ATC ASSOCIATES INC.
ENVIRONMENTAL, GEOTECHNICAL AND MATERIALS PROFESSIONALS

June 17, 1998

Mark Bouvier
Chittenden South School District
RR3, Box 161
Hinesburg, VT 05461

RE: ATC Project #02252.00004
Initial Site Investigation
Hinesburg Elementary School
Hinesburg, VT

98-2370

Dear Mr. Bouvier:

Enclosed are two copies of the report on the Initial Site Investigation, conducted at the Hinesburg Elementary School, by ATC Associates Inc., in May, 1998. We have also forwarded one copy of the report to the Vermont Department of Environmental Conservation.

Please call me with any questions that you may have regarding the report.

Sincerely,

ATC ASSOCIATES INC.

Peter M. Murray
Senior Project Scientist

cc: Chuck Schwer, Vermont Department of Environmental Conservation,
Sites Management Section

attachments

PMM/imh/M.Bouvier Letter 6/17

Browns Trace Building • Route 2 • PO Box 3 • Richmond, VT 05477-9601 • (808) 434-2113 • FAX (802) 434-2160

Prepared for:

Chittenden South School District
RR3, Box 161
Hinesburg, Vermont 05461

JUL 10 11 33 AM '98

Initial Site Investigation Report
Hinesburg Elementary School
Hinesburg, Vermont

June 1998

Prepared by:

ATC Associates Inc.
Brown's Trace Building
Richmond, Vermont

ATC Project #02252.00004

Table of Contents

1.0 INTRODUCTION

This report details the initial site investigation performed by ATC Associates Inc. (ATC) at the Hinesburg Elementary School, in Hinesburg, Vermont. The site investigation has been conducted under contract with the Chittenden South School District (CSSD), pursuant to the May 5, 1998 ATC work plan.

The work plan was designed to further define the degree and extent of subsurface petroleum contamination at the site and its potential for impact on nearby receptors, including the school building. Subsurface petroleum contamination was initially detected at this site on April 23, 1998, during excavation of test pits on the south side of the school building. The test pits were excavated to determine soil characteristics for scheduled construction of a new addition to the school building in Summer, 1998. The petroleum contamination was in the form of odors which resembled old No.2 oil, and sheens which accumulated on groundwater in the bottom of the pits.

The suspected source of the contamination was an abandoned underground storage tank (UST#2), located on the north side of the school building. The UST had a capacity of 1,000 gallons, and was used to store No.2 oil for the school's furnace. Reportedly, the UST was abandoned in the 1960's. The contents of the tank were reportedly pumped out in the early 1990s. There are no written records regarding either event.

UST#2 was permanently closed on May 25, 1998. Although the tank had several perforations, contamination concentrations in soils surrounding the tank were relatively low. A report on the closure of UST#2 was submitted to CSSD and to the State of Vermont Department of Environmental Conservation (VTDEC) on April 28, 1998. Two other USTs (UST#1 and UST#3) remain on-site and will be permanently closed during Summer, 1998.

As a result of the reported release of No.2 oil from UST#2, ATC has conducted an Initial Site Investigation, following VTDEC Site Investigation guidelines. This site investigation has been conducted under the VTDEC Site Investigation Expressway process.

1.1 Site Description

The Hinesburg Elementary School is located on Route 116, in Hinesburg, Vermont (see Figure 7.1, Site Locus). The school building is a combination of several "wings", each of which was constructed at different times, in response to increases in the amount of students at the school. In response to continued growth in the school population, CSSD is constructing a new addition to the school building. Prior to constructing the new addition, the "1956" wing of the school building will be demolished. The Site Plan, Figure 7.2, shows the location of the 1956 wing and the footprint of the new addition. Construction of the new addition will require excavation of soils for the foundation and footings. Since the test pits, in which

petroleum contaminated soils were detected on April 23, were in the area that is to be excavated, it is likely that some of the excavated soils will contain petroleum contamination and will be handled and treated appropriately.

UST#2 was located at the north end of an alcove, between the "White Building", which was the original school building, and the main school building (see Site Plan, Figure 7.2). There is a storm water catch basin, located approximately 30 feet south of the former UST. The catch basin discharges to a pipe, which runs beneath the 1956 wing, and discharges to a drainage swale, located south of the school. The pipe had previously discharged to a dry well, located on the south side of the 1956 wing (see Figure 7.2 for location of catch basin and dry well). It is possible that the pipe, which ran between the catch basin and the dry well, acted as a conduit for subsurface petroleum contamination resulting from surface or subsurface releases of petroleum in the vicinity of UST#2. There is also a footing drain, that runs along the foundation for the White Building. This footing drain, which runs within ten feet of UST#2, also discharges into the catch basin and may have acted as a conduit for contamination resulting from releases from tank.

The Hinesburg Elementary School is located on the south end of the Hinesburg Central Business District, which is basically confined to Route 116 and extends from the vicinity of the school, north, for about one-half mile. All homes and business in this corridor are served by the municipal water system. The water system is supplied by several drilled supply wells. The closest supply well to the elementary school is located near the Town Hall, approximately 1,200 feet north/northwest of the school. The remaining wells are located north of the CBD. The water system water main extends from the supply well near Town Hall, south, along Route 116, to a point located approximately 500 feet east of the elementary school. A branch of the water main extends south, along Silver Street, and ends at the bridge over the La Platte River.

Properties located south and west of the elementary school are mostly residential. Except for four homes located along Silver Street, which are located approximately 400 to 500 feet south and west of the school, these properties are not served by the municipal water system and each has its own water supply well.

The Hinesburg Elementary School is at an approximate elevation of 360' above sea level. The topography in the vicinity of the school slopes gently to the southwest, toward the La Platte River, located approximately 400 feet southwest of the school. According to the Surficial Geologic Map of Vermont, overburden in this area consists of silt and silty clay. According to the Bedrock Map of Vermont, bedrock beneath the school consists of Winooski dolomite.

1.2 Previous Site Investigations

As discussed above, several test pits were excavated south of the 1956 wing on April 23, 1998. During excavation of the test pits, petroleum odors were noticed in the soils. The petroleum contamination appeared to be limited to two test pits located immediately adjacent to the abandoned dry well. ATC was immediately notified and visited the site on that day. Although ATC did not bring a photo-ionization device (PID) to the site, petroleum odors and sheens on the water in the test pits were noted. The odors resembled old, weathered No.2 oil.

Based on a review of the site, it appeared that a possible source of petroleum contamination observed in the test pits was the abandoned UST, UST#2, located in the alcove, on the north side of the school. In response, UST#2 was permanently closed on May 25, 1998. ATC conducted the closure inspection and observed several small perforations in the tank walls. In addition, relatively low concentrations of volatile organic compounds (VOCs) were detected in soils surrounding the tank. ATC prepared a UST closure report which was submitted to CSSD and VTDEC.

2.0 MATERIALS AND METHODS

2.1 Soil Borings

On May 19 and May 20, 1998 soil borings were drilled at five locations at the Hinesburg Elementary School. The locations of each boring are shown on the Site Plan, Figure 7.2. At the request of Marc Coleman, of VTDEC, the first soil boring, SB-1, was drilled to determine if an existing UST (UST#1), which has a capacity of 10,000 gallons, and is used to store No.4 oil, is a potential source of contamination. The other four borings, SB-2, SB-3, SB-4 and SB-5, were installed in the vicinity of the test pits south of the 1956 wing, that were found to contain petroleum contamination on April 23, 1998. These borings were drilled to define the vertical and horizontal extent of contamination in this area.

The soil borings were drilled using a truck mounted, hollow stem auger drill rig, by Tri State Drilling & Boring, under the direct supervision of an ATC Senior Staff Scientist. Soil samples were collected from each boring, at five foot intervals, using a split spoon sampler. Soil samples were logged and screened, in the field, for VOCs, using a PID (HNU Model PI-101, serial #601430, equipped with a 10.2 electron-volt lamp and calibrated on site with isobutylene (98 ppm), referenced to benzene).

2.2 Monitoring Well Installation

In addition to the five soil borings, five groundwater monitoring wells, MW-1, MW-2, MW-3, MW-4 and MW-5, were installed on May 19 and May 20, 1998. The monitoring wells were also installed by Green Mountain Boring, under the direct supervision of ATC. MW-1 was installed north of the former location of UST#2 to determine if contamination may have migrated to the site from Hart & Meade, a gas station and heating oil distributor, located on the north side of Route 116, across from the school. MW-3 and MW-4 were installed in the alcove, south of the former location of UST#2, to determine the extent of soil and groundwater contamination immediately downgradient of the former tank. MW-2 and MW-5 were installed south and southwest of the 1956 wing to determine the extent of soil and groundwater contamination in the presumed downgradient direction.

