

Prepared for:  
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**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FOR THE BUNKER HILL PAVEMENT  
IMPROVEMENTS PROJECT – LONG POINT ROAD,  
WESTVIEW DRIVE, & PROPERTY ACQUISITIONS  
HOUSTON, HARRIS COUNTY, TEXAS  
WBS No. N-000767-0001-3**

TWEI Project Number 07.12.034

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# 1 EXECUTIVE SUMMARY

Tolunay-Wong Engineers, Inc., (TWEI) was retained by Turner, Collie & Braden, Inc., (TC&B) to conduct a Phase I Environmental Site Assessment (ESA) the Bunker Hill Pavement Improvements Project in Houston, Harris County, Texas. The Project Alignment is situated in the Houston Harris County Key Map on page 450, block X; page 490, block B.

TC&B has expanded the original Bunker Hill Pavement Improvements Project scope to include a segment on Long Point Road between two intersections with Rollingwood Drive, a segment of Westview Drive from Bunker Hill approximately 500 ft to the east and west, and nine property acquisitions. Hereafter, the included segments of Long Point Road and Westview Drive will be referred to as "Project Alignment" and the nine property acquisitions will be referred to as "Parcels". The work described in this report includes a Phase I ESA for the project expansion scope.

The purpose of the Phase I ESA was to document environmental conditions of the Project Alignment and adjacent properties. This was done by identifying, to the extent feasible, pursuant to the process described in the *American Society for Testing and Materials (ASTM) Standard Practice for ESAs (ASTM E-1527-05)*, recognized environmental conditions (RECs) along the Project Alignment and *City of Houston, Department of Public Works & Engineering ECRE Standard Practice (April 2003)*.

Eleven locations that were identified as RECs within the original report are also RECs with regard to the expanded project. They are listed in the following Table:

REC	Address	Type
Hurricane Industries	9600 Old Katy Road	Voluntary Cleanup Program (VCP), No Further Action Planned (NFRAP)
Spring Branch Honda	9702 Old Katy Road	Historic waste generator (RCRA), Petroleum Storage Tank (PST), & Leaking PST (LPST)
Centre at Bunker Hill/ CostCo	1150 Bunker Hill Road	Current PST & RCRA
Daniel Industries	9720 Old Katy Road	Historic RCRA, VCP, & PST
Texaco Service Station	995 Bunker Hill Road	Historic RCRA, PST, & LPST
BKP Warehouse	9714 Old Katy Road	Emergency Response Notification System (ERNS)
Excel Auto/ Auto Discount Center	9831/9801 Long Point Road	Current and historic RCRA, historic LPST & PST
Korner Entry/ Your Kitchen Look Plaza	9847 Long Point Road	Historic RCRA, LPST, & PST
First South Falls	1375 Bunker Hill Road	Historic LPST & PST
Compass Bank/ Discount Tire & Brake	9669 Katy Road	Historic LPST & PST
AT&T-IS/ CEO Manufacturers	1111 Bunker Hill Road	Historic PST

Additional information for two of these already identified REC locations was discovered in the title search records. The title records search reported impact from metals for Hurricane Industries (Parcel 5). Zinc, arsenic, cadmium, chromium, and lead impacts on the property are reported to have been remediated to meet or exceed the industrial/commercial soil criteria established by the Texas Commission on Environmental Quality (TCEQ). Groundwater is not reported to be contaminated. Based on the figures and tables provided, the area of metals contamination is approximately 800 ft from the Project Alignment and did not exceed 6 ft below ground surface (bgs). This area is currently the parking lot for the Centre at Bunker Hill shopping center. Because of the distance from the Project Alignment and because lateral movement of contaminants through the soil over such distances is unlikely, we do not consider the area of metals contamination to be a REC with regard to the Project Alignment.

Chain of title documentation also indicates potential metals impact from Gulf Steel Co., which is also the location of Daniel Industries. Soil and groundwater testing conducted at Daniel Industries by WSP Environmental Strategies (formerly Environmental Strategies Consulting LLC) as part of the VCP program indicated metals levels exceeding the TCEQ's Protective Concentration Limits (PCL) only in soils at 2 ft bgs or shallower. This limited area of metals contamination was found along the western property boundary, more than 1,000 ft from the Project Alignment. Because of the distance of potential contamination from the Project Alignment and because lateral movement of metals through the soil over such distances is unlikely, we do not consider the area of metals contamination to be a REC with regard to the Project Alignment.

Several facilities were researched for the original report, but were not considered to be RECs because of their distance from the Project Alignment. Because the Project Alignment has expanded, four of these are now within 500 ft of the Project Alignment and therefore are now considered to be RECs. They are described in the following table:

<b>REC</b>	<b>Address</b>	<b>Type</b>	<b>Distance/Direction</b>
Ahn's Auto & Repair	9825 Long Point Road	Historic RCRA	100 ft E
Chevron Station	9620 Long Point Road	Current PST	450 ft E
Best Buy Auto Center	9729 Long Point Road	Current RCRA	50 ft E
Don's Tires and Wheels/ Ada Oil Co.	9801 Long Point Road	Historic RCRA	Parcel 2

It is our professional opinion that the soil testing program already conducted and reported under separate cover was sufficient to encounter potential releases from these locations also. We have no recommendations for further work regarding the findings of this Phase I ESA for the expanded scope for the Bunker Hill Improvements Project.

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## **2 INTRODUCTION**

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Tolunay-Wong Engineers, Inc., (TWEI) was retained by Turner, Collie & Braden, Inc., (TC&B) to conduct a Phase I Environmental Site Assessment (ESA) for the Bunker Hill Pavement Improvements Project in Houston, Harris County, Texas. The Project Alignment is situated in the Houston Harris County Key Map on page 450, block X; page 490, block B.

### **2.1 BACKGROUND**

TWEI has already conducted Phase I ESA work for the Bunker Hill Pavement Improvements Project. The work is described in TWEI's Phase I ESA Report No. 06.12.063, Revision 2, dated September 11, 2007. TC&B has expanded the original Bunker Hill Pavement Improvements Project to include a segment of Long Point Road between its two intersections with Rollingwood Drive, a portion of Westview Drive, which transects Bunker Hill Road, and nine property acquisitions. Hereafter, the included segments of Bunker Hill Road, Long Point Road, and Westview Drive will be referred to as "Project Alignment" and the nine property acquisitions will be referred to as "Parcels". The work described in this report includes a Phase I ESA for the project expansion.

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## **3 PURPOSE**

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The purpose of the Phase I ESA was to document environmental conditions of the Project Alignment and adjacent properties. This was done by identifying, to the extent feasible, pursuant to the process described in the *American Society for Testing and Materials (ASTM) Standard Practice for ESA's (ASTM E-1527-05)*, recognized environmental conditions (RECs) at the Project Alignment. "Recognized environmental conditions" include:

"the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water on the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions." (ASTM-E-1527, 2005).

### **3.1 DETAILED SCOPE-OF-SERVICES FOR THE PHASE I ESA**

The work for this report was conducted in accordance with TWEI's Proposal No. P07-E021, Revision 3, dated June 12, 2007, and accepted by Mr. David R. Kubala, P.E., of TC&B. Work for the Phase I ESA was executed in general accordance with the guidelines in *ASTM-E-1527-05* and *City of Houston, Department of Public Works & Engineering ECRE Standard Practice* (April 2003). The scope of services for the Phase I ESA included:

- A historical review of land use, including review of aerial photographs, soil conservation maps, and other available, historical data;
- Contacting Federal, State, and Local regulatory agencies to identify records that could indicate negative environmental impacts at the Project Alignment;
- Reviewing the surrounding properties to determine if their land usage or business practices could have contributed to a negative environmental impact to the Project Alignment;
- A Project Alignment reconnaissance to evaluate topography and visibly observe conditions along the Project Alignment that may suggest environmental impairment; drums with unknown contents, underground storage tanks, waste dump areas, stained areas, stressed vegetation, etc.;
- Issuing this final report of our findings, which contains conclusions and recommendations, as we deem necessary.

The work for TWEI's Phase I ESA Report No. 06.12.063, Revision 2, dated September 11, 2007 for the original scope of the Bunker Hill Road Improvements Project discovered eleven RECs along the Project Alignment. As part of the additional Phase I ESA work for the expansion areas, TWEI reviewed the original Phase I ESA research materials and conducted reconnaissance along Long Point Road, Westview Drive, and nine property acquisitions. The following sections describe the expansion areas and identify any additional RECs not identified in the original Phase I ESA Report.

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## **4 PROJECT ALIGNMENT LOCATION AND DESCRIPTION**

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The additional sections of the Bunker Hill Pavement Improvements Project include a segment of Long Point Road, between its two intersections with Rollingwood Drive, a portion of Westview Drive, which transects Bunker Hill Road, and nine property acquisitions. The segment along Long Point Road includes stub-outs to Rollingwood Drive. The Project Alignment is situated in the Houston Harris County Key Map on page 450, block X; page 490, block B. The Site and general vicinity are depicted in Figure 1– Project Vicinity and Alignment Layout.

