VOLUNTARY REMEDIATION PROGRAM APPLICATION

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

July 24, 2017
Terracon Project No. ES157747

Prepared for:

Savannah-Chatham County Public School System
Savannah, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

July 24, 2017

Georgia Environmental Protection Division
Response and Remediation Program
Land Protection Branch
2 Martin Luther King, Jr. Drive, SE
Suite 1054, East Tower
Atlanta, Georgia 30334

Attn: Mr. Patrick Klan
P: (404) 657 8659
E: patrick.klan@dnr.ga.gov

Re: Voluntary Remediation Program Application
Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia
Terracon Project No. ES157747

Dear Mr. Klan:

On behalf of Savannah Chatham County Public School System (SCCPSS) Board of Education, Terracon Consultants, Inc. (Terracon) is submitting this Voluntary Remediation Program (VRP) Application for the above-referenced facility. This VRP Application has been completed in general accordance with the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100) and the directions received during the conference call between the Georgia Environmental Protection Division (EPD), SCCPSS, and Terracon on May 10, 2017. The VRP Application fee is attached.

If you have any questions concerning this report, please contact us at (912) 629 4000.

Sincerely,
Terracon Consultants, Inc.

Justin J. Johnson, PG
Senior Geologist

William S. Anderson, III, PE
Senior Principal / Office Manager

Enclosures
cc: 1 – Georgia EPD (1 hard copy; 2 electronic copies)
1 – Client (1 hard copy; 1 electronic copy)
1 – File (1 electronic copy)

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APPENDICES

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1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has prepared this Voluntary Remediation Program (VRP) Application on behalf of Savannah-Chatham County Public School System (SCCPSS) Board of Education (Participant) for the Interchange Court Facility located at 10 Interchange Court in Savannah, Chatham County, Georgia (Property).

This VRP Application has been completed in general accordance with the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100) and the directions received during the conference call between the Georgia Environmental Protection Division (EPD), SCCPSS, and Terracon on May 10, 2017. The VRP Application and Checklist are provided in Appendix A. The tax map and warranty deed documentation for the property are included in Appendix B. A Site Location Map (Figure 1), Site Vicinity Map (Figure 2), and Site Diagram (Figure 3) are included in Appendix C.

1.1 Purpose

The purpose of this document is to provide justification for enrollment of the property into the VRP by presenting a current understanding of site conditions based on existing data and a preliminary conceptual site model (CSM), a plan for additional investigation to fill data gaps, and a plan for site remediation.

1.2 Property Eligibility

Under O.C.G.A § 12-8-105, the following criteria must be met in order to be considered a qualifying property for the VRP:

1. The property must be listed on the inventory under Part 2 of this article or be a property which meets the criteria of O.C.G.A. § 12-8-105 or otherwise have a release of regulated substances into the environment;
2. The property shall not:

a. Be listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601, et seq;

b. Be currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or

c. Be a facility required to have a permit under O.C.G.A. § 12-8-66

3. Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency; and

4. Any lien filed under subsection (e) of O.C.G.A. § 12-8-96 or subsection (b) of O.C.G.A. § 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to O.C.G.A. § 12-8-94 or O.C.G.A. § 12-13-6.

Based on the criteria listed above, the Interchange Court Facility is a "qualifying property" under the VRP.

1.3 Participant Eligibility

Under O.C.G.A. § 12-8-106, the following criteria must be met in order for the participant to meet the qualifications of the VRP:

1. Be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action including, to the extent practical, implementing controls for the site pursuant to written lease, order, or indenture;

2. Not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director; and

3. Meet other such criteria as may be established by the board pursuant to O.C.G.A. § 12-8-103.

The participant, SCCPSS, meets all of the criteria stated above, and is therefore "qualified" under the VRP. The contact for the applicant and owner of the site is as follows:

Mr. Mark W. Pickering, PE
Project Engineer / Facilities & Construction
Savannah Chatham County Public School System
208 Bull Street, Room 305
Savannah, Georgia 31401
(912) 395 3001
mark.pickering@sccpss.com

2.0 BACKGROUND

2.1 Site Description

The site is a single parcel (Parcel No. 2-0597-01-003) consisting of approximately 6 acres of land located at 10 Interchange Court in the City of Savannah, Chatham County, Georgia. The site location is depicted on Figure 1 in Appendix C.

The site is improved with a service garage office building, storage building, paved parking areas, and a perimeter chain-link fence. The site has been owned by the Savannah-Chatham County Public School System (SCCPSS) Board of Education since July 15, 1993. A diagram of the site is shown on Figure 3 in Appendix C.

2.2 Site History

Historically, the site consisted of wooded land and/or cleared farm land until it was developed for commercial use in the early 1980s. Previous owners and/or occupants of the site have included the International Harvester Company, Wagchem, Wagner Laboratories, and World Wide Utilities. The SCCPSS has operated the site as a bus storage and repair facility since 1993.

2.3 Summary of Previous Investigations

On behalf of SCCPSS, Terracon conducted a limited site investigation (LSI) to evaluate soil and shallow groundwater conditions for areas potentially impacted by current and historical operations at the site. The LSI included the completion of eight (8) soil borings (TW-1 though TW-8) and the installation of two (2) monitoring wells (MW-1 and MW-2). LSI sample locations are depicted on Figure 3 in Appendix C.

Analytical results indicated arsenic was detected at a concentration exceeding the Georgia EPD Hazardous Site Response Act (HSRA) Appendix III notification concentration in the groundwater sample collected from MW-1. In accordance with HSRA notification requirements, a Release Notification/Reporting Form was submitted to the Georgia EPD on January 11, 2017.

In an email dated March 6, 2017, Mr. Patrick Klan with the Georgia EPD requested Terracon collect an additional groundwater sample from MW-1 using low flow methods and have it analyzed for both total and dissolved arsenic. Terracon resampled monitoring well MW-1 on March 28, 2017. Groundwater analytical results indicated that both total and dissolved arsenic concentrations exceeded the HSRA Groundwater Criterion of 0.010 mg/L.

In a conference call on May 10, 2017, the Georgia EPD requested the SCCPSS submit a VRP application for the Interchange Court Facility.

3.0 CURRENT SITE CONDITIONS

3.1 Subsurface Soil

As part of the LSI, Terracon advanced eight (8) direct push soil borings (TW-1 through TW-8) to assess soil conditions in areas of concern identified for the site. Soil samples were collected from ground surface to total depths ranging from ten (10) to twenty (20) feet below grade and field-screened for volatile organic vapors with a Photo-Ionization Detector (PID). Soil sample locations are depicted in Figure 3 of Appendix C. Soil boring logs are provided in Appendix E.

Based on the PID readings, eight (8) soil samples from select borings were submitted for laboratory analysis of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) Metals. Soil analytical results were compared to the Georgia Environmental Protection Division (EPD) Type 1 Risk Reduction Standards (RRS).

Soil analytical results indicated that no VOCs, PAHs or RCRA metals were detected at concentrations exceeding Type 1 RRS. Soil analytical results and the applicable Type 1 RRS are summarized in Table 1 of Appendix D.

3.2 Groundwater

Following the completion of soil sampling activities, groundwater samples were collected from the eight (8) soil borings using a stainless-steel Geoprobe® screen point groundwater sampler. After developing and purging each screen point as necessary, groundwater samples were collected and submitted for VOCs, PAHs, and RCRA metals analysis.

The target turbidity level for the groundwater samples was less than ten (10) Nephelometric Turbidity Units (NTU). However, turbidity levels less than 10 NTU could not be achieved for the eight (8) screen points despite extensive purging efforts. Detected metals concentrations for groundwater samples with high turbidity are likely to be elevated by the metals associated with the particulates and not representative of dissolved conditions. In order to evaluate for dissolved metals concentrations, an additional sample container was collected from each screen point and submitted to the laboratory for filtration prior to RCRA metals analysis.

Analytical results were compared to the Georgia EPD Type 1 RRS. A summary of groundwater analytical results and the applicable Type 1 RRS are provided in Tables 2 and 3 of Appendix D.

3.2.1 VOCs

Groundwater analytical results indicated that tetrachloroethylene (PCE) was detected at a concentration (0.00680 milligrams per liter [mg/L]) exceeding the Type 1 RRS (0.005 mg/L) in the groundwater sample collected from boring TW-4 adjacent to the west side of the garage repair bays.

To determine if reportable groundwater conditions exist at the site for PCE, a permanent monitoring well (MW-2) was installed at boring TW-4. PCE was detected at a concentration (0.00173 mg/L) below the Type 1 RRS in the groundwater sample collected from MW-2.

No other VOCs were detected above Type 1 RRS in the groundwater samples submitted for analysis.

3.2.2 PAHs

No PAHs were detected above laboratory reporting limits in the groundwater samples submitted for analysis.

3.2.3 RCRA Metals

Total arsenic was detected at concentrations exceeding Type 1 RRS (0.010 mg/L) in unfiltered groundwater samples collected from TW-2 (0.0924 mg/L), TW-3 (0.0370 mg/L), TW-5 (0.0402 mg/L), TW-6 (0.0430 mg/L), and TW-8 (0.116 mg/L). Dissolved arsenic was not detected above the laboratory reporting limit in the filtered groundwater samples collected from TW-2, TW-5, TW-6, and TW-8. However, dissolved arsenic was detected in TW-3 at a concentration of 0.0287 mg/L, which exceeds the Type 1 RRS.

To determine if reportable groundwater conditions exist at the site for arsenic, a permanent monitoring well (MW-1) was installed at boring TW-3. Total arsenic was detected at a concentration (0.0465 mg/L) exceeding the Type 1 RRS in the groundwater sample collected from MW-1 on September 30, 2016.

At the request of the Georgia EPD, Terracon collected an additional sample from MW-1 on March 28, 2017, to be analyzed for both total and dissolved arsenic. Total and dissolved arsenic were detected in the second sample at concentrations of 0.0647 mg/L and 0.0348 mg/L, respectively, exceeding the Type 1 RRS.

Total chromium was detected at a concentration (0.201 mg/L) exceeding the Type 1 RRS (0.1 mg/L) in unfiltered groundwater sample TW-8. However, dissolved chromium was not detected above the laboratory reporting limit in the filtered groundwater sample collected from TW-8.

Total lead was detected at concentrations exceeding Type 1 RRS in unfiltered groundwater samples collected from TW-1 (0.0203 mg/L), TW-4 (0.0252 mg/L), TW-5 (0.0300 mg/L), TW-6 (0.0630 mg/L), and TW-8 (0.0938 mg/L). However, dissolved lead was not detected above the Type 1 RRS in the filtered groundwater samples collected from TW-1, TW-4, TW-5, TW-6, and TW-8.

No other RCRA metals were detected above the Type 1 RRS in the groundwater samples submitted for analysis.

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

A preliminary CSM has been developed using data collected during previous site investigations and information obtained from reviews of published literature. It is intended that the CSM will be updated as new information is gathered for the site. The CSM illustrates the site's surface and subsurface setting; potential human health and ecological receptors; and the complete and incomplete exposure pathways that exist for the site.

4.1 Geologic Setting

The following subsections summarize the regional and site-specific geomorphic, stratigraphic, and hydrogeologic settings. Geologic data for this area are based on numerous published reports, previous environmental studies conducted at the site, and discussions with other researchers familiar with the geology and hydrogeology of the area.

4.1.1 Regional Geology

The site is located in the Coastal Plain physiographic province of Georgia. The stratigraphy of the Coastal Plain of Georgia and Chatham County has been described by numerous authors (e.g., Herrick, 1961; Herrick and Vorhis, 1963; Counts and Donsky, 1963; Furlow, 1969; Chowns and Williams, 1983; Clarke et al., 1990; Weems and Edwards, 2001; Williams and Gill, 2010; and Clarke et al., 2011) and is summarized in the following paragraphs. The area stratigraphic units are discussed in ascending order, from the deepest Paleocene units to the surficial Holocene deposits. Cretaceous and pre-Cretaceous rock units are typically found at depths of several thousand feet below ground surface in the area; therefore, only a general description of the lithologic character is included in this report.

Cretaceous and pre-Cretaceous Stratigraphy

Pre-Cretaceous strata underlying the area are considered "basement" rocks. These "basement" rocks consist of igneous intrusive rocks and low-grade metamorphic rocks of Paleozoic age, and sedimentary rocks and volcanic rocks of Triassic to Early Jurassic Age (Chowns and Williams,

1983). Upper Cretaceous sediments consist of inter-bedded sands and clayey silts at depths of 1,600 feet below ground surface (Herrick, 1961).

