

Minor Subdivision
Septic System Site and Soil
Evaluation Report
Performed At
17825 Jones Road
El Paso County, Colorado

Allison Engineering
(719) 331-6538

December 16, 2022

Map

The accompanying site map shows the four lots of this submission, each in size greater than the minimum 2-1/2 acres required for an OWTS and each having more than one buildable acre.

General

A central wastewater system is not within a reasonable distance of this proposed subdivision. The proposed density is 1 dwelling unit per 5 acres.

All wastewater disposal systems proposed will comply with the EPCPH regulations and the CDPHE guidelines, as applicable. Specifically, no system will have a design capacity of more than 2000 GPD and each of the 3 new systems to be added within the area of the proposed will be sited, permitted, constructed, and used will comply with the regulations adopted by the El Paso County Board of Health (EPCBoH) OWTS Act. Within the jurisdiction of EPCBoH and EPCPH. The single existing and operational septic system serving the only existing residence of the proposed subdivision was permitted and installed per the regulations in effect at time of such permitting.

Demonstration of Proposed OWTS Effectiveness

The following evidence is herewith presented for showing that the proposed OWTS meets the spirit and intent of this the El Paso County Environmental Health Department, OWTS Regulations as presented in Chapter 8 and related documents.

Non-contamination of surface or subsurface water resources

The four lots are not on a surface water source other than what might occur within the northeast corner of Lot 1 in the event of a 100-year precipitation event or more frequently, the borrow ditches paralleling Murr Road on the west and Jones Road on the north. For each such potential surface water the distance from the existing or proposed leach fields exceeds 100'

Non-interference with water resources of adjoining lots

No agricultural surface irrigation is part of the proposed or adjacent land uses. Well deepening is not anticipated. The soils provide adequate treatment of domestic wastewaters as evidenced by their Type 1 classification and the absence of any Type R0 soil which would indicate special OWTS requirements.

Non-interference

All wells within the proposed can be sited at least 100 feet distant from any leach field. Additionally, all wells in adjacent property are greater than 100 feet distant from any

leach field of this proposed subdivision.

Lot sizes requirements

Each lot is greater than 5 acres in spatial extent.

Setback requirements

All physical setback requirements of the EPCPH regulations can be met at each proposed OWTS location.

Availability of secondary OWTS site

The accompanying site map show the proposed locations for each of OWTS site on each lot and the proposed secondary site for each.

OWTS Report

A map to the same scale as the preliminary plan showing all lots, drainage-ways, flood plains is provided as an attachment to this document.

Slopes in excess of 30%, surface and sub-surface soils hazards and constraints, natural and cultural features, geologic hazards and constraints, bedrock, water table depth, and other than domestic current and historic land use are not observed within the boundaries of the proposed subdivision.

Soil Conditions

The USDA Web Soil Survey, shown in Figure 1, for the nominal 20 acres of this proposed subdivision shows 88.8% of the footprint to be Blakeland loamy Sand with a 1 to 9% slopes. The balance of 11.2% is Blendon sandy loam of 0 to 3% slopes. Eight test trenches to minimum depths of 8 feet found no underground water table nor indication of it such as radiomorphic coloration. Subsurface rock was also not detected in any of the trench holes. The only limitation to placement of a septic system is the flood plain in the northeast corner of the existing homesite on Lot 1. Figure 1 is copied from the above website. Map symbols '8' and '10' correspond to the two NRCS soil types, respectively.

Potential Deleterious Effects

No scared soil areas are found within the proposed subdivision other than that in the borrow areas paralleling Murr and Jones Roads. Flow from precipitation events is sheet flow of short duration due to the permeable Type 1 soil. The site is not now nor has it ever been known to have been irrigated.

