

January 19, 2015

Alaska Department of Transportation & Public Facilities  
Statewide Public Facilities  
2200 East 42<sup>nd</sup> Avenue  
Anchorage, AK 99508

Attn: Mr. Eric Hershey, PMP

**RE: USEABLE AREA, 8501 HIGHLAND CIRCLE, WASILLA, ALASKA; ADOT&PF  
PROJECT NUMBER 52432**

The purpose of this letter is to evaluate if the remaining parcel identified as 8501 East Highlands Circle meets the Matanuska-Susitna Borough (MSB) requirements for usable area. This work was conducted under Professional Services Agreement 02532064 Notice To Proceed 10. Approximately two acres of this former five acre parcel were acquired by the Alaska Department of Transportation and Public Facilities (ADOT&PF) to provide right-of-way (ROW) for the Trunk Road Reconstruction project. The ADOT&PF intends to sell the remaining approximately three acres and the residential structure currently constructed on the property.

The existing structure is a two bedroom residence constructed in approximately 1999, and the water/wastewater system consists of a traditional septic tank/trench infiltration system and a drilled well. Figure 1 shows the existing three acre parcel and the location of the on-site septic system and drinking water well. Other than property boundary setbacks, the entire parcel meets the definition of usable building area.

In April 1997, as part of the original subdivision, Archie Giddings advanced a test hole on the subject property. Test Hole #7 was advanced to a depth of 12 feet in the approximate location of the existing septic system. The soil encountered was classified as a sandy gravel or gravelly sand (GP or SP) and groundwater was not encountered. The site plan and test hole log is attached to this letter.

The existing septic system is operating under a waiver granted by the Alaska Department of Environmental Conservation (ADEC) on September 9, 2014 (Plan Review 10864). Under this

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ANCHORAGE, ALASKA 99518-1263  
907-561-2120 FAX: 907-561-4483  
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32-1-17625-005

waiver, a slope separation distance of 45 feet was approved. As shown on Figure 1 there is approximately 3,000 square feet of contiguous usable septic area within the vicinity of the existing system, that meets the slope waiver, and outside of the protective radius for the existing well.

The existing house contains two bedrooms. Assuming a soil type of gravelly sand (SP), which is conservative, Table B of 18 AAC 72 requires an infiltration area of at least 300 square feet. In our opinion there is sufficient usable area, outside of the protective well radius and slope separation distance, for replacement of the existing trench system. Alternately, the well could be moved to the south to provide the required 10,000 square feet of contiguous, usable septic area. Figure 1 shows the available septic area outside of the slope setback requirement to be nearly double the required area.

#### **CLOSURE/LIMITATIONS**

This report was prepared for the exclusive use of our client and their representatives in the study of this site. The findings we have presented within this report are based on the limited visual evaluation and review of provided information. Therefore, the conclusions and recommendations presented are our professional judgment as to the characteristics of the site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our assessment. Changes in content characteristics can occur over time, due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.

Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report, please contact the undersigned at (907) 561-2120.

ADOT&PF  
Attn: Eric Hershey  
January 19, 2015  
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SHANNON & WILSON, INC.

