

**Initial Site Assessment
Dowling Road Extension
Anchorage, Alaska**

November 2004



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ACRONYMS AND ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
ASI	Alaska Seafood Institute
AST	Above-ground Storage Tank
AWWU	Anchorage Water and Wastewater Utility
CEA	Chugach Electric Association
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
EPA	U.S. Environmental Protection Agency
ISA	Initial Site Assessment
LUST	Leaking Underground Storage Tank
NPL	National Priorities List
PCB	Polychlorinated biphenyls
ROW	Right-of-Way
TSD	Treatment, Storage, and Disposal
UST	Underground Storage Tank

**INITIAL SITE ASSESSMENT
DOWLING ROAD EXTENSION PROJECT
ANCHORAGE, ALASKA**

1.0 INTRODUCTION

This report presents the results of our Initial Site Assessment (ISA) of the Dowling Road Extension Project, Anchorage, Alaska. The purpose of the ISA was to develop a professional opinion regarding the potential presence of petroleum hydrocarbons and/or hazardous substances on or near the subject alignments. The ISA was conducted for HDR Alaska, Inc. Authorization to proceed was received from Mr. Duane Hippe of HDR Alaska, Inc., in the form of a Subconsultant Agreement. The scope of work was in general accordance with our proposal, which is included in Appendix A.

2.0 SITE AND PROJECT DESCRIPTION

The project site consists of three different concepts to extend Dowling Road west to Minnesota Drive. The Property is located in mid-town Anchorage, Alaska. All three concepts are located between International Airport Road to the north, Old Seward Highway to the east, Raspberry Road to the south, and Minnesota Road to the west. Because the proposed alignments overlap in some areas, and for simplicity, the three concepts will be broken down and referred to as lettered sections of the Property in this report. The sections are as follows:

Section A	Dowling Road from Old Seward Highway to Rovenna Street.
Section B	Dowling Road from Rovenna Street directly west to Minnesota Drive
Section C	Minnesota Drive between West Dowling Road and International Airport Drive.
Section D	Minnesota Drive between West Dowling and Raspberry Road.
Section E	Raspberry Road between the Minnesota Bypass and C Street.
Section F	Rovenna Street between Dowling Road and Raspberry Road.

Using these sections the three proposed alignments are broken down as follows:

Frontage Road	Sections A, B, C, D, and E
Rovenna Concept	Sections A, E, and F
Rovenna/Frontage Road	Section A, B, C, E, and F

A Vicinity Map showing the Property and surrounding areas is included as Figure 1. Figure 2 depicts designated Sections as well as the three proposed alignments; the Frontage Road, Rovenna, and the Rovenna Frontage Concepts. Figure 3 shows the proposed alignments

in relation to known underground storage tank (UST), leaking underground storage tank (LUST), and contaminated sites. Historic and current aerial photographs are presented as Figures 4 through 6.

The purpose of the ISA is to identify actual or potential environmental concerns associated with the Property and/or surrounding areas. The ISA included both a records research and a limited on-site visual evaluation of the Property grounds. Prior to the on-site evaluation, historical aerial photos were examined to identify areas of potential concern. Local offices were contacted or visited during the records review and site visit to determine public utility services to the alignments.

3.0 RECORDS REVIEW

The records review was conducted to identify previous activities on this land parcel which may have constituted environmental misuse and/or contributed waste residuals to the site. A review of historic aerial photographs was utilized to verify previous land use for this project. Visits or contacts were made to local public utilities companies. Environmental regulatory agency databases were reviewed to gather information regarding environmental conditions in the Property vicinity.

Applicable environmental regulations are promulgated by federal, state, and local agencies. The following lists and databases were reviewed to evaluate the proposed alignment's regulatory status:

- Alaska Department of Environmental Conservation's (ADEC's) Registered UST, LUST, Spills List, and state-registered Contaminated Sites;
- National Priorities List (NPL) sites;
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) sites and;
- Anchorage Wetlands Management Plan.

3.1 Applicable to the Three Concepts

This section describes the portion of the records review that is applicable to the Frontage Road, Rovenna Road, and Rovenna Frontage Road concept. Discussions of the individual concepts including historical aerial photography, utilities, and ADEC identified sites are included in the section for the individual concept.

3.1.1 EPA Databases

There are three listed hazardous materials Treatment, Storage, and Disposal (TSD) facilities in the Anchorage area: Elmendorf Air Force Base, Fort Richardson, and the Alaska Railroad Corporation. These three sites are not within 0.25 mile of the proposed alignments.

The NPL list specifies those properties assigned the U.S. Environmental Protection Agency's (EPA) highest cleanup priority. The EPA web site was reviewed for NPL sites in Alaska. There are two listed NPL sites in the Anchorage area: Elmendorf Air Force Base and Fort Richardson. These two sites are in excess of 0.25 mile of the proposed alignments.

The CERCLIS list is also compiled by the EPA and includes sites the EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the NPL. According to the CERCLIS list, viewed on the EPA website, three CERCLIS sites are located in the Anchorage area. These three sites are Elmendorf Air Force Base, Standard Steel and Metal Salvage Yard, and Fort Richardson. These sites are not located within 0.25 mile of the proposed alignments.

3.1.2 Wetlands Status

According to the Anchorage Wetlands Management Plan, dated April 1996, the proposed alignments encounter several designated wetland areas. The following discussion is for informative purposes, additional evaluation of the boundaries and restrictions for developing wetlands within the proposed alignments is highly recommended.

Campbell Creek and Trina Lake, encountered in Section A and part of each of the three options, are classified as Class A wetlands; and Campbell Creek is additionally designated as part of the Anchorage Coastal Zone Management Boundary. Except for the Rovenna Concept, the other two concepts also encounter designated wetlands along Minnesota Drive. The area around Blueberry Lake contains Class A, B, and C wetlands and a separate Class C wetland is located near the proposed intersection of Section C with International Airport Road. "A" wetlands have the highest wetland values. It is the explicit intention of the Municipality that "A" wetlands shall be maintained in their natural state to the maximum extent practicable. "B" wetlands have a moderate to high wetland value. According to the Municipality, Class "B" shall be maintained to the maximum extent in all development activities.

3.2 Frontage Road Concept

3.2.1 Aerial Photography

Aerial photographs from Aeromap USA, Inc., were reviewed to evaluate prior and present land use in this area. Of the aerial photos that illustrate significant land use patterns, three were chosen to print. These photos from 1950, 1970, and 1990 are included as Figures 4

through 6, respectively. The scale on each photograph varies and is indicated on the photo. The approximate alignments are shown in red on the photographs for reference.

In the 1950 aerial photograph, included as Figure 4, Sections C, D, and E of the Frontage Road concept appear undeveloped in this photograph. Vegetation and some ponds are visible in these areas. Some development is visible in Sections A and B and is summarized below.

- Section A.** A gravel Old Seward Highway is visible on the eastern boundary of the study area and the eastern portion of Section A (Dowling Road) is also visible as a gravel road. A few small structures, likely residences, are visible on this portion of Section A. Historical information from previous studies in the area indicates that the parcel at the southwest corner of the Dowling Road and Old Seward highway intersection may have been a service station as early as this photograph. The portion of Section A between Curlyva Street and Arctic Boulevard appears undeveloped.
- Section B.** A gravel surfaced Arctic Boulevard is visible in this photograph at the eastern boundary of Section B. What is reportedly a former depot is visible near this portion of the alignment, where Arctic Boulevard intersects the main line of the Alaska Railroad. A few small structures are visible.

Significant changes have taken place between the 1950 and the 1970 aerial photographs. The 1970 photo is included as Figure 5 and a description of Sections A through E is included below.

- Section A.** Additional development, a mixture of residential and commercial, is visible along the Old Seward Highway which appears as a paved road. A residential area is visible on the south side of Dowling Road and the gas station at the intersection of Dowling Road and the Old Seward Highway is now visible. C Street has been extended across the west-central portion of Section A, although Dowling Road has not been extended as far as C Street. Some construction activity and a trailer park are visible to the north of Section A, but the portion between C Street and Arctic Boulevard appears generally similar to the earlier photograph.
- Section B.** A large structure is visible to the north of Section B, near the intersection of Arctic Boulevard and the Alaska Railroad. Although some clearing and perhaps a trail are visible on the remaining portion of Section B it appears generally similar to the earlier photograph.

- Section C.** The areas to the west of Section C appears undeveloped and what appears to be an electrical substation is visible to the east of the proposed alignment. A large aboveground storage tank (AST) is visible within a bermed area to the south of the structure. A smaller structure and a cleared area are visible further north of the substation.
- Section D.** The area to the south of Dowling road, along the future Minnesota Drive, is largely undeveloped in this photograph. A few trails are visible that seem to provide access to Blueberry Lake.
- Section E.** The western portion of Section E appears largely undeveloped in this photograph, although some clearing is evident along lot or section lines. The eastern portion of Section E, between Arctic Spur Road and C Street, appear to have been developed as a commercial/industrial area. Large buildings, fenced yards, and equipment storage is visible in this area.

The 1990 aerial photograph, included as Figure 5, shows additional development along the alignment. The eastern edge of this photograph ends just before the intersection with the Old Seward Highway.

- Section A.** In addition to extending Dowling Road to the C Street intersection, additional residential and commercial/industrial development has occurred along Section A. The residential area to the south of the east end of Section A has been expanded, as has the residential area to the north. A large commercial structure (the Sears Warehouse) and additional commercial structures are visible to the north and south of Dowling Road, respectively. The remaining section, except for the area immediately surrounding Tina Lake has either been developed as commercial/industrial parcels or is in the process of being developed.
- Section B.** Except for an undeveloped area adjacent to Minnesota Drive, which is now visible to the west, most of Section B has undergone changes from the earlier photo. A large warehouse type structure is visible to the south of Dowling Road and an active gravel pit is visible to the west of the warehouse. What appears to be a small electrical station is visible to the north of Dowling Road, adjacent to a cleared but undeveloped area. A fenced yard containing many small containers, possibly drums, is located to the north of Dowling Road, near the west end of Section B.
- Section C.** The substation visible in the earlier photographs is still visible and several additional structures have been constructed to the east of Section C. In addition to three large office/warehouse buildings two large AST's are visible near the

southern portion of the section. These tanks are likely associated with the gravel pit operation located further south. Numerous smaller items, potentially including drums, are visible just south of the two ASTs.

- Section D.** With the exception of the gravel pit described above and some disturbance along Minnesota Drive, Section D appears similar to the earlier photograph.
- Section E.** The western portion of Section E appears largely undeveloped in this photograph, although a few long containers (similar to connexes or tankers) are visible near the entrance of a construction yard. Some small equipment or vehicles are visible in the southern portion of the construction yard which is located to the north of 68th Avenue. A residential area is visible to the south of 68th Avenue and the eastern portion of Section E has been further developed as a commercial/industrial area. Numerous warehouses, fenced yards, and stored materials are visible in the photograph.

Although not included with this report, a negative of a 2003 photograph was viewed at Aeromap USA, Inc. In general, this negative showed the area much as it appears today and similar to the 1990 photograph included with this report. Some additional development is visible, but is largely limited to completing development of undeveloped or partially developed parcels. The biggest change observed is the upgrade of Minnesota Drive with ramps and the construction of the Alaska Seafood International (ASI) building where the former Eastwind Construction yard was located along Section E.

3.2.2 Permits and Utility Services

The Anchorage Water and Wastewater Utility (AWWC) was contacted on November 15, 2004, to gather information about water and sewer mains installed along the proposed alignment. ENSTAR as-built records, dated 2004, were reviewed to determine when natural gas service was available along the proposed alignment. The following information was retrieved.

