GEOTEK ENGINEERING
& TESTING SERVICES, INC.
909 East 50th Street North
Sioux Falls, South Dakota 57104
Phone 605-335-5512 Fax 605-335-0773

May 8, 2026

MDB Properties
27088 Highway 11
Sioux Falls, SD 57108

Attn: Mike Brown

Subj: Sand & Gravel Exploration
456th Avenue (S. of 280th Street)
Near Parker, South Dakota
GeoTek #26-0686

Introduction

We are submitting this correspondence to present our written report detailing the sand and gravel exploration program for the referenced project. Our work was performed in accordance with your authorization.

Property Location & Description

The property is located east of 456th Avenue, on the south side of 280th Street, near Parker, South Dakota. The site location is shown in Figure 1, which is attached at the end of the report.

Borings

We performed 14 flight auger borings from April 29 to April 30, 2026 (16 flight auger borings had been planned; however, 2 of the borings were not able to be completed in time). The borings were advanced to depths varying from 40 feet to 60 feet. The subsurface conditions encountered at the boring locations are illustrated by means of the attached boring logs. Figure 2 (attached at the end of the report) shows the relative locations of the borings within the property.

Water Levels

Measurements to record the groundwater levels were made at the boring locations. The time and level of the groundwater readings are recorded on the boring logs. At the time of our measurements, the water levels varied from 5 feet below ground surface at test boring 5 to 23 feet below ground surface at test boring 1.

The water levels may or may not be an accurate indication of the depth or lack of subsurface groundwater. The limited length of observation restricts the accuracy of the measurements. Long term groundwater monitoring was not included in our scope of work.

Subsurface Conditions

The subsurface profile at the boring locations consisted of the following soil types: topsoil, coarse alluvium soils, and glacial till soils. The topsoil materials consisted of lean clay (CL) and sandy lean clay (CL). The coarse alluvium soils consisted of sand (SP), sand with silt (SP-SM), silty sand (SM), and clayey sand (SC). The glacial till soils consisted of lean clay with sand (CL).

Laboratory Testing

No laboratory testing was performed on the samples obtained from the test borings.

Discussion

Based on our visual observations of the samples collected from the test borings, it is our opinion that most of the sand (SP) and sand with silt (SP-SM) coarse alluvium soils and portions of the silty sand (SM) coarse alluvium soils would likely be suitable for use as pit-run material for various construction projects with limited processing and screening. In addition, portions of the coarse alluvium soils would likely be suitable for use as base or surfacing material for street and highway projects after additional processing such as mixing, crushing, and screening. Portions of the sand (SP) and sand with silt (SP-SM) coarse alluvium soils may also be suitable for use as washed sand after additional processing.

Standard of Care

Our services for your project were performed in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering profession currently practicing at this time and area.

Remarks

We trust this report provides you with the necessary information for the project. Please note that the samples will be discarded 30 days from the reporting date. If you have any questions or require additional information, please contact our office.

GeoTek Engineering & Testing Services, Inc.