### **4.1 PROJECT ALIGNMENT AND VICINITY GENERAL CHARACTERISTICS**

#### **4.1.1 Topography**

The *US Geologic Survey 7.5 Minute Quadrangle Topographic Map* of Hedwig Village, Texas (1982) was used to evaluate the Project Alignment. According to the topographic map, the general topography of the area is slight with an elevation of about 80 ft to 90 ft mean sea level (MSL). Drainage appears to be to the east through an engineered drainage

ditch (W140-01-00), which ultimately drains into Spring Branch Creek. See Figure 2 - Topographic Maps.

#### 4.1.1.1 General Geologic Conditions

TWEI reviewed internal files and found two well-documented, active faults in the vicinity of the Project Alignment. The Longpoint Fault crosses the Project Alignment near Cedardale Road. The Piney Point Fault is complementary to the Long Point Fault and is approximately 2200 ft south of the Project Alignment. Any further investigation of these faults is not within the scope of this Phase I ESA.

#### 4.1.2 Current and Past Uses of the Project Alignment and Parcels

Long Point Road is currently a four-lane, primarily commercial roadway. Westview Drive is a two-lane, residential roadway. Both appear to have been roadways for quite some time.

Parcel acquisition locations are shown on Figure 1. The nine Parcels and their uses are listed in the following table:

**Table 1: Parcel Use**

Parcel	Address	Current Use	Past Use (If known)
1	9819 Long Point Road	Shopping Center	
2	9831/9801 Long Point Road	Auto Discount Center	Excel Auto
3	9747 Long Point Road	Your Kitchen and Look Plaza shopping center	Korner Entry
4	9743 Long Point Road	Apartment Complex	
5	1150 Bunker Hill Road	Centre at Bunker Hill, retail shopping center	Hurricane Steel Industries
6	9702 Old Katy Road	Vacant land	Spring Branch Honda
7	1111 Bunker Hill Road	CEO Manufacturers, garment manufacturer	AT&T-IS
8	9710 Old Katy Road	Vacant land	
9	9720 Old Katy Road	Vacant land	Daniel Industries

#### 4.1.3 Descriptions of Structures, Roads, and Other Improvements along the Project Alignment

The Project Alignment is currently provided with municipal easements associated with water, sewer, natural gas, and electricity delivery. North of Long Point Road, there is a cement wall separating the right-of-way from the north adjoining neighborhood, and there is a drainage ditch just east of Bunker Hill Road that becomes subsurface when it reaches Long Point Road.



#### **4.1.4 Current Uses of the Adjoining Properties**

Along Long Point Road and at Parcel 1 through Parcel 4, adjoining properties to the north and south are single-family residential along the Project Alignment. The rest of Long Point Road is primarily commercial properties and multi-family residences. Businesses found on the project Alignment along Long Point Road include a restaurant, an automobile body repair shop, an automobile sticker inspection station, business and personal service offices, hair salons, a photography studio, a dentist, and several retail stores. Adjoining properties along Westview Drive are all single-family residences.

For Parcel 5 through Parcel 9, north adjoining properties are single-family residences east of Bunker Hill Road and a newly constructed apartment complex west of Bunker Hill Road. Interstate Highway 10 is located to the south, and commercial properties are located to the east and west.

## **4.2 USER PROVIDED INFORMATION**

### **4.2.1 Legal Description of Parcel Acquisitions**

- Parcel 1 is described as 23,418 square feet of land out of the T. Hoskins Survey, A-342, Harris County, Texas (HCAD # 043-008-000-0116).
- Parcel 2 is described as 37, 538 square feet of land (and called tracts 16B, 16C, and 16M, per HCAD) out of the T. Hoskins Survey, A-342, Harris County Texas (HCAD # 043-008-000-0046)
- Parcel 3 is described as 2.01 acres of land (per HCAD), and called 1.98 acres, per deed, out of the T. Hoskins Survey, A-342, Harris County, Texas (HCAD#043-008-000-0029).
- Parcel 4 is described as 1.496 acres of land (per HCAD) out of the T. Hoskins Survey, A-342, Harris County, Texas (HCAD # 043-008-000-0030).
- Parcel 5 is described as 14.7024 acres of land out of Reserve "C," Block 1 of CENTRE AT BUNKER HILL REPLAT, a subdivision in the Thomas Hoskins Survey, A-342 as recorded in Volume 535, Page 81, Harris County Map Records, Harris County, Texas (HCAD # 121-426-002-0003).

Said 14.7024 acres of land is, in part, composed of lots 1-6, Block 1, Lots 1-4, Block 2, and Lots 1-5, Block 3 of Kolbe Glen, an unrecorded subdivision of 15.78 acres in the Thomas Hoskins Survey, A-342, Harris County, Harris County, Texas.

- Parcel 6 is described as 0.4307 acres of land out of the Thomas Hoskins Survey, A-342, Harris County, Texas (HCAD # 043-008-000-0182 & 043-008-000-0183).
- Parcel 7 is described as 1.150 acres of land (per HCAD) out of the Thomas A. Hoskins Survey, A-342, Harris County, Texas (HCAD # 043-008-000-0177).

- Parcel 8 is described as 4.15 acres out of the East ½ of that certain 20 acres of land off the east side of the Walter B. Van Wart 75.386 acre tract in the Thomas A. Hoskins Survey, A-342, Harris County, Texas (HCAD # 043-008-000-0178).
- Parcel 9 is described as 31.489 acres of land being a part of Reserve “A,” BUNKER HILL BUSINESS PARK, a subdivision in the Thomas A. Hoskins Survey, A-342, Harris County Texas (HCAD # 124-881-001-0003).

#### 4.2.2 Title Records

City of Houston guidelines require Chain of Title searches for real estate transactions; therefore, TWEI conducted a Chain of Title search for each of the nine proposed property acquisitions. TWEI requested historical Chain of Title report from Residential Services. The Chain of Title reports and associated documentation referenced below are contained in Appendix A.

- Parcel 1: The current owner of record is Woon Sun Lee and wife Kil Soon Lee dba Lee’s Sign Co., who acquired the tract in 1986. Other owners of record are Creative Care Employees Profit Sharing Plan and individuals.
- Parcel 2: The current owner of record is Spring Branch Plaza, LLC, who acquired the tract in 2007. Other owners of record are Blazer Building, Inc., Don’s Tires and Wheels, Inc., Ada Oil Co., and individuals. A lease was granted to Betty Catherine Coats, in 1976, for a children’s day care center.
- Parcel 3: The current owner of record is Jerry J. Moore and wife Jean H. Moore, who acquired the tract in 1995. Other owners of record are Moore Partnership, L.P., Premium Investments, Inc., Woodhaven Baptist Church, Spring Branch Baptist Temple, and individuals. A lease was granted to The Borden Co. Southern Division, in 1964, for a portion of the subject tract.
- Parcel 4: The current owner of record is I. Investments, Inc., who acquired the tract in 2002. Other owners of record are JMT, Ltd., Premium Investments, Inc., Woodhaven Baptist Church., Spring Branch Baptist Temple, and individuals.
- Parcel 5: The current owner of record is Centre at Bunker Hill, Ltd., who acquired the tract in 1999. Other owners of record are Hurricane Steel Industries, Parkstone Development Corp., and individuals.

A lease was granted to Costco Wholesale Corp., in 2000, for the subject tract, for ten years with renewal options. An Industrial Solid Waste Certification of Remediation was granted to Schindler brothers Liquidating and Hurricane Industries, Inc., in 1998. An easement of Tracts 1-4 was granted to Houston Lighting & Power Co., in 1964, for the installation and maintenance of power lines.

The Chain of Title Report for Parcel 5 includes an Industrial Solid Waste Certification of Remediation for Hurricane Industries, Inc. Zinc, arsenic, cadmium, chromium, and lead

impacts on the property are reported to have been remediated to meet or exceed the industrial/commercial soil criteria established by the Texas Commission on Environmental Quality (TCEQ). Based on the figures provided, the area of contamination is approximately 800 ft from the Project Alignment.

- Parcel 6: The current owner of record is Jim R. Smith, who acquired the property in 2005. Other owners of record are CBH Tract Three, LP, Centre at Bunker Hill, Ltd., Great Western Management & Realty Corp., Texas General partnership, Hotmann-Marquardt Enterprises, Inc., Katy Road Investors, 9710 Katy Realty Co., and individuals. A lease was granted to South Texas Stone Co., in 1966, for Tract 5.
- Parcel 7: The current owner of record is Carlos J. Kuri, who acquired the property in 1988. Other owners of record are AT&T Information Systems, Inc., Southwestern Bell Telephone Co., and individuals.
- Parcel 8: The current owner of record is I-10/Bunker Hill Associates, LP, who acquired the tract in 2004. Other owners of record are Katy Road Investors, 9710 Katy Realty Co., and individuals.
- Parcel 9: The current owner of record is I-10/Bunker Hill Associates, LP, who acquired the tract in 2005. Other owners of record are The Northern Trust Company, Trustee of the Emerson Charitable Trust, Daniel Industries, Inc., Bank of the Southwest, Gulf Construction Co., Daniel Orifice Fitting Co., Gulf Steel Co., and individuals. A lease was granted to Security Pacific Corp. by Daniel Industries, Inc. in 1984 for the lease of a Laser Doppler Velocimetry System. The memorandum of said lease is included within the Chain of Title documentation for Parcel 9.