Paleocene Stratigraphy

Paleocene units in the area mark the beginning of a regional transgression of the sea that lasted through the late Eocene (Clarke et al., 1990). Paleocene units unconformably overlie strata of Late Cretaceous age. The Clayton Formation and the Cedar Keys Formation make up the Paleocene units in the area. The upper portion of the Clayton Formation is a hard, sandy glauconitic, fossiliferous limestone, while the remaining portion of the formation consists of glauconitic sand, argillaceous sand, and small amounts of medium-to-dark gray clay (Clarke et al., 1990). The Cedar Keys Formation is a Paleocene carbonate-evaporite facies. The Cedar Keys Formation consists of thick beds of anhydrite and dolomite (Clarke et al., 1990).

Eocene Stratigraphy

The early Eocene Oldsmar Formation unconformably overlies the Paleocene Clayton Formation (Clarke et al., 1990). Glauconitic limestone and dolomite are characteristic lithologies of the Oldsmar Formation (Miller, 1986; Clarke et al., 1990). The Oldsmar Formation may also contain an upper layer of sand in some areas (Clarke et al., 1990).

The middle Eocene Avon Park Formation unconformably overlies the Oldsmar formation (Miller, 1986; Clarke et al., 1990). The Avon Park, a glauconitic dolomite and limestone, has a thickness in the range of 700 to 500 feet in the Chatham County area.

The Ocala Limestone is a massive, fossiliferous limestone. Fossils identified in the Ocala include bryozoan remains, foraminiferal tests, and mollusk shells (Furlow, 1969; Miller, 1986; Clarke et al., 1990). The Ocala Limestone unconformably overlies the dolomite and limestone of the Avon Park Formation (Furlow, 1989; Krause and Randolph, 1989; and Clarke et al., 1990). The thickness of the Ocala is more than 200 feet thick, and in some areas exceeds 400 feet (Clarke et al., 1990).

Oligocene Stratigraphy

Buff-colored, porous fossiliferous (foraminiferal tests, micrite, and non-particulate ubiquitous phosphate) limestone describe the sediments of Oligocene age (Clarke et al., 1990). Huddleston (1988) named these sediments the Lazaretto Creek Formation and the Tiger Leap Formation. Weems and Edwards (2001) refined the descriptions of the two formations. The Lazaretto Creek Formation includes the lower Oligocene sediments in the study area and the Tiger Leap Formation includes the upper Oligocene sediments marked by an increase in phosphate. The abundance of miliolid foraminifera in the Oligocene sediments is used to differentiate the unit from the underlying Ocala Limestone, and the absence of particulate phosphate is used to differentiate the overlying Miocene carbonate sediments.

Miocene Stratigraphy

There are three units of Miocene age in Chatham County. These units have been described lithologically and by geophysical markers by several authors (Furlow, 1969; Huddleston, 1988; Clarke et al., 1990; Weems and Lewis, 2001). The three (3) layers are lithologically similar and are only differentiated based on stratigraphic position, geophysical characteristics, and limited paleontologic evidence (Clarke et al., 1990).

The lowermost Miocene unit in the Chatham County area was designated as Unit C by Clarke and others (1990). Unit C is correlative to the Parachucla Formation of Huddleston (1988) and the Tampa Limestone equivalent of Furlow (1969). Typically, only the lower portion of Unit C is found in the area, which is generally a sandy, phosphatic dolomite or limestone (Clarke et al., 1990). The middle clay and upper sandy layers have been removed by erosion (Clarke et al., 1990).

The middle Miocene unit has been designated as Miocene Unit B (Miller, 1986, and Clarke et al., 1990). Unit B is correlative to the Hawthorn Formation of Counts and Donsky (1963) and Miller (1986); the Marks Head Formation of Woolsey (1977) and Huddlestun (1988). The Marks Head Formation name has been used for this study after the work of Weems and Edwards (2001). The basal carbonate layer on Unit B typically consists of olive-green dolomite and limestone that contains very fine to coarse quartz sand, shiny brown to black phosphatic sand, and contains some fossils, typically mollusk molds and shark teeth. (Furlow, 1969; Clarke et al., 1990). Distinguishing the basal layer of Unit B from Unit C is difficult because both Unit C and Unit B are lithologically similar, therefore requiring paleontological evidence and/or borehole geophysical logs (Clarke et al., 1990). The two (2) basal units are juxtaposed because the middle and upper clastic layers of Unit C have been eroded away (Clarke et al., 1990). The middle layer of Unit B typically consists of olive-green phosphatic silty clay and clayey silt and grades upward to the upper sandy layer (Furlow, 1969; and Clarke et al., 1990). The upper sandy unit of Unit B typically consists of poorly sorted, very fine to coarse sand and locally a thin very dense dolomite layer (Furlow, 1969; and Clarke et al., 1990). Unit B (Hawthorn Formation) ranges in thickness from 20 to 55 feet thick (Furlow, 1969).

Miocene Unit A overlies Unit B and is included in the Hawthorn Formation of Counts and Donsky (1963) and Miller (1986), and correlates with the Coosawhatchie Formation of Woolsey (1977) and Huddleston (1988). The name Coosawhatchie Formation is adopted for this study based on the work of Weems and Edwards (2001). The Coosawhatchie Formation contains two (2) members. The basal layer, which is the Tybee Phosphorite Member, consists of a sandy phosphatic limestone and dolomite with some fossils (Clarke et al., 1990). In Chatham County, clay is the matrix material surrounding most of the phosphate grains instead of dolomite (Clarke et al., 1990). The sand in the basal unit generally consists of very fine to coarse quartz and brown to black phosphate. The middle clay layer consists of fossiliferous clay and silt laminae and the upper sand unit consists of a very fine to coarse, poorly sorted sand (Clarke et al., 1990). The

upper portion of this unit is equivalent to the Berryville Clay Member. Unit A is about 20 feet thick in the Savannah Area.

Pliocene, Pleistocene, and Holocene Stratigraphy

Sediments of Pliocene age are generally accepted as absent in Chatham County, with Pleistocene sediments unconformably overlying Miocene sediments (Herrick, 1965; Furlow, 1969; and Clarke et al., 1990). Pleistocene sediments typically consist of arkosic sand and gravel with discontinuous clay beds. Basal Pleistocene sediments contain reworked olive-green clay from the underlying Miocene units (Furlow, 1969). Lignitic and fossiliferous clay and micaceous sandy sediment ranging in thickness from 10 to 60 feet are typical of Pleistocene sediments. The Penholoway Formation is the principal surficial Pleistocene deposit in Chatham County (Weems and Edwards, 2001). The Penholoway is one of many remnants of former shoreline complexes through the area, which were the result of numerous transgressions and regressions of the sea, the result of extensive glaciations in North American during the Pleistocene Epoch.

4.1.2 Regional Hydrogeology

Hydrologic units in Chatham County, Georgia include (in descending order), the surficial aquifer system, consisting of the water-table zone, upper confined zone; the Upper Floridan Aquifer; middle confining; the lower Floridan Aquifer; and the lower confining unit (Williams and Gill, 2010).

In the vicinity of the site, the surficial aquifer system is present from land surface to approximately 60 feet below land surface (bls) (Williams and Gill, 2010). For this study, the surficial aquifer is undifferentiated; however, the surficial aquifer is typically informally divided into a water-table zone, an upper confined zone, and a lower confined zone. The confining unit underlying the surficial aquifer system is identified on natural-gamma radiation logs by the A-marker horizon. The bottom of the confining unit is determined by the location of the C-marker horizon, which coincides with the top of the Upper Floridan Aquifer (Clarke et al., 1990).

The principal source for all drinking water uses in the coastal area of Georgia is the Floridan Aquifer system. The Floridan Aquifer system is composed of carbonate rocks of varying permeability (Clarke et al., 1990; Clark et al., 2011). There are several water-bearing zones within the Floridan Aquifer system that are separated by layers of relatively dense limestone and dolostone that act as semi-confining units (Krause and Randolph, 1989; Clarke et al., 1990; Williams and Gill, 2010).

The Chatham County area, the two shallowest water bearing zones of the five that comprise Floridan Aquifer system are part of the upper Floridan Aquifer (McCollum and Counts, 1964; Krause and Randolph, 1989; Clark et al., 1990; Williams and Gill, 2010). The upper Floridan Aquifer is overlain by a confining unit consisting of layers of silty clay and dense phosphatic Oligocene dolomite identified by a distinct response on gamma-ray logs (Clarke et al., 1990). Clarke and others (1990) identified the base of the confining unit as the C-marker horizon. The

C-marker horizon is present near the top of the Suwannee Limestone and is considered to be the top of the upper Floridan Aquifer in the study area (Williams and Gill, 2010). Based on well log information for nearby Meddin Package Co. No. 2 Well (USGS Well ID 36Q038), the top of the upper Floridan Aquifer is encountered at a depth of 215 feet. The D-marker horizon represents the top of the permeable zone of the Upper Floridan Aquifer and is present at the top of the Ocala Limestone at a depth of 309 feet in the study area (Williams and Gill, 2010).

4.1.3 Site Geology

Based on geologic boring logs prepared during the LSI, the general lithology of the soil observed at the site consisted of silty sands and poorly graded sands extending from beneath the pavement to approximate depths ranging from 1 to 3 feet below ground surface (bgs), underlain by clayey sands and sandy clays to total boring depths (approximately 10 to 20 feet bgs). Saturated conditions were generally observed in the clayey sands and sandy clays. Soil boring logs detailing lithologic information are included in Appendix E.

Insufficient soil data is currently available to develop stratigraphic cross-sections for the site. Therefore, stratigraphic cross-sections will be prepared using soil information collected during the installation of monitoring wells for the proposed VRP investigation. The stratigraphic cross-sections will be provided in the first semi-annual progress report.

4.1.4 Site Hydrogeology

Saturated soil conditions were encountered during the advancement of the LSI borings at depths ranging from approximately 5 to 8.5 feet bgs. Saturated conditions were generally observed in the clayey sands and sandy clays. A zone of perched groundwater was observed at approximately 2 feet bgs in boring TW-7 located adjacent to the northeast corner of the septic drain field. Static water level measurements collected from the boreholes ranged from 4.3 to 7.2 feet bgs.

Insufficient groundwater data is currently available to develop a potentiometric surface map and determine the shallow groundwater flow direction for the site. Groundwater elevation data collected during the proposed VRP investigation will be used to create a potentiometric surface map; determine the groundwater flow direction and hydraulic gradient; and calculate the groundwater flow velocity. In addition, slug tests will be performed for select wells to determine a representative hydraulic conductivity for the site. This hydrogeologic information will be provided in the first semi-annual progress report.

4.2 Contaminants of Concern

Total and dissolved arsenic has been detected in the shallow groundwater within the vicinity of the oil/water separator (TW-3) at concentrations exceeding Type 1 RRS.

Total chromium and lead were detected at concentrations exceeding Type 1 RRS in certain groundwater samples with elevated turbidity levels. However, dissolved chromium and lead were not detected above laboratory reporting limits in filtered samples collected from the same sample locations. Therefore, chromium and lead are not considered to be contaminants of concern (COCs) at this time.

PCE was detected at a concentration exceeding Type 1 RRS in the shallow groundwater collected from a temporary well adjacent to the bus maintenance garage (TW-4). To confirm the exceedance of PCE, a permanent monitoring well (MW-2) was installed adjacent to TW-4. PCE was detected at a concentration below the Type 1 RRS in the groundwater sample collected from the permanent well. Therefore, PCE is not considered to be a COC at this time.

No regulated constituents have been detected above Type 1 RRS in the soil at the site.

4.3 Potential Environmental Receptors

4.3.1 Human Receptors

The site is zoned heavy industrial and developed with a bus maintenance facility and parking lot. Based on the current use of the site, on-site residents are not considered potential human receptors.

The facility is enclosed by a chain link fence capped with three strands of barbed wire. The fence gate is open during business hours and is closed and secured when the facility is unoccupied. The facility also maintains security cameras throughout the site. Based on the current restricted access, trespassers are not considered potential human receptors.

The adjoining properties to the north and south are zoned heavy industrial and consist of undeveloped wooded and wetland areas. The site is bounded to the west by Interstate 516 followed by industrial facilities. The adjoining property to the east is zoned heavy industrial and is occupied by the City of Savannah Buildings and Grounds Maintenance Department. The closest residential structures are located approximately 1,800 feet to the southeast of the site. Based on the surrounding land use and distance from residential structures, off-site residents are not considered potential human receptors.