Shawn Maassen, PE
Project Manager

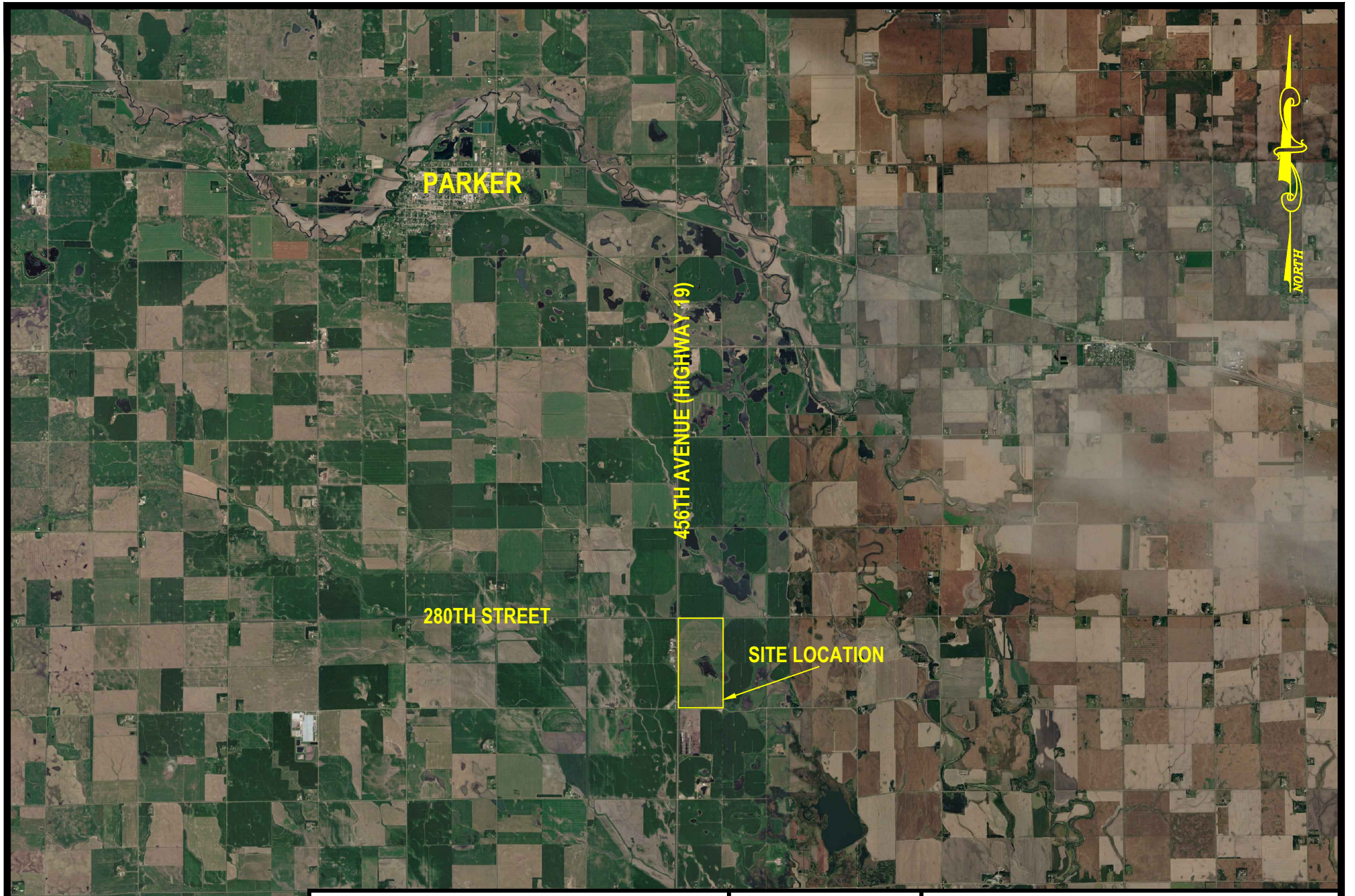

FIGURE 1
SITE LOCATION MAP
SAND & GRAVEL EXPLORATION
456TH AVENUE (S. OF 280TH STREET)
NEAR PARKER, SD
ACAD/GEOTEK/SHAWN/26-0686

