

EXHIBIT C

Geotechnical Subsoil Study (HP Geotech)

April 8, 2025

Abdi Pizadeh
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abdi@aspenbuilt.net

Project No. 25-7-208

Subject: Subsoil Study for Foundation Design, Proposed Hotel, County Road 335, East of Castle Valley Boulevard, New Castle, Colorado

Dear Abdi:

As requested, Kumar & Associates, Inc. performed a subsoil study for design of foundations at the subject site. The study was conducted in general accordance with our agreement for geotechnical engineering services to you dated March 13, 2025. The data obtained and our recommendations based on the proposed construction and subsurface conditions encountered are presented in this report. Evaluation of potential geologic hazard impacts to the property is beyond the scope of our services.

Proposed Construction: Plans for the proposed building were conceptual at the time of our study. The proposed hotel is assumed to be a two- or three-story structure located on the site in the area of the pits shown on Figure 1. Ground floor is assumed to be structural over crawlspace or slab-on-grade. Cut depths are assumed to range between about 5 to 10 feet. Foundation loadings for this type of construction are assumed to be relatively light and typical of the proposed type of construction.

When building conditions and foundation loadings have been determined, we should be notified to re-evaluate the recommendations presented in this report.

Site Conditions: The subject site was vacant at the time of our field exploration with an existing abandoned building slab and parking areas. The ground surface was relatively flat in the proposed building area with a steep slope down to the river along the north side. Vegetation consists sagebrush, weeds and scattered scrub oak. The Colorado River is located immediately north of the property.

Subsurface Conditions: The subsurface conditions at the site were evaluated by excavating three exploratory pits at the approximate locations shown on Figure 1. The logs of the pits are presented on Figure 2. The subsoils encountered, below about ½ foot of topsoil or 4 to 10 feet of mixed clayey and granular fill with concrete debris, consist of mixed clay, gravel and sand down to the maximum explored depth of 16 feet. Results of swell-consolidation testing performed on

a relatively undisturbed sample of sandy clay, presented on Figure 4, indicate low to moderate compressibility under conditions of loading and wetting. Results of a gradation analysis performed on a sample of gravelly clay (minus 3-inch fraction) obtained from the site are presented on Figure 5. The laboratory test results are summarized in Table 1. No free water was observed in the pits at the time of excavation and the soils were slightly moist to moist.

Foundation Bearing Conditions: The fill soils encountered in the pits are variable, contain debris and are not suitable for support of the proposed construction. The natural soils encountered below the fill are variable clay, sand and gravel and possess low bearing capacity and typically low to moderate settlement potential. The proposed Hotel can be founded with spread footings bearing on the natural soils below the existing fill with a risk of settlement primarily if the bearing soils become wetted. At assumed excavation depths we expect the exposed subsoils to consist of a combination of fill and mixed clay and gravel. Fill exposed in the foundation area should be removed to expose the underlying natural soils. The sub-excavated depth can be backfilled with compacted structural fill or the foundation level can be deepened to bear directly on the natural soils. A lower risk option would be to extend the bearing level down to the assumed deeper granular soils or bedrock with a micro-pile foundation system. If recommendations for micro-piles are desired, we will need to drill borings on the site to further explore the subsoils. Alternatively, the Hotel can be founded with spread footings bearing on at least 3 feet of compacted structural fill in addition to removal of all the existing fill. This would help to reduce the risk of differential settlement and improve bearing conditions.