Soil samples were collected from the boreholes for each of the five monitoring wells, at five foot intervals, using a split spoon. The soil samples were logged and screened in the field for VOCs by PID.

The monitoring wells are constructed of two inch diameter, PVC casing and screen. Each well has ten feet of screen, extending from approximately five to fifteen feet below grade. The casings for MW-3 and MW-4 extend approximately three feet above grade and are protected with locking, steel casings. MW-2, MW-2 and MW-5 are completed at grade and are protected with flush mounted road boxes and locking caps. Well construction details are shown on the drilling logs, in Appendix A.

2.3 Collection of Groundwater Samples

On May 28, 1998, ATC collected groundwater samples from four of the five on-site groundwater monitoring wells. A sample was not collected from MW-5 because the well had filled in with silt and there was not enough standing water in the well from which to collect a sample. In addition, ATC collected a duplicate sample, from MW-2, and a trip blank. Groundwater samples were collected using dedicated bailers for each well. Approximately three well volumes were removed from each well prior to sample collection. The samples were analyzed by Pace Analytical Services, Inc., using EPA Method 8020 for VOCs. Specifically, the analyses targeted the compounds benzene, toluene, ethylbenzene, and xylenes (BTEX) and for the gasoline additive methyl-tert-butyl-ether (MTBE). All samples were collected in 40 ml glass vials equipped with a Teflon septum and preserved with an HCL solution. All water samples were kept chilled until analyzed. Water quality results are discussed in Section 3.3 of this report. A copy of the groundwater analytical results are included in Appendix B.

2.4 Site Survey and Groundwater Elevations

A site survey was conducted by ATC on May 28, 1998 to ascertain spatial relationships and relative elevations between monitoring wells. The monitoring well top of casing (TOC) elevation for each well was determined by performing a site survey with a transit and rod. TOC was measured from the top of the PVC casing with the locking well cap removed. A benchmark was established on site with an assumed elevation of 100.00 feet and was utilized to determine relative TOC elevations. Spatial relationships between monitoring wells and other significant site features were determined by use of a 100 ft. measuring tape.

Water level and product thickness measurements and TOC elevations were obtained from the five monitoring wells on the site. Water levels were determined using an interface probe, which is accurate to within one-hundredth of a foot. Groundwater elevations were calculated by subtracting the measured water levels from the top of the inner PVC casing elevations.

2.5 Sensitive Receptor Survey

ATC has performed a localized sensitive receptor survey of the site and abutting properties and land features to determine any sensitive receptors that may exist which could potentially be impacted by subsurface contamination identified on site. This survey included identification of surface waters, drinking water sources, residential or business dwellings, subsurface service conduits and native flora or fauna which may be impacted. The survey also included a PID assay of ambient air in the on-site building on April 25 and May 20, 1998. The results of this survey are included in Section 3.4 of this report.

3.0 RESULTS

3.1 Soils

Lithology

Based on visual inspection of soil samples collected from the five soil borings and five monitoring wells, lithology at the site generally consists of a layer of sand and gravel, extending from grade level to five to seven feet below grade. From five to seven feet below grade, to approximately twelve to thirteen feet below grade, is a layer of dense clay and silt. Below the layer of dense clay and silt is a layer of wet silt, with some clay. The top of bedrock at this site appears to be at depths ranging from seventeen to twenty-two feet below grade. There appears to be a continuous thin layer of sand, gravel and weathered bedrock fragments on top of the bedrock surface.

VOC Screening

Soil samples collected from the five soil borings and from four out of the five monitoring well boreholes contained no detectable VOC concentrations, as measured, in the field, by PID. Soil samples collected from the borehole for MW-5, which is located approximately eighty-five feet south/southwest of the former dry well, contained VOC concentrations, as measured by PID, ranging from 0.2 parts per million (ppm) to 0.4 ppm. There were no olfactory indications of petroleum contamination in any of the soil samples collected from boreholes drilled at this site as part of this site investigation.

3.2 Groundwater

Hydrogeology

On May 28, 1998, ATC measured the depth to water in all monitoring wells to determine groundwater elevation and gradient. No product was detected on the groundwater in any of the monitoring wells. The depth to groundwater in the five monitoring wells ranged from six to fourteen feet below grade. In general, the depth to the water table at this site tends to increase from north to south.

Based on the water table measurements of May 28, 1998, the water table between MW-1, which is located on the north side of the site, and MW-5, which is located south of the school building, slopes at an average gradient of 8%, toward the south. This water table gradient and direction of slope is similar to the overlying topography at the site and is likely controlled by the topography of the bedrock surface. The average water table gradient between MW-1 and MW-3, which is located on the north side of the 1956 wing, is approximately 3.6%. The average gradient between MW-3 and MW-5 is approximately 11%, which also roughly parallels the overlying topography, which is relatively flat at the northern half of the site and sloping toward the south on the southern half of the site. Refer to Table 6.1 for a summary of groundwater elevation data and the Groundwater Gradient Map included as Figure 7.3 which shows water table elevation contours and groundwater flow direction.

Based on the topography and drainage patters in the vicinity of the school, it is likely that the area groundwater flow direction is south/southwest, toward the La Platte River, and that the river is the regional discharge point for groundwater.

Based on the observed characteristics and moisture content of soil samples collected from each borehole, and on water table elevations measured in the five monitoring wells, it appears that there is an upward flow component, on the north side of the site, between the wet, silt layer and the dense clay layer above it. This upward flow component may indicate that the water table north of the school building and in the

vicinity of UST#2 is under semi-confined conditions. The upward groundwater flow component may prevent the downward migration of contaminants released at or near the surface. Toward the southern end of the site and in the vicinity of the former dry well, the water table appears to be unconfined and there may even be a downward flow component from the overburden to the underlying dolomite bedrock.

Groundwater Quality

Results of analyses of groundwater samples collected from the site indicate that there were no detectable concentrations of BTEX or MTBE in groundwater in the vicinity of MW-1, MW-2, MW-3 and MW-4 on May 28, 1998. The absence of detectable VOCs in groundwater at this site indicates that the release of No.2 oil from UST#2 has not significantly impacted groundwater quality at this site. In addition, the lack of detectable VOC concentrations may also indicate that most of the VOCs that were released from UST#2 have been degraded and the petroleum odors detected on April 23, 1998, in the test pits were caused by semi-volatile and non-volatile petroleum compounds which have not yet been degraded. Complete laboratory reports of groundwater analyses are presented in Appendix C.

Since a groundwater sample was not collected from MW-5, there is no indication of groundwater quality at that point. It is possible that, since soil samples collected from the borehole for MW-5 contained detectable VOC concentrations, as measured by PID, there may be detectable VOC concentrations in the groundwater in the vicinity of this well. It is also likely, however, that, if there were detectable VOC concentrations in this well, they would be relatively low.

3.3 Sensitive Receptor Survey and Risk Assessment

On January 29, 1998 ATC performed a sensitive receptor survey and determined the following:

- The former UST#2 and the abandoned dry well, both potential sources of soil and groundwater contamination, are immediately adjacent to the Hinesburg Elementary School building. Most of the building is constructed on a concrete slab, at grade. The section of the school which is referred to as the White Building, and is immediately adjacent to UST#2, has a basement and a concrete foundation. The footing for the White Building foundation has a perimeter drain, which discharges to the catch basin in the alcove. The basement of the White Building would likely be prone to vapor impact if significant concentrations of petroleum contamination were contained in soils and groundwater within close proximity to the foundation. The 1956 wing, which is located downgradient of UST#2, is built on a concrete slab at grade, but there is a utility tunnel, which runs beneath the slab, from east to west. This utility tunnel could act as a conduit for vapor impact in the 1956 wing

and in the remainder of the school, if significant concentrations of petroleum contamination were contained in soils and groundwater in close proximity to the tunnel.

Ambient air in the utility tunnel, the basement of the White Building and class rooms in the 1956 wing was screened for VOCs by PID on both April 25 and May 20, 1998. No VOC vapors were detected in these areas on those dates and there have been no reports of petroleum vapors in the school building.

Based on the low VOC concentrations detected in soils surrounding UST#2, in soils collected from the five soil borings and five monitoring wells and in water samples collected from four of the five monitoring wells, it is not likely that soil and groundwater contamination in the vicinity of UST#2 and the former dry well will result in VOC vapor impact in ambient air in the school building.