- Section A.** A sewer main running east-west, beginning at the Old Seward Highway, along Dowling Road through to C Street was installed in 1978 and extended several times through 1999. The portion of Section A between C Street and Rovenna Street has access to a sewer main that was installed in 1980. A water main running east-west, beginning at the Old Seward Highway, along Dowling Road through to C Street was installed in 1976, and extended in 1986. The portion of Section A between C Street and Rovenna Street does not have access to municipality water mains. Structures on the neighboring properties predate public water and sewer installation. Natural gas was installed along Section A beginning in 1969 and installation continued progressively west until 1971.

- Section B.** Public water and sewer mains and natural gas have reportedly not been installed along Section B.
- Section C.** A water line was installed in Minnesota Drive in 1983, however records for the installation of a sewer line were not located. Natural gas was installed in the northern portion of Section C in 1989.
- Section D.** Public water and sewer mains and natural gas have reportedly not been installed along Section D.
- Section E.** Public water and sewer lines have been installed along Section E between Minnesota Drive and Arctic. The water lines were first installed in 1963 and 1964 and were upgraded or extended in 1981. The sewer lines were first installed in 1979 and upgraded in 1983. Natural gas lines were reportedly first installed along the eastern portion of Section E between Arctic Boulevard and Rovenna Street in 1965. The portion of Section E from Arctic Boulevard to Minnesota Drive had natural gas lines installed in 1980.

Numerous pole and pad mounted transformers were observed throughout the alignment. Transformers are significant because of the possible presence of polychlorinated biphenyls (PCBs). It is important to note that a PCB release would be the responsibility of the electrical utility.

3.2.3 Regulatory Status

The ADEC registered UST records, LUST records and Contaminated Sites Database, were viewed on the ADEC website. A summary of the ADEC records is included in Tables 1 through 3; respectively, and the sites adjacent to the proposed alignment is discussed below. The locations of these sites are shown on Figure 3.

- Section A.** Three registered UST sites were identified that are adjacent to Section A of the proposed alignment. Two of these sites, Senco Alaska and Williams Express Store 5021 are also listed on the LUST list with priorities of high and low, respectively. The third site is the World Equipment site which is listed as having one tank permanently out of use. No ADEC contaminated sites were identified on the database adjacent to Section A.
- Section B.** One registered UST site and one ADEC contaminated site were identified adjacent to Section B. The Alaska Steel site is listed as having one UST that is permanently out of use. The Central Paving Products is listed as a high priority contaminated site due to diesel contamination.

- Section C.** One registered UST site, which is also listed as a contaminated site, and one other contaminated site were identified along Section C. The Chugach Electric Association (CEA) Substation is listed as having 6 tanks out of use and two tanks currently in use. The substation is also listed as a closed contaminated site. Contamination was also found in the Minnesota Drive Right-of-Way (ROW) during previous work, and although this is listed as a contaminated site, it is designated as medium priority and inactive.
- Section D.** Registered UST, LUST or ADEC contaminated sites were not identified along Section D.
- Section E.** Two registered UST sites, which are also identified as LUST and contaminated sites are located along Section E. The Viking Freight site located at 6800 Arctic Boulevard is listed as having one out of use UST and as a high priority LUST site. This site is also listed as a contaminated site with low priority under the name of Golden North Van Lane. Wells Fargo Bank is listed as having one out of use tank and two active tanks as well as a low priority LUST site at 6831 Arctic Boulevard. This site is also listed as a low priority contaminated site due to contamination from a heating oil tank.

3.3 Rovenna Concept

3.3.1 Aerial Photography

Aerial photographs from Aeromap USA, Inc., were reviewed to evaluate prior and present land use in this area. Of the aerial photos that illustrate significant land use patterns, three were chosen to print. These photos from 1950, 1970, and 1990 are included as Figures 4 through 6, respectively. The scale on each photograph varies and is indicated on the photo. The approximate alignment Sections are shown in red on the photographs for reference. The Rovenna Concept includes Sections A, E, and F, see Section 3.2.1 of this report for a description of Sections A and E which are part of the Frontage Road Concept.

In the 1950 aerial photograph, included as Figure 4, a few cleared areas, apparently associated with homesteading activities are visible. The surrounding area, except for the Alaska Railroad ROW appears generally undisturbed.

In the 1970 aerial photograph development is visible along Section F. A small structure is visible on the north end of the section, adjacent to the Alaska Railroad and a commercial/industrial area has been developed to the east of Section F. Large buildings, fenced yards, and outdoor storage areas are visible in this area. The parcels to the west of Section F appear largely undisturbed, although a few trails are visible.

The 1990 photograph, included as Figure 6, shows that the area has undergone additional commercial/industrial development. The small structure along the Alaska Railroad is no longer visible and additional structures have been constructed in the commercial/industrial area to the east of Section F. The northern portion of the west side of Section F appears to have been developed in support of the gravel pit operations and two large buildings and outdoor storage areas are visible in the photo. The remaining area on the west side of Section F to the south remains undeveloped.

Although not included with this report, a negative of a 2003 photograph was viewed at Aeromap USA, Inc. In general this negative showed the area much as it appears today and similar to the 1990 photograph included with this report. The biggest change observed along Section F is the construction of the ASI building to the southwest of the section.

3.3.2 Permits and Utilities

AWWU was contacted on November 15, 2004, to gather information about water and sewer mains installed along the proposed alignment. ENSTAR as-built records, dated 2004, were reviewed to determine when natural gas service was available along the proposed alignment. The Ravenna Concept includes Sections A, E, and F, see Section 3.2.3 of this report for a description of Sections A and E which are part of the Frontage Road Concept.

A water main was installed along Section F, between Ravenna and the Alaska Railroad in 1977. Records of sewer or other water mains along Section F were not identified. Natural gas service was first available along Section F in 1981 and services was extended southward to Raspberry Road in 1998 and 1999.

3.3.3 Regulatory Status

The ADEC registered UST records, LUST records and Contaminated Sites Database, were viewed on the ADEC website. A summary of the ADEC records is included in Tables 1 through 3, respectively; and the sites adjacent to the proposed alignment is discussed below. The locations of these sites are shown on Figure 3. The Ravenna Concept includes Sections A, E, and F, see Section 3.2.3 of this report for a description of Sections A and E which are part of the Frontage Road Concept.

The 6400 Ravenna site is listed as a registered UST, a LUST, and a contaminated site. Two out of use tanks are listed at the site and it's identified as a high priority LUST site. Additionally the site is listed as a high priority contaminated sited due to surface spills and releases from regulated tanks.

3.4 Rovenna Frontage Road Concept

3.4.1 Aerial Photography

Aerial photographs from Aeromap USA, Inc., were reviewed to evaluate prior and present land use in this area. Of the aerial photos that illustrate significant land use patterns, three were chosen to print. These photos from 1950, 1970, and 1990 are included as Figures 4 through 6, respectively. The scale on each photograph varies and is indicated on the photo. The approximate alignment Sections are shown in red on the photographs for reference. The Rovenna Frontage Road Concept includes Sections A, B, C, E, and F. Sections A, B, C, and E are part of the Frontage Road Concept and are discussed in Section 3.2.1 of this report. Section F is also part of the Rovenna Concept and is discussed in Section 3.3.1 of this report.

3.4.2 Permits and Utilities

AWWU was contacted on November 15, 2004, to gather information about water and sewer mains installed along the proposed alignment. ENSTAR as-built records, dated 2004, were reviewed to determine when natural gas service was available along the proposed alignment. The Rovenna Frontage Road Concept includes Sections A, B, C, E, and F. Sections A, B, C, and E are part of the Frontage Road Concept and are discussed in Section 3.2.2 of this report. Section F is also part of the Rovenna Concept and is discussed in Section 3.3.2 of this report.

3.4.3 Regulatory Status

The ADEC registered UST records, LUST records and Contaminated Sites Database, were viewed on the ADEC website. A summary of the ADEC records is included in Tables 1 through 3, respectively; and the sites adjacent to the proposed alignment is discussed below. The locations of these sites are shown on Figure 3. The Rovenna Frontage Road Concept includes Sections A, B, C, E, and F. Sections A, B, C, and E are part of the Frontage Road Concept and are discussed in Section 3.2.3 of this report. Section F is also part of the Rovenna Concept and is discussed in Section 3.3.3 of this report.

4.0 SITE RECONNAISSANCE

The proposed three alignments were visually evaluated between October 14 and 22, 2004. Due to the size of the area evaluated and the stage of the current project, these evaluations were limited to visual observations from public ROWs. No structures were entered. Select photographs from the site visit are included in Appendix B.

4.1 Frontage Road Concept

Section A. The eastern end of Section A begins at the Old Seward Highway. As shown in Photographs 1 and 2 the developed area adjacent to Dowling Road is commercial in nature and a Tesoro fueling station is located at the southwest corner of Dowling Road and the Old Seward highway. Traveling west along Dowling Road the adjacent parcels transition to primarily residential in nature between Campbell Creek and the Potter Road curve.

Between the Potter Road curve and C Street the area is primarily commercial/industrial in nature (see Photo 3). Industrial activities observed included vehicle repair, radiator service, construction companies, and others. Photo 4 shows vehicles in various states of repair at Cook Inlet Auto located at 130 West Dowling Road. Several 55-gallon drums were observed within the fenced yard of Cornerstone Construction located near the intersection of B Street and West Dowling Road, as shown in Photo 5. A 30-gallon plastic container approximately two-thirds full of an unknown liquid was observed just in front of the white vehicle shown in Photo 5. An abandoned vehicle gasoline tank was observed within the undeveloped Dowling Road ROW between B and C Streets as shown in Photo 6.

World Trucking's yard, located at 6028 McKay abuts the Dowling Road ROW as shown in Photo 7. Heavy equipment, connexes, vehicle parts, and a diesel AST are stored in their yard, as shown in Photo 8. Numerous pole-mounted transformers were observed in the project area and two are shown in Photo 9.

Section B. This portion of the alignment is generally more industrial in nature than Section A. Central Paving Products is located on the south side of the alignment as shown in Photos 10 and 11. In addition to gravel and aggregate, Central Paving stores and sells asphalt. Several tanker trailers (shown in Photo 11) and upright asphalt tanks were observed on this parcel. An electrical substation, shown in Photo 12, is located on the north side of the alignment.

Section C. Traveling north along Section C the first portion of the alignment is undeveloped as shown in Photo 13. The adjacent land use begins with Central Paving Products and then a CEA Substation located on the east side. Trucks were observed spraying the bed with diesel fuel prior to picking up asphalt as shown in Photo 14 and a diesel sheen was observed on the surface soil in the ROW as shown in Photo 15. There were several large transformers and switches observed in the CEA yard as shown in Photo 16. The remaining adjacent properties transition to a more commercial/office nature further north along the alignment.

Section D. This area was not included in the visual evaluation.

Section E. This area was not included in the visual evaluation. The area could not be accessed without entering private property or fenced private areas.

4.2 Rovenna Concept

The Rovenna Concept includes Sections A, E, and F. Section 4.1 of this report describes the visual observations made along Sections A and E of these areas.

Section F. Rovenna Street is currently developed as a gravel road as shown in Photo 17 and the area adjacent to the ROW is generally undeveloped. A used oil container and miscellaneous debris was observed floating in the drainage ditch about half-way down the alignment as shown in Photo 18. Miscellaneous debris, including an engine were observed at the end of the developed roadway (see Photo 19). Additional debris was observed within the ROW near the end of West 64th Court, as shown in Photo 20, and an abandoned vehicle gas tank was observed near a structure located on West 64th Court, as shown in Photo 21.

4.3 Rovenna Frontage Road Concept

The Rovenna Frontage Road Concept includes Sections A, B, C, E, and F. Sections A, B, C, and E are part of the Frontage Road Concept and are discussed in Section 4.1 of this report. Section F is also part of the Rovenna Concept and is discussed in Section 4.2 of this report.

