



**GEOTECHNICAL
ENGINEERING SERVICES
JOB NO. 1-50401
ACOSTA ROAD RECONSTRUCTION
ANTHONY, NEW MEXICO**

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PREPARED FOR
WILSON AND COMPANY, INC.



April 13, 2015
Job No. 1-50401

Wilson and Company, Inc.
4900 Lang Avenue NE
Albuquerque, New Mexico 87109

Attn: Mr. Eric Hamilton, EIT

RE: Geotechnical Engineering Services
Acosta Road Reconstruction
Anthony, New Mexico

Dear Mr. Hamilton:

Submitted herein is the Geotechnical Engineering Services Report for the above referenced project. The report contains the results of our field investigation, laboratory testing, and recommendations for the pavement section, as well as criteria for general site grading.

It has been a pleasure to serve you on this project. If you should have any questions, please contact this office.

Respectfully submitted:

Reviewed by:

GEO-TEST, INC.

Timothy Matson, Geologist



Charles M. Miller, P.E.

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cc: Addressee (3)



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INTRODUCTION

This report presents the results of a geotechnical investigation performed by this firm for the proposed roadway and utility reconstruction construction in Anthony, New Mexico.

The objective of this investigation is to:

- 1) Evaluate the nature and engineering properties of the subsurface soils underlying the proposed roadway.
- 2) To provide recommendations for the necessary earthwork during construction of the proposed roadways and infrastructure including temporary slopes during trenching and pavement section design.

The investigation includes subsurface exploration, selected soil sampling, laboratory testing of the samples, performing an engineering analysis and preparation of this report.

PROPOSED CONSTRUCTION

It is understood that the project consists of the reconstruction of Acosta Road between Anthony Drive and Stern Drive, a distance of approximately 7,000 linear feet. The roadway has a total of 2 lanes and is approximately 20 feet wide. The design traffic data, which was supplied by Wilson & Company, Inc., indicates that the roadway will be subjected to an average daily traffic (ADT) of 3,423 vehicles per day with a 50 percent direction distribution and an annual growth factor of 2.0 percent. Ninety-five and two tenths percent (95.2%) of the traffic will consist of cars and light trucks (pickups) while 1.0 percent will consist of buses and 0.5 percent will consist of single unit trucks and 0.3 percent single trailer trucks. Four percent were unclassified. Eighteen (18) kip axle load equivalency factors of 0.0008, 0.6808, 0.187 and 2.3719 were provided for cars and light trucks, buses, single unit trucks, and single trailer trucks, respectively.

Should traffic data or other project details vary significantly from those outlined above, this firm should be notified for review and possible revision of recommendations contained herein.

FIELD EXPLORATION

Seven exploratory borings were drilled along the roadway to approximately

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11½ feet below existing roadway. The approximate locations of the borings are as shown on the Boring Location Map, Figure 1. The soils encountered in the borings were continuously examined, visually classified and logged during the drilling operation. The boring logs are presented in a following section of this report. Drilling was accomplished using a truck mounted drill rig equipped with 6.5-inch diameter continuous flight hollow stem auger. Subsurface materials were sampled at five foot intervals or less utilizing an open tube split barrel sampler driven by a standard penetration test hammer and grab samples from the auger cuttings.

LABORATORY TESTING

Selected samples were tested in the laboratory to determine certain engineering properties of the soils. Moisture contents were determined to evaluate the various soil deposits with depth. The results of these tests are shown on the boring logs.

Sieve analysis and Atterberg limits tests were performed to aid in soil classification and R-value correlation. The results of these tests are presented in the Summary of Laboratory Results presented in a following section of this report.

SUBSURFACE SOIL CONDITIONS

The near surface soils encountered at the boring locations consisted predominantly of silty sands and relatively clean sands with various amounts of interbedded gravel with lesser amounts of clayey sands. These soils ranged from loose to medium dense and ranged from non-plastic to medium in plasticity.

No free groundwater was encountered and soil moisture contents were relatively low to moderate throughout the extent of the borings.

CONCLUSIONS AND RECOMMENDATIONS

According to the Unified Soil Classification System (USCS), the upper 5 feet of the existing subgrade soils consist primarily of Silty Sand (SM), Sand with Silt and Gravel (SP-SM), and Clayey Sand (SC), and classify as A-2-4, A-1-b, and A-7, and according to the American Association of State Highway and Transportation Officials (AASHTO) soil classification system.

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Correlated R-values were determined in accordance with NMDOT procedures for the samples taken from the upper 5.0 feet which indicate that the soils possess R-values ranging from 6 to 69 with a mean R-value of about 50. Based on the above, and the fact that there was only one boring that had an estimated R-value less than 55, a design R-value of 50 was selected for pavement design. In areas where the A-7 soils are encountered they should be overexcavated to provide at least 12-inches of soil with an R-value of 50 or greater. Below is a table of the estimated R-values.