- Most of the properties in the immediate vicinity of the Hinesburg Elementary School are served by the Hinesburg Public Water System. The system obtains water from a series of drilled wells located throughout the town. The closest public water supply well to the site is located approximately 1,200 feet north/northwest of the school. Since the groundwater flow direction in the overburden at this site is to the south/southwest, and the source strength is relatively low, it is not likely that the Hinesburg public water supply system will be impacted by the release(s) of petroleum in the vicinity of UST#2 or the former dry well.

- Properties located south and west of the school are mostly residential and are all served by private water supply wells. Since these properties are located on the other side of the La Platte River from the school, and the river likely acts as a hydraulic barrier to migration of groundwater from northeast to southwest, the water supply wells located south of the river are not likely at risk of impact from groundwater contamination in the vicinity of UST#2 and the former dry well.

- The closest surface water body to the site is the La Platte River, which is located approximately 400 feet southwest of the school building and forms the southern boundary for the school property. Several drainage swales flow from the vicinity of the school building and ultimately discharge to the La Platte River. It is possible that contaminated groundwater could enter the pipe which runs between the catch basin, near UST#2, and the drainage swale. Although it is not known where the pipe from the catch basin discharges, it is likely that it discharges to the drainage swale that flows from east to west, and is located north of the gravel walkway, south of the school building. ATC has visually inspected this drainage swale and has not observed any indications of petroleum impact to the swale, including sheens or odors.

4.0 FINDINGS

- An out of service 1,000 gallon UST (UST#2) was removed from the site on April 25, 1998. Although the tank contained several perforations, soils surrounding the tank contained relatively low VOC concentrations, as measured by PID. It is possible that significant quantities of petroleum were released to the subsurface from this tank, which was abandoned in the early 1960s, but was not pumped out until the early 1990s. If significant quantities of petroleum were released from this tank, any resulting petroleum contamination has been significantly degraded due to natural attenuation.

- Relatively low concentrations of petroleum contamination remain in soils and ground water in the vicinity of an abandoned dry well, located south of the 1956 wing of the school building. The contamination is likely the result of a release of petroleum in the vicinity of UST#2, on the north side of the 1956 wing. A footing drain for the White Building is immediately adjacent to the former UST. The footing drain flows into a nearby catch basin. The catch basin was originally attached to the dry well, but has since been diverted to a drainage swale south of the school building. Soil and groundwater contamination south of the 1956 wing likely did not migrate through soils beneath the 1956 wing, but, may have flowed through the White Building footing drain, into the catch basin and former dry well.

- Petroleum contamination in the vicinity of UST#2 and in the vicinity of the former dry well likely consists mostly of semi-volatile and non-volatile petroleum compounds. Most of the volatile compounds have been eliminated due to natural attenuation.

- Overburden deposits in the vicinity of the school consist of a dense layer of silty clay, overlying a layer of wet silt. The overburden ranges in thickness from seventeen to over twenty feet. Bedrock at the site consists of dolomite, which can contain solution channels and joints that can rapidly transmit groundwater.

- The water table at this site is at a depth of between six and fourteen feet below grade. On the north half of the site, the water table may be semi-confined in the silt layer by the dense clay layer above it. As a result, there appears to be an upward flow component in this area. This upward flow may have prevented contamination of soils at depth in the vicinity of UST#2. South of the school building, the water table is at a depth of between ten and sixteen feet below grade. The average water table gradient at this site is approximately 8%. Groundwater in the overburden at this site flows south/southwest and discharges in the La Platte River.

- During groundwater monitoring on May 28, 1998, no product was detected on groundwater in any of the five on-site monitoring wells. Analysis of groundwater samples collected from four of the five monitoring wells indicated that no significant quantities of detectable dissolved VOC contamination exists at this site. No sample was collected from the fifth well due to lack of water in the well.

- Potential receptors of the contamination include local water supply wells, the school building and the La Platte River. The risk of impact to local supply wells, including several private residential supply wells on the southwest side of the La Platte River, and a municipal supply well located 1200 feet north/northwest of the school, is low. Since concentrations of VOCs in residual soil contamination in the vicinity of UST#2 and the former dry well have been significantly reduced, the risk of vapor impact to indoor air quality in the school building is low. Indoor air screening on April 25 and May 20, 1998 detected no vapor impact in the school building. Due to the source strength and low VOC concentrations in the vicinity of UST#2 and the former dry well, the risk of impact to the La Platte River, which is located approximately 400 feet south of the school building, is low. A drainage swale on the south side of the school building may be a discharge point for contaminated groundwater in the vicinity of the former dry well. There have been no indications of petroleum impact to this swale.

- The scheduled excavation of soils in the vicinity of the former dry well will further reduce the source strength of soil and groundwater contamination in this area. Contamination remaining in the area after the soils have been excavated will continue to be reduced by natural attenuation. Since VOC concentrations in soils in the vicinity of the dry well are low, and most of the contaminated soils will be excavated prior to construction of the new school addition, there will be little risk of impact to the new addition.

5.0 RECOMMENDATIONS

Based on the results of this investigation, the following recommendations are presented:

1. Excavated soils in the vicinity of the former dry well should be screened for VOCs by PID during construction of the new addition to the school building. ATC has been contracted by CSSD to conduct the screening during excavation, which is scheduled to begin on or near July 1, 1998. Soils found to contain any detectable VOC concentrations, either by PID or through olfactory screening, should be segregated from non-contaminated soils. Contaminated soils should then be transported to the Town Gravel Pit, on Observatory Road, in Hinesburg. ATC has made a formal written request to VTDEC to allow the treatment of contaminated soil at the Observatory Road site, through polyencapsulation.

2. To verify the results of the first round of groundwater analysis, an additional round of groundwater samples should be collected from each of the five on-site monitoring wells. Prior to collecting the samples, an attempt should be made to evacuate accumulated silt from the bottom of MW-5, so that a water sample can be collected from the well. The silt can probably be evacuated using high pressure water or air to lift the silt from the well. Prior to making an attempt at evacuating silt from the well, ATC will submit a work plan and cost estimate to CSSD and VTDEC for the task. Included in this work plan and cost estimate will be costs for additional groundwater sample collection, analysis and report preparation. The additional round of water sample collection should be conducted in August, 1998.

3. The report on the next round of groundwater sample collection and analysis should include a discussion of the excavation of contaminated soils and the degree and extent of contamination in the excavated area. In addition, the report should address the risk of vapor impact to the new addition.

6.0 Tables

Table 6.1 • Monitoring Well Data & Groundwater Elevations
HINESBURG ELEMENTARY SCHOOL • HINESBURG, VERMONT
May 1998 • Page 1 of 1

Well	Elevation at top of Casing [1]	Date	Depth to Free Product (feet)	Free Product Thickness (feet)	Depth to Water (feet below top of casing)	Uncorrected Groundwater Elevation	Corrected Groundwater Elevation
MW-1	99.66	28-May-98	-	-	4.95	94.71	-
MW-2	87.10	28-May-98	-	-	12.11	74.99	-
MW-3	101.59	28-May-98	-	-	10.33	91.26	-
MW-4	101.64	28-May-98	-	-	10.50	91.14	-
MW-5	89.46	28-May-98	-	-	13.64	75.82	-

[1]-As measured by ATC May 28, 1998. All measurements relative to a common 100 foot datum located as corner of concrete stair at NE corner of White Bldg. (see Figure 7.2: Site Plan)

TABLE 6.2
SUMMARY OF GROUNDWATER RESULTS THROUGH MAY, 1998
HINESBURG ELEMENTARY SCHOOL • HINESBURG, VERMONT

SAMPLE LOCATION	SAMPLE DATE	BENZENE (ug/L)	ETHYL BENZENE (ug/L)	MTBE (ug/L)	TOLUENE (ug/L)	TOTAL XYLENES (ug/L)	TOTAL BTEX (ug/L)	TOTAL VOLATILES (ug/L)
MW-1	5/28/98	ND	ND	ND	ND	ND	ND	ND
MW-2	5/28/98	ND	ND	ND	ND	ND	ND	ND
MW-3	5/28/98	ND	ND	ND	ND	ND	ND	ND
MW-4	5/28/98	ND	ND	ND	ND	ND	ND	ND
MW-5	5/28/98	NS	NS	NS	NS	NS	NS	NS
Enforcement Standard*		5	700	40	1000	10000	N/A	N/A
Preventive Action Limit*		0.5	350	20	500	5000	N/A	N/A
Laboratory Detection Limit		1.0	1.0	1.0	1.0	1.0	N/A	100.0

Notes:

* From the Vermont Department of Environmental Conservation's, "Chapter 12 Groundwater Protection Rule and Strategy, Effective Date November 18, 1997."

