



GILES

ENGINEERING ASSOCIATES, INC.

GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

- Atlanta, GA
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- Orlando, FL

August 16, 2011

Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King Drive
Milwaukee, WI 53212

Attention: Ms. Shanna Laube-Anderson c/o
Ms. Victoria Stovall

Subject: Response to WDNR Correspondence dated April 18, 2011
Martinizing Dry Cleaning Site
1730 State Street
Racine, Wisconsin
BRRTS No. 02-52-549890
FID No. 252251010
Project No. 1E-0909013

Dear Ms. Laube:

Giles Engineering Associates, Inc. (Giles) has prepared the following response to the Wisconsin Department of Natural Resources (WDNR) concerns presented in their correspondence dated April 18, 2011. The WDNR has requested that the following concerns be addressed including:

1. The vertical extent of soil contamination for PCE and TCE has not been defined near MW-1, MW-2, GP-1, and GP-2. The department is concerned that it appears concentrations of these contaminants are increasing with depth.

Giles completed soil boring MW-2 during the initial investigation phase, conducted in January 2010; subsequently additional borings GP-1 through GP-7 and MW-5 through MW-8 were completed in June and July, 2010 to complete the horizontal soil delineation. The highest Perchloroethene (PCE) detections were reported in the soil samples from fill material collected from MW-2, suggesting that it was proximate or within the release area. GP-1 was nested approximately 1 foot from MW-2 and three soil sample intervals were collected to evaluate the vertical contaminant profile. In general, the PCE levels dropped from 5,200,000 mg/kg (MW-2, 0 to 2 feet) to 47,000 mg/kg (GP-1, 12-14 feet).



2. Does your consultant have any suggestions for why the levels of contamination are higher outside the building than they are inside the building near the drycleaning machine? Does the building have floor drains that are either connected not connected to the city sewer or maybe damaged and leaking into the soils? An explanation is necessary please.

It is Giles opinion that the levels of contamination are higher outside the building from historic placement/storage of drycleaner waste in dumpsters in this area and/or historic losses/spills of drycleaner fluid when receiving and off-loading bulk product into the dry cleaning machine. Discussions with the Site owner have indicated that the sanitary sewer, storm sewer, and water utilities enter the property from the east. The floor drains of the building are tied into the sanitary utility; and no floor drains exist that are not connected to the sanitary utility.

Drilling activities completed beneath the building and parking lot revealed the presence of a granular sub-base fill material that ranged from six inches to three feet in thickness. The granular fill may have contributed to the lateral distribution of PCE in soil and groundwater.

3. MW-1, MW-2, MW-3, and MW-4 appear to be acting as piezometers as the screens are beneath the water table. Do you and your consultant feel comfortable that these monitoring points are collecting the necessary information to eventually get this site to a point of closure?

Monitoring wells screens for MW-1 through MW-4 were established based on the conditions observed in the field at the time the wells were constructed. The soil profile was observed to be unsaturated until the 10 to 12 foot interval for MW-1; the 6 to 8 foot interval for MW-2; and the 4 to 6 foot interval for MW-3 and MW-4. The water table appears to be perched and residing in the shallow granular fill material observed in MW-1 through MW-4.

Because PCE has a molecular weight that is greater than water, it will sink through the water column. Therefore, the existence of the screen intervals 1 to 3 feet beneath the water table should not significantly bias the groundwater quality results.

4. Have you evaluated potential vapor intrusion into the building from the contaminated soils beneath the building? If not that must be done.

Giles has attached a change in scope and cost estimate (Change order No.2) for the requested sub-slab vapor intrusion testing for the WDNR's review and concurrence.





Site Investigation Results Summary
Martinizing Dry Cleaners
Racine, Wisconsin
Project No. 1E-0909013
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5. If it is determined that there are floor drains with associated piping, please collect soil samples from the length of the piping runs.

Please see the aforementioned attached a change in scope and cost estimate (Change order No.1) for the requested soil sampling along the piping runs entering the property from the east.


6. Have your consultant develop cross sections for this site. It appears that there are some anomalies with the geology that could impact the remedial action phase of this project.