Boring No.	Correlated R-Values
1 @ 0-5'	55
2 @ 0-5'	6
3 @ 0-5'	55
4 @ 0-5'	55
5 @ 0-5'	55
6 @ 0-5'	69
7 @ 0-5'	55

PAVEMENT DESIGN

Pavement design and analysis was performed in general conformance the procedures outlined in the latest edition of the "Guidelines of Design of Pavement Structures" by the American Association of State Highway and Transportation and the "Structural Design Guide for Flexible Pavements", Bulletin 102, by the New Mexico Department of Transportation.

Pavement design was performed using the WinPAS software. The software performs pavement section thickness design based on the 1993 AASHTO Guide for Design of Pavement Structures. The required Structural Number was calculated based on the input of design ESALs, Reliability, Overall Deviation, Soil Resilient Modulus (correlated from the design R-value of 50), Initial Serviceability of 4.2, Terminal Serviceability of 2.0, and a 20 year Pavement Design Life. The required Structural Number was calculated to be 2.15. The WinPas design charts are attached to this report, Appendix A.

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The recommended pavement section for project roadway is 3.0 inches of hot mix asphaltic concrete over 7 inches of aggregate base course over 12 inches of compacted subgrade with an R-value of 50 or greater.

PAVING MATERIALS

All paving materials, quality and construction, should conform to Section 423 of the current New Mexico Department of Transportation Standard Specifications for Road and Bridge Construction. The HMA should be SPIII or SPIV, compacted to a target density of 94.5 percent, with a minimum compaction of 92 and a maximum compaction of 97 percent of the theoretical maximum density. The Performance Graded (PG) asphalt binder used should be based on the NMDOT's Pavement Type Selection and Design Guideline.

SITE-GRADING

The following general guidelines should be included in the project construction specifications to provide a basis for quality control during site grading. It is recommended that all structural fill and backfill be placed and compacted under engineering observation and in accordance with the following:

- 1) After milling of the asphalt and making the required excavations, the exposed cut surface should be densified prior to placement of structural fill or base course. Where A-7 soils are encountered they should be overexcavated to provide at least 12-inches of soil with an R-value of 50 or greater.
- 2) Densification of the exposed soils should consist of scarifying to a depth of 12 inches, moisture conditioning to near optimum moisture content and compacting the area to a minimum of 95 percent of maximum dry density as determined in accordance with AASHTO T-180, or in accordance with project specifications, local requirements or governing jurisdiction.
- 3) The results of this investigation indicate that the most of the native soils from the utility excavations should be suitable for structural fill. The millings may be stockpiled and used where the A-7 soils are encountered. All structural fill or backfill material should be free of vegetation and debris and contain no rocks larger than 3 inches.

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- 4) Fill or backfill, as well as the base course, shall be placed in 8-inch loose lifts and compacted with approved compaction equipment. Lifts should be reduced to 4-inch loose lifts if hand held compaction equipment is used. All compaction of fill, backfill or base course shall be accomplished to a minimum of 95 percent of the maximum dry density as determined in accordance with AASHTO T-180 and the moisture content of the fill or backfill, during compaction, should be within 2 percent of the optimum moisture content, or in accordance with project specifications, local requirements or governing jurisdiction.
- 5) Tests for degree of compaction should be determined by the ASTM D-1556 method or ASTM D-6938. Observation and field tests should be conducted during fill and backfill placement by the geotechnical engineer to assist the contractor in evaluating the required degree of compaction. If less than 95 percent is indicated, additional compaction effort should be made with adjustment of the moisture content as necessary until 95 percent compaction is obtained.

MOISTURE PROTECTION

All paved areas should be graded to drain and not allow any ponding on the surface of the paved areas. Positive drainage should also be provided away from the perimeter of all paved areas for a distance of at least 10 feet. Where possible, off site drainage should be routed around and not be allowed to enter the roadway.

CONSTRUCTION EXCAVATIONS

The results of this investigation indicate that the surficial soils encountered in the borings can be readily excavated using normal earth moving and excavation equipment. In addition, most of the excavated soils will be suitable for use as backfill above pipe embedment materials.

Excavated slopes for utility construction should be designed and constructed in accordance with 29 CFR 1926, Subpart P, and any applicable state or local regulations. Temporary cut slopes should not exceed 1.5 horizontal to 1 vertical. Shoring, bracing or benching should be performed by the contractor for in accordance with the strictest governing safety standards.

Bedding and pipe embedment materials to be used around underground utilities should be well graded sand or gravel conforming to the pipe

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manufacturer's recommendations and should be placed and compacted in accordance with project specifications, local requirements or governing jurisdiction. General fill to be used above pipe embedment materials should be placed and compacted in accordance with the plans and specifications. On-site soils may be used as general fill above pipe embedment materials provided they meet the requirements. Water jetting of trench backfill should not be allowed.

REVIEW AND INSPECTION

This report has been prepared to aid in the evaluation of this site and to assist in the design of this project. It is recommended that the geotechnical engineer be provided the opportunity to review the final design drawings and specifications in order to evaluate whether the recommendations in this report are applicable to the final design. Review of the final design drawings and specifications should be noted in writing by the geotechnical engineer.