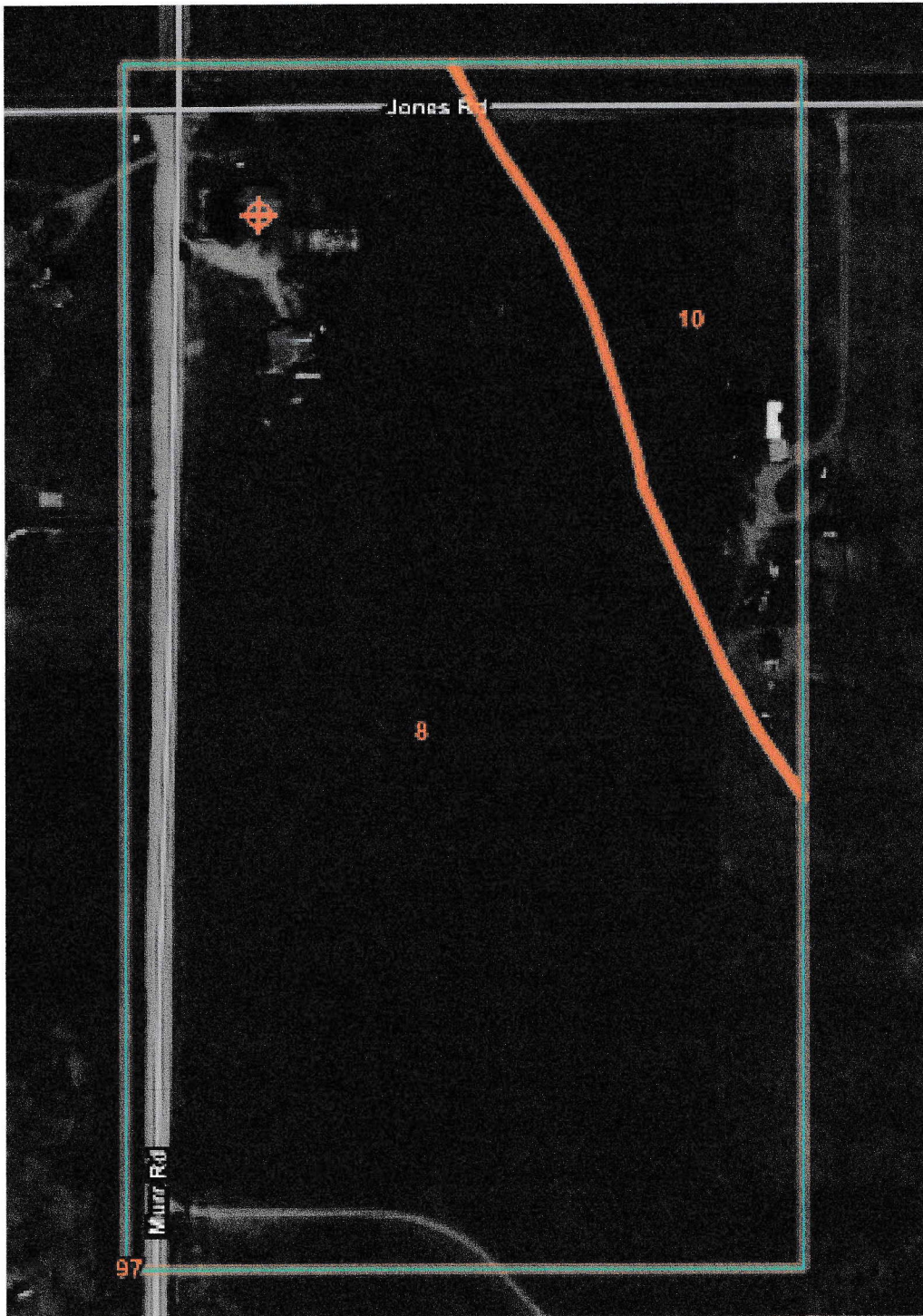


Figure 1: Soil survey map showing two soil types and spatial extents.

Availability of Central Sewage

The nearest known central sewage is more than 3 miles distant from this proposed 4-home subdivision. Connection into a central sewage system would be cost-prohibitive.

Proximity to Waters

The current well on the north lot, Lot 1, is further than 100 feet from the septic system on that lot. As no wells exist on the other 3 proposed lots, siting of wells and septic systems will be to assure separation by at least the required 100-foot distance. No lakes, streams, irrigation ditches, ponded water or other water sources are within the area being subdivided. Only the potential of flooding within the floodplain of the northeast corner of Lot 1 would the presence of water within the proposed subdivision be expected.

Soils Investigation

Visual and tactile evaluation of 2 profile test pit excavations were conducted for each of the four lots. The soil type the entire depth of each test pit was Type 1 with no limiting layers such as rock, clay, radiomorphic indications or groundwater. Sieve analysis were performed at 2 depths in each hole and all soil samples were found to have 25% or less retained on the 2 mm (number 10) sieve. Locations of the test trenches are shown on the accompanying map.

The Long Term Acceptance Rate of Type 1 soils is designated as 0.80 for Treatment Level 1. The best depth of the infiltrative surfaces will be at 30 inches below grade, but may extend as deep as 4 feet below grade.



James L. Allison, Ph.D., P.E.

Soil Profiles

Lot 1:

Excavation H1

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Excavation H2

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Lot 2:

Excavation H1

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Excavation H2

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Lot 3:

Excavation H1

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Excavation H2

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Lot 4:

Excavation H1

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Excavation H2

Depth	Soil Description	Moisture
0 to 1'	Topsoil Loam, Type 1, Granular, Moderate	
1' to 8'	Type 1, Sand, Single Grain	2.3

Sieve Analysis

On the following pages are documented the two soil sieve analysis for each lot. One performed at 4' below grade, the other at 8 feet below grade.