Foundation Recommendations: Considering the subsurface conditions encountered in the exploratory pits and the nature of the proposed construction, the building can be founded with spread footings bearing on the natural soils below the existing fill or on new compacted structural fill with a risk of settlement. Spread footings placed on the undisturbed natural soil or new structural fill can be designed for an allowable soil bearing pressure of 1,500 psf for support of the proposed Hotel. Footings placed entirely on at least 3 feet of compacted structural fill after removing the existing fill can be designed for an allowable bearing pressure of 2,000 psf. The soils are variable and tend to compress after wetting and there could be post-construction differential settlement of foundations. Footings should be a minimum width of 18 inches for continuous walls and 2 feet for columns. Loose disturbed soils and existing fill encountered at the foundation bearing level within the excavation should be removed to expose natural soils. We should observe the soils exposed in footing areas for bearing conditions. The footing bearing level can be extended down to the undisturbed natural soils or the sub-excavated depth can be backfilled with compacted structural fill. Structural fill can consist of the onsite soils processed to remove debris, topsoil, organics and rocks larger than about 6 inches or a suitable imported granular soils such as CDOT Class 5 or 6 base course. Structural fill should be spread in thin horizontal lifts, moisture conditioned to near optimum moisture content and compacted to at least

98% maximum standard Proctor density. Exterior footings should be provided with adequate cover above their bearing elevations for frost protection. Placement of footings at least 36 inches below the exterior grade is typically used in this area.

Continuous foundation walls should be heavily reinforced top and bottom to span local anomalies such as by assuming an unsupported length of at least 14 feet. Foundation walls acting as retaining structures should be designed to resist a lateral earth pressure based on an equivalent fluid unit weight of at least 55 pcf for the on-site soil as backfill. Cantilevered retaining structures which are separate from the Hotel and can be expected to deflect sufficiently to mobilize the full active earth pressure condition should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 45 pcf for backfill consisting of the on-site soils. The lateral resistance of foundation or retaining wall footings will be a combination of the sliding resistance of the footing on the foundation materials and passive earth pressure against the side of the footing. Resistance to sliding at the bottoms of the footings can be calculated based on a coefficient of friction of 0.35. Passive pressure of compacted backfill against the sides of the footings can be calculated using an equivalent fluid unit weight of 350 pcf. The coefficient of friction and passive pressure values recommended above assume ultimate soil strength. Suitable factors of safety should be included in the design to limit the strain which will occur at the ultimate strength, particularly in the case of passive resistance. Fill placed against the sides of the footings to resist lateral loads should be compacted to at least 95% of the maximum standard Proctor density at a moisture content near optimum. Wall backfill can consist of the onsite soils devoid of topsoil, organics, debris and rock larger than about 6 inches.

Floor Slabs: The natural on-site soils below the existing fill and topsoil can be used to support lightly loaded slab-on-grade construction. To reduce the effects of some differential movement, floor slabs should be separated from all bearing walls and columns with expansion joints which allow unrestrained vertical movement. Floor slab control joints should be used to reduce damage due to shrinkage cracking. The requirements for joint spacing and slab reinforcement should be established by the designer based on experience and the intended slab use. A minimum 4-inch layer of free-draining gravel should be placed beneath basement level slabs to facilitate drainage. This material should consist of minus 2-inch aggregate with less than 50% passing the No. 4 sieve and less than 2% passing the No. 200 sieve.

All fill materials for support of floor slabs should be compacted to at least 95% of maximum standard Proctor density at a moisture content near optimum. Required fill can consist of the on-site soils devoid of vegetation, topsoil and oversized rock.

Underdrain System: Although free water was not encountered during our exploration, it has been our experience in the area and where clayey soils are present that local perched groundwater can develop during times of heavy precipitation or seasonal runoff. Frozen ground

during spring runoff can create a perched condition. We recommend below-grade construction, such as retaining walls, crawlspace and basement areas (if any), be protected from wetting and hydrostatic pressure buildup by an underdrain system.

The drains should consist of rigid perforated PVC drainpipe placed in the bottom of the wall backfill surrounded above the invert level with free-draining granular material. The drain should be placed at each level of excavation and at least 1 foot below lowest adjacent finish grade and sloped at a minimum ½% to a suitable gravity outlet. Free-draining granular material used in the underdrain system should contain less than 2% passing the No. 200 sieve, less than 50% passing the No. 4 sieve and have a maximum size of 2 inches. The drain gravel backfill should be at least 1½ feet deep and covered with filter fabric such as Mirafi 140N or 160N. An impervious membrane such as 20 mil PVC should be placed beneath the drain gravel in a trough shape and attached to the foundation wall with mastic to prevent wetting of the bearing soils.

Surface Drainage: The following drainage precautions should be observed during construction and maintained at all times after the building has been completed:

- 1) Inundation of the foundation excavations and underslab areas should be avoided during construction.
- 2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement and slab areas and to at least 90% of the maximum standard Proctor density in landscape areas. Free-draining wall backfill should be covered with filter fabric and capped with about 2 feet of the on-site, finer graded soils to reduce surface water infiltration.
- 3) The ground surface surrounding the exterior of the building should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 12 inches in the first 10 feet in unpaved areas and a minimum slope of 3 inches in the first 10 feet in pavement and walkway areas.
- 4) Roof downspouts and drains should discharge well beyond the limits of all backfill.
- 5) Landscaping which requires regular heavy irrigation should be located at least 10 feet from the building. Consideration should be given to the use of xeriscape to limit potential wetting of soils below the foundation caused by irrigation.

Limitations: This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory pits excavated at the locations indicated on Figure 1 and to the depths shown on Figure 2, the proposed type of construction, and our experience in the area. Our services do not include determining the presence, prevention or possibility of mold

or other biological contaminants (MOBC) developing in the future. If the client is concerned about MOBC, then a professional in this special field of practice should be consulted. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory pits and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified at once so re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata and testing of structural fill by a representative of the geotechnical engineer.

If you have any questions or if we may be of further assistance, please let us know.

Respectfully Submitted,

Kumar & Associates, Inc.



James H. Parsons, P.E.

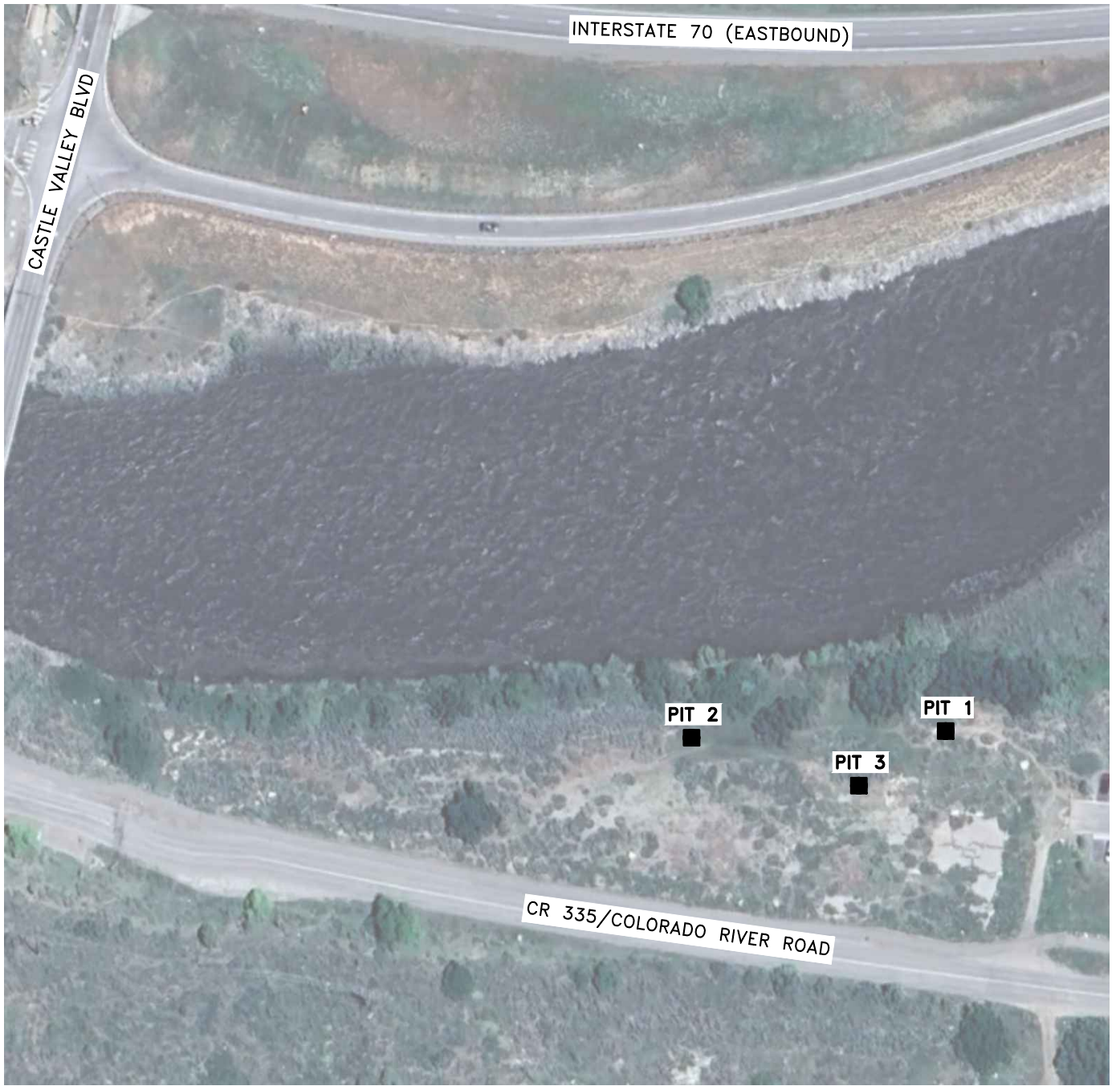
Reviewed by:

A handwritten signature in black ink that reads "Steven L. Pawlak".

Steven L. Pawlak, P.E.

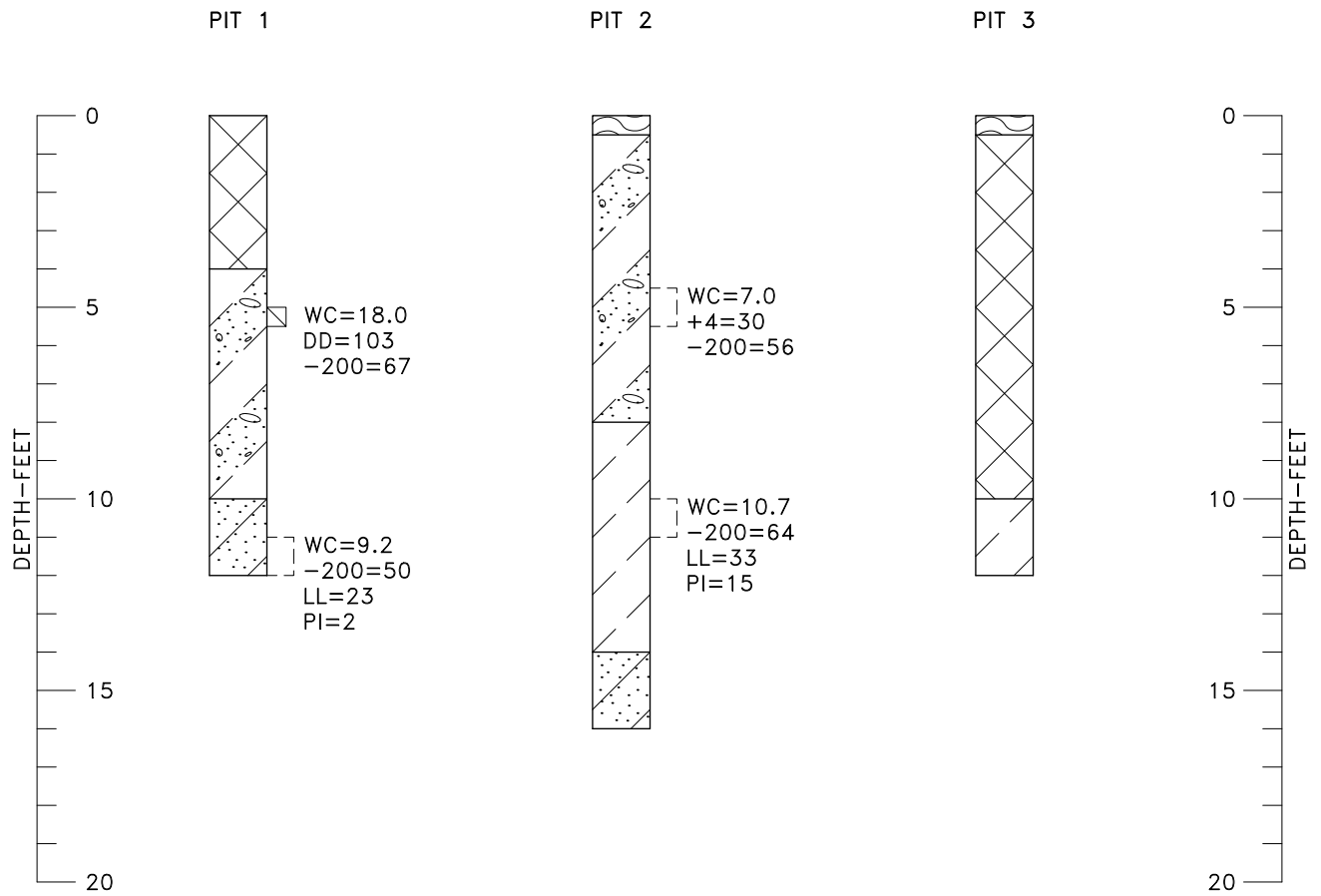
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- attachments
- Figure 1 – Location of Exploratory Pits
 - Figure 2 – Logs of Exploratory Pits
 - Figure 3 – Legend and Notes
 - Figure 4 – Swell-Consolidation Test Results
 - Figure 5 – Gradation Test Results
 - Table 1 – Summary of Laboratory Test Results



APPROXIMATE SCALE—FEET

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LEGEND



TOPSOIL; CLAY, SANDY, GRAVELLY, ORGANICS, FIRM, MOIST, DARK BROWN.



FILL: SANDY SILT AND CLAY, SCATTERED COBBLES, DEBRIS, SMALL BOULDERS, SLIGHTLY MOIST.



GRAVEL AND CLAY (GC-CL); SANDY, TRACE CALCAREOUS, ANGULAR ROCK, MEDIUM DENSE, SLIGHTLY MOIST, BROWN.



SAND (SM); SILTY, MEDIUM DENSE, SLIGHTLY MOIST, BROWN.



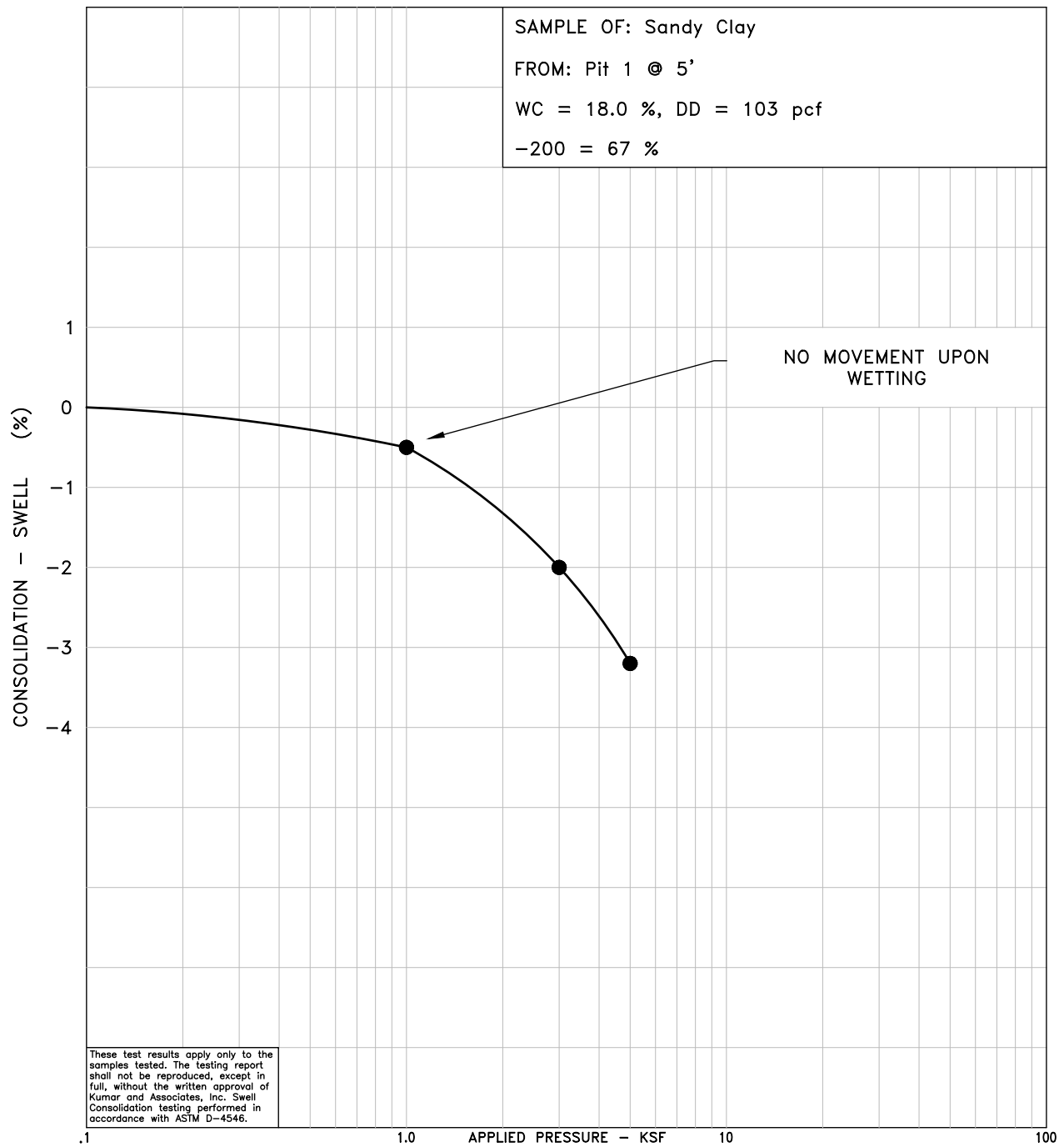
HAND DRIVE SAMPLE.