Variations from soil conditions presented herein may be encountered during construction of this project. In order to permit correlation between the conditions encountered during construction and to confirm recommendations presented herein, it is recommended that the geotechnical engineer be retained to perform sufficient review during construction of this project. Observation and testing should be performed during construction to confirm that suitable fill soils are placed upon competent materials and properly compacted and foundation elements penetrate the recommended soils.

CLOSURE

Our conclusions, recommendations and opinions presented herein are:

- 1) Based upon our evaluation and interpretation of the findings of the field and laboratory program.
- 2) Based upon an interpolation of soil conditions between and beyond the explorations.
- 3) Subject to confirmation of the conditions encountered during construction.
- 4) Based upon the assumption that sufficient observation will be provided during construction.

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- 5) Prepared in accordance with generally accepted professional geotechnical engineering principles and practice.

This report has been prepared for the sole use of Wilson Company, Inc., specifically to aid in the design of the reconstruction of Acosta Road in Anthony, New Mexico, and not for the use by any third parties.

We make no other warranty, either express or implied. Any person using this report for bidding or construction purposes should perform such independent investigation as he deems necessary to satisfy himself as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project. If conditions encountered during construction appear to be different than indicated by this report, this office should be notified.

All soil samples will be discarded 60 days after the date of this report unless we receive a specific request to retain the samples for a longer period of time.

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BORING LOCATION MAP



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GEOTECHNICAL ENGINEERING
AND MATERIAL TESTING

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ACOSTA ROAD RECONSTRUCTION
ANTHONY, NEW MEXICO
JOB NO. 1-59401

Figure 1



Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 1

During Drilling: None

After 24 Hours:

DEPTH (FT)	LOG	SAMPLE					SUBSURFACE PROFILE		N blows/ft
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	
							AC	1" AC & 3" Sub-base	
5			SS	5-10-10 20	7		SM	SILTY SAND, fine to medium grained, non-plastic, dense to loose, slightly moist, brown to light brown	20
			SS	2-3-5 8	9				8
			SS	2-4-6 10	3		SP-SM	SAND WITH SILT AND GRAVEL, medium to coarse grained, non-plastic, loose to medium dense, slightly moist to dry, tan	10
10			SS	8-9-9 18	2				18
								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'	
15									

LEGEND

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 2

During Drilling: None

After 24 Hours:

DEPTH (FT)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE			USC	SUBSURFACE PROFILE	DESCRIPTION	N blows/ft			
				N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)				20	40	60	80
0							AC	2" AC & 4" Sub-base					
5			SS	3-4-6 10	15		SC	CLAYEY SAND, fine grained, low to medium plasticity, soft, slightly moist to dry, brown					10
			SS	3-2-2 4	9		SM	SILTY SAND, fine to medium grained, non-plastic, loose, slightly moist, light brown					4
			SS	5-9-9 18	3		SP-SM	SAND WITH SILT AND GRAVEL, medium to coarse grained, non-plastic, medium dense, slightly moist to dry, light brown					18
10			SS	3-6-7 13	3								
15								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'					

LOG OF TEST BORING 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ_GEO TEST.GDT 4/13/15

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- UD/SL - Undisturbed Sleeve

- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed
- ST - Shelby Tube

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Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 3

During Drilling: None

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE				SUBSURFACE PROFILE	
				N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
							AC	3.5" AC & 6" Base Coarse	
			SS	10-9-9 18	7		SM	SILTY SAND, fine to medium grained, non-plastic, medium dense, slightly moist, light brown	18
5			SS	6-9-6 15	16				15
			SS	5-7-8 15	8		CL	SANDY CLAY, fine grained, medium plasticity, moderately firm, slightly moist to moist, light brown	15
10			SS	3-6-9 15	19				15
								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'	
15									

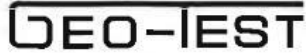
LOG OF TEST BORING 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- UD/SL - Undisturbed Sleeve

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Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 4

During Drilling: None

After 24 Hours:

DEPTH (FT)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE			USC	SUBSURFACE PROFILE	
				N BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)		DESCRIPTION	N blows/ft
							AC	1.5" AC & 4" Base Course	
5			SS	5-7-8 15	4				15
			SS	2-5-5 10	3		SM	SILTY SAND, fine grained, non-plastic, medium dense to loose, slightly moist to dry, light brown	10
			SS	3-4-5 9	3				9
10			SS	4-4-5 9	8				9
								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'	
15									

LOG OF TEST BORING 1-50401 RECONSTRUCTION OF ACOSTA ROAD G.P.I. GEO TEST G.3T 4/13/15

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed
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Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 5

During Drilling: None

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE				SUBSURFACE PROFILE		N blows/ft				
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	20	40	60	80
							AC	1.5" AC & 5" Base Course				
5			SS	2-3-4 7	5		SP	SAND WITH SILT, fine to medium grained, non-plastic, loose, slightly moist to dry, light brown				7
			SS	2-3-4 7	5							7
			SS	2-2-3 5	8		SM	SILTY SAND, fine grained, non-plastic, loose, slightly moist, light brown				5
10			SS	3-3-4 7	3		SP	SAND, fine to medium grained, non-plastic, loose, slightly moist to dry, light brown				7
								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'				
15												