Based on the current use of the site and adjoining properties, the potential exposure pathways were evaluated for the following potential human receptors:

- Current and future on-site industrial/construction workers
- Current and future off-site industrial/construction workers

4.3.2 Ecological Receptors

The site is developed with a bus maintenance facility and parking lot and does not provide a suitable habitat for plants or animals. In the absence of natural habitats, vegetation, and surface water, as well as the significant amount of anthropogenic disturbance, biologically significant populations of wildlife receptors are not likely to be present at the site.

Wooded and wetland areas to the north and south of the site may provide suitable ecological habitat. However, there is no complete exposure pathway for arsenic in shallow groundwater to impact off-site ecological receptors. Potential exposure to off-site ecological receptors will be revaluated based on the data collected during the proposed VRP investigation.

4.4 Potential Exposure Pathways

An evaluation of potential exposure pathways was conducted for the site. The exposure pathways evaluated include drinking water, soil, groundwater, vapor intrusion, and sediment and/or surface water from impacted soil and groundwater.

4.4.1 Drinking Water

The site and surrounding properties receive water from the Main System of the City of Savannah Water Supply and Treatment Department. According to the City of Savannah's 2016 Water Quality Report (most recently published report available), the drinking water for the Main System is drawn from twenty-two (22) wells installed within the Floridan Aquifer at depths between 414 and 1,006 feet deep.

According to information from the USGS National Water Information System (NWIS) database, eight (8) water wells exist within a 1-mile radius of the site (see Figure 4 in Appendix C). Based on the data provided by the NWIS database, the off-site wells indicated on Figure 4 are cased to withdraw from the Floridan Aquifer system, specifically the upper Floridan Aquifer.

Arsenic is present within the surficial aquifer at the site. As stated previously, the Floridan Aquifer system in the Savannah, Chatham County area is hydraulically separated from the surficial aquifer system by a series confining units. Therefore, contamination within the surficial aquifer at the site is unlikely to impact off-site water wells producing from the Floridan Aquifer. Based on

this information, the drinking water pathway is considered incomplete for arsenic in shallow groundwater at the site.

4.4.2 Soil Ingestion, Inhalation, or Direct Contact

The soil exposure pathway is not complete, as COCs have not been identified in the soil at this time. The proposed VRP investigation will include additional soil sampling to determine if COCs exist in the on-site vadose zone soils. If COCs are identified in the vadose zone soils, the potential soil exposure pathway will be reevaluated in the first semi-annual progress report.

4.4.3 Groundwater Ingestion, Inhalation, or Direct Contact

The groundwater exposure pathway for ingestion, inhalation, or direct contact by on-site and off-site construction workers during future excavation activities is potentially complete. Arsenic has been detected above Type 1 RRS in the shallow groundwater adjacent to the oil-water separator at the site. The arsenic exceedance is in close proximity to the western boundary of the site. Therefore, it is possible that arsenic groundwater impacts extend off-site. The proposed VRP investigation will include the installation of additional monitoring wells to delineate arsenic impacts and determine if other COCs are present in the groundwater at the site. The data collected by the proposed VRP investigation will be used to further evaluate the potential groundwater exposure pathway.

4.4.4 Vapor Intrusion

The vapor intrusion exposure pathway is not complete, as no volatile or semi-volatile COCs have been identified in the soil or groundwater at the site. If volatile and/or semi-volatile COCs are identified in the subsurface during the proposed VRP investigation, the potential vapor intrusion exposure pathway will be reevaluated in the first semi-annual progress report.

possible that arsenic groundwater impacts extend off-site. The proposed VRP investigation will include the installation of additional monitoring wells to delineate arsenic impacts and determine if other COCs are present in the groundwater at the site. The data collected by the proposed VRP investigation will be used to further evaluate the potential groundwater exposure pathway.

4.4.5 Surface Water / Sediment

No surface water bodies are present at the site. On-site surface water consists of overland flow during precipitation events. No storm drains or ditches were noted on site. Based on the absence of surface water bodies and drainage features, surface water and sediment are not considered complete exposure pathways at this time.

4.5 Fate and Transport Modeling

Following the identification and horizontal delineation of the COCs in the soil and groundwater, fate and transport modeling will be conducted, if required, to substantiate the use of Type 5 RRS.

4.6 Cleanup Standards

Soil and groundwater contamination will be subject to Type 5 RRS. The Type 5 RRS allows contamination to remain in place, provided the principal exposure pathways at the site are mitigated by engineering and institutional controls. These controls could include, but are not limited to, a uniform environmental covenant governing site activity and use limitations (AULs), restricted access, and 24-hour security measures.

5.0 VRP INVESTIGATION PLAN

5.1 Soil Investigation

The soil investigation will include the completion of three (3) soil borings to the north, west, and south of existing monitoring well MW-1. The proposed boring locations are depicted on Figure 5 in Appendix C.

Each soil boring will be initially advanced with a stainless steel hand auger to a depth of 5 feet bgs in order to verify underground utility clearance. Once cleared, the borings will be advanced using direct push methods to a not to exceed depth of 20 feet bgs. Soil samples will be continuously collected to total boring depth to screen for organic vapors with a PID as well as document soil lithology and saturated zone depths. Terracon will use this information to prepare stratigraphic cross-sections of the area of concern and further develop the CSM.

One (1) surface soil sample (≤ 2 feet below grade) and one (1) subsurface soil sample will be collected from each boring for laboratory analysis. The subsurface soil sample will be collected from the interval exhibiting the highest PID reading. If no elevated PID reading is observed within the boring; the sample will be collected from the interval of most likely environmental impact above the saturated zone as determined in the field by the sampling professional.

The soil samples selected for analysis will be placed in laboratory prepared containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The samples and completed chain-of-custody forms will be transported to an independent Georgia-certified laboratory for analysis of the following parameters:

- VOCs by USEPA Method 8260

- Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270
- RCRA Metals by USEPA Methods 6010 and 7471

The soil analytical data will be evaluated to determine the COCs for the site. If soil COCs are identified, Terracon will continue investigation activities as practical until COCs are delineated to Type 1 RRS. For metals detected in soils, delineation will continue if necessary until concentrations are below background concentrations as reported for Georgia undisturbed native soil samples as reported in the U.S.G.S. Open File Report 8 1-197 (Boerngen and Shacklette, 1981) or such later version as may be adopted by rule or regulation of the board pursuant to O.C.G.A. § 12-8-108.1(d).

5.2 Groundwater Investigation

5.2.1 Groundwater Sampling

Following the completion of soil sampling activities, the three (3) soil borings will be converted to permanent monitoring wells. The wells will be completed in general accordance with procedures described in the US EPA Region 4, Science and Ecosystem Support Division guidance document titled Design and Installation of Monitoring Wells (SESDGUID-101-R1, effective date January 29, 2013). The proposed monitoring well locations are depicted on Figure 5 in Appendix C.

Hollow stem auger drilling methods will be used to install the wells. The monitoring wells will be constructed with 2-inch diameter, Schedule 40 PVC risers and 0.010-inch slotted screens. Sand pack will be installed around the well screen from the bottom of the boring to approximately one (1) to two (2) feet above the top of the screen. Hydrated bentonite pellets will be placed above the sand pack to approximately six (6) inches below the ground surface. The wells will be completed at the surface with concrete pads and metal covers.

Upon the completion of installation activities, the monitoring wells will be developed by surging and removing groundwater with a whale pump (or equivalent) until fluids appear relatively free of sediment. Following the completion of development activities, the monitoring wells will be purged and sampled in general accordance with the low-flow sampling protocol EPA Region 4, SESD Groundwater Sampling Operating Procedure (SESDPROC-301-R3), March 2013.

Following the stabilization of field parameters, groundwater samples will be collected and placed in laboratory prepared containers, labeled, and placed on ice in coolers secured with custody seals. The groundwater samples and completed chain-of-custody forms will be transported to an independent Georgia-certified laboratory and analyzed for the following parameters:

- VOCs by USEPA Method 8260
- SVOCs by USEPA Method 8270

- RCRA Metals by USEPA Methods 6010 and 7471

Groundwater elevation data collected during the investigation will be used to create a potentiometric surface map; determine the groundwater flow direction and hydraulic gradient; and calculate the groundwater flow velocity. This information will be presented in the first semi-annual progress report.

The groundwater analytical data will be compared to Type 1 RRS to determine the regulated COCs for the site. Terracon will continue groundwater investigation activities as practical until regulated COCs are delineated to Type 1 RRS.

5.2.2 Hydraulic Conductivity

Hydraulic conductivity, or the coefficient of permeability, describes the ease with which a fluid moves through the pore spaces or fractures in the subsurface. Terracon will determine a representative site hydraulic conductivity pursuant to the further development of the conceptual site model.

A representative hydraulic conductivity value will be determined by conducting rising head slug tests within various monitoring wells throughout the site. Rising head slug tests are conducted by quickly removing a known volume of water (the slug) from a monitoring well and measuring the rate at which groundwater returns to static conditions. In order to collect accurate data, a transducer with an on-board data logger will be used to collect depth to water and hydrostatic pressure data over time.

Upon completion of the slug tests, time and depth to water data will be imported into the AQTESOLV™ aquifer software for analysis. Additional information input to the software will include the monitoring well diameter, the borehole diameter, the total depth of the monitoring well, the static water column height, the initial displacement, and an assumed gravel pack porosity. It is presumed that the Bouwer and Rice method for determining the hydraulic conductivity in an unconfined aquifer will be used.

6.0 REMEDIATION PLAN

6.1 Groundwater Monitoring

Upon completion of horizontal and vertical delineation of regulated COCs in groundwater, a semi-annual groundwater monitoring program will be implemented for the site. Groundwater monitoring will be conducted on a semi-annual basis for a period of three (3) years to demonstrate attenuation and/or stabilization of regulated COCs and to confirm the results of the groundwater fate and transport model. The monitoring program will be terminated by the end of the three (3) year period

if regulated COC concentrations are below Type 5 RRS; have stabilized and/or decreased over time; and are consistent with values predicted by the groundwater fate and transport model.

6.2 Institutional Controls

Soil and groundwater contamination will be subject to Type 5 RRS. The Type 5 RRS allows contamination to remain in place, provided the principal threats at the site are mitigated by engineering and institutional controls. An environmental covenant will likely be executed on the site in conformance with O.C.G.A. § 44-61-1, et seq., the "Georgia Uniform Environmental Covenants Act." This covenant will require that the site land use remain industrial and no drinking water well will be installed on-site. Other controls could include, but are not limited to, restricted access and 24-hour security measures.

7.0 MILESTONE SCHEDULE

The schedule for the implementation of the Voluntary Investigation and Remediation Plan is presented in Appendix F. Progress reports will be submitted to the Georgia EPD on a semi-annual basis during the implementation period until the final VRP compliance status report (CSR) is submitted. A discussion of the VRP milestones is below:

- **Identification of Regulated COCs in Soil and Groundwater** – Identification of the applicable COCs will occur immediately following VRP enrollment. It is likely that this information will be acquired within 6 months after VRP enrollment and presented in Semi-Annual Progress Report No. 1.
- **Source Zone Soil Profiling and Slug Testing** – Source zone soil profiling and slug testing activities will be conducted in conjunction with identification of the applicable COCs. This information will be developed within 6 months after VRP enrollment and presented in Semi-Annual Progress Report No. 1.
- **On-site Horizontal/Vertical Delineation of Soil and Groundwater Impacts** – The results of on-site soil and groundwater delineation will be completed within the 12 month period specified under the VRP. The results of the delineation effort will be presented in Semi-Annual Progress Report No. 2.
- **Off-site Horizontal/Vertical Delineation of Soil and Groundwater Impacts** – The results of off-site soil and groundwater delineation will be completed within the 24 month period specified under the VRP. The results of the delineation effort will be presented in Semi-Annual Progress Report No. 4.
- **Updated CSM Submittal with Final Remediation Plan** – An updated CSM and final remediation plan will be submitted as part of Semi-Annual Progress Report No. 5 within

30 months following VRP enrollment. A Uniform Environmental Covenant will be prepared and executed in conjunction with this submittal.

- **VRP Compliance Status Report** – A VRP CSR certifying compliance with applicable rules and regulations will be submitted within 60 months following VRP enrollment.