The Chain of Title Report for Parcel 9 includes information regarding the property's status as a Voluntary Cleanup Program (VCP) site. The most recent document is a Final Certificate of Completion from the Texas Commission on Environmental Quality (TCEQ), dated June 20, 2005. The document states that no groundwater from the contaminated area shall be used for residential, recreational, industrial, or commercial purposes without written consent from the TCEQ. A legal description of the "Condemned Area" can be found in the Chain of Title documentation for Parcel 9. It should be noted that Exhibit A of all documentation has not been included in this report. Exhibit A in all documents was a legal description or location map for Parcel 9 as it is described in Section 4.2.1 of this report.

The title records search identified four RECs. They are Don's Tires and Wheels, Inc. (Parcel 2), and Ada Oil Co. (Parcel 2), Hurricane Industries, Inc. (Parcel 5), Daniel Industries (Parcel 9), and Gulf Steel (Parcel 9). Impact from metals is reported for Hurricane Industries and could be a source of impact for Gulf Steel.

#### **4.2.3 Environmental Liens**

The Client provided no information regarding environmental liens.

#### **4.2.4 Owner, Property Manager, and Occupant Information**

The Project Alignment is a roadway owned and maintained by the City of Houston, and there are no occupants. No additional interviews with Parcel property owners were conducted, other than those contained in the original report and discussed in Section 6.4.2.

#### **4.2.5 Reason for Performing the Phase I ESA**

The purpose of this Phase I ESA is to evaluate the presence of RECs that could impact subsurface conditions within the Project Alignment.

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## **5 ENVIRONMENTAL RECORDS REVIEW**

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The search area defined for the original Phase I ESA was large enough to include the expansion sections. A review of the Atlas Environmental Database Report, City Directory Search Report, appropriate maps, and Aerial Photographs uncovered no additional RECs. RECs identified in the original Phase I ESA are summarized in the following sections.

### **5.1 STANDARD ENVIRONMENTAL RECORD SOURCES**

Atlas Environmental Research, Inc., was contracted to perform a regulatory records search. Environmental databases were searched within a radius as defined by *ASTM E-1527-05*. The *Atlas Regulatory Data Report* is presented in Appendix B.

#### **5.1.1 Standard Federal Government Databases**

Eleven locations were listed in the *Atlas Regulatory Data Report* and are considered RECs because of their proximity to the Project Alignment. They are summarized in Table 2 and described in detail following the table. A summary of information obtained from records held by the Texas Commission on Environmental Quality (TCEQ) are included for facilities listed as LPST sites. TCEQ materials are provided in the original Phase I ESA report (TWEI Report No. 06.12.063, Revision 2).

**Table 2: RECs Identified from the *Atlas Regulatory Data Report***

<b>REC</b>	<b>Address</b>	<b>Type</b>
Hurricane Industries	9600 Old Katy Road	Voluntary Cleanup Program (VCP), No Further Action Planned (NFRAP)
Spring Branch Honda	9702 Old Katy Road	Historic waste generator (RCRA), Petroleum Storage Tank (PST), & Leaking PST (LPST)
Centre at Bunker Hill/ CostCo	1150 Bunker Hill Road	Current PST & RCRA
Daniel Industries	9720 Old Katy Road	Historic RCRA, VCP, & PST
Texaco Service Station	995 Bunker Hill Road	Historic RCRA, PST, & LPST
BKP Warehouse	9714 Old Katy Road	Emergency Response Notification System (ERNS)
Excel Auto/ Auto Discount Center	9831/9801 Long Point Road	Current and historic RCRA, historic LPST & PST
Korner Entry/ Your Kitchen Look Plaza	9847 Long Point Road	Historic RCRA, LPST, & PST
First South Falls	1375 Bunker Hill Road	Historic LPST & PST
Compass Bank/ Discount Tire & Brake	9669 Katy Road	Historic LPST & PST
AT&T-IS/ CEO Manufacturers	1111 Bunker Hill Road	Historic PST

- The first facility is Hurricane Fence Co., also listed as Hurricane Steel Industries, and is located at 9600 Old Katy Road. It is located approximately 475 ft from the Project Alignment. This facility is listed as a galvanizing plant under No Further remedial Action Planned (NFRAP). Actions taken include discovery, preliminary assessment, site inspection, and archived site and all occurred in 1983. The facility applied for the Voluntary Cleanup Program (VCP) in October of 1999. Metals were listed as contaminants affecting soils and groundwater. It is currently listed in the completed phase. Project Alignment reconnaissance activities revealed that this address is now a shopping center.
- The second facility is Spring Branch Honda, also listed as Goodson Yugo and Goodson Honda, located at 9702 Old Katy Road, on the Project Alignment. The location is listed as a Resource Conservation and Recovery Act (RCRA) facility. The facility did not generate, treat, store, dispose, or transport hazardous materials, and has received no violations. It is listed as a Leaking Petroleum Storage Tank (LPST) site with groundwater impacted and no apparent threats or impacts to receptors. Final concurrence was issued and the case was closed. Review of the Texas Commission on Environmental Quality (TCEQ) LPST Database reports that quarterly ground water monitoring was approved in 1995 and 1996. A comprehensive site assessment was approved in 1995, and a risk assessment was approved in 1996. Site closure and the plugging and abandonment of four monitoring wells was approved in 1997. The facility is also listed as a Petroleum Storage Tank (PST) site. Two underground PSTs were removed from the ground in

1989. Project Alignment reconnaissance activities revealed that the facility no longer exists.

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. We received a letter, dated April 9, 1997, from the TCEQ confirming the completion of corrective actions for a release at Goodson Honda, LPST ID# 95219. The letter states that the groundwater contaminant plume is confined on-site and is stable or decreasing in contaminant concentration and that dermal exposure is not a significant concern. A groundwater study conducted in 1995 by Applied Earth Sciences indicated that contamination from Benzene, BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes), TPH (total petroleum hydrocarbons), and MTBE (Methyl tert-butyl ether) was concentrated at the site of a former tank field centrally within the island on which the facility was located. The area of concern (AOC) is located less than 60 ft east of the Project Alignment. A groundwater elevation contour map shows the groundwater flow direction to run from the area of contamination northwest towards the Project Alignment. The most recent records indicated that the distance between the AOC and the Project Alignment, following the direction of groundwater flow, is approximately 45 ft.

- The third listed facility is CostCo Wholesale Corporation No. 680, located at 1150 Bunker Hill Road, on the Project Alignment. The location is listed under the Resource Conservation and Recovery Act (RCRA) as a general merchandise business retail store that does not generate, treat, store, dispose, or transport hazardous materials and has received no violations. It is also listed as a PST facility with three underground PSTs in use.
- The fourth facility in the Atlas report is Daniel Industries, Inc., also listed as Daniel Measurement & Control, located at 9720 Old Katy Road, on the Project Alignment. It is listed as a manufacturer of bolts, nuts, screws, rivets, washers, instruments and related products for measuring, displaying, and controlling industrial products as a RCRA facility. It is listed as being a small quantity generator that does not treat, store, dispose, or transport hazardous materials. Compliance evaluations occurred on four occasions from 1983 to 2005. A non-financial record review occurred in 1992. Violations for land-ban and "other" requirements that apply to generators and are listed from 1983 to 1992. Several written and verbal informal enforcements occurred from 1983 to 1992. The facility applied for the VCP in October of 1992. It is currently listed in the investigation phase. Volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals, and chlorinated solvents were listed as contaminants affecting soils and groundwater. Daniel Industries is also listed as a PST facility. Two underground storage tanks were removed from the ground in 1991. Project Alignment reconnaissance activities revealed that the facility has been demolished.

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. Only records up to 2002 were available. We contacted Dean Perkins of the TCEQ, the project manager for remediation at

Daniel Industries. He stated that any groundwater contamination off site is 50 ft below grade. He did not have a recent full groundwater monitoring report, but he sent TWEI tables of the most recent monitoring results and a plume map created by the consultant firm WSP Environmental Strategies (formerly Environmental Strategies Consulting LLC). The tables provided include all groundwater monitoring conducted from 2001 to 2007. Based on the tables and plume maps provided, concentrations of VOCs above TRRP (Texas Risk Reduction Program) residential limits are found off site, and do not approach the Project Alignment. The greatest source of groundwater contamination is located along Pine Lake Drive, southwest of Woodview School. A lesser amount of contamination of DCE was also found at a monitoring well near the intersection of Westview Drive and Windover Lane, approximately 800 ft west of the Project Alignment.

- The fifth facility listed is the Texaco Service Station located at 995 Bunker Hill Road, approximately 475 ft from the Project Alignment. It is listed under the Resource Conservation and Recovery Act (RCRA) as a conditionally exempt small quantity generator. The facility does not generate, treat, store, dispose, or transport hazardous material and has received no violations. It is also listed as a LPST site with groundwater impacted and no apparent threats or impacts to receptors. Final concurrence was issued and the case was closed. This facility is also listed as a PST facility. Five underground gasoline tanks were removed from the ground in 1995 and three were removed in 2005. Project Alignment reconnaissance activities revealed that the facility has been demolished.