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
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Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 6

During Drilling: None

After 24 Hours:

DEPTH (Ft)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE				SUBSURFACE PROFILE		N blows/ft
				N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION		
								AC	1" AC & 6" Base Course	
5			SS	4-6-5 11	4			SP-SM	SAND WITH SILT AND GRAVEL, fine to medium grained, non-plastic, medium dense to loose, slightly moist, light brown	11
			SS	3-3-4 7	5					7
			SS	3-5-7 12	3			GP	GRAVEL WITH SAND, medium to coarse grained, non-plastic, medium dense to dense, slightly moist to dry, light brown to gray	12
10			SS	6-12-10 22	2					22
									STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'	

LEGEND

SS - Split Spoon
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UD/SL - Undisturbed Sleeve

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Project: Acosta Road Reconstruction

Date: 04/06/2015

Project No: 1-50401

Elevation:

Type: 6.5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 7

During Drilling: None

After 24 Hours:

DEPTH (ft)	LOG	SAMPLE				SUBSURFACE PROFILE		N blows/ft				
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE %	DRY DENSITY (pcf)	USC	DESCRIPTION	20	40	60	80
							AC	1" AC & 6" Base Course				
			SS	2-3-3 6	6		SM	SILTY SAND, fine grained, non-plastic, loose, slightly moist, light brown				
5			SS	3-2-3 5	9							
			SS	2-2-3 5	13		SC-SM	SILTY, CLAYEY SAND, fine grained, non-plastic to low plasticity, loose, slightly moist to moist, brown to light brown				
10			SS	3-4-4 8	8							
								STOPPED AUGER AT 10' STOPPED SAMPLER AT 11.5'				
15												

LOG OF TEST BORING - 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15

LEGEND

SS - Split Spoon
AC - Auger Cuttings
UD/SL - Undisturbed Sleeve

AMSL - Above Mean Sea Level
CS - Continuous Sampler
UD - Undisturbed
ST - Shelby Tube

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

SUMMARY OF LABORATORY RESULTS

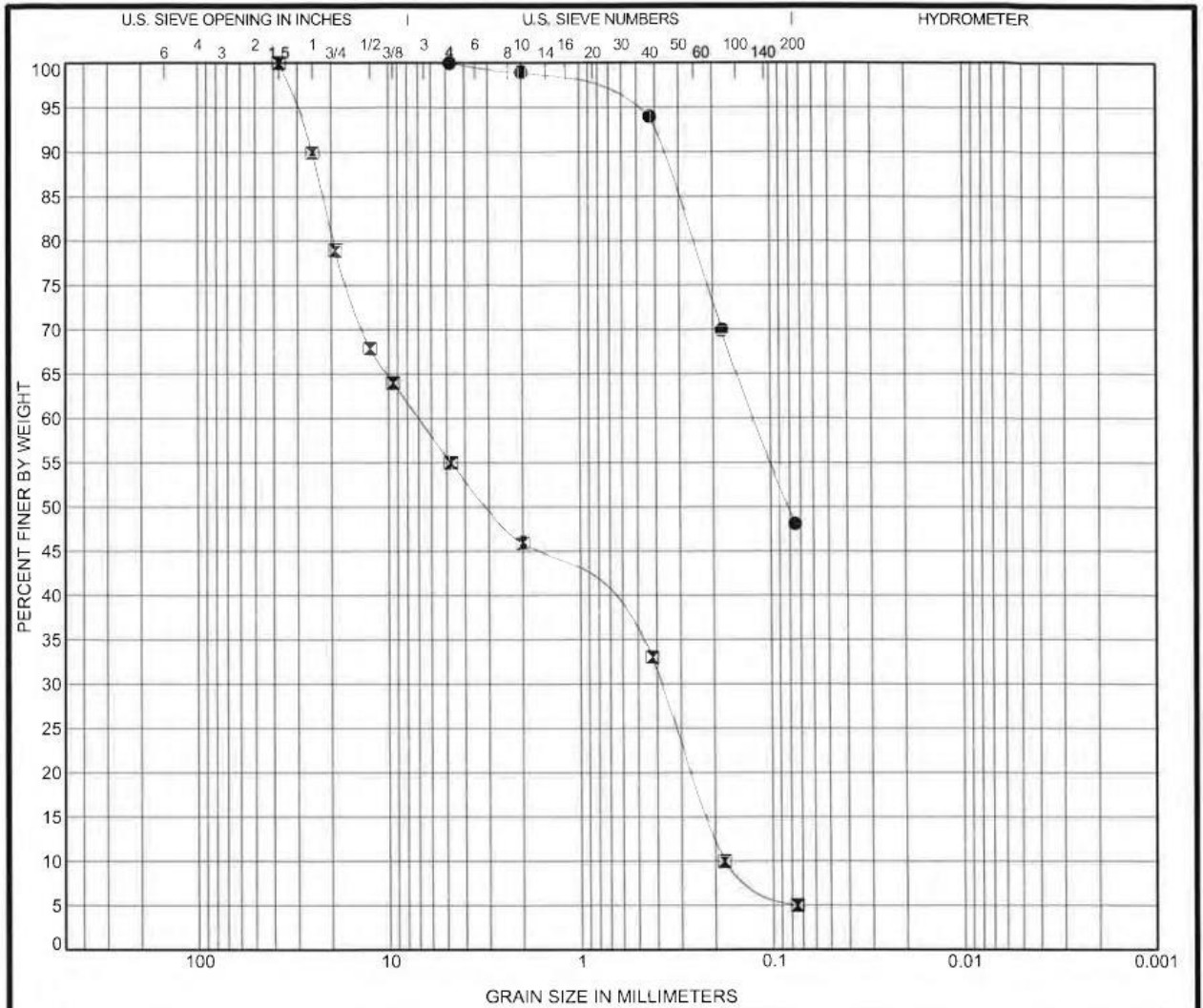
TEST HOLE	DEPTH (FEET)	UNIFIED CLASS	(% MOIST)	LL	PI	SIEVE ANALYSIS PERCENT PASSING															
						NO 200	NO 100	NO 40	NO 10	NO 4	3/8"	1/2"	3/4"	1"	1 1/2"	2"	4"				
5	10.0		2.5																		
6	2.5	SP-SM	4.0	NP	NP	6	14	47	70	79	87	95	97	100							
6	5.0		4.5																		
6	7.5	GP	2.5	NP	NP	2	4	16	36	48	73	91	100								
6	10.0		1.7																		
7	2.5		5.6																		
7	5.0	SM	9.0	NP	NP	33	52	93	99	99	100										
7	7.5		12.7																		
7	10.0	SC-SM	8.4	22	7	45	66	95	100												