8.0 REFERENCES

- Chowns, T.M., and Williams, C.T., 1983, Pre-Cretaceous rocks beneath the Georgia Coastal Plain- Regional Implications: *in* Gohn, G.S., *ed.,* Studies related to the Charleston, South Carolina Earthquake of 1886-tectonics and seismicity: U.S. Geologic Survey Professional Paper, p. L1- L42
- Clarke, J.S., Hacke, C.M., and Peck, M.F., 1990, Geology and Ground-Water Resources of the Coastal Area of Georgia: Georgia Geologic Survey Bulletin 113, 106 pages.
- Clarke, J.S., Cherry, G.C., and Gonthier, G.J., 2011, Hydrogeology and water quality of the Floridan aquifer system and effects of Lower Floridan aquifer pumping on the Upper Floridan aquifer at Fort Stewart, Georgia: U.S. Geological Survey Scientific Investigations Report 2011–5065, p. 59
- Clarke, W.Z., and Zisa, A.C., 1976, *Physiographic Map of Georgia*: Georgia Department of Natural Resources, 1 plate.
- Counts, H.B., and Donsky, E., 1963, Salt-water encroachment, geology, and ground-water resources of the Savannah area, Georgia and South Carolina: U.S. Geological Survey Water Supply Paper 1611, 100 pages, 6 plates, 9 figures.
- Furlow, J.W., 1969, Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit: Georgia Department of Natural Resources, Division of Mines, Mining, and Geology Bulletin 82, 40 pages.
- Georgia Department of Natural Resources (GDNR), 1976, Geologic Map of Georgia, Atlanta, Georgia.
- Herrick, S.M., 1961, Well Logs of the Coastal Plain of Georgia: Georgia Geologic Survey Bulletin 70, 426 p.
- Herrick, S.M., 1965, A subsurface study of Pleistocene deposits in coastal Georgia: Georgia Dept. of Natural Resources, Division of Mines, Mining, and Geology Information Circular 31, 8 p.
- Herrick, S.M., and Vorhes, R.C., 1963, Subsurface Geology of the Georgia Coastal Plain, Georgia: State Division Conservation, Department of Mines, Mining and Geology, Geological Survey Information Circular 25, 79 p.

- Huddlestun, P.F., 1988, A revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, the Miocene through Holocene: Georgia Geologic Survey Bull 104, 162 p.
- Krause, R.E., and Randolph, R.B., 1989, Hydrology of the Floridian Aquifer System in Southeast Georgia and Adjacent Parts of Florida and South Carolina: U.S. Geologic Survey Professional Paper 1403-D, 65 pages.
- Miller, J. A., 1986, Hydrogeologic framework of the Floridan aquifer system in Florida and parts of Georgia, Alabama, and South Carolina: U.S. Geological Survey Professional Paper 1403-B, 91 pages.
- United States Geologic Survey (USGS), 2017, National Water Information System: Mapper.
- Weems, R.E., and Edwards, L.E., 2001, Geology of Oligocene, Miocene, and Younger Deposits in the Coastal Area of Georgia: Georgia Geologic Survey Bulletin 131, 124 p.
- Williams, L.J., and Gill, H.E., 2010, Revised hydrogeologic framework of the Floridan aquifer system in the northern coastal area of Georgia and adjacent parts of South Carolina: U.S. Geological Survey Scientific Investigations Report 2010–5158, 103 p., 3 plates.

APPENDIX A

VOLUNTARY REMEDIATION PROGRAM APPLICATION AND CHECKLIST

Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	Savannah Chatham County Public School System Board of Education				
CONTACT PERSON/TITLE	Mark W. Pickering, PE / Project Engineer / Facilities & Construction				
ADDRESS	208 Bull Street, Room 305, Savannah, GA 31401				
PHONE	(912) 395-3001	FAX		E-MAIL	mark.pickering@sccpss.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	Justin J. Johnson			GA PE/PG NUMBER	PG No. 2196
COMPANY	Terracon Consultants, Inc.				
ADDRESS	2201 Rowland Avenue, Savannah, GA 31404				
PHONE	(912) 662-8481	FAX	(912) 629-4001	E-MAIL	justin.johnson2@terracon.com

APPLICANT'S CERTIFICATION

In order to be considered a qualifying property for the VRP:

(1) The property must have a release of regulated substances into the environment;
(2) The property shall not be:
- (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
- (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
- (C) A facility required to have a permit under Code Section 12-8-66.

(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:
- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE	Michael Coon		
APPLICANT'S NAME/TITLE (PRINT)	Michael Coon Sr Director	DATE	7-24-17

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)			
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)			
HSI Number	N/A	Date HSI Site listed	N/A
HSI Facility Name	N/A	NAICS CODE	N/A
PROPERTY INFORMATION			
TAX PARCEL ID	2-0597-01-003	PROPERTY SIZE (ACRES)	6
PROPERTY ADDRESS	10 Interchange Court		
CITY	Savannah	COUNTY	Chatham
STATE	Georgia	ZIPCODE	31415
LATITUDE (decimal format)	32.075787	LONGITUDE (decimal format)	-81.132296
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	Board of Education	PHONE #	(912) 395-3001
MAILING ADDRESS	208 Bull Street, Room 305		
CITY	Savannah	STATE/ZIPCODE	Georgia / 31401-3901

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)
1.	**$5,000 APPLICATION FEE** IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES. (PLEASE LIST CHECK DATE AND CHECK NUMBER IN COLUMN TITLED "LOCATION IN VRP." PLEASE DO NOT INCLUDE A SCANNED COPY OF CHECK IN ELECTRONIC COPY OF APPLICATION.)	**Attached: Check No.:102317 Date: 7/10/2017**	
2.	**WARRANTY DEED(S)** FOR QUALIFYING PROPERTY.	**Appendix B**	
3.	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	**Appendix C Figure 2**	
4.	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	**Included with submittal.**	
5.	The VRP participant's initial plan and application must include, using all reasonably available current information to the extent known at the time of application, a graphic three-dimensional preliminary conceptual site model (CSM) including a preliminary remediation plan with a table of delineation standards, brief supporting text, charts, and figures (no more than 10 pages, total) that illustrates the site's surface and subsurface setting, the known or suspected source(s) of contamination, how contamination might move within the environment, the potential human health and ecological receptors, and the complete or incomplete exposure pathways that may exist at the site; the preliminary CSM must be updated as the investigation and remediation progresses and an up-to-date CSM must be included in each semi-annual status report submitted to the director by the participant; a **PROJECTED MILESTONE SCHEDULE** for investigation and remediation of the site, and after enrollment as a participant, must update the schedule in each semi-annual status report to the director describing implementation of the plan	**Sections 4 & 7 Appendices C - F**	

	during the preceding period. A Gantt chart format is preferred for the milestone schedule. The following four (4) generic milestones are required in all initial plans with the results reported in the participant's next applicable semi-annual reports to the director. The director may extend the time for or waive these or other milestones in the participant's plan where the director determines, based on a showing by the participant, that a longer time period is reasonably necessary:		
5.a.	Within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment;	**Section 7 Appendix F**	
5.b.	Within the first 24 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern extending onto property for which access was not available at the time of enrollment;	**Section 7 Appendix F**	
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	**Section 7 Appendix F**	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	**Section 7 Appendix F**	
6.	**SIGNED AND SEALED PE/PG CERTIFICATION** AND SUPPORTING DOCUMENTATION: "I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances. Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." Justin J. Johnson, PG#2196 Printed Name and GA PE/PG Number Signature and Stamp 7-24-2014 Date JUSTIN J. JOHNSON GEORGIA REGISTERED PROFESSIONAL GEOLOGIST No. 2196	**Enclosed**	

APPENDIX B

TAX PLAT AND WARRANTY DEED

2017 Chatham County Board of Assessors

Property Record Card

2-0597-01-003

10 INTERCHANGE CT SAVANNAH

APPRAISER	ALCUMMIN
LAST INSP	12/29/2015
APPR ZONE	000009

TCT 1 PH 1 INTERCHANGE COMMERCE PK

BOARD OF EDUCATION
208 BULL ST
SAVANNAH GA 31401-3901

CAMA	ASMT		
888,000	888,000	LAND	1
742,800	742,800	BLDG	4
93,700	93,700	OBXF	4
1,724,500	1,724,500	Cost - MS	

SALES	BOOK / PAGE	INS	VI	QU	RSN	PRICE
15 Jul 1993	161C 0262	WD	I	U	UG	500,000
GRANTOR:WASTE MGT. OF GEORGIA INC						
GRANTEE:BOARD OF PUBLIC EDUCATION						
23 Jun 1992	154U 0043	WD	I	Q		451,000
GRANTOR:E. C. & LAURA WIDEMAN						
GRANTEE:WASTE MANAGEMENT OF GEORG						
26 May 1989	142E 0674	NA	V	U	UR	
GRANTOR:E. C. WIDEMAN III						
GRANTEE:E. C. & LAURA WIDEMAN						
17 Apr 1989	141U 0466	NA	V	U	UR	
GRANTOR:E. C. & JEANNE WIDEMAN						
GRANTEE:E. C. WIDEMAN III						
05 Aug 1976	107D 0408	NA	V	U	UR	
GRANTOR:E. C. WIDEMAN III, Agent						
GRANTEE:E. C. & JEANNE WIDEMAN						
23 Mar 1976	106M 0512	WD	V	Q		30,000
GRANTOR:SETON, INC.						
GRANTEE:E. C. WIDEMAN III, Agent						
27 Dec 1973	103E 0865	WD	V	U	UN	
GRANTOR:						
GRANTEE:SETON, INC.						

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CODES		
PROPERTY USE	0002	COMMERCIAL
UTA	0002	Savannah
NBHD	009800.00	I800 TELFAIR RD/LOUI
EXEMPTIONS	E1	
COMMCATEG	528	Service Repair Garage

HISTORY	LAND	IMPR	TOTAL	
2016	897,000	871,800	1,768,800	Cama
2015	897,000	892,400	1,789,400	Cama
2014	897,000	927,800	1,824,800	Cama
2013	897,000	985,900	1,882,900	Cama
2012	897,000	952,900	1,849,900	Cama
2011	690,000	802,500	1,492,500	MAV
2010	690,000	802,500	1,492,500	MAV
2009	690,000	802,500	1,492,500	Over
2008	690,000	802,500	1,492,500	Cama
2007	1,142,500	325,500	1,468,000	Cama
2006	120,000	323,500	443,500	Cama
2005	120,000	323,500	443,500	Cama
2004	120,000	361,500	481,500	Cama
2003	120,000	361,500	481,500	Cama
2002	120,000	361,500	481,500	Cama
2001	120,000	415,000	535,000	Cama
2000	120,000	415,000	535,000	Cama
1999	120,000	415,000	535,000	Cama
1998	120,000	427,000	547,000	Cama
1997	120,000	432,500	552,500	Cama
1996	120,000	448,540	568,540	Cama
1995	120,000	449,860	569,860	Cama
1994	120,000	446,360	566,360	Cama
1993	120,000	321,970	441,970	Over
1992	120,000	321,970	441,970	Over

PERMITS	TYPE	DATE		AMOUNT
1604293	DM	21 Sep 2016	Comp	25,000
16-04628-BC	RN	21 Sep 2016	Comp	NaN
10-3940B	CM	01 Jan 2011	Comp	78,715
17134	CM	01 Jan 1978	Comp	

COMMENTS:

05 Sep 2006	1977 Split out of 1-597-1-2. 1987 Annexation; PIN changed from 1-597-1-3 to 2-597-1-3. 1994 Exempt.

EXTRA FEATURES

ID#	BLDG #	SYSTEM DESC	DIM 1	DIM 2	UNITS	QL	UNIT PRICE	RCN	AYB	EYB	DT	ECON	FUNC	SP	SP%	RCNLD	MKT VALUE
113235	70683	EXCESS IND OFF AVG *EXCESS OFFICE SPACE*	0	0	3656.00	3	35.26	128,911	1996	1996	40					90,238	81,200

113236	6'CL FENCE 3 BARB W	0	0	2144.00	3	14.50	31,088	1996	1996	20			6,528	5,900
113237	6'CL GATE PER L.F.	0	0	30.00	3	36.25	1,088	1996	1996	20			228	200
113238	ASPHALT PAVE TO 500	0	0	23140.00	3	1.46	33,784	1996	1996	20			7,095	6,400