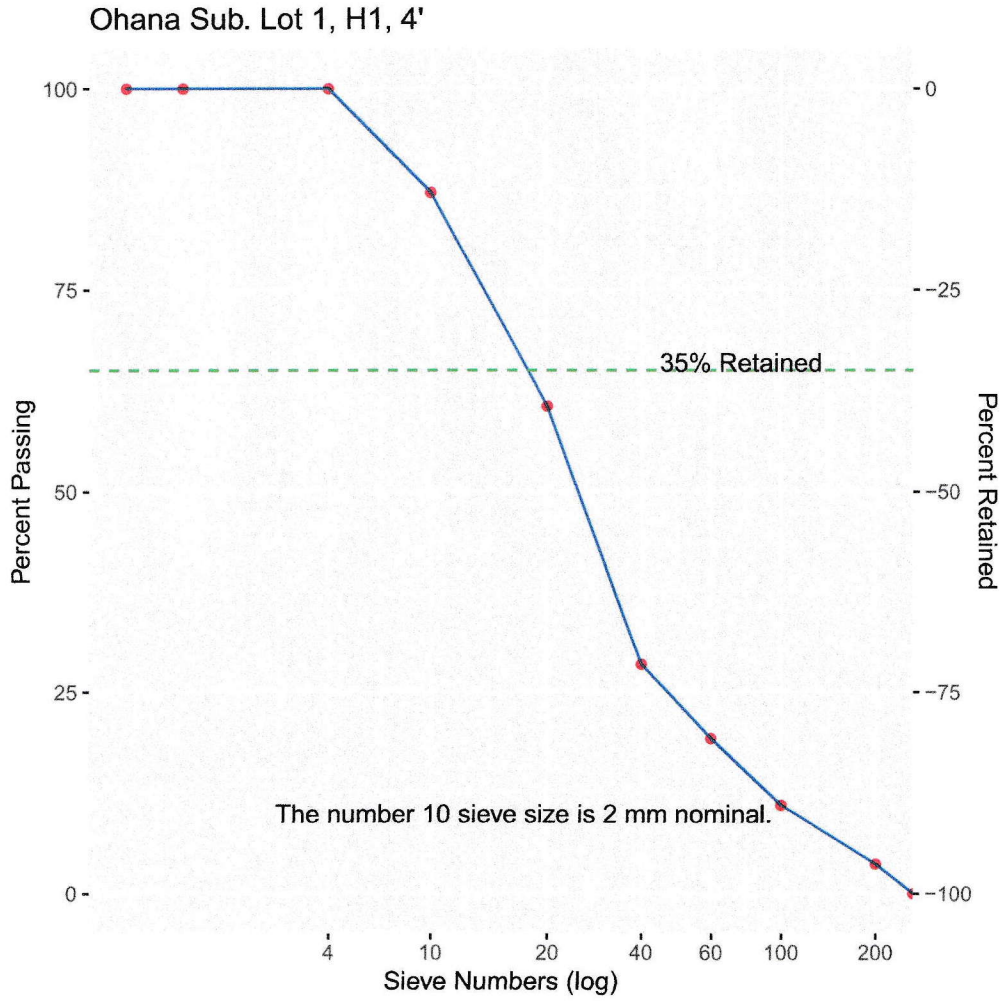


Figure 2: Lot 1 Sieve Analysis at 4 ft. in test trench H1.

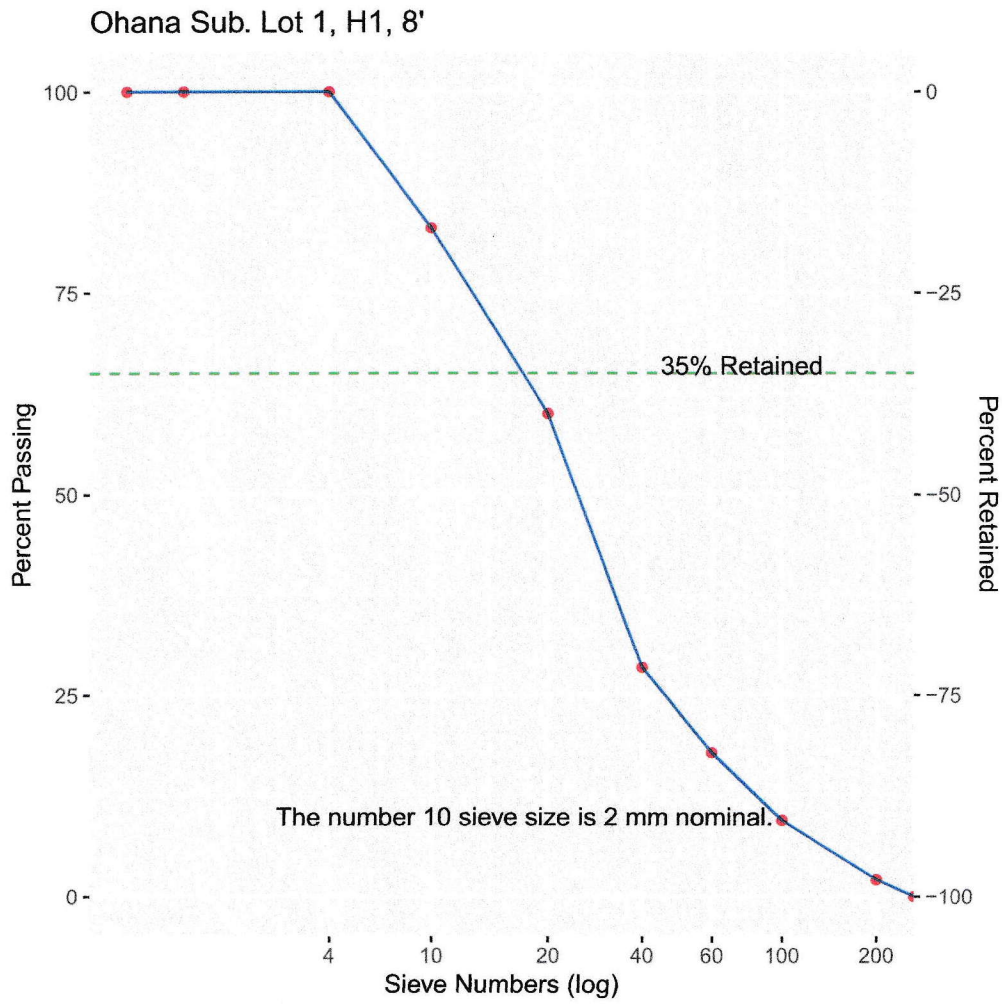


Figure 3: Lot 1 Sieve Analysis at 8 ft. in test trench H1.

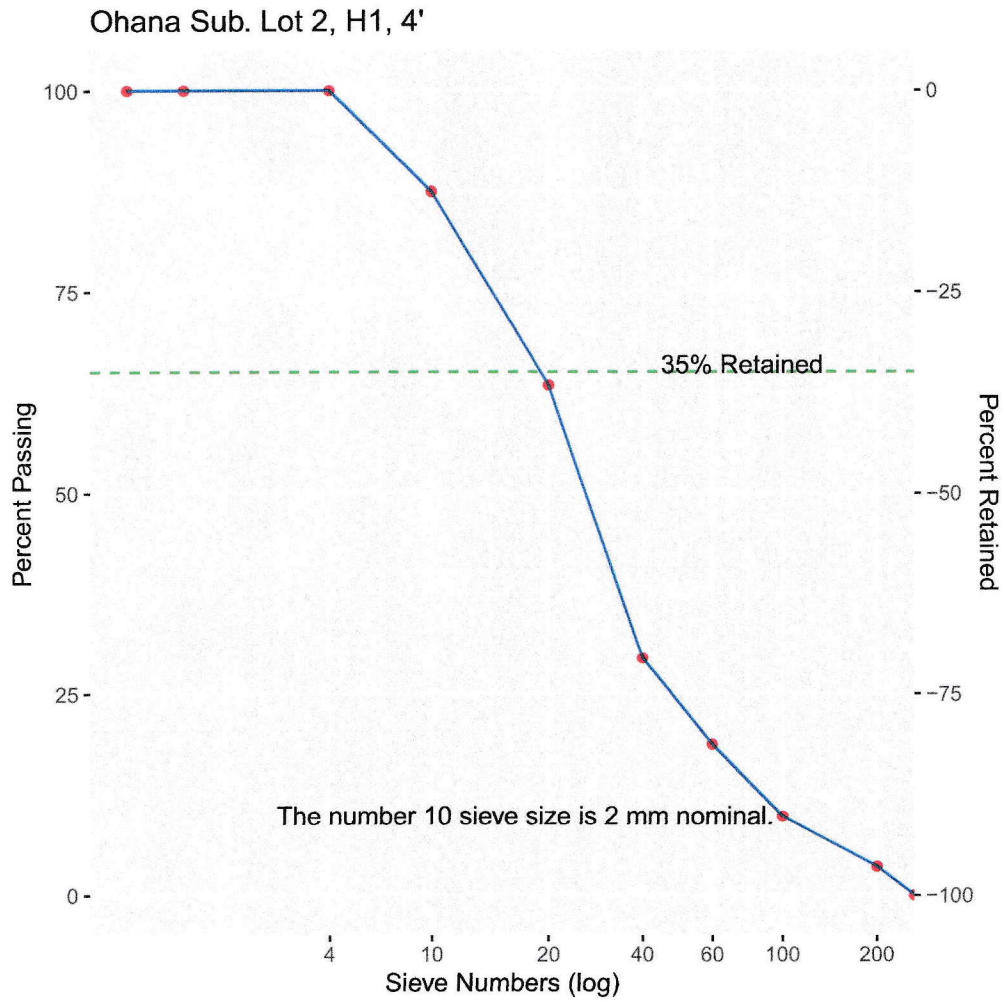


Figure 4: Lot 2 Sieve Analysis at 4 ft. in test trench H1.