PROJECT#: 26-0686

DRAWN BY: MW

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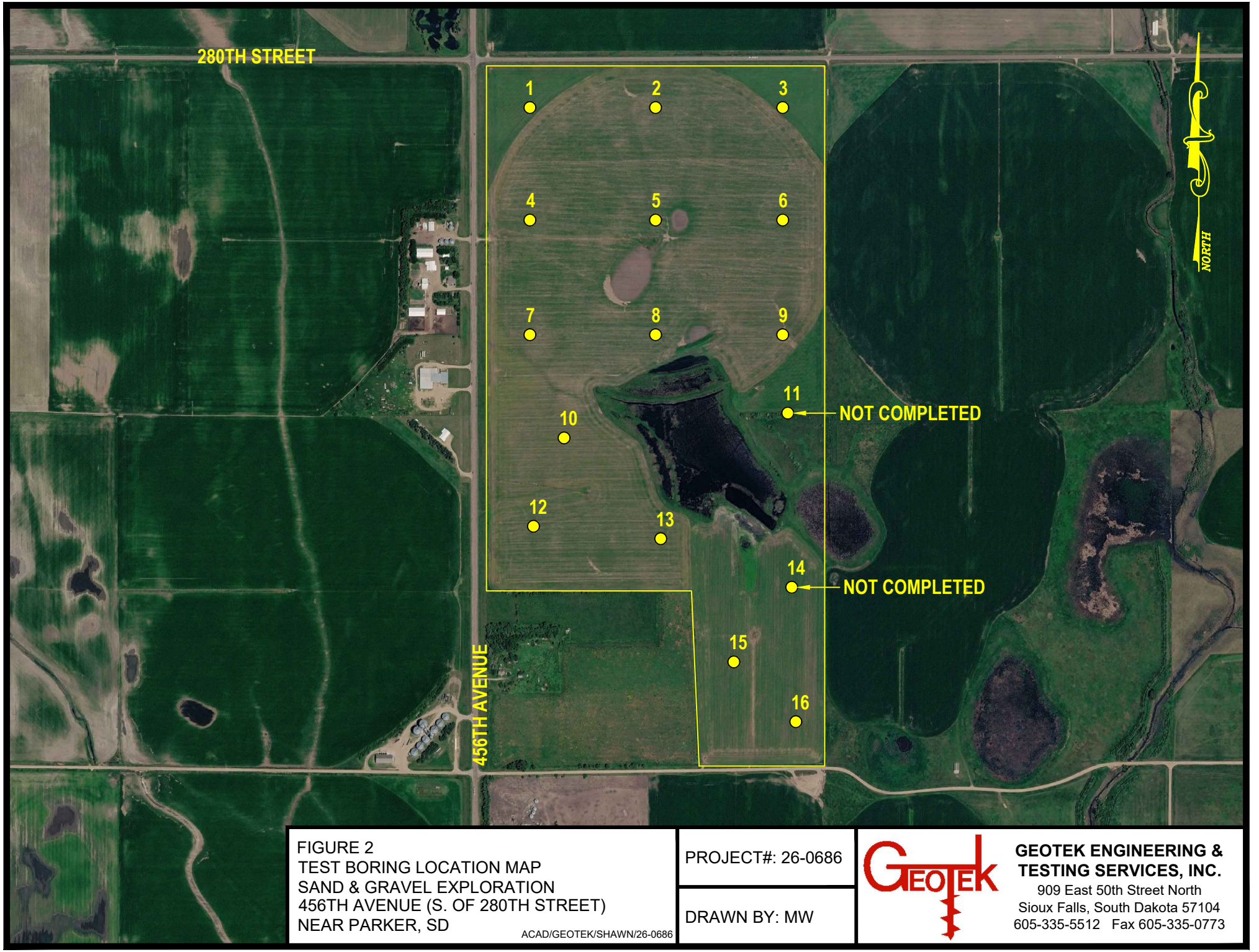

FIGURE 2
TEST BORING LOCATION MAP
SAND & GRAVEL EXPLORATION
456TH AVENUE (S. OF 280TH STREET)
NEAR PARKER, SD

ACAD/GEOTEK/SHAWN/26-0686

PROJECT#: 26-0686

DRAWN BY: MW

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GEOTECHNICAL TEST BORING LOG

BORING NO. 1

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
	1.0	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL							
		SILTY SAND: a little gravel, medium to coarse grained, brown, dry to moist, (SM)	COARSE ALLUVIUM		FA 1 FA 2 FA 3 FA 4					
	20.0									
▼		SILTY SAND: a little gravel, medium to coarse grained, brown, waterbearing, (SM)	COARSE ALLUVIUM		FA 5 FA 6					
	30.0									
		SAND WITH SILT: with gravel, fine to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 7 FA 8 FA 9					
	45.0									
		SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 10					
	50.0									
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	10:22 AM	50.0	-	23.0