Shade areas indicate enforcement standard exceedances.

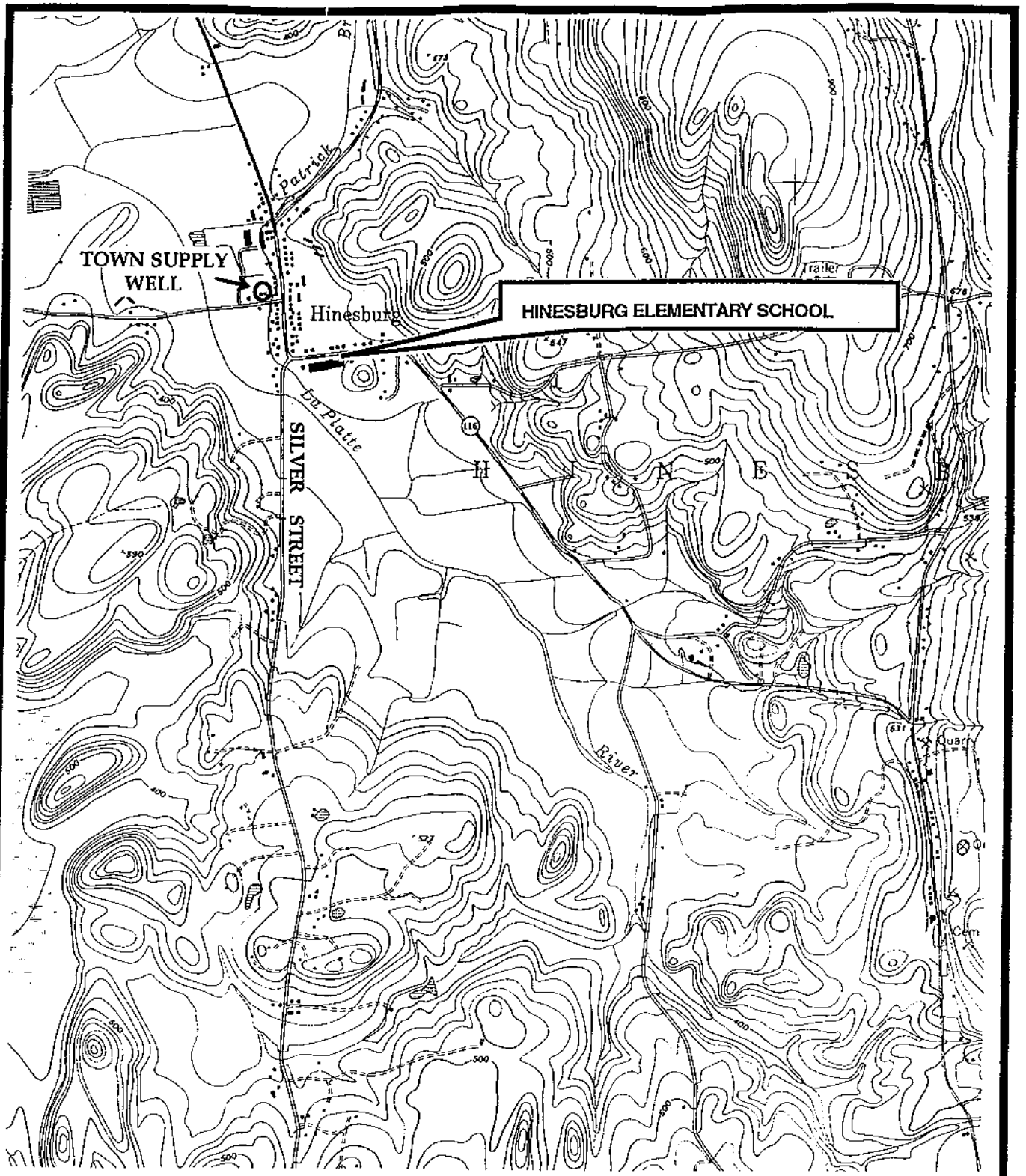
-- Not analyzed N/A - Not Applicable

ND - Not Detected NS - Not Sampled

7.0 Figures

Figure 7.1

Site Locus Map
Hinesburg Elementary School
Hinesburg, Vermont



ATC Associates Inc. P.O. Box 3, Richmond, VT (802) 434-2113 **project number** 02252.00004	**Figure 7.1** **Site Locus Map** **HINESBURG ELEMENTARY SCHOOL** **HINESBURG, VT**	Map Source: USGS HINESBURG, VT 7.5 min. Quadrangle, 1948 Scale 1: 24000