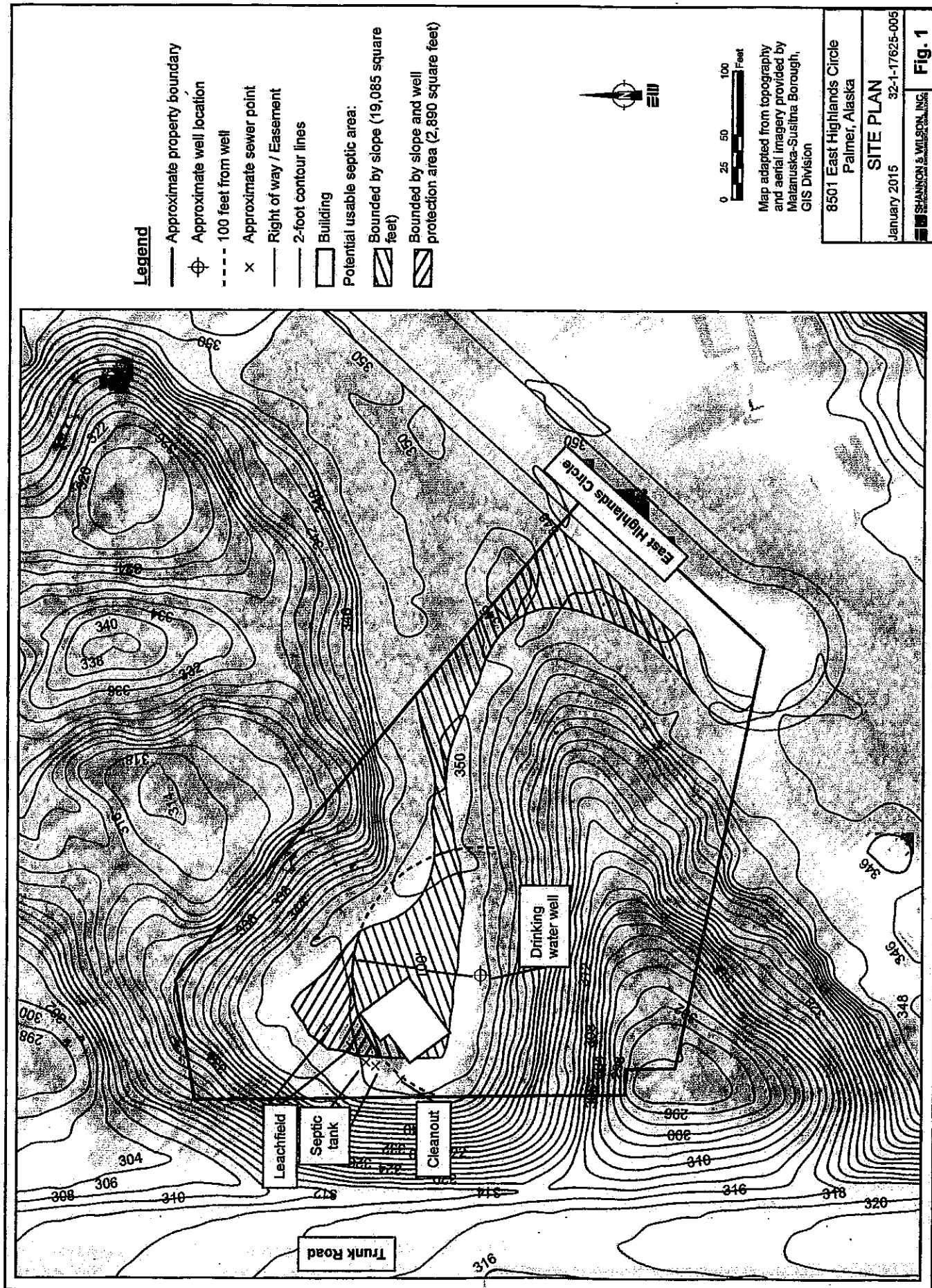
We appreciate this opportunity to be of service.

SHANNON & WILSON, INC.



Stafford Glashan, P.E.  
Vice President  
SJG

Enc: Figure 1  
April 24, 1997 Letter Report from Archie Giddings



APR 25

# ARCHIE GIDDINGS

CIVIL ENGINEERING

P.O. Box 872024  
Wasilla, Alaska 99687  
(907) 373-0270

Mr. Pio V. Cottini, R.L.S.  
Cottini Land Surveying  
P.O. Box 2748  
Palmer, Alaska 99645

April 24, 1997

RE: Proposed Waiver Parcels Within the W $\frac{1}{2}$  SW $\frac{1}{4}$ , Section 2, T17N, R1E, S.M. AK  
SOILS INVESTIGATION

Dear Pio:

At your request, I have conducted a soils investigation for the ten (10) proposed waiver parcels within Section 2, T17N, R1E, S.M., as shown on the attached RECORD OF SURVEY, dated January 9, 1997. I found the proposed waiver parcels to be suitable for conventional on-site wastewater disposal systems, meeting the State's regulatory requirement 18 AAC 72, Wastewater Disposal Regulations. My findings are as follows:

Seven (7) test holes were recently excavated and inspected to determine the type of subsurface soil and groundwater conditions existing within these waiver parcels. The attached RECORD OF SURVEY shows the approximate location of each test hole. The subsurface soils consist of top soil (organic silt), ranging in depth between 2 and 5 feet, overlying sandy gravel (GP/SP) to a depth of 12 feet below ground surface, with no groundwater encountered. The attached test hole logs show the subsurface soil strata found in each test hole excavation.

Based on this information and my observation of topography, there is a minimum of 20,000 square feet of contiguous usable area, with a ground slope less than 25 percent, within each of the ten (10) proposed waiver parcels, in conformance with the Matanuska-Susitna Borough Subdivision Regulations, Title 16. Therefore, I recommend that the proposed waiver parcels be approved by the platting authority.

If you have any questions, please do not hesitate to call.

Sincerely,

  
Archie Giddings, P.E.