5.0 CONCLUSIONS

Based on our review of available records, aerial photographs, and a limited site reconnaissance, we did identify evidence of petroleum hydrocarbon or hazardous substance impact along each of the three proposed conceptual alignments. At least one registered UST, T.UST and/or contaminated site is located adjacent to each of the alignments. When a preferred alignment is selected we recommend conducting additional studies at each of these sites to evaluate whether they have impacted the proposed ROW.

Our review of available utility information indicates that portions of the alignments were developed prior to the availability of natural gas or water/wastewater service. Therefore alternative forms of heating were likely used and may have included oil stored in ASTs or USTs. Additionally it is likely that some of the adjacent parcels are connected to on-site wells and wastewater systems.

In addition to documented impacted sites, we visually observed potential petroleum hydrocarbon or hazardous substance impacts along each of the proposed alignments. These potential impacts included derelict vehicles, 55-gallon drums, abandoned containers, engine parts, and surface releases of diesel fuel, among other things. As above we recommend additional focused evaluation of these areas after a selection of a preferred alignment is made.

Designated wetland and coastal management areas were also identified along each of the proposed alignments. Additional study should be conducted prior to selecting a preferred alignment to account for potential restrictions associated with developing along or through these areas.

As discussed above, this assessment was purposely scoped to take a limited view of a large area with respect to potential environmental impact. Additional studies are recommended not only to evaluate the areas of potential concern identified in this study, but also to conduct a more in-depth study for the areas included in this report.

6.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives for evaluating the site as it relates to the environmental aspects discussed herein. The conclusions and recommendations contained in this report are based on information provided from the observed site conditions and other conditions described herein. It is further assumed that the conditions observed are representative of the conditions throughout the site. The data presented in this report should be considered representative of the time of our initial site assessment. Changes due to natural processes or human activity can occur on the site. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations applicable to this site may need to be revised.

This report is an instrument of service prepared by Shannon & Wilson for the exclusive use of HDR Alaska, Inc. (Client) and their client for this study. To create a report on which the Client can rely, Shannon & Wilson worked closely with the Client and their representatives in development of the scope of services upon which all subsequent tasks have been based. Due to the size of the corridors evaluated, certain portions of a typical site assessment were purposefully omitted. These included limiting the field reconnaissance to limited visual evaluation, not conducting interviews, not reviewing the Resource Conservation Recovery Act Handler report, and other items. This report is intended to be a preliminary assessment and additional study is recommended when the proposed corridors are better defined. No party other than the Client is permitted by Shannon & Wilson to rely on this instrument of Shannon & Wilson's service. With the permission of the Client, Shannon & Wilson will meet with a third party, approved in writing by the Client, to help identify the additional services required, if any.

to permit such third party to rely on the information contained in this report. Such reliance would be limited to the same extent of Client's reliance, and subject to the same contractual, technological, and other limitations to which the Clients have agreed.

Appendix C contains information about the qualifications of the personnel who conducted this ISA. Shannon & Wilson has also prepared the attachment in Appendix D, "Important Information About Your Initial Site Assessment/Evaluation Report," to assist you and others in understanding the use and limitations of our report.

We appreciate this opportunity to be of service. Please contact the undersigned at (907) 561-2120 with questions or comments concerning the contents of this report.

Sincerely,

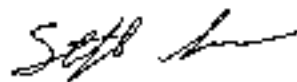
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for: Jessa H. Tibbetts
Environmental Scientist



Stafford Glasban, P.E.
Vice President

TABLE 1 - REGISTERED UNDERGROUND STORAGE TANKS WITHIN 0.25 MILE RADIUS

Facility Name	Facility ID	Street Address	Owner Name	Tank ID	Tank Status	Tank		Approximate Distance from Property (feet)	Figure 2 ID
						Capacity (gallons)	Contents		
Shannon & Wilson, Inc.	343	9400 Rosaura St.	Paysonland, Inc.	1	Permanently Out of Use	10,000	None	Adjacent, West of Rosaura St.	1
Willing Energy	3771	6500 Arctic Blvd.	Willing Inc. (77)	2	Permanently Out of Use	10,000	Gasoline		
6500 Arctic Blvd.	3641	6500 Arctic Blvd.	ADDA and Leasing My Pet Group	1	Permanently Out of Use	5,000 gal.	Not Listed	Across 4' North of W. 65th Ave.	2
				2	Permanently Out of Use	300	Gasoline		
				3	Permanently Out of Use	900	Gasoline	Adjacent, South of W. 65th Ave.	3
				4	Permanently Out of Use	900	Gasoline		
State of Barrow Alaska	3353	6831 Arctic Blvd.	Wells Fargo Bank	1	Permanently Out of Use	3,000	None	Adjacent, South of W. 68th Ave.	1
				2	Currently in Use	Not Listed	Not Listed		
				3	Currently in Use	Not Listed	Not Listed		
Shenandoah Alaska, Inc.	1225	877 East Dowling Rd.	Shenandoah Alaska, Inc.	1	Tank Removed	Not Listed	Gasoline	Adjacent, West of Dowling Rd.	4
				2	Tank Removed	Not Listed	Gasoline		
Leasing 21 1500 Delta Hill Drive, Fairbanks Shenandoah Alaska, Inc.	1377	2400 Old Seward Hwy	Leasing Alaska LLC	1	Currently in Use	12,000	Gasoline	Adjacent, South of Dowling Rd.	5
				2	Currently in Use	12,000	Gasoline		
				3	Tank Removed	Not Listed	Gasoline		
				4	Tank Removed	Not Listed	Gasoline		
				5	Tank Removed	Not Listed	Gasoline		
				6	Tank Removed	Not Listed	Gasoline		
				7	Permanently Out of Use	1,000	Gasoline		
				8	Tank In Progress	3,000	Gasoline		
				9	Tank In Progress	3,000	Gasoline		
				10	Tank In Progress	3,000	Gasoline		
				11	Tank In Progress	3,000	Gasoline		
Alaska Steel	2024	1400 West Dowling Rd.	Alaska Steel	1	Permanently Out of Use	1,000	None	Adjacent, South of Dowling Rd.	6
World Equipment	352	6028 McKinley St.	World Equipment Company	1	Permanently Out of Use	8,000	None	Adjacent, South of Dowling Rd.	7
King of the River Association	325	5201 Minnesota Dr.	King of the River Association	1	Permanently Out of Use	10,000	None	Adjacent, East of 51st Avenue Dr.	8
				2	Permanently Out of Use	5,000	Gasoline		
				3	Permanently Out of Use	3,000	None		
				4	Permanently Out of Use	3,000	None		
				5	Permanently Out of Use	3,000	Gasoline		
				6	Currently In Use	3,000	Gasoline		
				7	Currently In Use	3,000	None		

--- Site is not allowed per Figure 2

TABLE 1 - REGISTERED UNDERGROUND STORAGE TANKS WITHIN 0.25 MILE RADIUS

Facility Name	Facility ID	Street Address	Owner Name	Tank		Tank Capacity (gallons)	Tank Contents	Approximate Distance from Property (feet)	Figure 2 ID
				ID	Status				
Energy Control Services, Inc.	1896	6900 Arctic Hwy, #228	Geophysical Services, Inc.	1	Permanently Out of Use	1,000	Gasoline	200' South of W. 68th Ave	...
AMP Warehouse	1798	1421 West 5th Ave	AMP Warehouse Agency	2	Permanently Out of Use	1,000	Gasoline
Street Meter, Inc.	275	6130 Seward Way	Street Meter, Inc.	3	Permanently Out of Use	1,000	Gasoline	200' East of Munroville Dr	...
Weatherford U.S. Inc.	2656	6820 Arctic Hwy, #24	Weatherford U.S. Inc.	1	Permanently Out of Use	2,000	Gasoline	400' South of Dowling Rd	...
Palmer Oil Services, Inc.	1111	5959 Arctic Road Rd	Palmer Oil Services, Inc.	3	Permanently Out of Use	1,000	Gasoline	500' South of Dowling Rd	...
Boyc Equipment Co.	445	6720 Arctic Hwy.	Boyc Equipment Company	1	Permanently Out of Use	1,000	Gasoline	500' North of W. 68th Ave	...
Alco Industrial & Equipment	2825	6500 Arctic Spur Rd	Alco Industrial & Equipment	1	Permanently Out of Use	1,000	Gasoline	100' North of W. 68th Ave	...
K&L Distributors	1901	6130 Arctic Spur Rd.	K&L Distributors, Inc.	1	Permanently Out of Use	1,000	Gasoline	500' South of Roseville St	...
Warning Lights of Alaska	1755	591 West 5th Ave	Warning Lights of Alaska	1	Permanently Out of Use	2,000	Gasoline	100' South of W. 68th Ave	...
Scott & Welch	2007	1211 Laine Circle	US Small Business Admin	1	Permanently Out of Use	5,000	Gasoline	100' East of Munroville Dr	...
Beitz Construction	1753	150 Center Court	Beitz Construction, Inc.	2	Permanently Out of Use	300	Gasoline	600' North of Dowling Rd	...
Northwest Energy, Inc.	1095	560 West 6th Ave	Advanced Technology	1	Permanently Out of Use	1,000	Gasoline	600' North of W. 68th Ave	...
Procter Equipment, Inc.	1052	6700 Arctic Spur Road	Arctic Spur Road Holdings	1	Permanently Out of Use	1,000	Gasoline	100' North of W. 68th Ave	...
IB Street Industrial Co.	218	210 Center Court	Kuram Holdings	1	Permanently Out of Use	1,000	Gasoline	600' North of Dowling Rd	...
Process, Irons Facility	1787	6640 Seward Circle	Warren Oil Services, Inc.	1	Capacity only	2,500	Gasoline	600' East of Munroville Dr	...

... Sites not shown on Figure 2

TABLE 1 - REGISTERED UNDERGROUND STORAGE TANKS WITHIN 0.25 MILE RADII

Facility Name	Facility ID	Street Address	Owner Name	Tank ID	Tank Status	Tank		Approximate Distance from Property (feet)	Figure 2 ID
						Capacity (gallons)	Contents		
Big Three Fuel Alaska	0038	5410 Woods Blvd.	Big Three Alaska, Inc.	1	Permanently Out of Use	1,500	Gasoline	1,500' South of W. 54th Ave	...
	0039			2	Permanently Out of Use	1,500	Gas		...
Continental Motors	0047	6230 MacKay St	Continental Motor Co	1	Permanently Out of Use	100	Gasoline	1,500' South of Dowling Rd	...
S&W Machinery Company	0048	6950 Arctic Road	S&W Machinery Company	1	Permanently Out of Use	600	Gasoline	1,500' East of Kenney St	...
	0049			2	Permanently Out of Use	2,000	Gasoline		...
	0050			3	Permanently Out of Use	2,000	Gasoline		...
	0051			4	Permanently Out of Use	800	Gasoline		...
	0052			5	Permanently Out of Use	2,000	Gasoline		...
Continental Motors	0053	6230 MacKay St	Continental Motor Co	1	Permanently Out of Use	200	Gasoline	1,100' South of Dowling Rd	...
Parsons Co. Alaskan	0055	6161 Shelton Way	Parsons Construction	1	Permanently Out of Use	1,000	Gasoline	1,100' South of Dowling St	...
McKinnon Machine & Storage	0058	299 West South Ave	McKinnon Machine & Storage	1	Permanently Out of Use	2,000	Gasoline	1,100' South of Dowling Rd	...
Medical Waste Services	0801	7120 Hart St	WJ Waste Services	1	Permanently Out of Use	300	Gasoline	1,500' South of W. 68th Ave	...
Keenwell Enterprises	1011	1200 Koverton St	Amalgam Sales Products	1	Permanently Out of Use	1,000	Gasoline	1,100' South of W. 68th Ave	...
	1012			2	Permanently Out of Use	1,000	Gasoline		...
George Pearce	1067	4000 Seagram Way	George Pearce	1	Permanently Out of Use	500	Gasoline	1,500' East of McVassara Dr	...