Additional Boring Information

START:	04-29-2026	COMPLETE:	04-29-2026, 09:44 AM
METHOD:	6" Flight Auger		
LATITUDE:		*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:			
DRILL RIG:	B-57 Blue		
CREW CHIEF:	Marcus Shields		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 2

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	2.0	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
		SILTY SAND: a little gravel, medium to coarse grained, brown, dry to moist, (SM)	COARSE ALLUVIUM		FA 2 FA 3					
▼	18.0	SAND WITH SILT: with gravel, fine to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 4 FA 5 FA 6 FA 7					
	35.0	SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 8 FA 9 FA 10					
	50.0	Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	11:22 AM	50.0	-	18.0

Additional Boring Information

START: 04-29-2026 COMPLETE: 04-29-2026, 10:38 AM

METHOD: 6" Flight Auger

LATITUDE:

LONGITUDE:

(Latitude / Longitude) (Approximate Values)

DRILL RIG: B-57 Blue

CREW CHIEF: Marcus Shields

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GEOTECHNICAL TEST BORING LOG

BORING NO. 3

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	0.5	SANDY LEAN CLAY: very dark brown, moist, 4" thick (CL)	TOPSOIL		FA 1					
		SILTY SAND: medium to coarse grained, brown, dry to waterbearing, (SM)	COARSE ALLUVIUM		FA 2					
					FA 3					
▼					FA 4					
					FA 5					
					FA 6					
	35.0				FA 7					
		SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 8					
	43.0				FA 9					
		LEAN CLAY WITH SAND: a trace of gravel, dark gray, moist, (CL)	GLACIAL TILL							
	50.0				FA 10					
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	12:22 PM	50.0	-	22.0

Additional Boring Information

START:	04-29-2026	COMPLETE:	04-29-2026, 11:27 AM
METHOD:	6" Flight Auger		
LATITUDE:		*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:			
DRILL RIG:	B-57 Blue		
CREW CHIEF:	Marcus Shields		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 4

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	4.0	LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
▼	25.0	SAND WITH SILT: a little gravel, fine to medium grained, brown, moist to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 2, FA 3, FA 4, FA 5					
	40.0	SAND WITH SILT: with gravel, medium to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 6, FA 7, FA 8					
	47.0	SAND: a little gravel, medium to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 9					
	50.0	LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		FA 10					
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	03:24 PM	50.0	15.0	15.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 02:32 PM
METHOD:	6" Flight Auger		
LATITUDE:	43.326239	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.080584		
DRILL RIG:	B-57 Gray		
CREW CHIEF:	Mike Wagner		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 5

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
▼	5.0	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
	10.0	CLAYEY SAND: medium to coarse grained, brown, moist to waterbearing, (SC)	COARSE ALLUVIUM		FA 2					
	35.0	SILTY SAND: a little gravel, medium to coarse grained, brown, waterbearing, (SM)	COARSE ALLUVIUM		FA 3, FA 4, FA 5, FA 6, FA 7					
	50.0	SAND WITH SILT: with gravel, fine to coarse grained, gray, waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 8, FA 9, FA 10					
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	03:01 PM	50.0	-	5.0

Additional Boring Information

START:	04-29-2026 COMPLETE: 04-29-2026, 02:16 PM
METHOD:	6" Flight Auger
LATITUDE:	*(Latitude / Longitude) (Approximate Values)*
LONGITUDE:	
DRILL RIG:	B-57 Blue
CREW CHIEF:	

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GEOTECHNICAL TEST BORING LOG