Figure 7.2

Site Plan
Hinesburg Elementary School
Hinesburg, Vermont

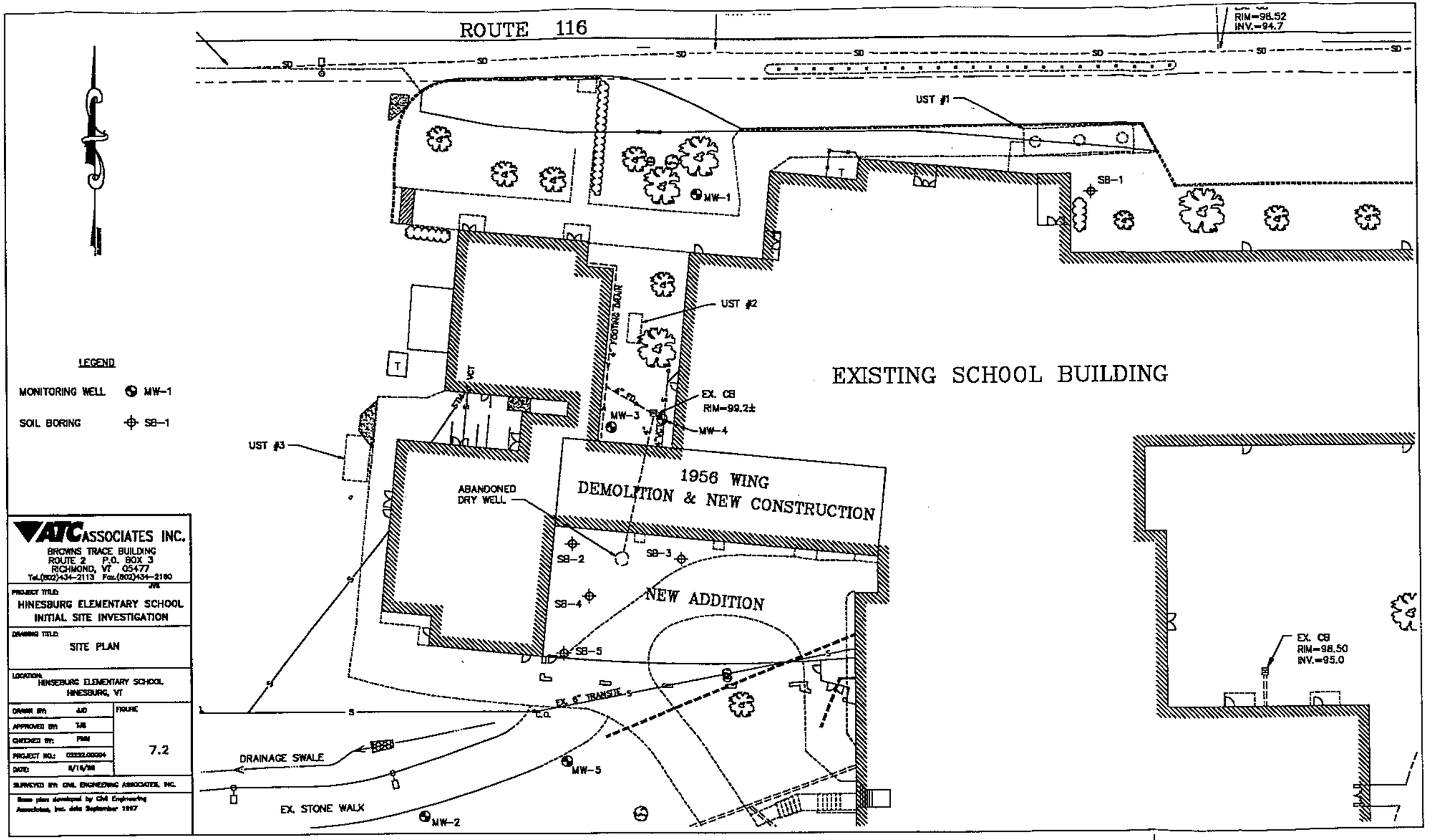
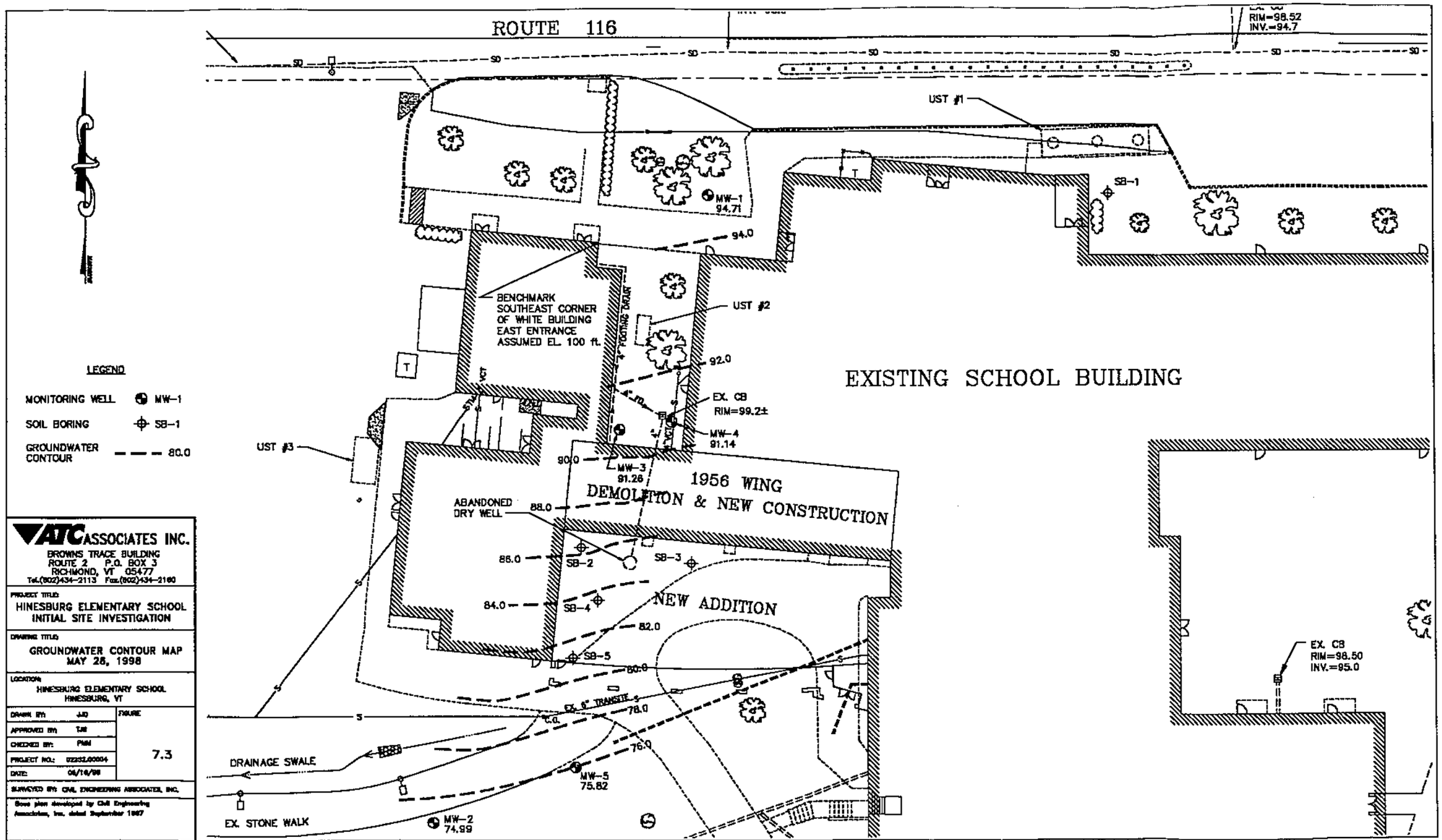

ROUTE 116
RIM=98.52
INV.=94.7
SD
UST #1
SB-1
MW-1
UST #2
4" FOOTING DRAIN
EXISTING SCHOOL BUILDING
T
VCT
4" FD
EX. CB
RIM=99.2±
MW-3
MW-4
UST #3
1956 WING
DEMOLITION & NEW CONSTRUCTION
ABANDONED
DRY WELL
SB-2
SB-3
SB-4
NEW ADDITION
SB-5
EX. 6" TRANSITE
S
C.O.
DRAINAGE SWALE
MW-5
EX. STONE WALK
MW-2
EX. CB
RIM=98.50
INV.=95.0
LEGEND
MONITORING WELL MW-1
SOIL BORING SB-1
ATC ASSOCIATES INC.
BROWNS TRACE BUILDING
ROUTE 2 P.O. BOX 3
RICHMOND, VT 05477
Tel.(802)434-2113 Fax.(802)434-2180
JVR
PROJECT TITLE:
HINESBURG ELEMENTARY SCHOOL
INITIAL SITE INVESTIGATION
DRAWING TITLE:
SITE PLAN
LOCATION:
HINESBURG ELEMENTARY SCHOOL
HINESBURG, VT
DRAWN BY: AJD
APPROVED BY: TJS
CHECKED BY: PMM
PROJECT NO.: 03232.00004
DATE: 9/15/98
FIGURE
7.2
SURVEYED BY: CIVIL ENGINEERING ASSOCIATES, INC.
Base plan developed by Civil Engineering Associates, Inc. date September 1997

Figure 7.3

Ground Water Gradient Map
Hinesburg Elementary School
Hinesburg, Vermont



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Tel.(802)434-2113 Fax.(802)434-2160

PROJECT TITLE:
HINESBURG ELEMENTARY SCHOOL
INITIAL SITE INVESTIGATION

DRAWING TITLE:
GROUNDWATER CONTOUR MAP
MAY 28, 1998

LOCATION:
HINESBURG ELEMENTARY SCHOOL
HINESBURG, VT

		FIGURE
DRAWN BY:	JJD	7.3
APPROVED BY:	TJR	
CHECKED BY:	PMM	
PROJECT NO.:	02252.00004	
DATE:	06/16/98	

SURVEYED BY: CIVIL ENGINEERING ASSOCIATES, INC.

Base plan developed by Civil Engineering Associates, Inc. dated September 1997

Appendix A

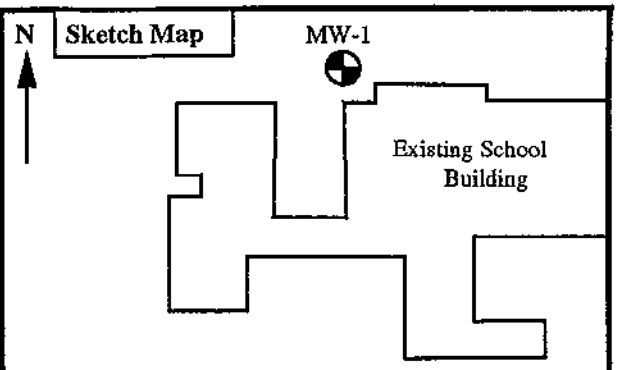
Soil Boring and Monitoring Well Logs

ATC Associates Inc.
Monitoring Well Log

WELL NUMBER MW-1

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. 2" **LENGTH** 10.0' **SLOT SIZE** 0.10
CASING DIA. 2" **LENGTH** 5.0' **TYPE** PVC
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