... Site to and Column in Figure 2

TABLE 2 - LEAKING UNDERGROUND STORAGE TANK SITES WITHIN 0.25 MILE RADIUS

Street Address	Facility ID	Facility Name	Event ID*	Reckey No.-	Priority	Office File ID**	Approximate Distance from Property (feet)	Figure 2 ID
6000 Ravenna St.	024	Dowling Road CY201	1037	99021002839	High	2100 26 17	1000' South of Dowling Rd	1
6800 Arctic Blvd	1177	Viking Freight	7006	99021002409	High	135 156	500' East of W 68th Ave	2
6851 Arctic Blvd	1150	NDA Operations Center	1717	99021002726	Low	2100 26 100	Adjacent South of W 68th Ave	3
6771 East Dowling Rd	5208	Screen Alaska	2811	990870009061	High	2100 26 102	Adjacent South of Dowling Rd	4
6410 Old Seward Hwy	227	Williams Express Store #3027	2727	990870019332	Low	2100 26 102	Adjacent South of W 68th Ave	5
6000 Arctic Blvd	211	Drum and Hoop	140	990870018401	Medium	135 79	700' South of W 68th Ave	
5411 West 64th Ave	2798	RMP Warehouse	186	990210027307	Low	135 86	300' East of Munroe Dr	
5339 Arctic Blvd	445	Tool Equipment (199) Used Tools	2505	990210011330	Low	135 104	400' North of W 68th Ave	
5333 Arctic Blvd	443	Tool Equipment Rental	70	990210045502	Low	135 107	400' North of W 68th Ave	
1901 Seward Way	1826	Hansen Warehouse	535	990210010292	Low	135 04	100' North of Dowling Rd	
5553 Arctic Spur Rd	2626	Weathered US Inc	779	991210115111	High	233 102	600' South of W 68th Ave	
2673 Arctic Spur Rd	2036	Asian Electric	442	992100103331	Medium	135 103	400' North of W 68th Ave	
591 West 67th Ave	1775	Wearing Shoes of Alaska	2642	991700033301	High	53 107	700' North of W 68th Ave	
6007 Arctic Spur Rd	1902	K&L Printlines	83	990210012302	High	2100 26 134	500' East of Ravenna St	
1313 Latona Circle	2601	USSDA-Dev Tech Employment Yards	141	990210010381	Low	135 03	600' East of Munroe Dr	
6719 West Way	161	Frontier Technology	767	990210017701	High	2100 26 020	1000' East of Forster St	
210 Center Court	1218	Pizza Hut Administration Offices	307	990620051201	Low	2100 26 207	300' South of Dowling Rd	
6407 Arctic Spur Rd	1056	Keen Supply Hardware	106	990210026305	High	2100 26 125	700' East of Ravenna St	
6459 Arctic Spur Rd	61	SC Machinery	204	990210022951	High	2100 26 117	100' East of Ravenna St	
6219 Mackay St	617	Centuria Materials	1647	992100121501	Medium	135 81	1000' South of Dowling Rd	

KEY

- * The Event ID is the Alaska Department of Environmental Conservation (ADEC) or Identification Code
- ** The Reckey No. is the ADEC site identification number
- *** The site's cleanup priority based on potential impact to human health and the environment as determined by ADEC
- **** The Office File ID is the ADEC file number
- ***** Site is not shown on Figure 2
- ***** Office Status means the ADEC does not require additional action for the site

TABLE 2 - LEAKING UNDERGROUND STORAGE TANK SITES WITHIN 0.25 MILE RADIUS

Street Address	Facility ID	Facility Name	Event ID*	Reckey No.†	Priority**	Office File ID**	Approximate Distance From Property (feet)	Figure 2 ID
5015 Mackay St.	2261	Continental Motors 6235	2381	199110022150	Major	199110022150	1,000' South of Dowling Rd	...
7120 Hanley	1850	World Wide Motors	271	199110068191	High	199110068191	1,000' South of W. 108th Ave	...
6221 A St.	405	Coastal Tire	171	199111001102	Medium	199111001102	1,000' South of Dowling Rd	...
8141 A St.	228	Coastal Tire Used Oil Tank	3430	199211020061	Medium	199211020061	1,000' South of Dowling Rd	...
1150 East 12nd Ave	2508	Power Cable Company	111	199211028701	High	199211028701	1,100' South of Dowling Rd	...
1129 West 9th Ave	1228	Beema Northways	139	1990110921201	Medium	1990110921201	1,100' South of Dowling Rd	...
525 West 6th Ave	1091	Airquad Corporation	103	199021001110	Low	199021001110	1,100' South of W. 62nd Ave	...

KEY

- * The Event ID is the Alaska Department of Environmental Conservation (ADEC) event file identification code.
- † The Reckey No. is the ADEC site identification code.
- ** The sites cleanup priority, based on potential threat to human health and the environment, as assigned by ADEC.
- ** The Office File ID is the ADEC file number.
- Site is not shown on Figure 2.
- Circle status near's the ADEC does not require additional actions for the site.

TABLE 3 - CONTAMINATED SITES WITHIN 0.25 MILE RADIUS

Street Address	Reckey Number*	Office File ID*	Problems/Priority/Status	Approximate Distance From Property (feet)	Figure 3 ID
Central Farming, Inc. 1580 West Dowling Road Anchorage, AK 99507	99021616830	2100 18 410	Heavy steel manufacturing from 1960's to 1970's primarily Dowling St.	Adjacent, south of Dowling St.	1
WFO Forward, Inc. 6400 Rowena Street Anchorage, AK 99518	990216118361	2100 18 210	Storage of oil and fuel from 1970's to 1980's and very old tank contamination and is reported for thermal treatment of waste light liquids	Adjacent, West of Rowena St.	2
Clingsmith Pipeline Operation, Inc. 5001 Mineralina Drive Anchorage, AK 99502	990216112669	1901 18 191	Contaminated soils from spills and spill clean up activities. Natural barrier with no other activity adjacent	Adjacent, East of Mineralina Dr.	3
North Slope Right of Way Municipal Authority Anchorage, AK 99511	990216114200	1901 18 210	Soils from 1980's, 1990's, 2000's contamination. 1990's cleanup activity included in 1998 and not to be included in regional Media Report	Adjacent to Municipal Authority	4
Conley Motors Van Line 8500 Arctic Highway Anchorage, AK 99518	990216112540	1901 18 199	Used oil spill from 1970's to 1980's, 1990's, 2000's. Material in Chukchi Creek - low priority	Adjacent, West of Arctic Hwy	5
Wt Is Fargo Data Center 2851 Arctic Drive Anchorage, AK 99507	990216102401		Contaminated soil contaminated with diesel oil. Tank removed in March 2001. Site was closed for 11 months. Clean up activity	Adjacent, South of Arctic Hwy	6
Fox Arctic Alaska 3801 Suburban Way Anchorage, AK 99518	990216103030	2100 18 210	1980 equipment used for 1980's and 1990's. Spills for 1980's and 1990's. Based on files of 1980's and 1990's. Not reported in the 2000 Media Report	4.60 South of Foxway Rd	7
Empire, Inc. 5500 Arctic Street Anchorage, AK 99507	990216111881	2100 18 210	Storage and Clean up of 1980's and 1990's. Spills and disposal of property. No other activity reported. Low priority	400 East of Rowena St	8
APX Transfer Van 1518 West 14th Avenue Anchorage, AK 99503	990216101692	1901 18 210	Based on 1990's and 1990's. Spills and disposal. Site is under investigation	500 East of 14th Avenue D.	9

KEY

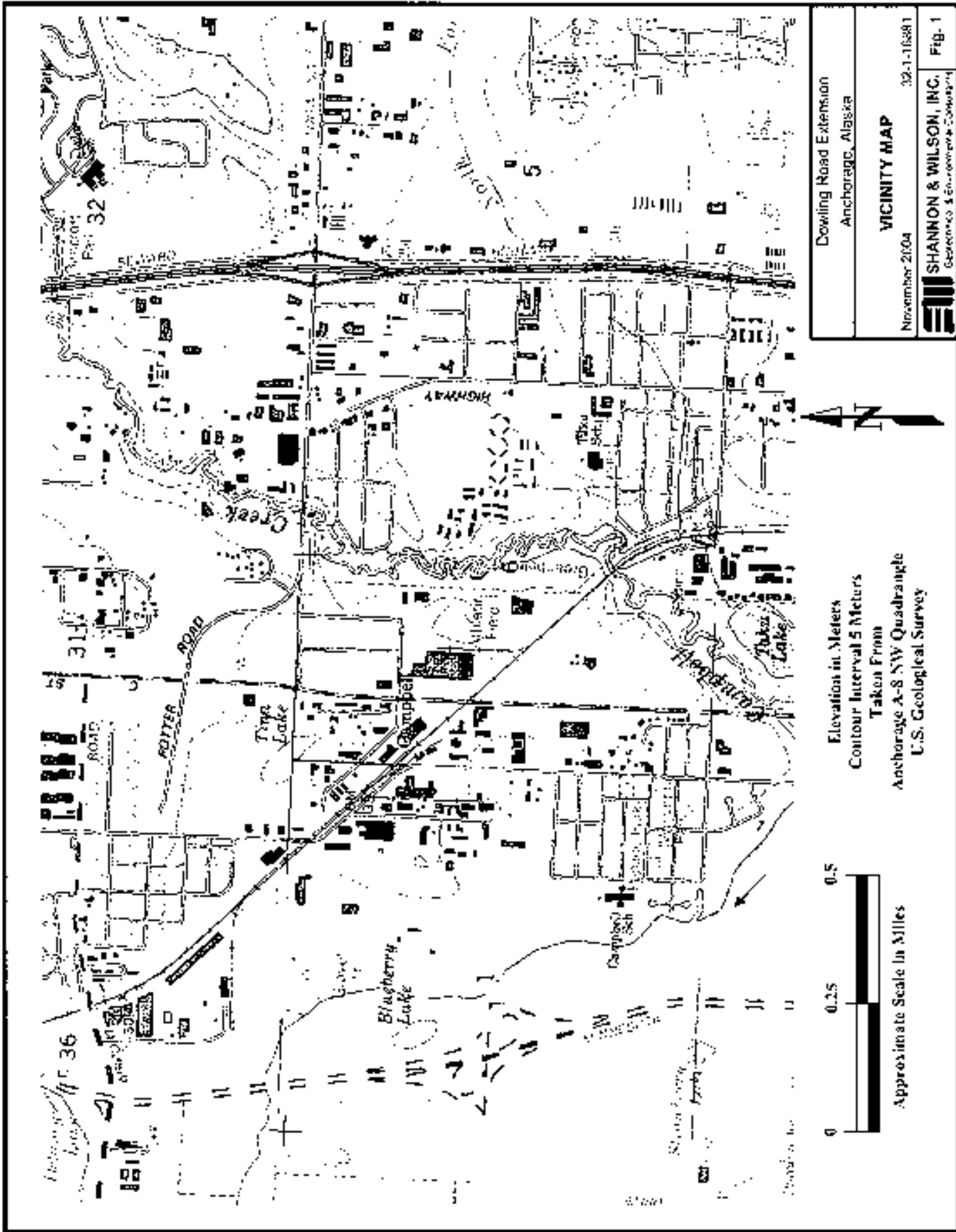
- * The Reckey Number is the Alaska Department of Environmental Conservation (ADEC) site identification number
- * As listed in ADEC database
- * The Office File ID is the ADEC file number
- * Site is not shown on Figure 3

