.

Ransom should be retained to provide geotechnical observation during construction. Geotechnical observation during preparation of foundation and floor slab subgrades is recommended.

Mr. Tod Dana
Dana/Fisher LLC

CLOSING

This report has been prepared to assist the site and structural engineers in the design and construction of foundations and slab-on-grade floors, related to the proposed 231 York Street property construction in Portland, Maine. This report has been completed based on Ransom's understanding of the project as described herein, and in general accordance with accepted soil and foundation engineering practices. No other warranties, expressed or implied, are made. If changes in the nature, design, or location of the project are made, the evaluations and recommendations presented in this report should be reviewed by Ransom. We have enjoyed working with you on this phase of your project.

Should you have any questions regarding this report, please do not hesitate to call.

Sincerely,

RANSOM ENVIRONMENTAL CONSULTANTS, INC.

Brian T. Nereson, E.I.T.
Geotechnical Engineer

STATE OF MAINE
DAVID R. BROGAN
No. 10022
LICENSED
PROFESSIONAL ENGINEER

David R. Brogan, P.E.
Senior Geotechnical Engineer/Project Manager

Stephen J. Dyer, P.E.
2010.08.04 16:19:24
-04'00'

Stephen J. Dyer, P.E.
Senior Project Manager

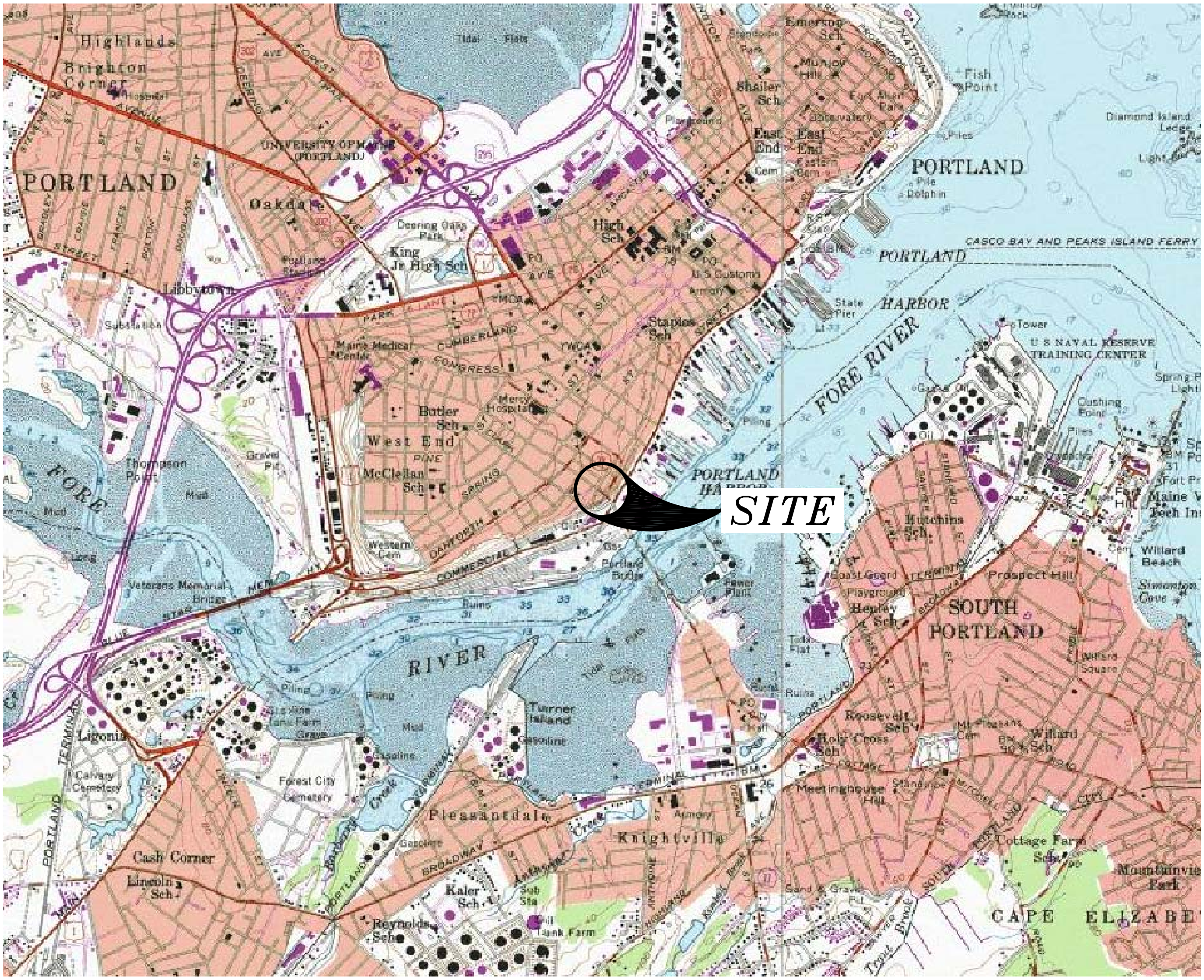
DRB/BTN/SJD:jar
Attachments

ATTACHMENT A

Figures

Proposed Restaurant
231 York Street
Portland, Maine

Ransom Environmental Consultants, Inc.
Project 091.06085

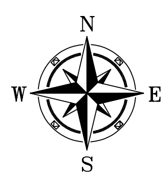


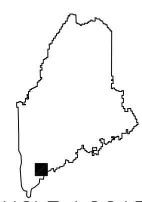
TAKEN FROM U.S.G.S. 7.5x15 MINUTE SERIES TOPOGRAPHIC MAP OF PORTLAND WEST, MAINE—1956, REVISED 1978.

CONTOUR INTERVAL IS 20 FEET

SITE COORDINATES: LATITUDE 43°38'52"
LONGITUDE 70°15'43"

UTM COORDINATES: 48: 33: 311mN
3: 98: 260mE





QUADRANGLE LOCATION

0 1000 2000 3000 4000

SCALE in FEET
1: 24,000

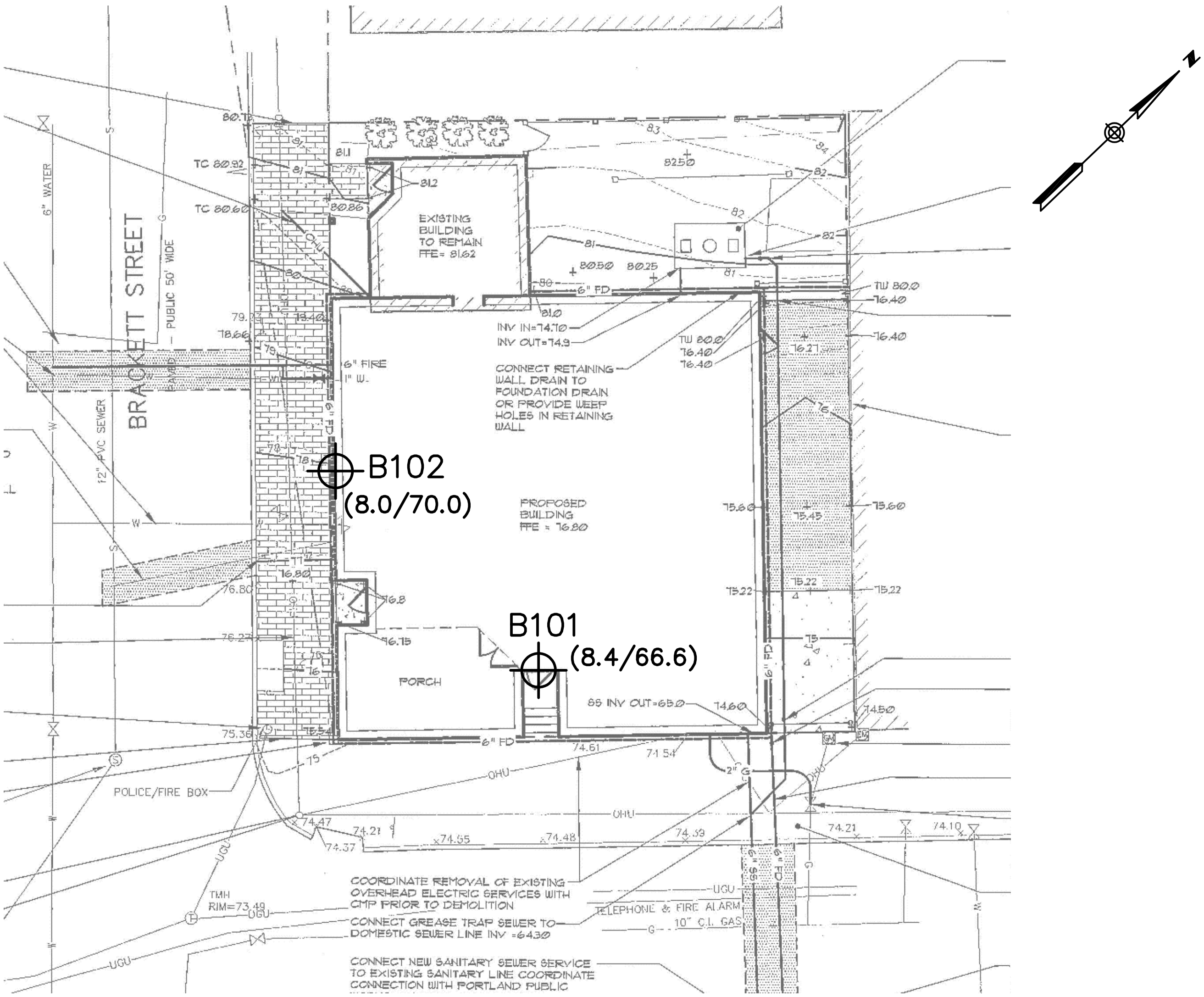
RANSOM Environmental Consultants, Inc.

