



QUARTERLY GROUNDWATER MONITORING REPORT

FORMER ONE HOUR MARTINIZING  
1923 MAIN ST  
GREEN BAY, WI

BRRTS # 02-05-217276

Prepared for:  
Wisconsin Department of Natural Resources  
2984 Shawano Avenue  
Green Bay, WI 54313

May 16, 2017

Prepared by:

Matt Dahlem, PG  
Project Manager / Sr. Engineering Hydrogeologist

## TABLE OF CONTENTS

<b>1.0 INTRODUCTION AND BACKGROUND.....</b>	<b>3</b>
<b>1.1 Site Description and History.....</b>	<b>3</b>
<b>1.2 Project Background .....</b>	<b>3</b>
<b>2.0 GEOLOGIC CONDITIONS .....</b>	<b>5</b>
<b>2.1 Geology .....</b>	<b>5</b>
<b>2.1.1 Site-Specific Geological Characteristics.....</b>	<b>5</b>
<b>2.2 Hydraulic Gradient.....</b>	<b>5</b>
<b>2.3 Groundwater Velocity Calculations .....</b>	<b>6</b>
<b>3.0 GROUNDWATER SAMPLING AND RESULTS.....</b>	<b>8</b>
<b>3.1 Groundwater Chemistry Results.....</b>	<b>8</b>
<b>3.2 Geochemical Indicators .....</b>	<b>8</b>
<b>4.0 DISCUSSION .....</b>	<b>10</b>
<b>4.1 Groundwater Chemistry Results.....</b>	<b>10</b>
<b>4.2 Geochemical Indicators .....</b>	<b>11</b>
<b>4.3 Contaminant Trend Analysis.....</b>	<b>11</b>
<b>5.0 POTENTIAL CONTAMINANT RECEPTORS.....</b>	<b>12</b>
<b>5.1 Protection from Direct Contact with Soil Contaminants.....</b>	<b>12</b>
<b>5.2 Potential Groundwater Receptors .....</b>	<b>12</b>
<b>5.3 Potential Surface Water Receptors .....</b>	<b>12</b>
<b>5.4 Potential Vapor Migration or Inhalation of Particulates.....</b>	<b>12</b>
<b>6.0 CONCLUSIONS .....</b>	<b>14</b>
<b>7.0 RECOMMENDATIONS .....</b>	<b>15</b>
<b>8.0 INERPRETATION OF RESULTS.....</b>	<b>16</b>

## FIGURES

FIGURE 1: PRE-REMEDIAL SOIL CONTAMINATION

FIGURE 2: REMAINING SOIL CONTAMINATION

FIGURE 3: GROUNDWATER ELEVATION MARCH 21, 2017

FIGURE 4: GROUNDWATER CHEMISTRY MARCH 21, 2017

## TABLES

TABLE A.1. GROUNDWATER ANALYTICAL TABLE - VOCs

TABLE A.2. SOIL ANALYTICAL RESULTS TABLE - VOCs

TABLE A.4. VAPOR ANALYTICAL TABLE - VOCs

TABLE A.6 WATER LEVEL ELEVATIONS

TABLE A.7 GROUNDWATER NATURAL ATTENUATION

## APPENDICES

A: SITE PLAN

B: BORING LOGS

C: LABORATORY ANALYTICAL REPORTS

D: CONTAMINANT TREND ANALYSIS

## 1.0 INTRODUCTION AND BACKGROUND

### 1.1 Site Description and History

The former One Hour Martinizing (OHM) Main Street facility was located on the north side of Main Street at 1923 Main Street. The property is irregularly shaped and consisted of approximately 1.2 acres. The former trapezoidal building was slab on grade in a vacant small strip mall that formerly contained four stores with various businesses.

The property history is not fully known, but based on information from previous reports; a structure was built in approximately 1960, with expansions to the west in the mid 1960's to 1970's. The drycleaner was always present on the western end of the building, and operated from 1979 to 2008. The dry-cleaning machine was present approximately 20 feet east of the west wall along the eastern edge of the dry-cleaning store space. The former dry-cleaning operations utilized tetrachloroethene (PCE).

The dry-cleaning machine has been removed, the above-grade structures of the building were demolished by the owner in 2013, and the building concrete floor and footings remained intact until redevelopment of the property began in Spring-Summer 2016.

The property is currently irregularly shaped, consists of approximately 1.07 acres, owned by Floss Daily, LLC and has been redeveloped as Familia Dental with associated asphalt, concrete, a 5,000 square foot building and landscaped areas (Appendix A).

### 1.2 Project Background

Soil samples were obtained in 1999, and a release to the environment was reported to the Wisconsin Department of Natural Resources (WDNR). Due to the presence of contamination, a site investigation was required to determine the degree and extent of contamination in the soil and groundwater.

The site investigation was completed primarily by STS, Inc. Green Bay, WI, with borings and wells installed from 1999 to 2001. Groundwater sampling occurred at the ten well monitoring network through 2007, including off-site wells to the west and south. In October 2010, an additional round of groundwater samples and two soil borings were advanced to evaluate more recent conditions. The results have been compiled in reports that have been previously submitted to the WDNR.

As part of the remedial action that was won by competitive bid by Alpha Terra Science (now Fehr-Graham), soil borings and an additional round of groundwater samples were obtained in December 2012.

#### Historical Soil Contamination

In an effort to delineate the historic soil contamination on the property, Fehr-Graham collected 27 soil samples from 12 soil borings (B10 to B21) located within and outside the former building in December 2012. Groundwater samples from the ten (10) site groundwater monitoring wells (MW-1 to MW-9 and PZ-1) were also obtained in December 2012.

Soil chemistry results indicated relatively low concentrations of PCE were present in soil as there were no PCE concentrations that exceeded the non-industrial direct contact Residual Contaminant Level (RCL). However, the PCE in soil presented a risk for leaching to

groundwater at many locations on the property. Per WDNR, the generic concentration of PCE that can be present in soil and leach contaminants to the groundwater at levels above the NR 140 standards is only 4.5 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), which is the groundwater pathway soil RCL.

The most contaminated soil sample was obtained from boring HA1, located under the floor of the former building immediately west of the former dry cleaning machine. In 1999, the soil at this location contained approximately 4,100  $\mu\text{g}/\text{kg}$  PCE in soil from depths of approximately 1.5 to 2.5 feet below grade. In 2010, follow up soil samples were obtained from this location (HA-1R), with a detection of approximately 410  $\mu\text{g}/\text{kg}$  PCE in soil from a depth of 3.5 to 4 feet below grade. The depth to water at this location was between approximately 3 and 5 feet below grade.

The highest detection of PCE in soil outside the former building was from boring B16, located just to the east of MW-3, which had the most contaminated groundwater levels at the site. The soil at this location contained approximately 2,320  $\mu\text{g}/\text{kg}$  PCE in soil from depths of approximately 4 to 4.5 feet below grade. Soil at MW-3 contained 122  $\mu\text{g}/\text{kg}$  PCE at a depth of 3 to 5 feet, so the extent of elevated PCE was not widespread. The depth to water at this location was approximately 5 feet below grade.

The soil chemistry results are attached on Table A.2 and Figure 1.

#### Historical Groundwater Contamination

Groundwater monitoring has been ongoing since June 1999 / January 2000 from a network of nine water table wells and a piezometer. In April 2015, a network of groundwater monitoring wells were installed property wide by General Engineering Company (GEC) as part of a separate petroleum release site investigation. Fehr Graham has been sampling two of these wells (GEC TW-4 and GEC TW-5) since September 2015 in order to aid in contaminant plume delineation (Table A.1). Results from the most recent groundwater sampling event in March 2017 are included in this report.

#### Remedial Excavation Activities

The excavation activities took place on August 5-6, 2015. Per the WDNR approved Scope of Work, the excavation extended to a depth of 6 feet below grade, which was slightly below the water table. A total of 570.86 tons of PCE impacted soil was removed from the site, with direct loading and hauling to Advanced Disposal's Hickory Meadows subtitle D landfill in Hilbert, Wisconsin.

Soil chemistry results from the August 2015 remedial excavation have been summarized on Table A.2 and Figure 2. As expected, a majority of the excavation sidewall sample results indicated the soil contained elevated PCE concentrations above the groundwater pathway RCLs at all four excavation areas due to the approximate water table interface fluctuating between two and seven feet below grade since 1999. These results may represent saturated soil that is reflective of groundwater contamination and not residual soil contamination. The remaining confirmation samples are substantially below the PCE non-industrial direct contact (0-4') standard of 30,700  $\mu\text{g}/\text{kg}$ .

## 2.0 GEOLOGIC CONDITIONS

### 2.1 Geology

The Property is located approximately 0.90-miles east of the East River and approximately 2.7-miles south of Lake Michigan. Underlying the surface fill soils at the site is the Glenmore Member of the Kewaunee Formation, which consists of dull reddish-brown sand, silt, and clay. Till of this member was deposited by glacial ice of the Green Bay Lobe. Sand and gravel associated with the till was fluvially deposited between about 12,500 and 14,000 years ago.<sup>1</sup> The combination of the Glenmore Member of the Kewaunee Formation and the other underlying unconsolidated sediments in the area are approximately 50-100-feet thick<sup>2</sup> and are bounded below by Ordovician Prairie du Chien Group bedrock, consisting primarily of dolomite with some sandstone and shale.<sup>3</sup>

#### *2.1.1 Site-Specific Geological Characteristics*

The description of the subsurface conditions provided herein was derived from on-site observations of soil samples during the December 2012 environmental investigation. Representative environmental soil samples were obtained from the soil borings and visually classified using the Unified Soil Classification System (USCS) as a guideline.

The borehole log results (Appendix B) indicate that the site has 2-8-feet of fill material consisting of sand, silt, clayey sand, silty clay, sandy silt, clayey silt and silty gravel. Beneath the fill material, the site soils consisted of native silt, silty clay, sandy silt and clayey silt. Bedrock was not encountered in any of the borings to the maximum depth explored (8-feet below grade).

The above subsurface descriptions are generalized in nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in Appendix B should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, recovery percentage, PID readings and water levels. The stratifications shown on the boring logs represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.

### 2.2 Hydraulic Gradient

The depths to water measurements and groundwater elevations from this sampling event are summarized in Table A.6. The depth to groundwater on the nearly flat-lying Property ranged between 4.49 and 6.78 feet below grade. The direction of groundwater flow is to the northwest, toward the East River (Figure 3).

---

<sup>1</sup> Mickelson, D.M., Clayton, Lee, Baker, R.W., Mode, W.N., and Schneider, A.F., 1984, Pleistocene stratigraphic units of Wisconsin: Wisconsin Geological and Natural History Survey Miscellaneous Paper, no. 84-1, 15 p.

<sup>2</sup> Schmidt, R.R., 1987, Groundwater Contamination Susceptibility Map and Evaluation: Wisconsin Department of Natural Resources. Wisconsin's Groundwater Management Plan Report 5, PUBL-WR-177-87, 27p.

<sup>3</sup> Mudrey, M.G., Brown, B.A., and Greenberg, J.K., 1982, Bedrock Geologic Map of Wisconsin, WGNHS

The highest hydraulic head was observed at GEC TW-4 (597.37-feet amsl) and the lowest hydraulic head was observed at MW-9 (593.91-feet amsl). The hydraulic gradient is a vector gradient between two or more hydraulic head measurements over the length of the flow path where:

$$i = \frac{dh}{dl} = \frac{h_2 - h_1}{length}$$

*i* = hydraulic gradient GEC TW-4 to MW-9

*dh* = difference between two hydraulic heads

*dl* = flow path length between the two wells

$$i = \frac{597.37 \text{ feet} - 593.91 \text{ feet}}{130 \text{ feet}} = 0.027 \text{ feet/foot}$$

## 2.3 Groundwater Velocity Calculations

An accurate estimate of groundwater velocity can be calculated using Darcy's Law. Darcy's law is an equation that describes groundwater movement in aquifers based on three variables: horizontal hydraulic conductivity, horizontal hydraulic gradient and effective porosity. The equation for calculating ground water velocity is:

$$V = \frac{Ki}{n}$$

*V* = average linear ground-water flow velocity

*K* = average hydraulic conductivity

*i* = *dh/dl* = hydraulic gradient GEC TW-4 to MW-9 (0.027 feet/foot)

*n* = porosity

Site specific hydraulic conductivity tests were not performed, but the native formation where the groundwater column resides mainly consists of silt, silty clay, sandy silt and clayey silt. These soils most likely have low hydraulic conductivities, as all wells completed in the native materials could be purged dry using a bailer. These native deposits are assumed to have a hydraulic conductivity range of  $10^{-6}$  to  $10^{-4}$  cm/sec<sup>4</sup>. To provide an estimate, a mean value of  $10^{-5}$  was used for calculation purposes, which is equivalent to 0.00001 cm/sec, or 0.028 feet per day.

According to Morris and Johnson (1967)<sup>5</sup>, the silt, silty clay, sandy silt and clayey silt, which is the primary formation in which the water column resides, has a mean porosity percentage of 45%.

$$V = \frac{(0.028 \frac{ft}{day})(0.027 \frac{ft}{ft})}{0.45}$$

$$V = 0.002 \text{ feet/day} = 0.73 \text{ feet/year}$$

<sup>4</sup> Fetter, C. W. (1994). Applied Hydrogeology, 3rd ed. Upper Saddle River, NJ: Prentice Hall, Inc.

<sup>5</sup> Morris, D.A. and A.I. Johnson, 1967, Summary of hydrologic and physical properties of rock and soil materials as analyzed by the Hydrologic Laboratory of the U.S. Geological Survey, U.S. Geological Survey Water-Supply Paper 1839-D, 42p.

The estimated groundwater velocity at the site is considered low as it is  $\leq$ 1-foot per day.<sup>6</sup>

The groundwater level at the site, as well as perched water levels and volumes, will likely fluctuate throughout the year based on variations in rainfall, snowmelt, evaporation, surface run-off and other related hydrogeological factors. The water level measurements presented in this report are the levels that were measured at the time of Fehr Graham's field activities.

---

<sup>6</sup>Alley, W.M., Reilly, T.E., and Franke, O.L., 1999, Sustainability of Ground-Water Resources, U.S. Geological Survey Circular 1186, 79p.

### 3.0 GROUNDWATER SAMPLING AND RESULTS

#### 3.1 Groundwater Chemistry Results

Fehr Graham staff has completed post-remedial excavation quarterly groundwater sampling within the groundwater monitoring well network for VOCs on five occasions (November 2015, June 2016, September 2016, December 2016 and March 2017). In addition to the existing site groundwater monitoring wells, two additional samples were taken from temporary wells that were installed by GEC at the east side of the property as part of an independent petroleum release site investigation. Sampling was performed using standard sample procedures, with individually dedicated bailers or tubing with peristaltic pump for sampling.

Public health groundwater quality standards are established in WAC Chapter NR 140. Two water quality standards, the Enforcement Standard (ES) and the Preventative Action Limit (PAL) have been established for substances of public health and welfare concern. The ES represents the concentration that requires the implementation of response measures, which typically consist of remedial action or additional investigations. The PAL represents a lower concentration, which typically requires an assessment of the potential for concentrations to exceed the enforcement standards and implementation of responses to prevent an exceedance of the enforcement standards.

Groundwater samples were obtained from wells MW-1, MW-2, SMW-3, MW-4 through MW-9, PZ-1, GEC TW-4 and GEC TW-5. The groundwater chemistry results indicated the following:

- PCE exceeds the ES in groundwater monitoring well SMW-3 and exceeds the PAL in groundwater monitoring wells MW-1 and MW-7.
- TCE exceeds the ES in groundwater monitoring well SMW-3 and exceeds the PAL in groundwater monitoring well MW-9.
- Cis-1,2-dichloroethene (cis-1,2-DCE) exceeds the ES in groundwater monitoring well SMW-3.

The PAL exceedance for TCE in MW-9 are extremely low and falls between the laboratory limit of detection (LOD) and limit of quantification (LOQ). Concentrations this low relative to the laboratory analytical sensitivities may not always be reproducible, meaning the quantity reported is an estimate of the concentration and is not considered to be substantial.

The analytical results are summarized on Table A.1 and shown on Figure 4. The laboratory report is included in Appendix C.

#### 3.2 Geochemical Indicators

Natural attenuation depends upon both the contaminant's reactivity and the site's geologic and chemical characteristics. Assessment of the changes in a site's geochemical environment constitutes a secondary line of evidence. Geochemical parameters including temperature, dissolved oxygen, specific conductance (conductivity and electric conductance), pH, and oxidation/reduction potential were recorded during this sampling event to help in characterizing the groundwater quality at the site. Because other parameters listed below can affect the occurrence and the rate of natural biodegradation, they were collected to help understand the status of the chlorinated solvent degradation in the aquifer at the former OHM site (Table A.7).

**Temperature:** Effective biodegradation can generally occur within a temperature range of 5°C to 45°C<sup>7</sup>. The optimal temperature for complete reductive dechlorination of PCE to ethene is between 10 and 30°C<sup>8</sup>. Groundwater temperatures at the site ranged between 5.86 and 11.36°C, indicating conditions are right for biological activity and reductive dechlorination.

**pH:** Most natural ground waters have pH of 4 to 9, with the optimal range for microbial activity in groundwater being 5 to 9<sup>9</sup>. Groundwater at the site had a pH range between 6.51 and 7.10 pH units, which means pH conditions are favorable for the degradation of contaminated groundwater.

**Dissolved Oxygen (DO):** Generally, a water sample is “oxic” (oxidized, aerobic or oxygen-bearing) if its dissolved oxygen exceeds 0.5 mg/L<sup>10</sup>. The DO measured in the site groundwater ranges from 0.67 to 6.24 mg/L, indicating that oxygen is present in the aquifer.

**Oxidation-Reduction Potential (ORP):** The potential values for ORP in groundwater can range from -400 to +800 millivolts (mV)<sup>11</sup>. Solutions with higher ORP are more likely to oxidize new species, and solutions with lower ORP are more likely to reduce them. More negative values (reductive dechlorination), preferably below -200 mVs, indicate reducing reactions are occurring (loss of electrons, more positive ion results). Oxidizing reactions or aerobic oxidation (gain of electrons, more negative ion results) have a positive ORP. Positive readings suggest that a reaction is more likely to occur spontaneously without the need of extra energy and is an indication that aerobic biodegradation may be occurring<sup>12</sup>. The ORP in the site groundwater ranges between 79.7 and 165.2 mV. The positive ORP values generally indicate the groundwater is oxidizing (aerobic).

**DO/ORP:** “DO and ORP readings need to be agreeable for oxidizing conditions. Readings should show a DO value less than 1mg/L when ORP is negative or a value greater than 1 when ORP is positive. As seen by the existing data, this relationship is true of the site groundwater, verifying that oxidizing (aerobic) conditions exist.

**Specific Conductivity:** This is a measure of water’s ability to transmit electric current while indirectly measuring the amount of total dissolved solids in groundwater<sup>13</sup>. Typical ranges of values for groundwater field measurements is 50 to 50,000 microSiemens per centimeter ( $\mu\text{S}/\text{cm}$ )<sup>14</sup>. The site wells had values between 400 and 6,063  $\mu\text{S}/\text{cm}$ .

---

<sup>7</sup> Colorado Department of Labor and Employment – Division of Oil and Public Safety, 2002, Monitored Natural Attenuation in Groundwater Guidance Document. 40 p.

<sup>8</sup> Dennis, P., J. Roberts, and S. Dworatzek, 2011, How Low Can You Go? Bioremediation of Chlorinated Ethenes in Cold Groundwater Abstract and Platform Presentation: REMTEC, Chicago, Illinois. May 16-19.

<sup>9</sup> WDNR Guidance Memorandum, 1993, Natural Biodegradation as a Remedial Action Option-Interim Guidance. Wisconsin Release News 3(1).

<sup>10</sup> Barker, J.F., Patrick, G.C., & D. Mayor, 1987, Natural Attenuation of Aromatic Hydrocarbons in a Shallow Sand Aquifer. Ground Water Monitoring Review, pp. 64- 71.

<sup>11</sup> Wiedemeier, T.H., 1999, Natural Attenuation of Fuels and Chlorinated Solvents in the Subsurface. John Wiley & Sons. 617 pages.

<sup>12</sup> American Petroleum Institute, 1997, Methods for Measuring Indicators of Intrinsic Bioremediation: Guidance Manual. Publ. No. 4658.

<sup>13</sup> Freeze, R.A. and Cherry, J.A., 1979, Groundwater. Prentice-Hall, Englewood Cliffs, NJ.

<sup>14</sup> Sanders, L.L., 1998, A Manual of Field Hydrogeology: Prentice-Hall, NJ, 381p.

## 4.0 DISCUSSION

### 4.1 Groundwater Chemistry Results

At monitoring well MW-3, the PCE and TCE concentrations were much higher at the time of groundwater sampling in December 2012 (PCE - 13,700 ug/l and TCE - 1,500 ug/l) compared to the initial sample results from June 1999 (PCE - 2,600 ug/l and TCE - <35.3 ug/l). These increasing groundwater concentrations from 1999 to 2012 indicated active source removal remediation was needed at this site.

After the remedial excavations took place in August 2015, the groundwater sample taken from SMW-3 (replacement sump for MW-3) showed concentrations are currently considerably lower than detected at MW-3 for PCE (4,150 µg/L in March 2017 compared to 13,700 µg/L in December 2012) and for TCE (1,050 µg/L in March 2017 compared to 1,500 µg/L in December 2012). The results for all wells are shown in Table A.1. Conversely, concentrations of cis-1,2-dichloroethene (cis-1,2-DCE), a compound indicating degradation of PCE, has been detected in SMW-3 above the NR140 ES in four out of the last six post-excavation sampling events. Degradation of PCE to TCE to cis-1,2-DCE can be readily observed in SMW-3 since the November 2015 remedial excavations.

MW-7 is located hydraulically down-gradient from the excavation area that contained the location of the dry cleaning machine and likely demonstrates the disturbance and re-introduction of PCE from the soil into the groundwater pathway. Monitoring well MW-9 is located further down-gradient from areas containing high levels of PCE. Currently levels of PCE in MW-7 and TCE in MW-9 are present at levels above the PAL, but below the ES. Future sampling could be anticipated to show an increase in concentrations as the PCE/TCE plume migrates and dissipates further along the path of groundwater. Concentrations of PCE are currently slightly lower than detected in December 2012 sample at MW-7 (2.0 µg/L in December 2012 and 1.7 µg/L in March 2017) while concentrations of TCE remained similar to the December 2012 sample at MW-9 (<0.48 µg/L in December 2012 and 0.58J µg/L in March 2017).

MW-1 is side gradient to the contaminant source and was above the PAL for PCE groundwater contamination. Concentrations of PCE are currently slightly lower than detected in December 2012 sample at MW-1 (6.5 µg/L in December 2012 and 4.8 µg/L in March 2017). This may be a result of a slight shifts in the groundwater flow direction over time. To note, the current PCE concentrations in MW-1 are significantly lower than that from the initial June 1999 results of 71.9 µg/L. The remaining sampled wells did not indicate the presence of PCE or TCE.

Both up-gradient wells GES TW-4 and GES TW-5 have never showed concentrations of dry cleaning compounds or compounds associated with chlorinated solvent degradation.

The vertical and horizontal extent of contamination has been defined based on groundwater chemistry results from further downgradient (MW-6 and MW-9) and deeper wells (PZ-1). Table A.1 and Figure 4 illustrate the groundwater findings.

## 4.2 Geochemical Indicators

Under strictly anaerobic conditions, both TCE and PCE are subject to reductive dechlorination<sup>15</sup>. The geochemical data suggests that the groundwater at the site is oxygen-rich (aerobic). In the presence of oxygen, bacteria are able to use the carbon found in contaminants as their primary food source. However, PCE's four chlorine atoms surround and block its two carbon atoms so the bacteria in the groundwater are not able to use the carbon as their primary food source, making PCE less susceptible aerobic biodegradation, suggesting reductive dechlorination is not occurring. However, the presence of PCE degradation compounds TCE and cis-1,2-DCE above the ES in the most contaminated well (SMW-3) may suggest that PCE is being broken down by hydrolysis, which is a non-biological chemical substitution reaction in which hydrogen ions in water react with organic molecules, replacing the chlorine atoms, and dechlorinating the PCE to the lesser chlorinated ethenes.<sup>16</sup>

## 4.3 Contaminant Trend Analysis

Semi-log plots of contaminant concentration vs. time and contaminant concentration vs. groundwater elevation were created for the groundwater monitoring wells where groundwater contamination currently exceeds the ES for PCE, TCE and cis-1,2-DCE in monitoring well SMW-3. These plots were assessed to determine if contaminant trends are stable or decreasing. The logarithm (to the base 10) of the PCE concentration data were plotted as a function of time (in days) in order to establish a trend<sup>17</sup>. This trend line is the semi-log<sub>10</sub>-transformed regression line. In addition, the groundwater elevation data has been superimposed on the concentration data. Charts of water level and chemistry results versus time are displayed in Appendix D, along with select trend analysis plots.

At monitoring well MW-3, the PCE concentrations are relatively stable over time and decreasing since December 2012. Additionally, PCE degradation compounds TCE and cis-1,2-DCE are increasing over time. The decreasing PCE trends of late and the increasing breakdown compounds are most likely due to the remedial excavations and dechlorination processes at play.

---

<sup>15</sup> Kastner, M., 1991, Reductive Dechlorination of Tri- and Tetrachloroethylenes Depends on Transition from Aerobic to Anaerobic Conditions, APPLIED AND ENVIRONMENTAL MICROBIOLOGY, July 1991, p. 2039-2046.

<sup>16</sup> Strauss, P., 1998, Natural Attenuation of Organic Compounds, Center for Public Environmental Oversight

<sup>17</sup> WDNR (2014). Guidance On Natural Attenuation For Petroleum Releases. PUB RR-614. 98 pages.

## 5.0 POTENTIAL CONTAMINANT RECEPTORS

Potential contaminant migration pathways of concern include direct contact with contaminated soil via ingestion, migration of contaminants to groundwater (which may be ingested by humans), vapor migration or inhalation of particulates, and the potential migration of contaminants to surface water.

### 5.1 Protection from Direct Contact with Soil Contaminants

Direct contact concerns usually apply to those soils located in the upper 4-feet of the ground surface that exceed WDNR non-industrial direct contact values. As shown on Figure 2, soil chemistry results indicated relatively low concentrations of PCE were present in soil as there were no PCE concentrations that exceeded the non-industrial direct contact Residual Contaminant Level (RCL). In addition, exposure to contaminated soil is not a significant migratory pathway of concern, as human contact to soil is limited by the site conditions, including the presence of asphalt, concrete, gravel and vegetative barriers across the property. Surface soils at the site are not impacted and do not pose a health concern unless redevelopment of the property brings people into direct contact with contamination.

### 5.2 Potential Groundwater Receptors

The main migratory pathway of concern is migration of contaminants to the groundwater. Utility corridors may intersect areas of soil or groundwater contamination and provide a preferential contaminant migration pathway. Sanitary and storm sewers, municipal water, and natural gas service the site via underground piping. The site has 2-8-feet of fill material consisting of sand, silt, clayey sand, silty clay, sandy silt, clayey silt and silty gravel underlain by low permeability of native silt, silty clay, sandy silt and clayey silt. Depending on the depth of the underground piping, the utility corridors may be more permeable than the surrounding native soil and could provide a preferential contaminant migration pathway. However, offsite migration is also inhibited by this low permeability as well. Based on soil and groundwater analytical data collected on site, the contaminant plumes do not appear to be migrating along utility corridors.

Additionally, there are no known private water supply wells functional within a ½-mile of the site. All homes and businesses in Green Bay are connected to the municipal supply. The City of Green Bay uses surface water from Lake Michigan to supply virtually all of their drinking water needs. Given the hydrogeological conditions at the property and the drinking water source for the area, the site does not appear to pose a risk to human health via groundwater ingestion.

### 5.3 Potential Surface Water Receptors

The site is located approximately 0.90-miles east of the East River. The East River discharges into the Fox River a point approximately 2.5-miles northeast of the site. The Fox River discharges into Lake Michigan a point approximately 1.3-miles north-northeast of the confluence of the East and Fox Rivers. Based on the analytical results and distance from the site, it is unlikely the site will adversely affect any surface water.

### 5.4 Potential Vapor Migration or Inhalation of Particulates

As part of redevelopment activities, a sub-slab vapor mitigation system was installed beneath the current “Familia Dentistry” building by American Radon Reduction. The system consists of

a piping network beneath the slab-on-grade “Familia Dentistry” building consisting of 3-inch diameter Schedule 30 PVC that is connected to a 4-inch diameter Schedule 40 4-inch riser pipe extending through the roof line that is connected to a “Radon Away” electric fan blower. The piping was bedded in approximately 10 to 12-inches of clear stone gravel. Two sub-slab vapor testing ports were installed by GEC personnel within the northeastern (VP-1) and southwestern (VP-2) portions of the building.

Subslab vapors beneath the floor of the current “Familia Dentistry” building were tested as part of the site investigation activities by GEC. Laboratory samples were obtained from two locations (VP-1 and VP-2) on September 2, 2016 and January 30, 2017.

The subslab laboratory analytical results from the most recent sampling event indicate the presence of various compounds at low microgram per cubic meter levels. The subslab vapor detections have been compared to standards for inhalation of air in a small commercial building, as shown on Table A.4. Standards were derived using the risk-based assessment methods of the United States Environmental Protection Agency (USEPA) and the modification of these values that has been determined by the WDNR and the Wisconsin Department of Health and Family Services (WDHFS). As shown on Table A.4, comparison of the detected subslab compounds during GEC’s most recent sampling event (January 30, 2017) are all below the comparative standards of the WDNR for subslab air. So currently, there are no elevated levels of VOCs in the subslab air beneath the building.

Additional subslab vapor information can be found in GEC’s “VPLE Site Investigation Update” dated September 26, 2016. GEC submitted the most recent vapor analytical data to Ms. Kristin DuFresne of the WDNR on February 24, 2017.

## 6.0 CONCLUSIONS

Based on the site investigation and remediation activities, the following conclusions have been reached.

1. The site geology consists of 2-8-feet of fill material overlying native silt, silty clay, sandy silt and clayey silt, with a depth to groundwater between 4.49 and 6.78 feet below grade. The direction of groundwater flow is to the northwest, toward the East River.
2. The majority of chlorinated solvent contaminated soil has been removed from the property and properly handled in August 2015.
3. There is no unsaturated soil above direct contact standards / within upper 4 feet at the site.
4. Soil chemistry results indicate remaining soils at the site contain levels of the chlorinated solvent PCE at levels above the regulatory groundwater pathway RCL. The observed concentrations are present in soil within and beyond the limits of the excavations (Figure 4). The observed soil above RCLs does not pose a risk to human health or the environment due to the limited potential for direct contact exposure as the site is currently capped with asphalt, concrete, a building and landscaped surfaces (Appendix A).
5. Post-excavation groundwater samples of the existing groundwater monitoring well network illustrate that concentrations at the site have shown improvements since remedial excavation activities in August 2015. Additionally, the most contaminated well (SMW-3) shows a relatively stable PCE trend with breakdown products TCE and cis-1,2-DCE showing increasing trends, indicating reductive dechlorination processes are taking place.

## 7.0 RECOMMENDATIONS

Fehr Graham recommends one additional round of groundwater sampling for VOCs and natural attenuation parameters be conducted at site monitoring wells MW-1 through MW-9, PZ-1, GEC TW-4, and GEC TW-5 in June 2017. Following this sampling event, discussions will be held with the WDNR regarding the results and whether case closure can be pursued.

The site is in the DERF program, and thus far, Fehr Graham and other subcontractors have invoiced approximately \$102,556.68 in expenses on this project, with a total DERF approved remedial action budget of \$128,013.80.

Future charges are anticipated to be fully covered by DERF up to \$200,000. Charges above \$200,000 are still eligible for DERF coverage, but an additional 8% deductible on charges above \$200,000 are not eligible for reimbursement.

## 8.0 INERPRETATION OF RESULTS

The field observations, measurements, and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the work performed at this site. The assessment, conclusions, and recommendations presented herein are based upon the subjective evaluation of limited data. They may not represent all conditions at the site as they reflect the information gathered from specific locations. Fehr Graham warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental investigation methodology and only for the site described in this report.

The soil, groundwater and vapor investigation of this site has been developed to provide the client and WDNR with information regarding apparent indications of environmental concerns relating to the site. It is necessarily limited to the conditions observed and to the information available at the time of the work.

Due to the limited nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of report preparation. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. The description, type, and composition of what are commonly referred to as "hazardous materials or conditions" can also change over time. Fehr Graham does not accept responsibility for changes in the state of the art, nor for changes in the scope of various lists of hazardous materials or conditions. Fehr Graham believes that the findings and conclusions provided in this report are reasonable.

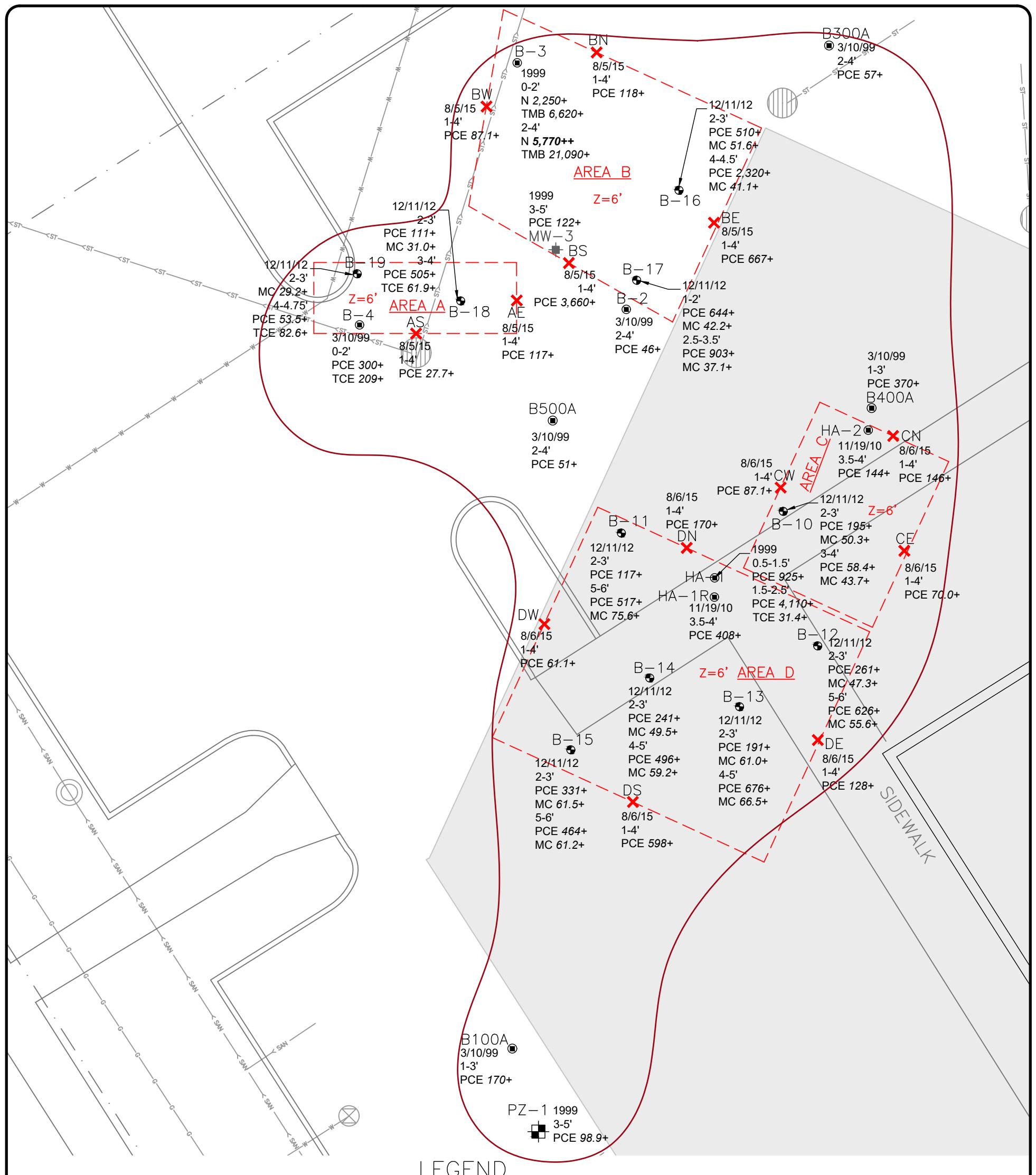
## Figures

Figure 1: Pre-Remedial Soil Contamination

Figure 2: Remaining Soil Contamination

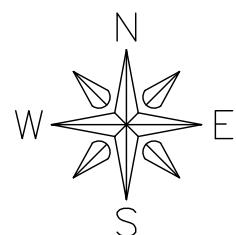
Figure 3: Groundwater Elevation March 21, 2017

Figure 4: Groundwater Chemistry March 21, 2017



## LEGEND

- |   |               |  |
|---|---------------|--|
| ● SOIL BORING (PREVIOUS CONSULTANTS)          | 12/11/12      | SAMPLE DATE  |
| ■ MONITORING WELL / PIEZOMETER<br>(ABANDONED) | 2-3'          | SAMPLE DEPTH   |
| ● SOIL BORING (ALPHA TERRA / FEHR GRAHAM)     | PCE           | TETRACHLOROETHENE (ug/kg)                                      |
| ✗ EXCAVATION SAMPLE                           | TCE           | TRICHLOROETHENE (ug/kg)  |
| — GAS LINE                                    | MC            | METHYLENE CHLORIDE (ug/kg)                                     |
| — ST — STORM SEWER                            | N             | NAPHTHALENE (ug/kg)  |
| — SAN — SANITARY SEWER                        | TMB           | TRIMETHYLBENZENES, TOTAL (ug/kg)                               |
| — W — WATERMAIN                               | ITALICS+      | EXCEEDS GROUNDWATER PATHWAY RCL                                |
| ▨ CATCH BASIN                                 | <b>BOLD++</b> | EXCEEDS NON-INDUSTRIAL DIRECT CONTACT (0-4') RCL               |
| ○ POWER POLE                                  |               |  |
| ⊗ WATER VALVE                                 |               |  |
|   |               | ESTIMATED EXTENT OF SOIL EXCEEDING PCE GROUNDWATER PATHWAY RCL |
|   |               | ONE HOUR MARTINIZING FOOTPRINT (DEMOLISHED)                    |
|   | Z=6'          | REMEDIAL EXCAVATION OUTLINE & DEPTH                            |
|   |               |  |



# **FEHR GRAHAM**

---

ENGINEERING & ENVIRONMENTAL

#### ONE HOUR MARTINIZING

ONE HOUR MARTINIZING  
1923 MAIN STREET

1925 MAIN STREET  
GREEN BAY WI 54302

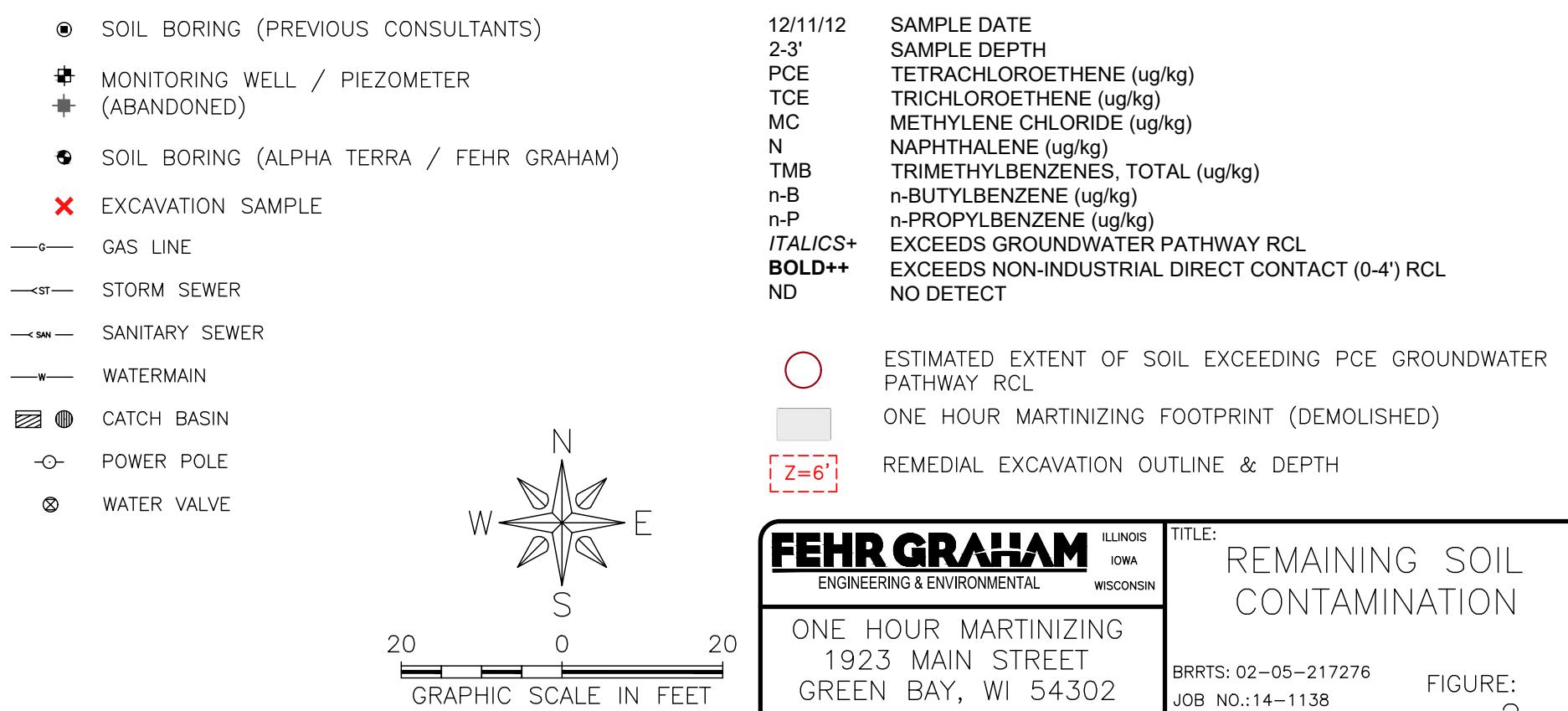
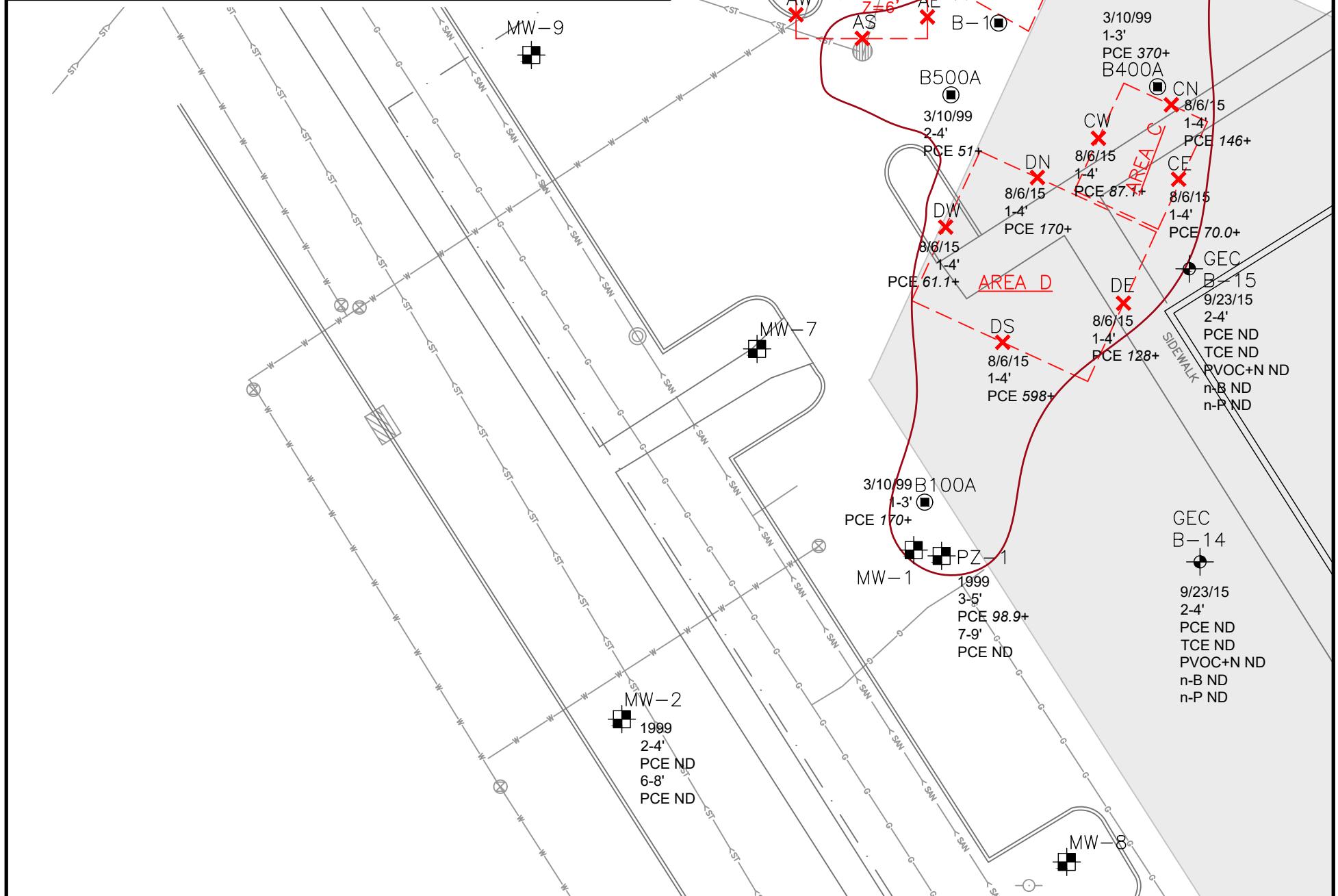
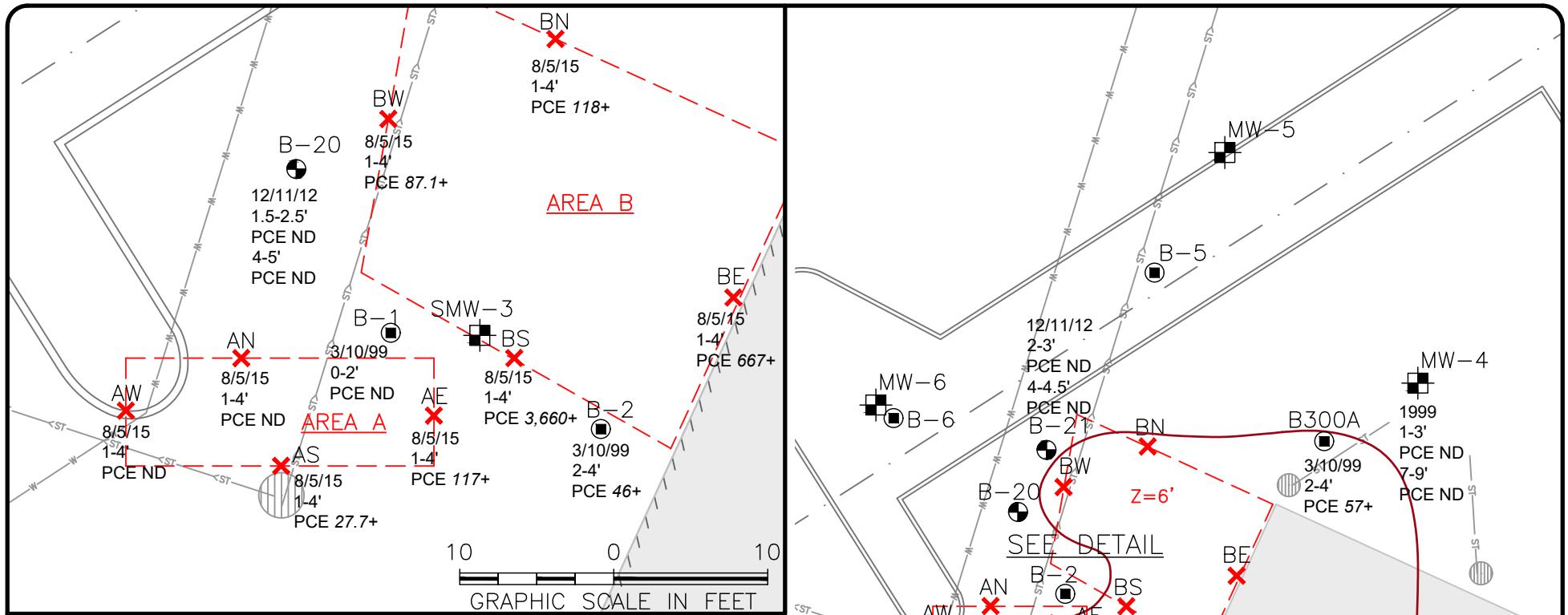
DIS | TITLE