BORING NO. 6

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
	3.0	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
	15.0	SILTY SAND: medium to coarse grained, brown, dry to moist, (SM)	COARSE ALLUVIUM		FA 2 FA 3					
▼	30.0	SAND WITH SILT: with gravel, brown, moist to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 4 FA 5 FA 6					
	45.0	SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 7 FA 8 FA 9					
	50.0	LEAN CLAY WITH SAND: a trace of sand, dark gray, moist, (CL)	GLACIAL TILL		FA 10					
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	02:10 PM	50.0	-	20.0

Additional Boring Information

START: 04-29-2026 COMPLETE: 04-29-2026, 12:42 PM
METHOD: 6" Flight Auger
LATITUDE:
LONGITUDE:
(Latitude / Longitude) (Approximate Values)
DRILL RIG: B-57 Blue
CREW CHIEF:

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GEOTECHNICAL TEST BORING LOG

BORING NO. 7

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
		LEAN CLAY: black, dry, (CL)	TOPSOIL		BAG 1					
	4.0									
▼		SILTY SAND: with gravel, fine to coarse grained, brown, dry to waterbearing, (SM)	COARSE ALLUVIUM		BAG 2 BAG 3 BAG 5 BAG 6 BAG 7					
	30.0									
		SAND WITH SILT: with gravel, medium to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		BAG 8					
	35.0									
		SAND: with gravel, medium to coarse grained, brownish gray, waterbearing, (SP)	COARSE ALLUVIUM		BAG 9 BAG 10					
	45.0									
		LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		BAG 11 BAG 13					
	55.0									
		Bottom of borehole at 55.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	11:20 AM	55.0	15.0	15.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 09:14 AM
METHOD:	6" Flight Auger		
LATITUDE:	43.324886	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.079236		
DRILL RIG:	B-57 Blue		
CREW CHIEF:	Matt Binstock		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 8

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
	2.0	LEAN CLAY: black, dry, (CL)	TOPSOIL		BAG 1					
▼		SILTY SAND: with gravel, fine to coarse grained, brown to gray, dry to waterbearing, (SM)	COARSE ALLUVIUM		BAG 2 BAG 3 BAG 4 BAG 5					
	25.0	SAND WITH SILT: with gravel, fine to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		BAG 6 BAG 7 BAG 8					
	40.0	SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		BAG 9 BAG 10					
	50.0	LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		BAG 11 BAG 12					
	60.0	Bottom of borehole at 60.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	11:21 AM	60.0	8.0	8.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 10:26 AM
METHOD:	6" Flight Auger		
LATITUDE:	43.324066	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.077032		
DRILL RIG:	B-57 Blue		
CREW CHIEF:	Matt Binstock		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 9

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
		LEAN CLAY: black, dry, (CL)	TOPSOIL		BAG 1					
	4.0									
▼		SILTY SAND: a little gravel, fine to coarse grained, brown, dry to waterbearing, (SP)	COARSE ALLUVIUM		BAG 2 BAG 3 BAG 4 BAG 5 BAG 6					
	30.0									
		SAND WITH SILT: with gravel, fine to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		BAG 7 BAG 8 BAG 9					
	45.0									
		LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		BAG 10					
	50.0									
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	12:15 PM	50.0	12.0	12.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 11:35 AM
METHOD:	6" Flight Auger		
LATITUDE:	43.324234	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.073402		
DRILL RIG:	B-57 Blue		
CREW CHIEF:	Matt Binstock		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 10

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
	4.0	LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
▼	20.0	SILTY SAND: a little gravel, fine to medium grained, brown, moist to waterbearing, (SM)	COARSE ALLUVIUM		FA 2 FA 3 FA 4					
	35.0	SAND WITH SILT: a little gravel, medium to coarse grained, brown, waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 5 FA 6 FA 7					
	50.0	LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		FA 8 FA 9 FA 10					
		Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	04:13 PM	50.0	14.0	13.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 03:24 PM
METHOD:	6" Flight Auger		
LATITUDE:	43.322024	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.079880		
DRILL RIG:	B-57 Gray		
CREW CHIEF:	Mike Wagner		

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GEOTECHNICAL TEST BORING LOG