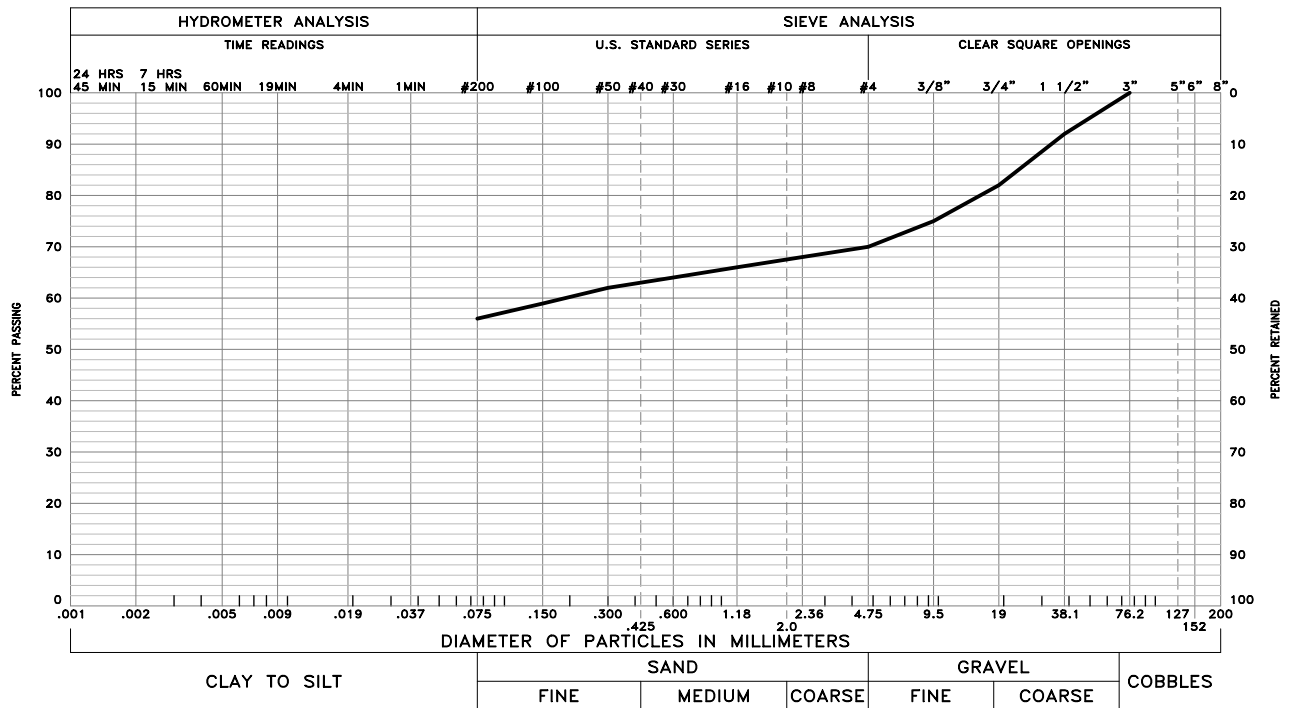
DISTURBED BULK SAMPLE.

NOTES

1. THE EXPLORATORY PITS WERE EXCAVATED WITH A BACKHOE ON MARCH 13, 2025.
2. THE EXPLORATORY PITS WERE LOCATED BY THE CLIENT.
3. THE ELEVATIONS OF THE EXPLORATORY PITS WERE NOT MEASURED AND THE LOGS OF THE EXPLORATORY PITS ARE PLOTTED TO DEPTH.
4. THE EXPLORATORY PIT LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5. THE LINES BETWEEN MATERIALS SHOWN ON THE EXPLORATORY PIT LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE TRANSITIONS MAY BE GRADUAL.
6. GROUNDWATER WAS NOT ENCOUNTERED IN THE PITS AT THE TIME OF EXCAVATION. PITS WERE BACKFILLED SUBSEQUENT TO SAMPLING.
7. LABORATORY TEST RESULTS:
 - WC = WATER CONTENT (%) (ASTM D 2216);
 - DD = DRY DENSITY (pcf) (ASTM D 2216);
 - +4 = PERCENTAGE RETAINED ON NO. 4 SIEVE (ASTM D 422);
 - 200 = PERCENTAGE PASSING NO. 200 SIEVE (ASTM D 1140);
 - LL = LIQUID LIMIT (ASTM D 4318);
 - PI = PLASTICITY INDEX (ASTM D 4318).



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GRAVEL 30 % SAND 14 % SILT AND CLAY 56 %
 LIQUID LIMIT - PLASTICITY INDEX -
 SAMPLE OF: Sandy Gravelly Clay FROM: Pit 2 @ 4.5'

These test results apply only to the samples which were tested. The testing report shall not be reproduced, except in full, without the written approval of Kumar & Associates, Inc. Sieve analysis testing is performed in accordance with ASTM D6913, ASTM D7928, ASTM C136 and/or ASTM D1140.

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**TABLE 1
SUMMARY OF LABORATORY TEST RESULTS**

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SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (pcf)	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (psf)	SOIL TYPE
PIT	DEPTH (ft)			GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTIC INDEX (%)		
1	5	18.0	103			67				Sandy Clay
	11 to 12	9.2				50	23	2		Sandy Silt and Gravel
2	4½	7.0		30	14	56				Sandy Gravelly Clay
	10	10.7				64	33	15		Sandy Clay