Review of the TCEQ's LPST database lists the following corrective action response form approvals; semi-annual and annual groundwater monitoring (May 1995), semi-annual and annual groundwater monitoring (April 1996), risk assessment (August 1996), assessment including installation of one boring to collect soil samples (August 1996), annual groundwater monitoring (April 1997), assessment with soil boring (June 1997), push removal (September 1997), semi-annual groundwater monitoring (May 1998), assessment with completion of two piezometers (July 1998), remedial action plan feasibility testing (July 1998), remedial action plan preparation (July 1998), semi-annual groundwater monitoring (January 1999), semi-annual groundwater monitoring (August 1999), risk-based assessment with three confirmatory soil borings (September 1999), assessment with installation of one monitoring well (March 2000), remedial action plan feasibility testing (March 2000), semi-annual groundwater monitoring (November 2000), semi-annual groundwater monitoring (November 2001), push removal (August 2002), quarterly groundwater monitoring (June 2003), assessment with field survey (January 2004), quarterly groundwater monitoring (November 2004), and site closure (November 2005).

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. We received a letter, dated November 10, 2005, from the TCEQ confirming the completion of corrective actions for a release at the Texaco Service Station, LPST ID# 94130. The letter states that the groundwater contaminant plume is stable and/or decreasing in size and

concentrations, that contaminant concentrations are below the default target concentrations for construction worker exposure, and that concentrations are below health-based and explosive concentrations. We also reviewed the Annual Groundwater Monitoring Report for 2004, prepared by SECOR International Inc. Figures within the monitoring report show the location of eight monitoring wells, three of which are off-site to the south. Contamination from Benzene, BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes), and TPH (total petroleum hydrocarbons) is primarily on site and directly south of the Texaco facility, southwest of the Project Alignment. Contamination approaches Bunker Hill Road and the groundwater gradient slopes toward Bunker Hill Road. The most recent records indicated that hydrocarbon contamination may be within 500 ft of Old Katy Road, which is the southernmost extent of the Project Alignment.

- The sixth facility listed is BKP Warehouse, located at 9714 Old Katy Road, approximately 210 ft from the Project Alignment. 12,000 gallons of sulfuric acid were reported to have been released from the facility according to the Emergency Response Notification System (ERNS). Project Alignment reconnaissance activities revealed that the facility has been demolished.
- The seventh facility listed is Excel Auto, located at 9801 Long Point Road, on the Project Alignment. It is a LPST site with only soils contamination and requiring full site assessment and remedial action plan. Final concurrence was issued and the case was closed as of 1991, according to the TCEQ LPST database. This facility is also listed as a retail facility with a PST. Three tanks were removed from the ground in 1990. Project Alignment reconnaissance activities revealed that the facility is now called Auto Discount Center.

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. The only information on file was a PST release incident report, dated May 8, 1990, and contained in Appendix B. We contacted Reagan Stephens at TCEQ's offices to request a closure letter. He explained that prior to 1995, little formal documentation was issued and furthermore, the site may not have been classified as an LPST site according to current standards.

- The eighth listing is Korner Entry at Bunker Hill Road and Long Point Road, on the Project Alignment. No physical address was reported. It is a LPST site with only soils contamination and requiring full site assessment and remedial action plan. Final concurrence was issued and the case was closed as of 1990, according to the TCEQ LPST database. It is also listed as a PST facility. Two gasoline tanks were removed from the ground in 1990. Although the address is not specific, Project Alignment reconnaissance activities suggest that this facility does not exist, and may be in the vicinity of Your Kitchen, located at 9785 Long Point Road.

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. We received a letter concerning Korner Entry, LPST ID# 98882 and dated June 25, 1990, from the Texas Water



Commission (TWC) explaining that the vertical and horizontal extent of hydrocarbon contamination was determined by over-excavating the tank pit until clean soil was encountered. No further action was recommended. It should be noted that figures and attached documents referenced in the letter were not available. We also received a letter, dated October 25, 1990, from the TWC confirming the completion of corrective actions for a release at the facility. The letter states that the TWC had received the closure report for the facility and agreed that no further assessment or remedial activities were necessary.

- The ninth listing is First South Falls, located at 1375 Bunker Hill Road, on the Project Alignment. It is listed as a LPST site with only soils contamination and requiring full site assessment and remedial action plan. Final concurrence was issued and the case was closed as of 1991, according to the TCEQ LPST database. This location is also listed as a PST facility for the purpose of fleet refueling. One underground diesel tank was removed from the ground in 1991. Project Alignment reconnaissance activities revealed that a meditation center currently holds this address.

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. We received a PST Incident Report, which indicated that elevated TPH levels were discovered at the First South Savings, located at 1375 Bunker Hill Road, LPST ID# 98882. We also received a letter, dated June 27, 1991, from the TWC confirming the completion of corrective actions for a release at the site. The letter states that the TWC had received the closure report for the facility and agreed that no further assessment or remedial activities were necessary.

- The tenth facility is Compass Bank Bunker Hill Branch, also listed as a Phillips 66, located at 9669 Katy Road, and approximately 475 ft from the Project Alignment. It is listed as a LPST site with groundwater impacted and no apparent threats or impacts to receptors. Final concurrence was issued and the case was closed. This facility is also listed as a PST facility. Three underground tanks were removed in 1986 and one more was removed in 1996.

Review of the TCEQ's LPST database lists the following corrective action response form approvals; comprehensive site assessment (March 1995), remedial action plan preparation (May 1995), quarterly groundwater monitoring (May 1995), remedial action plan feasibility testing (October 1995), annual groundwater monitoring (January 1996), assessment (April 1996), groundwater pump and treat (April 1996), soil vapor extraction (April 1996), operation and maintenance of remediation system (April 1996), assessment (April 1996), quarterly groundwater monitoring (July 1996), excavation (May 1996), waste treatment (July 1996), risk assessment (October 1996), operation and maintenance of remediation treatment (September 1998), quarterly groundwater monitoring (June 2000), operation and maintenance of remediation system (November 2000), operation and maintenance of remediation system (March 2001), quarterly groundwater monitoring (July 2002), quarterly

groundwater monitoring (December 2003), and site closure including plugging and abandonment of ten monitoring wells (July 2005).

We requested information from TCEQ's records in Austin, Texas, concerning final closure documentation for this LPST site. We received a letter, dated February 4, 2005, from the TCEQ confirming the completion of corrective actions for a release at the Compass Bank Bunker Hill Branch, LPST ID# 93200. The letter states that the groundwater contaminant plume is stable and/or decreasing over time with maximum concentrations protective of Construction Worker Default Target Levels, that contaminant concentrations are below the default target concentrations for health-based and explosive concentrations for a commercial/industrial site. A 2004 Annual Groundwater Monitoring Report, performed by TGE Resources, Inc. in 2004, contains plume maps showing the contamination levels of benzene to be primarily confined on site. The most recent map indicates that a benzene plume approaches Bunker Hill Road approximately 500 ft south of Old Katy Road, which is the southernmost extent of the Project Alignment.

- The final listing is AT&T-IS, located at 1111 Bunker Hill Road, on the Project Alignment. It is listed as a PST facility. One underground gasoline tank was permanently filled in place in 1983. Project Alignment reconnaissance activities revealed that the facility is currently a garment manufacturer.

## **5.1.2 Additional Environmental Record Sources**

### **5.1.2.1 Railroad Commission Pipeline Map**

Review of the Railroad Commission Pipeline Map for Hedwig Village, indicates there are no pipelines on or within 500 ft of the Project Alignment.

### **5.1.2.2 Railroad Commission Oil and Gas Well Map**

Review of the Railroad Commission of Texas website (<http://gis2.rrc.state.tx.us>) and [drillinginfo.com](http://drillinginfo.com) indicates there are no oil and/or gas wells on or within 500 ft of the Project Alignment.

### **5.1.2.3 Houston-Galveston Area Council Closed Landfill Inventory**

The Houston-Galveston Area Council Closed Landfill Inventory consists of three information sheets that summarize work conducted by Wilbur Smith Associates (WSA), Corrigan Consulting, Inc., (CCI) and the Houston-Galveston Area Council (HGAC). Research included general site information, and ownership and boundary information. The information in the inventory was derived from the best possible records and is for public information purposes only. A review of the website revealed no closed permitted or un-permitted landfills on or adjacent to the Project Alignment.

### **5.1.3 Physical Setting Sources**

#### **5.1.3.1 Topographic Map**

The *US Geologic Survey 7.5 Minute Quadrangle Topographic Map* of Hedwig Village, Texas (1982) was reviewed as part of the Phase I ESA. In addition to the results previously discussed in Section 4.1.1 of this report (pertaining to the general topography of the Project Alignment), other features of note shown on the topographic map include:

- Spring Branch Creek to the northeast;
- Briar Branch Creek to the east;
- Woodview School west of the Project Alignment; and
- Interstate Highway 10 and commercial development surrounding it.

It should be noted that the topographic map is dated 1982, and features on the map more nearly reflect conditions in the 1979 aerial photographs rather than current conditions. See Figure 2 - Topographic Maps.

#### **5.1.3.2 FEMA FIRM**

The Federal Emergency Management Agency Flood Insurance Rate Map (FEMA FIRM), Community Panel Number Panel No. 48201C0645L, June 9, 2006 was used to evaluate the Project Alignment relative to flood zones. The map shows the Project Alignment to be entirely within an Unshaded Zone X area. The Unshaded Zone X is an area outside the 500-year floodplain. See Figure 3- FEMA FIRM.

### **5.1.4 Historical Use Information on the Project Alignment and Adjoining Properties**

#### **5.1.4.1 City Directory**

City Directories include listings of residences, businesses, and professional concerns organized both alphabetically by name similar to a telephone book, and alphanumerically by street name, then by specifically by street address.

TWEI reviewed directory listings, provided in the Atlas City Directory Search Report for properties along Bunker Hill Road, Long Point Road, Westview Drive, and side streets for years from 1955 through 2002. Several businesses show a potential to be RECs and were identified in Section 5.1.1. They are the Texaco located at 995 Bunker Hill, CEO Manufacturers located at 1111 Bunker Hill Road, Daniel Industries listed at 1133 Bunker Hill Road and 9720 Old Katy Road, Auto Discount Center located at 9801 Long Point Road, and Compass Bank/Phillips 66 located at 9669 Katy Freeway.

Three additional addresses listed in the City Directory are potential RECs. They are Amco Mesh & Wire, Inc. located at 1050 Bunker Hill Road, Discount Tire & Brake/Brake-O

located at 9661 Katy Freeway, and Spring Branch Honda Motorcycle Shop located at 9702 Old Katy Road. Based on an address search using Google Earth, Amco Mesh & Wire and Spring Branch Honda Motorcycle Shop were located at the intersection of Bunker Hill Road and Old Katy Road but are no longer in existence. Discount Tire & Brake/Brake-O appear to have been located in the area now occupied by Compass Bank. A copy of the Atlas City Directory Search is presented in Appendix C.

#### **5.1.4.2 Sanborn Map Review**

In the late nineteenth century, companies began preparing maps for use by fire insurance companies. These maps indicate construction materials of specific structures in developed urban areas. With the advent of retail gasoline service stations, the approximate locations of tanks were noted, often without AST or UST designations. These maps were updated and expanded geographically periodically through the twentieth century. No Sanborn maps of the area were available.

#### **5.1.4.3 Aerial Photography**

TWEI sourced historical aerial photographs for the Project Alignment from Atlas. Atlas provided photographs from 1944, 1953, 1969, 1979, 1986, 1995, and 2004. The historical aerial photographs with approximate Project Alignment boundaries are contained in Appendix D.

In the 1944 aerial photograph, the area surrounding the Project Alignment is primarily undeveloped forest with some agricultural land west of the Alignment. Only the southern portion of Bunker Hill Road is a roadway. A drainage ditch (W140-01-00) transecting the property is visible. By 1953, Bunker Hill Road has been extended north to Long Point Road and development begins east of the Project Alignment. The 1969 aerial photograph shows the area to be extensively residentially developed with some commercial development along Old Katy Road. Residential and commercial development appears to have continued until 2004.

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## **6 PROJECT ALIGNMENT RECONNAISSANCE**

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### **6.1 OBJECTIVE**

The objective of the Project Alignment reconnaissance was to obtain information indicating the likelihood of identifying RECs in connection with the Project Alignment. A TWEI environmental professional conducted the Project Alignment reconnaissance on July 8, 2007. Project Alignment reconnaissance photographs are contained in Appendix E of this report.

## **6.2 METHODOLOGY AND LIMITING CONDITIONS**

We traveled the Project Alignment along its length to observe boundary conditions and conditions of adjoining properties. We photographed representative conditions and documented key features.

## **6.3 OBSERVATIONS**

No major conditions have changed since the original reconnaissance work was done (October 3, 2006).

### **6.3.1 Storage Tanks**

In the original Phase I ESA, an underground petroleum storage tank (PST) was identified at the CostCo located at 1150 Bunker Hill Road, which is now Parcel 5. A Chevron gas station, located at 9620 Long Point Road and approximately 450 ft from the Project Alignment, has three underground petroleum storage tanks, The Best Buy Auto, located at 9729 Long Point Road and approximately 50 ft from the Project Alignment, has an aboveground waste oil tank. These three locations are now considered RECs because of their proximity to the expanded Project Alignment.

### **6.3.2 Other Conditions of Concern**

Pursuant to *ASTM-E-1527-05*, the following conditions were checked for during the Project Alignment reconnaissance, but were not observed:

- Hazardous substances and petroleum products in connection with identified uses;
- Oil, gas, and water wells;
- Odors;
- Drums;
- Hazardous substance and petroleum products containers;
- Unidentified substance containers;
- Pipelines;
- Pools of non-aqueous liquid;
- Pits, ponds, and lagoons;
- Stressed vegetation;

- PCB-containing equipment, and;
- Stained soil or pavement.

## **6.4 INTERVIEWS**

### **6.4.1 Interviews with Owners, Managers, Occupants, and Local Government Officials**

The Project Alignment is a roadway owned and maintained by the City of Houston, and City officials, project managers, and occupants were not interviewed as part of this Phase I ESA. No research from other activities undertaken as part of this Phase I ESA resulted in findings warranting interviews with government officials.

### **6.4.2 Interviews with Others**

We attempted to contact owners or occupants of facilities directly adjacent to the Project Alignment. The following is a summary of the business representatives with which we were able to make contact. No additional interviews were conducted for this Phase I ESA. The following paragraph is a summary of Records of Communication from the original report that are relevant to the expanded project.

During Project Alignment reconnaissance conducted for the original report on October 3, 2006, we interviewed a representative of Ahn's Auto & Repair, located at 9825 Long Point Road. He provides auto body repairs and has no storage tanks at the location. We also spoke with a representative of a Chevron, located at 9620 Long Point Road. They have three underground tanks and two wells that are monitored by Chevron when tanks are refilled. An interview with Best Buy Auto Center, located at 9729 Long Point Road, revealed no underground tanks and one aboveground waste oil tank. These three locations are considered to be RECs with respect to the expanded Project Alignment.

We attempted to make contact with Le's Cleaners, located at 9620 Long Point Road on October 3, 2006 and again on July 8, 2007, but the facility was not open. Signage indicated that they offer same day dry cleaning services, indicating that a plant may be located on the site. This location is over 500 ft from the expanded Project Alignment; therefore, it is not considered to be a REC.

We spoke with a representative of CEO Manufacturers, located at 1111 Bunker Hill Road, on October 3, 2006. The location currently manufactures garments, including silk screening, which involves the use of paints, lacquers, and solvents. The facility was owned by AT&T in the past, as listed in the Atlas Data Report. This location is a REC because of the use of solvents and the presence of an underground storage tank in the past.

We interviewed Prince Cleaners, which has been a dry cleaning drop off location for forty years. A representative of Village Cleaners, located at 949 Bunker Hill Road, was also interviewed. The facility provides on-site dry cleaning services, uses a service to dispose of waste chemicals,

and has received no violations. He remembered the removal of underground storage tanks at the Texaco on Bunker Hill Road in both 1995 and 2005. The two cleaners are not considered RECs because of their lack of on-site services and distance from the Alignment, respectively.

A representative of Compass Bank, located at 9669 Katy Road, was interviewed. She knew nothing about any underground storage tanks associated with a Phillips 66 that was listed in the Atlas report as being at that address. We spoke with a representative of CostCo, located at 1150 Bunker Hill Road. He confirmed three underground storage tanks currently being used at the location. We interviewed the owner of Your Kitchen, located at 9785 Long Point Road. He did not know of a gas station being at that location in the past. We also spoke with the owner of Auto Discount Center, located at 9801 Long Point Road. He no longer provides auto repair services, but did in the past. At that time he had an aboveground storage tank for waste oil provided and maintained by a service. These four locations are considered RECs because of current or past presence of underground storage tanks and their proximity to the Project Alignment.

We attempted to contact a representative of Daniel Industries, located at 9720 Old Katy Road, by telephone. A message was left for Robin Palmer. We received a telephone call from Mr. Phil Spooner, representing WSP Environmental Strategies on behalf of Daniel Industries. He explained that they are finishing work for the Voluntary Cleanup Program (VCP). They have been monitoring wells at nine locations: seven are located in the residential neighborhood north of Daniel Industries Property and two are located on the land undergoing apartment building construction, also north of the property. He explained that the area has two aquifers, one deeper than the other. Their results indicated that the upper (closer to the surface) aquifer is contaminated only on the Daniel Industries property. Outside of the property, only the lower aquifer is contaminated. Therefore, it was his opinion that digging would have to be extreme in order for road construction workers to be at risk.

To further our investigation of recent information on Daniel Industries, we contacted a representative of the Spring Branch Public Library for recent groundwater reports in the area. She explained that they did have a water study but that it was never requested and the supplier reclaimed it. We spoke with Laura Tobin of WSP in Denver, Colorado. WSP is the current contractor for the environmental remediation of the facility. She knew no details concerning the facility but confirmed that groundwater remediation is still being performed by their client and reporting to the State (TX). At that point we contacted the TCEQ remediation offices and spoke with Dean Perkins, the project manager of the Daniel industries remediation project. He provided TWEI current groundwater monitoring results and plume maps, as discussed in Section 5.1.1.

We were also able to make contact with a representative of Hurricane Measurement and Control, located at 9600 Old Katy Road. She explained that the VCP was completed and the facility is no longer there. The location is currently the CostCo shopping center. Both these locations are considered RECs because of possible soil contamination reported in the Atlas Data Report.

We contacted the TCEQ offices to request closure documentation for Excel Auto. They explained that prior to 1995, little formal documentation was issued and furthermore, the site may not have been classified as an LPST site according to current standards.

## 7 FINDINGS AND CONCLUSIONS

Tolunay-Wong Engineers, Inc., (TWEI) was retained by TC&B to conduct a Phase I ESA for the expanded Bunker Hill Pavement Improvements Project in Houston, Harris County, Texas.

The purpose of a Phase I ESA is to document environmental conditions of a Site and adjacent properties. This is done by identifying, to the extent feasible, pursuant to the process described in the *American Society for Testing and Materials (ASTM) Standard Practice for ESA's (ASTM E-1527-05)*, recognized environmental conditions (RECs) at a Site.

Eleven locations that were identified as RECs within the original report are also RECs with regard to the expanded project. They are listed in the following table:

**Table 3: RECs Identified in TWEI Report 06.12.063**

REC	Address	Type
Hurricane Industries	9600 Old Katy Road	Voluntary Cleanup Program (VCP), No Further Action Planned (NFRAP)
Spring Branch Honda	9702 Old Katy Road	Historic waste generator (RCRA), Petroleum Storage Tank (PST), & Leaking PST (LPST)
Centre at Bunker Hill/ CostCo	1150 Bunker Hill Road	Current PST & RCRA
Daniel Industries	9720 Old Katy Road	Historic RCRA, VCP, & PST
Texaco Service Station	995 Bunker Hill Road	Historic RCRA, PST, & LPST
BKP Warehouse	9714 Old Katy Road	Emergency Response Notification System (ERNS)
Excel Auto/ Auto Discount Center	9831/9801 Long Point Road	Current and historic RCRA, historic LPST & PST
Korner Entry/ Your Kitchen Look Plaza	9847 Long Point Road	Historic RCRA, LPST, & PST
First South Falls	1375 Bunker Hill Road	Historic LPST & PST
Compass Bank/ Discount Tire & Brake	9669 Katy Road	Historic LPST & PST
AT&T-IS/ CEO Manufacturers	1111 Bunker Hill Road	Historic PST

Additional information for two of these already identified REC locations was discovered in the title search records. The chain of title search reported impact from metals for Hurricane Industries (Parcel 5). Zinc, arsenic, cadmium, chromium, and lead impacts on the property are reported to have been remediated to meet or exceed the industrial/commercial soil criteria established by the Texas Commission on Environmental Quality (TCEQ). Groundwater is not reported to be contaminated. Based on the figures and tables provided, the area of metals contamination is approximately 800 ft from the Project Alignment and did not exceed 6 ft below ground surface (bgs). This area is currently the parking lot for the Centre at Bunker Hill shopping center. Because of the distance from the Project Alignment and because lateral movement of contaminants through the soil over such distances is unlikely, we do not consider the area of metals contamination to be a REC with regard to the Project Alignment.



Chain of title documentation also indicates potential metals impact from Gulf Steel Co. (Parcel 9). This is also the location of Daniel Industries. Soil and groundwater testing conducted at Daniel Industries by WSP Environmental Strategies (formerly Environmental Strategies Consulting LLC) as part of the VCP program indicated metals levels exceeding the TCEQ's Protective Concentration Limits (PCL) only in soils at 2 ft bgs or shallower. This limited area of metals contamination was found along the western property boundary, more than 1,000 ft from the Project Alignment. Because of the distance of potential contamination from the Project Alignment and because lateral movement of metals through the soil over such distances is unlikely, we do not consider the area of metals contamination to be a REC with regard to the Project Alignment.

Several facilities were researched for the original report, but were not considered to be RECs because of their distance from the Project Alignment. Because the Project Alignment has expanded, four of these are now within 500 ft of the Project Alignment and therefore are now considered to be RECs. They are described in the following table:

**Table 4: Additional RECs**

<b>REC</b>	<b>Address</b>	<b>Type</b>	<b>Distance/Direction</b>
Ahn's Auto & Repair	9825 Long Point Road	Historic RCRA	100 ft E
Chevron Station	9620 Long Point Road	Current PST	450 ft E
Best Buy Auto Center	9729 Long Point Road	Current RCRA	50 ft E
Don's Tires and Wheels/ Ada Oil Co.	9801 Long Point Road	Historic RCRA	Parcel 2

TWEI has conducted a Phase II ESA soil testing program designed to test for RECs identified in the original Phase I ESA report. Although additional RECs have been identified in this report (Table 4), no releases have been reported from any of these REC locations. It is our professional opinion that the soil testing program already conducted was sufficient to encounter potential releases from these locations also. The results of the Phase II ESA soil boring program are contained under separate cover (TWEI Report No. 07.12.034).

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## **8 RECOMMENDATIONS FROM THE PHASE I ESA**

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We have no recommendations for further work regarding the findings of this Phase I ESA.

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## 9 LIMITATIONS AND EXCEPTIONS

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### 9.1 USER RELIANCE

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions, recommendations, and conclusions contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. Environmental conditions may exist at the property that cannot be identified by visual observation. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

### 9.2 LIMITATIONS OF THE PHASE I ESA

Pursuant to *ASTM E-1527-05*, the following were excluded from the scope-of-work for the Phase I ESA:

- Radon;
- Regulatory compliance;
- Soils testing;
- Health and safety;
- Asbestos surveys;
- Lead in drinking water;
- Lead-based paint surveys;
- Industrial hygiene;
- Ecological resources;
- Groundwater testing.

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## 10 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

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The material and data in this Phase I Environmental Site Assessment of the Bunker Hill Improvements Project located in Houston, Harris County, Texas, were prepared under the supervision and direction of the undersigned.

TWE Project Number 07.12.034

October 31, 2007



Amy Kunza  
Staff Biologist  
Environmental Services Division



Paul R. Wild  
Vice President  
Environmental Services Division

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## 11 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

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The resumes of the environmental professionals who prepared this report are presented below.

**AMY KUNZA**  
**STAFF BIOLOGIST, ENVIRONMENTAL SERVICES DIVISION**

**SPECIALIZATION**

Over 6 years experience in the education of coastal ecosystem functioning. Conducted research in wetland plant identification and plant diversity patterns of barrier island salt marshes. This research included work in the coastal marshes of the Texas Gulf Coast from Bolivar Peninsula to Port Aransas and required the accurate identification of over fifty coastal wetland plant species as well as knowledge of their ecological function. Research projects also included work with the Georgia Coastal Ecosystem chapter of the Long Term Ecological Research program. Has experience in Animal and Plant Taxonomy, and Animal and Plant Survey Methods. Field experience includes Phase I Environmental Site Assessments, Wetlands Determinations & Delineations, Threatened & Endangered Species File Review, Historical and Cultural Resources Survey, Phase II Environmental Site Assessments Soil and Water Testing.

**PROFESSIONAL HISTORY**

Tolunay-Wong Engineers, Inc., Houston, TX, May 2006 - Present  
University of Houston, Houston, TX, August 2003 – August 2006  
Kiawah Island Resort, Kiawah Island, SC, 2003  
Outside Hilton Head, Hilton Head Island, SC, 2000-2001

**EDUCATION**

Bachelor of Science, University of Georgia, Botany, May 1999.  
Master of Science, University of Houston, Biology, August 2006.  
Thesis: Plant Diversity Patterns of Salt Water Marshes of Texas and Georgia.

**PAUL R. WILD**  
**VICE PRESIDENT - ENVIRONMENTAL SERVICES DIVISION**

**SPECIALIZATION**

Conducts technical reviews of environmental management systems, and directs environmental compliance audits, risk assessments, environmental site assessments, and asbestos surveys. Manages RCRA Facility Investigations and Corrective Measures Studies. Manages all phases of underground storage tank release evaluations from initial investigation to remediation. Conducts Environmental Assessments under the National Environmental Policy Act. Evaluates analytical testing data and oversees contract laboratory quality assurance, including on-site auditing. Supervises drilling and sampling operations at hazardous waste sites and provides assessment of soil and groundwater contamination. Conducts chemical literature research and assesses waste treatment methods. Evaluate applicable or relevant and appropriate requirements (ARARs) in relation to remedial actions and air/water/waste permitting. Develops health and safety plans and monitors health and safety plan compliance. Evaluates census tract data, property ownership records, aerial photography, house-to-house survey data, and other publicly available data, including interviews with regulatory and governmental agency personnel, to assess possible or probable social and economic impacts to communities from construction and remediation projects.