SUMMARY OF LABORATORY RESULTS 1-50401 RECONSTRUCTION OF ACOSTA ROAD GPJ GEO TEST GDT 4/13/15

GEO-TEST

LL = LIQUID LIMIT
 PI = PLASTICITY INDEX
 NP = NON PLASTIC or NO VALUE

Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 2 2.5	CLAYEY SAND(SC)	43	14	29		
⊠ 2 10.0	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	NP	NP	NP	0.11	38.78

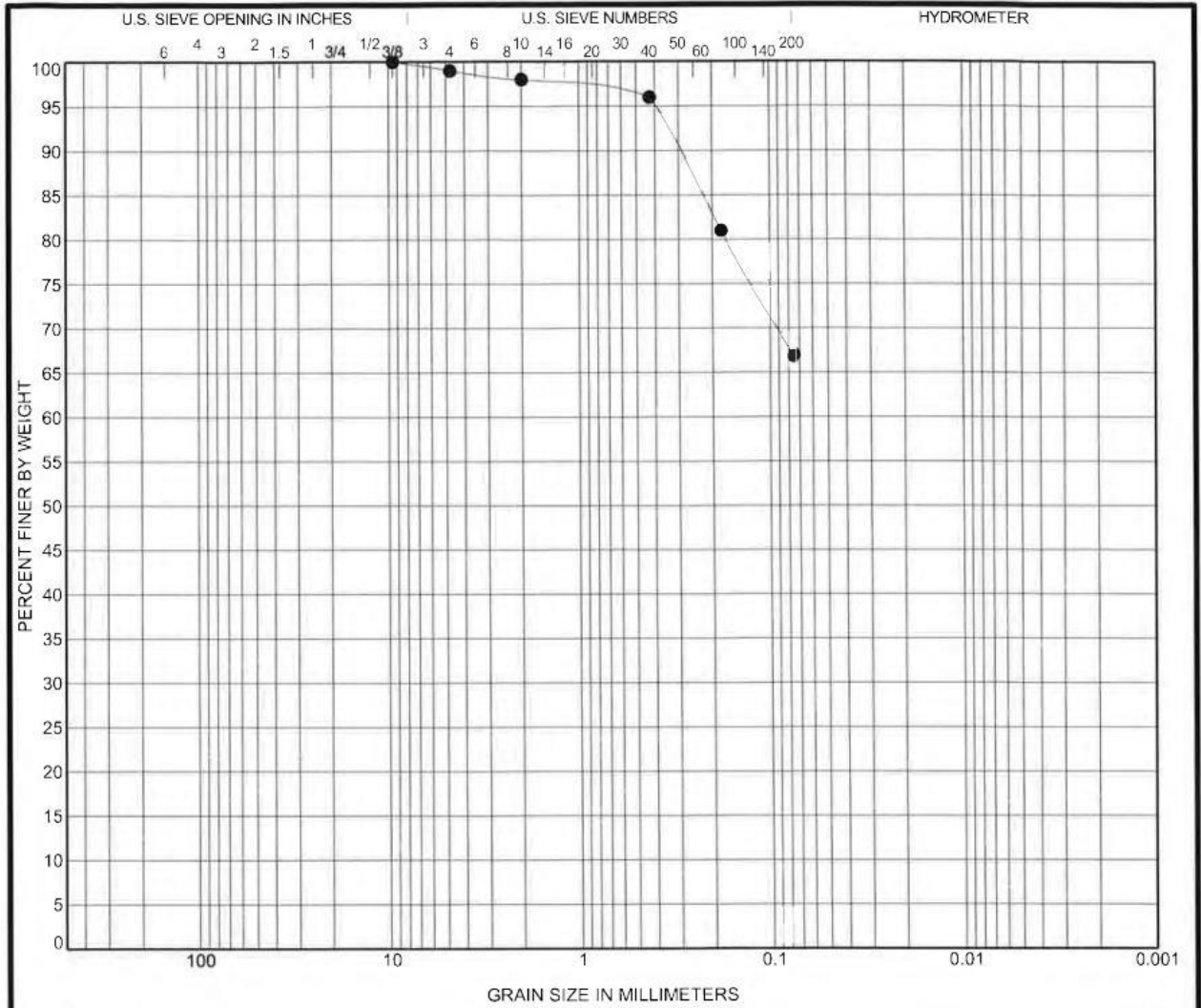
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 2 2.5	4.75	0.121			0.0	51.9		48.1
⊠ 2 10.0	37.5	6.981	0.38	0.18	45.0	50.0		5.0