LAND

ID#	USE DESC	FRONT	DEPTH	UNITS / TYPE	PRICE	ZONING	LCTN	TOPO	OTHER	ADJ1	ADJ2	ADJ3	ADJ4	MKT VALUE
89964	General Commercial 1	0	0	6.00-AC	80000.00	I-L				CN85				888000

2017 Chatham County Board of Assessors

Property Record Card

2-0597-01-003

10 INTERCHANGE CT SAVANNAH

BUILDING SECTION 70682-1-2017	CONSTRUCTION TYPE	RCN	AYB	EYB	DEP TYPE	PHYS	ECON	FUNC	OBSV / %	TOTAL DEP %	RCNLD	U.FACTOR	MKT VAL
	Commercial	767,973	1976	1996	MS	53.00	0.00	0.00	0.00	53.00	360,947	1.00	360,947

[Click for larger picture]

Service Garage. One story steel joist & metal siding; 640 square feet of interior office; reinforced concrete slab. http://www.firststudentinc.com/

AREA	15280
STORIES	1.0
PERIMETER / SHAPE	702

OCCUPANCIES		AREA	%	CLASS	HEIGHT	QUAL
528	Service Repair Garage	640	4.19	S	16.00	2.00
528	Service Repair Garage	14640	95.81	S	16.00	2.00

COMPONENTS			Units	%	QUAL
C2	606	Space Heater		100.00	
C4	682	Dry Sprinklers		100.00	
C1	888	Stud -Metal Siding		100.00	

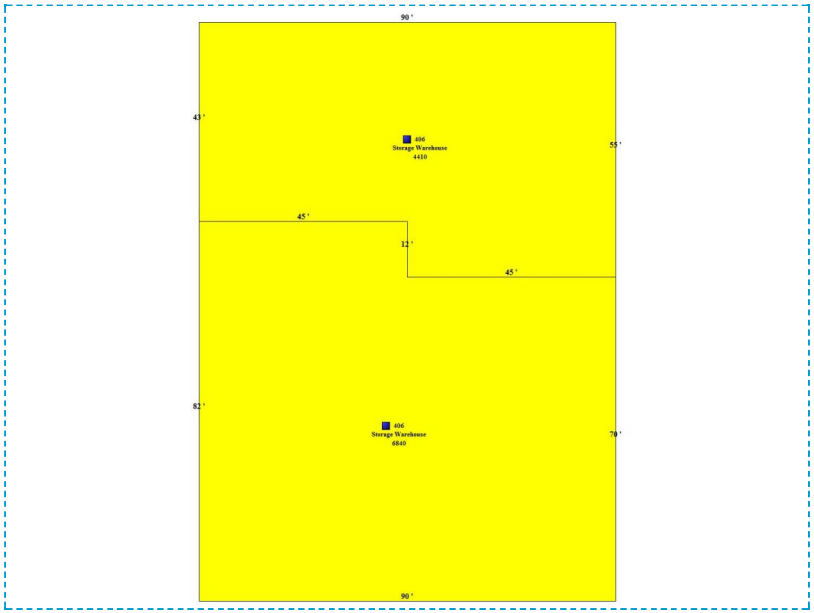
2017 Chatham County Board of Assessors

Property Record Card

2-0597-01-003

10 INTERCHANGE CT SAVANNAH

BUILDING SECTION 70683-1-2017	CONSTRUCTION TYPE	RCN	AYB	EYB	DEP TYPE	PHYS	ECON	FUNC	OBSV / %	TOTAL DEP %	RCNLD	U.FACTOR	MKT VAL
	Commercial	482,739	1977	1996	MS	30.00	0.00	0.00	0.00	30.00	337,917	1.00	337,917



[Click for larger picture]

Parts Warehouse. One story steel joist & metal siding; 6,840 square feet of interior office; 4,410 square feet of storage area. http://www.firststudentinc.com/

AREA	11250
STORIES	1.0
PERIMETER / SHAPE	634

OCCUPANCIES		AREA	%	CLASS	HEIGHT	QUAL
406	Storage Warehouse	6840	60.80	S	10.00	2.00
406	Storage Warehouse	4410	39.20	S	10.00	2.00

COMPONENTS			Units	%	QUAL
C2	611	Package Unit		100.00	
C4	682	Dry Sprinklers		100.00	
C1	888	Stud -Metal Siding		100.00	

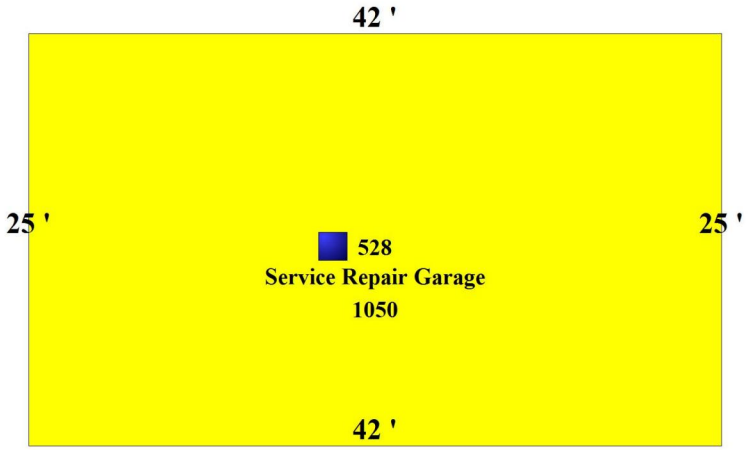
2017 Chatham County Board of Assessors

Property Record Card

2-0597-01-003

10 INTERCHANGE CT SAVANNAH

BUILDING SECTION 70684-1-2017	CONSTRUCTION TYPE	RCN	AYB	EYB	DEP TYPE	PHYS	ECON	FUNC	OBSV / %	TOTAL DEP %	RCNLD	U.FACTOR	MKT VAL
	Commercial	72,052	1977	1996	MS	39.00	0.00	0.00	0.00	39.00	43,952	1.00	43,952



[Click for larger picture]

AREA	1050
STORIES	1.0
PERIMETER / SHAPE	134

OCCUPANCIES	AREA	%	CLASS	HEIGHT	QUAL
528 Service Repair Garage	1050	100.00	C	16.00	2.00

COMPONENTS			Units	%	QUAL
C1	812	Concrete Block		100.00	

Paint Shop. One story steel joist & metal siding. http://www.firststudentinc.com/

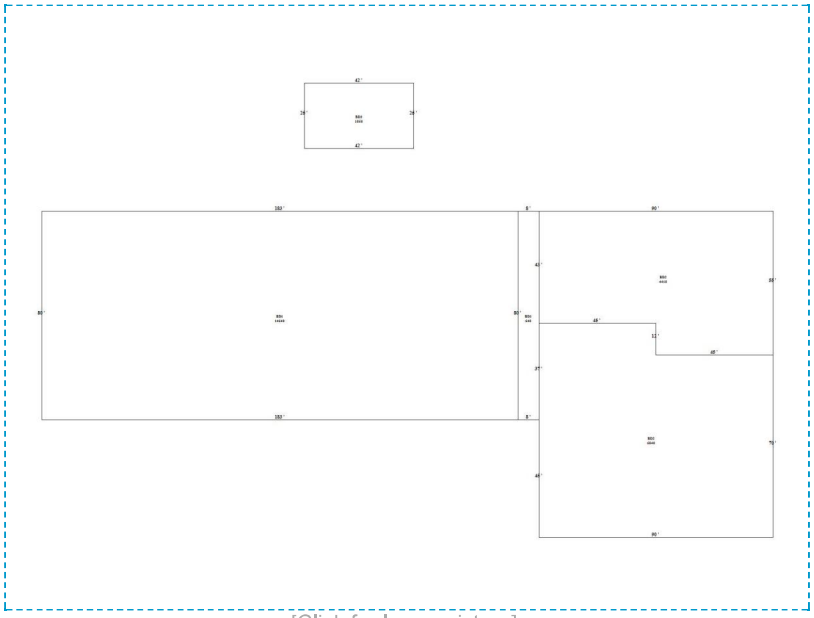
2017 Chatham County Board of Assessors

Property Record Card

2-0597-01-003

10 INTERCHANGE CT SAVANNAH

BUILDING SECTION 70685-1-2017	CONSTRUCTION TYPE	RCN	AYB	EYB	DEP TYPE	PHYS	ECON	FUNC	OBSV / %	TOTAL DEP %	RCNLD	U.FACTOR	MKT VAL
	Drawing Only	NaN			MS		0.00	0.00	0.00		NaN		NaN



[Click for larger picture]

COMPONENTS	Units	%	QUAL

"DRAW" Screen #4 - "Plot Plan". BD1 represents Building #1. BD2 represents Building #2. BD3 represents Building #3. http://www.firststudentinc.com/

RECEIVED FOR RECORD

93 JUL 15 PM 4:48

DORIS S STEPHENS
CLERK, S.C.C.C.GA.

STATE OF GEORGIA)
)
COUNTY OF CHATHAM)

WARRANTY DEED

262 THIS INDENTURE, made this 15th day of July, 1993, between WASTE MANAGEMENT OF GEORGIA, INC., of the first part, and THE BOARD OF PUBLIC EDUCATION FOR THE CITY OF SAVANNAH AND COUNTY OF CHATHAM, of the second part,

W I T N E S S E T H:

First party, for and in consideration of the sum of TEN DOLLARS ($10.00) and other valuable considerations, receipt whereof is hereby acknowledged, does hereby grant, bargain, sell and convey unto second party, its successors and assigns, the following described property, to-wit:

ALL that certain lot, tract or parcel of land situate, lying and being in the City of Savannah, Chatham County, Georgia, known and designated as Tract No. 1, Interchange Commerce Park, Phase I, as shown upon the map or plan of said Subdivision, recorded in the Office of the Clerk of the Superior Court of Chatham County, Georgia, in Subdivision Map Book L, page 57, said parcel being more particularly described as follows: For the point of beginning, commence at the point of intersection of the southern right-of-way line of Gwinnett Street Extension and the western right-of-way line of Interchange Drive; from said point of commencing, run thence along said western right-of-way line of Interchange Drive South 17°29' West a distance of 488.26 feet to a point; thence run North 71°42' West a distance of 579.96 feet to a rebar, which is the point of beginning; from said point of beginning, thence run South 17°29' West a distance of 687.71 feet to a point marked by a PK nail; thence run North 71°42' West a distance of 380.04 feet to a point marked by a concrete monument and located on the eastern right-of-way line of Lynes Parkway (Interstate Highway No. 516); thence run along said right-of-way line North 17°29' East a distance of 687.71 feet to a point marked by a concrete monument; thence run South 71°42' East a distance of 380.04 feet to the point of beginning. Said parcel is bounded as follows: North by lands now or formerly of the Seaboard Coast Line Railroad; East by lands of Seton, Inc., reserved for future development; South by lands of Seton, Inc., reserved for future development; and West by Lynes Parkway (Interstate Highway No. 516).

Said tract is shown upon that certain Plat of Survey prepared for The Board of Public Education for the City of Savannah and County of Chatham by J. Whitley Reynolds, G.R.L.S. No. 2249, dated May 1, 1992, and updated on June 11, 1993, and recorded in the Office of the Clerk of the Superior Court of Chatham County, Georgia, in Plat Record Book 12 P, page 163, reference to which is made for all purposes hereof.

TO HAVE AND TO HOLD said property, together with all and singular the rights, members, hereditaments, improvements, easements, and appurtenances thereunto belonging or in any wise

Filed For Record At 4:48 O'Clock P M. On The 15 Day Of July, 1993
Recorded In Record Book 161-C Folio 262
On The 15 Day Of July, 1993
Clerk Superior Court

Real $ 500.00 7-15-93
Paid $ Margaret Carpenter
For Clerk of Sup. Court
Chatham County Georgia

3947094001 07/15/93TRANSFER 500.00

3947094001 07/15/93TOTAL 7.00

appertaining unto second party, its successors and assigns, FOREVER IN FEE SIMPLE with full WARRANTY OF TITLE to said property against the claims of all persons whomsoever.

IN WITNESS WHEREOF, first party has caused these presents to be executed in its corporate name by its duly authorized officers, under seal, the day and year first above written.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

Lee D. Cowart

Notary Public

NOTARY PUBLIC GWINNETT COUNTY, GA
Notary Public, Gwinnett County, Georgia
My Commission Expires May 17, 1996

WASTE MANAGEMENT OF GEORGIA, INC.

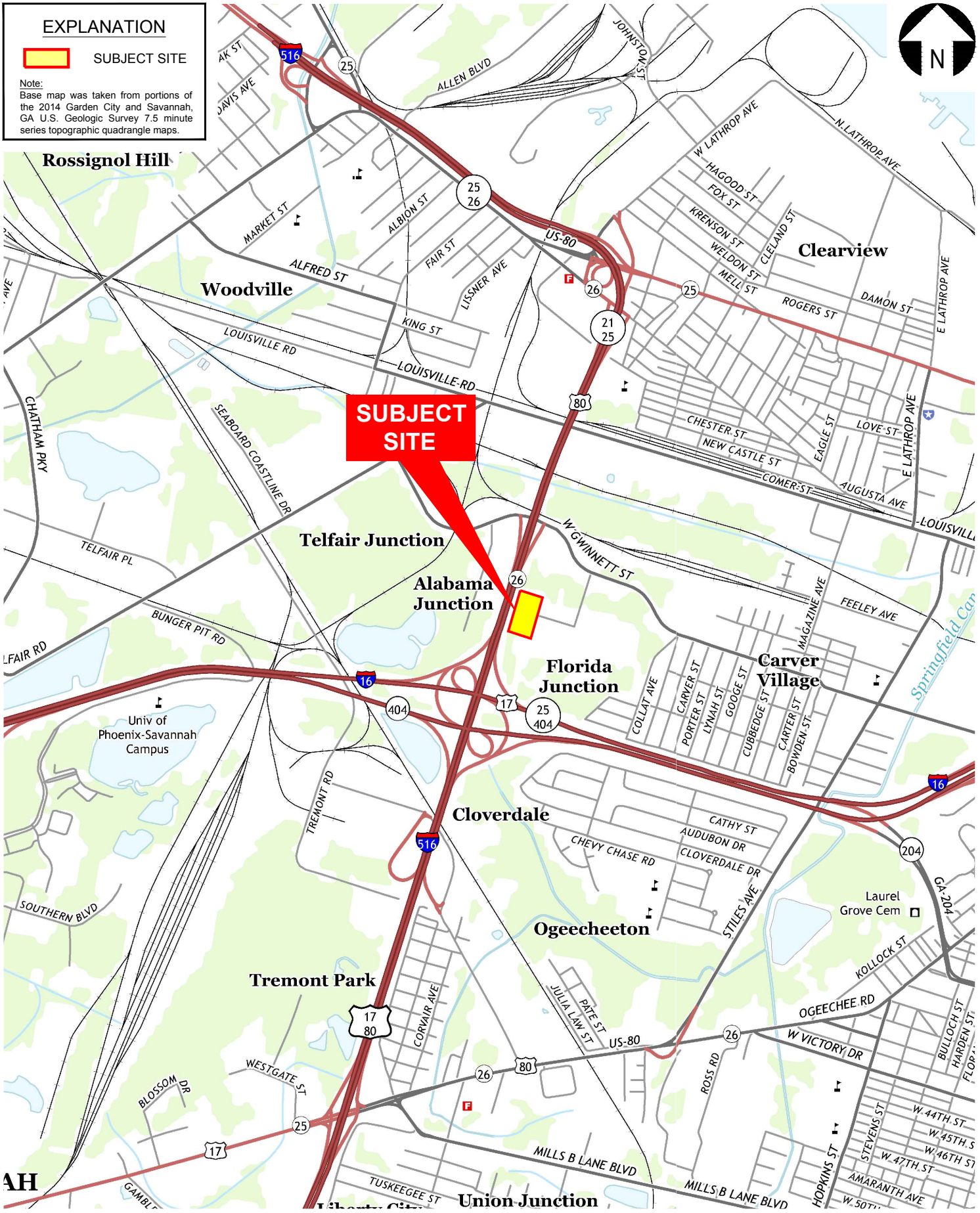
By: Harold Imhoff
Title: Vice President

Attest:
Title: Vice Pres.

[Corporate Seal]

APPENDIX C

FIGURES



0 1,000' 2,000'
1" = 2,000'
SCALE IN FEET

Project Mngr:	JJJ
Drawn By:	VMG
Checked By:	JJJ
Approved By:	SAD

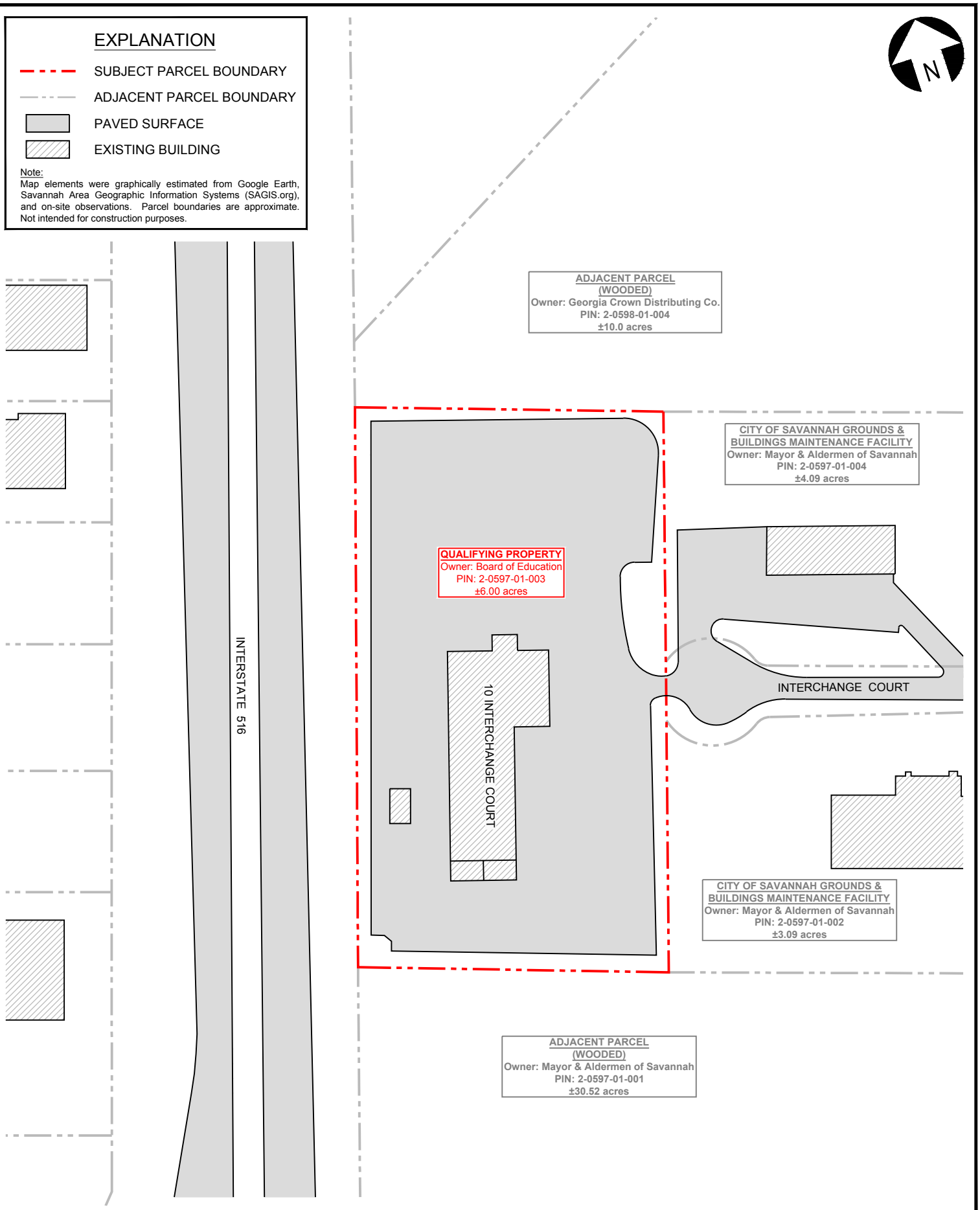
Project No.	ES157747
Scale:	1" = 2,000'
File Name:	ES157747-2017.dwg
Date:	July 21, 2017

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

SITE LOCATION MAP

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

Figure
1



0 75' 150'
1" = 150'
SCALE IN FEET

Project Mngr:	JJJ
Drawn By:	VMG
Checked By:	JJJ
Approved By:	SAD

Project No.	ES157747
Scale:	1" = 150'
File Name:	ES157747-2017.dwg
Date:	July 21, 2017

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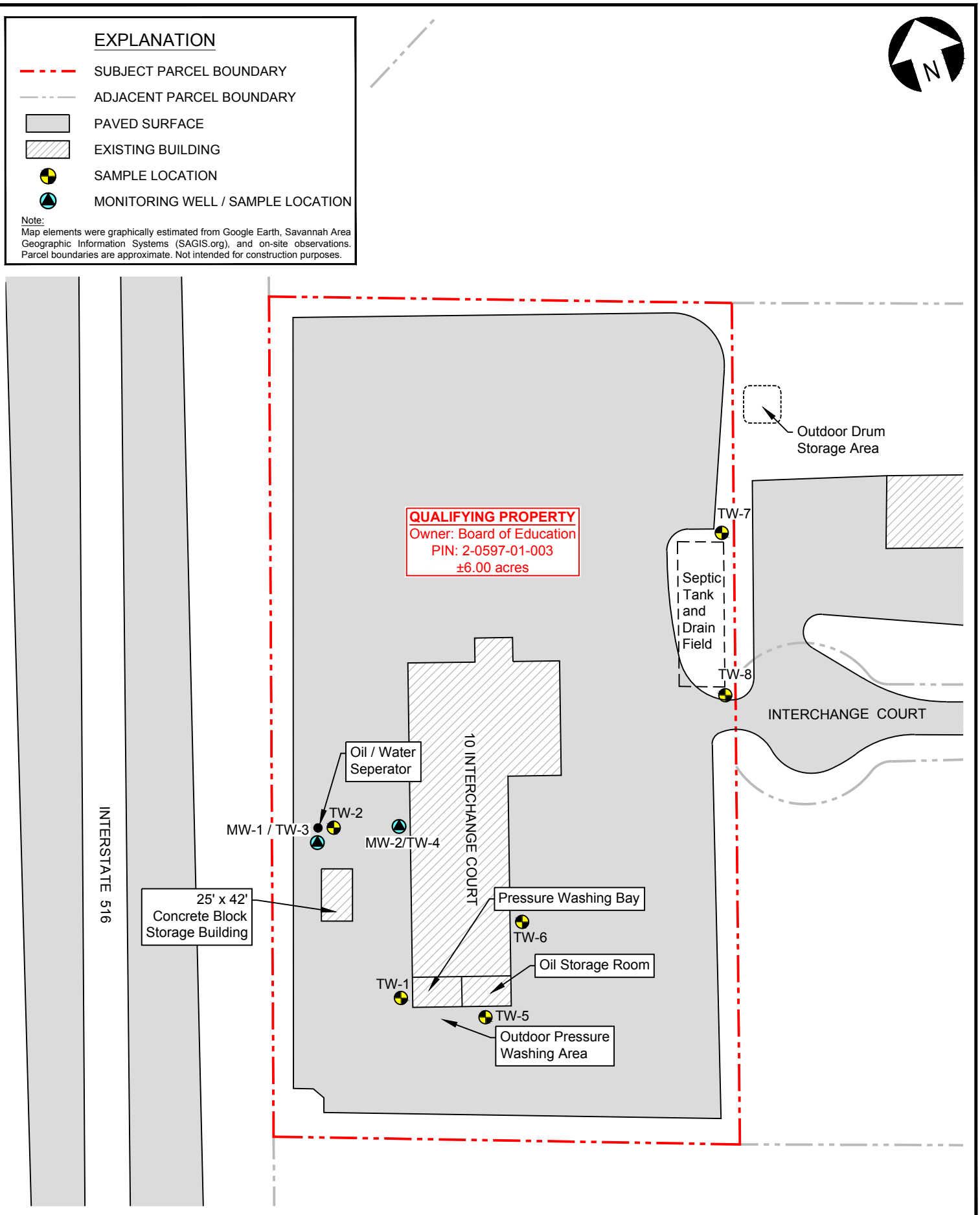
SITE VICINITY MAP

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

Figure
2



0 50' 100'
1" = 100'
SCALE IN FEET

Project Mngr:	JJJ	Project No.	ES157747
Drawn By:	VMG	Scale:	1" = 100'
Checked By:	JJJ	File Name:	ES157747-2017.dwg
Approved By:	SAD	Date:	July 21, 2017

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Consulting Engineers & Scientists
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Phone (912) 629 4000 Fax. (912) 629 4001

SITE DIAGRAM

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

Figure
3

EXPLANATION

SUBJECT SITE

37Q216 USGS WELL NUMBER

Note:
Base map was taken from a portion of the 2014 Garden City, Georgia and 2014 Savannah, Georgia, U.S. Geologic Survey 7.5 minute series topographic quadrangle map. Contour interval is ten feet.

0 1,000' 2,000'

1" = 2,000'

N

SUBJECT SITE

1-Mile Radius

37Q216
37Q181
37Q023
37Q095
36Q016
36Q035
36Q011
36Q036

Rossignol Hill
Woodville
Central Junction
Clearview
Hutchinson Island
Eugene E Talmadge Memorial Bridge
Yamacraw Bluff
Telfair Junction
Alabama Junction
Florida Junction
Carver Village
Cloverdale
Ogeecheetee
Tremont Park
Laurel Grove Cem
Colonial Park Cem
Robert M Hitch Village
Savannah Coll of Art and Design
Univ of Phoenix-Savannah Campus
Evergreen Cem
Liberty City
Union Junction
Southover
SAVANNAH
RDEN CITY

Savannah River
Marsh Island Channel
Springfield Canal

Project Mngr:	JJJ
Drawn By:	VMG
Checked By:	JJJ
Approved By:	SAD

Project No.	ES157747
Scale:	1" = 2,000'
File Name:	ES157747-2017.dwg
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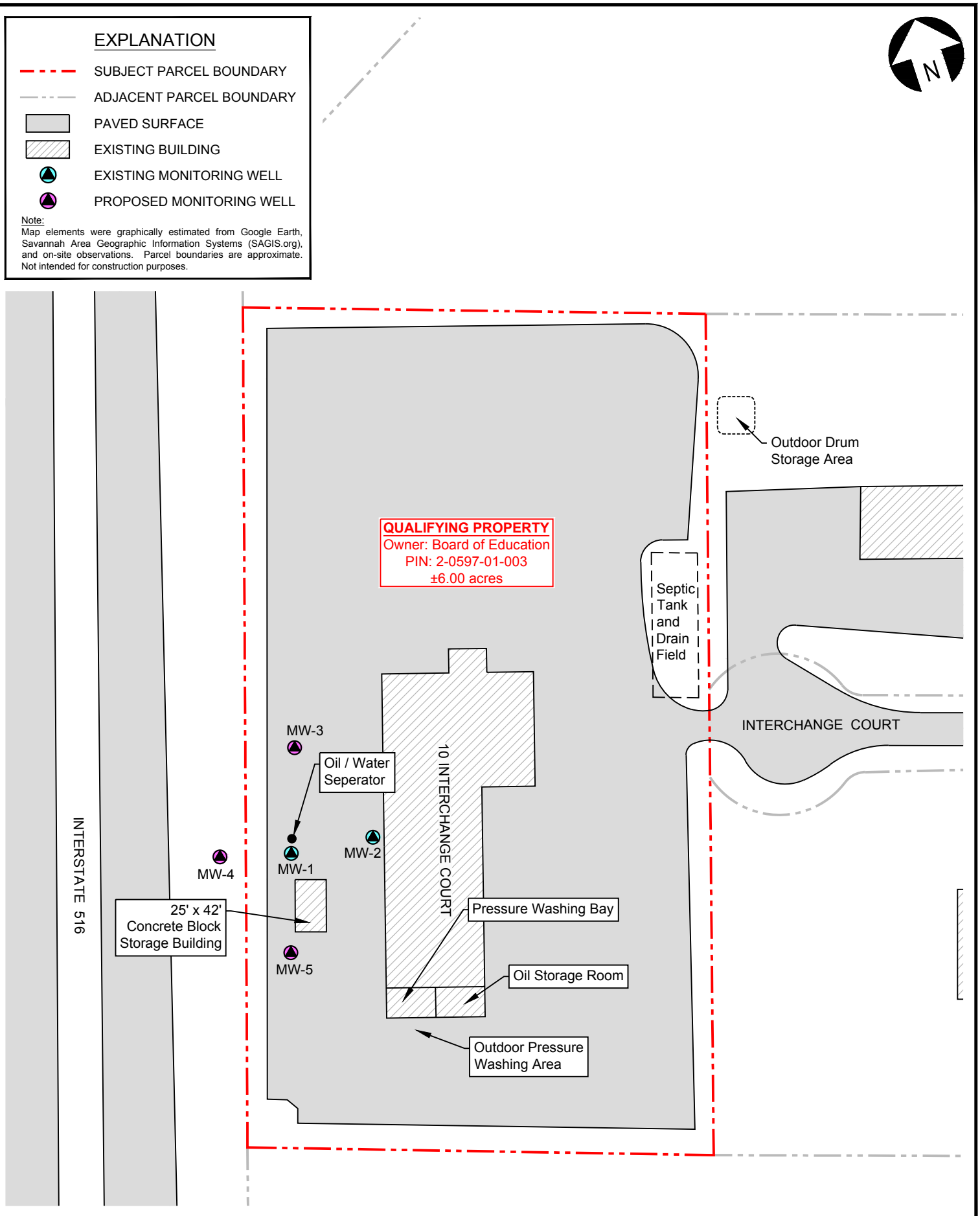
WATER WELL SURVEY

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

Figure 4



Project Mngr:	JJJ
Drawn By:	VMG
Checked By:	JJJ
Approved By:	SAD
Project No.	ES157747
Scale:	1" = 100'
File Name:	ES157747-2017.dwg
Date:	July 21, 2017

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PROPOSED INVESTIGATION PLAN

Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

Figure
5

APPENDIX D

TABLES

SCCPSS Interchange Court Facility

10 Interchange Court
Savannah, Chatham County, Georgia
Terracon Project No. ES157747

TABLE 1: SUMMARY OF SOIL ANALYTICAL RESULTS

Sample ID	Depth (ft)	Date Sampled	Arsenic (mg/kg)	Barium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Acetone (mg/kg)	PCE (mg/kg)	MEK (mg/kg)
TW-1-1	0-1	6/16/2016	1.34	19.4	3.32	9.45	0.0414	0.148	<0.00610	<0.0310
TW-2-5	4-5	6/16/2016	2.75	18.1	7.50	6.24	<0.0500	<0.0620	<0.00620	<0.0310
TW-3-5	4-5	6/16/2016	2.65	43.4	9.70	14.1	<0.0500	<0.0600	<0.00600	<0.0300
TW-4-1	0-1	6/16/2016	1.15	10.5	2.50	5.48	0.335	0.0571	0.0140	<0.0270
TW-5-3	2-3	6/16/2016	1.71	61.3	4.44	12.9	<0.0500	0.455	<0.00600	0.0915
TW-6-2	1-2	6/16/2016	1.59	18.9	2.37	28.0	0.108	0.0766	<0.00620	<0.0310
TW-7-1	0-1	6/16/2016	<1.30	7.47	1.82	8.35	<0.0500	<0.0710	<0.00710	<0.0350
TW-8-1	0-1	6/16/2016	<1.20	6.36	2.27	18.6	0.0883	<0.150	<0.0150	<0.0750
Georgia EPD Type 1 RRS			41.00	500	1,200.00	400.00	17.00	2.74	0.18	0.79

Prepared By: Justin J. Johnson, PG Date: 7/21/2017

Reviewed By: William S. Anderson, III, PE Date: 7/21/2017

NOTES:

Table shows analytes with detections in at least one (1) of the soil samples. Analytes not shown were below reporting limits in the eight (8) soil samples.
mg/kg = milligrams per kilogram, or parts per million (ppm)
PCE = Tetrachloroethylene
MEK = Methyl Ethyl Ketone (2-Butanone)
RRS = Risk Reduction Standard

SCCPSS Interchange Court Facility

10 Interchange Court
Savannah, Chatham County, Georgia
Terracon Project No. ES157747

TABLE 2: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs

Sample ID	Date Sampled	cis-1,2-Dichloroethylene (mg/L)	Tetrachloroethylene (mg/L)	Trichloroethylene (mg/L)
TW-1	6/16/2016	0.00585	0.00353	0.00135
TW-2	6/16/2016	<0.001	<0.001	<0.001
TW-3	6/16/2016	<0.001	<0.001	<0.001
TW-4*	6/16/2016	<0.001	**0.00680**	<0.001
TW-5	6/16/2016	<0.001	<0.001	<0.001
TW-6	6/16/2016	0.00173	<0.001	<0.001
TW-7	6/16/2016	<0.001	<0.001	<0.001
TW-8	6/16/2016	<0.001	<0.001	<0.001
MW-2	9/30/2016	<0.001	0.00173	<0.001
Georgia EPD Type 1 RRS		0.070	0.005	0.005

Prepared By: Justin J. Johnson, PG Date: 7/21/2017
Reviewed By: William S. Anderson, III, PE Date: 7/21/2017

NOTES:

Table shows VOCs with detections in at least one (1) of the groundwater samples.
VOCs not shown were below reporting limits in the eight (8) groundwater samples.
Bold Result = Concentration exceeds Georgia EPD HSRA Appendix III Groundwater Criteria
mg/L = milligrams per liter, or parts per million (ppm)
VOCs = volatile organic compounds
EPD = Environmental Protection Division
RRS = Risk Reduction Standard
* = Sample TW-4 collected using Geoprobe® screen point sampler. Permanent monitoring well MW-2 installed at TW-4 sample location on September 29, 2016.

SCCPSS Interchange Court Facility

10 Interchange Court
Savannah, Chatham County, Georgia
Terracon Project No. ES157747

TABLE 3: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - METALS

Sample ID	Date Sampled	Total Arsenic (mg/L)	Dissolved Arsenic (mg/L)	Total Barium (mg/L)	Total Chromium (mg/L)	Dissolved Chromium (mg/L)	Total Lead (mg/L)	Dissolved Lead (mg/L)
TW-1	6/16/2016	<0.010	NA	0.0875	0.0350	NA	**0.0203**	0.00615
TW-2	6/16/2016	**0.0924**	<0.010	0.0128	<0.010	NA	<0.0050	NA
TW-3*	6/16/2016	**0.0370**	**0.0287**	0.0160	<0.010	NA	<0.0050	NA
TW-4	6/16/2016	<0.010	NA	0.150	0.0400	NA	**0.0252**	<0.0050
TW-5	6/16/2016	**0.0402**	<0.010	0.122	0.0451	NA	**0.0300**	<0.0050
TW-6	6/16/2016	**0.0430**	<0.010	1.00	0.0990	NA	**0.0630**	<0.0050
TW-7	6/16/2016	<0.010	NA	0.0859	<0.010	NA	<0.010	NA
TW-8	6/16/2016	**0.116**	<0.010	0.944	**0.201**	<0.010	**0.0938**	0.00626
MW-1	9/30/2016	**0.0465**	NA	NA	NA	NA	NA	NA
MW-1	3/28/2017	**0.0647**	**0.0348**	NA	NA	NA	NA	NA
George EPD Type 1 RRS		0.010	0.010	2	0.1	0.1	0.015	0.015

Prepared By: Justin J. Johnson, PG Date: 7/21/2017
Reviewed By: William S. Anderson, III, PE Date: 7/21/2017

NOTES:

Table shows metals with detections in at least one (1) of the groundwater samples.
Metals not shown were below reporting limits in the eight (8) groundwater samples.
Bold Result = Concentration exceeds Georgia EPD HSRA Appendix III Groundwater Criteria
NA = not analyzed
mg/L = milligrams per liter, or parts per million (ppm)
EPD = Environmental Protection Division
RRS = Risk Reduction Standard
* = Sample TW-3 collected using Geoprobe® screen point sampler. Permanent monitoring well MW-1 installed at TW-3 sample location on September 29, 2016.