BORING NO. 12

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	0.5	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
		SILTY SAND: a little gravel, medium to coarse grained, brown, dry to waterbearing, (SM)	COARSE ALLUVIUM		FA 2					
	15.0				FA 3					
▼		SAND WITH SILT: with gravel, medium to coarse grained, brown, moist to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 4					
					FA 5					
					FA 6					
	35.0				FA 7					
		SAND: a little gravel, fine to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 8					
	45.0				HA 9					
		LEAN CLAY WITH SAND: a trace of gravel, dark gray, moist, (CL)	GLACIAL TILL		FA 10					
	50.0	Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	03:52 PM	50.0	-	22.0

Additional Boring Information

START: 04-29-2026 COMPLETE: 04-29-2026, 03:07 PM
METHOD: 6" Flight Auger
LATITUDE:
LONGITUDE:
(Latitude / Longitude) (Approximate Values)
DRILL RIG: B-57 Blue
CREW CHIEF: Marcus Shields

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GEOTECHNICAL TEST BORING LOG

BORING NO. 13

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	LABORATORY TESTS MC	D	LL / PL	QU	- #200
	4.0	LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
▼	25.0	SAND WITH SILT: a little gravel, fine to medium grained, brown, moist to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 2, FA 3, FA 4, FA 5					
	34.0	SAND: a little gravel, medium to coarse grained, brown, waterbearing, (SP)	COARSE ALLUVIUM		FA 6, FA 7					
	40.0	LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		FA 8					
		Bottom of borehole at 40.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	05:03 PM	40.0	12.5	12.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 04:20 PM
METHOD:	6" Flight Auger		
LATITUDE:	43.319704	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.076961		
DRILL RIG:	B-57 Gray		
CREW CHIEF:	Mike Wagner		

GEOTEK ENGINEERING
& TESTING SERVICES, INC.
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GEOTECHNICAL TEST BORING LOG

BORING NO. 15

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	0.5	SANDY LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL							
		SAND WITH SILT: a little gravel, medium to coarse grained, brown, dry to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 1 FA 2 FA 3 FA 4					
▼	20.0	SAND: a little gravel, medium to coarse grained, brown, waterbearing, (SP)	COARSE ALLUVIUM		FA 5 FA 6 FA 7 FA 8					
	40.0	SAND: with gravel, medium to coarse grained, gray, waterbearing, (SP)	COARSE ALLUVIUM		FA 9 FA 10					
	50.0	Bottom of borehole at 50.0 Feet.								

Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/29/2026	04:51 PM	50.0	-	19.0

Additional Boring Information

START: 04-29-2026 COMPLETE: 04-29-2026, 04:05 PM
METHOD: 6" Flight Auger
LATITUDE:
LONGITUDE:
(Latitude / Longitude) (Approximate Values)
DRILL RIG: B-57 Blue
CREW CHIEF: Marcus Shields

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GEOTECHNICAL TEST BORING LOG

BORING NO. 16

GEOTEK # **26-0686**

PROJECT: **Sand & Gravel Exploration, 456th Ave (S of 280th St), Near Parker, SD**

WL	Elevation / Depth (feet)	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	SAMPLE TYPE NO.	MC	D	LL / PL	QU	- #200
	4.0	LEAN CLAY: very dark brown, moist, (CL)	TOPSOIL		FA 1					
▼	20.0	SAND WITH SILT: a little gravel, fine to medium grained, brown, moist to waterbearing, (SP-SM)	COARSE ALLUVIUM		FA 2 FA 3 FA 4					
	35.0	SAND: a little gravel, medium to coarse grained, brown, waterbearing, (SP)	COARSE ALLUVIUM		FA 5 FA 6 FA 7					
	40.0	LEAN CLAY WITH SAND: a little gravel, gray, moist, (CL)	GLACIAL TILL		FA 8					
		Bottom of borehole at 40.0 Feet.								