GRAIN SIZE DISTRIBUTION



Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401

U.S. GRAIN SIZE 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 3 5.0	SANDY LEAN CLAY (CL)	34	17	17		

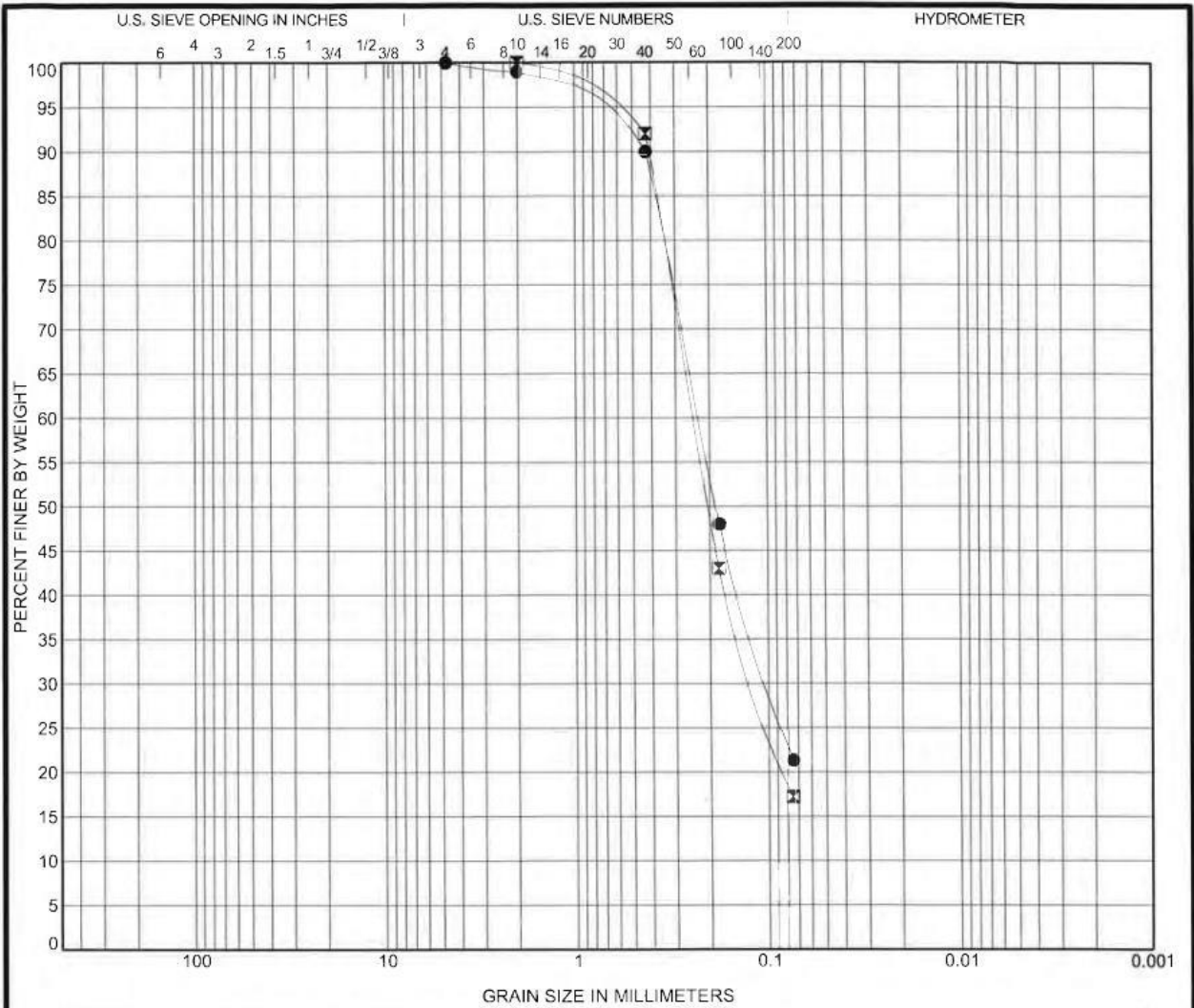
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 3 5.0	9.5				1.0	32.0	67.0	