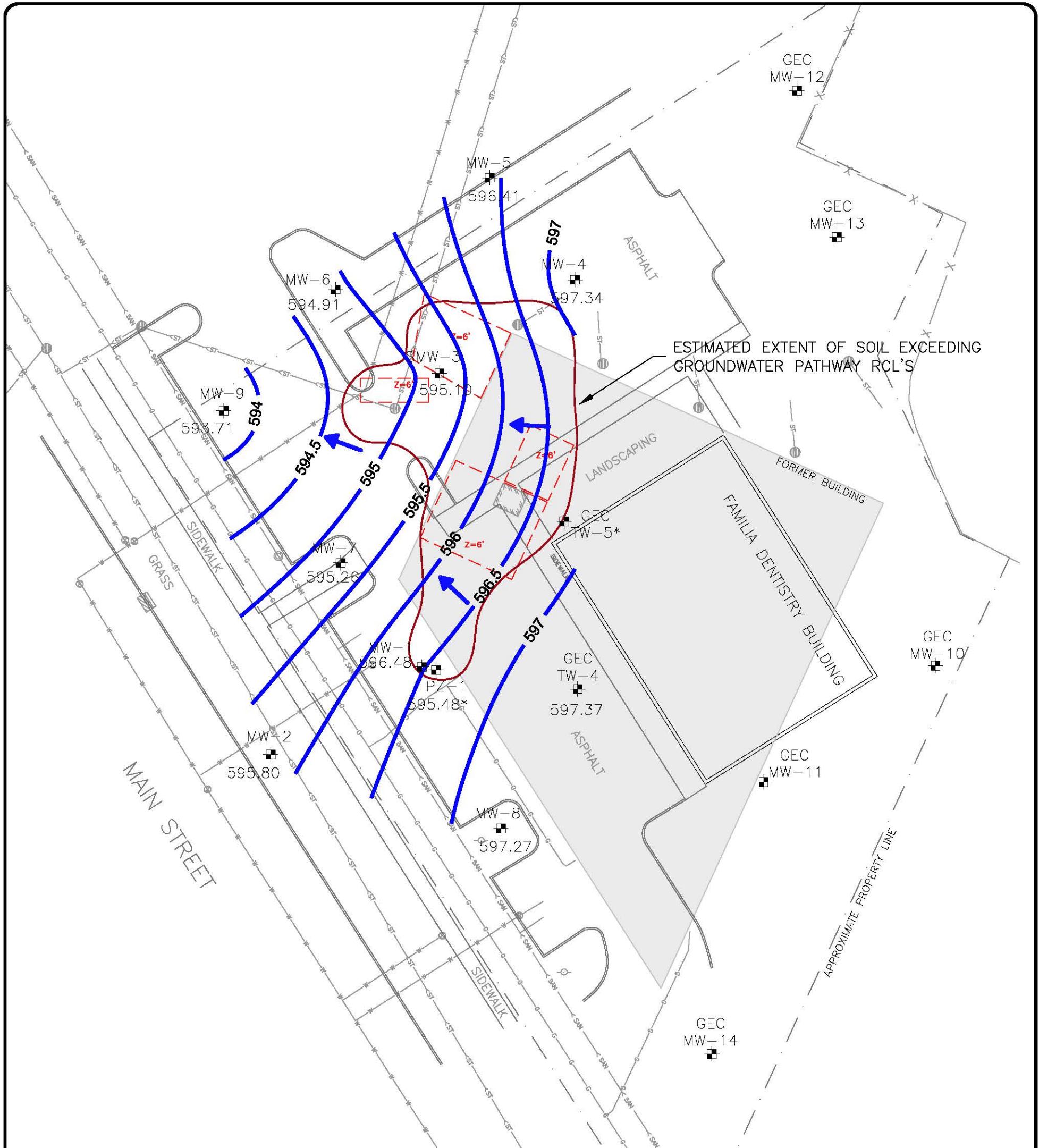
WSIN

# TITLE: PRE-REMEDIAL SOIL CONTAMINATION

BRRTS: 02-05-217276  
JOB NO.:14-1138  
PLOT DATE: 5/16/17

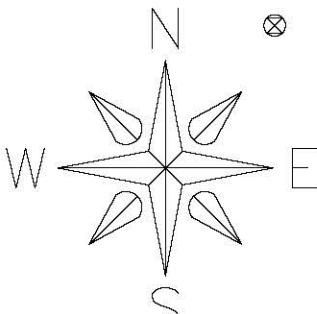
# FIGURE: 1





#### LEGEND

MW-14	MONITORING WELL
—g—	GAS LINE
—ST—	STORM SEWER
—SAN—	SANITARY SEWER
—w—	WATERMAIN
■ ●	CATCH BASIN
○	POWER POLE
⊗	WATER VALVE
596.29	GROUNDWATER ELEVATION (ft/msl)
594.87*	NOT USED IN CONTOUR
→	GROUNDWATER FLOW DIRECTION
[red dashed]	JULY 2015 EXCAVATION
[light gray box]	ONE HOUR MARTINIZING BUILDING FOOTPRINT (DEMOLISHED)
[white box]	LOCATION OF FORMER DRY CLEANING MACHINE



30 0 30  
GRAPHIC SCALE IN FEET

**FEHR GRAHAM**  
ENGINEERING & ENVIRONMENTAL

ILLINOIS  
IOWA  
WISCONSIN

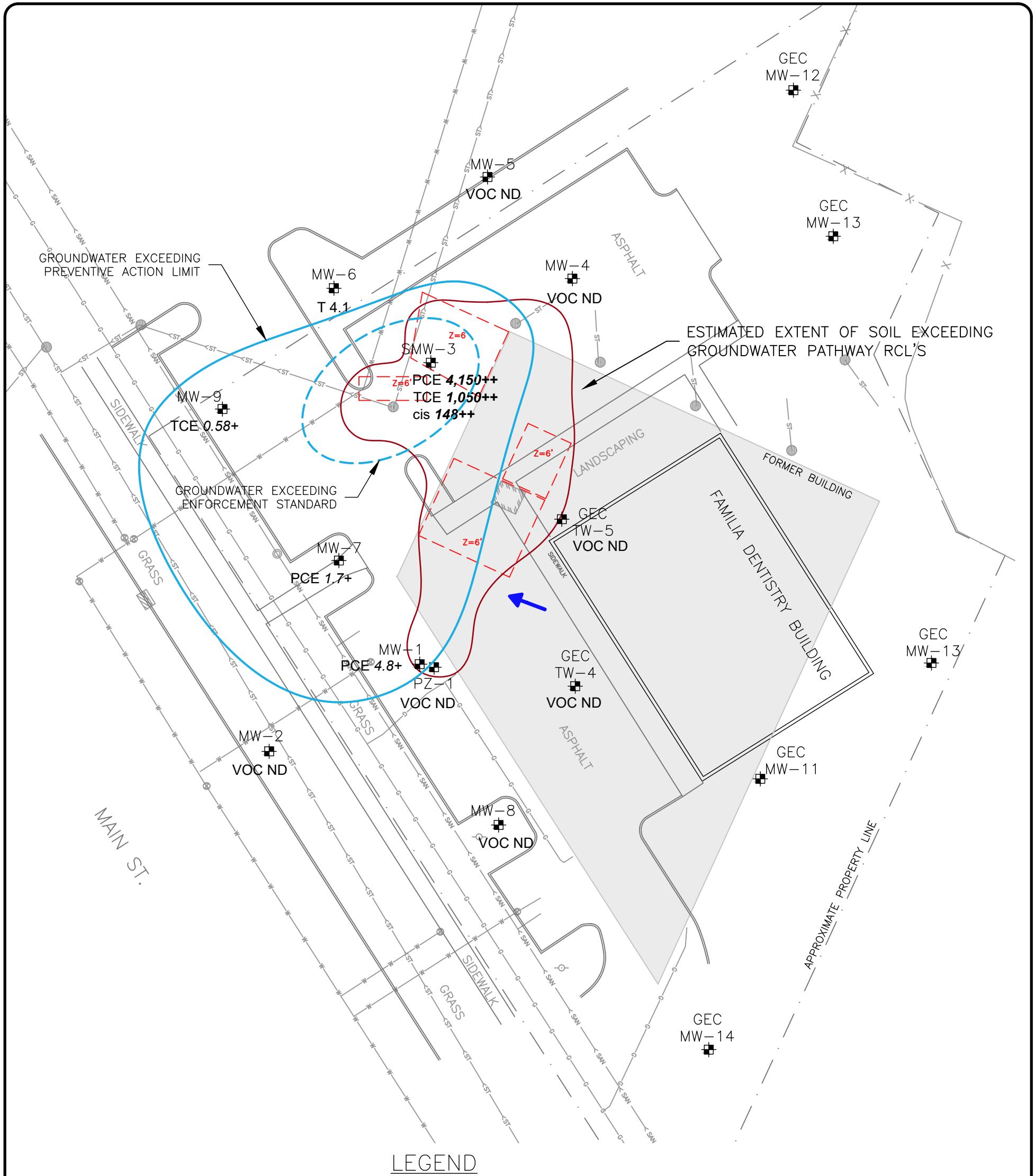
ONE HOUR MARTINIZING  
1923 MAIN STREET  
GREEN BAY, WI 54302

DRWN: MKH DATE: 10/06/16 APPD: XXX

TITLE: GROUNDWATER  
ELEVATION  
MAR. 21, 2017

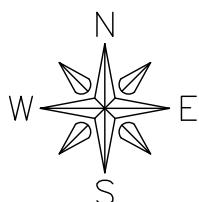
BRRTS: 02-05-217276  
JOB NO.: 14-1138  
PLOT DATE: 5/16/17

FIGURE:  
3



### LEGEND

MW-14	MONITORING WELL
—G—	GAS LINE
—ST—	STORM SEWER
—SAN—	SANITARY SEWER
—W—	WATERMAIN
■ ●	CATCH BASIN
—○—	POWER POLE
⊗	WATER VALVE
PCE	TETRACHLOROETHENE (ug/L)
TCE	TRICHLOROETHEN (ug/L)
cis	cis-1,2-DICHLOROETHENE (ug/L)
VC	VINYL CHLORIDE (ug/L)
T	TOLUENE (ug/L)
VOC	VOLATILE ORGANIC COMPOUNDS
ITALICS+	EXCEEDS NR140 PREVENTIVE ACTION LIMIT
<b>BOLD++</b>	EXCEEDS NR140 ENFORCEMENT STANDARD
ND	NO DETECT
↗	GROUNDWATER FLOW DIRECTION (MAR. 21, 2017)
□	REMEDIAL EXCAVATION AUGUST 2015
■	ONE HOUR MARTINIZING BUILDING FOOTPRINT (DEMOLISHED)
▨	LOCATION OF FORMER DRY CLEANING MACHINE



30 0 30  
GRAPHIC SCALE IN FEET

**FEHR GRAHAM**

ENGINEERING & ENVIRONMENTAL

ILLINOIS  
IOWA  
WISCONSIN

ONE HOUR MARTINIZING  
1923 MAIN STREET  
GREEN BAY, WI 54302

DRWN: MKH DATE: 10/06/16 APPD: XXX

TITLE: GROUNDWATER  
CHEMISTRY  
MAR. 21, 2017

BRRTS: 02-05-217276  
JOB NO.: 14-1138  
PLOT DATE: 5/16/17

FIGURE:  
4

## Tables

Table A.1: Groundwater Analytical Table - VOCs

Table A.2: Soil Analytical Results - VOCs

Table A.4: Vapor Analytical Table - VOCs

Table A.6: Water Level Elevations

Table A.7: Groundwater Natural Attenuation

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	HA-1	MW-1																	
Date	6/8/99			6/17/99	1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	10/15/10	12/12/12	11/15/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation	NA	597.18	595.40	598.03	597.96	596.94	596.17	597.91	598.58	598.03	--	597.32	598.79	599.24	598.31	596.29	595.99	596.48				
Notes												Dup		GEC								
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<b>84.7</b>	<b>71.9</b>	<b>20</b>	<b>16</b>	<b>21</b>	<b>22</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>19.9</b>	<b>17</b>	<b>6.5</b>	<b>6.8</b>	<b>7.6</b>	<b>6.1</b>	<b>10.1</b>	<b>5.8</b>	<b>4.8</b>	
Trichloroethene (TCE)	(ug/L)	0.5	5	<b>1.79P</b>	0.29P	<0.21	<0.48	<0.48	<b>0.52</b>	<b>0.60</b>	<0.48	<0.48	<0.48	<0.48	<0.33	<0.47	<0.33	<0.33	<0.33	<0.33	<0.33	
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.93	<0.19	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26	<0.45	<0.26	<0.26	<0.26	<0.26	<0.26	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	--	--	--	--	--	--	<0.89	<0.26	<0.44	<0.26	<0.26	<0.26	<0.26	
Vinyl Chloride	(ug/L)	0.02	0.2	<0.70	<0.14	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17	<0.18	<0.18	<0.18	
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	--	--	--	--	--	<0.43	<0.23	NA	<0.23	<0.23	<0.23	<0.23	
Benzene	(ug/L)	0.5	5	<0.94	<0.19	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50	
Ethylbenzene	(ug/L)	140	700	<0.97	<0.19	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50	<0.71	<0.50	<0.50	<0.50	<0.50	
Toluene	(ug/L)	160	800	<0.55	0.14P	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50	
Xylenes (TOTAL)	(ug/L)	400	2,000	<2.85	<0.57	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5	<3.1	<1.5	<1.5	<1.5	<1.5	<1.5	
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	--	<1.8	<1.0	<0.9	<1.0	<1.0	<1.0	<1.0	
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50	<2.2	<0.50	<0.50	<0.50	<0.50	
Naphthalene	(ug/L)	10	100	<0.41	<0.08	<0.082	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.89	<0.89	<0.89	<2.5	--	<2.5	<2.5	<2.5	
MTBE	(ug/L)	12	60	--	--	--	--	--	--	--	--	--	--	--	<0.61	<0.17	<1.1	<0.17	<0.17	<0.17	<0.17	
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	--	<0.97	<0.50	<1.6	<0.5	<0.50	<0.50	<0.50	
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<4.05	<0.81	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<3.1	<1.0	<1.0	<1.0	<1.0	<1.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	PZ-1																
Date				6/17/99	1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17	
Groundwater Elevation		589.43	595.17	596.87	596.91	596.15	595.17	597.00	597.18	596.78	594.27	597.21	--	596.97	594.87	595.19	595.48			
Notes													GEC							
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.34	<0.45	<0.45	<b>4.8</b>	<b>15</b>	<0.45	<0.45	<0.45	<0.50				<0.50	<0.50	<0.50	
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.21	<0.48	<0.48	<b>0.56</b>	<b>1.1</b>	<0.48	<0.48	<0.48	<0.48	<0.33			<0.33	<0.33	<0.33	
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26			<0.26	<0.26	<0.26	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	--	--	--	--	<0.89	<0.26			<0.26	<0.26	<0.26	
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	--	--	--	--	<0.43	<0.23			<0.23	<0.23	<0.23
Benzene	(ug/L)	0.5	5	<0.19	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.50	<0.50	
Ethylbenzene	(ug/L)	140	700	<0.19	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50	<0.50	<0.50	
Toluene	(ug/L)	160	800	<0.11	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50	<0.50	<0.50	
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.57	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5	<1.5	<1.5	
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<1.8	<1.0			<1.0	<1.0	<1.0
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50			<0.50	<0.50	<0.50
Naphthalene	(ug/L)	10	100	<0.08	<0.082	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.89	<0.89	<0.89	<2.5	<2.5	<2.5	
MTBE	(ug/L)	12	60	--	--	--	--	--	--	--	--	--	--	<0.61	<0.17			<0.17	<0.17	<0.17
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.97	<0.50			<0.50	<0.50	<0.50
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50			<0.50	<0.50	<0.50
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<1.0	<1.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-2															
Date				6/17/99	1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		595.74	593.77	595.79	595.53	594.90	593.88	595.64	596.12	595.75	594.58	595.95	--	595.71	595.75	594.87	595.80		
Notes														GEC					
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.34	<0.45	<0.45	<b>9.8</b>	<b>15</b>	<0.45	<0.45	<0.48	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.21	<0.48	<0.48	<b>0.8</b>	<b>1.2</b>	<0.48	<0.48	<0.48	<0.48	<0.33	<0.33	<0.33	<0.33	<0.33	
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26	<0.26	<0.26	<0.26	<0.26	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	--	--	--	--	<0.89	<0.26	<0.26	<0.26	<0.26	<0.26	
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	--	--	--	--	<0.43	<0.23	<0.23	<0.23	<0.23	
Benzene	(ug/L)	0.5	5	<0.19	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.50	<0.50	<0.50	
Ethylbenzene	(ug/L)	140	700	<0.19	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50	<0.50	<0.50	<0.50	
Toluene	(ug/L)	160	800	<0.11	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	1.6	<0.50	<0.50	<0.50	
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.57	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5	<1.5	<1.5	
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<1.8	<1.0	<1.0	<1.0	<1.0	
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50	<0.50	<0.50	<0.50	
Naphthalene	(ug/L)	10	100	<0.08	<0.082	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5	<2.5	<2.5	<2.5	
MTBE	(ug/L)	12	60	--	--	--	--	--	--	--	--	--	--	<0.61	<0.17	<0.17	<0.17	<0.17	
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.97	<0.50	<0.50	<0.50	<0.50	
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	--	<0.83	<0.50	<0.50	<0.50	<0.50	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<1.0	<1.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	MW-3												SMW-3						
Date			6/17/99	1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation			598.60	596.31	598.68	598.47	597.51	596.15	598.19	599.04	598.06	596.33	--	595.57	595.62	595.69	595.07	594.96	595.10		
Notes														GEC							
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<b>2,600</b>	<b>76</b>	<b>4,400</b>	<b>2,800</b>	<b>10,000</b>	<b>12,000</b>	<b>4,700</b>	<b>5,200</b>	<b>602</b>	<b>13,700</b>	REMOVED DURING 2015 EXCAVATION	<b>3,100</b>	<b>760</b>	<b>1,790</b>	<b>2,450</b>	<b>3,680</b>	<b>4,150</b>	
Trichloroethene (TCE)	(ug/L)	0.5	5	<35.3	<b>89</b>	<b>190</b>	<b>200</b>	<b>450</b>	<b>570</b>	<b>360</b>	<b>410</b>	<b>191</b>	<b>1,500</b>		<b>504</b>	<b>197</b>	<b>425</b>	<b>616</b>	<b>785</b>	<b>1,050</b>	
cis-1,2-Dichloroethene	(ug/L)	7	70	<31	1.6	<21	<21	<83	<170	<42	<83	<b>34.4</b>	<208		<b>86.5</b>	<b>24.3</b>	<b>54.7</b>	<b>201</b>	<b>145</b>	<b>148</b>	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	--	--	--	--	<222		<10.3	2.22	<10.3	<b>18.5 J</b>	<b>10.0 J</b>	<b>12.0 J</b>	
Vinyl Chloride	(ug/L)	0.02	0.2	<23.3	<b>1.2</b>	<4.5	<4.5	<18	<36	<9.0	<18	<0.9	<45.0		<7.0	<b>0.40 J</b>	<7.0	<b>5.8 J</b>	<3.5	<4.4	
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	--	--	--	<108		<9.3	--	<9.3	<4.7	<4.7	<5.8	
Benzene	(ug/L)	0.5	5	<31.3	<0.19	<10	<10	<41	<82	<20	<41	<2.0	<102		<20.0	<0.44	<20.0	<10.0	<10.0	<12.5	
Ethylbenzene	(ug/L)	140	700	<32.3	<0.19	<14	<14	<54	<110	<27	<54	<2.7	<135		<20.0	<0.71	<20.0	<10.0	<10.0	<12.5	
Toluene	(ug/L)	160	800	<18.3	0.75	<17	<17	<67	<130	<34	<67	<3.4	<168		<20.0	<0.44	<20.0	<10.0	<10.0	<12.5	
Xylenes (TOTAL)	(ug/L)	400	2,000	<95	2.2	<66	<66	<263	<530	<132	<263	<13.2	<658		<60.0	<3.1	<60.0	<30.0	<30.0	<37.5	
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	<450		<40.0	<0.9	<40.0	<20.0	<20.0	<25.0	
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	<208		<20.0	<2.2	<20.0	<10.0	<10.0	<12.5	
Naphthalene	(ug/L)	10	100	<13.7	<0.082	<18	<18	<74	<150	<37	<74	<4.4	<222		<100	--	<100	<50.0	<50.0	<62.5	
MTBE	(ug/L)	12	60	--	--	--	--	--	--	--	--	--	<152		<7.0	<1.1	<7.0	<3.5	<3.5	<4.4	
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	<242		<20.0	<1.6	<20.0	<10.0	<10.0	<12.5	
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	--	--	<208		<20.0	<1.5	<20.0	<10.0	<10.0	<12.5	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<135	5.4	<45	<45	<180	<360	<90	<180	<9.0	<450		<40.0	<3.1	<40.0	<20.0	<20.0	<25.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-4														
Date				6/17/99	1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				598.67	596.26	598.96	597.43	598.16	598.23	597.07	597.29	597.90	297.27	596.90	596.33	597.34		
Notes												GEC						
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.34	<b>1.9</b>	<b>2.0</b>	<b>3.0</b>	<0.45	<0.45	<b>1.4</b>	<b>0.89 J</b>	<b>1.1</b>	<b>1.3</b>	<b>0.63 J</b>	<0.50		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.21	<0.48	<0.48	<0.48	<0.48	<0.48	<0.33	<0.47	<0.33	<0.33	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26	<0.45	<0.26	<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26	<0.54	<0.26	<0.26	<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17	<0.18	<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	<0.43	<0.23	--	<0.23	<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.19	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.19	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50	<0.71	<0.50	<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.11	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50		
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.57	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5	<3.1	<1.5	<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	<1.8	<1.0	<0.9	<1.0	<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	<0.83	<0.50	<2.2	<0.50	<0.50	<0.50	<0.50		
Naphthalene	(ug/L)	10	100	<0.08	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5	--	<2.5	<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	--	--	--	--	--	--	--	<0.17	<1.1	<0.17	<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	<0.50	<1.6	<0.50	<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	--	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<3.1	<1.0	<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection & Limit of Quantification

*ITALICS* indicates exceedance of NR 140.10 Preventive Action Limit

**BOLD** indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-5													
Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				596.86	599.56	598.05	598.63	598.73	596.62	596.69	--	596.69	596.19	595.74	596.41		
Notes				--	--	--	--	--	--	--	GEC	--	--	--	--		
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<b>1.9</b>	<0.45	<0.45	<0.45	<0.45	<0.50	NOT SAMPLED	<0.50	<0.50	<0.50	<0.50		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.48	<0.48	<0.48	<0.48	<0.48	<0.33		<0.33	<0.33	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26		<0.26	<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26		<0.26	<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18		<0.18	<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	--	<0.43		<0.23	<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50		<0.50	<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50		<0.50	<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67		<0.50	<0.50	<0.50	<0.50		
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5		<1.5	<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	<1.8		<1.0	<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	--	<0.83		<0.50	<0.50	<0.50	<0.50		
Naphthalene	(ug/L)	10	100	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5		<2.5	<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	--	--	--	--	--	--	<0.61		<0.17	<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	<0.97		<0.50	<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	--	<0.83		<0.50	<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0		<1.0	<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-6													
Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/20/16	6/23/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				596.29	598.63	597.49	597.85	597.84	596.34	596.56	--	596.60	594.44	594.95	594.91		
Notes											GEC						
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.45	<0.45	<0.45	<0.45	<0.45	<0.50	NOT SAMPLED	<0.50	<0.50	<0.50	<0.50		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.48	<0.48	<0.48	<0.48	<0.48	<0.33		<0.33	<0.33	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26		<0.26	<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26		<0.26	<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18		<0.18	<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	<0.43	<0.23		<0.23	<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50		<0.50	<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50		<0.50	<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50		<0.50	<0.50	<0.50	4.1		
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5		<1.5	<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<1.8	<1.0		<1.0	<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50		<0.49	<0.50	<.50	<0.50		
Naphthalene	(ug/L)	10	100	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5		<2.4	<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	--	--	--	--	--	<0.61	<0.17		<0.17	<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.97	<0.50		<0.50	<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50		<0.50	<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0		<1.1	<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-7													
Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/21/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				594.78	597.68	596.48	597.28	597.20	596.63	597.81	597.68	597.21	595.00	594.77	595.26		
Notes											GEC						
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.45	<b>30</b>	<0.45	<b>1.3</b>	<b>2</b>	<b>16.5</b>	<b>14.3</b>	<b>14.8</b>	<b>4.0</b>	<b>2.0</b>	<b>1.7</b>		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.48	<b>2.0</b>	<0.48	<b>0.78J</b>	<0.48	0.49 J	<0.47	<b>0.33 J</b>	<b>0.54 J</b>	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.83	<0.83	<0.83	2.2	<0.83	<0.26	<0.45	<0.26	<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26	<0.54	<0.26	<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17	<0.18	<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	<0.43	<0.23	--	<0.23	<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50	<0.71	<0.50	<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50		
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5	<3.1	<1.5	<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<1.8	<1.0	<0.9	<1.0	<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50	<2.2	<0.50	<0.50	<0.50	<0.50		
Naphthalene	(ug/L)	10	100	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5	--	<2.5	<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	--	--	--	--	--	<0.61	<0.17	<1.1	<0.17	<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.97	<0.50	<1.6	<0.50	<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<3.1	<1.0	<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-8													
Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				595.83	598.21	596.98	598.17	598.35	597.46	599.12	599.49	597.28	596.73	596.64	597.27		
Notes											GEC						
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.45	<0.45	<0.45	<0.45	<0.45	<0.50	<0.49	NOT SAMPLED	<0.50	<0.50	<0.50		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.21	<0.48	<0.48	<0.48	<0.48	<0.48	<0.33	<0.47		<0.33	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26	<0.45		<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26	<0.54		<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.14	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18		<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	<0.43	<0.23	--		<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50	<0.44		<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50		<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50		<0.50	<0.50	<0.50		
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5		<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<1.8	<1.0	<0.9		<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50	<2.2		<0.50	<0.50	<0.50		
Naphthalene	(ug/L)	10	100	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5	--		<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	--	--	--	--	--	<0.61	<0.17	<1.1		<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.97	<0.50	<1.6		<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50	<1.5		<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0	<3.1		<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	MW-9													
Date				8/28/01	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	4/20/16	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				NA	595.58	594.65	595.89	593.86	593.15	595.32	--	594.24	594.50	593.79	593.71		
Notes											GEC						
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.34	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	0.94 J	NOT SAMPLED	0.73 J	0.60 J	<0.50	<0.50	
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.098	0.55	2.6	0.7	<0.48	<0.48	<0.48	1.7		1.0	0.78 J	0.67 J	0.58 J	
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.19	1.2	3.4	<0.83	<0.83	<0.83	<0.26			<0.26	<0.26	<0.26	<0.26	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	--	--	--	--	<0.89	<0.26			<0.26	<0.26	<0.26	<0.26	
Vinyl Chloride	(ug/L)	0.02	0.2	<23	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18		<0.18	<0.18	<0.18	<0.18	
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	<0.43	<0.23			<0.23	<0.23	<0.23	<0.23	
Benzene	(ug/L)	0.5	5	<0.19	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.50		<0.50	<0.50	<0.50	<0.50	
Ethylbenzene	(ug/L)	140	700	<0.19	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.50		<0.50	<0.50	<0.50	<0.50	
Toluene	(ug/L)	160	800	<0.11	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.50		<0.50	<0.50	<0.50	<0.50	
Xylenes (TOTAL)	(ug/L)	400	2,000	<0.39	<2.63	<2.63	<2.63	<2.63	<2.63	<2.63	<1.5		<1.5	<1.5	<1.5	<1.5	
m&p-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<1.8	<1.0			<1.0	<1.0	<1.0	<1.0	
o-Xylene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50			<0.50	<0.50	<0.50	<0.50	
Naphthalene	(ug/L)	10	100	<0.082	<0.74	<0.74	<0.74	<0.89	<0.89	<2.5			<2.5	<2.5	<2.5	<2.5	
MTBE	(ug/L)	12	60	--	--	--	--	--	<0.61	<0.17			<0.17	<0.17	<0.17	<0.17	
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.97	<0.50			<0.50	<0.50	<0.50	<0.50	
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	--	--	--	--	--	<0.83	<0.50			<0.50	<0.50	<0.50	<0.50	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<0.81	<1.80	<1.80	<1.80	<1.80	<1.80	<1.80	<1.0		<1.0	<1.0	<1.0	<1.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	GEC TW-4						GEC TW-5						
Date				9/24/15	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17	9/24/15	11/12/15	6/24/16	9/22/16	3/21/17		
Groundwater Elevation				--	598.16	597.91	596.76	596.57	597.37	--	--	--	--	--		
Notes																
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.49	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.47	<0.33					<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.45	<0.26					<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	
trans-1,2-Dichloroethene	(ug/L)	20	100	--	<0.26					<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	
Vinyl Chloride	(ug/L)	0.02	0.2	--	<0.18					<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	
Methylene Chloride	(ug/L)	0.5	5	--	<0.23					<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	
Benzene	(ug/L)	0.5	5	<0.44	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Ethylbenzene	(ug/L)	140	700	<0.71	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Toluene	(ug/L)	160	800	<0.44	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Xylenes (TOTAL)	(ug/L)	400	2,000	<3.1	<1.5					<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	
m&p-Xylene	(ug/L)	NS	NS	<2.2	<1.0					<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
o-Xylene	(ug/L)	NS	NS	<0.9	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Naphthalene	(ug/L)	10	100	--	<2.5					<2.5	<2.5	<2.5	--	<2.5	<2.5	
MTBE	(ug/L)	12	60	<1.1	<0.17					<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	<1.6	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	<1.5	<0.50					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<3.1	<1.0					<1.0	<1.0	<1.0	<3.1	<1.0	<1.0	

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

## A.1

Groundwater Analytical Table - VOCs  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140.10 Preventive Action Limit	NR 140.10 Enforcement Standard	GEC MW-10	GEC MW-11	GEC MW-12	GEC MW-13	GEC MW-14	W-1	Trip Blank						
Date				4/21/16	4/21/16	4/21/16	4/21/16	4/21/16	6/20/16	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				--	--	--	--	--	--	--	--	--	--	--		
Notes																
Tetrachloroethene (PCE)	(ug/L)	0.5	5	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.50	<0.50	<0.50	<0.50	<0.50		
Trichloroethene (TCE)	(ug/L)	0.5	5	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.33	<0.33	<0.33	<0.33	<0.33		
cis-1,2-Dichloroethene	(ug/L)	7	70	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.26	<0.26	<0.26	<0.26	<0.26		
trans-1,2-Dichloroethene	(ug/L)	20	100	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.26	<0.26	<0.26	<0.26	<0.26		
Vinyl Chloride	(ug/L)	0.02	0.2	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.18	<0.18	<0.18	<0.18	<0.18		
Methylene Chloride	(ug/L)	0.5	5	--	--	--	--	--	<1.3	<0.23	<0.23	<0.23	<0.23	<0.23		
Benzene	(ug/L)	0.5	5	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50		
Ethylbenzene	(ug/L)	140	700	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.50	<0.50	<0.50	<0.50	<0.50		
Toluene	(ug/L)	160	800	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50		
Xylenes (TOTAL)	(ug/L)	400	2,000	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<1.5	<1.5	<1.5	<1.5	<1.5		
m&p-Xylene	(ug/L)	NS	NS	<0.9	<0.9	<0.9	<0.9	<0.9	<2.2	<1.0	<1.0	<1.0	<1.0	<1.0		
o-Xylene	(ug/L)	NS	NS	<2.2	<2.2	<2.2	<2.2	<2.2	<0.9	<0.50	<0.50	<0.50	<0.50	<0.50		
Naphthalene	(ug/L)	10	100	--	--	--	--	--	<1.6	<2.5	<2.5	<2.5	<2.5	<2.5		
MTBE	(ug/L)	12	60	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.17	<0.17	<0.17	<0.17	<0.17		
1,2,4-Trimethylbenzene	(ug/L)	NS	NS	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.50	<0.50	<0.50	<0.50	<0.50		
1,3,5-Trimethylbenzene	(ug/L)	NS	NS	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.50	<0.50	<0.50	<0.50	<0.50		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/L)	96	480	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<1.0	<1.0	<1.0	<1.0	<1.0		

## Notes:

NS = No standard established

-- = Not analyzed or reported for parameter

J = Between Limit of Detection &amp; Limit of Quantification

ITALICS indicates exceedance of NR 140.10 Preventive Action Limit

BOLD indicates exceedance of NR 140.10 Enforcement Standard

TABLE A.2

## Soil Analytical Results

One Hour Martinizing

1923 Main St., Green Bay, WI 54302

BRRTS #02-05-217276

			Site Investigation - Northern Environmental				Site Investigation - STS Consultants							
Sample ID		Groundwater Pathway RCL Non-Industrial Direct-Contact RCL	B100A	B300A	B400A	B500A	PZ-1		MW-2		MW-3		MW-4	
Date	3/10/99		3/10/99	3/10/99	3/10/99	3/10/99	1999	1999	1999	1999	1999	1999	1999	1999
Depth	1-3'		2-4'	1-3'	2-4'	3-5'	7-9'	2-4'	6-8'	3-5'	7-9'	1-3'	7-9'	0-2'
Description	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DEPTH to Seasonal Low Water Table (ft BGS)	6'		6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'
Saturated (S) or Unsaturated (U)	U		U	U	U	U	S	U	S	U	S	U	S	U
PID Reading	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Notes					<i>RMVD</i>					<i>RMVD</i>	<i>RMVD</i>			
Benzene	(ug/kg)	5.1	1,490	<25	<25	<25	<12.8	<13.1	<11.5	<13.8	<12.7	<12.6	<11.8	<12.0
Ethylbenzene	(ug/kg)	1570	7,470	<25	<25	<25	<13.2	<13.6	<11.9	<14.2	<13.1	<19.0	<12.2	<12.3
Toluene	(ug/kg)	1107.2	818,000	<25	<25	<25	<7.5	<7.69	<6.74	<8.07	<7.41	<7.36	<6.93	<7.0
Xylenes (TOTAL)	(ug/kg)	3940	258,000	<75	<75	<25	<38.8	<39.8	<34.9	<41.9	<38.4	<38.1	<35.9	<36.2
m&p-Xylene	(ug/kg)	NS	778,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	(ug/kg)	NS	434,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene	(ug/kg)	658.2	5,150	<25	<25	<25	<5.59	<5.73	<5.03	<6.02	<5.52	<b>38</b>	<5.17	<5.22
MTBE	(ug/kg)	27	59,400	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene	(ug/kg)	408	89,800	<25	<25	<25	<31.6	<32.4	<28.4	<34	<31.3	<31.1	<29.2	<22
1,3,5-Trimethylbenzene	(ug/kg)	NS	182,000	<25	<25	<25	<23.6	<24.2	<21.2	<25.4	<23.3	<23.2	<21.2	<5.22
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/kg)	1382.1	NS	<50	<50	<50	<55.2	<56.6	<49.6	<59.4	<54.6	<54.3	<50.4	<27.22
Tetrachloroethene (PCE)	(ug/kg)	4.5	30,700	<b>170</b>	<b>57</b>	<b>370</b>	<b>51</b>	<b>98.9</b>	<23.5	<20.6	<24.7	<b>122</b>	<22.5	<21.2
Trichloroethene (TCE)	(ug/kg)	3.6	1,260	NR	NR	NR	NR	<14.5	<14.8	<13.0	<15.6	<14.3	<14.2	<13.4
cis-1,2-Dichloroethene	(ug/kg)	41.2	156,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	(ug/kg)	58.8	1,560,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Vinyl Chloride	(ug/kg)	0.1	67	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene Chloride	(ug/kg)	2.6	60,700	NR	NR	NR	<17.3	<17.8	<15.6	<18.6	74.9	<17.0	<16.0	<16.2
Total Organic Carbon	(mg/kg)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36400
No. of Individual Exceedances (DC)		0	0	0	0	0	--	--	--	0	0	--	--	--
Cumulative Hazard Index (DC)		0.0015	0.0005	0.0032	0.0004	0.0009	--	--	--	0.0011	0.0002	--	--	--
Cumulative Cancer Risk (DC)		<b>5.5E-09</b>	<b>1.9E-09</b>	<b>1.2E-08</b>	<b>1.7E-09</b>	<b>3.2E-09</b>	--	--	--	<b>4.0E-09</b>	<b>7.4E-09</b>	--	--	--

Exceedance Highlights:

Red font indicates DC RCL exceedance, and BTV exceedance for metals. \*B1\*: Cumulative exceedance (HI > 1), even though no individual DC RCL was exceeded.

*Italic* font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

Notes:

Xylenes reported as total of m-, o-, p-xylenes

NS = No standard established

NA = Not analyzed for parameter

NR = Not Reported

*ITALICS* indicates exceedance of Groundwater Pathway RCL**BOLD** indicates exceedance of Non-industrial Direct Contact RCL

TABLE A.2

Soil Analytical Results

One Hour Martinizing

1923 Main St., Green Bay, WI 54302

BRRTS #02-05-217276

Site Investigation - STS Consultants															
Sample ID			Non-Industrial Direct-Contact RCL												
Date			MW-7	HA-1	B-1	B-2	B-3		B-4	B-5	B-6	HA-1R	HA-2		
1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	11/19/10	11/19/10		
Depth	0-2'	0.5-1.5'	1.5-2.5'	0-2'	2-4'	0-2'	2-4'	0-2'	0-2'	0-2'	0-2'	3.5-4'	3.5-4'		
Description	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
DEPTH to Seasonal Low Water Table (ft BGS)	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'		
Saturated (S) or Unsaturated (U)	U	U	U	U	U	U	U	U	U	U	U	U	U		
PID Reading	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Notes			RMVD	RMVD			RMVD	RMVD	RMVD		RMVD	RMVD			
Benzene	(ug/kg)	5.1	1,490	NA	<11.0	<12.1	<11	<11	<58	<127	<11	<12	<10	<25.0	<25.0
Ethylbenzene	(ug/kg)	1570	7,470	NA	<11.3	<12.5	<11	<12	397	1,370	<12	<12	<11	<25.0	<25.0
Toluene	(ug/kg)	1107.2	818,000	NA	<6.41	<7.07	<6.5	<6.7	<34	<74	<6.6	<7.0	<6.1	<25.0	<25.0
Xylenes (TOTAL)	(ug/kg)	3940	258,000	NA	<33.3	16.6P	<23	<24	776	2,030	<24	<25	<22	<75.0	<75.0
m&p-Xylene	(ug/kg)	NS	778,000	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	(ug/kg)	NS	434,000	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene	(ug/kg)	658.2	5,150	NA	5.99J	17.7	<32	<33	2,250	5,770	<32	<34	<30	<25.0	<25.0
MTBE	(ug/kg)	27	59,400	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene	(ug/kg)	408	89,800	NA	<27.1	<29.8	<27	<28	4,280	16,200	<28	<29	<26	<25.0	<
1,3,5-Trimethylbenzene	(ug/kg)	NS	182,000	NA	<20.2	<22.2	<20	<21	2,340	4,890	<21	<22	<19	<25.0	<25.0
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/kg)	1382.1	NS	NA	<47.2	<52.0	<47	<49	6,620	21,090	<49	<51	<45	<50.0	<50.0
Tetrachloroethene (PCE)	(ug/kg)	4.5	30,700	NA	925	4,110	<20	46J	<103	<228	300	<21	<19	408	144
Trichloroethene (TCE)	(ug/kg)	3.6	1,260	NA	<12.4	31.4J	<13	<13	<65	<144	209	<13	<12	<25.0	<25.0
cis-1,2-Dichloroethene	(ug/kg)	41.2	156,000	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	<25.0	<25.0
trans-1,2-Dichloroethene	(ug/kg)	58.8	1,560,000	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	<25.0	<25.0
Vinyl Chloride	(ug/kg)	0.1	67	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	<25.0	<25.0
Methylene Chloride	(ug/kg)	2.6	60,700	NA	<14.8	<16.3	<47	<48	<245	<538	<48	<50	<44	<25.0	<25.0
Total Organic Carbon	(mg/kg)		24700	NA	NA	NA	NA	NA	NA	NA	NA	NA			
No. of Individual Exceedances (DC)	--	0	0	--	0	0	1	0	--	--	0	0			
Cumulative Hazard Index (DC)	--	0.0081	0.041	--	0.0004	0.0636	0.22	0.0372	--	--	0.0035	0.0013			
Cumulative Cancer Risk (DC)	--	3.1E-08	1.6E-07	--	1.5E-09	4.9E-07	1.3E-06	1.8E-07	--	--	1.3E-08	4.7E-09			

**Exceedance Highlights:**

Red font indicates DC RCL exceedance, and BTV exceedance for metals. \*B1\*: Cumulative exceedance (HI > 1), even though no individual DC RCL was exceeded.