Please see the attached cross-sections in accordance the WDNR's request.

Please contact the undersigned with any questions.

Very truly yours,

GILES ENGINEERING ASSOCIATES, INC.


Kevin T. Bugel, P.G., C.P.G.
Environmental Division Manager


Thomas J. Bauman, P.G.
Project Hydrogeologist

Attachments: Change Order No. 1
Cross-Section Figures

Distribution: Wisconsin Department of Natural Resources
Attn: Ms. Shanna Laube-Anderson (1)

BMP Reality
Attn: Mr. Douglas Berry (1)

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**TABLE 1
PROPOSED SCHEDULE OF FEES
CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING
RACINE, WISCONSIN**

Phase No.	Description	CONSULTANT FEES			SUBCONTRACTOR FEES	Budget
		Labor	Expenses	Equipment		
TASK 01:	SAMPLING PLAN PREPARATION	\$650	\$0	\$0	\$0	\$650
TASK 02:	DIRECT-PUSH SOIL SAMPLING	\$810	\$54	\$104	\$820	\$1,788
TASK 03:	SUB-SLAB VAPOR SAMPLING	\$1,230	\$0	\$753	\$550	\$2,533
TASK 04:	LETTER REPORT PREPARATION	\$1,245	\$0	\$0	\$0	\$1,245
Fee Estimate		\$3,935	\$54	\$856	\$1,370	\$6,215

**TABLE 1
PROPOSED SCHEDULE OF FEES
CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING
RACINE, WISCONSIN**

SUBCONTRACTOR FEES DETAIL		SUBCONTRACTOR FEES	Budget
TASK 01:	SAMPLING PLAN PREPARATION	\$0	\$0
TASK 02:	DIRECT-PUSH SOIL SAMPLING	\$820	\$820
	Laboratory Subcontractor Costs	\$140	
	Direct-push Subcontractor Costs	\$680	
TASK 03:	SUB-SLAB VAPOR SAMPLING	\$550	\$550
	Laboratory Subcontractor Costs	\$550	
TASK 04:	LETTER REPORT PREPARATION	\$0	\$0
TOTALS:			\$1,370

BUDGET WORKSHEET**PROJECT NAME:** CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING**CITY, STATE:** RACINE, WISCONSIN**PROJECT NO:** 1E-0909013

TASK 01:		SAMPLING PLAN PREPARATION		\$650.00	
GILES LABOR		Units	Unit Rate	Quantity	Price
REGIONAL MANAGER	hr.	\$120.00			\$0.00
DIVISION MANAGER	hr.	\$120.00		4	\$480.00
SENIOR PM	hr.	\$110.00			\$0.00
PROJECT PM II	hr.	\$100.00			\$0.00
PROJECT PM I	hr.	\$95.00			\$0.00
STAFF ENV SCIENTIST I / II	hr.	\$85.00		2	\$170.00
STAFF GEOLOGIST II / I	hr.	\$75.00			\$0.00
ENV SPECIALIST I / II	hr.	\$65.00			\$0.00
CAD OPERATOR	hr.	\$55.00			\$0.00
WORD-PROCESSING	hr.	\$45.00			\$0.00
GILES LABOR COST TOTAL					\$650.00

BUDGET WORKSHEET

PROJECT NAME: CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING

CITY, STATE: RACINE, WISCONSIN

PROJECT NO: 1E-0909013

TASK 02: DIRECT-PUSH SOIL SAMPLING		\$1,787.50		
GILES LABOR	Units	Unit Rate	Quantity	Price
REGIONAL MANAGER	hr.	\$120.00		\$0.00
DIVISION MANAGER	hr.	\$120.00	1	\$120.00
SENIOR PM	hr.	\$110.00		\$0.00
PROJECT PM II	hr.	\$100.00		\$0.00
PROJECT PM I	hr.	\$95.00		\$0.00
STAFF ENV SCIENTIST I / II	hr.	\$85.00	2	\$170.00
STAFF GEOLOGIST II / I	hr.	\$75.00		\$0.00
ENV SPECIALIST I / II	hr.	\$65.00	8	\$520.00
CAD OPERATOR	hr.	\$55.00		\$0.00
WORD-PROCESSING	hr.	\$45.00		\$0.00
GILES LABOR COST TOTAL				\$810.00