**PROFESSIONAL HISTORY**

Tolunay-Wong Engineers, Inc., Houston, Texas, 2002 to Present  
Washington Group International, Houston, Texas, 1985 - 2002, Manager of Environmental Services  
Resource Engineering, Inc. (ENSR), Houston, Texas, 1985, Staff Chemist  
McBride-Ratcliff and Associates, Inc., Houston, Texas, 1984 - 1985, Field Technician

**EDUCATION**

B.S. Chemistry (Zoology minor): Marshall University, 1983

**CERTIFICATION**

OSHA Certified for Hazardous Waste Site Work (OSHA 29 CFR 1910.120)  
OSHA 29 CFR 1910.120 Supervisor Training  
Asbestos Hazard Emergency Response Act (AHERA) building inspector and management planner  
Illinois Licensed Asbestos Inspector #100-7145  
TCEQ Corrective Action Project Manager Reg. #CAPM00385

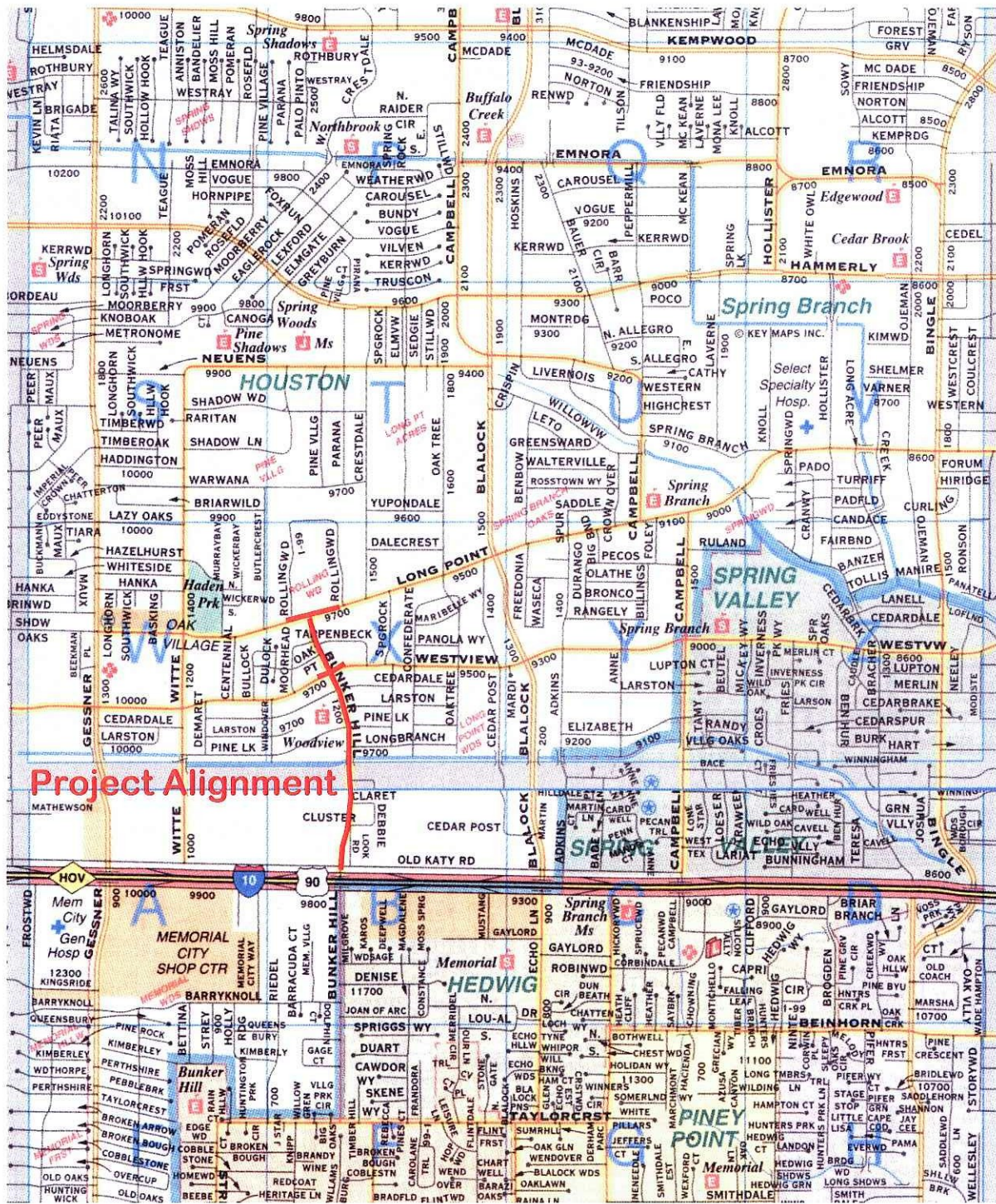
**AFFILIATIONS**

American Chemical Society

**PUBLICATIONS**

"A Contaminant-Resistant Slurry Trench," W. R. Tobin, co-author, presented at the First Annual Southern Regional Ground Water Conference, San Antonio, Texas, September 1985, pp. 193-208.  
"Attapulgate: A Clay Liner Solution?" W. R. Tobin, co-author, Civil Engineering, Vol. 56, No. 2, February 1986, pp. 56-58.  
"The Environmental Site Assessment as a Pre-Investment Security," presented at the Texas Section, American Society of Civil Engineers Spring Meeting, Dallas, Texas, April, 1987.

**FIGURE 1: PROJECT VICINITY AND ALIGNMENT LAYOUT**



**PROJECT ALIGNMENT MAP**

Source: Harris County Key Maps Pages 450 Block X and 490 Block B

Scale: 1" = ~2600'



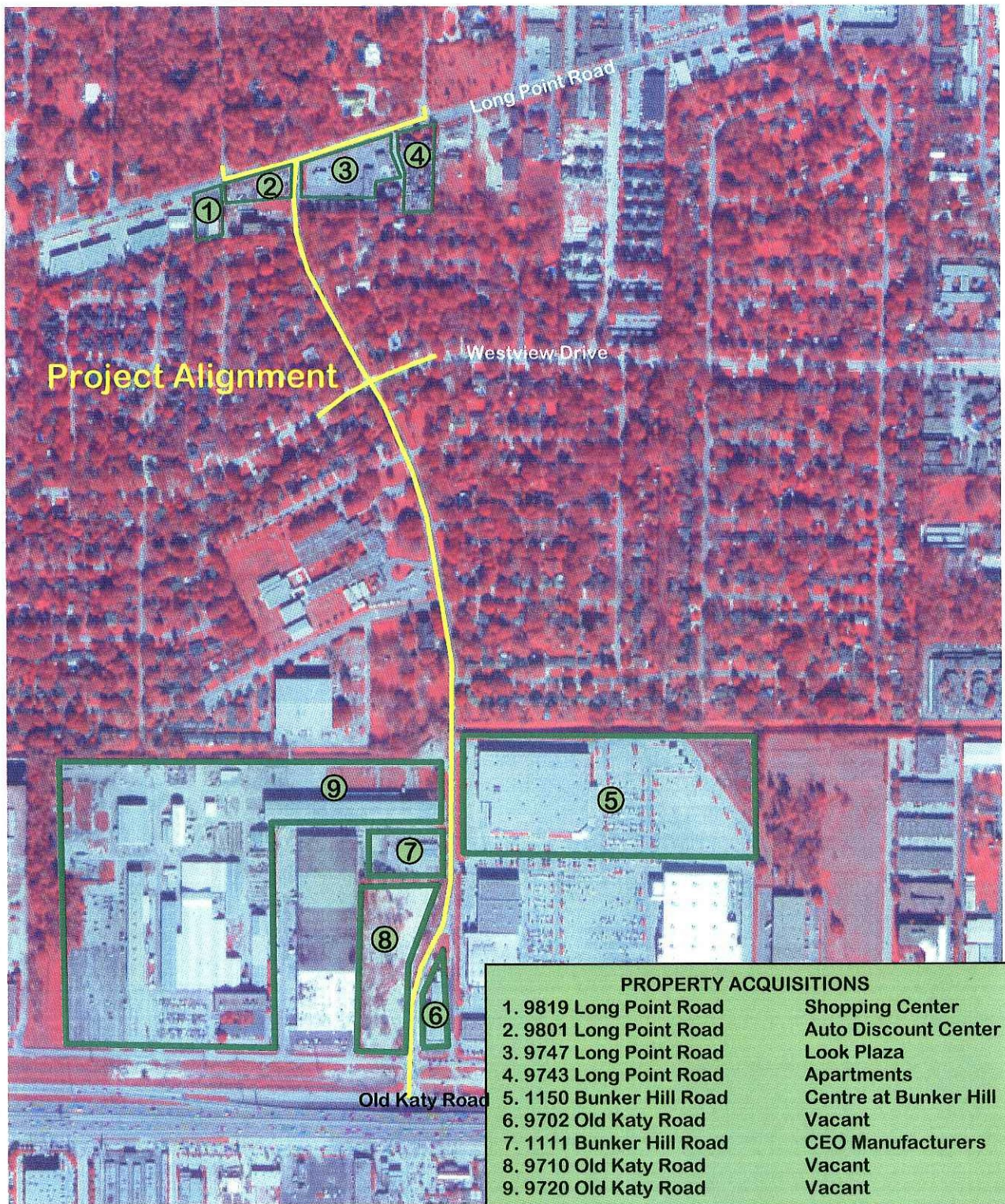
**Project: Environmental Services  
Bunker Hill Pavement  
Improvement Project  
Houston, Harris County, TX**