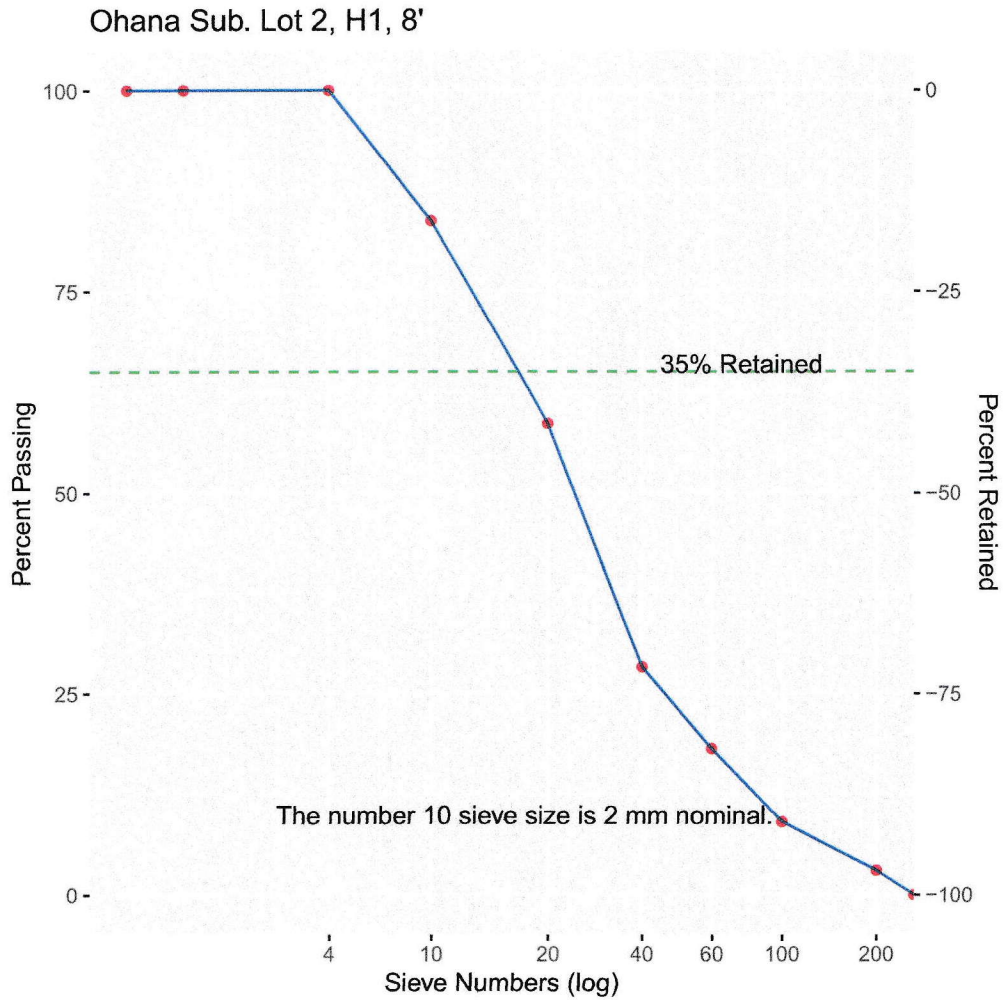


Figure 5: Lot 2 Sieve Analysis at 8 ft. in test trench H1.