APPENDIX E

SOIL BORING AND WELL CONSTRUCTION LOGS

Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-1**
Date Started: 6/16/16	Latitude: 32.075277		
Logged By: JJJ	Longitude: -81.132795	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 20.0	Saturated Zone: ▽ 8.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.50 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	0.7		Asphalt	
					SILTY SAND (SM), dark brown, very fine to medium grain, moist	
		2	0.4		**SAND (SP)**, with silt, light gray, very fine grain, moist	
2		3	0.3			2
		4	0.7		**CLAYEY SAND (SC)**, mottled orange brown to gray, very fine to fine grain, no plasticity, moist	
4		5	0.4			4 ▼
6		6	0.5			6
					Similar to above, very moist, saturated	
8		78	0.6			8 ▽
10		9	0.5		**CLAYEY SAND (SC)**, orange brown, very fine to coarse grain, very moist to saturated	10
					SANDY CLAY (CL), mottled orange brown to gray, very fine grain, very moist to saturated	
12		10	0.2			12
14		11	0.3		**CLAYEY SAND (SC)**, mottled gray to orange brown, very fine to medium grain, moist	14
					Similar to above, saturated	
16		12	0.5			16
18		13	0.4			18
		14	0.7			
20					Borehole terminated at 20 feet	20

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Phone: 912-629-4000, Fax: 912-629-4001

Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-2**
Date Started: 6/16/16	Latitude: 32.076196		
Logged By: JJJ	Longitude: -81.132733	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 8.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 5.00 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	0.2		**SILTY SAND (SM)**, light brown, very fine to fine grain, moist	
		2	0.3		**SANDY CLAY (CL)**, orange brown, very fine to fine grain, soft, low plasticity, moist	
2		3	0.5		Similiar to above, red brown/orange brown	2
		4	0.7		**CLAYEY SAND (SC)**, mottled orange brown to gray to red brown, very fine to medium grain, moist	
4		*5*	0.9			4
					Similar to above ▼	
6		6	0.7			6
8		7	0.7		▽ **CLAYEY SAND (SC)**, gray to gray brown, very fine to medium grain, saturated	8
		8	0.7			
10					Borehole terminated at 10 feet	10

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-3**
Date Started: 6/16/16	Latitude: 32.076068		
Logged By: JJJ	Longitude: -81.132566	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 7.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 5.10 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	0.3		**SILTY SAND (SM)**, dark brown, very fine to fine grain, moist	
		2	0.4		**SANDY CLAY (CL)**, red brown, stiff, medium plasticity, moist	
2		3	0.6		Similar to above, red brown to yellow brown	2
		4	0.5		**CLAYEY SAND (SC)**, mottled red brown to light brown, very fine to medium grain, moist	
4		*5*	0.8		Similar to above, red brown / gray brown	4
					Similar to above ▼	
6		6	0.5		▽	6
					SAND (SP), with silt, yellow brown, very fine to fine grain, saturated	
8		7	0.6		Similar to above	8
		8	0.9		**SANDY CLAY (CL)**, gray, stiff, medium plasticity, moist	
10					Borehole terminated at 10 feet	10

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-4**
Date Started: 6/16/16	Latitude: 32.075711		
Logged By: JJJ	Longitude: -81.132678	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 8.50 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.50 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	1.7		Asphalt	
					SILTY SAND (SM), light brown, very fine to fine grain, moist	
		2	1.0		**CLAYEY SAND (SC)**, orange brown, very fine to fine grain, moist	
2		3	0.3		Similar to above	2
		4	0.3		Similar to above, mottled red brown to yellow brown to gray	
4		5	1.1			4 ▼
					Similar to above	
6		6	2.1			6
8		7	1.5		▽ **CLAYEY SAND (SC)**, light brown, very fine to medium grain, saturated	8
		8	1.2		**SANDY CLAY (CL)**, gray, soft, low plasticity, saturated	
10					Borehole terminated at 10 feet	10

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Phone: 912-629-4000, Fax: 912-629-4001

Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-5**
Date Started: 6/16/16	Latitude: 32.075448		
Logged By: JJJ	Longitude: -81.132765	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 7.20 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 5.00 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	2.0		Asphalt	
					SILTY SAND (SM), with angular gravel, dark brown, very fine to coarse grain	
		2	1.7		**SAND (SP)**, grayish green, fine grain, moist	
2		*3*	2.7		**CLAY (CL)**, with silt, dark gray to green, soft, high plastiicty, moist	2
		4	1.4			
4					**SILTY SAND (SM)**, dark brown to dark gray, very fine to fine grain, moist	4
		5	1.1		Similar to above, saturated	
6		6	0.6		**SANDY CLAY (SC)**, gray green to yellow brown, high plasticity, stiff, saturated	6
8		7	0.7			8
		8	N/A			
10					Borehole terminated at 10 feet	10

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Phone: 912-629-4000, Fax: 912-629-4001

Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-6**
Date Started: 6/16/16	Latitude: 32.075212		
Logged By: JJJ	Longitude: -81.132781	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 8.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.80 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	1.7		Asphalt	
					SILTY SAND (SM), dark brown to light gray, very fine to medium grain, moist	
		2	2.1		Similar to above, dark brown	
2		3	1.2		**CLAYEY SAND (SC)**, light brown, very fine to fine grain, moist	2
		4	1.5		**SANDY CLAY (CL)**, mottled dark gray to brown to orange brown, moist, stiff, medium plasticity	
4		5	1.4			4
6		6	0.9			6
8		7	1.0		**CLAYEY SAND (SC)**, yellow brown to gray, very fine to medium grain, saturated	8
		8	1.0			
10					Borehole terminated at 10 feet	10

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-7**
Date Started: 6/16/16	Latitude: 32.076007		
Logged By: JJJ	Longitude: -81.131708	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 8.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 7.10 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	0.4		**SAND (SP)**, light to dark brown, very fine to fine grain	
		2	0.3		Similar to above, perched zone of groundwater	
2		3	N/A			2
		4	N/A			
4						4
					CLAYEY SAND (SC), orange brown to gray, very fine to medium grain, moist	
6		6	0.7			6
						▼
8		7	0.5		▽ **SAND (SP)**, with silt, orange brown to gray, very fine to medium grain, saturated	8
		8	0.5		**SANDY CLAY (CL)**, orange brown to gray, very fine to fine, very moist to saturated	
10					Borehole terminated at 10 feet	10

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **TW-8**
Date Started: 6/16/16	Latitude: 32.075893		
Logged By: JJJ	Longitude: -81.131708	***NOTES:***	
Drilling Co.: Geolab	Driller: Edward Wayman	**** Soil sample submitted for laboratory analysis.***	
Method: Direct Push	Equipment: Geoprobe 6620DT	***No well was constructed at this boring location.***	
Boring Depth (ft.): 10.0	Saturated Zone: ▽ 8.00 Date: 6/16/2016	***Groundwater sampled using a stainless-steel screen point.***	
Boring Diameter (in): 2.25	Static Water Level: ▼ 4.30 Date: 6/16/2016	***Borehole abandoned following sample collection.***	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Depth
		1	0.8		**SILTY SAND (SM)**, dark brown, very fine to fine grain, moist	
		2	0.6		**SAND (SP)**, light brown, very fine to medium grain, moist	
2		3	0.4		**CLAYEY SAND (SC)**, mottled orange brown to gray brown, very fine to medium grain, moist	2
		4	0.3		Similar to above, red brown/gray brown	
4		5	0.4		Similar to above	4 ▼
6		6	1.2			6
8		7	0.6		▽ **SAND (SP)**, with silt, brown, very fine to medium grain, saturated	8
		8	0.4		**SANDY CLAY (CL)**, gray brown, very fine to fine grain, soft, medium palsticity, very moist to saturated	
10					Borehole terminated at 10 feet	10

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **MW-1**
Date Started: 9/29/16	Latitude: 32.076068	Screen: "0.010"" slotted PVC"	From: 3 To: 13
Logged By: JHC	Longitude: -81.132566	Pack: Clean 20/30 Filter Sand	From: 2 To: 13
Drilling Co.: Geolab	Driller: AJ	Seal: Hydrated Bentonite Chips	From: 0.5 To: 2
Method: HSA	Equipment: Geoprobe 6610DT	Grout: Concrete flush mount	From: 0 To: 0.5
Boring Depth (ft.): 13.0	Saturated Zone: ▽ 8.00 Date: 9/29/2016	Inner Casing: 2" Threaded Schedule 40 PVC	
Boring Diameter (in): 4.25	Static Water Level: ▼ 6.36 Date: 9/30/2016	Notes:	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Well Detail	Depth
		1	3.0		Asphalt and concrete debris		
		2	2.7		**SILTY SAND (SP)**, brown, fine grained		
2		3	3.3		As above, tan, fine grained		2
		4	4.4		**CLAYEY SAND (SC)**, reddish brown, medium plasticity, fine grained		
4		5	4.0				4
6							6
		6	5.3		As above, moist		
8					As above, saturated	▽	8
10		7	4.1		**CLAYEY SAND (SC-SM)**, grey, low to zero plasticity, fine grained		10
12		8	3.1		**SILTY SAND (SM)**, grey, fine grained		12
					Borehole terminated at 13 feet		

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Soil Boring Log / Well Construction Details

Project: Interchange Court LSI		Project Number: ES157747	Boring/Well: **MW-2**
Date Started: 9/29/16	Latitude: 32.075711	Screen: "0.010"" slotted PVC"	From: 3 To: 13
Logged By: JHC	Longitude: -81.132678	Pack: Clean 20/30 Filter Sand	From: 2 To: 13
Drilling Co.: Geolab	Driller: AJ	Seal: Hydrated Bentonite Chips	From: 0.5 To: 2
Method: HSA	Equipment: Geoprobe 6610DT	Grout: Concrete flush mount	From: 0 To: 0.5
Boring Depth (ft.): 13.0	Saturated Zone: ▽ 8.00 Date: 9/29/2016	Inner Casing: 2" Threaded Schedule 40 PVC	
Boring Diameter (in): 4.25	Static Water Level: ▼ 6.41 Date: 9/30/2016	Notes:	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Well Detail	Depth
		1	13.8		Asphalt debris **SILTY SAND (SM)**, brown, fine grained		
		2	5.5				
2		3	4.6		**CLAYEY SAND (SC)**, reddish brown, medium plasticity, fine grained		2
		4	7.5				
4		5	7.7				4
6							6
		6	6.9		As above, moist		
8					As above, tan, saturated	▽	8
10		7	8.8				10
12		8	4.8				12
					Borehole terminated at 13 feet		

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APPENDIX F

MILESTONE SCHEDULE

VRP Project Milestone Schedule

SCCPSS Interchange Court Facility
10 Interchange Court
Savannah, Chatham County, Georgia

ID	Task Name	Start	Finish	Duration
1	Submit VRP Application	7/21/2017	7/21/2017	0w
2	Identification of Regulated COCs	7/21/2017	1/19/2018	26w 1d
3	Source Zone Profile and Slug Testing	7/21/2017	1/19/2018	26w 1d
4	Semi-Annual Progress Report #1	7/21/2017	1/19/2018	26w 1d
5	On-Site Horizontal / Vertical Delineation	7/21/2017	7/19/2018	52w
6	Semi-Annual Progress Report #2	1/19/2018	7/19/2018	26w
7	Semi-Annual Progress Report #3	7/19/2018	1/18/2019	26w 2d
8	Off-Site Horizontal / Vertical Delineation	7/21/2017	7/24/2019	104w 4d
9	Semi-Annual Progress Report #4	1/21/2019	7/24/2019	26w 3d
10	Updated CSM with Final Remediation Plan	7/24/2019	1/24/2020	26w 3d
11	Semi-Annual Progress Report #5	7/24/2019	1/24/2020	26w 3d
12	Semi-Annual Groundwater Monitoring Event #1	9/23/2019	10/25/2019	5w
13	Semi-Annual Progress Report #6	7/24/2019	1/24/2020	26w 3d
14	Semi-Annual Groundwater Monitoring Event #2	3/23/2020	4/24/2020	5w
15	Semi-Annual Progress Report #7	1/24/2020	7/24/2020	26w 1d
16	Semi-Annual Groundwater Monitoring Event #3	9/21/2020	10/23/2020	5w
17	Semi-Annual Progress Report #8	7/24/2020	1/25/2021	26w 2d
18	Semi-Annual Groundwater Monitoring Event #4	3/22/2021	4/26/2021	5w 1d
19	Semi-Annual Progress Report #9	1/25/2021	7/26/2021	26w 1d
20	Semi-Annual Groundwater Monitoring Event #5	9/27/2021	10/29/2021	5w
21	Semi-Annual Progress Report #10	7/26/2021	1/26/2022	26w 3d
22	Semi-Annual Groundwater Monitoring Event #6	3/28/2022	4/29/2022	5w
23	VRP Compliance Status Report	1/26/2022	7/22/2022	25w 3d