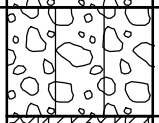
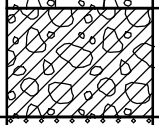
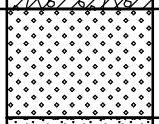
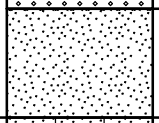
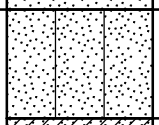
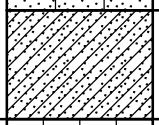
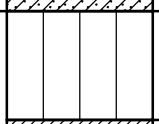
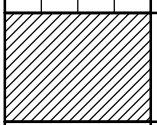
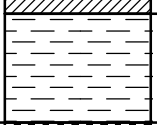
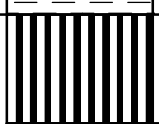
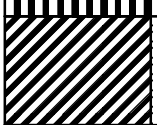
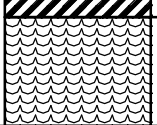
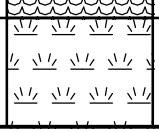
Water Level Measurements

DATE	TIME	SAMPLE DEPTH (ft)	CAVE-IN DEPTH (ft)	WATER LEVEL (ft)
04/30/2026	06:10 PM	40.0	12.5	12.0

Additional Boring Information

START:	04-30-2026	COMPLETE:	04-30-2026, 04:20 PM
METHOD:	6" Hand Auger		
LATITUDE:	43.319704	*(Latitude / Longitude) (Approximate Values)*	
LONGITUDE:	-97.076961		
DRILL RIG:	B-57 Gray		
CREW CHIEF:	Mike Wagner		

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

BORING LOG SYMBOLS AND DESCRIPTIVE TERMINOLOGY

SYMBOLS FOR DRILLING AND SAMPLING

Symbol	Definition
Bag	Bag sample
CS	Continuous split-spoon sampling
DM	Drilling mud
FA	Flight auger; number indicates outside diameter in inches
HA	Hand auger; number indicates outside diameter in inches
HSA	Hollow stem auger; number indicates inside diameter in inches
LS	Liner sample; number indicates outside diameter of liner sample
N	Standard penetration resistance (N-value) in blows per foot
NMR	No water level measurement recorded, primarily due to presence of drilling fluid
NSR	No sample retrieved; classification is based on action of drilling equipment and/or material noted in drilling fluid or on sampling bit
SH	Shelby tube sample; 3-inch outside diameter
SPT	Standard penetration test (N-value) using standard split-spoon sampler
SS	Split-spoon sample; 2-inch outside diameter unless otherwise noted
WL	Water level directly measured in boring
▼	Water level symbol

SYMBOLS FOR LABORATORY TESTS

Symbol	Definition
WC	Water content, percent of dry weight; ASTM:D2216
D	Dry density, pounds per cubic foot
LL	Liquid limit; ASTM:D4318
PL	Plastic limit; ASTM:D4318
QU	Unconfined compressive strength, pounds per square foot; ASTM:D2166

DENSITY/CONSISTENCY TERMINOLOGY

Density		Consistency
Term	N-Value	Term
Very Loose	0-4	Soft
Loose	5-8	Firm
Medium Dense	9-15	Stiff
Dense	16-30	Very Stiff
Very Dense	Over 30	Hard

PARTICLE SIZES

Term	Particle Size
Boulder	Over 12”
Cobble	3” – 12”
Gravel	#4 – 3”
Coarse Sand	#10 – #4
Medium Sand	#40 – #10
Fine Sand	#200 – #40
Silt and Clay	passes #200 sieve

DESCRIPTIVE TERMINOLOGY

Term	Definition
Dry	Absence of moisture, powdery
Frozen	Frozen soil
Moist	Damp, below saturation
Waterbearing	Pervious soil below water
Wet	Saturated, above liquid limit
Lamination	Up to ½” thick stratum
Layer	½” to 6” thick stratum
Lens	½” to 6” discontinuous stratum

GRAVEL PERCENTAGES

Term	Range
A trace of gravel	2-4%
A little gravel	5-15%
With gravel	16-50%