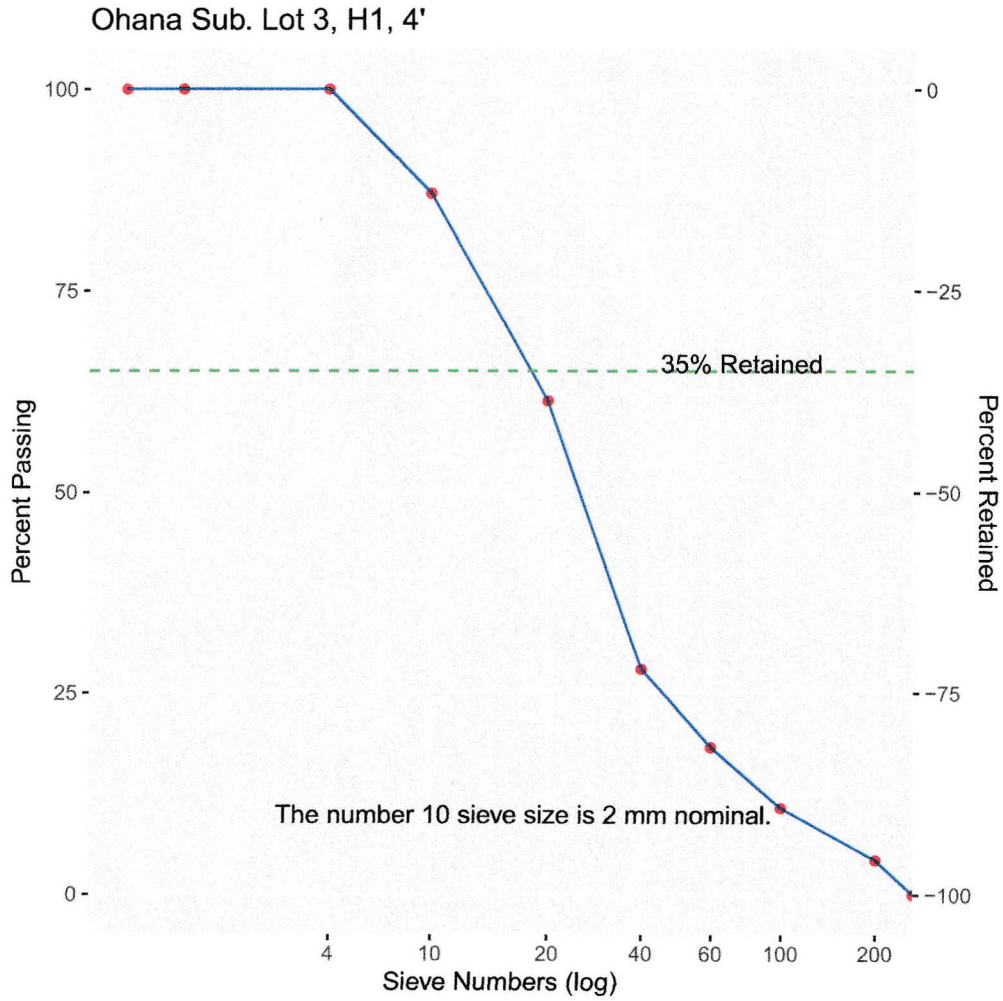


Figure 6: Lot 3 Sieve Analysis at 4 ft. in test trench H1.

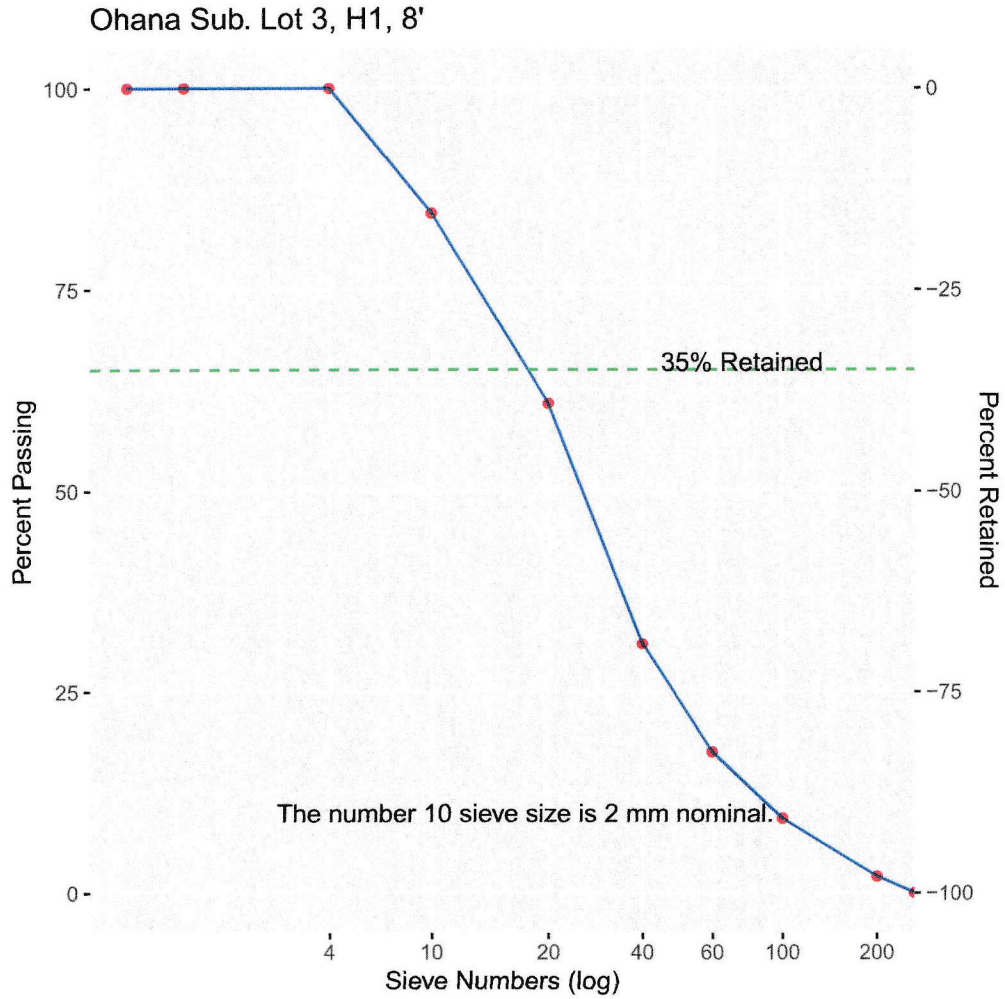


Figure 7: Lot 3 Sieve Analysis at 8 ft. in test trench H1.

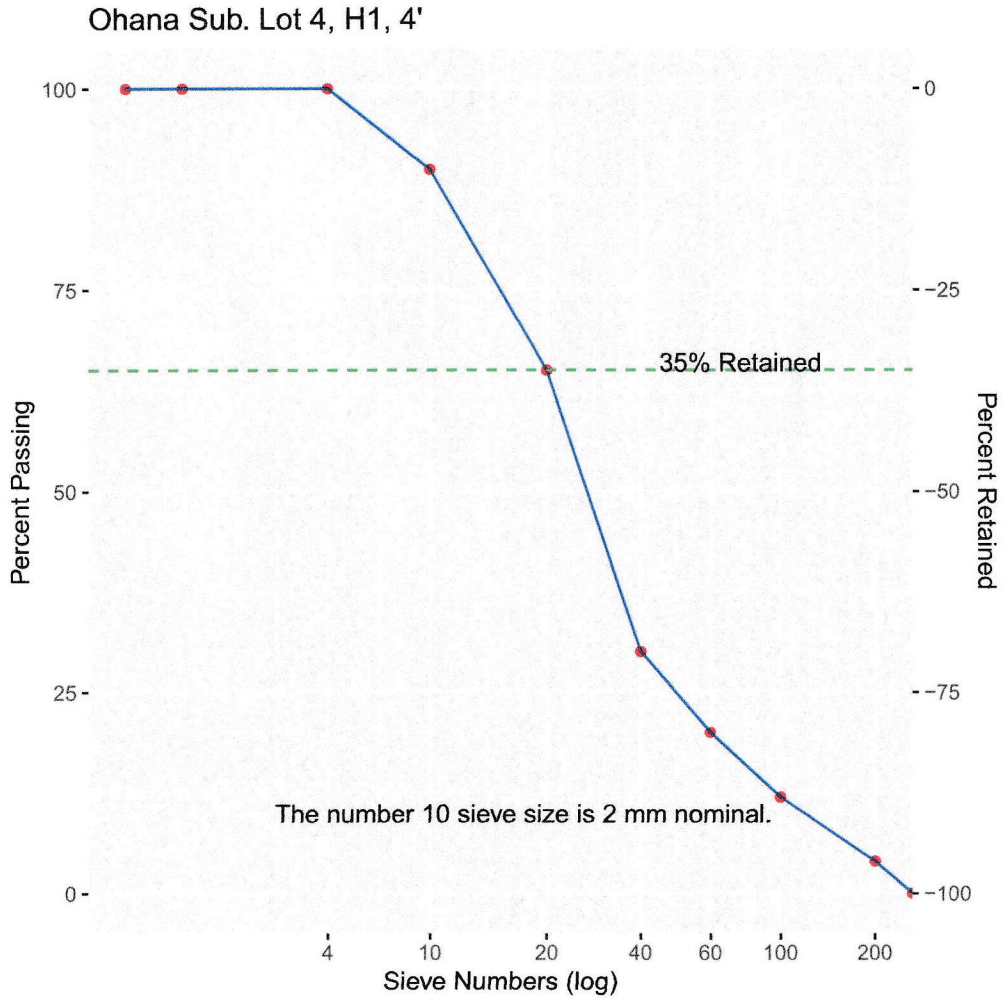


Figure 8: Lot 4 Sieve Analysis at 4 ft. in test trench H1.