GRAIN SIZE DISTRIBUTION



Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401

U.S. GRAIN SIZE 1-50401 RECONSTRUCTION OF ACOSTA ROAD GPJ GEO TEST GDT 4/13/15



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

US GRAIN SIZE 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15

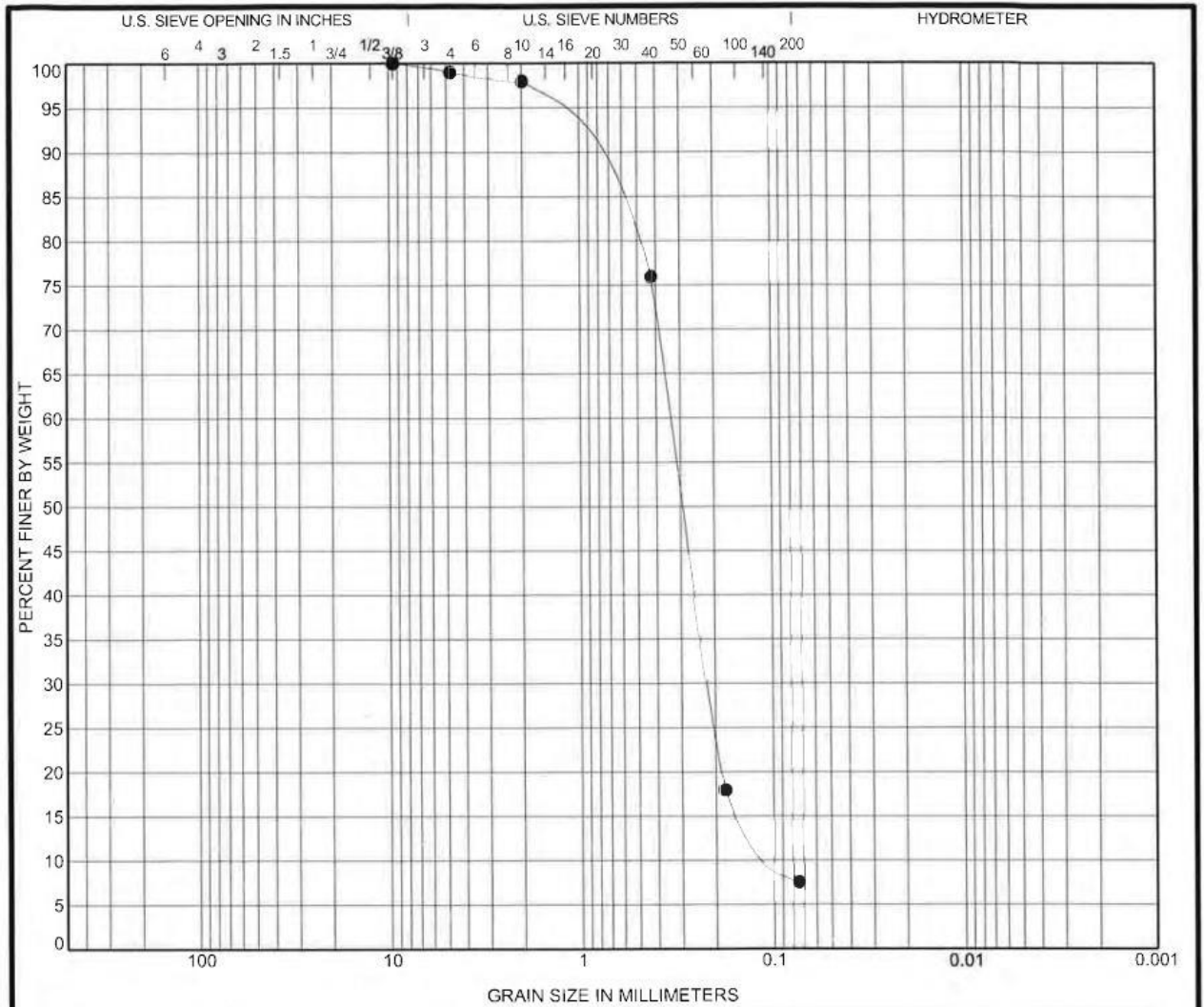
Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 4 2.5	SILTY SAND(SM)	NP	NP	NP		
⊗ 4 7.5	SILTY SAND(SM)	NP	NP	NP		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 4 2.5	4.75	0.23	0.1		0.0	78.7	21.3	
⊗ 4 7.5	2	0.243	0.116		0.0	82.8	17.2	