TABLE 3 - CONTAMINATED SITES WITHIN 0.25 MILE RADIUS

Street Address	Rockey Number	Office File ID	Problem/Priority/Status	Approximate Distance From Property (feet)	Figure 3 ID
NANA/Chance JV 6228 Nelson Way Anchorage, AK 99518	100170112-01	2106 38 751	Translocation, remediation, high level of concern, substantial contamination, low priority	979 South of Dawling lot	---
Sevettie Subdivision FDOT 521 West 28th Avenue Anchorage, AK 99518	201521012650	1-59 38 696	Remediation, high level of concern, remediated during 2000 investigation, no further action required at present and identified as needed - Medium priority	850 North of Dawling lot	---
ASD Campbell Elementary School 3106 Brevard Street Anchorage, AK 99515	109910102401	2106 34 411	Leaking UST remediated in 1996, elevated soils and groundwater contamination, low level of concern, remediation complete, low priority	1,200 South of W. 95th Ave	---

KEY

- * The Rocky Number is the Alaska Department of Environmental Conservation (ADEC) site identification code
- As listed in ADEC database
- * The Office File ID is the ADEC file number
- Site is not shown on Figure 3



Dowling Road Extension
Anchorage, Alaska

VICINITY MAP

November 2004

32-1-10281

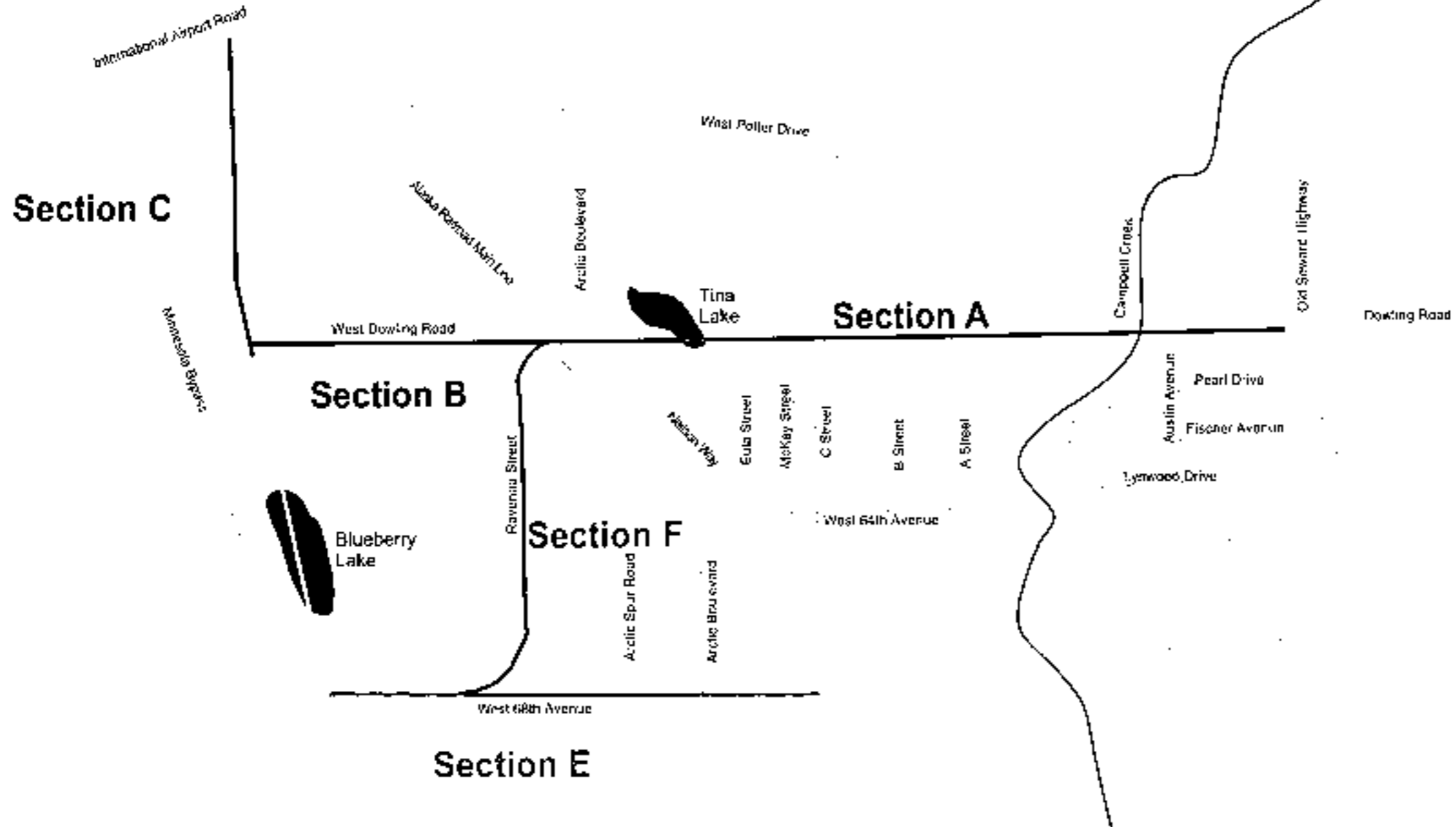
SHANNON & WILSON, INC.
Geotechnical & Environmental Consulting

Fig. 1

Elevation in Meters
Contour Interval 5 Meters
Taken From
Anchorage A-8 NW Quadrangle
U.S. Geological Survey

Approximate Scale in Miles

0 0.25 0.5

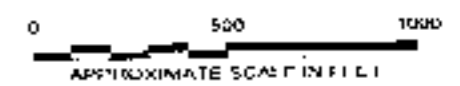


Map Adapted from Mad Dog Ventures, Inc., 2002

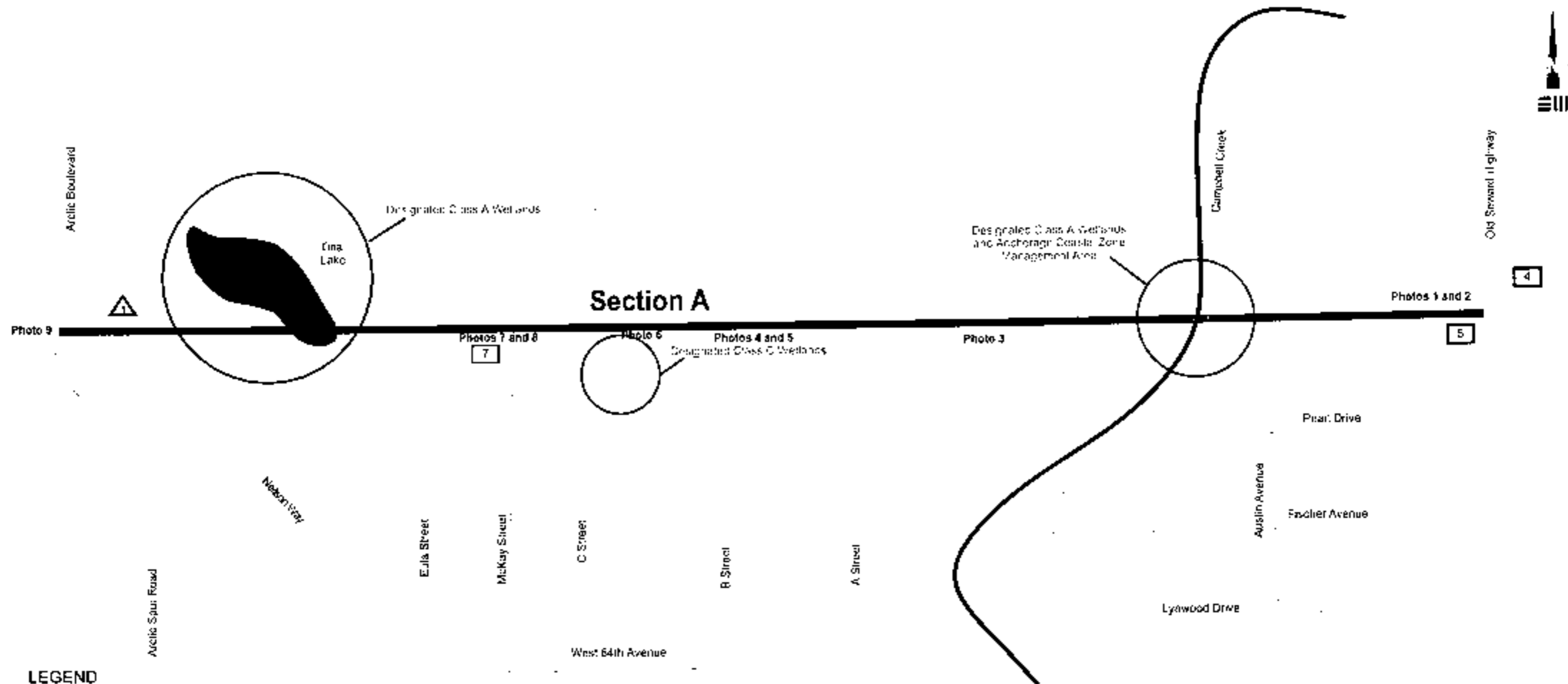
LEGEND

— Approximate Location of the Frontage Road, Rovenna and Rovenna Frontage Concepts.




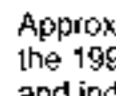
Frontage Road Concept = Sections A, B, C, D, and E
 Rovenna Road Concept = Sections A, E, and F
 Rovenna Frontage Concept = Sections A, B, C, E, and F



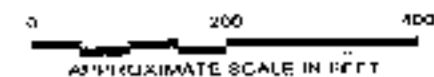
Dowling Road Extension Anchorage, Alaska	
SITE PLAN	
November 2004	32-1-16881
SHANNON & WILSON, INC. Geotechnical & Foundation Company	Fig. 2