SITE LOCATION MAP

PREPARED FOR:	SITE:
DANA/FISHER LLC P.O. BOX 169 PORTLAND, MAINE	PROPOSED RESTAURANT 231 YORK STREET PORTLAND, MAINE

DATE: AUGUST 2010
PROJECT: 091.06085
FIGURE: 1

P:\ME-DWGS\2009\091.06085\091.06085-00.dwg



NOTES:

1. SITE PLAN BASED ON PLAN TITLED "GRADING AND UTILITY PLAN" PREPARED BY SEBAGO TECHNICS, LATEST REVISION APRIL 21, 2010.
2. TEST BORING LOCATIONS ARE APPROXIMATE.
3. THIS PLAN HAS BEEN PREPARED FOR DANA/FISHER LLC. ALL OTHER USES ARE NOT AUTHORIZED, UNLESS WRITTEN PERMISSION IS OBTAINED FROM RANSOM ENVIRONMENTAL CONSULTANTS, INC.

LEGEND:

B101 — TEST BORING

(8.4/66.6) — APPROXIMATE DEPTH TO GROUNDWATER/APPROXIMATE GROUNDWATER ELEVATION (IN FEET)

0 10 20 40

SCALE in FEET
1"=20'

RANSOM Environmental Consultants, Inc.

SITE PLAN

PREPARED FOR:	SITE:
DANA/FISHER LLC P.O. BOX 169 PORTLAND, MAINE	PROPOSED RESTAURANT 231 YORK STREET PORTLAND, MAINE

DATE: AUGUST 2010
PROJECT: 091.06085
FIGURE: 2

ATTACHMENT B

Test Boring Logs

Proposed Restaurant
231 York Street
Portland, Maine

Ransom Environmental Consultants, Inc.
Project 091.06085

RANSOM Environmental Consultants, Inc.