GRAIN SIZE DISTRIBUTION



Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 5	POORLY GRADED SAND with SILT(SP-SM)	NP	NP	NP	1.50	3.65

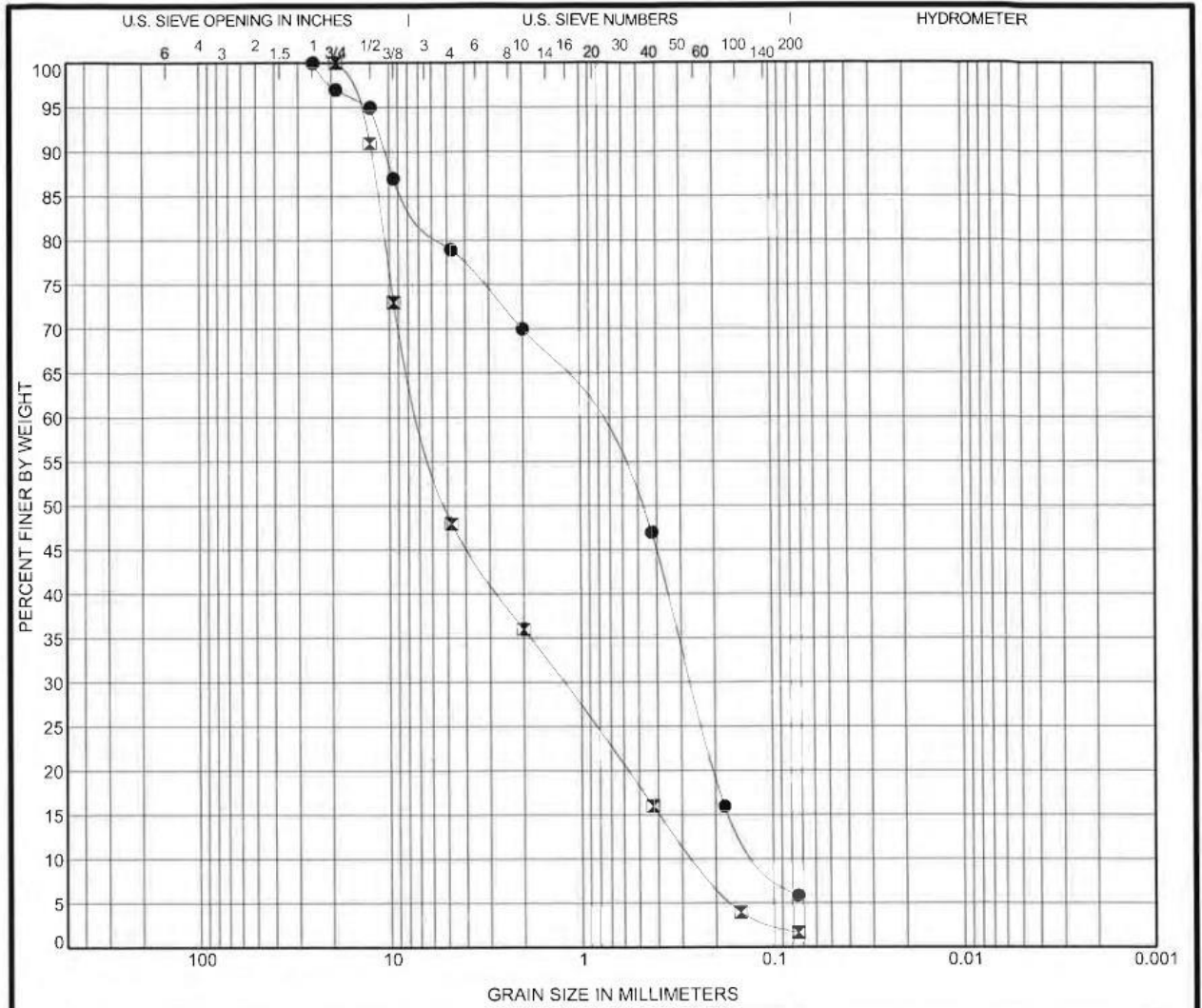
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 5	9.5	0.335	0.215	0.092	1.0	91.4	7.6	

GRAIN SIZE DISTRIBUTION



Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401

US GRAIN SIZE 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 6 2.5	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	NP	NP	NP	0.65	9.53
⊠ 6 7.5	POORLY GRADED GRAVEL with SAND(GP)	NP	NP	NP	0.94	26.24

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 6 2.5	25	1.02	0.265	0.107	21.0	73.1	5.9	
⊠ 6 7.5	19	6.625	1.257	0.252	52.0	46.3	1.7	

GRAIN SIZE DISTRIBUTION



Project: Acosta Road Reconstruction
 Location: Anthony, New Mexico
 Number: 1-50401

U.S. GRAIN SIZE 1-50401 RECONSTRUCTION OF ACOSTA ROAD.GPJ GEO TEST.GDT 4/13/15