**Tolunay-Wong  
Engineers, Inc.**  
Houston, Texas

**Project No.: 07.12.034**

**Client:  
Turner, Collie & Braden**

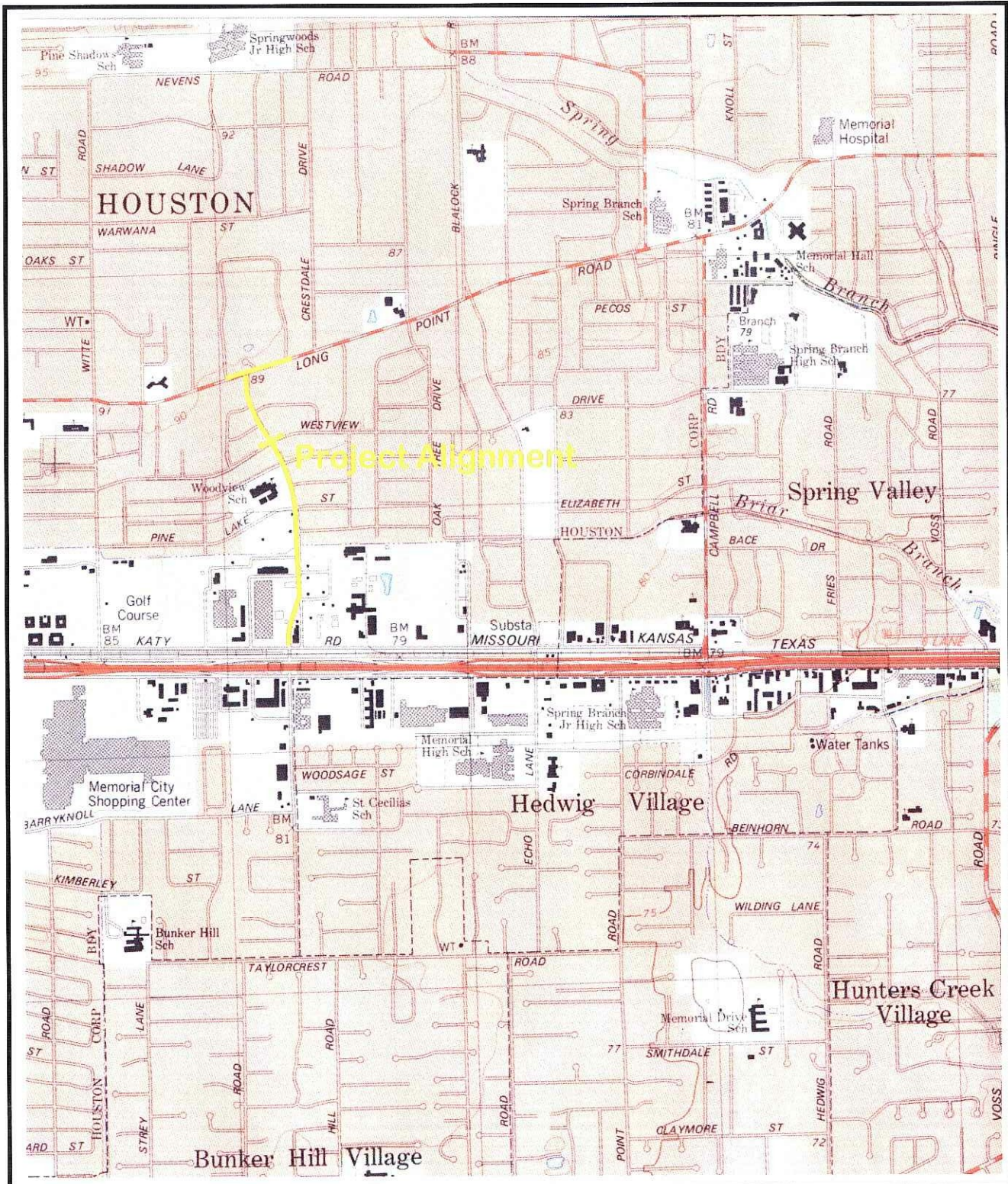


PROPERTY ACQUISITIONS	
1. 9819 Long Point Road	Shopping Center
2. 9801 Long Point Road	Auto Discount Center
3. 9747 Long Point Road	Look Plaza
4. 9743 Long Point Road	Apartments
5. 1150 Bunker Hill Road	Centre at Bunker Hill
6. 9702 Old Katy Road	Vacant
7. 1111 Bunker Hill Road	CEO Manufacturers
8. 9710 Old Katy Road	Vacant
9. 9720 Old Katy Road	Vacant

<b>PROJECT VICINITY AND ALIGNMENT MAP</b> SOURCE: Base Map- 2004 TNRS IR Photograph ( <a href="http://www.tnris.state.tx.us/digital.htm">http://www.tnris.state.tx.us/digital.htm</a> )		Scale 1"=~665' 
Environmental Services Bunker Hill Pavement Improvement Project Houston, Harris County, TX	 <b>Tolunay-Wong          Engineers, Inc.</b> Houston, Texas	Proposal No.: 07.12.034 <hr/> Client: Turner, Collie & Braden



**FIGURE 2: TOPOGRAPHIC MAP**



**TOPOGRAPHIC MAP**

SOURCE: USGS 7.5 Minute Quadrangle Map  
Hedwig Village, TX, 1982

Scale 1"=2000'



**Project: Environmental Services  
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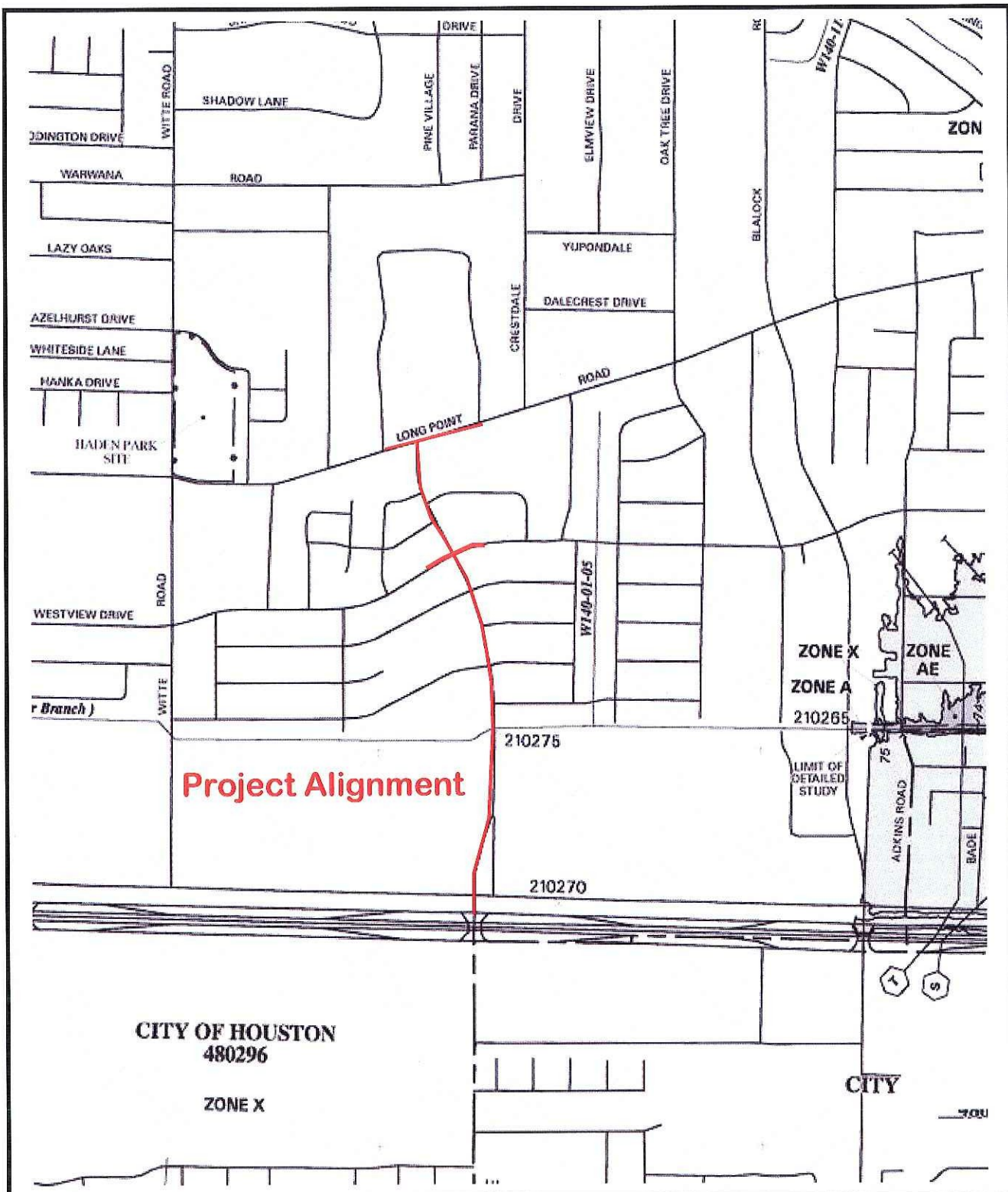


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**Project No.: 07.12.034**

**Client:  
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**FIGURE 3: FEMA FIRM**




**FEMA FIRM**  
 SOURCE: Federal Emergency Management Agency Flood Insurance Rate Map  
 Panel No. 4820C0645L, June 9, 2006



**Scale:**  
 1" = ~XX'

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 Bunker Hill Pavement  
 Improvement Project  
 Houston, Harris County, TX**



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 Engineers, Inc.**  
 Houston, Texas

**PROJECT NO.: 07.12.034**

**Client:  
 TC&B**