BORING AND MONITORING WELL LOG: B101

Reviewed by: DRB	Total Depth: 21 Feet	Logged By: BTN
Date Reviewed: 8/4/10	Boring Diameter: 6 Inches	Date Drilled: 8/2/10 to 8/2/10
Surface Elevation (ft.): ~75	Well Stickup: NA	Driller: Northern Test Borin

DEPTH	DESCRIPTION Based on USCS and modified Burmister Soil Classification System	SOIL PROFILE	SAMPLE	SAMPLE NUMBER	BLOWS (per 6")	SPT-N Value	PENETRATION/ RECOVERY	OVM (ppm) / DEXSIL (ppm)	WELL CONSTRUCTION
	4" CONCRETE.	Concrete							
	S1 (0.5-2.5') Medium dense, brown, fine to medium SAND, some Silt, trace fine sand, dry.			S1	9-9-10-15	19	24/18		
5	S2 (4-6') Medium dense, brown SILT, some fine Sand, trace clay with seam of fine sand, moist at tip. Note: Augered past cobble at 6'.	Glacial Till		S2	8-8-10-50/4	18	22/22		
10	S3 (9-11') Medium dense, brown, fine to medium SAND and SILT, trace fine gravel with seam of fine to medium sand, wet.			S3	7-6-8-11	14	24/16		
15	S4 (14-16') Dense, brown, fine to medium SAND, some Silt, trace gravel, wet.			S4	11-21-18-20	39	24/14		
20	S5 (19-21') Dense, brown, fine to medium SAND, some Silt with 2" seam of fine sand, little silt, wet.			S5	14-14-17-22	31	24/14		
	End of boring at 21'.								

WATER LEVELS:

During Drilling	End of Boring	Date:
	8.4 Feet	8/2/10

WELL LEGEND: Filter Sand, Native Fill, Bentonite, Bentonite Grout, Concrete, PVC Screen, PVC Riser

NOTES:

1. Boring advanced using 2 1/4" ID HSA's.
2. Standard penetration tests conducted using auto-trip hammer.

CLIENT:
Dana/Fisher LLC

SITE:
Proposed Restaurant
231 York Street
Portland, ME

Project No.: 091.06085

BORING AND MONITORING WELL LOG: B102

RANSOM Environmental Consultants, Inc.

Reviewed by: DRB	Total Depth: 21 Feet	Logged By: BTN
Date Reviewed: 8/4/10	Boring Diameter: 6 Inches	Date Drilled: 8/2/10 to 8/2/10
Surface Elevation (ft.): ~78	Well Stickup: NA	Driller: Northern Test Borin

DEPTH	DESCRIPTION Based on USCS and modified Burmister Soil Classification System	SOIL PROFILE	SAMPLE	SAMPLE NUMBER	BLOWS (per 6")	SPT-N Value	PENETRATION/ RECOVERY	OVM (ppm) / DEXSIL (ppm)	WELL CONSTRUCTION
	1 1/2" CONCRETE.	Asphalt							
	S1 (0.5-2.5') Medium dense, brown, fine to coarse SAND, trace gravel and silt, dry.	Fill		S1	3-8-12-16	20	24/14		
	Note: Drill action and auger cuttings suggests change in material at 3.5'.								
5	S2 (4-4.8') Very dense, brown, fine to medium SAND, some Silt, trace gravel, dry.	Glacial Till		S2	34-25/4	25+	10/5		
10	S3 (9-11') Dense, brown, fine to medium SAND, some Silt, trace gravel, wet.			S3	9-15-19-24	34	24/14		
15	S4 (14-15.6') Medium dense, brown SILT and fine to medium SAND, trace gravel and clay, wet.			S4	8-5-23-10/2	28	20/15		
20	S5 (19-21') Medium dense, brown/orange, fine to coarse SAND, trace gravel and silt, wet.			S5	7-11-15-17	26	24/16		
	End of boring at 21'.								

WATER LEVELS:

During Drilling	End of Boring	Date:
	8.0 Feet	8/2/10

WELL LEGEND: Filter Sand, Native Fill, Bentonite, Bentonite Grout, Concrete, PVC Screen, PVC Riser

NOTES:
1. Boring advanced using 2 1/4" ID HSA's.
2. Standard penetration tests conducted using auto-trip hammer.

CLIENT:
Dana/Fisher LLC

SITE:
Proposed Restaurant
231 York Street
Portland, ME

Project No.: 091.06085 Page: 1