GILES EMPLOYEE EXPENSES	Units	Unit Rate	Quantity	Price
Mileage-Giles Vehicle	mi.	\$0.60	90	\$54.00
GILES EMPLOYEE EXPENSES COST TOTAL				\$54.00

GILES EQUIPMENT	Units	Unit Rate	Quantity	Price
Survey Equipment	day	\$41	1	\$41.00
PID	day	\$75	0.5	\$37.50
Electronic Scale	day	\$25	1	\$25.00
GILES EQUIPMENT COST TOTAL				\$103.50

LABORATORY SUBCONTRACTOR COSTS	Units	Unit Rate	Quantity	Price
Synergy Labs, Inc.				
Soil Laboratory Analytical Methods				
VOCs 8260		\$70.00	2	\$140.00
Subtotal Soil Analytical Cost				\$140.00
LABORATORY SUBCONTRACTOR COST TOTAL				\$140.00

GEOPROBE SUBCONTRACTOR COSTS	Units	Unit Rate	Quantity	Price
Giles Drilling Division				
Mobilization/Demobilization	LS	\$200.00	1	\$200.00
0 to 20 feet	ft	\$8.50	30	\$255.00
20 to 40 feet	ft	\$9.50		\$0.00
Decon	ea	\$150.00	1	\$150.00
Temp Wells	ft	\$6.50		\$0.00
Expendables	LS			\$0.00
Borehole Abandonment	ft	\$2.50	30	\$75.00
Per diem	LS	\$150.00		\$0.00
OPTIONAL LUMP SUM DAILY Geoprobe Services	LS	\$1,500.00		\$0.00
GEOPROBE SUBCONTRACTOR COST TOTAL				\$680.00

BUDGET WORKSHEET

PROJECT NAME: CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING

CITY, STATE: RACINE, WISCONSIN

PROJECT NO: 1E-0909013

TASK 03:		SUB-SLAB VAPOR SAMPLING		\$2,532.50	
GILES LABOR		Units	Unit Rate	Quantity	Price
REGIONAL MANAGER		hr.	\$120.00		\$0.00
DIVISION MANAGER		hr.	\$120.00	2	\$240.00
SENIOR PM		hr.	\$110.00		\$0.00
PROJECT PM II		hr.	\$100.00		\$0.00
PROJECT PM I		hr.	\$95.00		\$0.00
STAFF ENV SCIENTIST I / II		hr.	\$85.00	4	\$340.00
STAFF GEOLOGIST II / I		hr.	\$75.00		\$0.00
ENV SPECIALIST I / II		hr.	\$65.00	10	\$650.00
CAD OPERATOR		hr.	\$55.00		\$0.00
WORD-PROCESSING		hr.	\$45.00		\$0.00
GILES LABOR COST TOTAL					\$1,230.00

GILES EQUIPMENT		Units	Unit Rate	Quantity	Price
PID		day	\$75	0.5	\$37.50
Air Sampling Pump		day	\$40	1	\$40.00
Helium Meter		ea	\$200	1	\$200.00
Helium Tracer Gas Kit		ea	\$400	1	\$400.00
Hammer Drill		ea	\$75	1	\$75.00
GILES EQUIPMENT COST TOTAL					\$752.50

LABORATORY SUBCONTRACTOR COSTS		Units	Unit Rate	Quantity	Price
Synergy Labs, Inc.					
Soil Laboratory Analytical Methods					
VOCs (Summa Canisters) TO-15		ea	\$275.00	2	\$550.00
LABORATORY SUBCONTRACTOR COST TOTAL					\$550.00

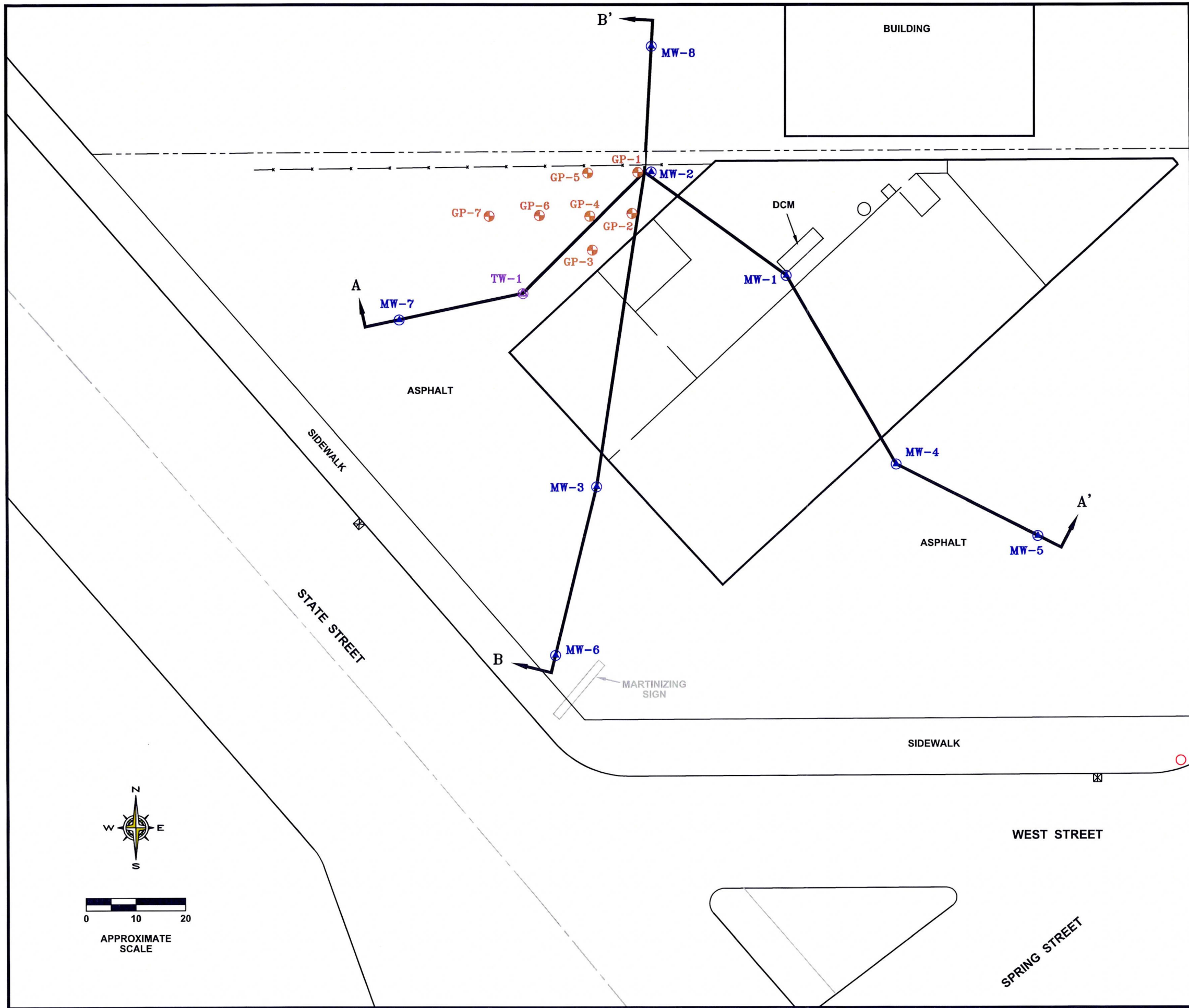
BUDGET WORKSHEET

PROJECT NAME: CHANGE ORDER NO. 2 - MARTINIZING DRY CLEANING

CITY, STATE: RACINE, WISCONSIN

PROJECT NO: 1E-0909013

TASK 04:		LETTER REPORT PREPARATION		\$1,245.00	
GILES LABOR		Units	Unit Rate	Quantity	Price
REGIONAL MANAGER	hr.	\$120.00			\$0.00
DIVISION MANAGER	hr.	\$120.00		2	\$240.00
SENIOR PM	hr.	\$110.00			\$0.00
PROJECT PM II	hr.	\$100.00			\$0.00
PROJECT PM I	hr.	\$95.00			\$0.00
STAFF ENV SCIENTIST I / II	hr.	\$85.00		10	\$850.00
STAFF GEOLOGIST II / I	hr.	\$75.00			\$0.00
ENV SPECIALIST I / II	hr.	\$65.00			\$0.00
CAD OPERATOR	hr.	\$55.00		2	\$110.00
WORD-PROCESSING	hr.	\$45.00		1	\$45.00
GILES LABOR COST TOTAL					\$1,245.00



LEGEND:

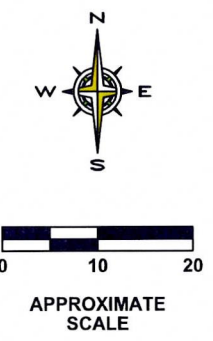
- A-A' LINE OF CROSS-SECTION
- GP-1 DIRECT-PUSH SOIL BORING
- MW-1 GROUNDWATER MONITORING WELL
- TW-1 TEMPORARY WELL
- FENCE
- ELECTRIC POLE
- CATCH BASIN

NOTES:
 1.) EXISTING FEATURES ARE APPROXIMATE BASED ON FIELD OBSERVATIONS AND AERIAL PHOTOGRAPHY.

GILES ENGINEERING ASSOCIATES, INC.
 N8 W22350 JOHNSON DRIVE, SUITE A1
 WAUKESHA, WI 53186 (262)544-0118

FIGURE 3
 CROSS-SECTION LOCATION PLAN
 MARTINIZING
 1730 STATE STREET
 RACINE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx. 1"=20'	05-04-11	--
PROJECT NO.: 1E-0909013			CAD No. 1E0909013E	



SPRING STREET

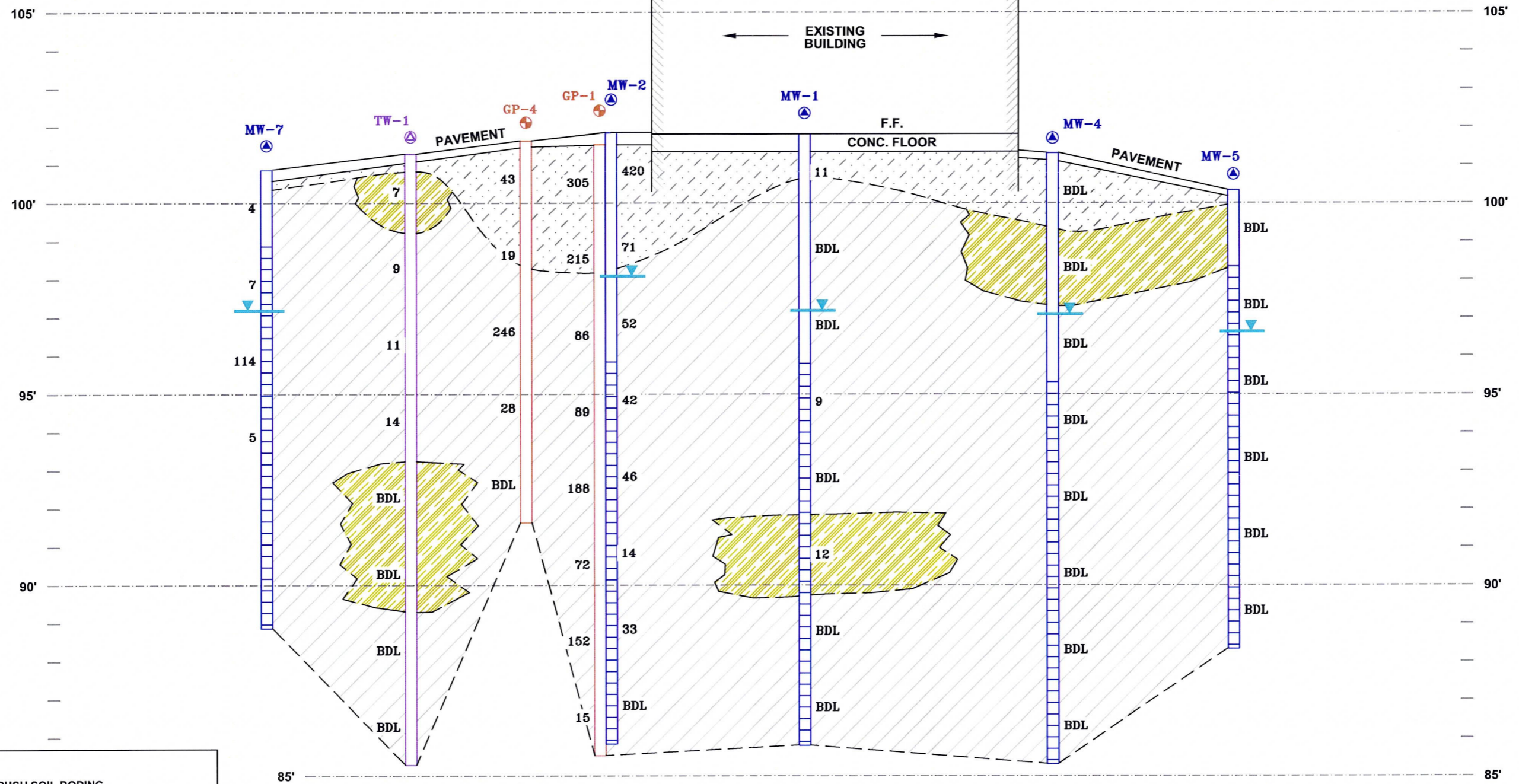
A
(WEST)