*Italic* font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

**Notes:**

Xylenes reported as total of m-, o-, p-xylenes

NS = No standard established

NA = Not analyzed for parameter

NR = Not Reported

*ITALICS* indicates exceedance of Groundwater Pathway RCL**BOLD** indicates exceedance of Non-industrial Direct Contact RCL

TABLE A.2

Soil Analytical Results

One Hour Martinizing

1923 Main St., Green Bay, WI 54302

BRRTS #02-05-217276

Site Investigation - Alpha Terra Science (Fehr-Graham)																	
Sample ID		Groundwater Pathway RCL	Non-Industrial Direct-Contact RCL	B-10		B-11		B-12		B-13		B-14		B-15			
Date	Depth			12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12		
Depth	clay			2-3'	3-4'	2-3'	3-4'	5-6'	2-3'	4-5'	3.5-4'	2-3'	4-5'	2-3'	5-6'		
Description	clay			silty clay	silty clay	silt	sand	sandy silt	sandy silt	sandy silt	sandy silt	sand	clay	silt	sandy silt		
DEPTH to Seasonal Low Water Table (ft BGS)	6'			6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'		
Saturated (S) or Unsaturated (U)	U			U	U	U	U	U	U	U	U	U	U	U	U		
PID Reading	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Notes	RMVD			RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD		
Benzene	(ug/kg)	5.1	1,490	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
Ethylbenzene	(ug/kg)	1570	7,470	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
Toluene	(ug/kg)	1107.2	818,000	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
Xylenes (TOTAL)	(ug/kg)	3940	258,000	<75.0	<75.0	<75.0	NA	<75.0	<75.0	NA	<75.0	<75.0	<75.0	<75.0	<75.0		
m&p-Xylene	(ug/kg)	NS	778,000	<50.0	<50.0	<50.0	NA	<50.0	<50.0	NA	<50.0	<50.0	<50.0	<50.0	<50.0		
o-Xylene	(ug/kg)	NS	434,000	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
Naphthalene	(ug/kg)	658.2	5,150	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
MTBE	(ug/kg)	27	59,400	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
1,2,4-Trimethylbenzene	(ug/kg)	408	89,800	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
1,3,5-Trimethylbenzene	(ug/kg)	NS	182,000	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0		
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/kg)	1382.1	NS	<50.0	<50.0	<50	NA	<50	<50	NA	<50.0	<50.0	<50.0	<50.0	<50.0		
Tetrachloroethene (PCE)	(ug/kg)	4.5	30,700	195	58.4J	117	NA	517	261	626	NA	191	676	241	496	331	464
Trichloroethene (TCE)	(ug/kg)	3.6	1,260	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
cis-1,2-Dichloroethene	(ug/kg)	41.2	156,000	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
trans-1,2-Dichloroethene	(ug/kg)	58.8	1,560,000	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Vinyl Chloride	(ug/kg)	0.1	67	<25.0	<25.0	<25.0	NA	<25.0	<25.0	NA	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
Methylene Chloride	(ug/kg)	2.6	60,700	50.3J	43.7J	73	NA	75.6	47.3J	55.6J	NA	61.0J	66.5J	49.5J	59.2J	61.5J	61.2J
Total Organic Carbon	(mg/kg)			NA	NA	NA	7,165	NA	NA	NA	4,240	NA	NA	NA	NA	NA	
No. of Individual Exceedances (DC)		0	0	0	--	0	0	0	--	0	0	0	0	0	0	0	
Cumulative Hazard Index (DC)		0.0018	0.0006	0.0012	--	0.0047	0.0024	0.0056	--	0.0018	0.0061	0.0022	0.0045	0.003	0.0042		
Cumulative Cancer Risk (DC)		7.2E-09	2.6E-09	5.0E-09	--	1.8E-08	9.3E-09	2.1E-08	--	7.2E-09	2.3E-08	8.7E-09	1.7E-08	1.2E-08	1.6E-08		

**Exceedance Highlights:**

Red font indicates DC RCL exceedance, and BTV exceedance for metals. \*B1\*: Cumulative exceedance (HI > 1), even though no individual DC RCL was exceeded.

*Italic* font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

**Notes:**

Xylenes reported as total of m-, o-, p-xylenes

NS = No standard established

NA = Not analyzed for parameter

NR = Not Reported

*ITALICS* indicates exceedance of Groundwater Pathway RCL**BOLD** indicates exceedance of Non-industrial Direct Contact RCL

TABLE A.2

Soil Analytical Results

One Hour Martinizing

1923 Main St., Green Bay, WI 54302

BRRTS #02-05-217276

Site Investigation - Alpha Terra Science (Fehr-Graham)															
Sample ID		Groundwater Pathway RCL	Non-Industrial Direct-Contact RCL	B-16		B-17		B-18		B-19		B-20		B-21	
Date	Depth			12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	12/11/12	
Depth	2-3'			4-4.5'	1-2'	2.5-3.5'	2-3'	3-4'	2-3'	4-4.75'	1.5-2.5'	4-5'	4-4.5'	2-3'	4-4.5'
Description	sandy silt			sandy silt	sandy silt	sandy silt	silty gravel	silty gravel	silty gravel	silt	silty gravel	silt	silt	silty gravel	silt
DEPTH to Seasonal Low Water Table (ft BGS)	6'			6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'
Saturated (S) or Unsaturated (U)	U			U	U	U	U	U	U	U	U	U	U	U	U
PID Reading	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Notes	RMVD			RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD	RMVD
Benzene	(ug/kg)	5.1	1,490	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Ethylbenzene	(ug/kg)	1570	7,470	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Toluene	(ug/kg)	1107.2	818,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Xylenes (TOTAL)	(ug/kg)	3940	258,000	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	NA	<75.0	<75.0	
m&p-Xylene	(ug/kg)	NS	778,000	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	NA	<50.0	<50.0	
o-Xylene	(ug/kg)	NS	434,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Naphthalene	(ug/kg)	658.2	5,150	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
MTBE	(ug/kg)	27	59,400	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
1,2,4-Trimethylbenzene	(ug/kg)	408	89,800	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
1,3,5-Trimethylbenzene	(ug/kg)	NS	182,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Trimethylbenzene Total (1,2,4- & 1,3,5-)	(ug/kg)	1382.1	NS	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	NA	<50.0	<50.0	
Tetrachloroethene (PCE)	(ug/kg)	4.5	30,700	510	2,320	644	903	111	505	<25.0	53.5J	<25.0	NA	<25.0	
Trichloroethene (TCE)	(ug/kg)	3.6	1,260	<25.0	<25.0	<25.0	<25.0	<25.0	61.9J	<25.0	82.6	<25.0	NA	<25.0	
cis-1,2-Dichloroethene	(ug/kg)	41.2	156,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
trans-1,2-Dichloroethene	(ug/kg)	58.8	1,560,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Vinyl Chloride	(ug/kg)	0.1	67	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	<25.0	<25.0	
Methylene Chloride	(ug/kg)	2.6	60,700	51.6J	41.1J	42.2J	37.1J	31.0J	<25.0	29.2J	<25.0	<25.0	NA	<25.0	
Total Organic Carbon	(mg/kg)			NA	NA	NA	5,220	NA	NA	NA	NA	1,785	NA	NA	
No. of Individual Exceedances (DC)		0	0	0	0	0	0	0	0	--	--	--	--	--	
Cumulative Hazard Index (DC)		0.0046	0.0203	0.0067	0.0079	0.001	0.0158	0.0001	0.0141	--	--	--	--	--	
Cumulative Cancer Risk (DC)		1.7E-08	7.6E-08	2.8E-08	3.0E-08	4.1E-09	7.1E-08	4.8E-10	6.7E-08	--	--	--	--	--	

**Exceedance Highlights:**

Red font indicates DC RCL exceedance, and BTV exceedance for metals. \*B1\*: Cumulative exceedance (HI > 1), even though no individual DC RCL was exceeded.

*Italic* font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

**Notes:**

Xylenes reported as total of m-, o-, p-xylenes

NS = No standard established

NA = Not analyzed for parameter

NR = Not Reported

ITALICS indicates exceedance of Groundwater Pathway RCL

BOLD indicates exceedance of Non-industrial Direct Contact RCL

TABLE A.2

Soil Analytical Results

One Hour Martinizing

1923 Main St., Green Bay, WI 54302

BRRTS #02-05-217276

August 5-6, 2015 Remedial Action Excavation																						
Sample ID		Groundwater Pathway RCL	Non-Industrial Direct-Contact RCL	AN	AS	AE	AW	BN	BS	BE	BW	CN	CE	CW	DN	DS	DE	DW				
Date				8/5/15	8/5/15	8/5/15	8/5/15	8/5/15	8/5/15	8/5/15	8/5/15	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15					
Depth				1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'	1-4'					
Description				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
DEPTH to Seasonal Low Water Table (ft BGS)				6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'					
Saturated (S) or Unsaturated (U)				U	U	U	U	U	U	U	U	U	U	U	U	U	U					
PID Reading				0.2	0.7	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0					
Notes																						
Benzene				5.1	1,490	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0					
Ethylbenzene				1570	7,470	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Toluene				1107.2	818,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Xylenes (TOTAL)				3940	258,000	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0				
m&p-Xylene				NS	778,000	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0				
o-Xylene				NS	434,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Naphthalene				658.2	5,150	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0				
MTBE				27	59,400	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
1,2,4-Trimethylbenzene				408	89,800	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
1,3,5-Trimethylbenzene				NS	182,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Trimethylbenzene Total (1,2,4- & 1,3,5-)				1382.1	NS	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0				
Tetrachloroethene (PCE)				4.5	30,700	<25.0	<b>27.7 J</b>	<b>117</b>	<25.0	<b>118</b>	<b>3,660</b>	<b>667</b>	<b>87.1</b>	<b>146</b>	<b>70.0 J</b>	<b>87.1</b>	<b>170</b>	<b>598</b>	<b>128</b>	<b>61.1 J</b>		
Trichloroethene (TCE)				3.6	1,260	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0			
cis-1,2-Dichloroethene				41.2	156,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
trans-1,2-Dichloroethene				58.8	1,560,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Vinyl Chloride				0.1	67	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Methylene Chloride				2.6	60,700	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0				
Total Organic Carbon						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
No. of Individual Exceedances (DC)		--	0	0	--	0	0	0	0	0	0	0	0	0	0	0	0					
Cumulative Hazard Index (DC)		--	0.0002	0.001	--	0.001	0.0318	0.0058	0.0008	0.0013	0.0006	0.0008	0.0015	0.0052	0.0011	0.0005						
Cumulative Cancer Risk (DC)		--	9.0E-10	3.8E-09	--	3.8E-09	1.2E-07	2.2E-08	2.8E-09	4.8E-09	2.3E-09	2.8E-09	5.5E-09	1.9E-08	4.2E-09	2.0E-09						

**Exceedance Highlights:**

Red font indicates DC RCL exceedance, and BTV exceedance for metals. \***B1**\*: Cumulative exceedance (HI > 1), even though no individual DC RCL was exceeded.

*Italic* font indicates GW RCL Exceedance. Groundwater quality (> NR 140 ES) may be affected when GW RCLs are exceeded.

**Notes:**

Xylenes reported as total of m-, o-, p-xylenes

NS = No standard established

NA = Not analyzed for parameter

NR = Not Reported

**ITALICS** indicates exceedance of Groundwater Pathway RCL**BOLD** indicates exceedance of Non-industrial Direct Contact RCL

**TABLE A.4**  
**GEC SUMMARY OF SUB-SLAB VAPOR SOIL ANALYTICAL RESULTS**  
**FORMER ONE HOUR MARTINIZING**

TABLE 1 REGIONAL SCREENING LEVEL SUMMARY					
Sample No.	Small Commerical	VP-1		VP-2	
Sampling Date		09/02/16	01/30/17	09/02/16	01/30/17
Units (ug/m3)	<b>VOLATILE ORGANIC COMPOUNDS (VOC) (ug/m3)</b>				
Benzene	530	8.58	0.800	<48.9	0.894
Carbon Tetrachloride	670	<1.23	<1.23	<123	<1.23
Chloroform	180	<0.930	<0.930	<93	<0.930
Chloromethane	13000	<0.374	0.739	<37.4	1.26
Dichlorodifluoromethane	15000	<0.989	1.38	<98.9	1.41
1,1 Dichloroethane	2600	<0.685	<0.685	<68.5	<0.685
1,2 Dichloroethane	160	<0.830	<0.830	<83	<0.830
1,1-Dichloroethene	29000	<0.646	<0.646	<64.6	<0.646
cis-1,2-Dichloroethylene	NE	<0.515	<0.515	<51.5	<0.515
trans-1,2-Dichloroethylene	NE	<0.614	<0.614	<61.4	<0.614
Ethylbenzene	1600	<b>4420</b>	4.52	313	2.13
Methylene Chloride	87000	12.7	<0.538	<53.8	<0.538
Methy Tert Butyl Ether	16000	<0.605	<0.605	196	<0.605
Naphthalene	120	4.37	<2.69	<269	<2.69
Tetrachloroethylene	6000	1.47	1.22	<113	<1.13
Toluene	730000	25.5	5.73	149	2.58
1,1,1-Trichloroethane	73000	<1.21	<1.21	<121	<1.21
Trichloroethylene	290	<0.975	<0.975	<97.5	<0.975
Trichlorofluoromethane	NE	1.3	1.36	<126	1.37
1,2,4-Trimethylbenzene	1000	16.8	7.64	<79	3.85
1,3,5-Trimethylbenzene	NE	3.58	1.57	<103	<1.03
Vinyl chloride	930	<0.389	<0.389	<38.9	<0.389
m&p-Xylene	15000	33.6	7.97	<137	3.32
o-Xylene	15000	18.2	3.62	<91.5	1.54

UG/M<sup>3</sup> Micrograms per Cubic Meter of Air

Bold indicates analytical results exceed May 2016 USEPA Regional Sub-Slab Vapor Risk Screening Level

**TABLE A.6**  
**Water Level Elevations**  
**One Hour Martinizing**  
**1923 Main St., Green Bay, WI 54302**  
**BRRTS #02-05-217276**

Well Identification	MW-1	PZ-1	MW-2	MW-3	SMW-3	MW-4	MW-5
Top of Casing Elevation (ft MSL)	98.61	99.15	98.31	98.29	--	99.27	98.92
Top of Casing Elevation (ft MSL)*	602.01	602.07	600.55	--	601.25	601.51	601.69
Ground Surface Elevation (ft. MSL)	99.01	99.51	98.63	98.71	--	99.71	99.19
Ground Surface Elevation (ft. MSL)*	602.28	602.26	600.80	--	601.45	601.83	601.95
Total Well Depth	12.43	22.23	12.70	12.89	15.30	12.30	12.64
Stickup	-0.40	-0.36	-0.32	-0.42	--	-0.44	-0.27
Stickup*	-0.27	-0.19	-0.25	--	-0.20	-0.32	-0.26
Screened Elevation (ft MSL)							
Well Identification	MW-6	MW-7	MW-8	MW-9	GEC TW-4	GEC TW-5	
Top of Casing Elevation (ft MSL)	97.65	97.83	98.91	97.43			
Top of Casing Elevation (ft MSL)*	601.23	601.39	602.24	599.89	602.19		
Ground Surface Elevation (ft. MSL)	97.93	98.13	99.29	97.77	0.00	0.00	
Ground Surface Elevation (ft. MSL)*	601.27	601.66	602.38	600.16	602.70		
Total Well Depth	12.55	12.26	12.54	13.50	12.88	12.68	
Stickup	-0.28	-0.30	-0.38	-0.34	0.00		
Stickup*	-0.04	-0.27	-0.14	-0.27	-0.51	0.00	
Screened Elevation (ft MSL)							

Sample Date	MW-1			PZ-1			MW-2		
	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl.)
6/8/1999	4.83	5.23	597.18	12.64	13.00	589.43	4.81	5.13	595.74
1/3/2000	6.61	7.01	595.40	6.90	7.26	595.17	6.78	7.10	593.77
4/22/2004	3.98	4.38	598.03	5.20	5.56	596.87	4.76	5.08	595.79
7/22/2004	4.05	4.45	597.96	5.16	5.52	596.91	5.02	5.34	595.53
10/27/2004	5.07	5.47	596.94	5.92	6.28	596.15	5.65	5.97	594.90
1/25/2005	5.84	6.24	596.17	6.90	7.26	595.17	6.67	6.99	593.88
10/31/2006	4.10	4.50	597.91	5.07	5.43	597.00	4.91	5.23	595.64
4/30/2007	3.43	3.83	598.58	4.89	5.25	597.18	4.43	4.75	596.12
10/15/2010	3.98	4.38	598.03	5.29	5.65	596.78	4.80	5.12	595.75
12/12/2012	4.69	5.09	597.32	7.80	8.16	594.27	5.97	6.29	594.58
11/12/2015	3.22	3.62	598.79	4.86	5.22	597.21	4.60	4.92	595.95
4/21/2016	2.77	3.17	599.24	No Data			No Data		
6/24/2016	3.70	4.10	598.31	5.10	5.46	596.97	4.84	5.16	595.71
9/22/2016*	5.72	5.99	596.29	7.20	7.39	594.87	4.80	5.05	595.75
12/22/2016*	6.02	6.29	595.99	6.88	7.07	595.19	5.68	5.93	594.87
3/21/2017*	5.53	5.80	596.48	6.59	6.78	595.48	4.75	5.00	595.80

Sample Date	MW-3			SMW-3			MW-4		
	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl.)
6/8/1999	2.65	3.07	598.60		Not Installed		2.84	3.28	598.67
1/3/2000	4.94	5.36	596.31		Not Installed		5.25	5.69	596.26
4/22/2004	2.57	2.99	598.68		Not Installed		2.55	2.99	598.96
7/22/2004	2.78	3.20	598.47		Not Installed			No Data	
10/27/2004	3.74	4.16	597.51		Not Installed		4.08	4.52	597.43
1/25/2005	5.10	5.52	596.15		Not Installed			No Data	
10/31/2006	3.06	3.48	598.19		Not Installed		3.35	3.79	598.16
4/30/2007	2.21	2.63	599.04		Not Installed			No Data	
10/15/2010	3.19	3.61	598.06		Not Installed		3.28	3.72	598.23
12/12/2012	4.92	5.34	596.33		Not Installed		4.44	4.88	597.07
11/12/2015	Abandoned 2015 Excavation			5.68	5.68	595.57	4.22	4.66	597.29
4/21/2016	Abandoned 2015 Excavation			5.63	5.63	595.62	3.61	4.05	597.90
6/24/2016	Abandoned 2015 Excavation			5.56	5.56	595.69	4.24	4.68	597.27
9/22/2016*	Abandoned 2015 Excavation			6.18	6.38	595.07	4.61	4.93	596.90
12/22/2016*	Abandoned 2015 Excavation			6.29	6.49	594.96	5.18	5.50	596.33
3/21/2017*	Abandoned 2015 Excavation			6.15	6.35	595.10	4.17	4.49	597.34

**TABLE A.6**  
**Water Level Elevations**  
**One Hour Martinizing**  
**1923 Main St., Green Bay, WI 54302**  
**BRRTS #02-05-217276**

Well Identification	MW-1	PZ-1	MW-2	MW-3	SMW-3	MW-4	MW-5
Top of Casing Elevation (ft MSL)	98.61	99.15	98.31	98.29	--	99.27	98.92
Top of Casing Elevation (ft MSL)*	602.01	602.07	600.55	--	601.25	601.51	601.69
Ground Surface Elevation (ft. MSL)	99.01	99.51	98.63	98.71	--	99.71	99.19
Ground Surface Elevation (ft. MSL)*	602.28	602.26	600.80	--	601.45	601.83	601.95
Total Well Depth	12.43	22.23	12.70	12.89	15.30	12.30	12.64
Stickup	-0.40	-0.36	-0.32	-0.42	--	-0.44	-0.27
Stickup*	-0.27	-0.19	-0.25	--	-0.20	-0.32	-0.26
Screened Elevation (ft MSL)							
Well Identification	MW-6	MW-7	MW-8	MW-9	GEC TW-4	GEC TW-5	
Top of Casing Elevation (ft MSL)	97.65	97.83	98.91	97.43			
Top of Casing Elevation (ft MSL)*	601.23	601.39	602.24	599.89	602.19		
Ground Surface Elevation (ft. MSL)	97.93	98.13	99.29	97.77	0.00	0.00	
Ground Surface Elevation (ft. MSL)*	601.27	601.66	602.38	600.16	602.70		
Total Well Depth	12.55	12.26	12.54	13.50	12.88	12.68	
Stickup	-0.28	-0.30	-0.38	-0.34	0.00		
Stickup*	-0.04	-0.27	-0.14	-0.27	-0.51	0.00	
Screened Elevation (ft MSL)							

Sample Date	MW-5			MW-6			MW-7			
	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl.)	
6/8/1999		Not Installed			Not Installed			Not Installed		
1/3/2000	4.83	5.10	596.86	4.94	5.22	596.29	6.61	6.91	594.78	
4/22/2004	2.13	2.40	599.56	2.60	2.88	598.63	3.71	4.01	597.68	
7/22/2004		No Data			No Data			No Data		
10/27/2004	3.64	3.91	598.05	3.74	4.02	597.49	4.91	5.21	596.48	
1/25/2005		No Data			No Data			No Data		
10/31/2006	3.06	3.33	598.63	3.38	3.66	597.85	4.11	4.41	597.28	
4/30/2007		No Data			No Data			No Data		
10/15/2010	2.96	3.23	598.73	3.39	3.67	597.84	4.19	4.49	597.20	
12/12/2012	5.07	5.34	596.62	4.89	5.17	596.34	4.76	5.06	596.63	
11/12/2015	5.00	5.27	596.69	4.67	4.95	596.56	3.58	3.88	597.81	
4/21/2016		No Data			No Data			3.71	4.01	597.68
6/24/2016	5.00	5.27	596.69	4.63	4.91	596.60	4.18	4.48	597.21	
9/22/2016*	5.50	5.76	596.19	6.79	6.83	594.44	6.39	6.66	595.00	
12/22/2016*	5.95	6.21	595.74	6.28	6.32	594.95	6.62	6.89	594.77	
3/21/2017*	5.28	5.54	596.41	6.32	6.36	594.91	6.13	6.40	595.26	

Sample Date	MW-8			MW-9			GEC TW-4		
	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl.)
6/8/1999		Not Installed			Not Installed			No Data	
1/3/2000	6.41	6.79	595.83		Not Installed			No Data	
4/22/2004	4.03	4.41	598.21	4.31	4.65	595.58		No Data	
7/22/2004		No Data			No Data			No Data	
10/27/2004	5.26	5.64	596.98	5.24	5.58	594.65		No Data	
1/25/2005		No Data			No Data			No Data	
10/31/2006	4.07	4.45	598.17	4.00	4.34	595.89		No Data	
4/30/2007		No Data			No Data			No Data	
10/15/2010	3.89	4.27	598.35	6.03	6.37	593.86		No Data	
12/12/2012	4.78	5.16	597.46	6.74	7.08	593.15		No Data	
11/12/2015	3.12	3.50	599.12	4.57	4.91	595.32	4.03	4.03	598.16
4/21/2016	2.75	3.13	599.49		No Data		3.40	3.40	598.79
6/24/2016	4.96	5.34	597.28	5.65	5.99	594.24	4.28	4.28	597.91
9/22/2016*	5.51	5.65	596.73	5.39	5.66	594.50	5.43	5.94	596.76
12/22/2016*	5.60	5.74	596.64	6.10	6.37	593.79	5.62	6.13	596.57
3/21/2017*	4.97	5.11	597.27	6.18	6.45	593.71	4.82	5.33	597.37

Sample Date	GEC TW-5		
	Depth to Water (ft below PVC Lip)	Depth to Water (below grade)	Groundwater Elev. (ft msl)
11/12/2015	3.77	3.77	-3.77
4/21/2016	3.51	3.51	-3.51
6/24/2016	3.93	3.93	-3.93
9/22/2016*	5.92	5.92	-5.92
12/22/2016*		Not Sampled	
3/21/2017*	5.12	5.12	-5.12

NOTES:

ft MSL - Feet below Mean Sea Level

\* = Elevations resurveyed after construction (10/13/16)

TABLE A.7  
 Groundwater Natural Attenuation  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-1															
Sample Date				1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/15/15	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				595.40	598.03	597.96	596.94	596.17	597.91	598.58	598.03	597.32	598.79	598.31	596.29	595.99	596.48		
FIELD PARAMETERS																			
Temperature	C°	NS	NS	8.8	13.8	23.9	18.3	9.6	16.2	14.9	19.1	14.74	14.68	15.46	16.48	13.24	6.38		
Specific Conductivity	mS/cm	NS	NS	1005	1652	1618	1691	1767	1463	1121	1217	900	476	--	781	886	2542		
Dissolved Oxygen (field)	mg/l	NS	NS	1	5	5	4	4	3	6	--	5.73	7.77	6.07	1.10	4.12	3.72		
pH		NS	NS	7.05	7.11	7.14	7.41	7.15	7.26	7.18	6.85	7.18	7.42	7.34	6.93	5.69	6.57		
ORP	eV	NS	NS	--	--	--	--	--	--	--	--	-30.6	195.9	87.0	170.0	144.4	163.6		

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	PZ-1													
Sample Date				1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		595.17	596.87	596.91	596.15	595.17	597.00	597.18	596.78	594.27	597.21	596.97	594.87	595.19	595.48		
FIELD PARAMETERS				8.9	14.1	23.4	15.1	10.7	15.4	15.0	14.1	14.87	15.77	NOT SAMPLED	14.33	13.69	11.36
Temperature	C°	NS	NS	192	261	261	233	257	275	236	332	187	190		161	425	6063
Specific Conductivity	mS/cm	NS	NS	1	4	4	3	3	4	5	--	1.40	3.90		1.32	3.33	0.67
Dissolved Oxygen (field)	mg/l	NS	NS	8.35	7.98	8.13	8.50	8.20	8.18	8.04	7.36	8.00	7.73		6.28	5.49	6.51
pH		NS	NS	--	--	--	--	--	--	--	--	-61.6	191.2		224.0	148.6	130.3
ORP	eV	NS	NS														

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

TABLE A.7  
 Groundwater Natural Attenuation  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-2															
Sample Date				1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				593.77	595.79	595.53	594.90	593.88	595.64	596.12	595.75	594.58	595.95	595.71	595.75	594.87	595.80		
FIELD PARAMETERS		NR 140	NR 140	8.1	8.2	19.1	15.3	7.2	13.3	9.9	15.6	13.52	13.89	14.55	16.25	11.58	5.93		
Temperature	C°	NS	NS	3030	6690	4120	5190	4690	3420	3110	3730	2285	1679	1717	2349	1589	2442		
Dissolved Oxygen (field)	mg/l	NS	NS	<1	3	5	2	5	3	4	--	2.54	7.30	3.88	1.69	12.93	2.72		
pH		NS	NS	6.83	6.86	6.99	7.28	7.10	7.19	7.25	7.03	7.04	6.64	5.90	6.27	5.19	6.58		
ORP	eV	NS	NS	--	--	--	--	--	--	--	--	-42.3	155.9	134.0	188.0	144.8	162.4		

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

TABLE A.7  
 Groundwater Natural Attenuation  
 One Hour Martinizing  
 1923 Main St., Green Bay, WI 54302  
 BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-3										SMW-3				
Sample Date				1/3/00	4/22/04	7/22/04	10/28/04	1/25/05	10/31/06	4/30/07	10/15/10	12/12/12	11/12/15	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		596.31	598.68	598.47	597.51	596.15	598.19	599.04	598.04	596.33	--	595.57	595.69	595.07	594.96	595.10		
FIELD PARAMETERS				7.8	7.4	16.7	16.5	9.0	13.2	10.6	18.2	12.54	REMOVED DURING 2015 EXCAVATION	15.19	13.48	20.10	12.21	6.63
Temperature	C°	NS	NS	710	901	929	801	919	811	665	633	604		501	996	918	1767	772
Specific Conductivity	mS/cm	NS	NS	<1	6	5	2	4	3	6	--	4.21		6.17	4.01	0.96	5.19	1.31
Dissolved Oxygen (field)	mg/l	NS	NS	7.23	7.31	7.36	7.60	7.47	7.30	7.18	6.89	7.28		7.41	6.70	7.16	5.56	6.66
pH		NS	NS	--	--	--	--	--	--	--	--	-48.3		182.4	118.7	167.0	142.9	116.5
ORP	eV	NS	NS															

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-4												
Sample Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17		
Groundwater Elevation				596.26	598.96	597.43	598.16	598.23	597.07	597.29	597.27	596.90	596.33	597.34		
<b>FIELD PARAMETERS</b>																
Temperature	C°	NS	NS	8.0	9.4	16.9	13.4	19.5	13.38	16.24	16.92	23.13	12.14	6.41		
Specific Conductivity	mS/cm	NS	NS	713	760	757	776	659	433	532	659	585	566	477		
Dissolved Oxygen (field)	mg/l	NS	NS	1	5	4	5	--	6.60	3.84	4.64	1.12	15.66	2.59		
pH		NS	NS	7.19	7.20	7.57	7.38	6.38	7.46	7.15	7.49	7.88	5.99	6.98		
ORP	eV	NS	NS	--	--	--	--	--	-48.6	185.9	70.1	188.0	202.6	85.9		

**Notes:**

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-5										
Sample Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		596.86	599.56	598.05	598.63	598.73	596.62	596.69	596.69	596.19	595.74	596.41		
FIELD PARAMETERS				10.5	8.4	17.2	13.5	17.6	12.93	14.57	NOT SAMPLED	20.60	11.72	5.86
Temperature	C°	NS	NS	598	1039	896	828	722	560	501		482	554	3736
Specific Conductivity	mS/cm	NS	NS	5	5	4	2	--	576.00	7.45		5.06	15.32	6.03
Dissolved Oxygen (field)	mg/l	NS	NS	7.58	7.24	7.55	7.25	6.41	7.34	7.05		7.08	5.35	6.54
pH		NS	NS	--	--	--	--	--	-41.2	189.5		197.0	196.8	79.7
ORP	eV	NS	NS											

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-6											
Sample Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16		
Groundwater Elevation				596.29	598.63	597.49	597.85	597.84	596.34	596.56	596.60	594.44	594.95	594.91	
FIELD PARAMETERS		NS	NS	9.8	8.2	17.5	14.9	17.3	12.12	13.96	13.01	16.26	12.41	7.29	
Temperature	C°	NS	NS	1321	4350	2170	1246	877	518	558	433	117	530	497	
Specific Conductivity	mS/cm	NS	NS	4	4	3	3.5	--	1.73	1.47	2.08	4.34	1.21	0.91	
Dissolved Oxygen (field)	mg/l	NS	NS	7.27	7.00	7.67	7.37	6.64	7.43	7.00	5.56	5.74	4.75	6.87	
pH		NS	NS	--	--	--	--	--	-65.4	31.3	166.4	233.0	195.6	86.3	
ORP	eV	NS	NS												

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-7										
Sample Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		594.78	597.68	596.48	597.28	597.20	596.63	597.81	597.21	595.00	594.77	595.26		
FIELD PARAMETERS				8.8	6.8	17.7	15.6	18.9	14.45	15.27	16.25	17.20	12.97	7.73
Temperature	C°	NS	NS	448	1979	1611	1175	782	992	606	712	917	879	2160
Dissolved Oxygen (field)	mg/l	NS	NS	<1	3	4	5	--	3.77	5.29	4.03	1.67	9.38	6.24
pH		NS	NS	7.49	6.77	7.26	7.17	6.78	7.14	6.97	6.95	6.62	5.41	6.81
ORP	eV	NS	NS	--	--	--	--	--	-30.8	217.8	104.2	178.0	141.3	165.2

*Notes:*

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-8										
Sample Date				1/3/00	4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		595.83	598.21	596.98	598.17	598.35	597.46	599.12	597.28	596.73	596.64	597.27		
FIELD PARAMETERS				10.1	9.5	17.8	16.0	18.3	14.84	15.46	NOT SAMPLED	16.94	11.98	6.42
Temperature	C°	NS	NS	745	1462	1573	1207	905	841	643		609	487	400
Specific Conductivity	mS/cm	NS	NS	6	6	4	5	--	5.06	4.37		1.57	16.06	3.38
Dissolved Oxygen (field)	mg/l	NS	NS	7.21	7.29	7.41	7.35	7.10	7.27	7.02		6.83	5.70	7.10
pH		NS	NS	--	--	--	--	--	-30.0	104.9		183.0	142.1	145.0
ORP	eV	NS	NS											

**Notes:**

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

**TABLE A.7**  
**Groundwater Natural Attenuation**  
One Hour Martinizing  
1923 Main St., Green Bay, WI 54302  
BRRTS #02-05-217276

Sample ID		NR 140 Preventive Action Limit	NR 140 Enforcement Standard	MW-9									
Sample Date				4/22/04	10/28/04	10/31/06	10/15/10	12/12/12	11/12/15	6/24/16	9/22/16	12/22/16	3/21/17
Groundwater Elevation		595.58	594.65	595.89	593.86	593.15	595.32	594.24	594.50	593.79	593.71		
<b>FIELD PARAMETERS</b>													
Temperature	C°	NS	NS	9.7	16.8	15.8	17.1	12.84	13.60	12.95	17.62	11.61	7.86
Specific Conductivity	mS/cm	NS	NS	11280	3340	2790	1394	824	678	667	705	835	648
Dissolved Oxygen (field)	mg/l	NS	NS	--	7	--	--	2.08	8.90	2.75	1.14	2.67	2.27
pH		NS	NS	7.02	7.74	7.49	7.14	7.78	7.31	6.79	5.68	2.19	7.07
ORP	eV	NS	NS	--	--	--	--	-48.5	117.1	101.2	205.0	117.1	162.1

**Notes:**

NS = No standard established

**Bold** value indicates exceedance of NR 140.10 or 140.12

Enforcement Standard

*ITALICS* value exceeds NR 140.10 or 140.12 PAL

\*: Public Welfare Standard from Table 2, NR 140.12

\*\*: Values beyond standard range of concentration, meter operation suspect

## **Appendices**

Appendix A: Site Plan

Appendix B: Boring Logs

Appendix C: Laboratory Analytical Reports

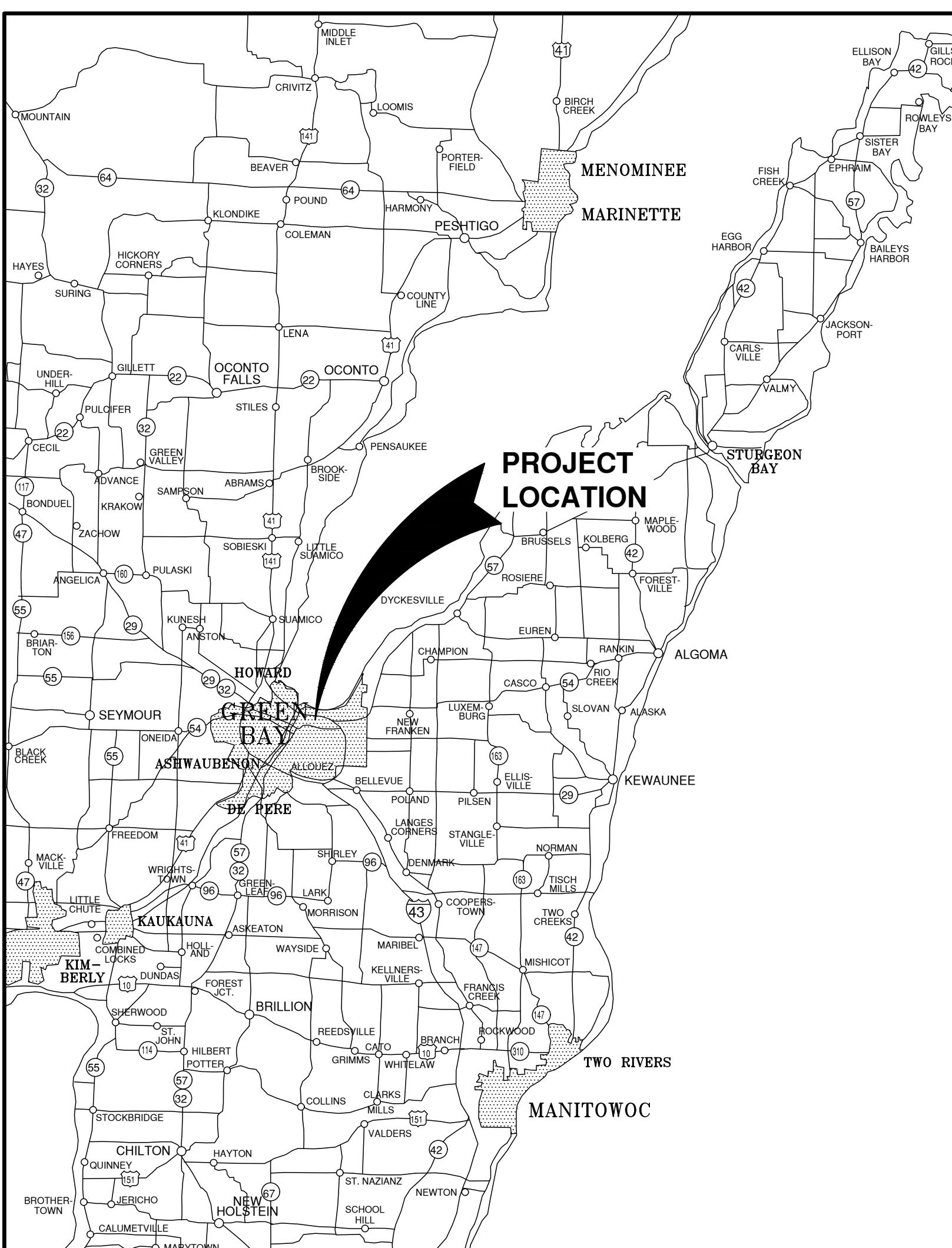
Appendix D: Contaminant Trend Analysis

## Appendix A

Site Plan

# PROPOSED FAMILIA DENTAL FOR GB REAL ESTATE INVESTMENTS, LLC CITY OF GREEN BAY, BROWN COUNTY WISCONSIN

**ATTENTION!**  
DOWNLOADED PLANS ARE NOT SCALEABLE, NEITHER THE OWNER OR THE ENGINEER SHALL BE HELD RESPONSIBLE FOR THE SCALE OR PRINT QUALITY OF DOWNLOADED PLANS. ONLY PRINTED PLANS FROM BLUE PRINT SERVICE CO., INC. SHALL BE CONSIDERED TO BE SCALEABLE PLANS.



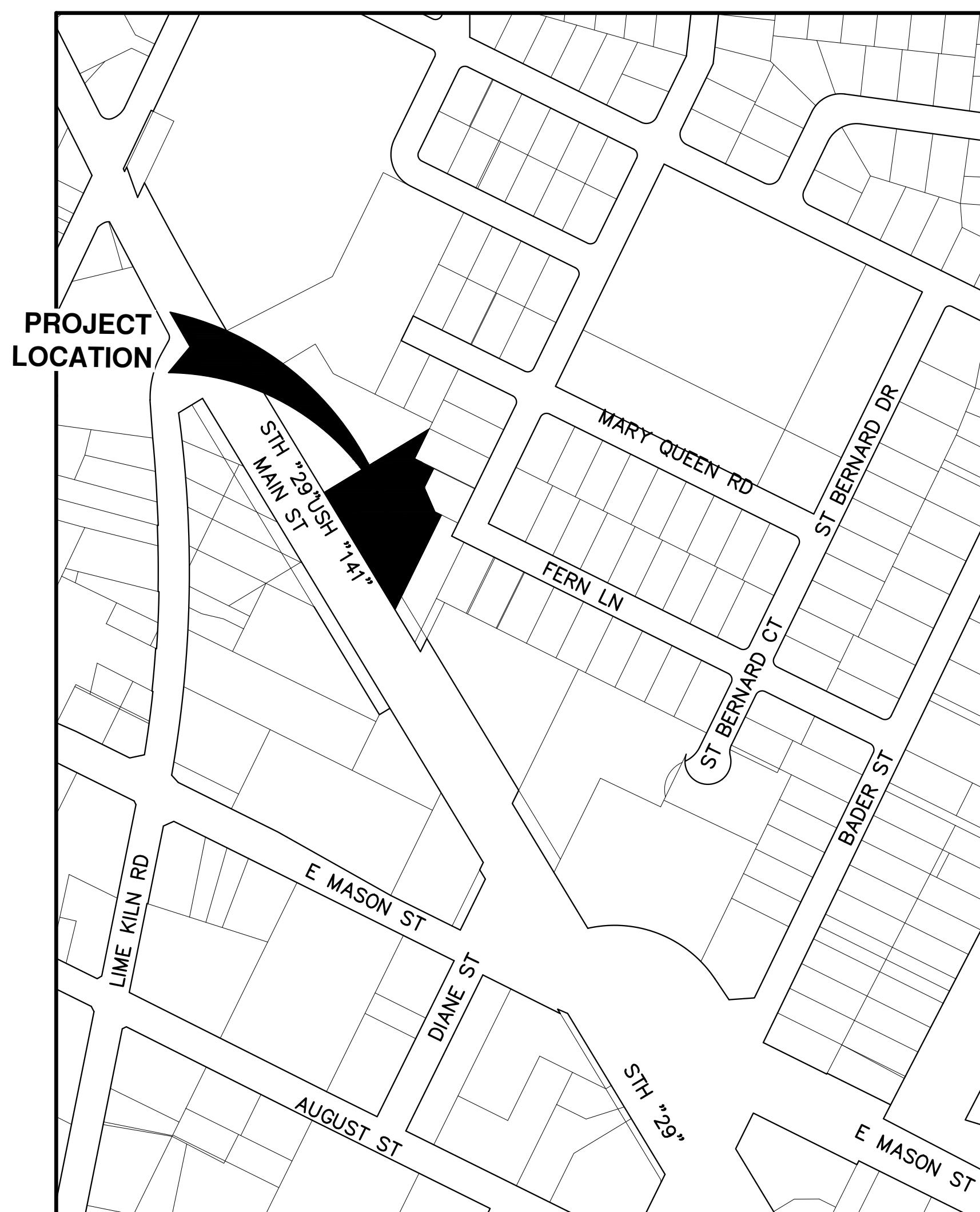
VICINITY MAP

**NOTE:**  
EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES, WHETHER SHOWN OR NOT, FROM THE OWNERS OF THE RESPECTIVE UTILITIES. ALL UTILITY OWNERS SHALL BE NOTIFIED FOR LOCATES BY THE CONTRACTOR 72 HOURS PRIOR TO EXCAVATION.

**NOTE:**  
ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONSTRUCTION SITE EROSION CONTROL AND TECHNICAL STANDARDS.

## INDEX TO DRAWINGS

SHT. NO.	DESCRIPTION
C-0	LOCATION MAPS AND INDEX TO DRAWINGS
C-1	EXISTING SITE CONDITIONS
C-2	SITE PLAN
C-3	UTILITY PLAN
C-4	GRADING AND EROSION CONTROL PLAN
C-5	MISCELLANEOUS DETAILS
C-6	MISCELLANEOUS DETAILS
C-7	MISCELLANEOUS DETAILS
C-8	EROSION CONTROL - INLET PROTECTION AND MISCELLANEOUS DETAILS
C-9	EROSION CONTROL - DITCH CHECK DETAILS
C-10	EROSION CONTROL - SHEET FLOW DETAILS
L-0	LANDSCAPING PLAN
L-1	LIGHTING PLAN



LOCATION MAP

1	5-10-16	JGS	CITY SUBMITTAL	NO.	DATE	APPROV.	REVISION	DRAWN BY
2	5-25-16	JGS	FINAL CITY SUBMITTAL					CHECKED BY

PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC.  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN

LOCATION MAP AND INDEX TO DRAWINGS

DATE  
05/2016  
FILE  
5642001C  
JOB NO.  
5642002

Robert E. Lee & Associates, Inc.  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD  
HOBART, WI 54155  
PHONE: (920) 662-9641  
FAX: (920) 662-9141  
INTERNET: www.releeinc.com

SHEET NO.  
**C-0**

### DEMOLITION NOTES

- ALL EXISTING BUILDINGS AND MISCELLANEOUS STRUCTURES ON SITE TO BE DEMOLISHED AND REMOVED.
- EXISTING ASPHALT AND BASE COURSE MAY BE PULVERIZED AND STOCKPILED ON SITE FOR FUTURE USE.
- EXISTING GAS, ELECTRIC, CABLE TELEVISION AND TELEPHONE TO BE REMOVED AND/OR RELOCATED BY OTHERS. WORK SHALL BE COORDINATED BY GENERAL CONTRACTOR.
- DRIVEWAY OPENINGS SHALL BE REMOVED AND CURB OPENINGS SHALL BE CLOSED IN ACCORDANCE WITH CITY OF GREEN BAY STANDARDS.
- NO STOCKPILING OF CONSTRUCTION DEBRIS ALLOWED ON SITE, MUST BE REMOVED AND HAULED OFF-SITE.

### LEGEND

○ FIRE HYDRANT	POWER POLE
⊗ WATER VALVE/CURB STOP	POWER POLE W/GUY WIRE
⊕ WATER MANHOLE	LIGHT POLE
▽ REDUCER/INCREASER	TRAFFIC SIGNAL POLE
○ SANITARY MANHOLE	ELECTRIC MANHOLE
● AIR RELIEF MANHOLE	ELECTRIC METER
○ STORM MANHOLE	TELEPHONE MANHOLE
○ OPEN STORM MANHOLE	TELEPHONE PEDESTAL
■ STORM INLET	CABLE TV MANHOLE
□ STORM INLET MANHOLE	CABLE TV PEDESTAL
○ TANK COVER	TANK COVER
⊕ <sub>SB</sub> SOIL BORING	GAS VALVE
■ POST	GAS METER
● IRON PIPE/ROD	MAILBOX
△ PK NAIL	SIGN
○ BOLLARD	BOLLARD

— 8SS — 8SS —	SANITARY SEWER (SIZE NOTED)
— 4FM — 4FM —	FORCemain (SIZE NOTED)
— 10ST — 10ST —	STORM SEWER (SIZE NOTED)
— 6W — 6W —	WATERMAIN (SIZE NOTED)
— G — G —	GAS LINE
— OT — OT —	OVERHEAD TELEPHONE LINE
— T — T —	UNDERGROUND TELEPHONE LINE
— OE — OE —	OVERHEAD ELECTRIC LINE
— E — E —	UNDERGROUND ELECTRIC LINE
— OTV — OTV —	OVERHEAD CABLE TV LINE
— TV — TV —	CABLE TV LINE
— F — F —	FIBER OPTIC LINE
— R/W — R/W —	R/W LINE
— PROPERTY LINE —	PROPERTY LINE
— EASEMENT LINE —	EASEMENT LINE
— BUILDING SETBACK LINE —	BUILDING SETBACK LINE
— SECTION LINE —	SECTION LINE

GR.	GRAVEL	WM.	WATERMAIN	VPC	VERTICAL POINT OF CURVATURE
BIT.	BITUMINOUS	HYD.	HYDRANT	VPI	VERTICAL POINT OF INTERSECTION
ASP.	ASPHALT	WV.	WATER VALVE	VPT	POINT OF CURVATURE
CONC.	CONCRETE	SAN.	SANITARY SEWER	PC	POINT OF INTERSECTION
SW.	SIDEWALK	MH.	MANHOLE	PI	POINT OF TANGENCY
BLDG.	BUILDING	ST.	STORM SEWER	PT	POINT OF TANGENCY
HSE.	HOUSE	CB.	CATCH BASIN	R	RADIUS
PED.	PEDESTAL	TELE.	TELEPHONE	EX	EXISTING
PP.	POWER POLE	ELEC.	ELECTRIC	PR	PROPOSED
LP.	LIGHT POLE	TV.	TELEVISION	EOR	END OF RADIUS
BM.	BENCH MARK	STA.	STATION	BOC	BACK OF CURB

B-B	BACK TO BACK (OF CURB)
F-F	FACE TO FACE (OF CURB)
R/W	RIGHT OF WAY
T/C	TOP OF CURB
F/L	FLOW LINE
C/L	CENTERLINE
R/L	REFERENCE LINE
INV.	INVERT
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
CULV.	CULVERT

BENCHMARK		BENCHMARK ESTABLISHED BY: ROBERT E. LEE & ASSOCIATES, INC.
NO.	DESCRIPTION	EL.
1	TOP NUT ON FIRE HYDRANT	119.88

### OWNER INFORMATION:

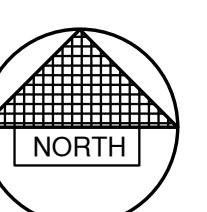
GB REAL ESTATE INVESTMENTS, LLC  
300 NORTH VAN BUREN ST.  
GREEN BAY, WI 54301

(813)500-02-96

CONTACT: GARRITT BADER

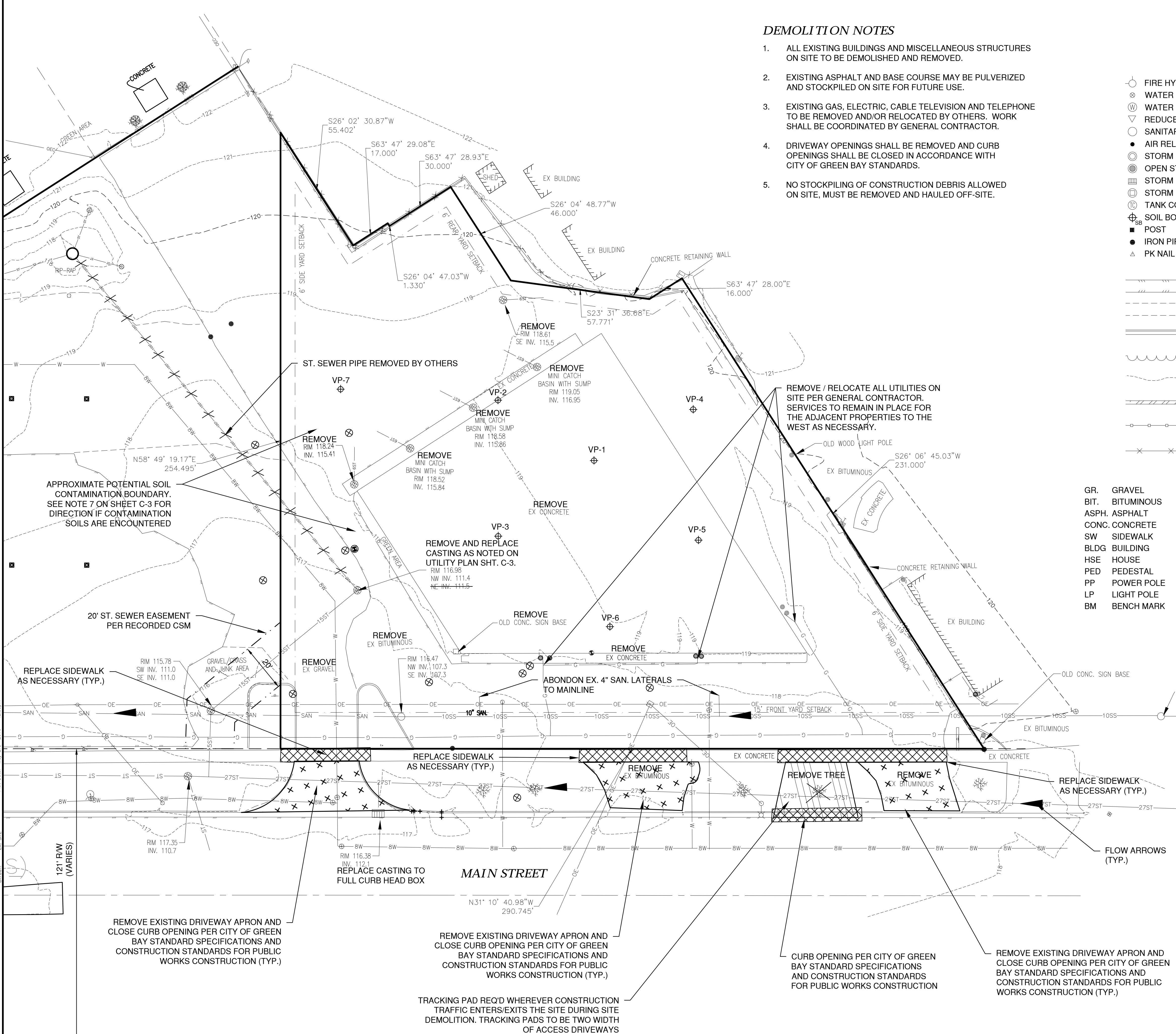
### SURVEYOR'S NOTES:

ALL SURVEY WORK WAS CONDUCTED BY CAROW LAND SURVEYING. (920)731-4168 PLEASE CONTACT ENGINEER IF THERE ARE ANY DISCREPANCIES WITHIN THE PLAN.

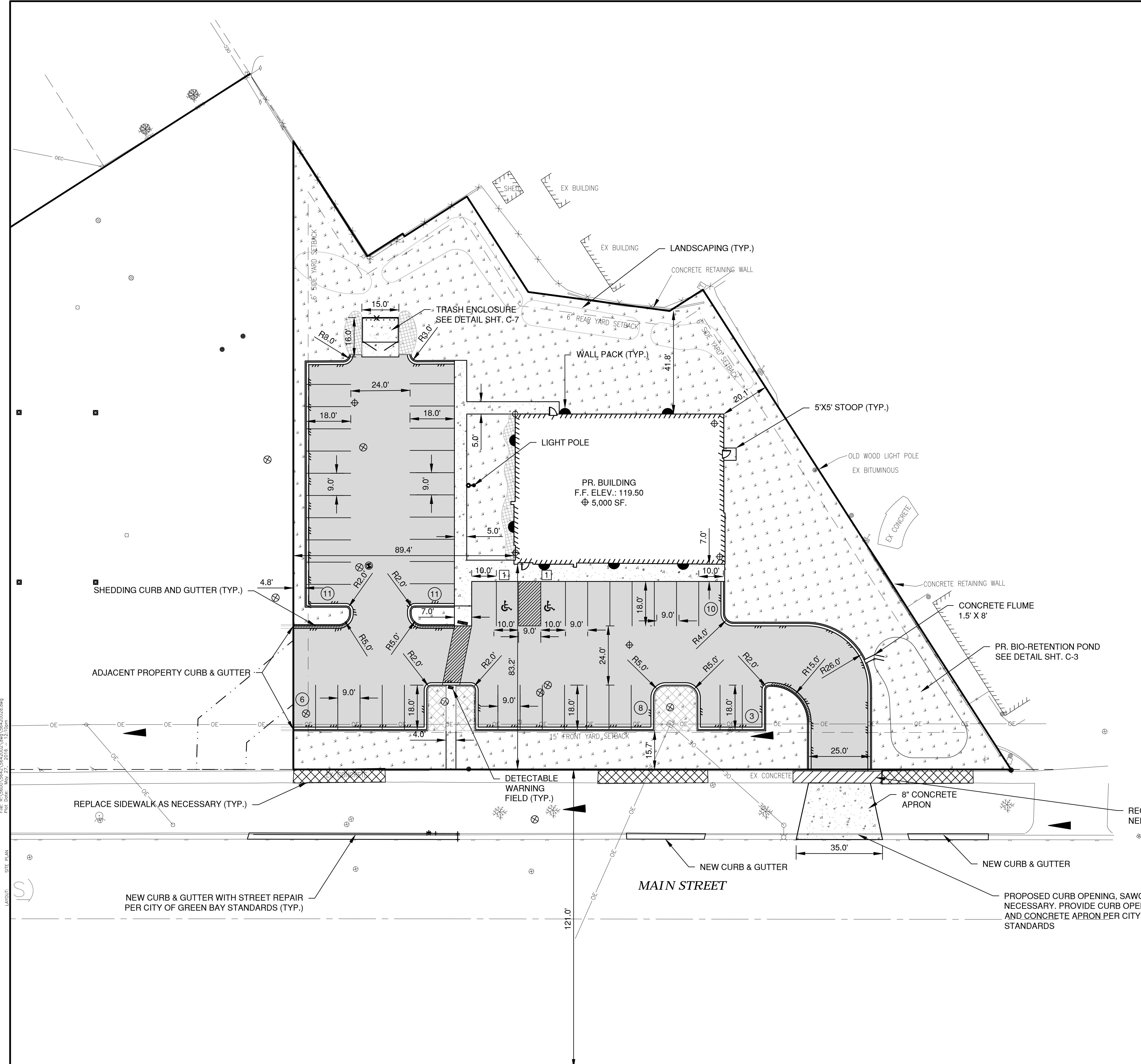


0' 20' 40'

SCALE IN FEET



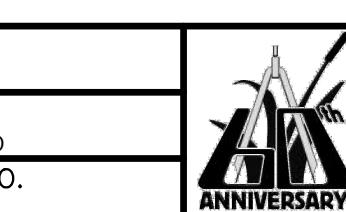
NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN BY	PROPOSED FAMILY DENTAL FOR	DATE	FILE	JOB NO.	Robert E. Lee & Associates, Inc.	SHEET NO.
1	5-10-16	JGS	CITY SUBMITTAL					CHECKED JGS	GB REAL ESTATE INVESTMENTS, LLC.	05/2016	5642002T	5642002	Engineering, Surveying, Environmental Services 1250 CENTENNIAL CENTER BOULEVARD, HOBART, WI 54155 920-662-9641 www.reeln.com	C-1
2	5-25-16	JGS	FINAL CITY SUBMITTAL					DESIGNED BLT	CITY OF GREEN BAY BROWN COUNTY, WISCONSIN				Celebrating 60 Years of Excellence	



NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN
1	5-10-16	JGS	CITY SUBMITTAL					CHECKED
2	5-25-16	JGS	FINAL CITY SUBMITTAL					DESIGNED

PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC.  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN

SITE PLAN



Robert E. Lee & Associates, Inc.  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTER BOULEVARD HOBART, WI 54155  
920-662-9641 www.releinco.com  
Celebrating 60 Years of Excellence

ANNIVERSARY

C-2

## NOTE:

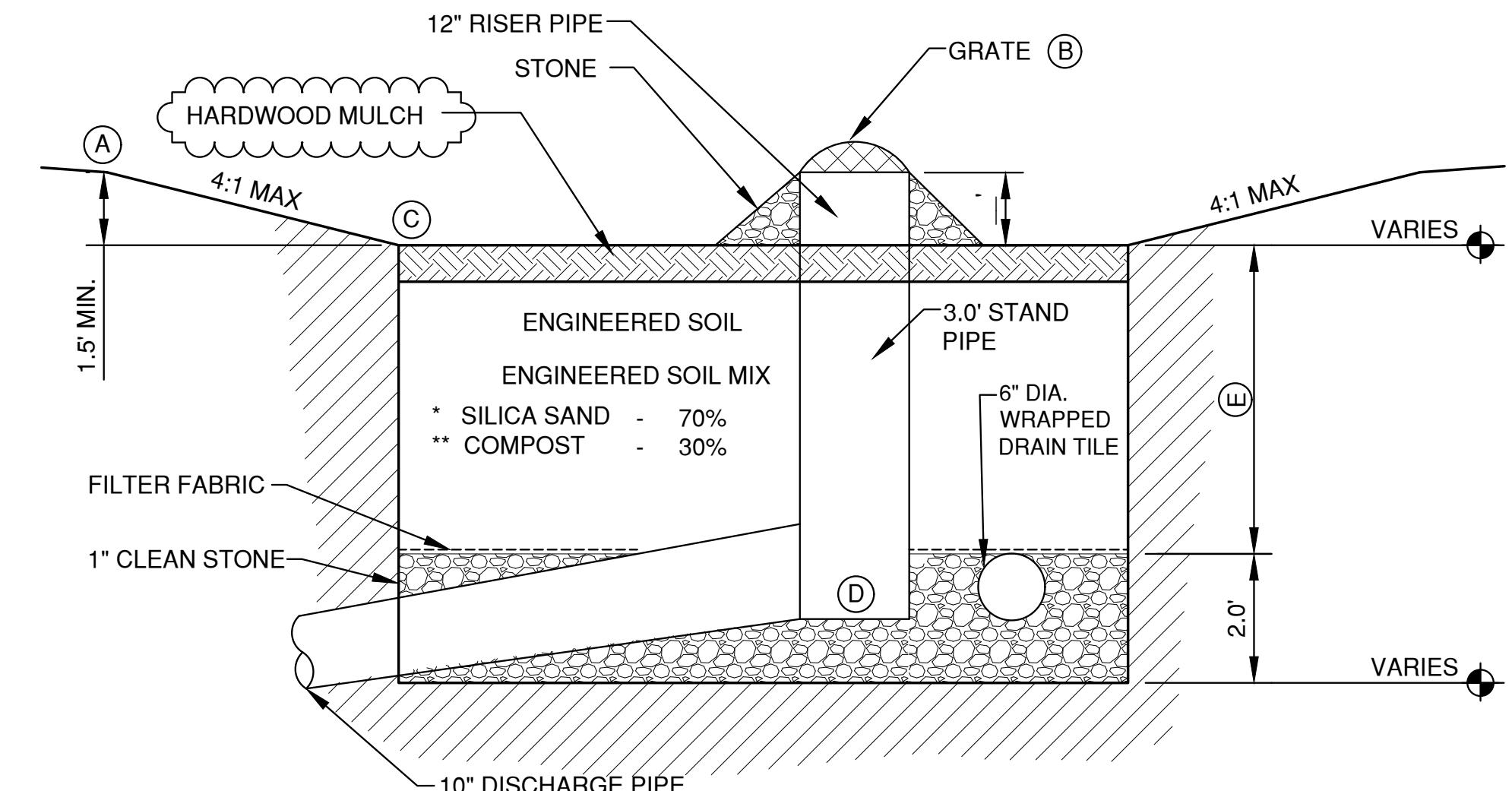
\* SILICA SAND SHALL MEET THE REQUIREMENTS OF WDNR TECHNICAL STANDARD 1004, BIORETENTION FOR INFILTRATION.

\*\* COMPOST SHALL MEET THE REQUIREMENTS OF WDNR SPECIFICATION S100.

\*\*\* THE BIO-RETENTION AREA SHALL BE EXCAVATED TO THE ENGINEERED SOIL DEPTH AND THE 4" DISCHARGE PIPE INSTALLED ALONG WITH THE REMAINDER OF THE STORM SEWER ON SITE. AFTER THE SITE HAS BEEN CONSTRUCTED AND VEGETATION ESTABLISHED, THE BIO-RETENTION AREA SHALL THEN BE EXCAVATED TO FINAL DEPTH AND THE CLEAN STONE, DRAIN TILE, ENGINEERED SOIL, AND HARDWOOD MULCH INSTALLED.

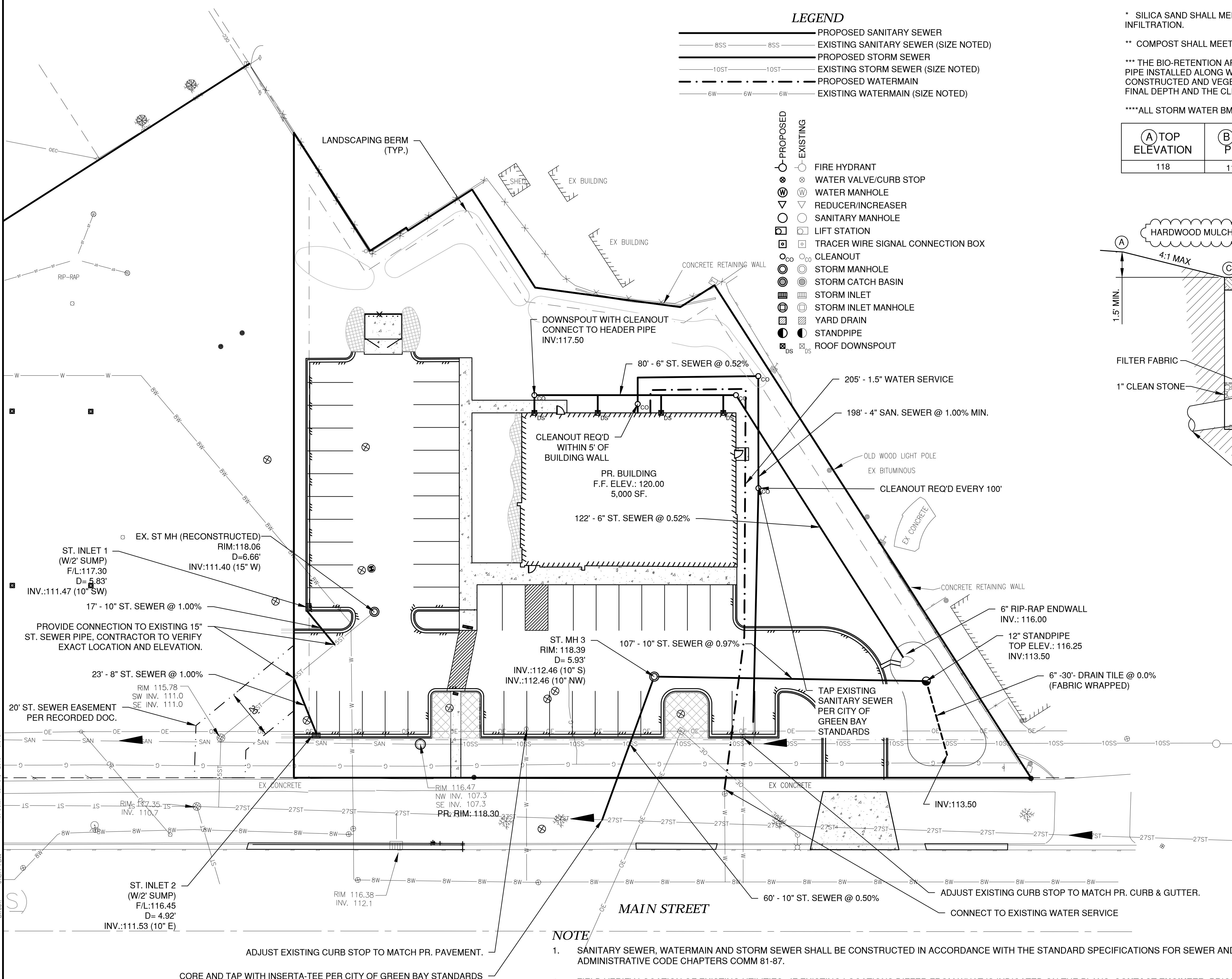
\*\*\* ALL STORM WATER BMP'S MUST MEET WDNR STANDARDS

(A) TOP ELEVATION	(B) STAND PIPE RIM	(C) BOTTOM AREA (S.F.), ELEV.	(D) DISCHARGE PIPE INV.	(E) ENGINEERED SOIL DEPTH
118	116.25	630, 116	113.50	2.0



BIORETENTION POND DETAIL

Scientific Name	Common Name	No. of Plants
<b>Forbs</b>		
<i>Anemone canadensis</i>	Canada Anemone	19
<i>Asclepias incarnata</i>	Marsh Milkweed	11
<i>Aster novae-angliae</i>	New England Aster	19
<i>Aster umbellatus</i>	Flat-topped Aster	11
<i>Chelone glabra</i>	Turtlehead	22
<i>Eupatorium maculatum</i>	Spotted Joe-Pye Weed	22
<i>Eupatorium perfoliatum</i>	Boneset	33
<i>Geranium maculatum</i>	Wild Geranium	26
<i>Helenium autumnale</i>	Sneezeweed	26
<i>Iris versicolor</i>	Northern Blue Flag Iris	37
<i>Liatris pycnostachya</i>	Prairie Blazing Star	30
<i>Lobelia cardinalis</i>	Cardinal Flower	11
<i>Lobelia siphilitica</i>	Great Blue Lobelia	22
<i>Physostegia virginiana</i>	Obedient Plant	7
<i>Pycnanthemum virginianum</i>	Common Mountain Mint	37
<i>Solidago riddellii</i>	Riddell's Goldenrod	7
<i>Verbena hastata</i>	Blue Vervain	30
<i>Zizia aurea</i>	Golden Alexanders	7
<b>Grasses</b>		
<i>Anthoxanthum hirtum</i>	Sweet Grass	26
<i>Calamagrostis canadensis</i>	Bluejoint	59
<i>Carex bebbii</i>	Bebb's Sedge	19
<i>Carex cristatella</i>	Crested Oval Sedge	33
<i>Carex vulpinoidea</i>	Brown Fox Sedge	74
<i>Elymus virginicus</i>	Virginia Wild Rye	30
<i>Spartina pectinata</i>	Prairie Cord Grass	11
TOTAL		629



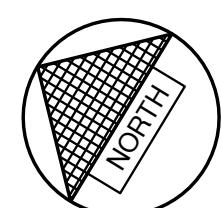
## NOTE

1. SANITARY SEWER, WATERMAIN AND STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN AND ADMINISTRATIVE CODE CHAPTERS COMM 81-87.
2. FIELD VERIFY LOCATION OF EXISTING UTILITIES. IF EXISTING LOCATIONS DIFFER FROM WHAT IS INDICATED ON THE PLANS, CONTACT ENGINEER, PRIOR TO CONTINUED WORK.
3. ALL SANITARY SEWER, STORM SEWER AND WATER SERVICES / MAINS SHALL BE PROVIDED WITH TRACER WIRE OR OTHER METHOD TO BE LOCATED.
4. THE CITY OF GREEN BAY DEPARTMENT OF PUBLIC WORKS MUST BE NOTIFIED (3) THREE WORKING DAYS BEFORE THE START OF ANY SANITARY OR STORM SEWER CONSTRUCTION WITHIN A PUBLIC RIGHT OF WAY OR EASEMENT. CONTACT MATT HECKENLAIBLE, (920) 448-3100.
5. DURING CONSTRUCTION, ALL EXCAVATIONS SHALL BE MONITORED FOR CONTAMINATION. IF PETROLEUM ODORS ARE NOTICED OR IF STAINED SOILS ARE VISIBLE, IMMEDIATELY NOTIFY THE OWNER'S ENVIRONMENTAL PROFESSIONAL. THE CONTRACTOR AND AN ENVIRONMENTAL PROFESSIONAL (EP) WILL MOBILIZE TO THE SITE. THE EP WILL GUIDE THE EXCAVATION OF IMPACTED MATERIAL. SOIL DEEMED IMPACTED WILL BE STOCKPILED ON SITE ON PLASTIC AND COVERED WITH PLASTIC PENDING PROPER OFF-SITE DISPOSAL.
6. CONTRACTOR TO ACQUIRE REQUIRED PERMITS PRIOR TO START OF CONSTRUCTION, TO INCLUDE STREET EXCAVATION, STREET CONSTRUCTION, CURB CUT, SIDEWALK BUILDING GRADE, ETC.

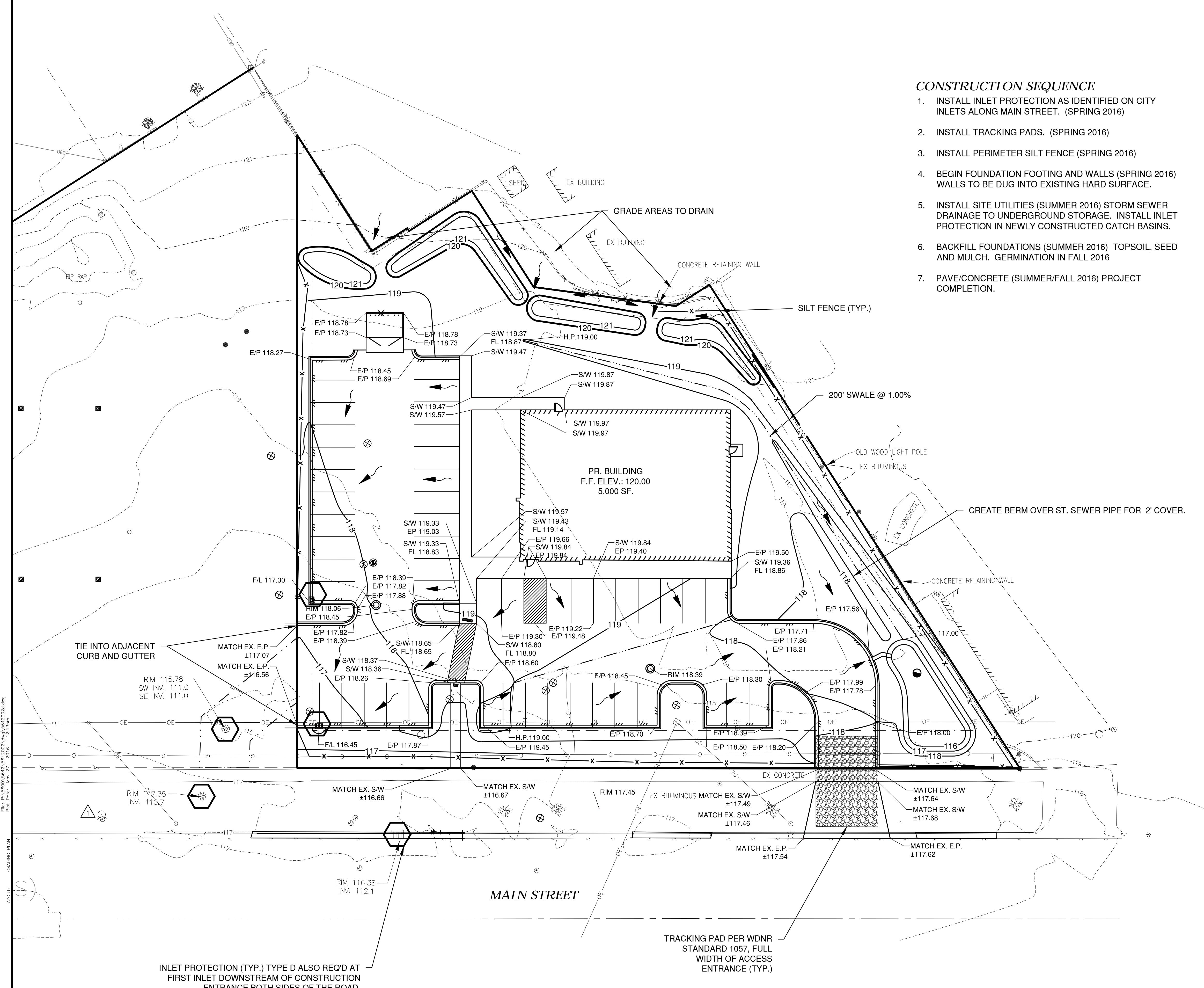
## PLUMBING DATA

DRAINAGE FIXTURE UNITS = 67  
WATER FIXTURE UNITS = 29 GPM.

NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN BY	CHECKED BY	PROPOSED FAMILY DENTAL FOR GB REAL ESTATE INVESTMENTS, LLC.	DATE 05/2016	FILE 5642002D	JOB NO. 5642002	Robert E. Lee & Associates, Inc.	Sheet No. C-3
1	5-10-16	JGS	CITY SUBMITTAL					BLT	JGS	CITY OF GREEN BAY	ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES	1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155	920-662-9641 www.releinco.com	Celebrating 60 Years of Excellence	
2	5-25-16	JGS	FINAL CITY SUBMITTAL					BLT		BROWN COUNTY, WISCONSIN				ANNIVERSARY	



0' 20' 40'  
SCALE IN FEET



BENCHMARK		BENCHMARK ESTABLISHED BY: ROBERT E. LEE & ASSOCIATES, INC.
<b>FIELD VERIFY BENCHMARKS FOR ACCURACY.</b>		
NO.	DESCRIPTION	EL.
1 	TOP NUT ON FIRE HYDRANT	119.88

CONSTRUCTION SEQUENCE

1. INSTALL INLET PROTECTION AS IDENTIFIED ON CITY INLETS ALONG MAIN STREET. (SPRING 2016)
  2. INSTALL TRACKING PADS. (SPRING 2016)
  3. INSTALL PERIMETER SILT FENCE (SPRING 2016)
  4. BEGIN FOUNDATION FOOTING AND WALLS (SPRING 2016)  
WALLS TO BE DUG INTO EXISTING HARD SURFACE.
  5. INSTALL SITE UTILITIES (SUMMER 2016) STORM SEWER DRAINAGE TO UNDERGROUND STORAGE. INSTALL INLET PROTECTION IN NEWLY CONSTRUCTED CATCH BASINS.
  6. BACKFILL FOUNDATIONS (SUMMER 2016) TOPSOIL, SEED AND MULCH. GERMINATION IN FALL 2016
  7. PAVE/CONCRETE (SUMMER/FALL 2016) PROJECT COMPLETION.

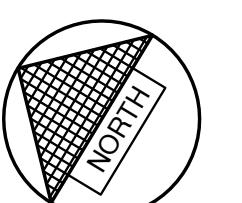
EROSION CONTROL

ALL EROSION CONTROL PRACTICES INDICATED ON THIS PLAN ARE APPROXIMATE LOCATIONS ONLY. THE ACTUAL SITE MAY REQUIRE MORE OR LESS EROSION CONTROL DEPENDING ON THE CURRENT CONDITION OF THE SITE.

1. SILT FENCE IS REQUIRED DOWNSLOPE OF ANY DISTURBED LAND THAT MAY CARRY SEDIMENTS OFF SITE.
  2. A TRACKING PAD IS REQUIRED AT ANY INGRESS/EGRESS LOCATION, WHERE SEDIMENT MAY BE TRACKED OFF-SITE.
  3. PROPER INLET PROTECTION SHALL BE USED DEPENDING ON THE INLET TYPE.
  4. ALL NECESSARY SITE DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061

## *LEGEND*

	T/C 999.99	TOP OF CURB ELEVATION
	F/L 888.88	FLOW LINE ELEVATION
	S/W 666.66	TOP OF SIDEWALK ELEVATION
	E/P 555.55	EDGE OF PAVEMENT ELEVATION
	R/W 444.44	TOP OF RETAINING WALL ELEVATION
	333.33	GROUND ELEVATION
		DRAINAGE SWALE
		DRAINAGE DIVIDE
		SILT FENCE
		BALE DITCH CHECK
		FLOW ARROW
		TRACKING PAD
		INLET PROTECTION



SCALE IN FEET

NO.	DATE	APPROV.	REVISION
1	5-10-16	JGS	CITY SUBMITTAL
2	5-25-16	JGS	FINAL CITY SUBMITTAL

NO.	DATE	APPROV.	REVISION

DRAWN
BLT
CHECKED
JGS
DESIGNED
BLT

**PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC.  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN**

## GRADING AND EROSION CONTROL PLAN

TE  
016  
E  
002D  
B NO.  
002



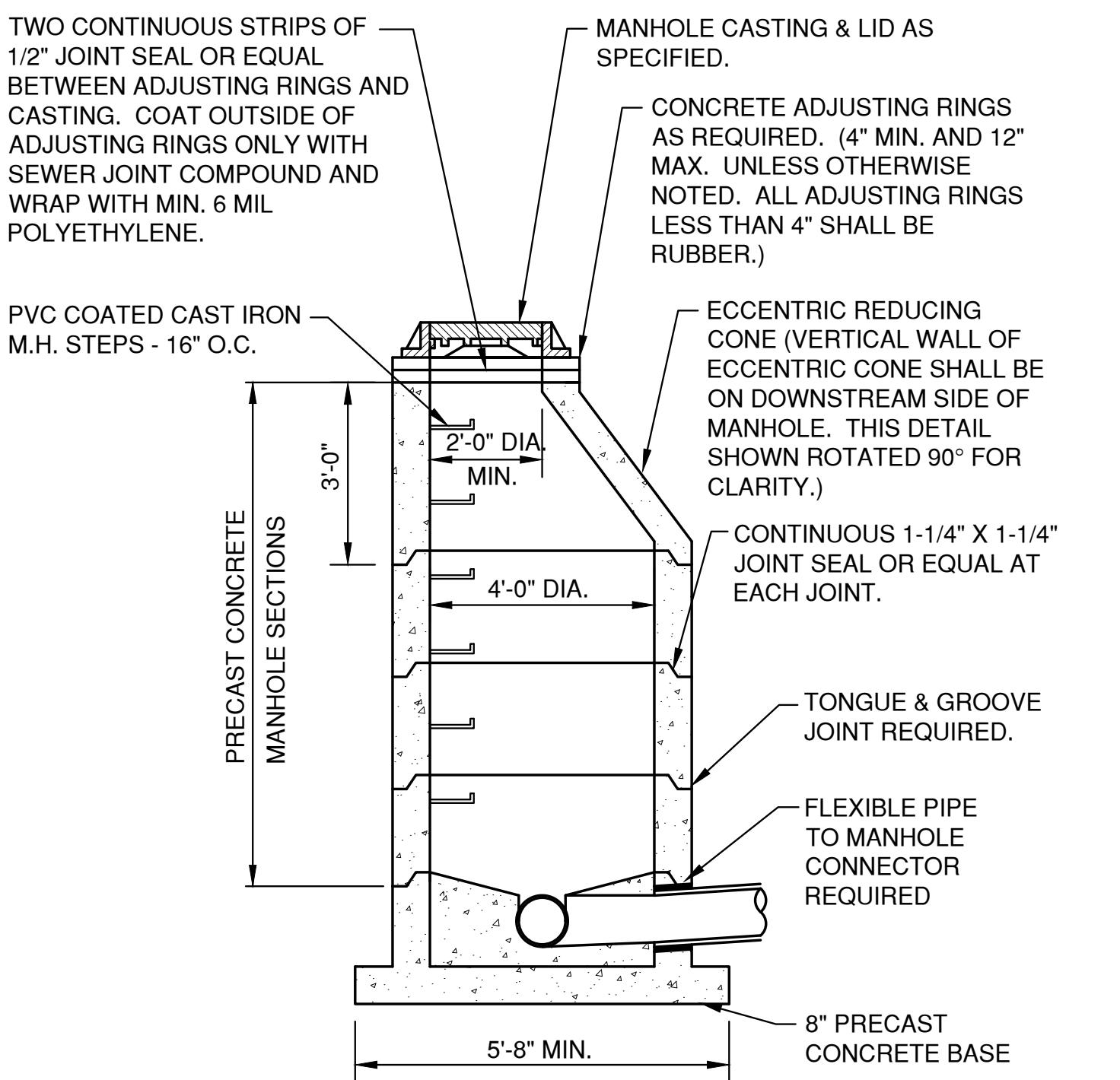


# Robert E. Lee & Associates, Inc.

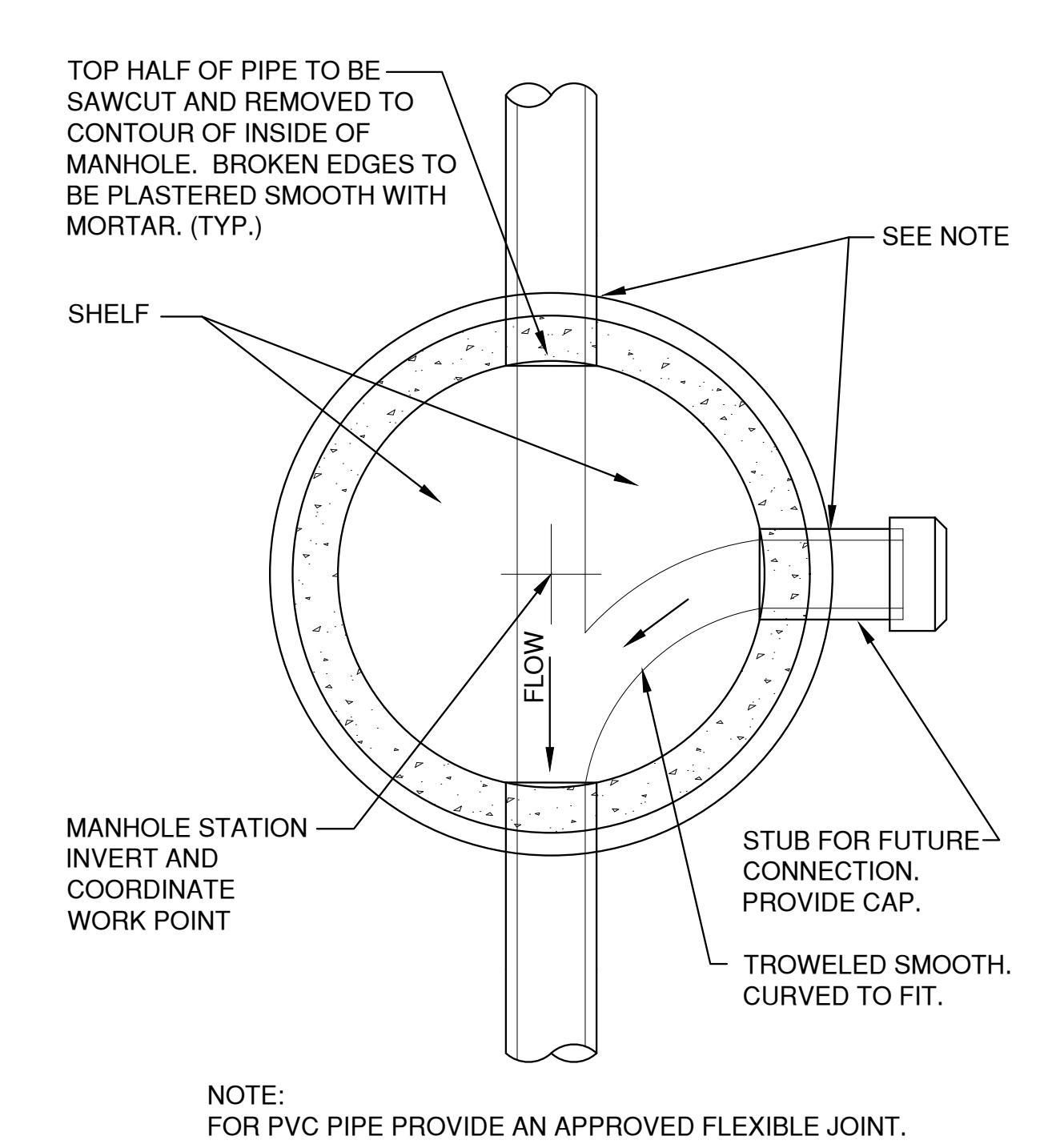
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES

1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155  
920-662-9641 [www.releeinc.com](http://www.releeinc.com)

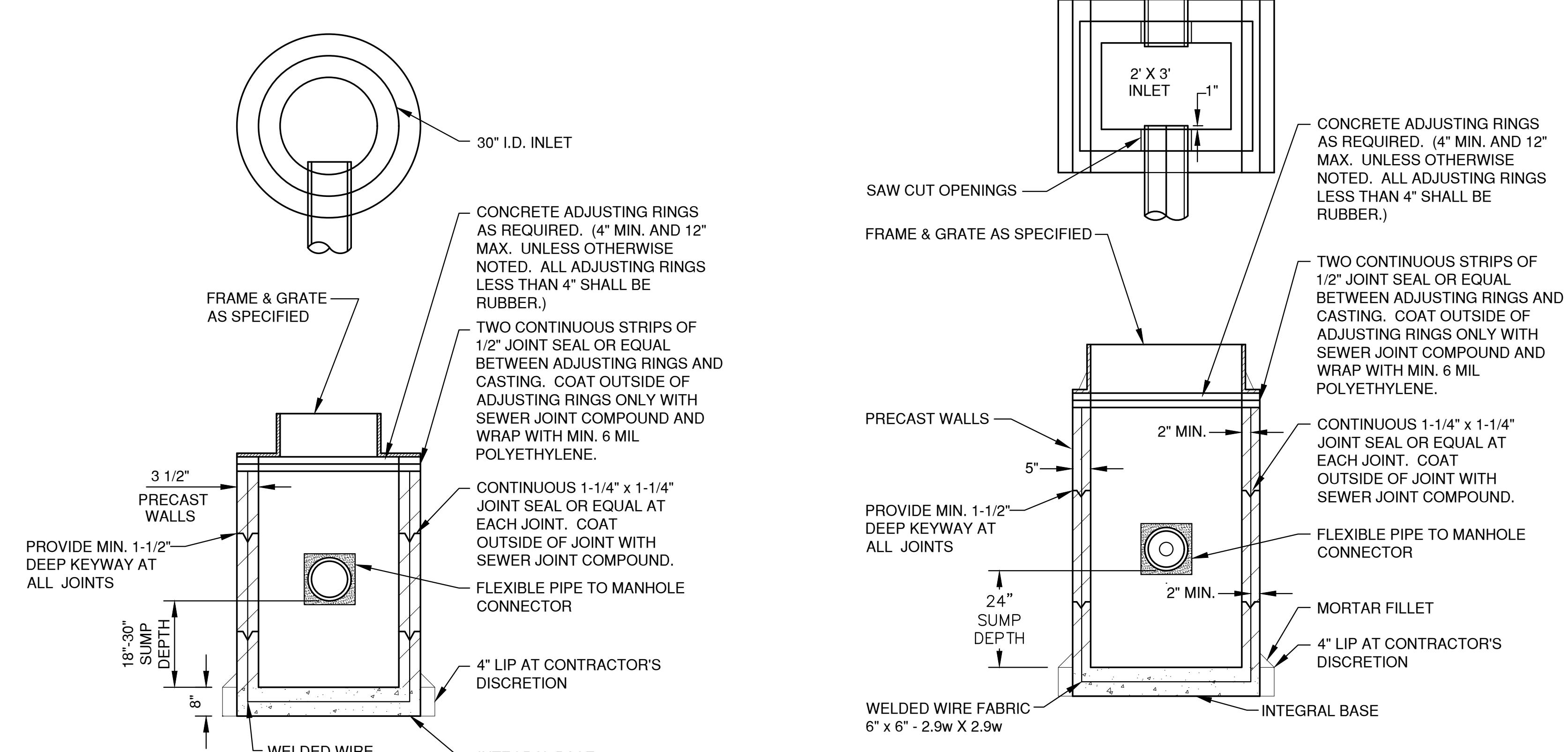
*Celebrating 60 Years of Excellence*



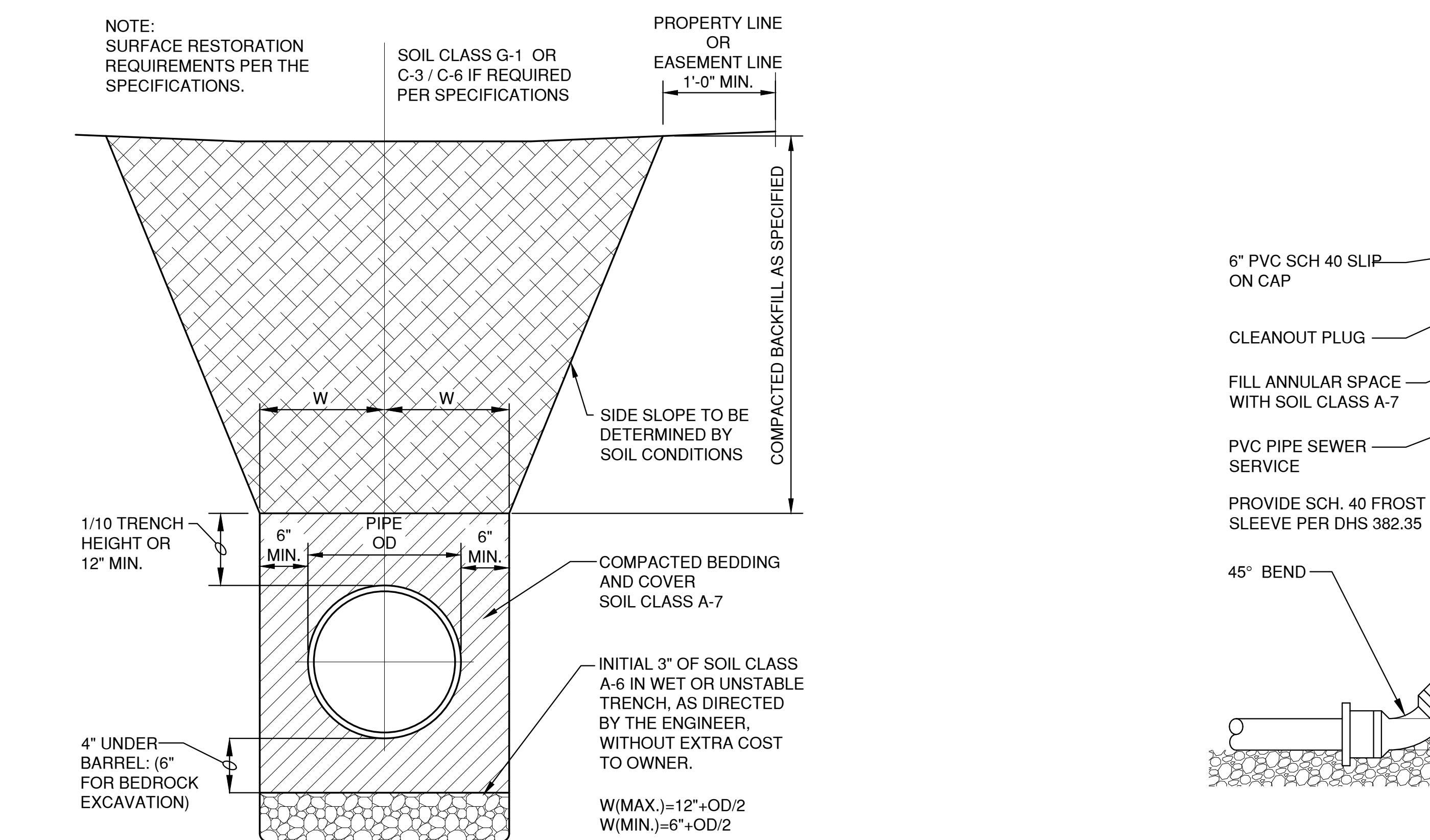
**SANITARY AND STORM STANDARD MANHOLE  
8"-24" (INCLUSIVE)**



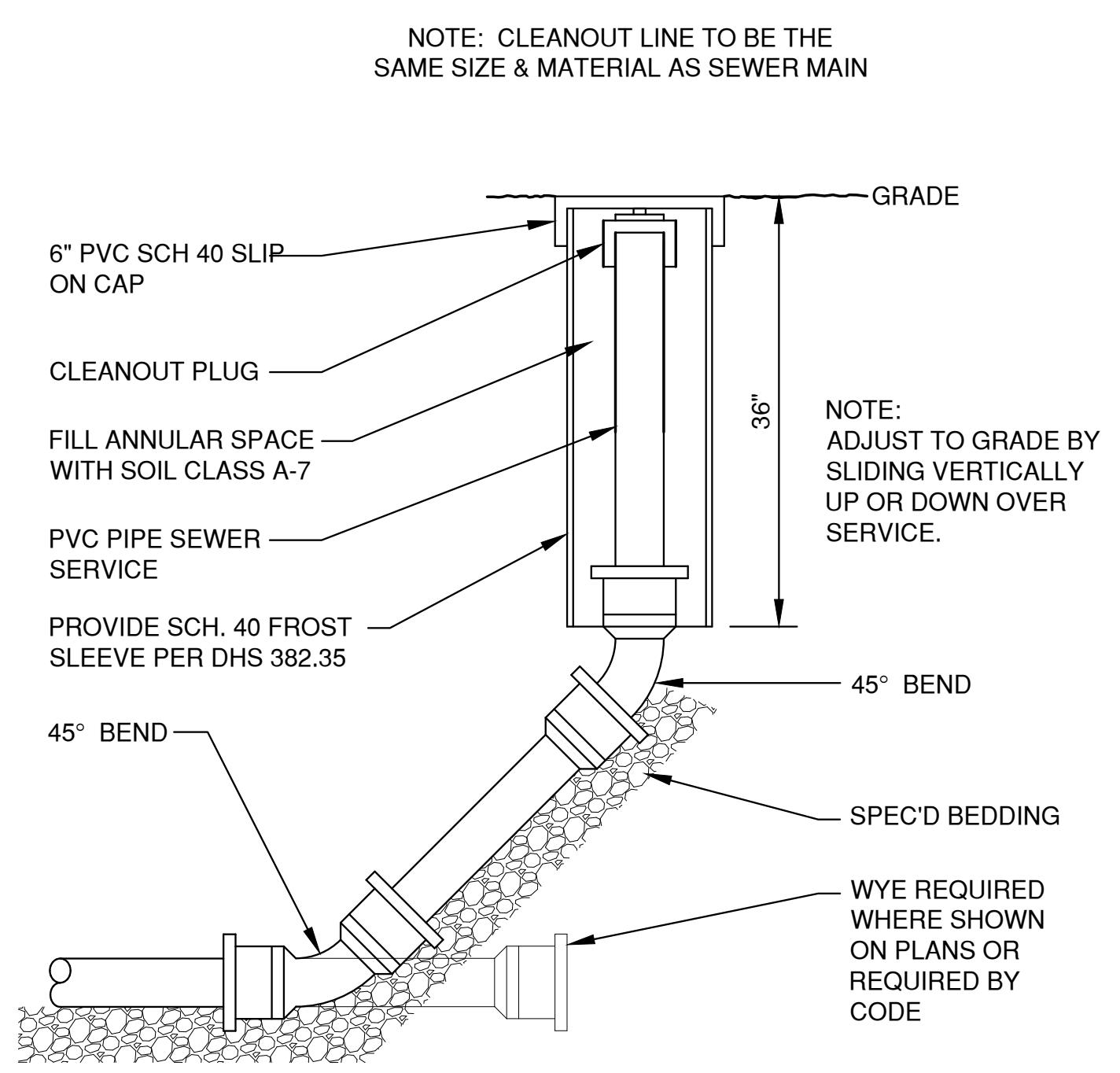
**MANHOLE BASE PLAN  
8" - 60" (INCLUSIVE)**



**TYPE 'A' STORM INLET**  
**TYPE 'B' STORM INLET**



**HDPE /PVC SEWER & WATERMAIN & FORCEMAIN  
BEDDING & TRENCH SECTION**



**CLEAN-OUT DETAIL  
(NON-TRAVELED AREAS)**

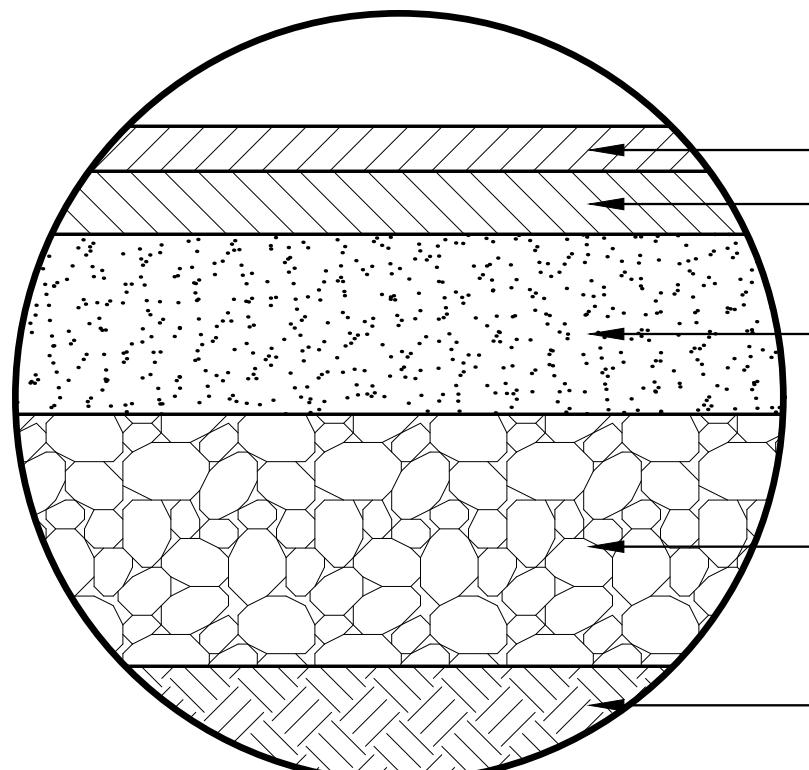
NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN
1	5-10-16	JGS	CITY SUBMITTAL					CHECKED JGS
2	5-25-16	JGS	FINAL CITY SUBMITTAL					DESIGNED BLT

PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN

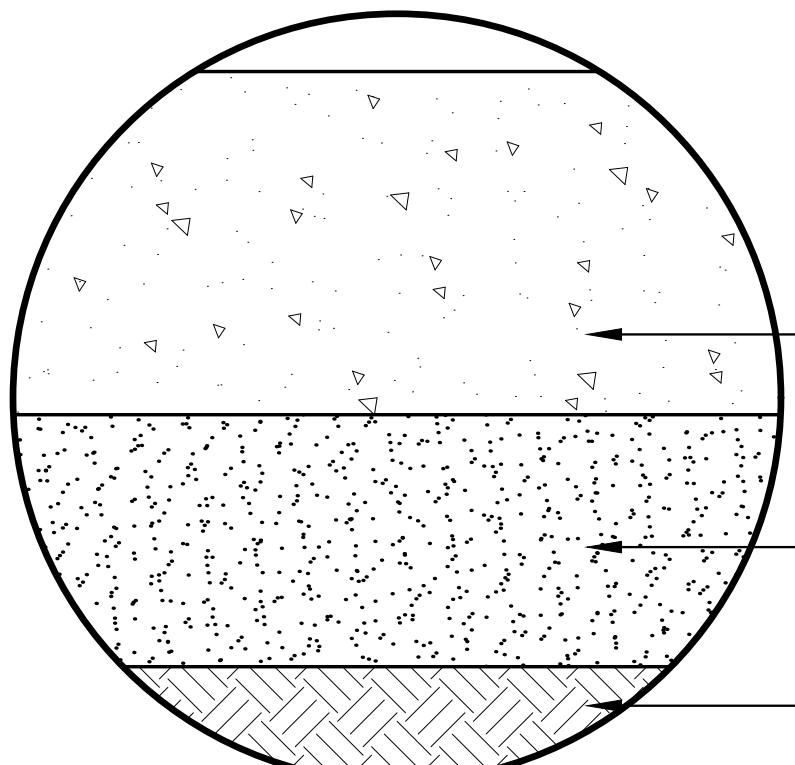
MISCELLANEOUS DETAILS

Robert E. Lee & Associates, Inc.  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD  
HOBART, WI 54155  
PHONE: (920) 662-9641  
INTERNET: www.releeinc.com  
FAX: (920) 662-9141

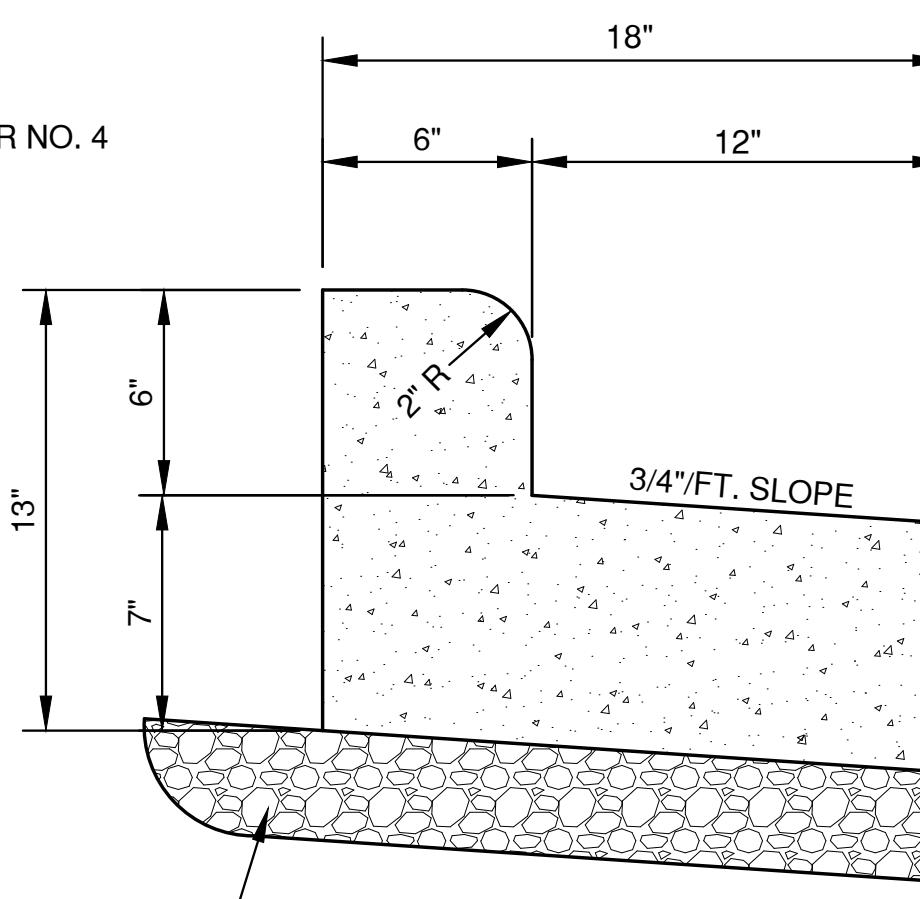
SHEET NO.  
**C-5**



ASPHALT PAVEMENT DETAIL



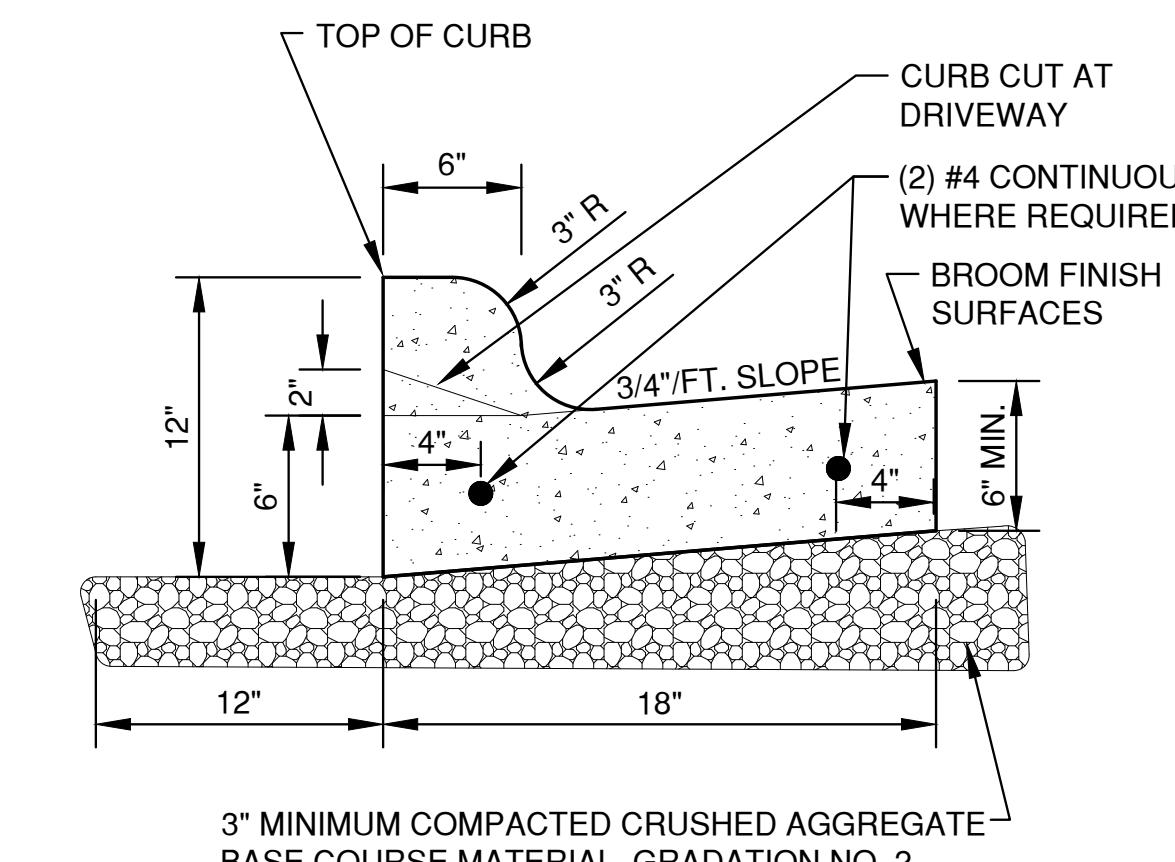
6" / 8" CONCRETE PAVEMENT DETAIL



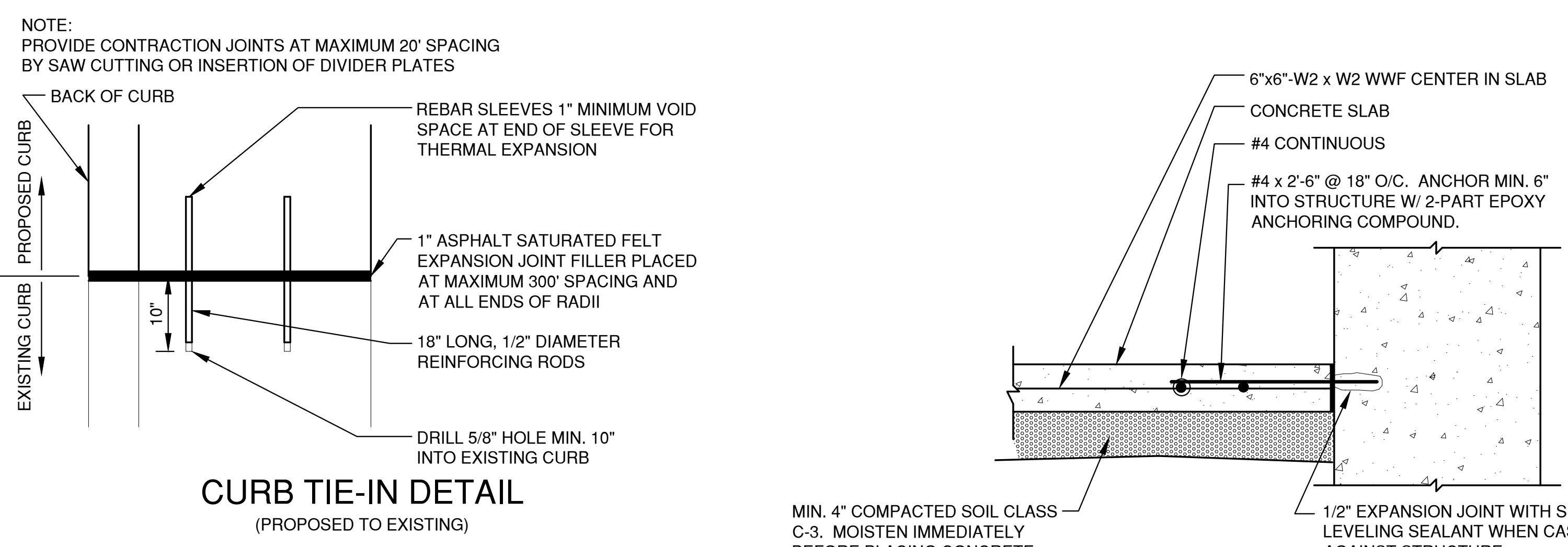
**NOTES**

1. PROVIDE 1" EXPANSION JOINTS AT 300' INTERVALS OR AS SPECIFIED. PROVIDE CONTRACTION JOINTS EVERY 30' OR AS DIRECTED.
2. AT REMOVAL AND REPLACEMENT AREAS AND AT TIES TO EXISTING CURB & GUTTER PROVIDE 2-#5 BARS, 18" LONG. DRILL AND GROUT INTO EXISTING CURB AND GUTTER 9 INCHES.

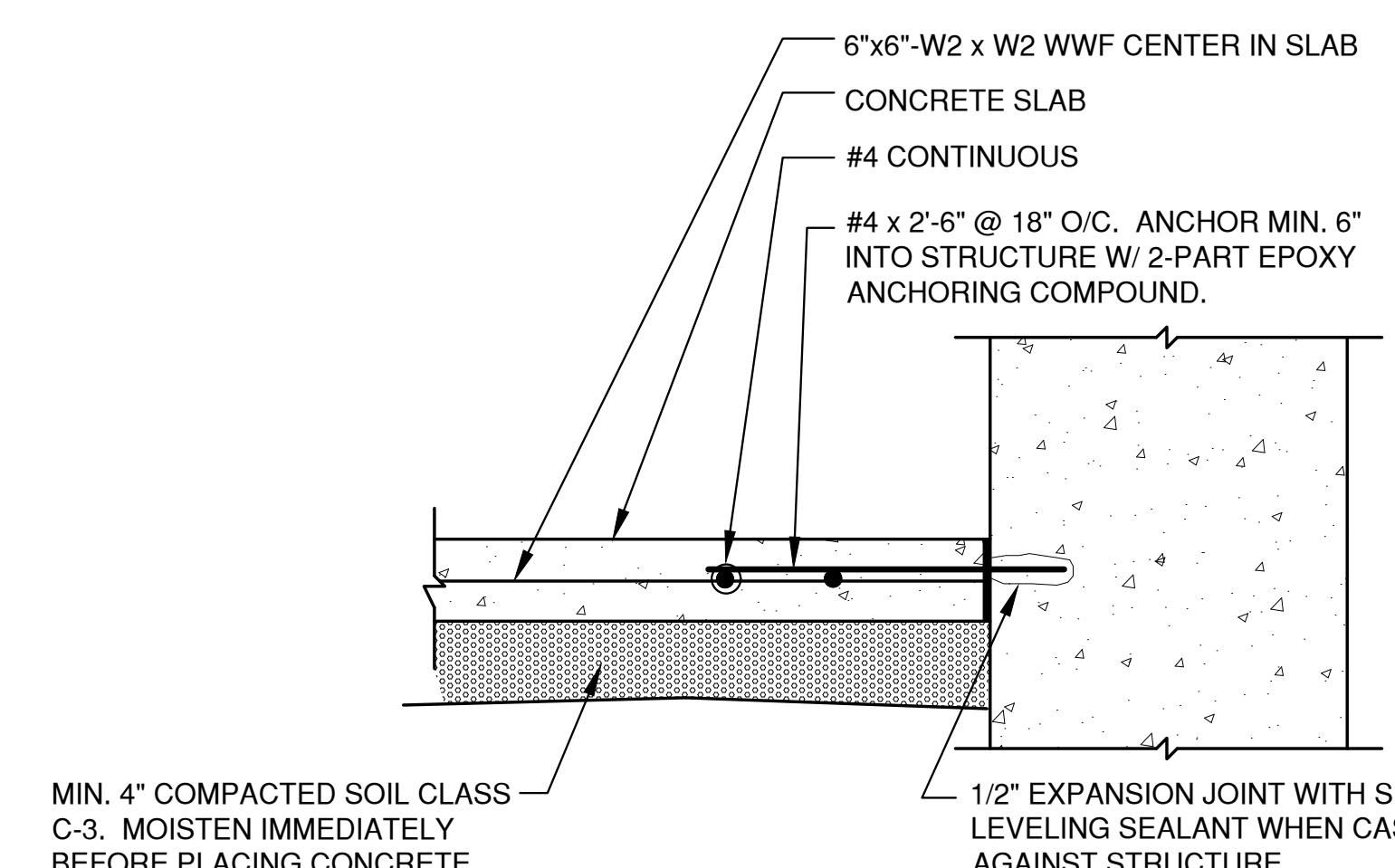
SHEDDING CURB DETAIL



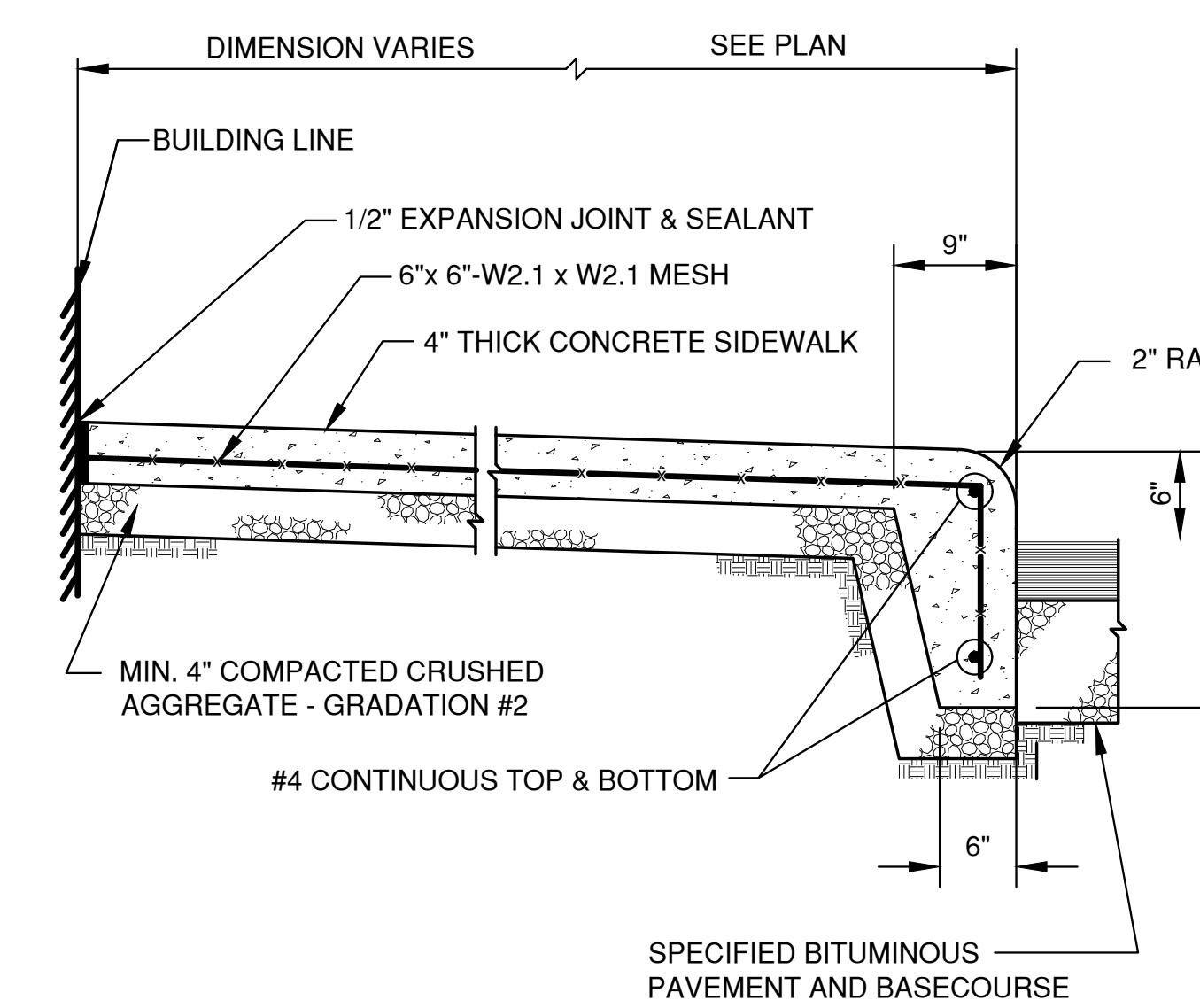
STANDARD CURB & GUTTER



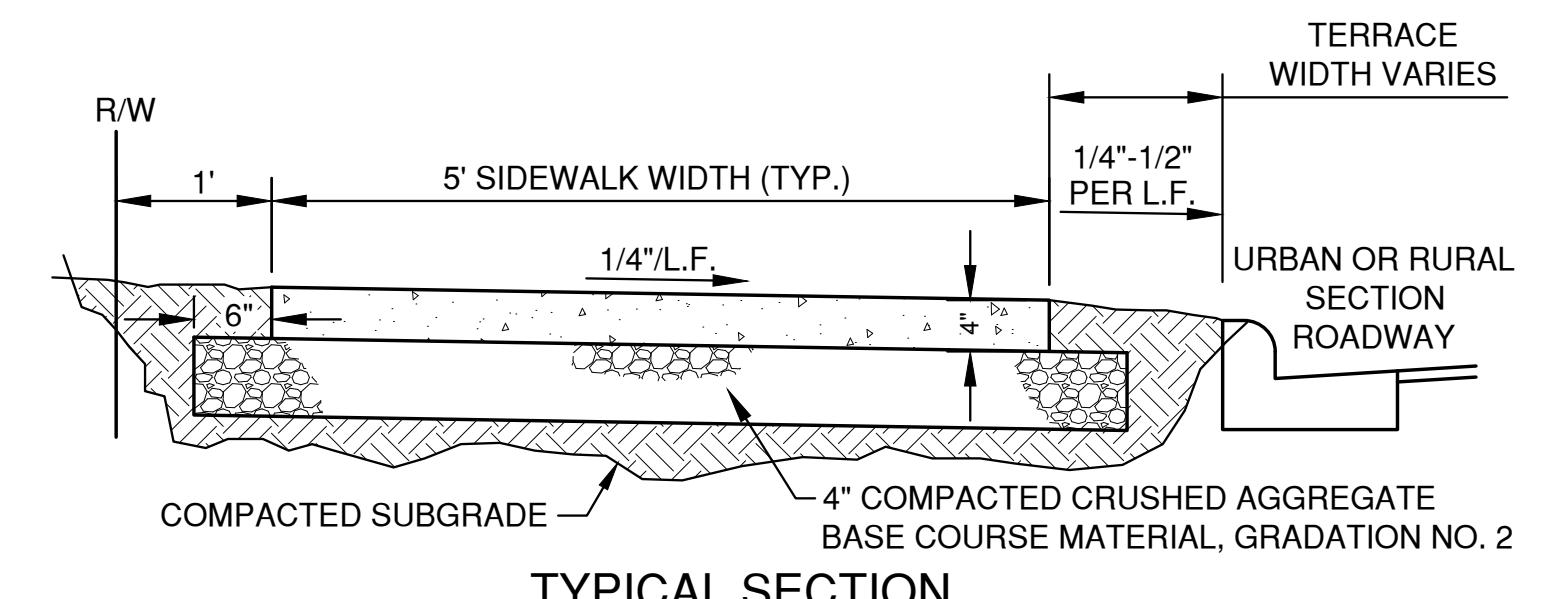
CURB TIE-IN DETAIL  
(PROPOSED TO EXISTING)



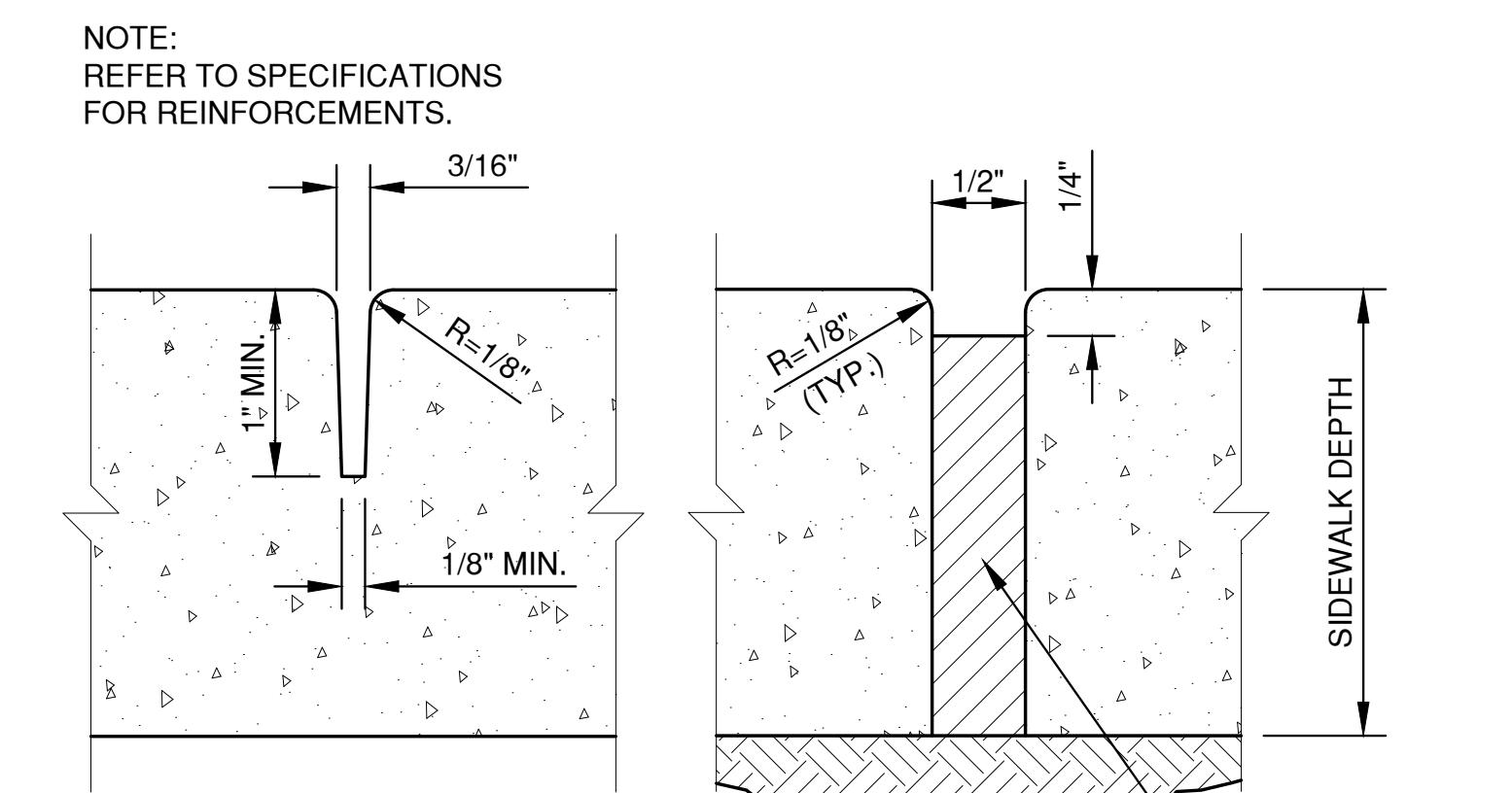
TYPICAL SIDEWALK ADJACENT TO STRUCTURE



SIDEWALK WITH INTEGRAL CURB

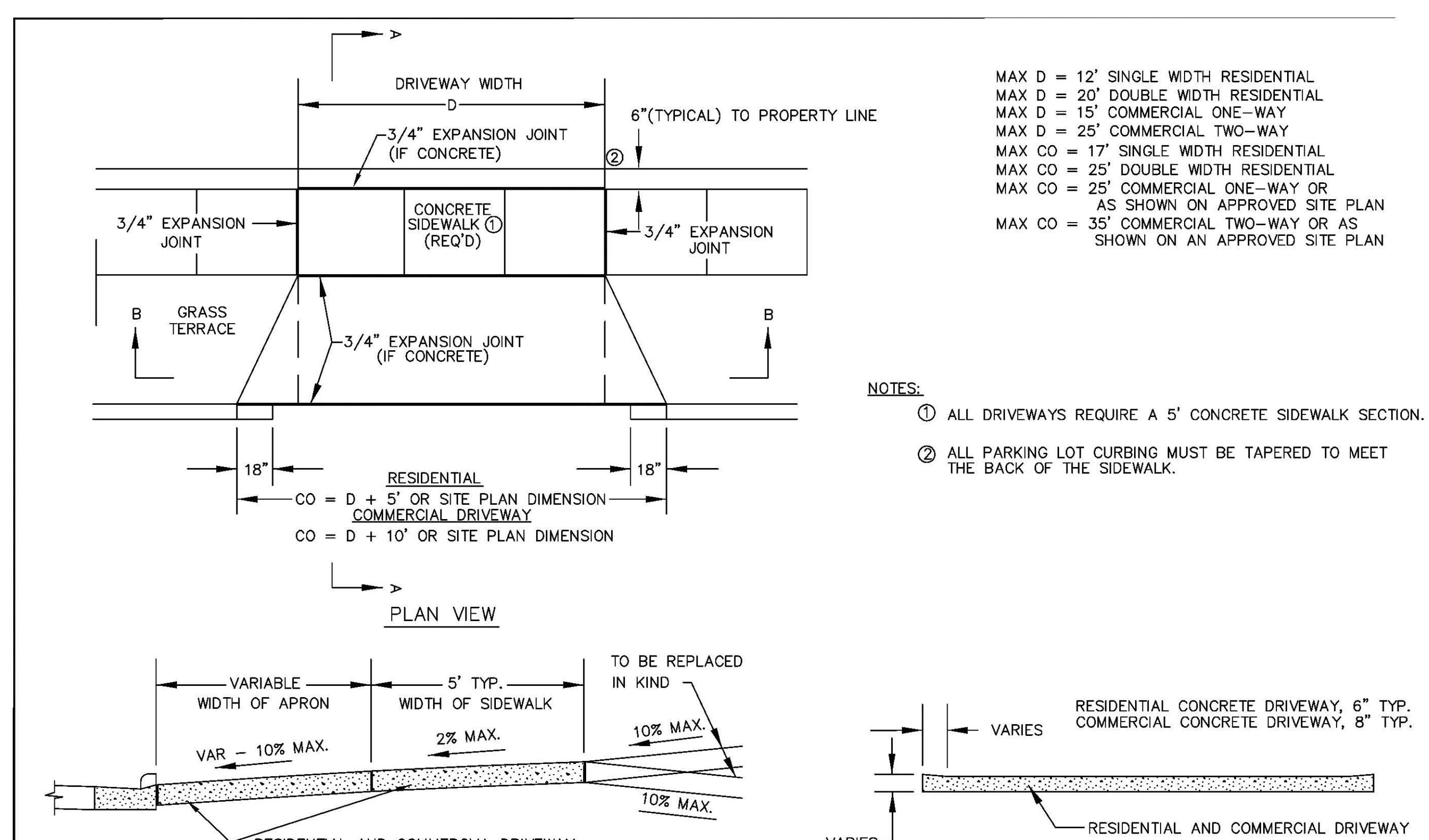
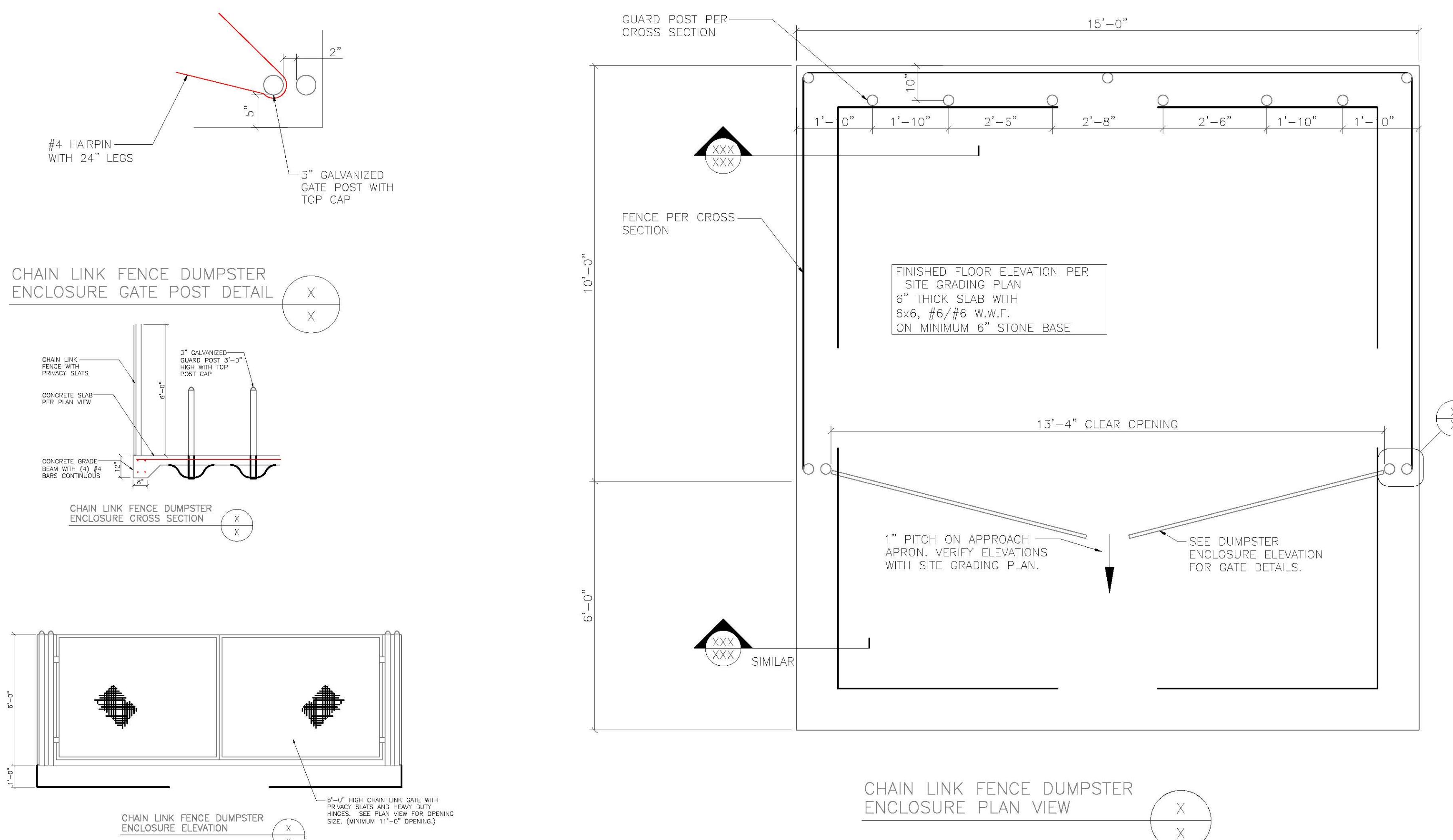


TYPICAL SECTION



SIDEWALK DETAIL

WALK WIDTH	CONTRACTION JOINT SPACING		EXPANSION JOINT SPACING
	TRANSVERSE	LONGITUDINAL	
4'	4'	NOT REQ'D.	100' MAX.
5'	5'	NOT REQ'D.	100' MAX.
6'	6'	NOT REQ'D.	100' MAX.
8'	4'	4'	100' MAX.
10'	5'	5'	100' MAX.
12'	6'	6'	100' MAX.

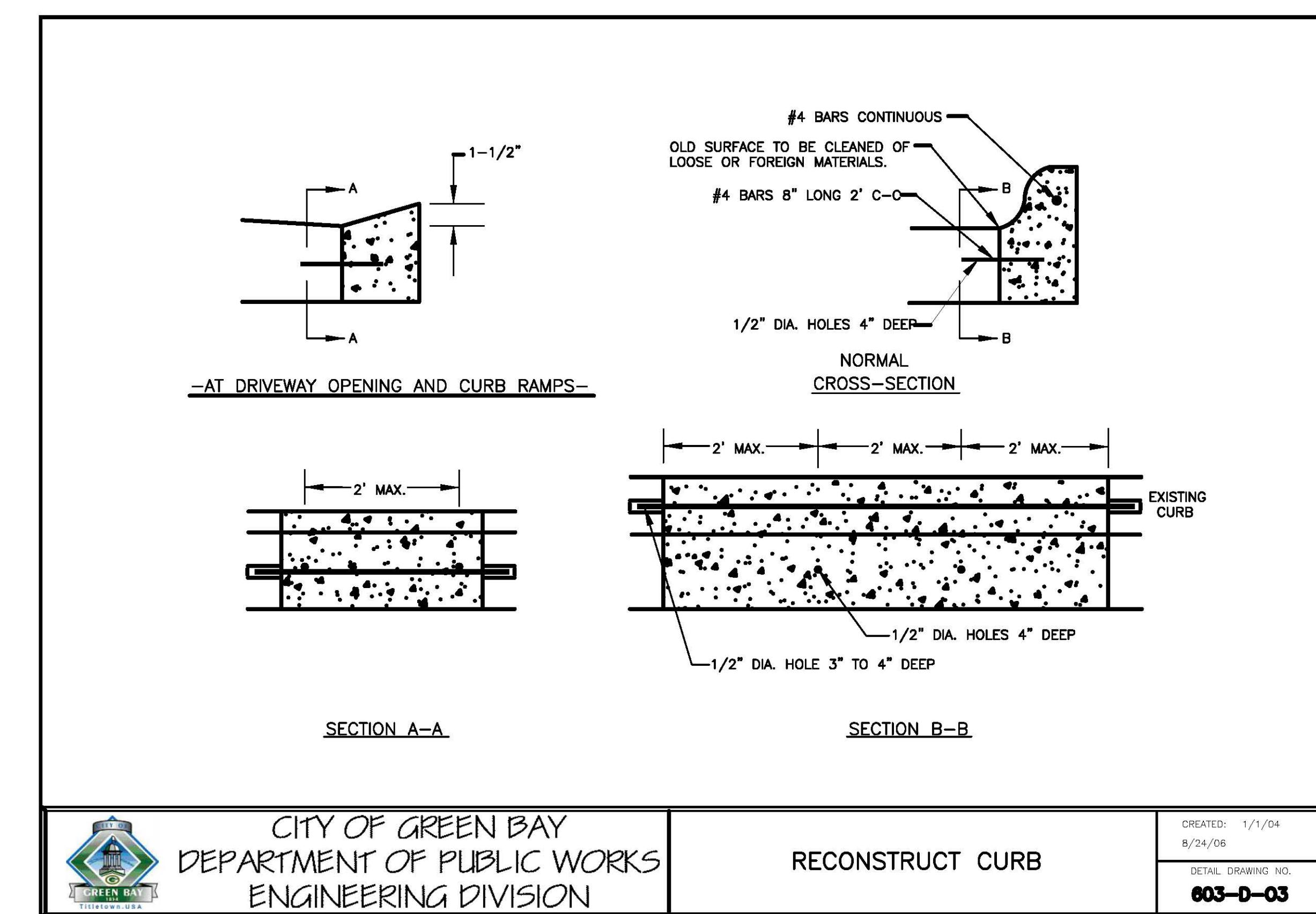




# CITY OF GREEN BAY DEPARTMENT OF PUBLIC WORK ENGINEERING DIVISION

## URBAN DRIVEWAY

	CREATED: 1/1/04
	REVISED: 2/4/08
	DETAIL DRAWING N 602-D-09



CITY OF GREEN BAY  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION

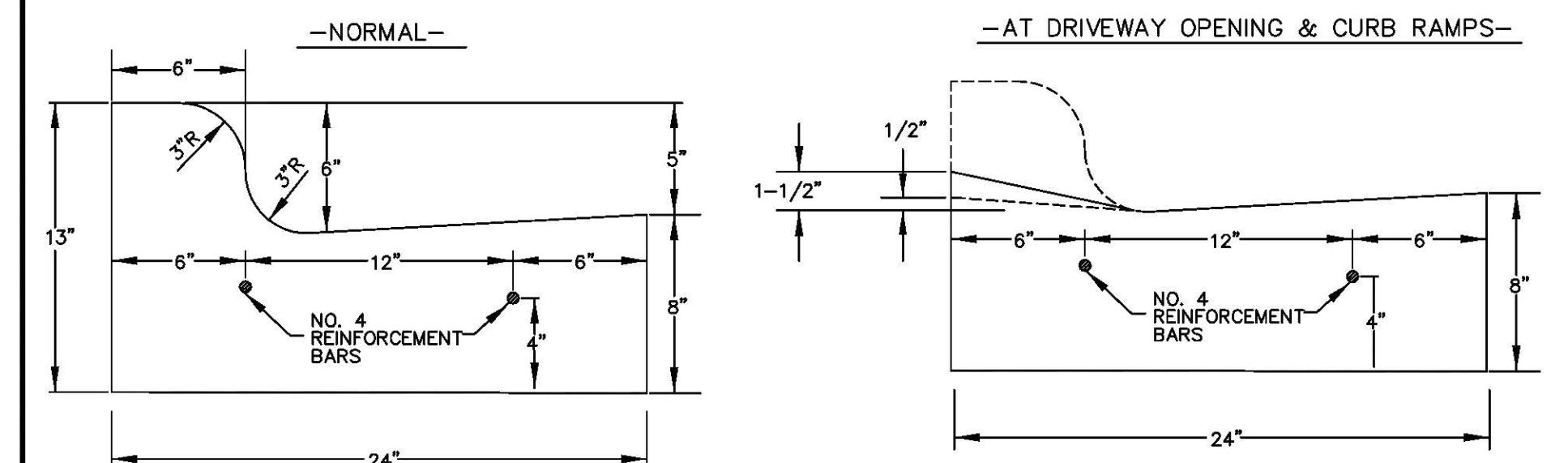
## RECONSTRUCT CURB

CREATED: 1/1/04  
8/24/06

---

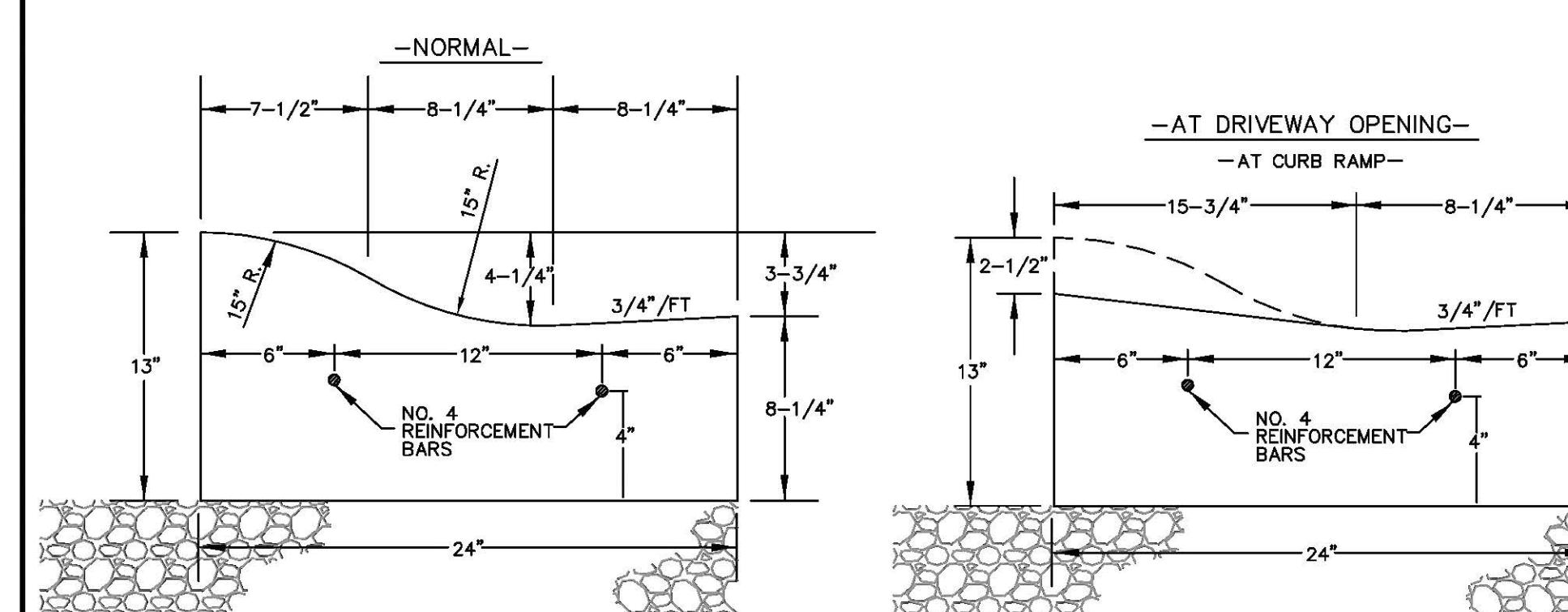
DETAIL DRAWING NO.  
**603-D-03**

**FOR CITY STREETS ONLY**



OTES:

- ① CONTRACTION JOINTS SHALL BE EVERY 15' MAXIMUM OR DESIGNATED BY ENGINEER IN FIELD.
- ② 6"x6" EXPANSION JOINTS (3/4") SHALL BE PLACED AT CURB HEAD AT END OF RADII.
- ③ NO. 4 REINFORCEMENT BARS SHALL BE 20' LONG WITH A 3/4" EXPANSION TUBE REQUIRED ON ONE END AT EXPANSION JOINTS
- ④ NO. 4 REINFORCEMENT BARS SHALL BE OVERLAPPED A MINIMUM OF 1'.
- ⑤ 1-1/2" CURB HEIGHT APPLIES TO DRIVEWAY OPENINGS, 1-1/2" CURB HEIGHT APPLIES TO CURB RAMPS



NOTES:

- ① CONTRACTION JOINTS SHALL BE EVERY 15' MAXIMUM OR DESIGNATED BY ENGINEER IN FIELD.
- ② 4-1/4"x7-1/2" EXPANSION JOINTS (3/4") SHALL BE PLACED AT CURB HEAD AT END OF RADII.
- ③ NO. 4 REINFORCEMENT BARS SHALL BE 20' LONG WITH A 3/4" EXPANSION TUBE REQUIRED ON ONE END AT EXPANSION JOINTS
- ④ NO. 4 REINFORCEMENT BARS SHALL BE OVERLAPPED A MINIMUM OF 1'



# CITY OF GREEN BAY DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION

# CURB AND GUTTER SECTIONS

CREATED: 11/09/04  
REVISED: 3/15/07

---

DETAIL DRAWING NO.  
603-D-01

NO.	DATE	APPROV.	REVISION
1	5-10-16	JGS	CITY SUBMITTAL
2	5-25-16	JGS	FINAL CITY SUBMITTAL

NO.	DATE	APPROV.	REVISION	DRAWN BLT
				CHECK
				JGS
				DESIGN
				BLT

**PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC**

**CITY OF GREEN BAY**  
**BROWN COUNTY, WISCONSIN**

**PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC**

**CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN**

## MISCELLANEOUS DETAILS

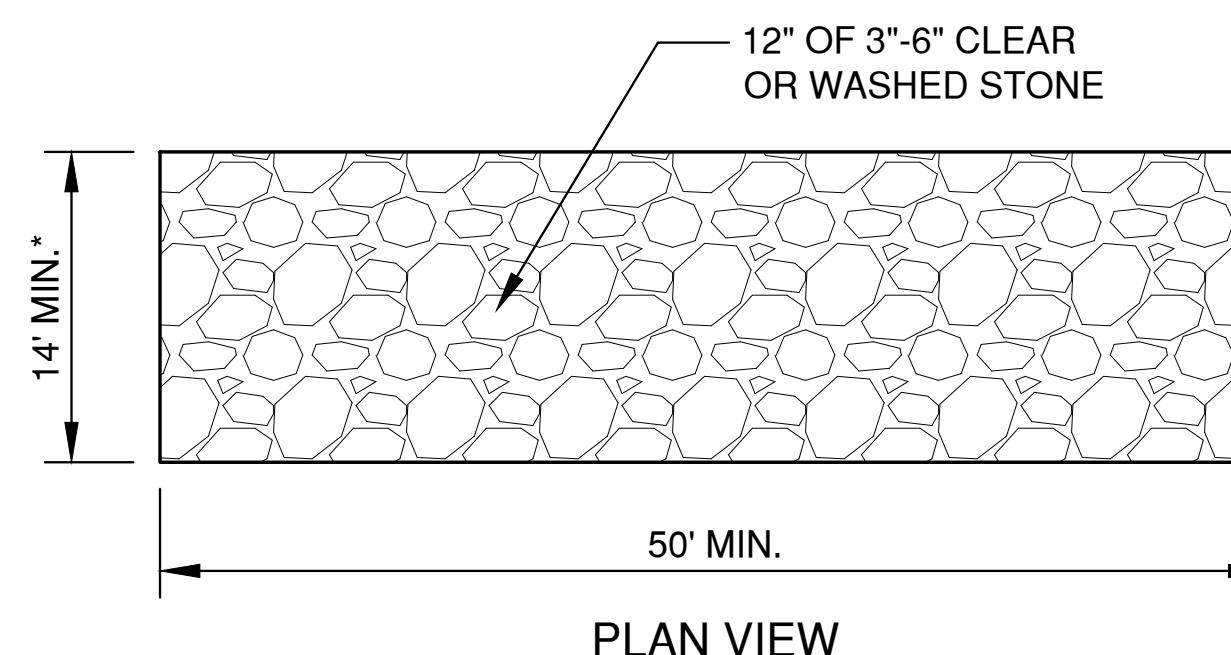


# **Robert E. Lee & Associates, Inc.**

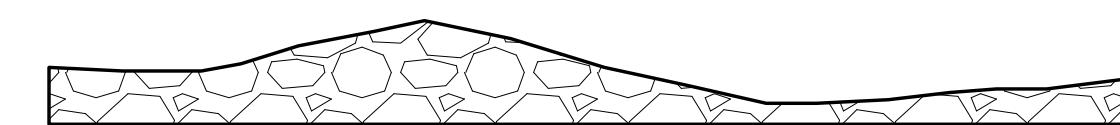
**ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES**

**1250 CENTENNIAL CENTRE BOULEVARD**  
**HOBART, WI 54155**      **PHONE:(920) 662-9641**  
**INTERNET: [www.releeing.com](http://www.releeing.com)**      **FAX:(920) 662-9141**

**SHEET NO.**



PLAN VIEW



PROFILE VIEW

\*14' MIN. OR FULL WIDTH OF THE EGRESS POINT.  
REFERENCE WDNR TECHNICAL STANDARD 1057.

### TRACKING PAD DETAIL (IF APPLICABLE)

#### INLET PROTECTION NOTES:

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE WDNR PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2"X4".

INSTALLATION NOTES:  
TYPE "B" & "C"

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

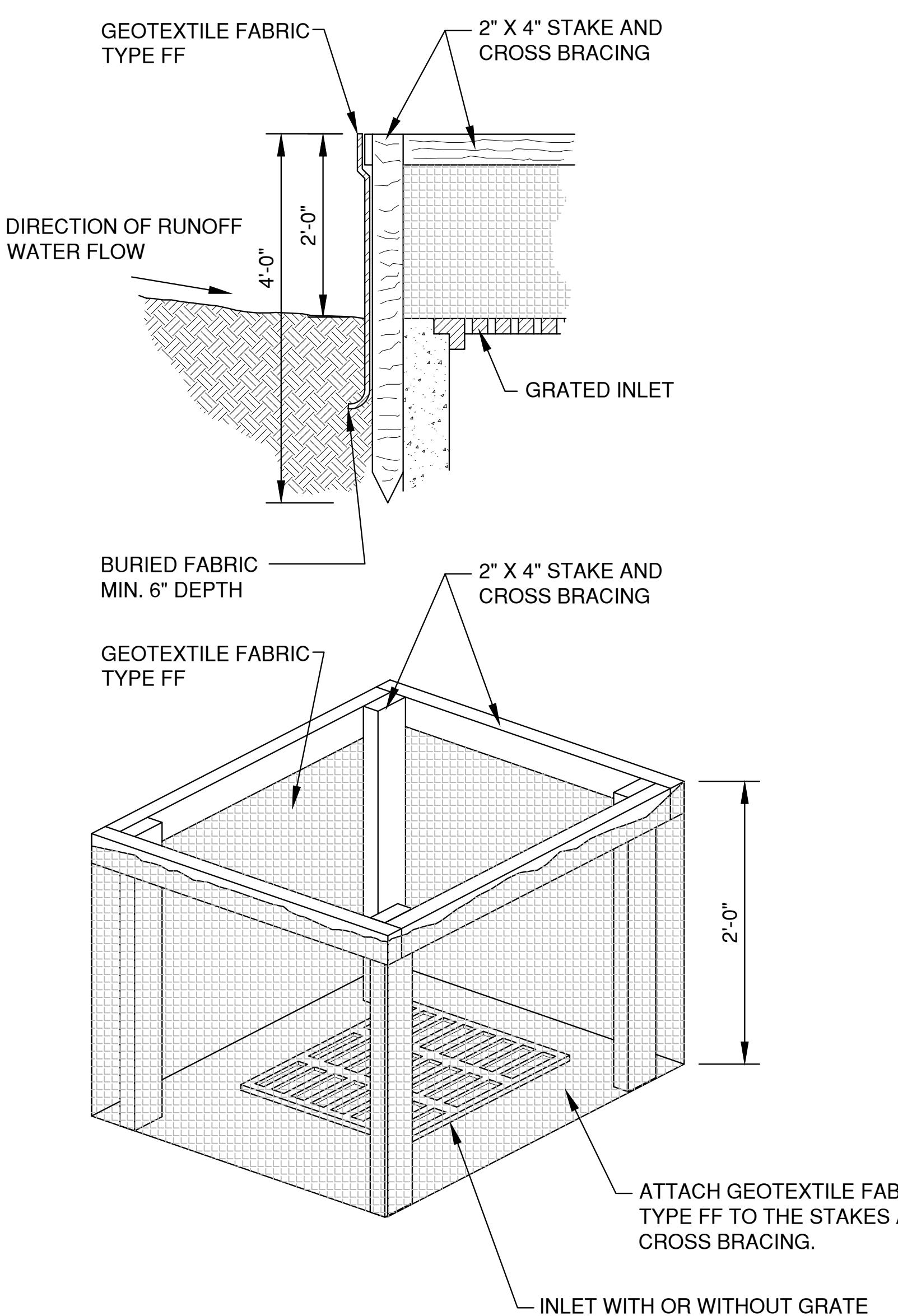
DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

#### TYPE "D"

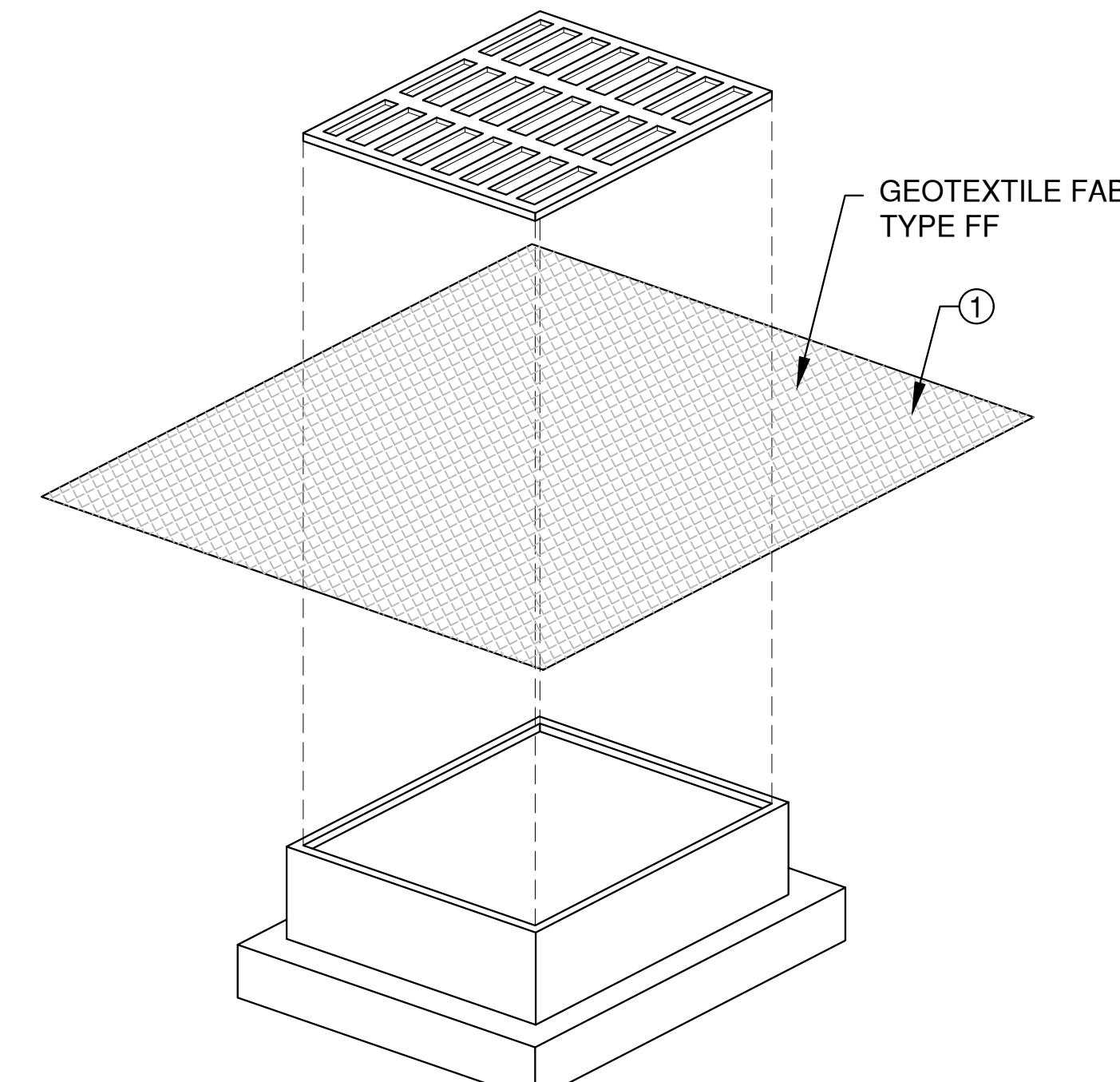
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30" MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY, CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE, THE TIES SHALL BE PLACED AT THE MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

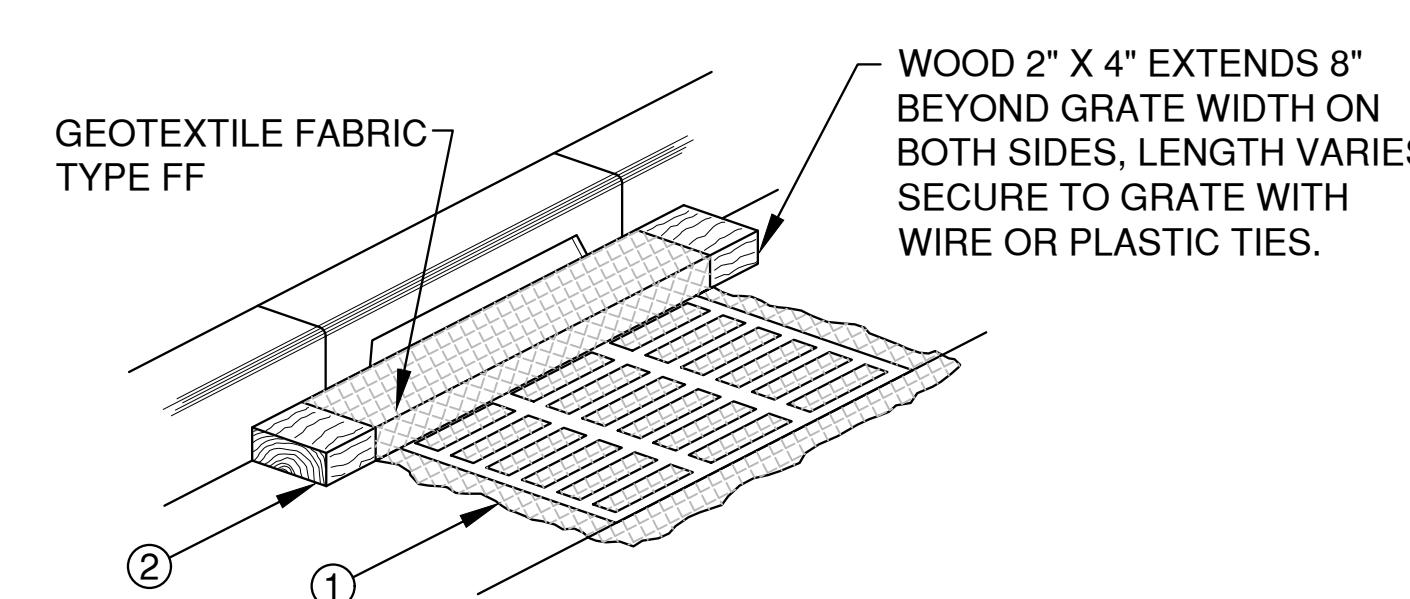


INLET PROTECTION, TYPE A

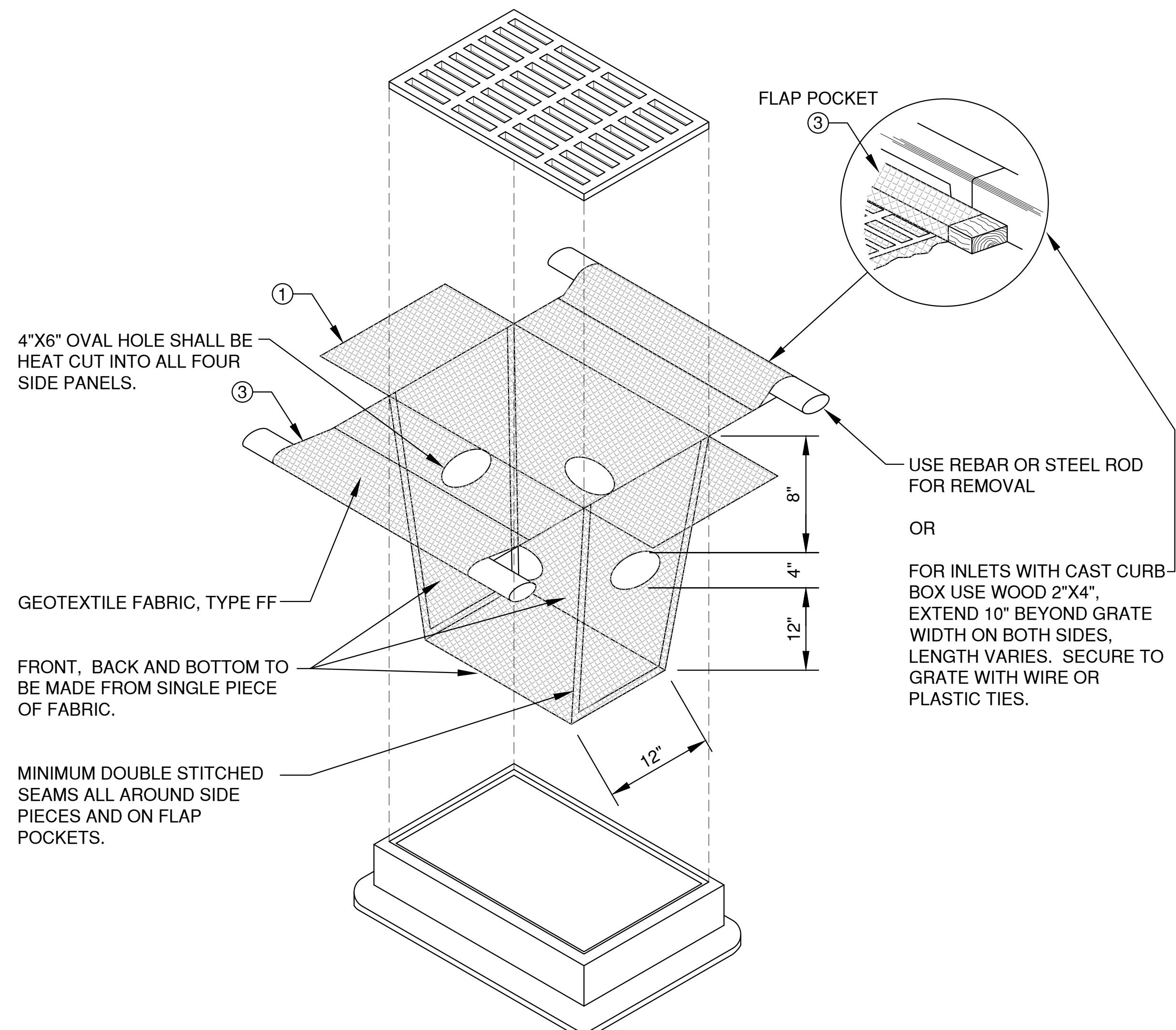


### INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



### INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT CURB BOX AS PER NOTE "2")

NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN BY	CHECKED BY	DESIGNED BY
1	5-10-16	JGS	CITY SUBMITTAL							
2	5-25-16	JGS	FINAL CITY SUBMITTAL							

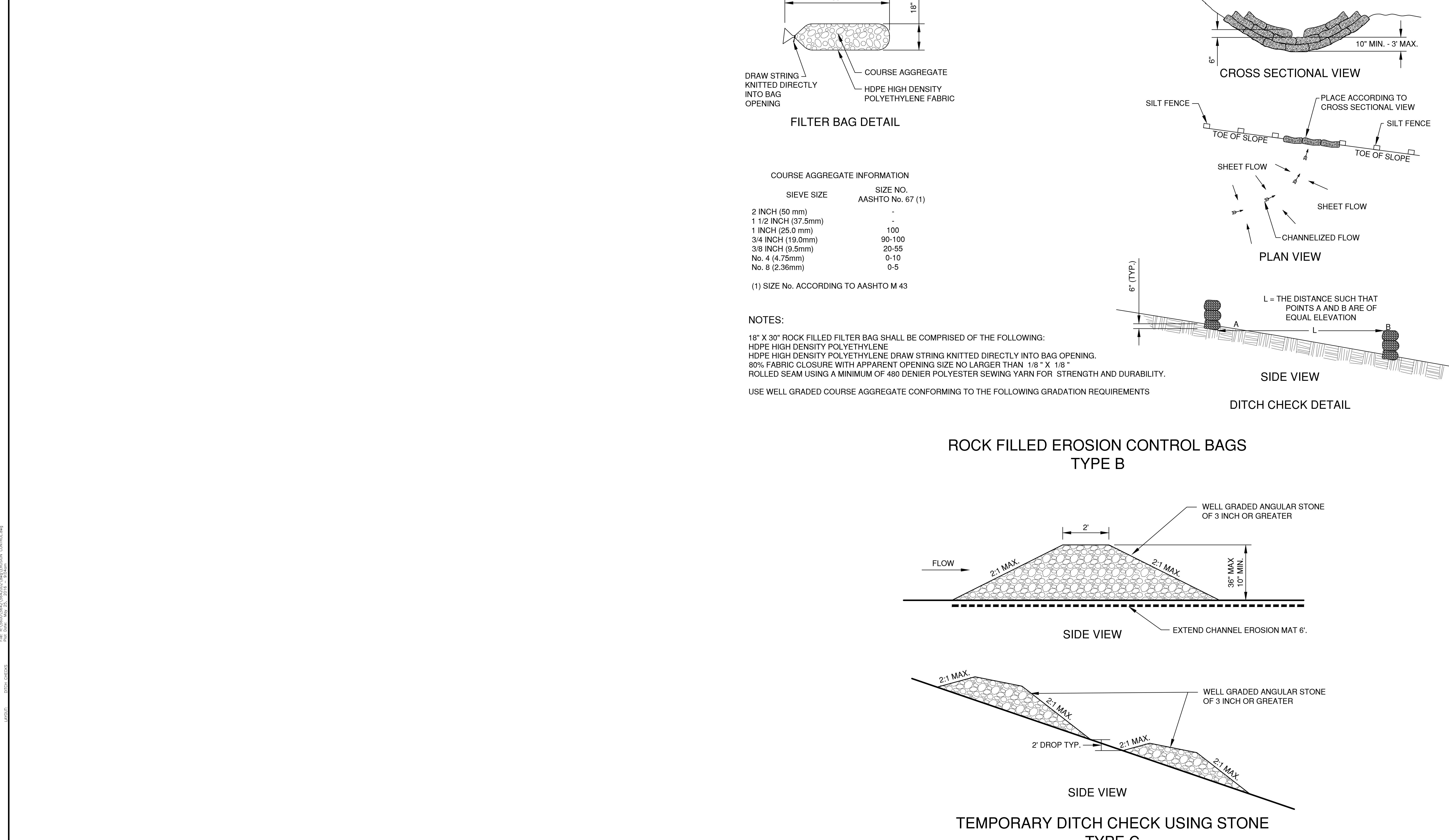
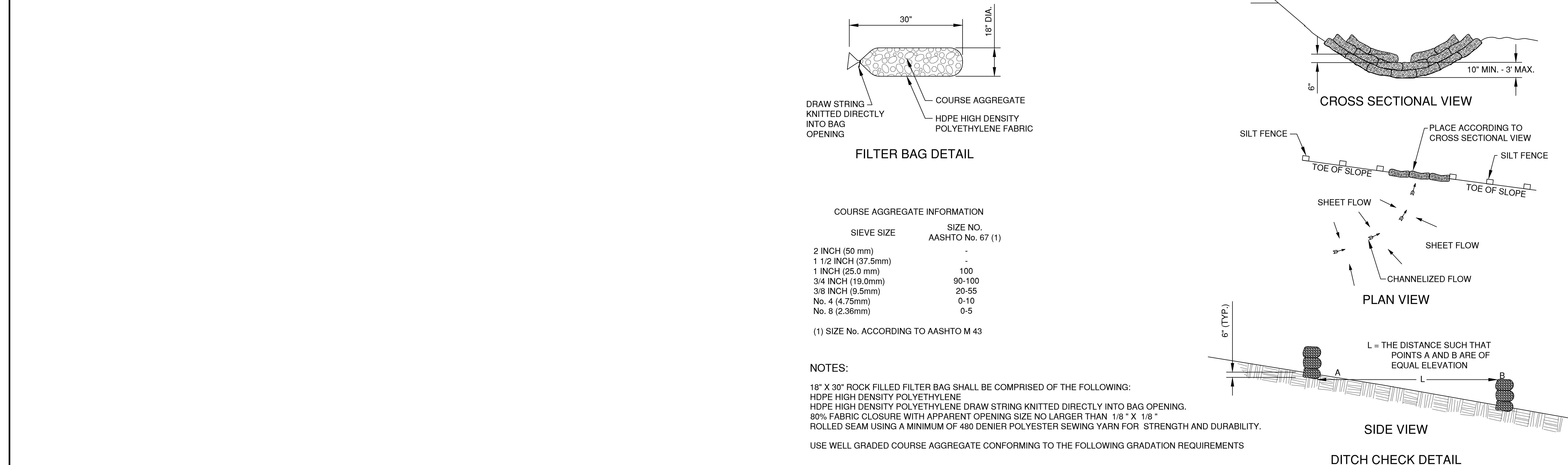
PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN

EROSION CONTROL  
INLET PROTECTION AND  
MISCELLANEOUS DETAILS

DATE  
05/2016  
FILE  
EROSION CONTROL  
JOB NO.  
5642002

Robert E. Lee & Associates, Inc.  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD  
HOBART, WI 54155  
PHONE: (920) 662-9641  
FAX: (920) 662-9141  
INTERNET: www.releeinc.com

SHEET NO.  
C-8



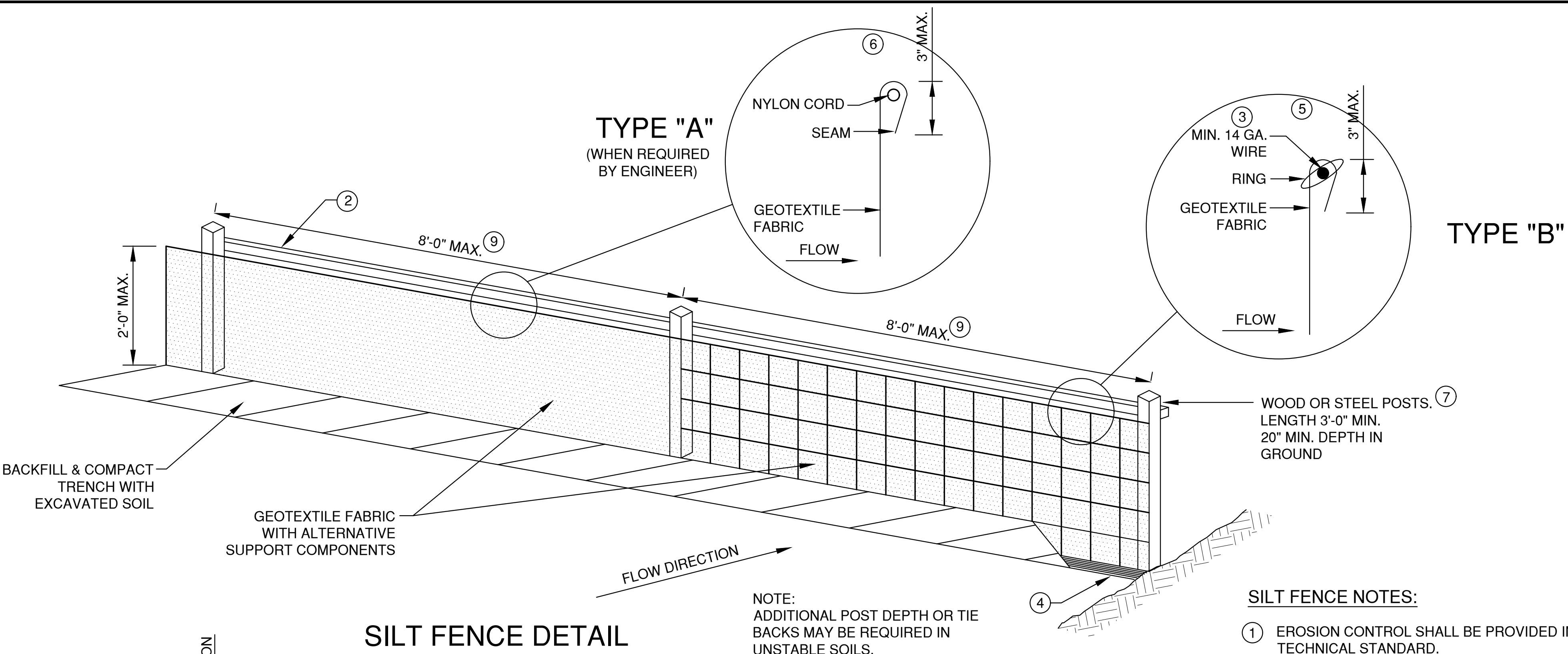
NO.	DATE	APPROV.	REVISION	NO.	DATE	APPROV.	REVISION	DRAWN BLT
1	5-10-16	JGS	CITY SUBMITTAL					CHECKED JGS
2	5-25-16	JGS	FINAL CITY SUBMITTAL					DESIGNED BLT

PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC  
CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN

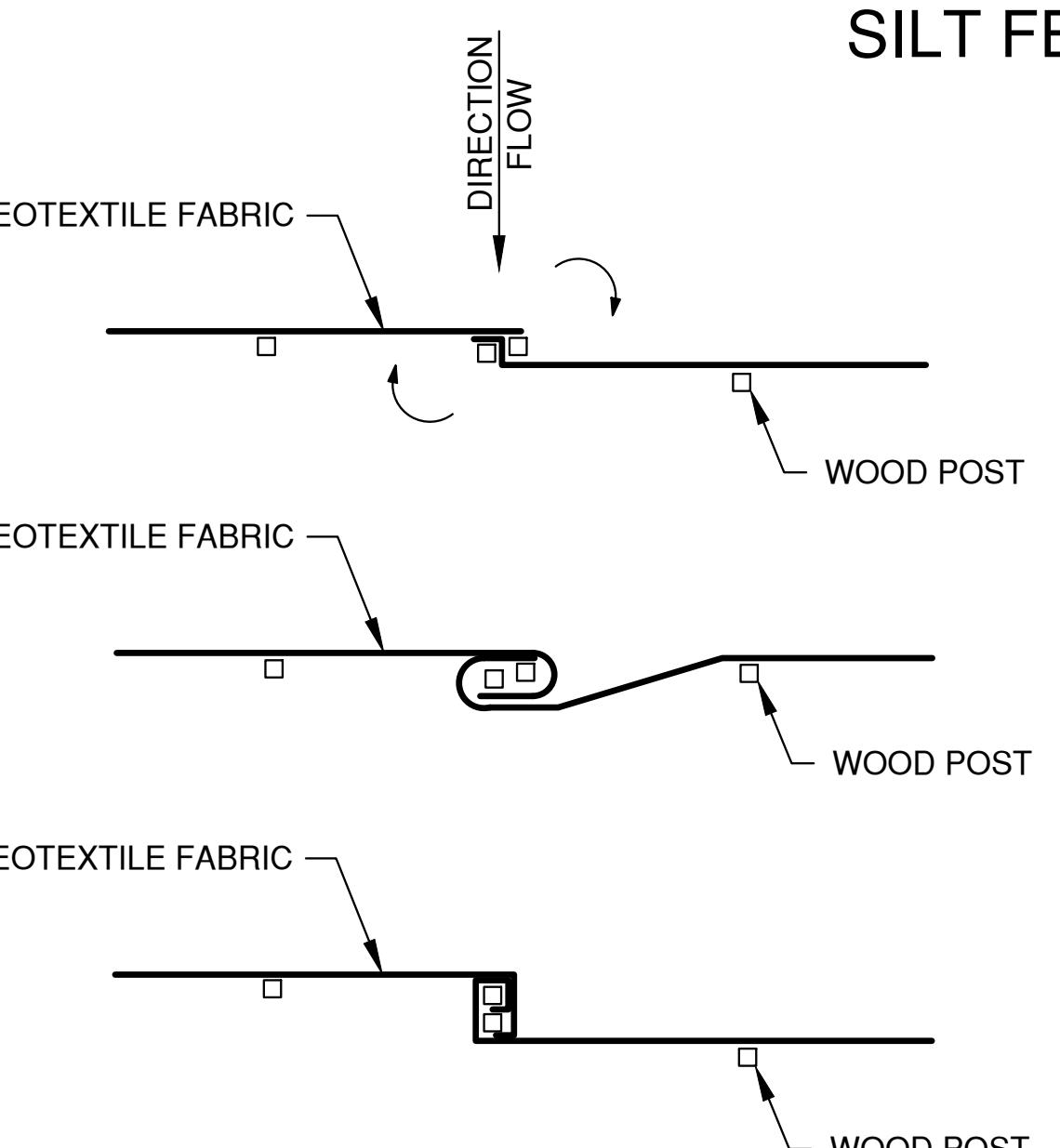
EROSION CONTROL  
DITCH CHECK DETAILS

Robert E. Lee & Associates, Inc.  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD  
HOBART, WI 54155  
PHONE: (920) 662-9641  
INTERNET: www.releeinc.com  
FAX: (920) 662-9141

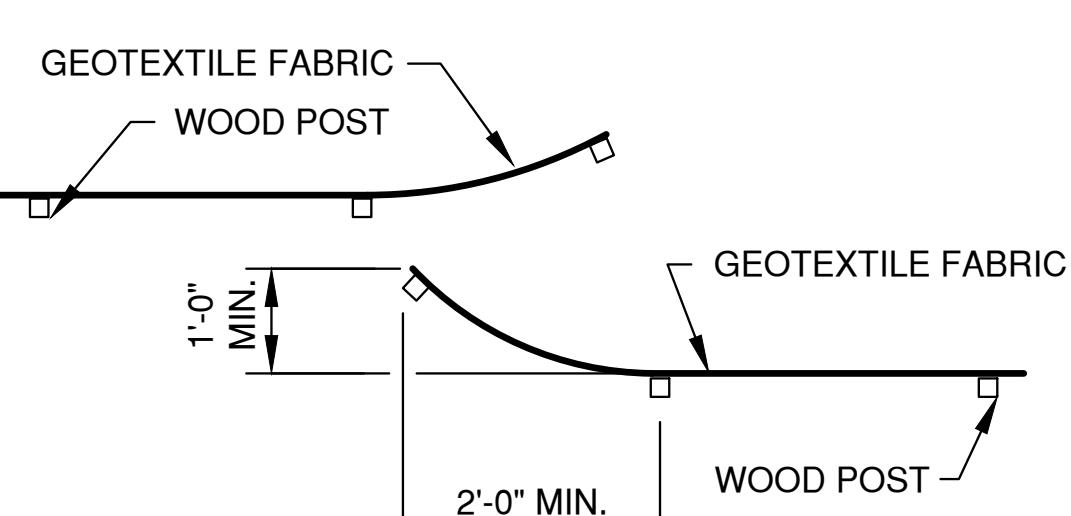
DATE  
05/2016  
FILE  
EROSION CONTROL  
JOB NO.  
5642002  
SHEET NO.  
C-9



### SILT FENCE DETAIL

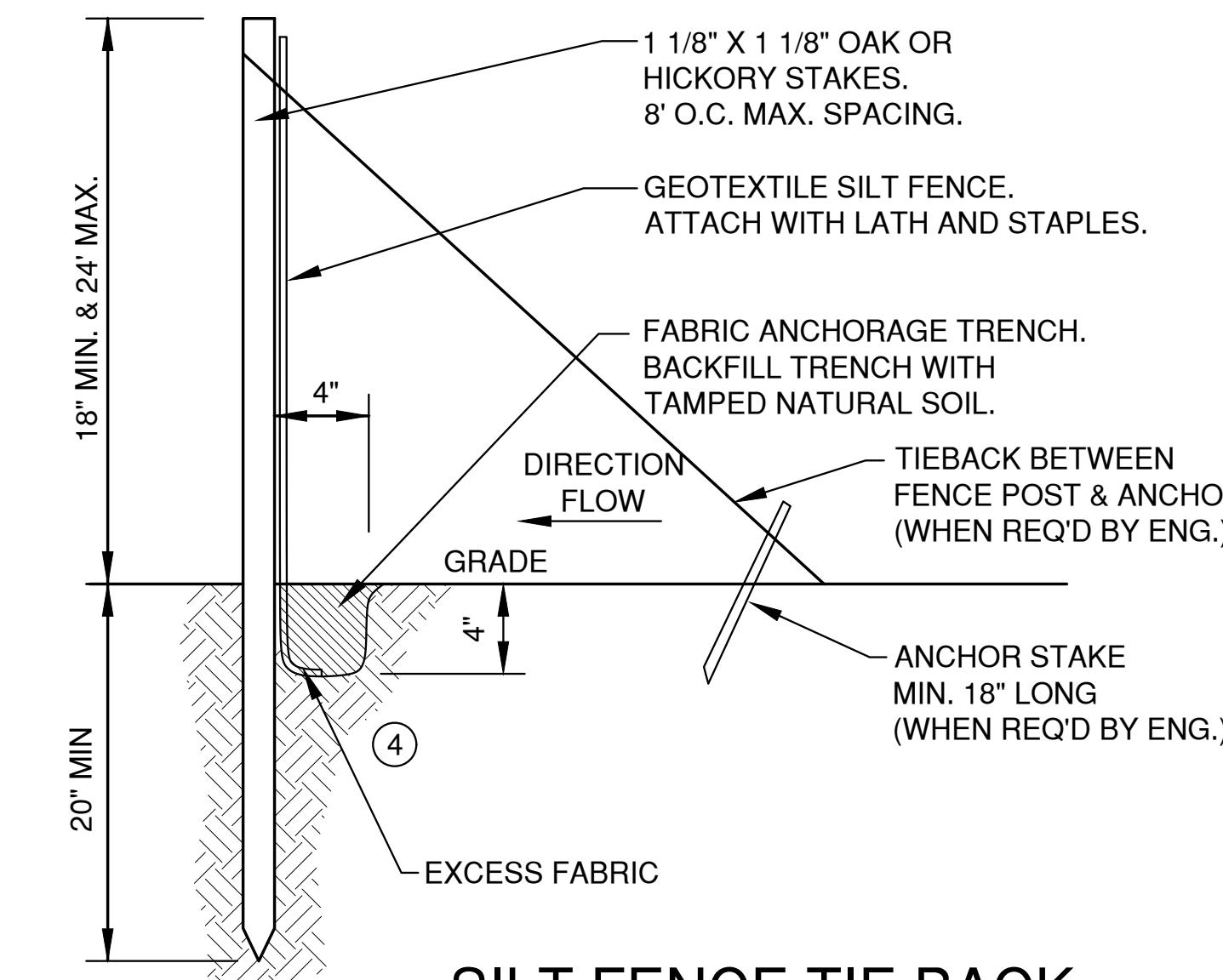


TWIST METHOD <sup>(8)</sup>



HOOK METHOD <sup>(8)</sup>

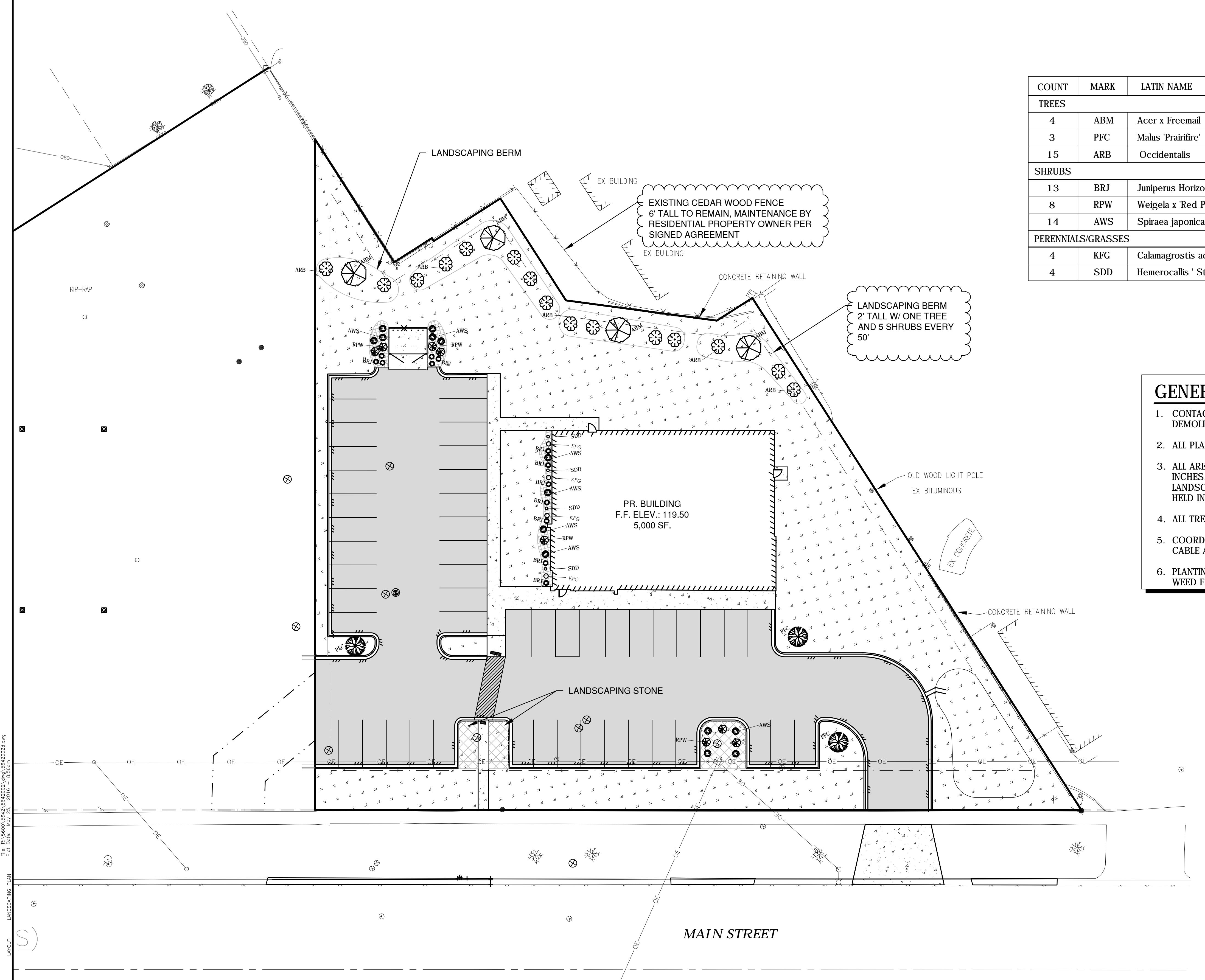
### JOINING TWO LENGTHS OF SILT FENCE



SILT FENCE TIE BACK

### EROSION CONTROL SHEET FLOW NOTES:

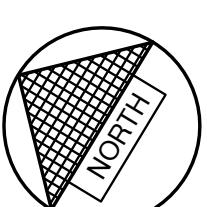
1. ANY SOIL STOCKPILED THAT REMAINS FOR MORE THAN 7 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
2. A MINIMUM OF 4 INCHES OF TOPSOIL MUST BE APPLIED TO ALL AREAS TO BE SEADED OR SODDED.
3. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
4. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH DAY. FLUSHING SHALL NOT BE ALLOWED.
5. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR THE APPLICATION OF STABILIZATION MEASURES MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
6. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING.
7. ALL TEMPORARY EROSION CONTROL PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED WITH 70% VEGETATION AND A NOTICE OF TERMINATION HAS BEEN APPROVED BY THE DNR.
8. WIND EROSION SHALL BE KEPT TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH OR A TACKING AGENT MAY NEED TO BE UTILIZED TO PROTECT NEARBY RESIDENCES/WATER RESOURCES.
9. CONTRACTOR RESPONSIBLE FOR MAINTAINING ALL THE EROSION CONTROL MEASURES IN CONFORMANCE WITH THE WDNR CONSERVATION PRACTICE STANDARDS, LATEST EDITION.
10. UPON COMPLETION OF STORM INLET CONSTRUCTION, INSTALL STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITE AS SPECIFIED.
11. FINE SEDIMENT ACCUMULATIONS SHALL BE CLEANED FROM STREETS, PRIVATE DRIVES, OR PARKING AREAS BY MANUAL OR MECHANICAL SWEEPING A MINIMUM OF ONCE PER WEEK AND BEFORE ALL IMMINENT RAINS.
12. EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF RAINFALL OF 0.5 INCH OR MORE.



COUNT	MARK	LATIN NAME	COMMON NAME	SIZE	ROOT	MATURE SIZE
<b>TREES</b>						
4	ABM	Acer x Freemail	Autumn Blaze Maple	2" CAL	BB	2" CAL
3	PFC	Malus 'Prairifire'	Prariefire Crab Tree	2" CAL. 7'	BB	2" CAL. 7'
15	ARB	Occidentalis	Technito Arborvitae	4-5' Wide		8-10'
<b>SHRUBS</b>						
13	BRJ	Juniperus Horizontalis 'Wiltonii'	Blue Rug Juniper	5 GAL.	POT	1'-2'
8	RPW	Weigela x 'Red Prince'	Red Prince Weigela	2'-3'	POT	4'-5'
14	AWS	Spiraea japonica 'Anthony Waterer'	Anthony Waterer Spirea	2'-3'	POT	3'-5'
<b>PERENNIALS/GRASSES</b>						
4	KFG	Calamagrostis acutiflora 'Karl Foerster'	Karl Foetster Reed Grass	#2	POT	4'-5'
4	SDD	Hemerocallis ' Stella D'Oro'	Stella D'Oro Daylily	#1	POT	2'

## GENERAL NOTES

1. CONTACT DIGGER'S HOTLINE 5 WORKING DAYS PRIOR TO THE START OF DEMOLITION / CONSTRUCTION.
  2. ALL PLANTINGS SHALL MEET THE NURSERYMEN'S ASSOCIATION STANDARDS
  3. ALL AREAS SHOWN AS GREEN SPACE TO BE TOPSOILED TO A DEPTH OF 6 INCHES. RAKE FREE OF STONES AND CLUMPS. ALL AREAS NOT SHOWN WITH LANDSCAPE BEDS TO BE SEEDED AND MULCHED FOR LAWN. MULCH SHALL BE HELD IN PLACE BY CRIMPING OR BY USE OF A TACKIFIER.
  4. ALL TREES TO BE STAKED WITH A MINIMUM OF 3 STAKES.
  5. COORDINATE LANDSCAPE WORK WITH ALL TRADES (EXAMPLE: GAS, ELECTRIC, CABLE AND TELEPHONE).
  6. PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH WITH WEED FABRIC BELOW AND EDGING WHERE NEEDED.



0' 20' 4

SCALE IN FEET

NO.	DATE	APPROV.	REVISION
1	5-10-16	JGS	CITY SUBMITTAL
2	5-25-16	JGS	FINAL CITY SUBMITTAL

NO.	DATE	APPROV.	REVISION

	DRAWN BLT
	CHECKED
	JGS
	DESIGNED BLT

**PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC**

**CITY OF GREEN BAY**

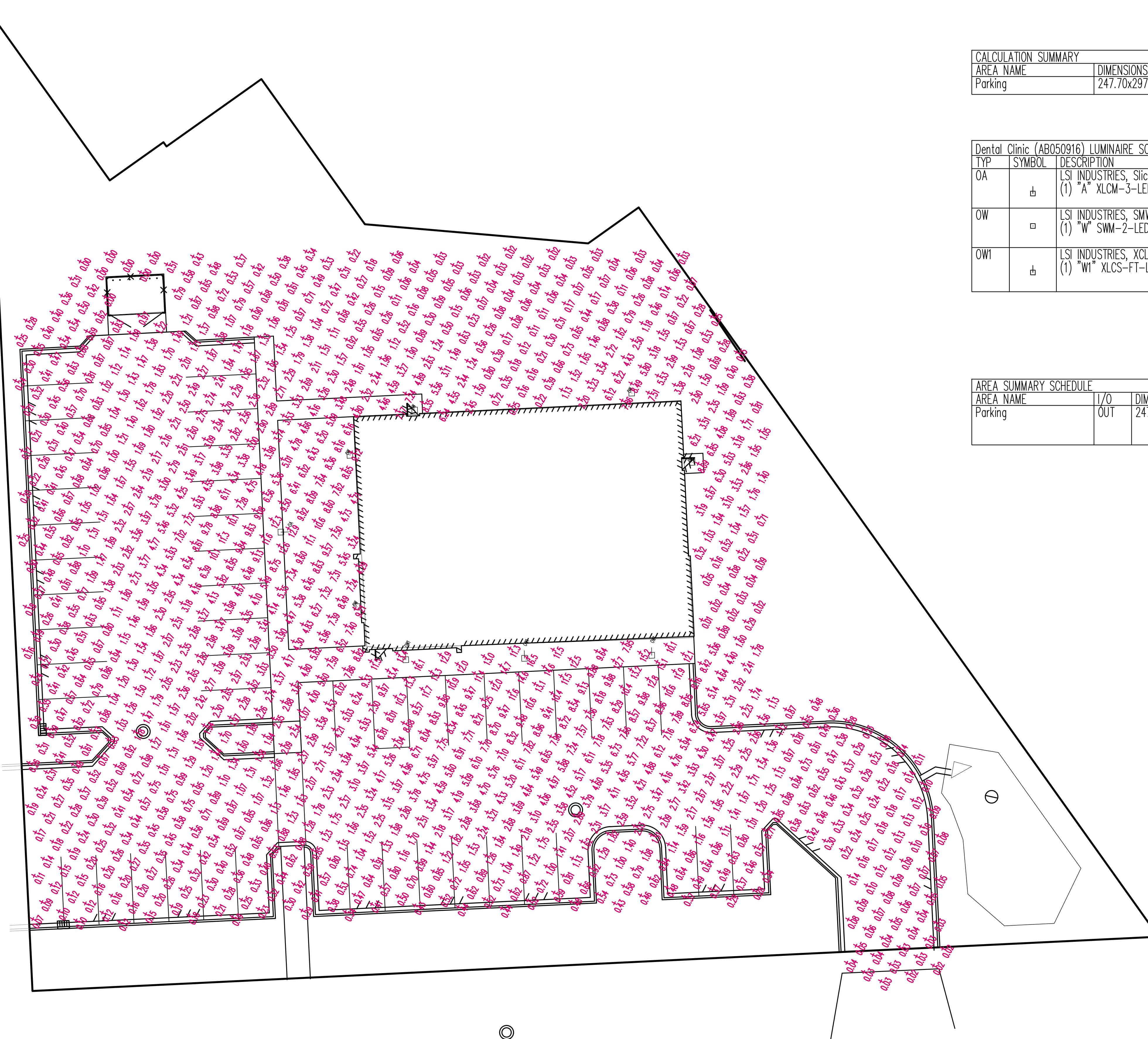
**BROWN COUNTY, WISCONSIN**

## LANDSCAPING PLAN

TE  
016  
E  
002D  
B NO.  
000

**Robert E. Lee & Associates, Inc.**  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155  
920-662-9641 [www.releeinc.com](http://www.releeinc.com)

*Celebrating 60 Years of Excellence*



## CALCULATION SUMMARY

AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	SPAC	GROUP	AVE	MAX	MIN	MAX/MIN	AVE/MIN
Parking	247.70x297.44Ft	Grade / H-H	1161	5.00	<+>	2.61	16.50	0.00	N/A	N/A

Dental Clinic (AB050916) LUMINAIRE SCHEDU

TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/BALLAST	LLF	QTY
OA	▲	LSI INDUSTRIES, Slice – Single (1) "A" XLCM-3-LED-HO-NW	(1)	27916	25' SSS 3' Conc. Pour	1.00	1
OW	□	LSI INDUSTRIES, SMW Wall (1) "W" SWM-2-LED-CW-UE	(1)	4145	LSI	1.00	1
OW1	▲	LSI INDUSTRIES, XCLS Wall (1) "W1" XLCS-FT-LED-HO-NW	(1)	15570	LSI	1.00	1

ARFA SUMMARY SCHF

Area Summary Schedule					
Area Name	I/O	Dimensions	LUMS / <ASMS>	Watts / Sq Ft	Qty
Parking	OUT	247.70x297.44Ft	<OA> (1) <OW> (5) <OW1> (3)	0.02	1

LIGHTING PLAN BY:

Docor  
Prosid  
VisualcLigg, LLC  
20-40-20  
Grou- Miu- Mudis

NO.	DATE	APPROV.
1	5-10-16	JGS
2	5-25-16	JGS

**PROPOSED FAMILIA DENTAL FOR  
GB REAL ESTATE INVESTMENTS, LLC**

**CITY OF GREEN BAY  
BROWN COUNTY, WISCONSIN**

LIGHTING PL

TE  
2016  
E  
2002D  
B NO.  
ANNUAL DEDAR

**Robert E. Lee & Associates, Inc.**  
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES  
1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155  
920-662-9641 [www.releeinc.com](http://www.releeinc.com)

*Celebrating 60 Years of Excellence*

SHEET NO.

## Appendix B

### Boring Logs

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-10</b>								
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>								
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches								
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location										
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	□ N   □ S   □ E   □ W								
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay									
Number and Type and Recovery (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties					RQD/ Comments	
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index		P 200
1 CS	48 40		0.0-0.25' CONCRETE	SC									
			0.25-1.25' CLAYEY SAND, red, fined grained sand, cohesive, low plasticity, dry, med. dense (FILL, SC)	SC									
			1.25-2.0' As above. Color grades to dark brown / black.	SC									
			2.0-2.5' SILTY CLAY, red, cohesive, high plasticity, stiff, dry (FILL, CH)	CH				0.0					
			2.5-3.0' SILTY SAND, med. grained, red, dry, loose (FILL, SM)	SM				0.0					
			3.0-3.5' SILTY CLAY, red, cohesive, high plasticity, stiff, dry (FILL, CH)	CH									
			3.5-4.0' SILTY SAND, med. grained, red, dry, loose (FILL, SM)	SM									
2 CS	48 37		4.0-7.0' CLAYEY SILT w/ SAND, fine grained, brown, non-cohesive, low plasticity, wet (TILL, ML)	ML									
			7.0-8.0' As above. Color grades to grey brown.	ML									
			8.0' End of Boring. Abandoned with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-11</b>							
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>							
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches							
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location									
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W							
Facility ID		County <b>Brown</b>	County Code <b>5</b>	Civil Town/City/ or Village <b>Green Bay</b>								
Number and Type and Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties					RQD/ Comments
				U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	
1 CS	48 34		0.0-0.25' CONCRETE 0.25-2.75' CLAYEY SILT w/ SAND, reddish brown, slightly cohesive, non plastic, dry, dense (FILL, ML)	ML			0.0					
2 CS	48 32		2.75-4.0' As above. Color grades to dark brown. 4.0-6.0' SILT, reddish brown, non-cohesive, non-plastic, loose, moist (TILL, ML)	ML		▼	0.0					
			6.0-8.0' As above. Color grades to brown. Wet at 6'	ML			0.0					
			8.0' End of Boring. Abandoned with bentonite.									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-12</b>						
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	□ N   □ S   Feet   □ E   □ W						
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay							
Number and Type and Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48 34		0.0-0.25' CONCRETE 0.25-0.75' POORLY GRADED SAND, medium grained, reddish brown (FILL, SP) 0.75-1.25' SILT, dark brown, non-cohesive, non-plastic, dry (FILL, ML) 1.25-3.5' POORLY GRADED SAND, medium grained, reddish brown (FILL, SP)	SP ML SP			0.0				
2 CS	48 39		3.5-4.25' SANDY SILT, fined grained sand, dark brown / brown, non-cohesive, non-plastic, dense, moist (TILL, ML) 4.25-6.0' As above. Color grades to reddish brown. Wet at 5' 6.0-8.0' As above. Color grades to brown.	ML ML ML			0.0 0.0				
			8.0' End of Boring. Abandoned with bentonite.								

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-13</b>									
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>									
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches									
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location											
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	□ N Feet □ S Feet □ W									
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay										
Number and Type and Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit		U SCS	Graphic Log	Well Diagram	PID/FID	Soil Properties				RQD/ Comments
				0.0-0.25' CONCRETE	SP					ML	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48		0.5	0.25-0.6' POORLY GRADED SAND, medium grained, reddish brown (FILL, SP)	SP	ML			0.0					
	40		1.0	0.6-1.0' SILT, dark brown / black, non-cohesive, non-plastic, dry (FILL, ML)	SP									
			1.5	1.0-2.25' POORLY GRADED SAND, medium grained, reddish brown (FILL, SP)	SP									
			2.0	2.25-3.5' SANDY SILT, fined grained sand, dark brown / brown, non-cohesive, non-plastic, dense, moist (TILL, ML)	ML									
			2.5											
			3.0											
			3.5											
			4.0											
			4.5											
			5.0											
2 CS	48		5.5	3.5-5.0' POORLY GRADED SAND, fine to medium grained, reddish brown (FILL, SP)	SP				0.0					
	39		6.0	5.0-6.0' SILT, brownish yellow, non-cohesive, non-plastic, loose, wet (TILL, ML)	ML				0.0					
			6.5	6.0-8.0' As above. Color grades to brown. Med. stiff.	ML									
			7.0											
			7.5											
			8.0	8.0' End of Boring. Abandoned with bentonite.										

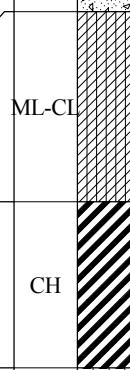
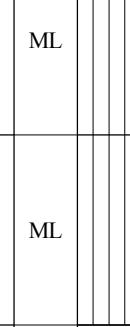
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-14</b>						
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W						
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay							
Number and Type and Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48 40		0.0-0.25' CONCRETE 0.25-2.25' CLAYEY SILTY SAND, red / black, fine grained sand, cohesive, low plasticity, stiff, dry (FILL, ML-CL)	ML-CL		0.0					
2 CS	48 37		2.25-4.0' SILTY CLAY, red, cohesive, high plasticity, stiff, dry, fine grained sand seam at 3.0' (FILL, CH) 4.0-6.0' SILT, light brown, non-cohesive, non-plastic, loose, wet at 5.0' (TILL, ML)	CH		0.0					
			6.0-8.0' CLAYEY SILT, brown, cohesive, low plasticity, stiff (TILL, ML-CL) 8.0' End of Boring. Abandoned with bentonite.	ML		0.0					

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	---	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-15</b>							
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>							
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches							
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location									
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W							
Facility ID		County <b>Brown</b>	County Code <b>5</b>	Civil Town/City/ or Village <b>Green Bay</b>								
Number and Type and recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments	
				U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit		Plasticity Index
1 CS	48 38		0.0-0.25' CONCRETE 0.25-3.0' SANDY SILT, fine to med. grained sand, brown, non-cohesive, non-plastic, dry, dense (FILL, ML)	ML			0.0					
2 CS	48 39		3.0-4.25' As above. Color grades to dark brown. 4.25-6.5' As above. Color grades to reddish light brown, water at 6.5'	ML			0.0					
			6.5-8.0' As above. Color grades to brown.	ML								
			8.0' End of Boring. Abandoned with bentonite.									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	---	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-16</b>							
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>							
WI Unique Well No.		DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Lat °   '   "	Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Long °   '   "	Feet <input type="checkbox"/> N	Feet <input type="checkbox"/> S	Feet <input type="checkbox"/> E						
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay								
Number and Type and Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit		Soil Properties				RQD/ Comments		
				U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content		Liquid Limit	Plasticity Index
1 CS	48 42		0.0-0.5'	0.0-2.0' CLAYEY SILT w/ GRAVEL (topsoil), 10% 1/4" subrounded gravel, black, non-cohesive, non-plastic, roots, dense (FILL, OL)		OL		0.0				
			0.5-1.0'	2.0-6.5' SANDY SILT, very fine grained sand, non-cohesive, non-plastic, dense, moist, wet at 4.5' (TILL, ML)								
2 CS	48 48		1.0-1.5'			ML		0.0				
			1.5-2.0'	6.5-8.0' As above. Color grades to grey brown.								
			2.0-3.0'	8.0' End of Boring. Abandoned with bentonite.								

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-17</b>						
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	□ N   □ S   □ E   □ W						
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay							
Number and Type and Type Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments
				U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48 38		0.0-0.25' CLAYEY SILT (topsoil), black, roots (FILL, OL) 0.25-0.5' SILTY GRAVEL, grey, 3/4" angular gravel, dry (FILL, GM) 0.5-2.0' SANDY SILT, very fine grained sand, brown, non-cohesive, non-plastic, dense, dry (FILL, ML) 2.0-2.25' ASPHALT 2.25-8.0' SANDY SILT, very fine grained sand, brown, non-cohesive, non-plastic, dense, wet at 4.0' (FILL, ML)	OL GM ML	ML	0.0	0.0				
2 CS	48 44		4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0	ML		▼					
8.0' End of Boring. Abandoned with bentonite.											

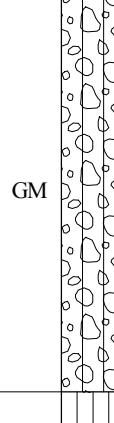
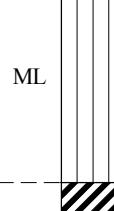
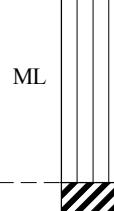
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-18</b>									
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>									
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches									
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location											
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   " <input type="checkbox"/>	Long °   '   " <input type="checkbox"/>	□ N   □ S   Feet   □ E   □ W									
Facility ID		County Brown	County Code 5	Civil Town/City/ or Village Green Bay										
Number and Type and Type Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments			
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit		Plasticity Index	P 200	
1 CS	48 28		0.5	0.0-4.25' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)			GM		0.0	0.0				
2 CS	48 40		1.0				ML							
			1.5				CH							
			2.0											
			2.5											
			3.0											
			3.5											
			4.0	4.25-6.5' SILT, brown, non-cohesive, non-plastic, dense, moist, wet at 4.75' (TILL, ML)			ML		▼					
			4.5											
			5.0											
			5.5											
			6.0											
			6.5	6.5-8.0' SILTY CLAY, brown, cohesive, high plasticity, tight, moist (TILL, CH)			CH							
			7.0											
			7.5											
			8.0	8.0' End of Boring. Abandoned with bentonite.										

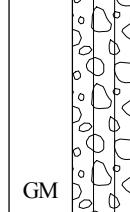
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-19</b>									
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>									
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches									
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location											
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   " <input type="checkbox"/>	Long °   '   " <input type="checkbox"/>	□ N   □ S   Feet   □ E   □ W									
Facility ID		County <b>Brown</b>	County Code <b>5</b>	Civil Town/City/ or Village <b>Green Bay</b>										
Number and Type and Type Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments			
				U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit		Plasticity Index	P 200	
1 CS	48 34		0.5	0.0-4.25' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)			GM		0.0					
2 CS	48 48		1.0				ML		0.0					
			1.5				CH							
			2.0											
			2.5											
			3.0											
			3.5											
			4.0	4.25-6.5' SILT, brown, non-cohesive, non-plastic, dense, moist, wet at 4.75' (TILL, ML)			ML		0.0					
			4.5											
			5.0											
			5.5											
			6.0											
			6.5	6.5-8.0' SILTY CLAY, brown, moist, cohesive, high plasticity, very stiff, (TILL, CH)			CH							
			7.0											
			7.5											
			8.0	8.0' End of Boring. Abandoned with bentonite.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-20</b>						
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W						
Facility ID		County <b>Brown</b>	County Code <b>5</b>	Civil Town/City/ or Village <b>Green Bay</b>							
Number and Type and Type Recovered (in)	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48 40		0.0-0.75' ASPHALT				0.0				
			0.75-2.5' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)								
			2.5-3.0' ASPHALT								
			3.0-3.25' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)								
			3.25-3.75' ASPHALT								
			3.75-5.5' SILT, dark brown / green, non-cohesive, non-plastic, dense, water at 4' (TILL, ML)								
			5.5-8.0' No recovery, soil slid out of tube.								
			8.0' End of Boring. Abandoned with bentonite.								
2 CS	48 18		0.0-0.75' ASPHALT				0.0				
			0.75-2.5' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)								
			2.5-3.0' ASPHALT								
			3.0-3.25' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)								
			3.25-3.75' ASPHALT								
			3.75-5.5' SILT, dark brown / green, non-cohesive, non-plastic, dense, water at 4' (TILL, ML)								
			5.5-8.0' No recovery, soil slid out of tube.								
			8.0' End of Boring. Abandoned with bentonite.								

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Page 1 of 1

Facility/Project Name <b>One Hour Martinizing</b>			License/Permit/Monitoring Number <b>02-05-217276</b>		Boring Number <b>B-21</b>						
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Dan Bendorf Probe Technologies, Inc.</b>			Date Drilling Started <b>12/11/2012</b>	Date Drilling Completed <b>12/11/2012</b>	Drilling Method <b>geoprobe</b>						
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2.0 inches						
Local Grid Origin <input type="checkbox"/> (estimated: <input checked="" type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location								
State Plane NW 1/4 of SE 1/4 of Section 5, T 23 N, R 21 E			Lat °   '   "	Long °   '   "	Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W						
Facility ID		County <b>Brown</b>	County Code <b>5</b>	Civil Town/City/ or Village <b>Green Bay</b>							
Number and Type and Length Att. & Recovered (in)	Sample	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit			Soil Properties				RQD/ Comments
				U SCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	
1 CS	48 33		0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0	0.75-3.0' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)  3.0-3.25' ASPHALT  3.25-3.75' SILTY GRAVEL, brown, 3/4" angular gravel, dry (FILL, GM)  3.75-4.25' SANDY SILT, very fine grained sand, brown, non-cohesive, non-plastic, dense, dry (FILL, ML)  4.25-6.0' SILT, dark brown / green, non-cohesive, non-plastic, dense, water at 4.5' (TILL, ML)  6.0-8.0' SILTY CLAY, brown, cohesive, high plasticity, very stiff, moist to wet (TILL, CH)  8.0' End of Boring. Abandoned with bentonite.	GM  GM  ML  ML  CH	0.0  0.0					
2 CS	48 35										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm <b>Alpha Terra Science</b> 1237 Pilgrim Rd. Plymouth, WI 53073	Tel: 920-892-2444 Fax: 920-892-2620
-----------	--	--

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

## Appendix C

### Laboratory Analytical Reports

March 24, 2017

Matt Dahlem  
Fehr Graham Engineering and Environmental  
1237 Pilgrim Road  
Plymouth, WI 53073

RE: Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Dear Matt Dahlem:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Megan Hansen, Fehr Graham Engineering and Environmental



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

Virginia VELAP ID: 460263  
South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-16-00157  
Federal Fish & Wildlife Permit #: LE51774A-0

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## SAMPLE SUMMARY

Project: 14-1138 RICE ENTERPRISES  
 Pace Project No.: 40147028

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40147028001	MW-1	Water	03/21/17 11:20	03/21/17 13:45
40147028002	PZ-1	Water	03/21/17 11:25	03/21/17 13:45
40147028003	MW-2	Water	03/21/17 11:15	03/21/17 13:45
40147028004	SMW-3	Water	03/21/17 13:05	03/21/17 13:45
40147028005	MW-4	Water	03/21/17 11:50	03/21/17 13:45
40147028006	MW-5	Water	03/21/17 11:45	03/21/17 13:45
40147028007	MW-6	Water	03/21/17 11:40	03/21/17 13:45
40147028008	MW-7	Water	03/21/17 11:30	03/21/17 13:45
40147028009	MW-8	Water	03/21/17 11:10	03/21/17 13:45
40147028010	MW-9	Water	03/21/17 11:35	03/21/17 13:45
40147028011	GEC TW-4	Water	03/21/17 11:05	03/21/17 13:45
40147028012	GEC TW-5	Water	03/21/17 11:00	03/21/17 13:45
40147028013	TB	Water	03/21/17 00:00	03/21/17 13:45

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.

## SAMPLE ANALYTE COUNT

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40147028001	MW-1	EPA 8260	HNW	64	PASI-G
40147028002	PZ-1	EPA 8260	HNW	64	PASI-G
40147028003	MW-2	EPA 8260	HNW	64	PASI-G
40147028004	SMW-3	EPA 8260	HNW	64	PASI-G
40147028005	MW-4	EPA 8260	HNW	64	PASI-G
40147028006	MW-5	EPA 8260	HNW	64	PASI-G
40147028007	MW-6	EPA 8260	HNW	64	PASI-G
40147028008	MW-7	EPA 8260	HNW	64	PASI-G
40147028009	MW-8	EPA 8260	HNW	64	PASI-G
40147028010	MW-9	EPA 8260	HNW	64	PASI-G
40147028011	GEC TW-4	EPA 8260	HNW	64	PASI-G
40147028012	GEC TW-5	EPA 8260	HNW	64	PASI-G
40147028013	TB	EPA 8260	HNW	64	PASI-G

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## SUMMARY OF DETECTION

Project: 14-1138 RICE ENTERPRISES  
 Pace Project No.: 40147028

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40147028001</b>	<b>MW-1</b>					
EPA 8260	Tetrachloroethene	4.8	ug/L	1.0	03/23/17 11:14	
<b>40147028004</b>	<b>SMW-3</b>					
EPA 8260	cis-1,2-Dichloroethene	148	ug/L	25.0	03/23/17 10:51	
EPA 8260	trans-1,2-Dichloroethene	12.0J	ug/L	25.0	03/23/17 10:51	
EPA 8260	Tetrachloroethene	4150	ug/L	25.0	03/23/17 10:51	
EPA 8260	Trichloroethene	1050	ug/L	25.0	03/23/17 10:51	
<b>40147028007</b>	<b>MW-6</b>					
EPA 8260	Toluene	4.1	ug/L	1.0	03/23/17 12:42	
<b>40147028008</b>	<b>MW-7</b>					
EPA 8260	Tetrachloroethene	1.7	ug/L	1.0	03/23/17 13:05	
<b>40147028010</b>	<b>MW-9</b>					
EPA 8260	Trichloroethene	0.58J	ug/L	1.0	03/23/17 13:49	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

Sample: MW-1	Lab ID: 40147028001	Collected: 03/21/17 11:20	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:14	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 11:14	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 11:14	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:14	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 11:14	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 11:14	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 11:14	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 11:14	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 11:14	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 11:14	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 11:14	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 11:14	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 11:14	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 11:14	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 11:14	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:14	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:14	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 11:14	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 11:14	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 11:14	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:14	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:14	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 11:14	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 11:14	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 11:14	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 11:14	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:14	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: MW-1	Lab ID: 40147028001	Collected: 03/21/17 11:20	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 11:14	79-34-5	
Tetrachloroethene	4.8	ug/L	1.0	0.50	1		03/23/17 11:14	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:14	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:14	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 11:14	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 11:14	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:14	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 11:14	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 11:14	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 11:14	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 11:14	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		03/23/17 11:14	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: PZ-1	Lab ID: 40147028002	Collected: 03/21/17 11:25	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:36	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 11:36	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 11:36	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:36	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 11:36	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 11:36	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 11:36	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 11:36	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 11:36	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 11:36	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 11:36	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 11:36	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 11:36	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 11:36	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 11:36	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:36	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:36	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 11:36	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 11:36	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 11:36	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:36	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:36	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 11:36	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 11:36	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 11:36	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 11:36	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:36	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: PZ-1**      **Lab ID: 40147028002**      Collected: 03/21/17 11:25      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 11:36	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:36	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:36	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 11:36	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 11:36	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:36	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 11:36	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 11:36	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:36	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 11:36	460-00-4	
Dibromofluoromethane (S)	114	%	70-130		1		03/23/17 11:36	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		03/23/17 11:36	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-2**      **Lab ID: 40147028003**      Collected: 03/21/17 11:15      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 09:45	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 09:45	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 09:45	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 09:45	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 09:45	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 09:45	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 09:45	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 09:45	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 09:45	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 09:45	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 09:45	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 09:45	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 09:45	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 09:45	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 09:45	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 09:45	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 09:45	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 09:45	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 09:45	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 09:45	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 09:45	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 09:45	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 09:45	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 09:45	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 09:45	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 09:45	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 09:45	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-2**      **Lab ID: 40147028003**      Collected: 03/21/17 11:15      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 09:45	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 09:45	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 09:45	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 09:45	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 09:45	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 09:45	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 09:45	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 09:45	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 09:45	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 09:45	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		03/23/17 09:45	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		03/23/17 09:45	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: SMW-3**      **Lab ID: 40147028004**      Collected: 03/21/17 13:05      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	71-43-2	
Bromobenzene	<5.8	ug/L	25.0	5.8	25		03/23/17 10:51	108-86-1	
Bromochloromethane	<8.5	ug/L	25.0	8.5	25		03/23/17 10:51	74-97-5	
Bromodichloromethane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	75-27-4	
Bromoform	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	75-25-2	
Bromomethane	<60.9	ug/L	125	60.9	25		03/23/17 10:51	74-83-9	
n-Butylbenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	104-51-8	
sec-Butylbenzene	<54.7	ug/L	125	54.7	25		03/23/17 10:51	135-98-8	
tert-Butylbenzene	<4.5	ug/L	25.0	4.5	25		03/23/17 10:51	98-06-6	
Carbon tetrachloride	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	56-23-5	
Chlorobenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	108-90-7	
Chloroethane	<9.4	ug/L	25.0	9.4	25		03/23/17 10:51	75-00-3	
Chloroform	<62.5	ug/L	125	62.5	25		03/23/17 10:51	67-66-3	
Chloromethane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	74-87-3	
2-Chlorotoluene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	95-49-8	
4-Chlorotoluene	<5.3	ug/L	25.0	5.3	25		03/23/17 10:51	106-43-4	
1,2-Dibromo-3-chloropropane	<54.1	ug/L	125	54.1	25		03/23/17 10:51	96-12-8	
Dibromochloromethane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	124-48-1	
1,2-Dibromoethane (EDB)	<4.4	ug/L	25.0	4.4	25		03/23/17 10:51	106-93-4	
Dibromomethane	<10.7	ug/L	25.0	10.7	25		03/23/17 10:51	74-95-3	
1,2-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	95-50-1	
1,3-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	541-73-1	
1,4-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	106-46-7	
Dichlorodifluoromethane	<5.6	ug/L	25.0	5.6	25		03/23/17 10:51	75-71-8	
1,1-Dichloroethane	<6.0	ug/L	25.0	6.0	25		03/23/17 10:51	75-34-3	
1,2-Dichloroethane	<4.2	ug/L	25.0	4.2	25		03/23/17 10:51	107-06-2	
1,1-Dichloroethene	<10.3	ug/L	25.0	10.3	25		03/23/17 10:51	75-35-4	
cis-1,2-Dichloroethene	148	ug/L	25.0	6.4	25		03/23/17 10:51	156-59-2	
trans-1,2-Dichloroethene	12.0J	ug/L	25.0	6.4	25		03/23/17 10:51	156-60-5	
1,2-Dichloropropane	<5.8	ug/L	25.0	5.8	25		03/23/17 10:51	78-87-5	
1,3-Dichloropropane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	142-28-9	
2,2-Dichloropropane	<12.1	ug/L	25.0	12.1	25		03/23/17 10:51	594-20-7	
1,1-Dichloropropene	<11.0	ug/L	25.0	11.0	25		03/23/17 10:51	563-58-6	
cis-1,3-Dichloropropene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	10061-01-5	
trans-1,3-Dichloropropene	<5.7	ug/L	25.0	5.7	25		03/23/17 10:51	10061-02-6	
Diisopropyl ether	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	108-20-3	
Ethylbenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	100-41-4	
Hexachloro-1,3-butadiene	<52.6	ug/L	125	52.6	25		03/23/17 10:51	87-68-3	
Isopropylbenzene (Cumene)	<3.6	ug/L	25.0	3.6	25		03/23/17 10:51	98-82-8	
p-Isopropyltoluene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	99-87-6	
Methylene Chloride	<5.8	ug/L	25.0	5.8	25		03/23/17 10:51	75-09-2	
Methyl-tert-butyl ether	<4.4	ug/L	25.0	4.4	25		03/23/17 10:51	1634-04-4	
Naphthalene	<62.5	ug/L	125	62.5	25		03/23/17 10:51	91-20-3	
n-Propylbenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	103-65-1	
Styrene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	100-42-5	
1,1,1,2-Tetrachloroethane	<4.5	ug/L	25.0	4.5	25		03/23/17 10:51	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: SMW-3	Lab ID: 40147028004	Collected: 03/21/17 13:05	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<6.2	ug/L	25.0	6.2	25		03/23/17 10:51	79-34-5	
Tetrachloroethene	4150	ug/L	25.0	12.5	25		03/23/17 10:51	127-18-4	
Toluene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	108-88-3	
1,2,3-Trichlorobenzene	<53.3	ug/L	125	53.3	25		03/23/17 10:51	87-61-6	
1,2,4-Trichlorobenzene	<55.2	ug/L	125	55.2	25		03/23/17 10:51	120-82-1	
1,1,1-Trichloroethane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	71-55-6	
1,1,2-Trichloroethane	<4.9	ug/L	25.0	4.9	25		03/23/17 10:51	79-00-5	
Trichloroethene	1050	ug/L	25.0	8.3	25		03/23/17 10:51	79-01-6	
Trichlorofluoromethane	<4.6	ug/L	25.0	4.6	25		03/23/17 10:51	75-69-4	
1,2,3-Trichloropropane	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	96-18-4	
1,2,4-Trimethylbenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	95-63-6	
1,3,5-Trimethylbenzene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	108-67-8	
Vinyl chloride	<4.4	ug/L	25.0	4.4	25		03/23/17 10:51	75-01-4	
m&p-Xylene	<25.0	ug/L	50.0	25.0	25		03/23/17 10:51	179601-23-1	
o-Xylene	<12.5	ug/L	25.0	12.5	25		03/23/17 10:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90	%	70-130		25		03/23/17 10:51	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		25		03/23/17 10:51	1868-53-7	
Toluene-d8 (S)	89	%	70-130		25		03/23/17 10:51	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-4**      **Lab ID: 40147028005**      Collected: 03/21/17 11:50      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:58	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 11:58	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 11:58	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:58	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 11:58	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 11:58	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 11:58	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 11:58	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 11:58	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 11:58	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 11:58	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 11:58	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 11:58	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 11:58	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 11:58	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:58	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 11:58	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 11:58	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 11:58	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 11:58	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 11:58	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:58	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 11:58	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 11:58	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 11:58	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 11:58	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:58	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: MW-4	Lab ID: 40147028005	Collected: 03/21/17 11:50	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 11:58	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 11:58	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 11:58	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 11:58	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 11:58	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 11:58	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 11:58	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 11:58	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 11:58	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 11:58	460-00-4	
Dibromofluoromethane (S)	116	%	70-130		1		03/23/17 11:58	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		03/23/17 11:58	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-5**      **Lab ID: 40147028006**      Collected: 03/21/17 11:45      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 12:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 12:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 12:20	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 12:20	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 12:20	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 12:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 12:20	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 12:20	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 12:20	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 12:20	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 12:20	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 12:20	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 12:20	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 12:20	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 12:20	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 12:20	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 12:20	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 12:20	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 12:20	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 12:20	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 12:20	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 12:20	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 12:20	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 12:20	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 12:20	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 12:20	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 12:20	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: MW-5	Lab ID: 40147028006	Collected: 03/21/17 11:45	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 12:20	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 12:20	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 12:20	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 12:20	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 12:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 12:20	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 12:20	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 12:20	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:20	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 12:20	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 12:20	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/23/17 12:20	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-6**      **Lab ID: 40147028007**      Collected: 03/21/17 11:40      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 12:42	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 12:42	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 12:42	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 12:42	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 12:42	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 12:42	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 12:42	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 12:42	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 12:42	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 12:42	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 12:42	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 12:42	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 12:42	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 12:42	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 12:42	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 12:42	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 12:42	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 12:42	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 12:42	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 12:42	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 12:42	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 12:42	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 12:42	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 12:42	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 12:42	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 12:42	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 12:42	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: MW-6	Lab ID: 40147028007	Collected: 03/21/17 11:40	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 12:42	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	127-18-4	
Toluene	4.1	ug/L	1.0	0.50	1		03/23/17 12:42	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 12:42	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 12:42	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 12:42	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 12:42	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 12:42	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 12:42	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 12:42	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 12:42	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	91	%	70-130		1		03/23/17 12:42	460-00-4	HS
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 12:42	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/23/17 12:42	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-7**      **Lab ID: 40147028008**      Collected: 03/21/17 11:30      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:05	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 13:05	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 13:05	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:05	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 13:05	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 13:05	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 13:05	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 13:05	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 13:05	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 13:05	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 13:05	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 13:05	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 13:05	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 13:05	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 13:05	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:05	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:05	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 13:05	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 13:05	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 13:05	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:05	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:05	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 13:05	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 13:05	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 13:05	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 13:05	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:05	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: MW-7	Lab ID: 40147028008	Collected: 03/21/17 11:30	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 13:05	79-34-5	
Tetrachloroethene	1.7	ug/L	1.0	0.50	1		03/23/17 13:05	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:05	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:05	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 13:05	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 13:05	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:05	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 13:05	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 13:05	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:05	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 13:05	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		1		03/23/17 13:05	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/23/17 13:05	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-8**      **Lab ID: 40147028009**      Collected: 03/21/17 11:10      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:27	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 13:27	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 13:27	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:27	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 13:27	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 13:27	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 13:27	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 13:27	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 13:27	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 13:27	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 13:27	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 13:27	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 13:27	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 13:27	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 13:27	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:27	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:27	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 13:27	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 13:27	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 13:27	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:27	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:27	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 13:27	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 13:27	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 13:27	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 13:27	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:27	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-8**      **Lab ID: 40147028009**      Collected: 03/21/17 11:10      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 13:27	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:27	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:27	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 13:27	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 13:27	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:27	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 13:27	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 13:27	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 13:27	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 13:27	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/23/17 13:27	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-9**      **Lab ID: 40147028010**      Collected: 03/21/17 11:35      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:49	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 13:49	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 13:49	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:49	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 13:49	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 13:49	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 13:49	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 13:49	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 13:49	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 13:49	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 13:49	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 13:49	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 13:49	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 13:49	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 13:49	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:49	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 13:49	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 13:49	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 13:49	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 13:49	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 13:49	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:49	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 13:49	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 13:49	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 13:49	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 13:49	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:49	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: MW-9**      **Lab ID: 40147028010**      Collected: 03/21/17 11:35      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 13:49	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 13:49	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 13:49	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 13:49	79-00-5	
Trichloroethene	0.58J	ug/L	1.0	0.33	1		03/23/17 13:49	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 13:49	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 13:49	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 13:49	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 13:49	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 13:49	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 13:49	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		03/23/17 13:49	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: GEC TW-4**      **Lab ID: 40147028011**      Collected: 03/21/17 11:05      Received: 03/21/17 13:45      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/23/17 14:11	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/23/17 14:11	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/23/17 14:11	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 14:11	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/23/17 14:11	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/23/17 14:11	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/23/17 14:11	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/23/17 14:11	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/23/17 14:11	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/23/17 14:11	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/23/17 14:11	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/23/17 14:11	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/23/17 14:11	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/23/17 14:11	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/23/17 14:11	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 14:11	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/23/17 14:11	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/23/17 14:11	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/23/17 14:11	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/23/17 14:11	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/23/17 14:11	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/23/17 14:11	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/23/17 14:11	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/23/17 14:11	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/23/17 14:11	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/23/17 14:11	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/23/17 14:11	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: GEC TW-4      Lab ID: 40147028011      Collected: 03/21/17 11:05      Received: 03/21/17 13:45      Matrix: Water**


---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/23/17 14:11	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/23/17 14:11	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/23/17 14:11	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/23/17 14:11	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/23/17 14:11	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/23/17 14:11	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/23/17 14:11	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/23/17 14:11	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/23/17 14:11	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/23/17 14:11	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		03/23/17 14:11	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/23/17 14:11	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

---

**Sample: GEC TW-5      Lab ID: 40147028012      Collected: 03/21/17 11:00      Received: 03/21/17 13:45      Matrix: Water**


---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/24/17 01:05	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/24/17 01:05	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/24/17 01:05	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/24/17 01:05	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/24/17 01:05	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/24/17 01:05	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/24/17 01:05	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/24/17 01:05	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/24/17 01:05	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/24/17 01:05	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/24/17 01:05	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/24/17 01:05	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/24/17 01:05	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/24/17 01:05	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/24/17 01:05	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/24/17 01:05	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/24/17 01:05	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/24/17 01:05	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/24/17 01:05	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/24/17 01:05	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/24/17 01:05	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/24/17 01:05	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/24/17 01:05	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/24/17 01:05	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/24/17 01:05	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/24/17 01:05	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/24/17 01:05	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: GEC TW-5	Lab ID: 40147028012	Collected: 03/21/17 11:00	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/24/17 01:05	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/24/17 01:05	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/24/17 01:05	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/24/17 01:05	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/24/17 01:05	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/24/17 01:05	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/24/17 01:05	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/24/17 01:05	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/24/17 01:05	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		03/24/17 01:05	460-00-4	
Dibromofluoromethane (S)	115	%	70-130		1		03/24/17 01:05	1868-53-7	
Toluene-d8 (S)	88	%	70-130		1		03/24/17 01:05	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

Sample: TB	Lab ID: 40147028013	Collected: 03/21/17 00:00	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Benzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/24/17 00:21	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/24/17 00:21	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/24/17 00:21	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/24/17 00:21	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/24/17 00:21	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/24/17 00:21	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/24/17 00:21	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/24/17 00:21	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/24/17 00:21	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/24/17 00:21	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/24/17 00:21	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/24/17 00:21	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/24/17 00:21	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/24/17 00:21	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/24/17 00:21	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/24/17 00:21	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/24/17 00:21	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/24/17 00:21	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/24/17 00:21	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/24/17 00:21	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/24/17 00:21	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/24/17 00:21	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/24/17 00:21	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/24/17 00:21	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/24/17 00:21	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/24/17 00:21	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/24/17 00:21	630-20-6	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

Sample: TB	Lab ID: 40147028013	Collected: 03/21/17 00:00	Received: 03/21/17 13:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/24/17 00:21	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/24/17 00:21	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/24/17 00:21	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/24/17 00:21	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/24/17 00:21	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/24/17 00:21	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/24/17 00:21	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/24/17 00:21	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/24/17 00:21	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93	%	70-130		1		03/24/17 00:21	460-00-4	
Dibromofluoromethane (S)	114	%	70-130		1		03/24/17 00:21	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		03/24/17 00:21	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALITY CONTROL DATA

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

QC Batch: 250770 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Associated Lab Samples: 40147028001, 40147028002, 40147028003, 40147028004, 40147028005, 40147028006, 40147028007,  
40147028008, 40147028009, 40147028010, 40147028011, 40147028012, 40147028013

METHOD BLANK: 1479945 Matrix: Water

Associated Lab Samples: 40147028001, 40147028002, 40147028003, 40147028004, 40147028005, 40147028006, 40147028007,  
40147028008, 40147028009, 40147028010, 40147028011, 40147028012, 40147028013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	03/23/17 07:54	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	03/23/17 07:54	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	03/23/17 07:54	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	03/23/17 07:54	
1,1-Dichloroethane	ug/L	<0.24	1.0	03/23/17 07:54	
1,1-Dichloroethene	ug/L	<0.41	1.0	03/23/17 07:54	
1,1-Dichloropropene	ug/L	<0.44	1.0	03/23/17 07:54	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	03/23/17 07:54	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	03/23/17 07:54	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	03/23/17 07:54	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	03/23/17 07:54	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	03/23/17 07:54	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	03/23/17 07:54	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	03/23/17 07:54	
1,2-Dichloroethane	ug/L	<0.17	1.0	03/23/17 07:54	
1,2-Dichloropropene	ug/L	<0.23	1.0	03/23/17 07:54	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	03/23/17 07:54	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	03/23/17 07:54	
1,3-Dichloropropene	ug/L	<0.50	1.0	03/23/17 07:54	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	03/23/17 07:54	
2,2-Dichloropropane	ug/L	<0.48	1.0	03/23/17 07:54	
2-Chlorotoluene	ug/L	<0.50	1.0	03/23/17 07:54	
4-Chlorotoluene	ug/L	<0.21	1.0	03/23/17 07:54	
Benzene	ug/L	<0.50	1.0	03/23/17 07:54	
Bromobenzene	ug/L	<0.23	1.0	03/23/17 07:54	
Bromochloromethane	ug/L	<0.34	1.0	03/23/17 07:54	
Bromodichloromethane	ug/L	<0.50	1.0	03/23/17 07:54	
Bromoform	ug/L	<0.50	1.0	03/23/17 07:54	
Bromomethane	ug/L	<2.4	5.0	03/23/17 07:54	
Carbon tetrachloride	ug/L	<0.50	1.0	03/23/17 07:54	
Chlorobenzene	ug/L	<0.50	1.0	03/23/17 07:54	
Chloroethane	ug/L	<0.37	1.0	03/23/17 07:54	
Chloroform	ug/L	<2.5	5.0	03/23/17 07:54	
Chloromethane	ug/L	<0.50	1.0	03/23/17 07:54	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	03/23/17 07:54	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	03/23/17 07:54	
Dibromochloromethane	ug/L	<0.50	1.0	03/23/17 07:54	
Dibromomethane	ug/L	<0.43	1.0	03/23/17 07:54	
Dichlorodifluoromethane	ug/L	<0.22	1.0	03/23/17 07:54	
Diisopropyl ether	ug/L	<0.50	1.0	03/23/17 07:54	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

without the written consent of Pace Analytical Services, LLC.

## QUALITY CONTROL DATA

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

METHOD BLANK: 1479945

Matrix: Water

Associated Lab Samples: 40147028001, 40147028002, 40147028003, 40147028004, 40147028005, 40147028006, 40147028007,  
40147028008, 40147028009, 40147028010, 40147028011, 40147028012, 40147028013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.50	1.0	03/23/17 07:54	
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	03/23/17 07:54	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	03/23/17 07:54	
m&p-Xylene	ug/L	<1.0	2.0	03/23/17 07:54	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	03/23/17 07:54	
Methylene Chloride	ug/L	<0.23	1.0	03/23/17 07:54	
n-Butylbenzene	ug/L	<0.50	1.0	03/23/17 07:54	
n-Propylbenzene	ug/L	<0.50	1.0	03/23/17 07:54	
Naphthalene	ug/L	<2.5	5.0	03/23/17 07:54	
o-Xylene	ug/L	<0.50	1.0	03/23/17 07:54	
p-Isopropyltoluene	ug/L	<0.50	1.0	03/23/17 07:54	
sec-Butylbenzene	ug/L	<2.2	5.0	03/23/17 07:54	
Styrene	ug/L	<0.50	1.0	03/23/17 07:54	
tert-Butylbenzene	ug/L	<0.18	1.0	03/23/17 07:54	
Tetrachloroethene	ug/L	<0.50	1.0	03/23/17 07:54	
Toluene	ug/L	<0.50	1.0	03/23/17 07:54	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	03/23/17 07:54	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	03/23/17 07:54	
Trichloroethene	ug/L	<0.33	1.0	03/23/17 07:54	
Trichlorofluoromethane	ug/L	<0.18	1.0	03/23/17 07:54	
Vinyl chloride	ug/L	<0.18	1.0	03/23/17 07:54	
4-Bromofluorobenzene (S)	%	95	70-130	03/23/17 07:54	
Dibromofluoromethane (S)	%	107	70-130	03/23/17 07:54	
Toluene-d8 (S)	%	89	70-130	03/23/17 07:54	

LABORATORY CONTROL SAMPLE: 1479946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	59.3	119	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	44.2	88	67-130	
1,1,2-Trichloroethane	ug/L	50	45.8	92	70-130	
1,1-Dichloroethane	ug/L	50	58.6	117	70-133	
1,1-Dichloroethene	ug/L	50	56.2	112	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.0	86	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	42.1	84	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	48.5	97	70-130	
1,2-Dichlorobenzene	ug/L	50	46.4	93	70-130	
1,2-Dichloroethane	ug/L	50	56.3	113	70-130	
1,2-Dichloropropane	ug/L	50	51.2	102	70-130	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,4-Dichlorobenzene	ug/L	50	45.9	92	70-130	
Benzene	ug/L	50	56.5	113	60-135	
Bromodichloromethane	ug/L	50	52.5	105	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

without the written consent of Pace Analytical Services, LLC.

## QUALITY CONTROL DATA

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

LABORATORY CONTROL SAMPLE: 1479946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	43.9	88	70-130	
Bromomethane	ug/L	50	39.9	80	33-130	
Carbon tetrachloride	ug/L	50	54.3	109	70-138	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	46.8	94	51-130	
Chloroform	ug/L	50	54.6	109	70-130	
Chloromethane	ug/L	50	39.1	78	25-132	
cis-1,2-Dichloroethene	ug/L	50	55.7	111	69-130	
cis-1,3-Dichloropropene	ug/L	50	43.0	86	70-130	
Dibromochloromethane	ug/L	50	50.5	101	70-130	
Dichlorodifluoromethane	ug/L	50	31.9	64	23-130	
Ethylbenzene	ug/L	50	50.7	101	70-136	
Isopropylbenzene (Cumene)	ug/L	50	53.6	107	70-140	
m&p-Xylene	ug/L	100	106	106	70-138	
Methyl-tert-butyl ether	ug/L	50	60.1	120	66-138	
Methylene Chloride	ug/L	50	54.1	108	70-130	
o-Xylene	ug/L	50	52.5	105	70-134	
Styrene	ug/L	50	52.9	106	70-133	
Tetrachloroethene	ug/L	50	46.2	92	70-138	
Toluene	ug/L	50	49.0	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	57.0	114	70-131	
trans-1,3-Dichloropropene	ug/L	50	39.8	80	69-130	
Trichloroethene	ug/L	50	53.5	107	70-130	
Trichlorofluoromethane	ug/L	50	56.3	113	50-150	
Vinyl chloride	ug/L	50	50.6	101	49-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			109	70-130	
Toluene-d8 (S)	%			90	70-130	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1479949      1479950

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	Max	
		40147028003	Spike Conc.	Spike Conc.	MS Result						RPD	RPD
1,1,1-Trichloroethane	ug/L	<0.50	50	50	57.2	59.0	114	118	70-134	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	42.4	43.2	85	86	67-130	2	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	43.3	44.4	87	89	70-130	3	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	56.5	57.9	113	116	70-134	2	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	54.8	54.4	110	109	68-136	1	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	41.8	44.0	84	88	62-139	5	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	43.1	42.0	86	84	50-150	2	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.7	48.2	93	96	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	45.0	46.6	90	93	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	54.2	55.7	108	111	70-130	3	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	49.1	49.4	98	99	70-130	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALITY CONTROL DATA

Project: 14-1138 RICE ENTERPRISES

Pace Project No.: 40147028

Parameter	Units	40147028003		MS		MSD		MS		MSD		% Rec	Limits	Max			
		Result	Spike Conc.	Spike Conc.	Result	MSD	% Rec	MSD % Rec	RPD	RPD	Qual			RPD	RPD		
1,3-Dichlorobenzene	ug/L	<0.50	50	50	45.3	46.1	91	92	70-131	2	20						
1,4-Dichlorobenzene	ug/L	<0.50	50	50	45.1	46.5	90	93	70-130	3	20						
Benzene	ug/L	<0.50	50	50	54.7	56.2	109	112	57-138	3	20						
Bromodichloromethane	ug/L	<0.50	50	50	50.2	51.1	100	102	70-130	2	20						
Bromoform	ug/L	<0.50	50	50	42.0	43.4	84	87	70-130	3	20						
Bromomethane	ug/L	<2.4	50	50	40.0	42.7	80	85	33-130	7	27						
Carbon tetrachloride	ug/L	<0.50	50	50	52.5	53.2	105	106	70-138	1	20						
Chlorobenzene	ug/L	<0.50	50	50	47.7	48.9	95	98	70-130	3	20						
Chloroethane	ug/L	<0.37	50	50	44.2	44.6	88	89	51-130	1	20						
Chloroform	ug/L	<2.5	50	50	51.8	53.9	104	108	70-130	4	20						
Chloromethane	ug/L	<0.50	50	50	35.9	36.7	72	73	25-132	2	20						
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	53.8	55.0	108	110	61-140	2	20						
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	45.3	45.8	91	92	70-130	1	20						
Dibromochloromethane	ug/L	<0.50	50	50	48.1	50.0	96	100	70-130	4	20						
Dichlorodifluoromethane	ug/L	<0.22	50	50	26.9	27.3	54	55	23-130	2	20						
Ethylbenzene	ug/L	<0.50	50	50	49.1	50.2	98	100	70-138	2	20						
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	52.0	53.4	104	107	70-152	3	20						
m&p-Xylene	ug/L	<1.0	100	100	103	105	103	105	70-140	2	20						
Methyl-tert-butyl ether	ug/L	<0.17	50	50	58.9	60.6	118	121	66-139	3	20						
Methylene Chloride	ug/L	<0.23	50	50	53.5	53.1	107	106	70-130	1	20						
o-Xylene	ug/L	<0.50	50	50	50.6	51.8	101	104	70-134	2	20						
Styrene	ug/L	<0.50	50	50	51.4	52.8	103	106	70-138	3	20						
Tetrachloroethene	ug/L	<0.50	50	50	45.4	46.5	91	93	70-148	2	20						
Toluene	ug/L	<0.50	50	50	47.2	48.3	94	97	70-130	2	20						
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	55.6	57.3	111	115	70-133	3	20						
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	40.6	42.6	81	85	69-130	5	20						
Trichloroethene	ug/L	<0.33	50	50	51.8	52.5	104	105	70-131	1	20						
Trichlorofluoromethane	ug/L	<0.18	50	50	54.0	54.6	108	109	50-150	1	20						
Vinyl chloride	ug/L	<0.18	50	50	48.2	49.3	96	99	49-133	2	20						
4-Bromofluorobenzene (S)	%						101	103	70-130								
Dibromofluoromethane (S)	%						111	110	70-130								
Toluene-d8 (S)	%						90	90	70-130								

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALIFIERS

Project: 14-1138 RICE ENTERPRISES  
Pace Project No.: 40147028

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 14-1138 RICE ENTERPRISES  
 Pace Project No.: 40147028

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40147028001	MW-1	EPA 8260	250770		
40147028002	PZ-1	EPA 8260	250770		
40147028003	MW-2	EPA 8260	250770		
40147028004	SMW-3	EPA 8260	250770		
40147028005	MW-4	EPA 8260	250770		
40147028006	MW-5	EPA 8260	250770		
40147028007	MW-6	EPA 8260	250770		
40147028008	MW-7	EPA 8260	250770		
40147028009	MW-8	EPA 8260	250770		
40147028010	MW-9	EPA 8260	250770		
40147028011	GEC TW-4	EPA 8260	250770		
40147028012	GEC TW-5	EPA 8260	250770		
40147028013	TB	EPA 8260	250770		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, LLC.

**(Please Print Clearly)**

Company Name:	Fehr Graham	
Branch/Location:	Plymouth, WI	
Project Contact:	Matt Dahlem	
Phone:	(920) 892-2444	
Project Number:	14-1138	
Project Name:	Rice Enterprises	
Project State:	WI	
Sampled By (Print):	Dillon Plamann	
Sampled By (Sign):	DMPL	
PO #:		Regulator Program



# CHAIN OF CUSTODY

#### **UPPER MIDWEST REGION**

MN: 612-607-1700 WI: 920-469-2436

Page 1 of

Page 38 of 39

Quote #:		
Mail To Contact:	Matt Dahlem	
Mail To Company:	Fehr Graham	
Mail To Address:	m.dahlem@fehr-graham.com	
Invoice To Contact:	AA	
Invoice To Company:	AA	
Invoice To Address:	AA	
Invoice To Phone:		
CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	3-40mlVB	
<i>Mike Paul</i>	1-40mlVB	PACE Project No.
Date/Time: <i>3-21-17</i>	1345	<i>40147028</i>
Date/Time:	Receipt Temp = ROT °C	
Date/Time:	Sample Receipt pH	
Date/Time:	OK / Adjusted	
Date/Time:	Cooler Custody Seal	
Date/Time:	Present / <u>Not Present</u>	
Date/Time:	Intact / Not Intact	

## Sample Condition Upon Receipt

Pace Analytical Services, Inc.  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302

Pace Analytical™

Project #

WO# : 40147028

Client Name: Fehr GrahamCourier:  FedEx  UPS  Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used: N/A Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begunCooler Temperature: Uncom /Corr: \_\_\_\_\_Biological Tissue is Frozen:  yes  noTemp Blank Present:  yes  no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments: \_\_\_\_\_

Person examining contents:

Date: 3-21-17Initials: SJM

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <i>Initials only</i> 3-21-17
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5. Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: - Pace Containers Used: - Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed Lab Std #/ID of preservative Date/ Time: _____
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <i>007-3 vials</i> 3-21-17
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

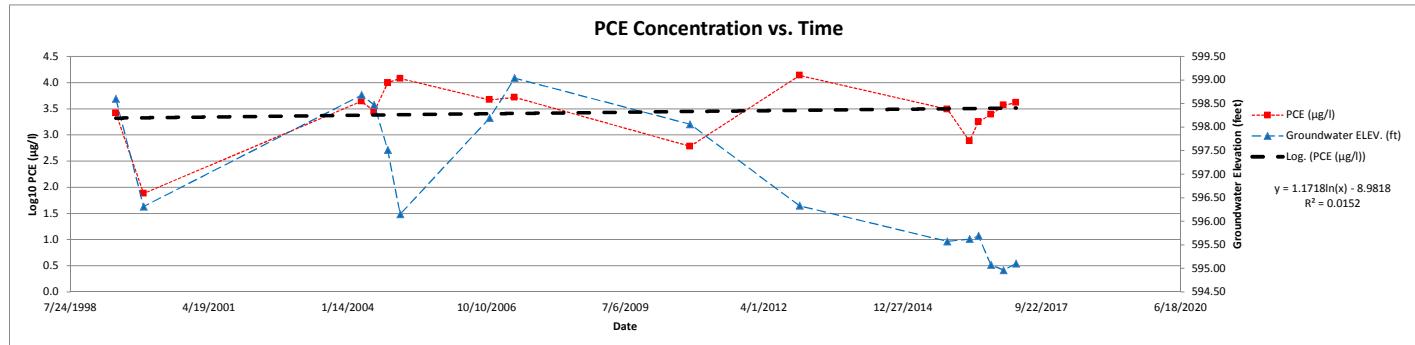
Project Manager Review: CRADate: 3-21-17

## Appendix D

### Contaminant Trend Analysis

#### Groundwater monitoring data (ug/l)

MW 3	598.60	596.31	598.68	598.47	597.51	596.15	598.19	599.04	598.06	596.33	595.57	595.62	595.69	595.07	594.96	595.1
Sampling Dates	6/17/1999	1/3/2000	4/22/2004	7/22/2004	10/28/2004	1/25/2005	10/31/2006	4/30/2007	10/15/2010	12/12/2012	11/12/2015	4/20/2016	6/24/2016	9/22/2016	12/22/2016	3/21/2017
	Max	Min														
PCE (ug/l)	2,600.0	76.0	4,400.0	2,800.0	10,000.0	12,000.0	4,700.0	5,200.0	602.0	13,700.0	3,100.0	760.0	1,790.0	2,450.0	3,680.0	4,150.0
Log <sub>10</sub> [PCE(ug/l)]	3.4	1.9	3.6	3.4	4.0	4.1	3.7	3.7	2.8	4.1	3.5	3.5	2.9	3.3	3.4	3.6



#### Notes:

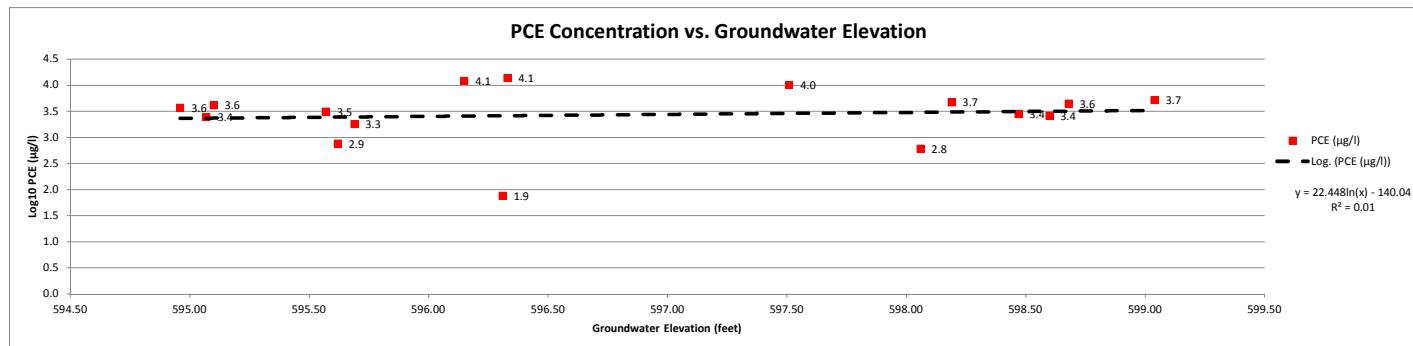
The logarithm (to the base 10) of the PCE concentration data is plotted as a function of time.

The trend line is the semi-log<sub>10</sub>-transformed regression line.

Groundwater elevation data is superimposed on the concentration data.

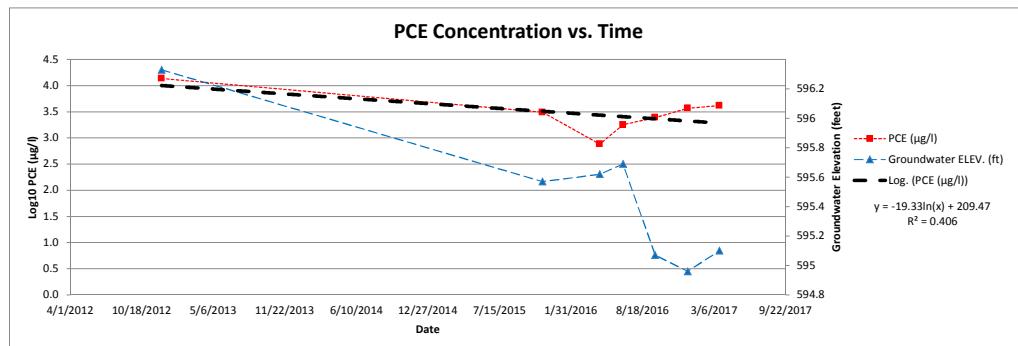
For the graph above, PCE concentrations appear to be slightly increasing but relatively stable, and there seems to be a decreasing water level with time.

For the graph below, PCE concentrations appear to increase as a function of increasing water levels.



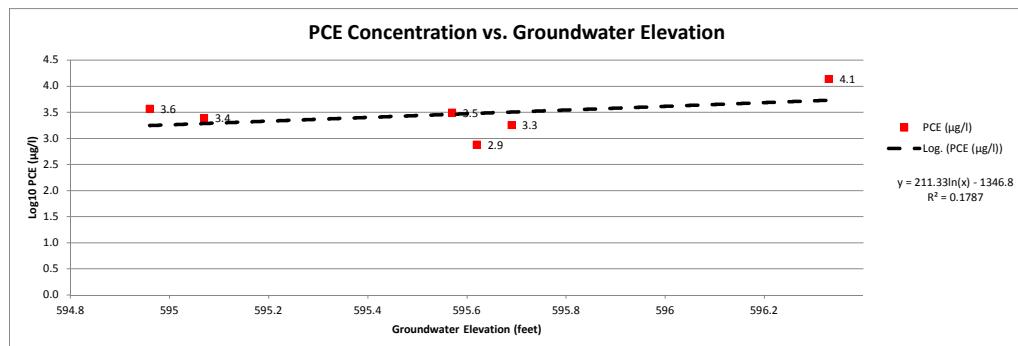
#### Groundwater monitoring data (ug/l)

MW 3	
Groundwater ELEV. (ft)	596.33    595.57    595.62    595.69    595.07    594.96    595.1
Sampling Dates	12/12/2012    11/12/2015    4/20/2016    6/24/2016    9/22/2016    12/22/2016    3/21/2017
PCE (ug/l)	13,700.0    3,100.0    760.0    1,790.0    2,450.0    3,680.0    4,150.0    13,700.0    760.0
Log <sub>10</sub> [PCE(ug/l)]	4.1    3.5    2.9    3.3    3.4    3.6    3.6



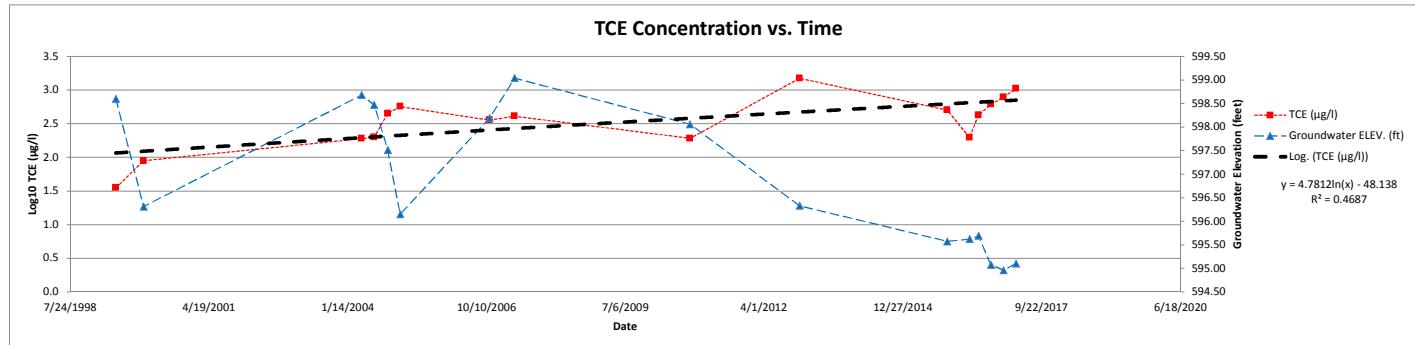
#### Notes:

The logarithm (to the base 10) of the PCE concentration data is plotted as a function of time.  
The trend line is the semi-log<sub>10</sub>-transformed regression line.  
Groundwater elevation data is superimposed on the concentration data.  
For the graph above, PCE concentrations appear to be decreasing, and there seems to be a decreasing water level with time.  
For the graph below, PCE concentrations appear to increase as a function of increasing water levels.



#### Groundwater monitoring data (ug/l)

MW 3	Groundwater ELEV. (ft)	Sampling Dates	598.60	596.31	598.68	598.47	597.51	596.15	598.19	599.04	598.06	596.33	595.57	595.62	595.69	595.07	594.96	595.1		
			6/17/1999	1/3/2000	4/22/2004	7/22/2004	10/28/2004	1/25/2005	10/31/2006	4/30/2007	10/15/2010	12/12/2012	11/12/2015	4/20/2016	6/24/2016	9/22/2016	12/22/2016	3/21/2017		
																	Max	Min		
	TCE (ug/l)		35.3	89.0	190.0	200.0	450.0	570.0	360.0	410.0	191.0	1,500.0	504.0	197.0	425.0	616.0	785.0	1,050.0	1,500.0	35.3
	Log <sub>10</sub> [TCE(ug/l)]		1.5	1.9	2.3	2.3	2.7	2.8	2.6	2.6	2.3	3.2	2.7	2.3	2.6	2.8	2.9	3.0		



#### Notes:

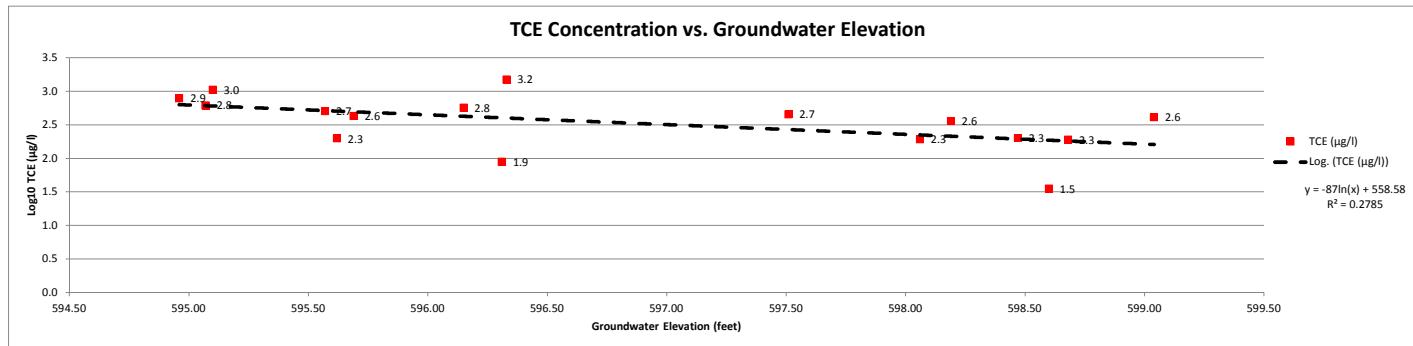
The logarithm (to the base 10) of the TCE concentration data is plotted as a function of time.

The trend line is the semi-log<sub>10</sub>-transformed regression line.

Groundwater elevation data is superimposed on the concentration data.

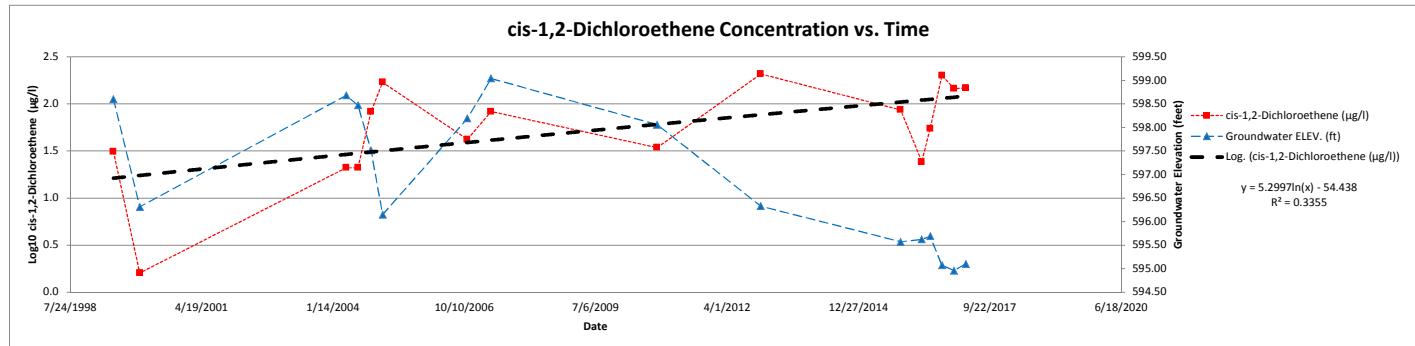
For the graph above, TCE concentrations appear to be increasing, and there seems to be a decreasing water level with time.

For the graph below, TCE concentrations appear to decrease as a function of increasing water levels.



#### Groundwater monitoring data (ug/l)

MW 3	Groundwater ELEV. (ft)	Sampling Dates	598.60	596.31	598.68	598.47	597.51	596.15	598.19	599.04	598.06	596.33	595.57	595.62	595.69	595.07	594.96	594.96	595.1	Max	Min
			6/17/1999	1/3/2000	4/22/2004	7/22/2004	10/28/2004	1/25/2005	10/31/2006	4/30/2007	10/15/2010	12/12/2012	11/12/2015	4/20/2016	6/24/2016	9/22/2016	12/22/2016	3/21/2017			
	cis-1,2-Dichloroethene (ug/l)		31.0	1.6	21.0	21.0	83.0	170.0	42.0	83.0	34.4	208.0	86.5	24.3	54.7	201.0	145.0	148.0	208.0	1.6	
	Log <sub>10</sub> [cis-1,2-Dichloroethene(ug/l)]		1.5	0.2	1.3	1.3	1.9	2.2	1.6	1.9	1.5	2.3	1.9	1.4	1.7	2.3	2.2	2.2	2.2		



#### Notes:

The logarithm (to the base 10) of the cis-1,2-DCE concentration data is plotted as a function of time.

The trend line is the semi-log<sub>10</sub>-transformed regression line.

Groundwater elevation data is superimposed on the concentration data.

For the graph above, cis-1,2-DCE concentrations appear to be increasing, and there seems to be a decreasing water level with time.

For the graph below, cis-1,2-DCE concentrations appear to decrease as a function of increasing water levels.