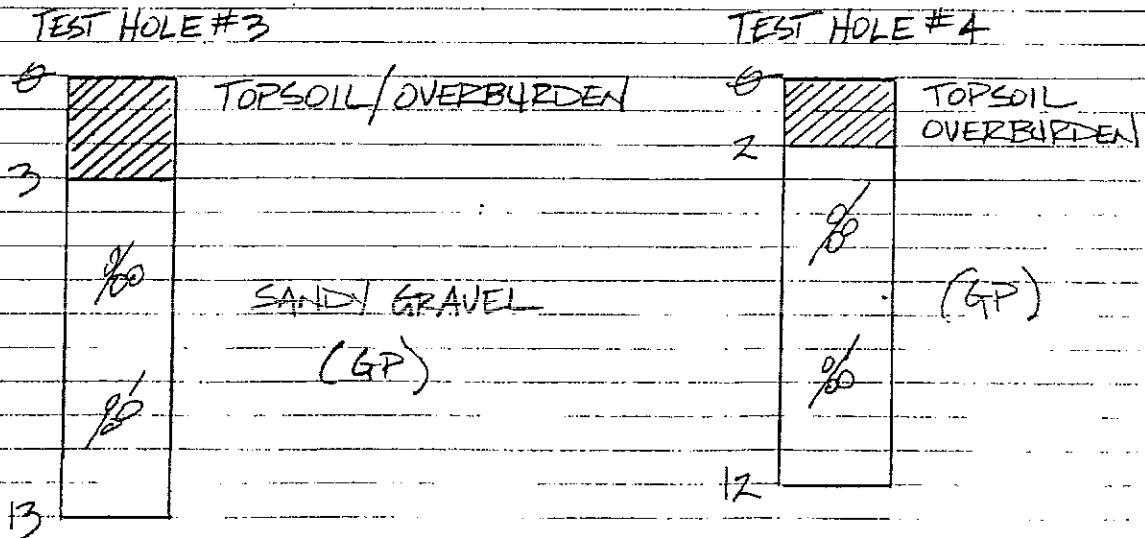
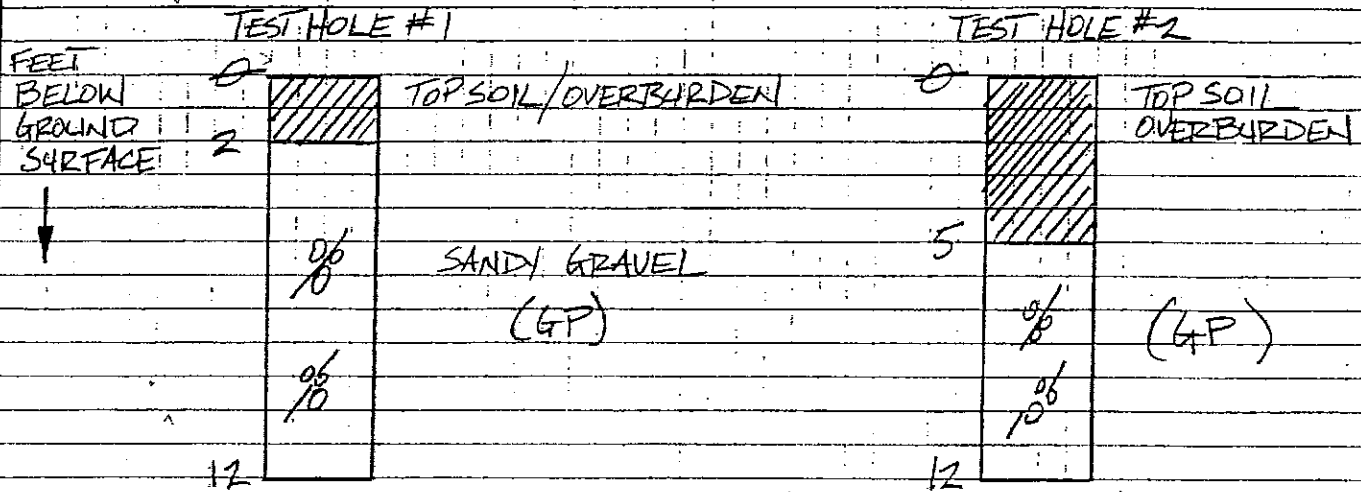
# TEST HOLE LOG

LOCATION: W 1/2 SW 1/4 SECTION 2, T17N R1E S.M.

DATE: APRIL 12, 1997 (SNOW MELT HAS ENTERED THE GROUND)

EQUIPMENT: EX-150 HITACHI

INSPECTOR: ARCHIE GIDDINGS, P.E.  
CE B483



NO GROUNDWATER  
ENCOUNTERED IN ANY TESTHOLE  
OR SIGNS OF GROUNDWATER

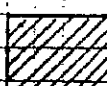
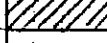


# TEST HOLE LOG

LOCATION: W 1/2 SW 1/4 SECTION 2 T17N R1E S1M.



DATE: APRIL 12, 1997 (SNOW MELT HAS ENTERED THE GROUND)

EQUIPMENT: EX-150 HITACHI INSPECTOR: ARCHIE GIDDINGS, P.E.  
CE 8483






## TEST HOLE #5

FEET BELOW GROUND SURFACE ↓		
0		TOP SOIL / OVERBURDEN
3		
		SANDY GRAVEL
		(GP)
12		

## TEST HOLE #6

FEET BELOW GROUND SURFACE ↓		
0		PREVIOUSLY CUT - TOP SOIL REMOVED
		(GP)
12		

## TEST HOLE #7

FEET BELOW GROUND SURFACE ↓		
0		PREVIOUSLY CUT - TOP SOIL REMOVED
		(GP)
3		(SP) GRAVELLY SAND
5		(GP) SANDY GRAVEL
		
12		

NO GROUNDWATER  
ENCOUNTERED IN ANY TEST HOLE  
OR SIGNS OF GROUNDWATER