CROSS SECTION A-A'

SCALE: VERTICAL 1" = 3'
HORIZONTAL 1" = 20'

A'
(EAST)

ELEVATION (IN FEET REFERENCED TO AN ARBITRARY BENCHMARK)



LEGEND:

	DIRECT-PUSH SOIL BORING
	TEMPORARY WELL
	GROUNDWATER MONITORING WELL
	WELL SCREEN
	STATIC WATER LEVEL (12-01-10)
5	PHOTOIONIZATION DETECTOR (PID) READING
BDL	BELOW PID DETECTION LIMIT

SOIL KEY:

	FILL: SAND AND GRAVEL, WITH SOME ASPHALT FRAGMENTS
	CLAYEY SILT
	SILTY CLAY WITH SOME SAND
	SOIL CONTACT LINES ARE INFERRED

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**FIGURE 4
 CROSS-SECTION A-A'
 MARTINIZING
 1730 STATE STREET
 RACINE, WISCONSIN**

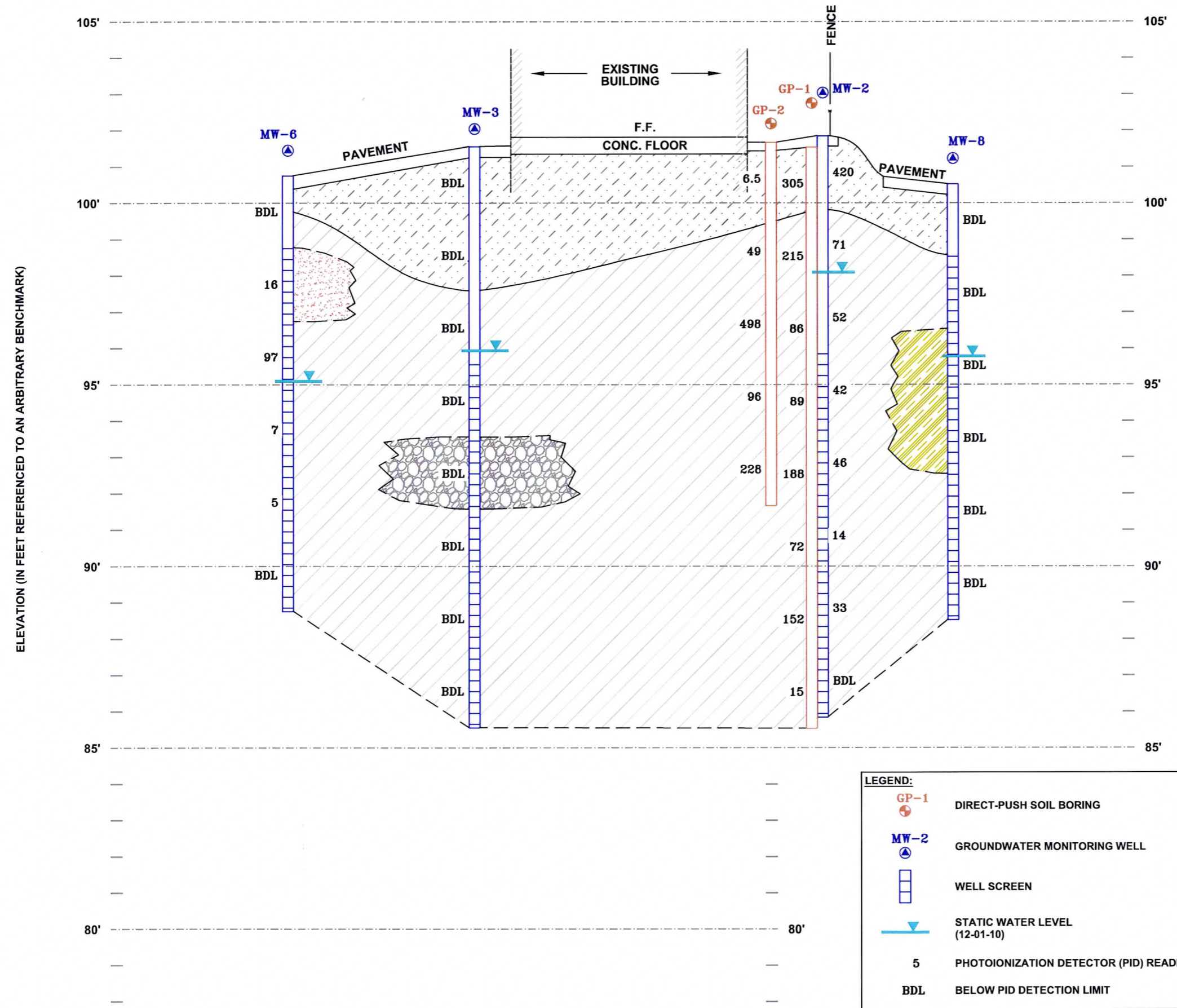
DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	SEE TITLE	04-29-11	--
PROJECT NO.: 1E-0909013			CAD No. 1E0909013F	

B
(SOUTH)

CROSS SECTION B-B'

SCALE: VERTICAL 1" = 3'
HORIZONTAL 1" = 20'

B'
(NORTH)



ELEVATION (IN FEET REFERENCED TO AN ARBITRARY BENCHMARK)

SOIL KEY:

- FILL: SAND AND GRAVEL, WITH SOME ASPHALT FRAGMENTS
- CLAYEY SILT
- SILTY CLAY WITH SOME SAND
- SAND
- SAND AND GRAVEL
- SOIL CONTACT LINES ARE INFERRED

LEGEND:

- GP-1 DIRECT-PUSH SOIL BORING
- MW-2 GROUNDWATER MONITORING WELL
- WELL SCREEN
- STATIC WATER LEVEL (12-01-10)
- 5 PHOTOIONIZATION DETECTOR (PID) READING
- BDL BELOW PID DETECTION LIMIT

GILES ENGINEERING ASSOCIATES, INC.
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 WAUKESHA, WI 53186 (262)544-0118

FIGURE 5
 CROSS-SECTION B-B'
 MARTINIZING
 1730 STATE STREET
 RACINE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	SEE TITLE	05-04-11	--
PROJECT NO.: 1E-0909013			CAD No. 1E0909013G	