LEGEND

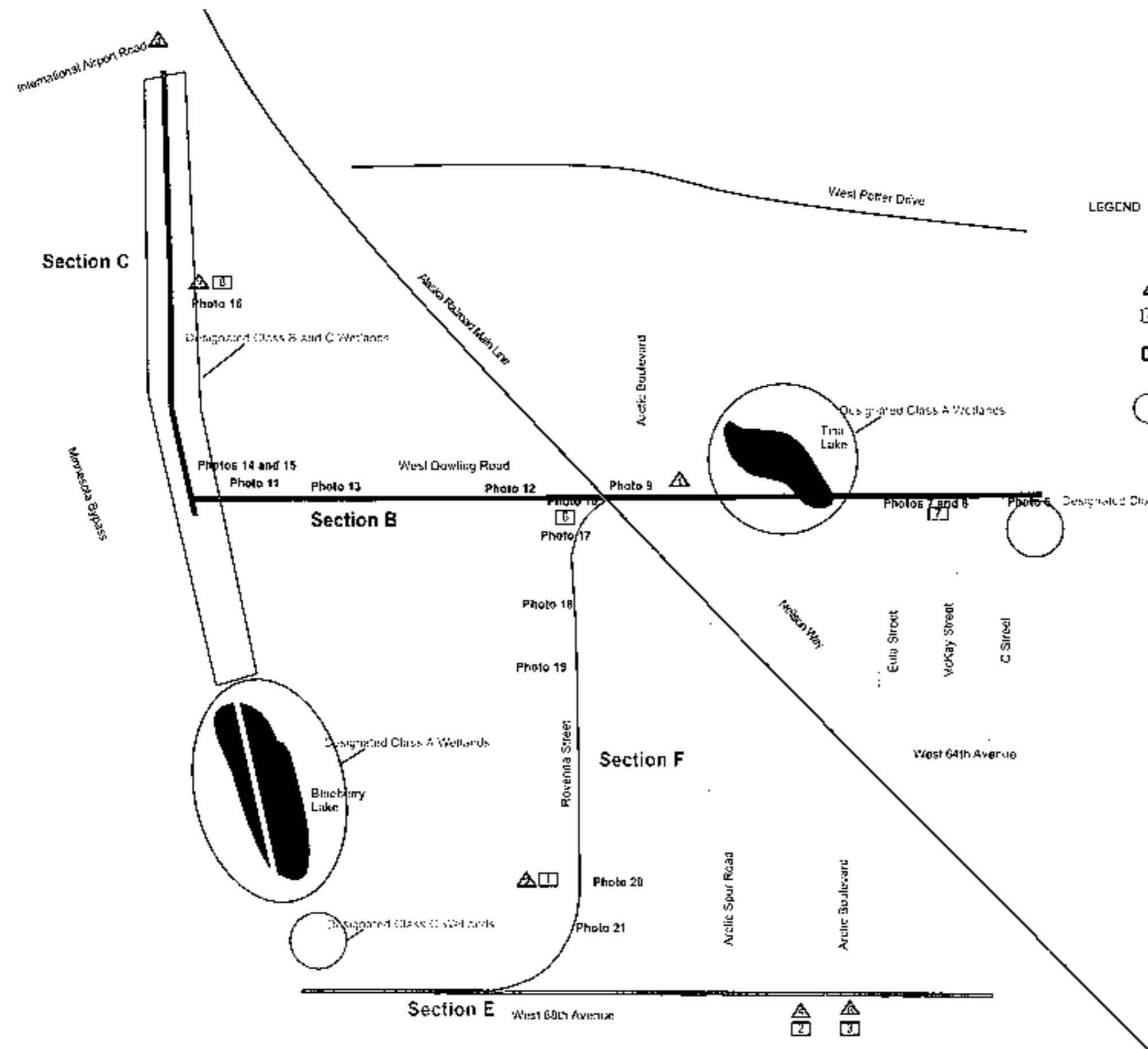
-  Approximate location of ADEC Contaminated Site. See Table 3.
 -  Approximate location of ADEC Registered UST Site. See Table 1.
 -  Approximate location of ADEC Registered UST Site that is also listed as a LUST Site. See Tables 1 and 2.
 -  Approximate area containing designated wetland areas from the 1996 Anchorage Wetlands Management Plan. Areas are general and indicate the presence, and not the boundaries, of the wetland.
- See Appendix B for Photographs.

Frontage Road Concept = Sections A, B, C, D, and E
 Rovenna Road Concept = Sections A, E, and F
 Rovenna Frontage Concept = Sections A, B, C, E, and F



Dowling Road Extension Anchorage, Alaska	
SECTION MAPS Section A	
November 2004	32-1-16881
 SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	Fig. 3a

Map Adapted from Media Ventures, Inc., 2002

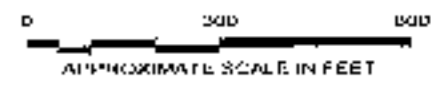


LEGEND

- Approximate Location of the Frontage Road, Rovenna and Rovenna Frontage Concepts.
- Approximate location of ADEC Contaminated Site. See Table 3.
- Approximate location of ADEC Registered UST Site. See Table 1.
- Approximate location of ADEC Registered UST Site that is also listed as a UST Site. See Tables 1 and 2.
- Approximate area containing designated wetland areas from the 1996 Anchorage Wetlands Management Plan. Areas are general and indicate the presence, and not the boundaries, of the wetland. See Appendix B for Photographs.

Frontage Road Concept = Sections A, B, C, D, and E
 Rovenna Road Concept = Sections A, E, and F
 Rovenna Frontage Concept = Sections A, B, C, E, and F

Map Adapted from Media Ventures, Inc., 2002



Dowling Road Extension Anchorage, Alaska	
SECTION MAPS Sections B through F	
November 2004	32-t-16881
SHANNON & WILSON, INC. Geotechnical & Environmental Consulting	Fig. 3b



June 23, 1950 Aerial Photograph
Approximate Scale 1"=750'

November 2034 32-1-16881


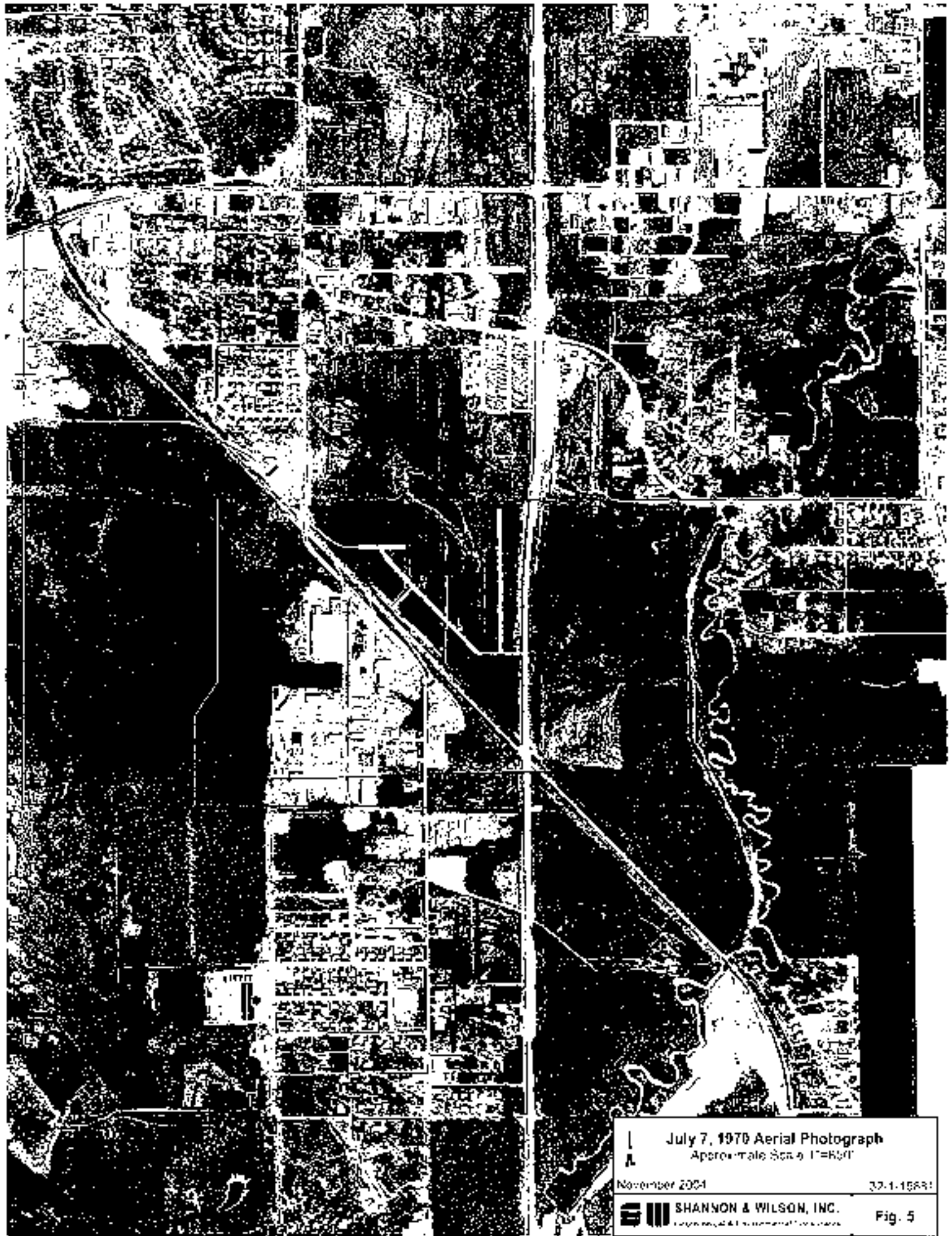
 SHANNON & WILSON, INC.
The San Francisco Environmental Consultants

Fig. 4



July 7, 1970 Aerial Photograph
Approximate Scale 1"=650'

November 2004

37-1-15631


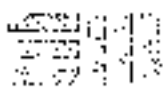
 SHANNON & WILSON, INC.
Engineering & Environmental Services

Fig. 5

APPENDIX A

COPY OF PROPOSAL DATED NOVEMBER 11, 2002



November 11, 2002

HDR Alaska, Inc.
2535 C Street, Suite 305
Anchorage, Alaska 99503

Attn: Mr. Lance DeBernardi

FAX (907) 274-2022

RE: PHASE I ENVIRONMENTAL SITE ASSESSMENT PROPOSAL & COST ESTIMATE, DOWLING ROAD EXTENSION PROJECT, ANCHORAGE, ALASKA

We are pleased to submit our proposal and estimated cost to conduct a Phase I environmental site assessment (ESA). We understand that the ESA will be prepared to supplement an Environmental Impact Study (EIS) that HDR Alaska Inc. (HDR) is conducting for the Dowling Road Extension and Reconstruction Project. Based on our conversation with you, the ESA will address an area loosely bounded by Marmesota Drive to the west, Old Seward Highway to the east, 68th Avenue to the south, and 54th Avenue to the North.

SCOPE OF SERVICES

The Phase I ESA's purpose is to identify potential human health and environmental risks associated with the subject area. Due to the large size of the study area, our proposed scope is modified from a standard Phase I ESA. In particular, our study will focus on general land use patterns within the area, and will identify known environmental concerns in the vicinity. Unlike more conventional ESAs, which are designed to evaluate discrete sites, our scope does not include detailed research regarding individual lots and parcels. If a portion of the study area is identified as a likely road reconstruction corridor, we can modify our approach to conduct a more thorough and detailed assessment of that particular area. Moreover, this scope does not strictly adhere to ASTM E 1527-00 standards, but in our opinion is consistent with the local standard of practice.

Task 1 - Aerial Photograph Review

As our first task, we will review aerial photographs to identify patterns of land use in the area. The chronology of land uses will be used to identify potential environmental concerns that are typically associated with these activities. Aerial photographs will be reviewed at a local mapping company, and up to four photos from each site will be purchase for inclusion in our summary report. These photos will be selected to depict significant periods of land development, changes in land use, and to show the area as it appears today. We estimate that the study area can be included in a single 11x17 photograph at a scale of 1 inch equals 500 feet.

Task 2 - Records Search

We will conduct a records review to identify known or potential environmental concerns within the study area. The primary record sources will be local, state, and federal databases listing known contaminated sites, registered leaking underground storage tanks (LUSTs), and other sites with documented environmental issues. Additional information may also be obtained from utility companies, historical societies, conservation commissions, hazardous waste coordinators, insurance library maps, libraries, local fire department, and state and local environmental agency files. The actual sources available for a given study will vary and may include previous assessment projects conducted by Shannon & Wilson or other environmental firms. Previous documentation includes R&M Consultants, Inc.'s March 1995 "Initial Site Assessment, Dawling Road" report provided by HDR. The sources used to conduct this ESA will be referenced in the report.

Task 3 - Wetlands Status Review

We understand that the study area includes lands designated as wetlands. As part of our research, we will identify the current wetlands designations for these areas, and will establish regulatory limitations to development posed by these designations. The primary reference for this research will be the Anchorage Wetlands Management Plan.

Task 4 - Site Visits

A cursory site visit to selected parcels within the study area may be conducted. The purpose of these site visit(s), if performed, will be to verify information obtained from Tasks 1 through 3, and to obtain additional data regarding specific site's current usage. The site visits will not be used to perform detailed assessments of each site within the study area, and will be contingent on property owners' approval. During each site visit, we will visually assess the property grounds for indications of potential environmental issues (e.g. USTs, ASTs, waste disposal drains, etc.) The sites will be walked, photographed, and evaluated for visible signs of contamination such as stained soils, fuel odors, dead vegetation, trash, or landfills. Site plans will be developed showing the approximate locations of observed environmental concerns. It is noted that site surface observations may be limited by snow cover if the ESA is performed during winter months.