N **Sketch Map**

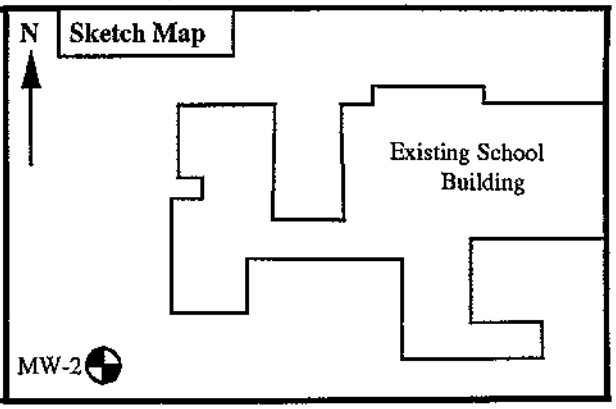


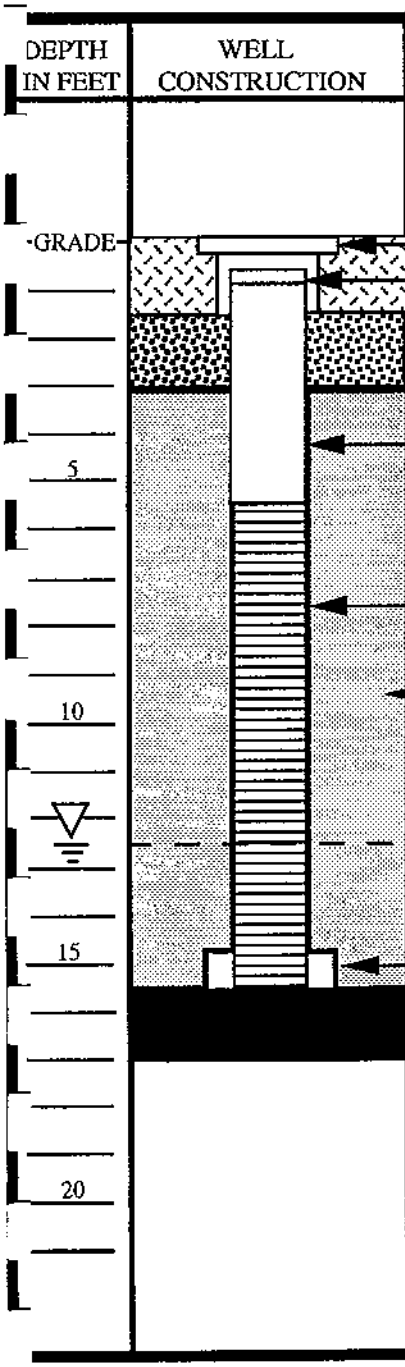
DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
-GRADE-		ROAD BOX LOCKING CAP		
		BENTONITE	Non Detect (ND)	**0.0-2.0'** (7,14,15,12) Dry, fine to medium SAND and medium to coarse GRAVEL.
		5.0' PVC RISER		
5 ▽			ND	**5.0-7.0'** (7,8,8,8) Damp, brown slity CLAY, dense, plastic.
		SCREEN (0.10)		
		SANDPACK #1 Silica Sand		
10			ND	**10.0-12.0'** (1,1,1,2) Wet, brown/gray SILT and CLAY.
15		BOTTOM CAP	ND	**15.0-17.0'** (1,1,1,1) Wet, gray SILT and CLAY.
20				WELL CONSTRUCTION: Screen 15.5' to 5.5' Riser 5.5' to 0.5' Sand 15.5' to 3.0' Plug 3.0' to 1.5'

ATC Associates Inc.
Monitoring Well Log

WELL NUMBER MW-2

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. 2" **LENGTH** 10.0' **SLOT SIZE** 0.10
CASING DIA. 2" **LENGTH** 5.0' **TYPE** PVC
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray



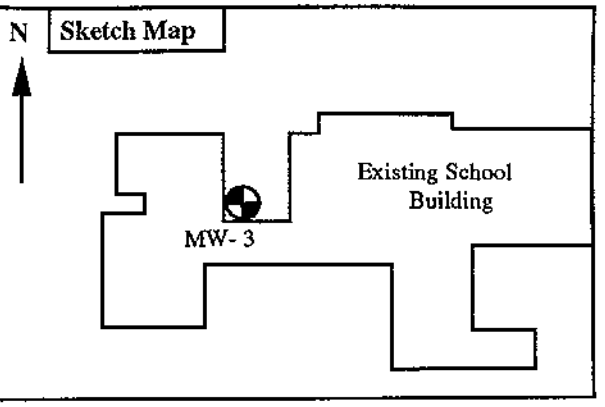


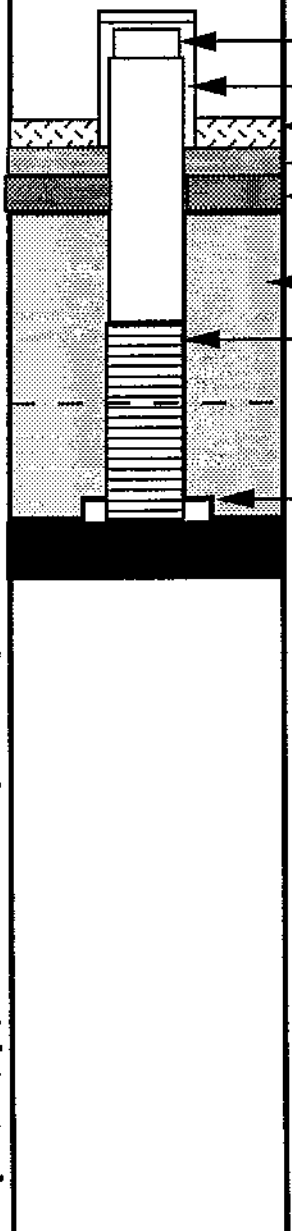
DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
			Non Detect (ND)	**0.0-2.0'** (8,10,13,15) Dry SILT, SAND, and GRAVEL.
			ND	**5.0-7.0'** (3,3,4,4) Damp SAND and GRAVEL, little silt.
			ND	**10.0-12.0'** (1,3,6,8) Wet, gray SILT, some clay.
			ND	**15.0-17.0'** (3,3,6,Refusal) Wet, medium to coarse GRAVEL, some coarse to medium sand, little silt.
				WELL CONSTRUCTION: Screen 15.5' to 5.5' Riser 5.5' to 0.5' Sand 15.5' to 3.0' Plug 3.0' to 1.5'

ATC Associates Inc.
Monitoring Well Log

WELL NUMBER MW-3

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, VT
DATE DRILLED 5/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. 2" **LENGTH** 10.0' **SLOT SIZE** 0.10
CASING DIA. 2" **LENGTH** 7.5' **TYPE** PVC
DRILLING CO. Tri-State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray





DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
			ND (Non-Detect)	**0.0'-5.0'** Cuttings - Dry, dark brown SILT, CLAY, and GRAVEL.
			ND	**5.0'-7.0'** (5,6,7,7) Dense, light brown, damp CLAY, some silt.
			ND	**10.0'-12.0'** (3,3,5,6) Damp, brown/gray, plastic CLAY, some silt.
			ND	**15.0'-17.0'** (1,1,1,2) Wet, gray SILT, some clay.

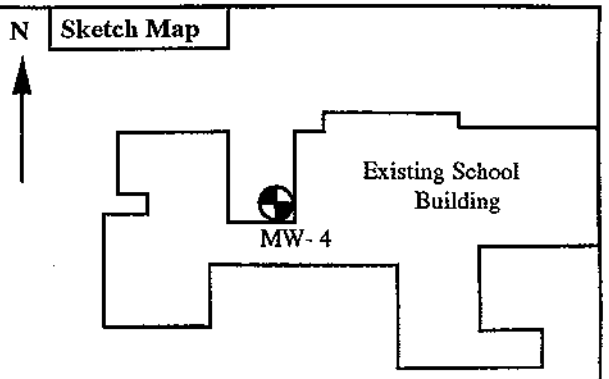
WELL CONSTRUCTION: Screen 15.0' to 5.0'
Riser 5.0' to + 2.5'
Sand 15.0' to 3.0'
Plug 3.0' to 1.5'
Native 1.5' to 0.5'
Cement 0.5' to 0.0'

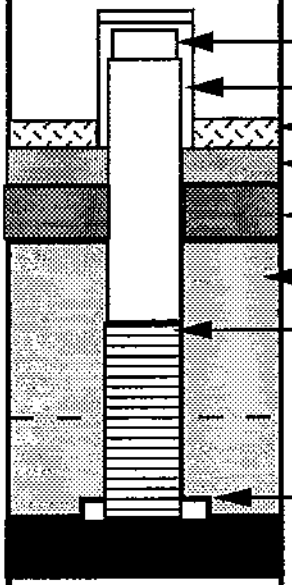
ATC Associates Inc.
Monitoring Well Log

WELL NUMBER MW-4

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, VT
DATE DRILLED 5/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. 2" **LENGTH** 10.0' **SLOT SIZE** 0.10
CASING DIA. 2" **LENGTH** 7.5' **TYPE** PVC
DRILLING CO. Tri-State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

Sketch Map





DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
		TOP CAP STEEL STICK-UP CEMENT APRON NATIVE FILL BENTONITE	ND (Non-Detect)	**0.0'-5.0'** Cuttings - Dry, light brown SAND and GRAVEL.
		SANDPACK SCREEN	ND	**5.0'-7.0'** (1,2,3,3) Wet, angular, coarse - fine GRAVEL and SILT.
			ND	**10.0'-12.0'** (2,2,3,4) Light brown, dense, wet, plastic CLAY, some silt.
		BOTTOM CAP	ND	**15.0'-17.0'** (2,1,1,1) Wet, gray SILT and CLAY.

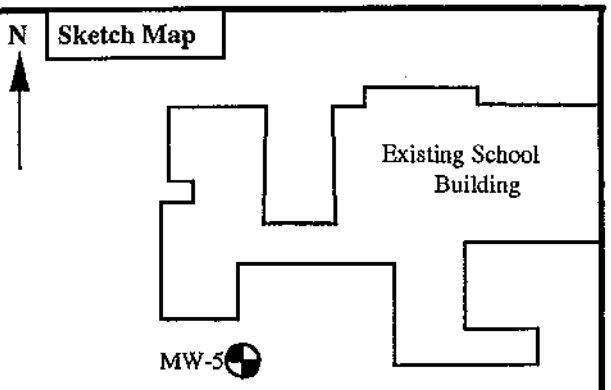
WELL CONSTRUCTION: Screen 15.0' to 5.0'
Riser 5.0' to + 2.5'
Sand 15.0' to 3.5'
Plug 3.5' to 2.0'
Native 2.0' to 0.5'
Cement 0.5' to 0.0'

ATC Associates Inc.
Monitoring Well Log

WELL NUMBER MW-5

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. 2" **LENGTH** 10.0' **SLOT SIZE** 0.10
CASING DIA. 2" **LENGTH** 5.0' **TYPE** PVC
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

Sketch Map

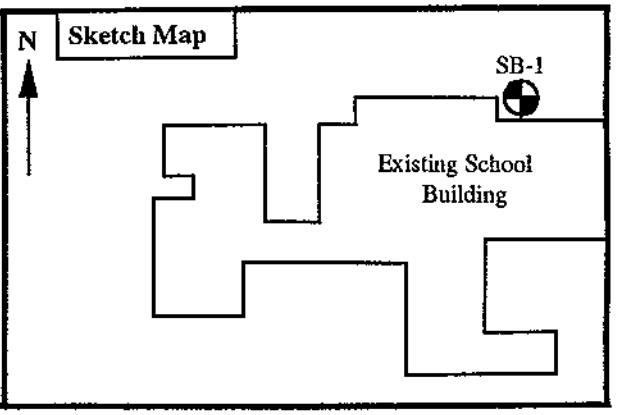


DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE		ROAD BOX LOCKING CAP NATIVE BACKFILL BENTONITE 5.0' PVC RISER		
5		SCREEN (0.10) SANDPACK #1 Silica Sand	0.2 ppm	**5.0-7.0'** (5,6,6,8) Moist, light brown/gray CLAY, some silt.
10			0.2 ppm	**10.0-12.0'** (1,1,1,1) Wet, gray SILT, some clay.
15		BOTTOM CAP	0.4 ppm	**15.0-17.0'** (16,14,13,25) Wet, angular ROCK FRAGMENTS, some rounded gravel, course sand and silt.
20				WELL CONSTRUCTION: Screen 15.5' to 5.5' Riser 5.5' to 0.5' Sand 15.5' to 4.0' Plug 4.0' to 2.5'

ATC Associates Inc.
Monitoring Soil Boring Log

SOIL BORING NUMBER SB-1

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 BORING DEPTH 10'
DIAMETER 6"
SCREEN DIA. N/A LENGTH N/A SLOT SIZE N/A
CASING DIA. N/A LENGTH N/A TYPE N/A
DRILLING CO. Tri State DRILLING METHOD HSA
DRILLER Wayne Ault LOG BY P. Murray



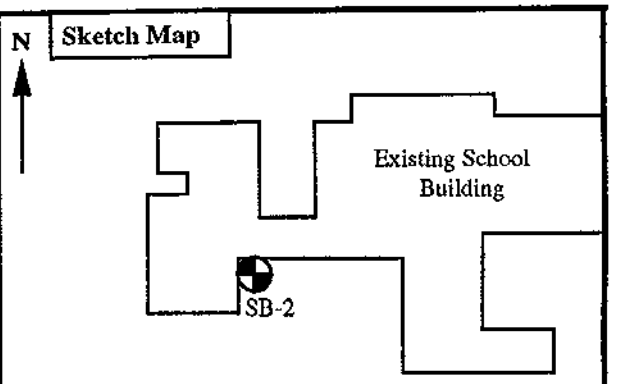
DEPTH IN FEET	SOIL BORING DIAGRAM	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE			Non Detect (ND)	**0.0-2.0'** (6,12,24,32) Moist, dark brown SAND, GRAVEL, and SILT.
5		NATIVE BACKFILL	ND	**5.0-7.0'** (5,5,8,8) Light brown, damp CLAY, some silt.
10			ND	**10.0-12.0'** (2,1,1,1) Wet, gray CLAY and SILT..
15				
20				

ATC Associates Inc.
Monitoring Soil Boring Log

SOIL BORING NUMBER SB-2

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 20'
DIAMETER 6"
SCREEN DIA. N/A **LENGTH** N/A **SLOT SIZE** N/A
CASING DIA. N/A **LENGTH** N/A **TYPE** N/A
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

Sketch Map



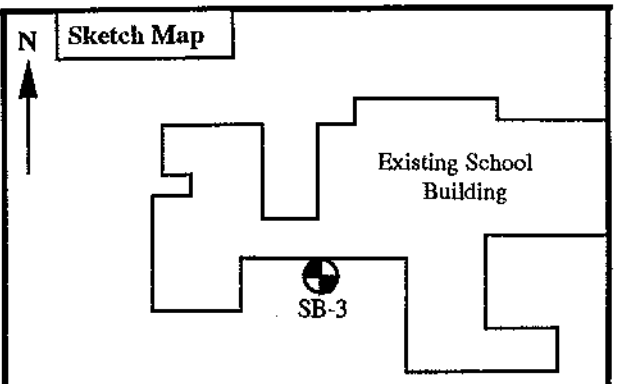
DEPTH IN FEET	SOIL BORING DIAGRAM	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE			Non Detect (ND)	**0.0-5.0'** Cuttings - SILT, CLAY, and GRAVEL.
5		NATIVE BACKFILL	ND	**5.0-7.0'** (2,2,4,5) Damp, light brown CLAY, some silt.
10			ND	**10.0-12.0'** (3,4,4,7) Damp, olive CLAY, little silt very fine sand laminae.
15			ND	**15.0-17.0'** (1,1,1,1) Wet, runny, gray SILT, some clay.
20			ND	**20-22'** (3,12,10,10) Wet, runny, gray SILT, little clay.

ATC Associates Inc.
Monitoring Soil Boring Log

SOIL BORING NUMBER SB-3

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 10'
DIAMETER 6"
SCREEN DIA. N/A **LENGTH** N/A **SLOT SIZE** N/A
CASING DIA. N/A **LENGTH** N/A **TYPE** N/A
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

Sketch Map



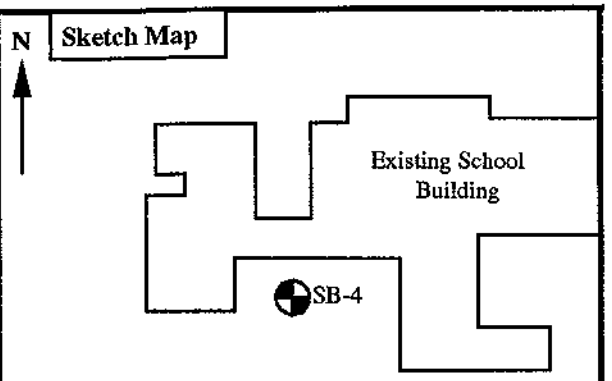
DEPTH IN FEET	SOIL BORING DIAGRAM	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE			Non Detect (ND)	**0.0-5.0'** Cuttings - Dry SAND, GRAVEL, and SILT.
5		NATIVE BACKFILL	ND	**5.0-7.0'** (3,6,6,15) Dry to damp, light brown CLAY, some silt.
10			ND	**10.0-12.0'** (10,6, Refusal) Wet, olive, dense CLAY, some silt.
15				
20				

ATC Associates Inc.
Monitoring Soil Boring Log

SOIL BORING NUMBER SB-4

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 **BORING DEPTH** 15'
DIAMETER 6"
SCREEN DIA. N/A **LENGTH** N/A **SLOT SIZE** N/A
CASING DIA. N/A **LENGTH** N/A **TYPE** N/A
DRILLING CO. Tri State **DRILLING METHOD** HSA
DRILLER Wayne Ault **LOG BY** P. Murray

Sketch Map

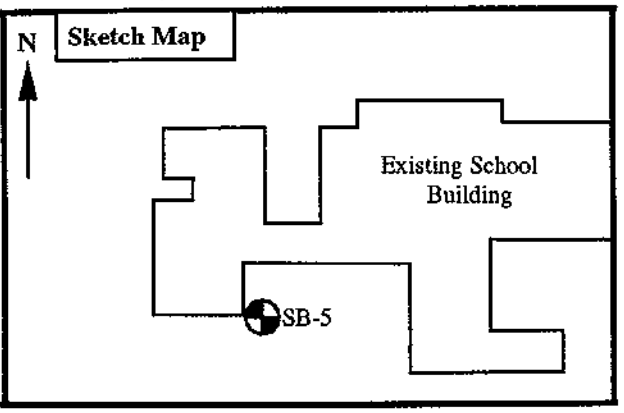


DEPTH IN FEET	SOIL BORING DIAGRAM	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE				
			Non Detect (ND)	**0.0-3.0'** Cuttings - Dry, fine to medium GRAVEL.
			ND	**3.0-5.0'** (12,9,5,5) Dry SAND and GRAVEL.
5		NATIVE BACKFILL	ND	**5.0-7.0'** (5,3,5,9) Damp, dark brown, dense CLAY.
	▽			
10			ND	**10.0-12.0'** (5,3,4,6) Moist, light brown, dense CLAY little silt, very fine sand laminae.
15			ND	**15.0-17.0'** (2,2,1,1) Wet, gray, runny SILT, some clay.
20				

ATC Associates Inc.
Monitoring Soil Boring Log

SOIL BORING NUMBER SB-5

PROJECT NAME Hinesburg Elementary School
PROJECT # 02252-00004
LOCATION Hinesburg Elementary School, Hinesburg, Vermont
DATE DRILLED 05/19/98 BORING DEPTH 15'
DIAMETER 6"
SCREEN DIA. N/A LENGTH N/A SLOT SIZE N/A
CASING DIA. N/A LENGTH N/A TYPE N/A
DRILLING CO. Tri State DRILLING METHOD HSA
DRILLER Wayne Ault LOG BY P. Murray



DEPTH IN FEET	SOIL BORING DIAGRAM	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE			Non Detect (ND)	**0.0-5.0'** Cuttings - Dry SILT, SAND, and GRAVEL.
5		NATIVE BACKFILL	ND	**5.0-7.0'** (2,4,4,7) Damp, dense, gray/brown CLAY, some silt.
10			ND	**10.0-12.0'** (3,4,5,6) Damp, dense, brown/gray CLAY, some silt.
15			ND	**15.0-17.0'** (1,2,4, Refusal) Wet, runny, gray SILT, some clay.
20				

Appendix B

Ground Water Laboratory Analytical Results

Pace Analytical Services, Inc.
5156 East 65th Street
Indianapolis, IN 46220
Tel: 317-845-7730
Fax: 317-845-0630

Pace Analytical

June 8, 1998

Mr. Peter Murray
ATC Associates Inc.
Browns Trace Building
Route #2, P. O. Box 3
Richmond, VT 05477

Re: Six Water BTEX
Chittenden South School District
Pace Work Order Number 98052533
ATC Project Number 02252.0004

Dear Mr. Murray:

Attached is an eight page report of results for the Organic Analyses for the six water samples which were submitted to Pace Analytical on May 29, 1998, on behalf of the Chittenden South School District. The BTEX samples were analyzed on a Hewlett Packard 5890II Gas Chromatograph equipped with a Photoionization Detection system via U.S. EPA Method 602 for Purgeable Aromatic Compounds. Prior to analysis, the system was calibrated with the appropriate standard.

The analytical procedures are performed in accordance with the Pace Analytical Standard Operating Procedures, which are based on the methods referenced in this report. These SOPs are available for your review upon request.

Any associated Quality Control information will be maintained in the Pace Analytical files, a copy of which can be forwarded to you upon request. After a thirty-day period, a fee will be assessed for this additional information.

Two copies of this Analytical Report are being provided for your records. Additional copies can be provided at a minimum cost of $30.00 per copy.

Results in this report relate only to the items tested.

Respectfully submitted,

Donna S. Spyker

Donna Spyker
GC Group Leader
Pace Analytical

DS/js

ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 054779601

Attn : Peter Murray

Cust Proj #: 02252.0004

Lab Proj #: 98052533
Date : 06/15/1998

Date Received : 05/29/1998
Date Completed: 06/15/1998

REPORT OF ANALYSIS

ATC Sample Number	Client Sample Description
98-010414	WS-01
98-010415	WS-02
98-010416	WS-03
98-010417	WS-04
98-010418	WS-05
98-010419	WS-06

This report shall not be reproduced except in full, without approval of the Laboratory.

Certified By
Donna S. Spyker

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010414
Date Collected: 05/28/98 11:44
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-01
MW-1

	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/03/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/03/98

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010415
Date Collected: 05/28/98 11:52
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-02

MW-4	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/03/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/03/98

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010416
Date Collected: 05/28/98 11:56
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-03
MW-3

	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/03/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/03/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/03/98

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010417
Date Collected: 05/28/98 12:20
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-04
MW-2

	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/02/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/02/98

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010418
Date Collected: 05/28/98 12:20
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-05
Duplicate

	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/02/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/02/98

Date of Report: 06/15/98
Project Number: 98052533
Lab ID: 98-0010419
Date Collected: 05/28/98 08:30
Collected By: Client
Date Received: 05/29/98 00:00
C of C Number:
Temperature: Received on Ice

Attention: Peter Murray
ATC Associates, Inc.
Brown's Trace Building
Route 2, Box 3
Richmond VT 05477-9601

Sample Desc: WS-06
Trip Blank

	Result	Unit	PQL	Procedure	Test Date
ORGANIC					
GC VOLATILES					
Benzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Ethylbenzene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Methyl Tertiary Butyl Ether (MTBE)	<10	ug/L	10	8020 BTEX	06/02/98
o-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
m,p-Xylene	<1.0	ug/L	1.0	602 BTEX	06/02/98
Toluene	<1.0	ug/L	1.0	602 BTEX	06/02/98

Chain of Custody

Serial No. 007948

oject Name: Chittenden South S.U. UST Project No.: 01252.00004 Client: Chittenden South School District Lab No.:

mpler:(Signature) John Simms Turnaround:(Circle One) 24 hours 48 hours 72 hours 1 week (Normal) Date Required:_____

ssible Hazard: Yes___ Unknown X (Comment Below) Well Sample Sample Disposal: Return to Client___ Disposal by Lab* X (*May be an additional Charge)

ecial Instructions:

mpliance Samples: Yes___ No✓ State:_____

Cooler Temperature: On Ice ✓ Temperature_____

ient mple). No.	Lab I.D. No.	Date	Time	Water	Soil	Comp.	Grab	Preservatives: Filtered	Iced	Acidified	Preservative Confirmed	No. of Containers	Laboratory Analysis: BTEX 602/8020	BTEX 624/8240	VOC 624/8240	SVOC 625/8270	TPH Method:	PNA 610/8310	Pb: Total or TCLP	RCRA 8 Metals	TCLP Metals	Bacterial	Asbestos	Remarks/ Sample Location
01		5/28/98	1141	✓			✓		✓	✓		2	X											MW-1
02			1152	✓			✓		✓	✓			X											MW-4
03			1156	✓			✓		✓	✓			X											MW-3
04			1220	✓			✓		✓	✓			X											MW-2
05			1230	✓			✓		✓	✓			X											Duplicate
06		↓	0830	✓			✓		✓	✓		↓	X											Trip Blank

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ENVIRONMENTAL GEOTECHNICAL AND MATERIALS PROFESSIONALS
Analytical Services
5150 E. 65th Street
Indianapolis, IN 46220
(317) 849-4990 • FAX (317) 842-7932

inquished By: (Signature)	John Simms	Date: 5-28-98	Time: 1450	Received By: (Signature)	Date: Time:
inquished By: (Signature)		Date:	Time:	Received By: (Signature)	Date: Time:
inquished By: (Signature)		Date:	Time:	Received By: (Signature)	Date: Time:

Project Manager:(Signature) [signature] for PMM

Project Manager:(Print) Peter Murray

Phone Number: 703-434-3113

The Laboratory must provide a copy of this Chain of Custody with results.