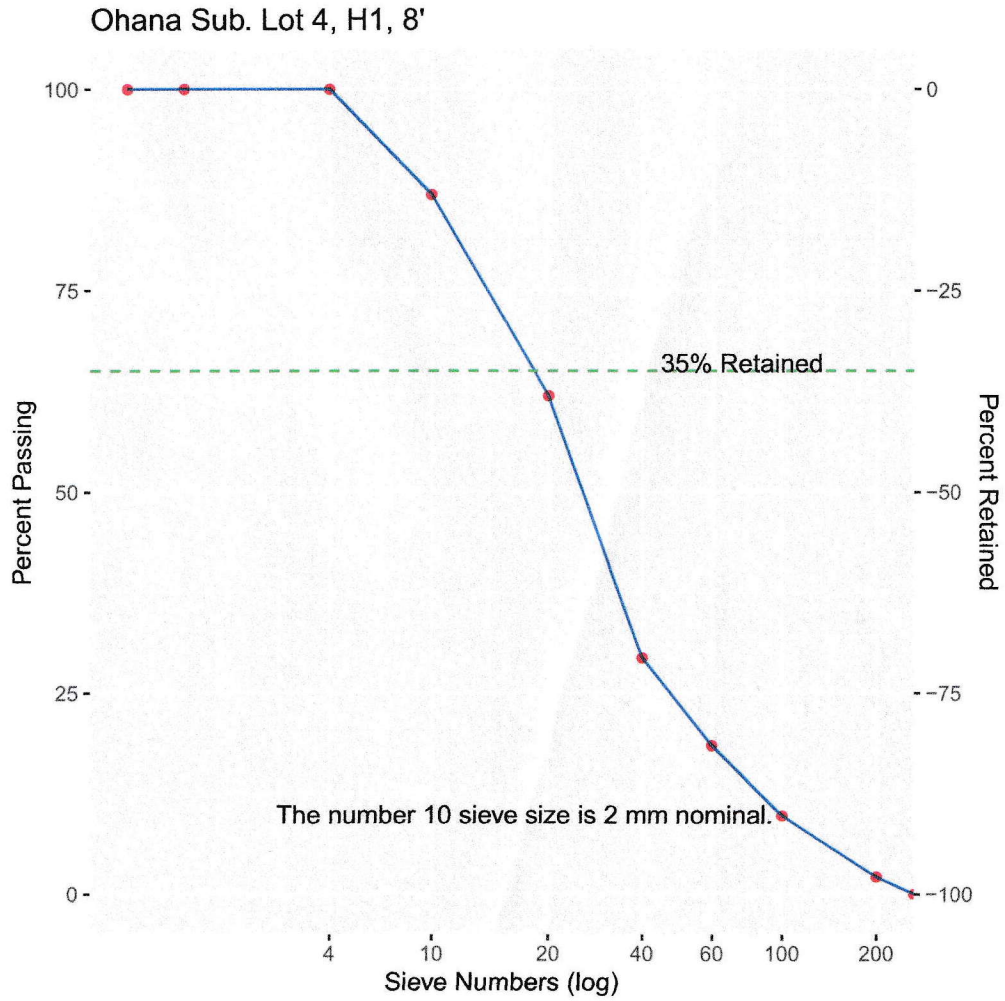


Figure 9: Lot 4 Sieve Analysis at 8 ft. in test trench H1.

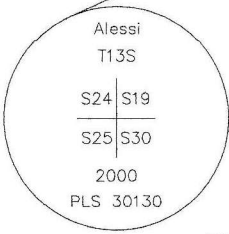
(RIGHT-OF-WAY WIDTH VARIES)

N 44°16'19" W 42.26 (TIE)
N 44°03'52" W 42.15 (R)

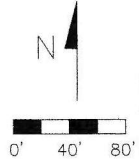
HIGHEST ADJACENT GRADE
ELEVATION = 6417.8

S 89°26'18" E 660.00 (R)
S 89°26'18" E 660.00 (R)

20 PUBLIC UTILITY & DRAINAGE EASEMENT



NORTHWEST CORNER
OF SECTION 30
MARKED AS SHOWN



MURR ROAD

(RIGHT-OF-WAY WIDTH VARIES)

N 1°18'35" (18826) 74.83 (R)
N 1°18'35" (18826) 74.83 (R)

W 127°42'54" (18826) 1274.83 (R)
W 127°42'54" (18826) 1274.83 (R)

20 PUBLIC UTILITY & DRAINAGE EASEMENT

313.64

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313.64

LOT 1
220,334 Sq. Ft.
(5.0682 ACRES)

10 PUBLIC UTILITY & DRAINAGE EASEMENT

LOT 2
206,961 Sq. Ft.
(4.7512 ACRES)

LOT 1
V L FILING No. 1
S 89°27'50" E 659.91

10 PUBLIC UTILITY & DRAINAGE EASEMENT

LOT 3
206,947 Sq. Ft.
(4.7508 ACRES)

10 PUBLIC UTILITY & DRAINAGE EASEMENT

LOT 4
206,916 Sq. Ft.
(4.7501 ACRES)

10 PUBLIC UTILITY & DRAINAGE EASEMENT

20 PUBLIC UTILITY & DRAINAGE EASEMENT

N 89°28'08" W 659.81

20 PUBLIC UTILITY & DRAINAGE EASEMENT

N 89°28'08" W 659.81

55 BUILDING SETBACK

20 ELECTRIC EASEMENT
(BOOK 2614, PAGE 452)

S 89°27'50" E 659.95

10 PUBLIC UTILITY & DRAINAGE EASEMENT

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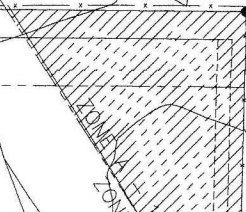
10 PUBLIC UTILITY & DRAINAGE EASEMENT

20 PUBLIC UTILITY & DRAINAGE EASEMENT

N 89°28'08" W 659.81

20 PUBLIC UTILITY & DRAINAGE EASEMENT

N 89°28'08" W 659.81



TOP SLOPE

6420
6425
6430
6435
6440
6445

6420
6430
6440

6430
6440

6440
6450

6450
6460

6460
6470

6470
6480

6480
6490

S 1°18'35" W 1274.83 (R)

BASIS OF BEARINGS

S 1°18'35" W 1274.83 (R)

S 1°18'35" W 1274.83 (R)

S 1°18'35" W 1274.83 (R)

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