Task 5 - Summary Report

A Phase I ESA Report will be prepared to summarize our project results and present conclusions regarding the area's environmental conditions and potential constraints to development. The primary components of the report include the following:

- an overview of the environmental setting, including predominant land use, water bodies, wetlands, and critical terrestrial environments (parks, refuges, sanctuaries, etc.);
- a discussion of present and historical land uses, along with potential environmental concerns associated with each land use;
- tables and site maps that provide pertinent data regarding known contaminated sites that are listed on agency databases;
- color copies of aerial photos and site photographs;
- conclusions regarding the area's regulatory status; and
- summary of potential environmental concerns that are most likely to pose obstacles to roadway development.

EXCLUSIONS/LIMITATIONS

This preliminary assessment does not include provisions to evaluate asbestos, lead-based paint, or radon gas levels at the site. Sampling and analysis of building materials, debris, soil, groundwater, and/or air are also not included in this preliminary assessment. The phase I ESA scope does not include testing to determine the presence or extent of impacted materials associated with these or other potential sources. These tests can be provided under a more detailed scope of work or a Phase II evaluation, as requested.

The ESA reports and opinions presented therein will be based solely upon the services conducted for this project, and will not be based on tasks or procedures beyond the scope of the described services. In particular, it is emphasized that detailed assessments of individual parcels, including material inventories, are not included in the report. Moreover, site visits, if conducted, will be limited to cursory assessments of general site conditions, and will not include evaluation of interior areas. If the assessment is conducted during winter, such that snow cover obscures the site surface, we will not be able to provide an affirmative statement regarding the site's surface conditions. Three bound original reports will be submitted.

SCHEDULE

We are available to start work on this project immediately following authorization to proceed. Our typical Phase I ESA turnaround time is four weeks from the project authorization date. In addition, significant findings will be provided to you informally as soon as they are determined.

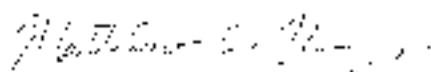
ESTIMATED COSTS AND CONDITIONS FOR SERVICES

We are prepared to perform the Phase I ESA services on a lump sum basis in accordance with the attached summary cost estimate. These costs include work through submittal of our final report. We will also discuss our findings with you informally as they are developed, and can adjust our scope to accommodate your needs. The terms and conditions for our services are in accordance with the attached Standard General Terms and Conditions. We are also including the document "Important Information About Your Environmental Site Assessment Proposal".

If you approve of the scope of work and our associated costs, please sign to the space provided and return a copy of this letter, which will serve as our agreement. If you have questions or comments, please call the undersigned at (977) 561-2120. We look forward to working with you and appreciate the opportunity to be of service.

Sincerely,

SHANNON & WILSON, INC.



Matthew S. Henry, P.E.
Associate

enc: Summary Cost Estimate
Standard General Terms and Conditions
Important Information About Your Environmental Site Assessment Proposal

ACCEPTANCE

I accept the above conditions and authorize the Dowling Road Extension Phase I ESA to proceed.

By:

Signature: _____ Date: _____

Printed Name and Title: _____

APPENDIX B
SITE PHOTOGRAPHS

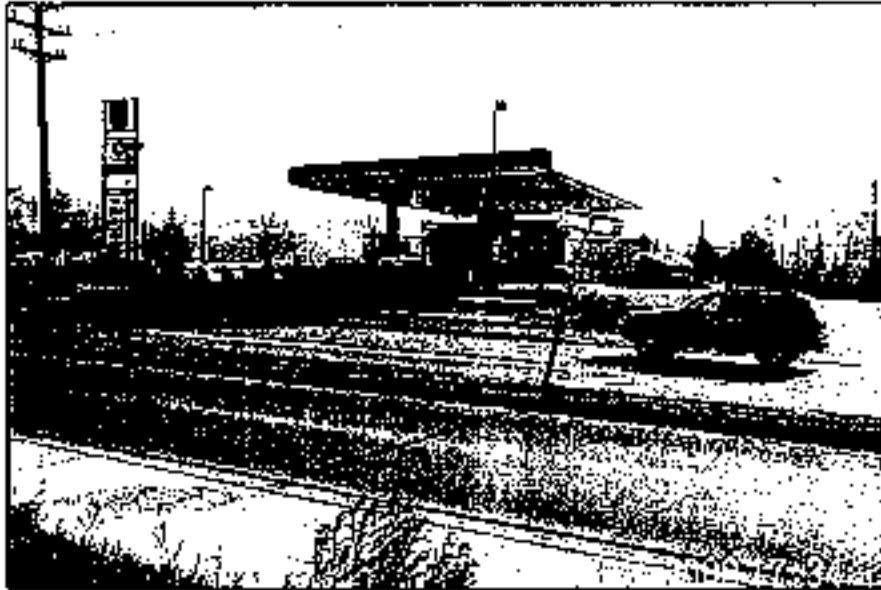


Photo 1: Looking southeast at the Tesoro at the intersection of Dowling Road and the Old Seward highway

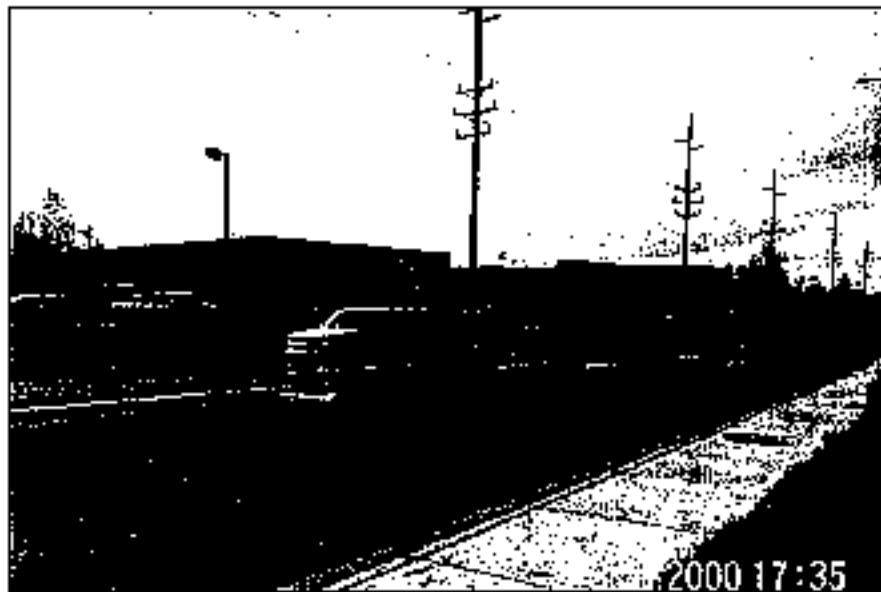


Photo 2. Looking southwest along Section A.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 1 AND 2

November 2004

32-1-16891



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B-1



Photo 3: Looking west at the intersection of West Dowling and Potter Drive.



Photo 4. Vehicles at Cook Inlet Auto, 130 West Dowling Road.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 3 AND 4

November 2004

32-1-16961



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H-2



Photo 5: Abandoned 30-gallon container.



Photo 6: Abandoned vehicle gas tank observed in Dowling ROW between B and C Streets.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 5 AND 6

November 2004

32-1-16881



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B 3



Photo 7: Looking west along Dowling ROW from McKay Street.



Photo 8. World Trucking yard, note storage and AST.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 7 AND 8

November 2004

32-1-16881



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8-4



Photo 9: Looking east at Dowling ROW from Arctic Boulevard. Note pole mounted transformers.

Photo 10. Looking west at West Dowling Road from Rovenna Road.



Dowling Road Extension
Anchorage, Alaska

PHOTOS 9 AND 10

November 2004

32-1-16881



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B 5

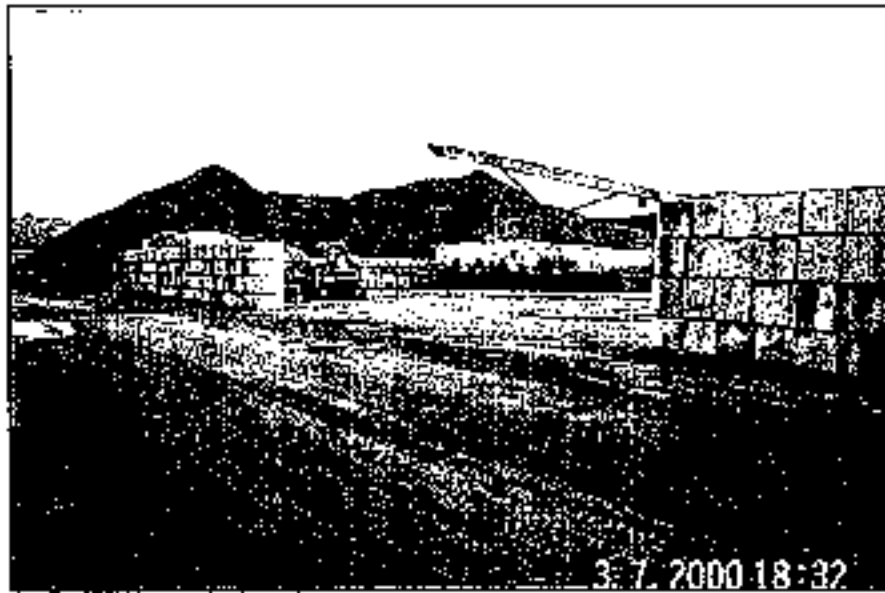


Photo 11: Asphalt tanks observed at Central Paving Products along Section C.



Photo 12. Looking northeast at CEA substation along Section C.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 11 AND 12

November 2004

12-1-18801



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B-6



Photo 13: Existing ROW between Rovenna and 68th.

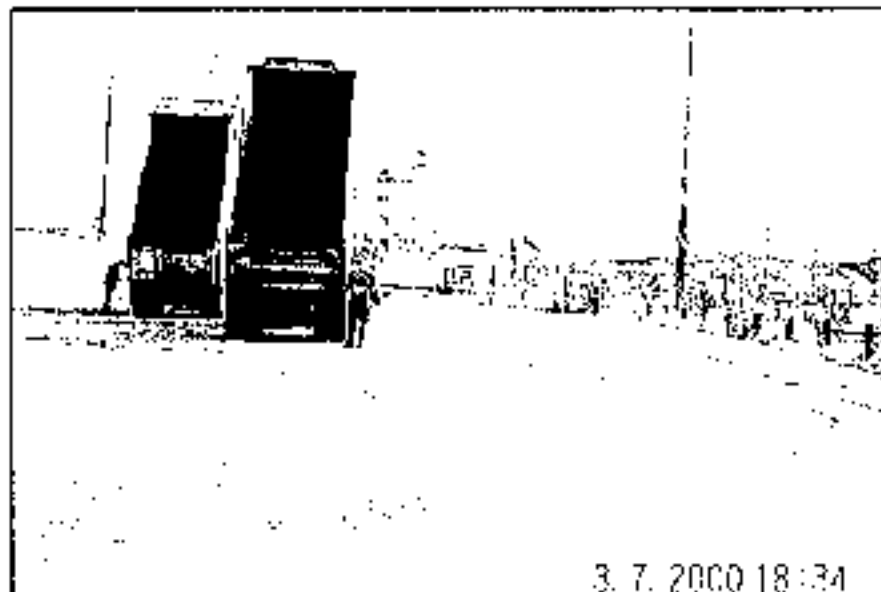


Photo 14. Trucks observed applying diesel to bed prior to loading asphalt.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 13 AND 14

November 2004

32'-16883'



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B-7

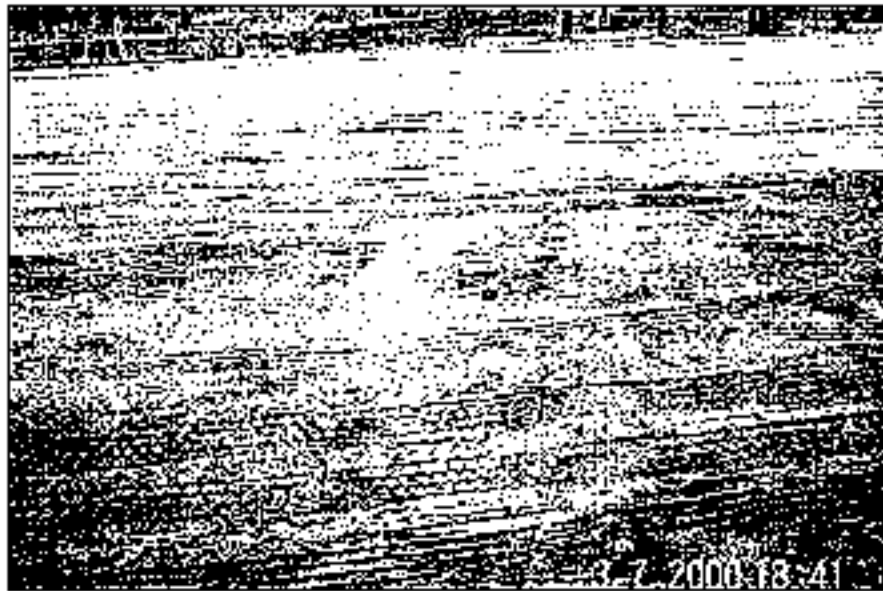


Photo 15. Diesel staining observed near Minnesota Drive from truck spraying.

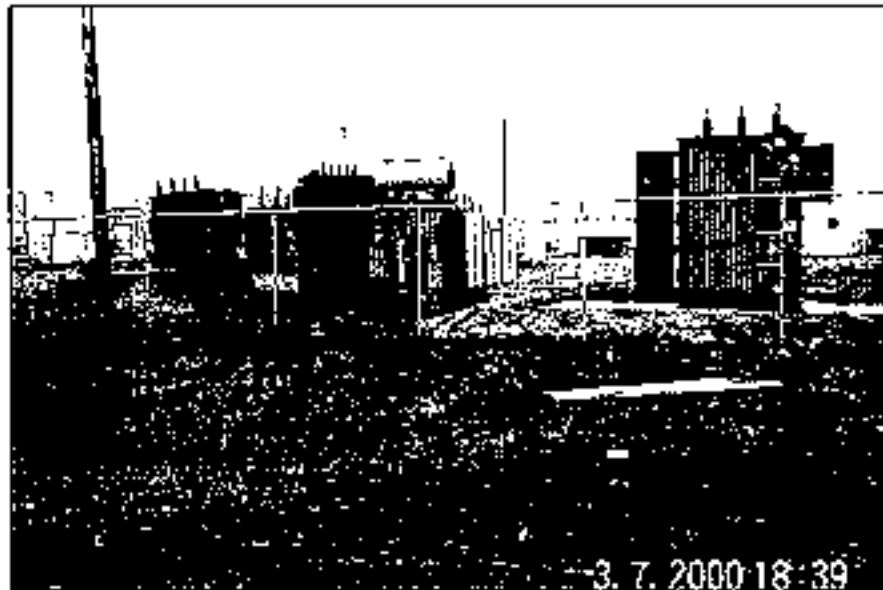


Photo 16. Equipment observed in CEA Substation yard.

Dwelling Road Extension
Anchorage, Alaska

PHOTOS 15 AND 16

November 2004

32-1-16881



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B-8

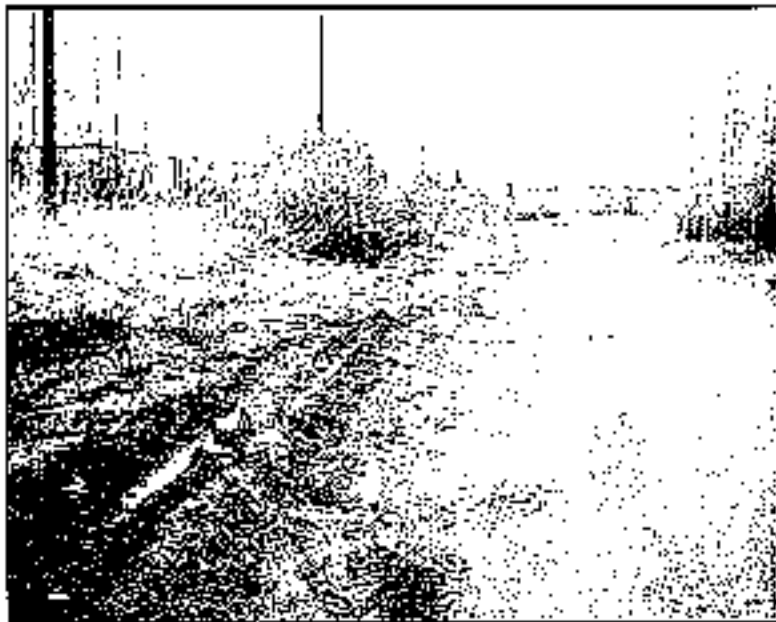


Photo 17: Looking south at the Rovenna ROW from Dowling Road.



Photo 18. Debris, including a used oil container, observed in drainage adjacent to Rovenna.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 17 AND 18

November 2004

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9.9



Photo 19: Debris observed near the end of the developed portion of Rovenna. Note the engine in the right middle of the photo.



Photo 20. Debris observed in drainage Rovenna ROW near West 66th Court.

Dowling Road Extension
Anchorage, Alaska

PHOTOS 19 AND 20

November 2004

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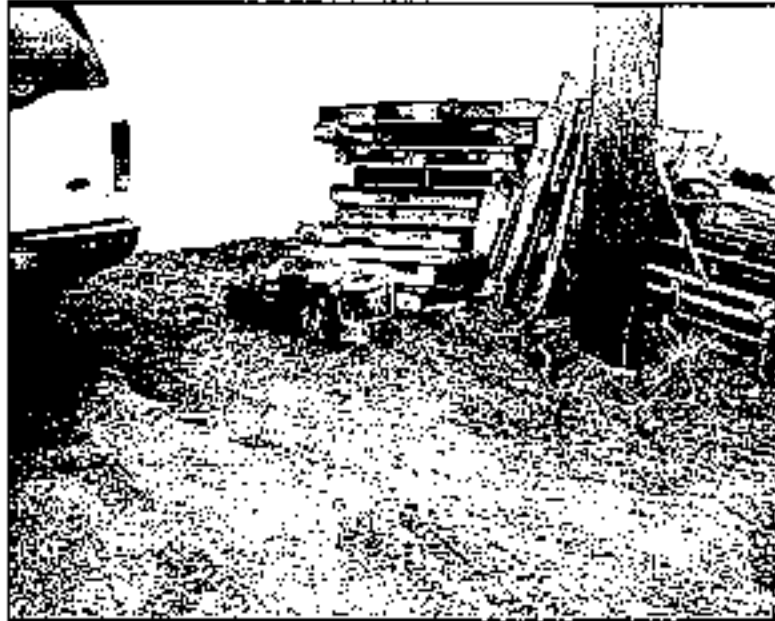


Photo 21: Gas tank observed at 1000 West 66th Court, adjacent to Rovenna ROW.

Dawling Road Extension
Anchorage, Alaska

PHOTO 21

November 2004

32-1-16881



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B-11

APPENDIX C
QUALIFICATIONS

QUALIFICATIONS

This Phase I Environmental Site Assessment (ESA) was completed by Ms. Jessa Tibbets, an Environmental Scientist, under the direction of Mr. Stafford Glashan. Mr. Glashan is Shannon & Wilson's Anchorage Office Manager and has conducted and reviewed over one hundred environmental assessments.

APPENDIX D

**IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE
ASSESSMENT/EVALUATION REPORT**



Important Information About Your Environmental Site Assessment/Evaluation Report

ENVIRONMENTAL SITE ASSESSMENTS/EVALUATIONS ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

This report was prepared to meet the needs you specified with respect to your specific site and your risk management preferences. Unless indicated otherwise, we prepared your report expressly for you and for the purposes you indicated. No one other than you should use this report for any purpose without first consulting with us. No one is authorized to use this report for any purpose other than that originally contemplated without our prior written consent.

The findings and conclusions documented in this site assessment/evaluation have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in this area. The conclusions presented are based on interpretation of information currently available to us and are made within the operational scope, budget, and schedule constraints of this project. No warranty, express or implied, is made.

OUR REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

Our environmental site assessment is based on several factors and may include (but not be limited to): reviewing public documents to chronicle site ownership for the past 30, 40, or more years; investigating the site's regulatory history to learn about permits granted or citations issued; determining prior uses of the site and those adjacent to it; reviewing available topographic and real estate maps, historical aerial photos, geologic information, and hydrologic data; reviewing readily available published information about surface and subsurface conditions; reviewing federal and state lists of known and potentially contaminated sites; evaluating the potential for naturally occurring hazards, and interviewing public officials, owners/operators, and/or adjacent owners with respect to local concerns and environmental conditions.

Except as noted within the text of the report, no sampling or quantitative laboratory testing was performed by us as part of this site assessment. Where such analyses were conducted by an outside laboratory, Shannon & Wilson relied upon the data provided and did not conduct an independent evaluation regarding the reliability of the data.

CONDITIONS CAN CHANGE.

Site conditions, both surface and subsurface, may be affected as a result of natural processes or human influence. An environmental site assessment/evaluation is based on conditions that existed at the time of the evaluation. Because so many aspects of a historical review rely on third party information, most consultants will refuse to certify (warrant) that a site is free of contaminants, as it is impossible to know with absolute certainty if such a condition exists. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas that showed no signs of contamination at the time they were studied.

Unless your consultant indicates otherwise, your report should not be construed to represent geotechnical subsurface conditions at or adjacent to the site and does not provide sufficient information for construction-related activities. Your report also should not be used following floods, earthquakes, or other acts of nature; if the size or configuration of the site is altered; if the location of the site is modified; or if there is a change of ownership and/or use of the property.

INCIDENTAL DAMAGE MAY OCCUR DURING SAMPLING ACTIVITIES.

Incidental damage to a facility may occur during sampling activities. Asbestos and lead-based paint sampling often require destructive sampling of pipe insulation, floor tile, walls, doors, ceiling tile, roofing, and other building materials. Shannon & Wilson does not provide for paint repair. Limited repair of asbestos sample locations are provided. However, Shannon & Wilson neither warrants repairs made by our field personnel, nor are we held liable for injuries or damages as a result of those repairs. If you desire a specific form of repair, such as those provided by a licensed roofing contractor, you need to request the specific repair at the time of the proposal. The owner is responsible for repair methods that are not specified in the proposal.

READ RESPONSIBILITY CLAUSES CAREFULLY.

Environmental site assessments/evaluations are less exact than other design disciplines because they are based extensively on judgment and opinion, and there may not have been any (or very limited) investigation of actual subsurface conditions. Wholly unwarranted claims have been lodged against consultants. To limit this exposure, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses may appear in this report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

Consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed, or conditions at the site have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of the final assessment/evaluation.

An assessment/evaluation of a site helps reduce your risk, but does not eliminate it. Even the most rigorous professional assessment may fail to identify all existing conditions.

ONE OF THE OBLIGATIONS OF YOUR CONSULTANT IS TO PROTECT THE SAFETY, HEALTH, PROPERTY, AND WELFARE OF THE PUBLIC.

If our environmental site assessment/evaluation discloses the existence of conditions that may endanger the safety, health, property, or welfare of the public, we may be obligated under rules of professional conduct, statutory law, or common law to notify you and others of these conditions.

The preceding paragraphs are based on information provided by the ASPE-Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland