

LOG OF TEST BORING

BORING 34

Project No: WV545

Boring No: 34

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

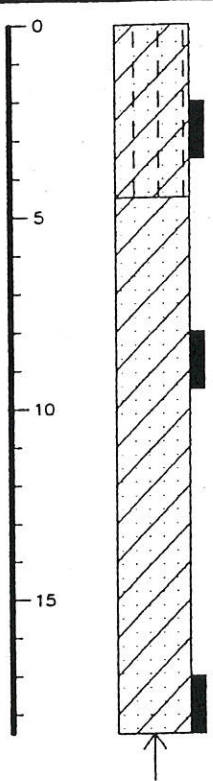
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY, dry to moist, stiff, with sands		34-1	20	81.5	15.2
5		SC	Light to medium Brown Sandy CLAY, moist, very stiff to hard		34-2	33	92.2	28.4
10			As Above		34-3	37		
15			Boring Terminated @ 18.5' No Groundwater encountered					

Figure Number 38

LOG OF TEST BORING

BORING 35

Project No: WV545

Boring No: 35

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/CH	Dark Brown Silty CLAY, dry- to slightly moist, stiff					
5					35-1	34	109.1	12.8
		SC	Light to medium Brown Clayey SAND, moist, dense					
10								
15		CL	Sandy CLAY	Perm = 5.9E-09 cm/sec	35-2	35	88.0	32.4
			Boring Terminated @ 16.5' No Groundwater encountered					

Figure Number 39

LOG OF TEST BORING

BORING 36

Project No: VV545

Boring No: 36

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

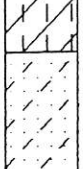
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, dry stiff, (FILL)	Qu = 6250psf	36-1	23	99.0	10.1
5		CL/ CH	Brown Silty CLAY, moist, stiff, (NATIVE)		36-2	15	101.9	13.6
10		SC	Light Brown Clayey SAND moist		36-3	32	105.9	19.2
15			Boring Terminated @ 16.5' No Groundwater encountered					

Figure Number 40

LOG OF TEST BORING

BORING 37

Project No: VV545

Boring No: 37

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

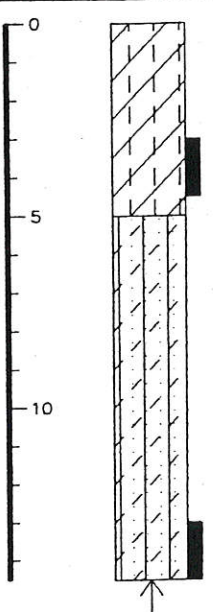
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, dry, stiff, with some sands		37-1	13	95.7	11.7
5		SC/ ML	Light Brown Clayey SAND/ Clayey SILT, very stiff medium dense, moist		37-2	22	102.0	15.0
10			Boring Terminated @ 14.5' No Groundwater encountered					

Figure Number 41

LOG OF TEST BORING

BORING 38.

Boring No: 38

Project No: VV545

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

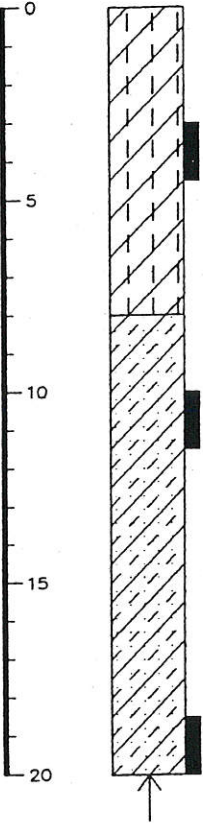
ELEV DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
0		CH	Dark Brown Silty CLAY, dry, stiff		38-1	22	97.5	9.7
5								
10		CL/ SC	Light Brown Sandy CLAY, Clayey SAND, moist, medium dense, stiff		38-2	13	105.5	13.9
15								
20			Boring Terminated @ 20' No Groundwater encountered		38-3	26		

Figure Number 42

LOG OF TEST BORING

BORING 39

Boring No: 39

Project No: WV545

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

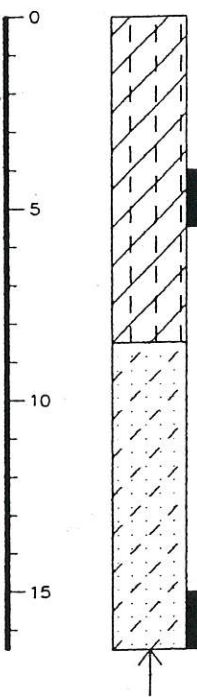
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, dry, stiff, with fine sands and caliche seams					
5					39-1	9	84.0	10.7
10		SC	Light Brown Clayey SAND, moist, very stiff and dense with sand lenses					
15					39-2	38	112.2	6.7
			Boring Terminated @ 16.5' No Groundwater encountered					

Figure Number 43

LOG OF TEST BORING

BORING 40

Project No: WV545

Boring No: 40

Date Drilled: 10/11/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

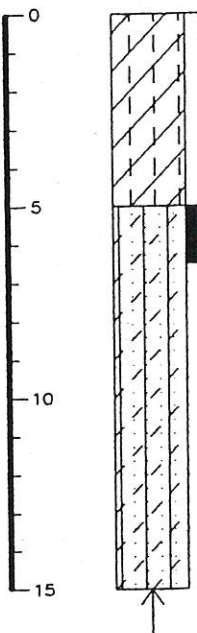
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY, dry, stiff	- #200 = 87% LL= 63% PI =41	BAG			
5		ML/ SC	Light Brown Clayey SILT or Clayey SAND		40-1	18	103.1	11.6
10								
15				Boring Terminated @ 15' No Groundwater encountered				

Figure Number 44

LOG OF TEST BORING

BORING 41

Project No: WV545

Boring No: 41

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

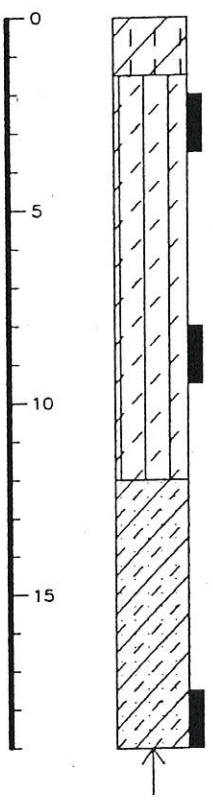
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY, dry, stiff					
		MH	Light Brown Clayey SILT, moist, hard with caliche seams	LL = 82% PI = 58	41-1	25	98.7	18.5
				- #200 = 67.5%	41-2	25	109.1	15.4
		CL/ SC	Light Brown Clayey SAND/ Sandy CLAY, hard very dense moist					
					41-3	50		
			Boring Terminated @ 19' No Groundwater encountered					

Figure Number 45

LOG OF TEST BORING

BORING 42

Boring No: 42

Project No: VV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

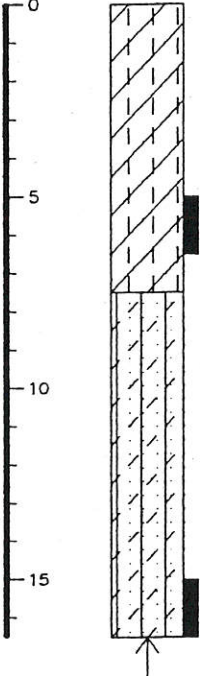
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, dry to slightly moist, stiff					
5				Qu = 2940psf	42-1	28	102.8	12.9
10		SC/ ML	Light Brown Clayey SAND/ Sandy SILT, slightly moist, hard very dense, fine grained sand					
15					42-2	77		
			Boring Terminated @ 16.5' No Groundwater encountered					

Figure Number 46

LOG OF TEST BORING

BORING 43

Project No: WV545

Boring No: 43

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL	Dark Brown Sandy CLAY, surface disked then stiff, wet to dry		43-1	7		
5		SC	Light to medium Brown Clayey SAND, moist, medium dense to dense, with occasional Silty SAND lenses					
10					43-2	34	112.9	12.7
15		SM/ SC	Gray Brown Clayey Silty SAND, moist, very dense, with minor gravels					
20								
			Boring Terminated @ 20' No Groundwater encountered					

Figure Number 47

LOG OF TEST BORING

BORING 44

Boring No: 44

Project No: WV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

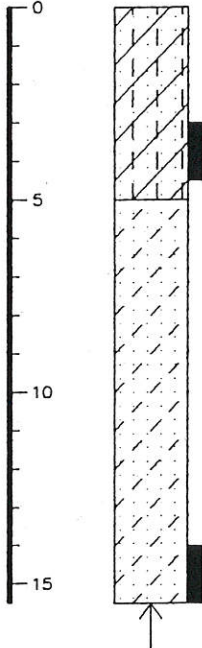
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Sandy Silty CLAY wet, loose to stiff with caliche seams		44-1	11	93.4	12.1
5		SC	Brown Clayey SAND, dense moist					
10								
15					44-2	52	114.6	13.2
			Boring Terminated @ 15.5' No Groundwater encountered					

Figure Number 48

LOG OF TEST BORING

BORING 45

Project No: WV545

Boring No: 45

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

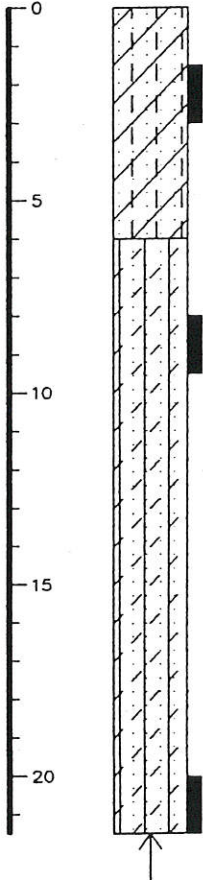
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Sandy Silty CLAY wet to dry, loose to stiff		45-1	9	95.6	10.8
5		ML/ SC	Light to medium Brown Clayey SILT/Clayey SAND, moist, very stiff, medium dense with occasional thin sand lenses		45-2	19	92.0	25.6
10								
15								
20			As Above		45-3	26		
			Boring Terminated @ 21.5' No Groundwater encountered					

Figure Number 49

LOG OF TEST BORING

BORING 46

Boring No: 46

Project No: WV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

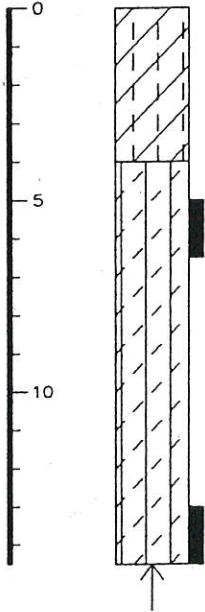
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, wet and loose to dry and stiff					
5		ML	Brown Clayey SILT, moist medium dense, stiff	- #200 = 82%	46-1	12	96.2	21.1
10					46-2	17	106.0	15.2
			Boring Terminated @ 14.5' No Groundwater encountered					

Figure Number 50

LOG OF TEST BORING

BORING 47

Project No: WV545

Boring No: 47

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, with minor sands & gravels, wet and loose to dry & stiff		47-1	16	103.1	7.6
5		ML/ SC	Light Brown Clayey SAND/ Clayey SILT, with caliche seams, moist, stiff					
10					47-2	38	101.0	22.7
15		SM/ SP	Light Brown Sand Gray Silty SAND, dense, moist, fine to medium grained					
20								
			Boring Terminated @ 20' No Groundwater encountered					

Figure Number 51

LOG OF TEST BORING

BORING 48

Boring No: 48

Project No: WV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: 14 Feet

After: At Time of Drilling

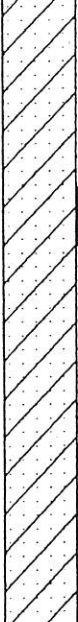
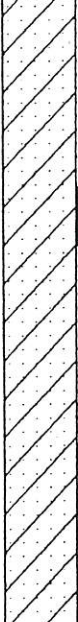
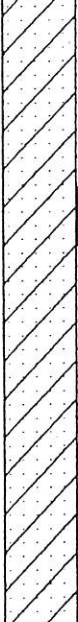
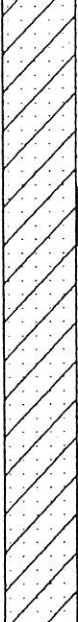
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, dry, stiff					
5		ML/ CL	Light Brown Clayey SILT/ Silty CLAY, slightly moist, stiff, with minor sands and caliche seams					
10		CL	Light Brown Sandy CLAY, moist to very moist, very stiff		48-1	35		
15				- #200 = 71.3% Perm = 1.7E-06 cm/sec	48-2B 48-2A	27	92.0	29.1
20								
25			As Above, hard		48-3	54	103.8	24.0
			Boring Terminated @ 26.5' Groundwater @ 14'					

Figure Number 52

LOG OF TEST BORING

BORING 49

Project No: VV545

Boring No: 49

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: 15 Feet

After: At Time of Drilling

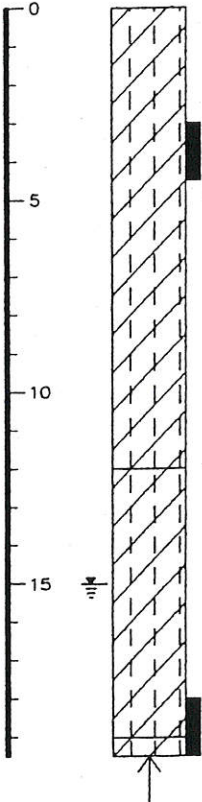
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/	Dark Brown Silty CLAY, wet	Qu = 8070psf	49-1	20	108.4	17.4
5		CH	to dry, soft to stiff					
10								
15			Light Brown Silty CLAY, hard, moist		49-2	35	101.6	17.7
			Silty CLAY					
			Boring Terminated @ 19.5' Groundwater @ 15'					

Figure Number 53

LOG OF TEST BORING

BORING 50

Boring No: 50

Project No: WV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

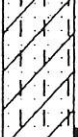
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/CH	Dark Brown Silty CLAY, wet and loose to moist and stiff					
5		SM	Light Brown Silty SAND, dense, moist		50-1	38	111.2	6.8
10		CL	Medium Brown Silty CLAY with some sands, moist, very stiff					
15			As Above		50-2	24	85.4	31.7
			Boring Terminated @ 16.5' No Groundwater encountered					

Figure Number 54

LOG OF TEST BORING

BORING 51

Boring No: 51

Project No: VV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: 18 Feet

After: At Time of Drilling

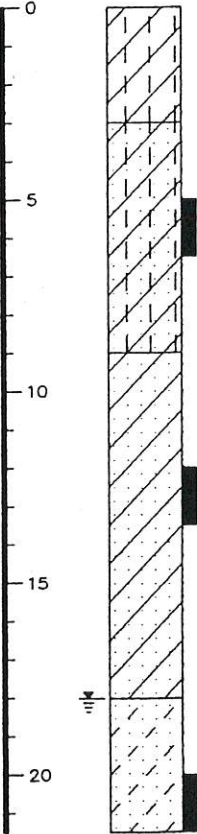
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/CH	Dark Brown Silty CLAY, wet to dry, stiff					
5		CL	Light Brown Sandy Silty CLAY, moist		51-1	44	108.8	15.6
10		CL	Light Brown Sandy CLAY, fine to medium grained sands, moist, very stiff					
15				- #200 = 54.7%	51-2	22	97.2	15.0
20		SC	Brown Clayey SAND, medium dense, moist		51-3	27	100.0	24.3
			Boring Terminated @ 21.5' Groundwater @ 18'					

Figure Number 55

LOG OF TEST BORING

BORING 52

Project No: WV545

Boring No: 52

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: 19 Feet

After: At Time of Drilling

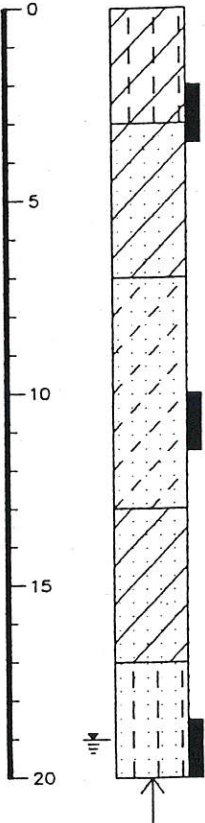
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY wet to moist, stiff	LL = 59% PI = 38 - #200 = 86%	52-1	65	109.6	15.3
5		CH/ CL	Light Brown Sandy CLAY, moist, very stiff					
10		SC	Light Brown Clayey SAND, moist, dense	- #200 = 40.4% Perm = 1.6E-04 cm/sec	52-2B 52-2A	45	115.7	8.8
15		CL	Light to medium Brown Sandy CLAY, very stiff					
20		SM	Light Brown Silty SAND, wet medium dense		52-3	27		
			Boring Terminated @ 20' Groundwater @ 19'					

Figure Number 56

LOG OF TEST BORING

BORING 53

Boring No: 53

Project No: VV545

Date Drilled: 10/12/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

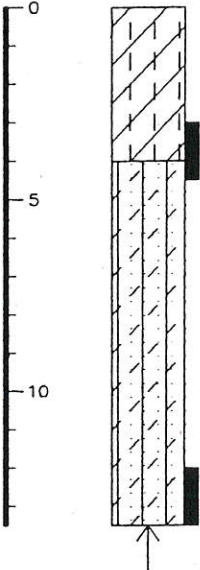
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, wet to moist, firm to stiff		53-1	15	99.4	11.7
5		ML/ SC	Light Brown Clayey SILT/ SAND, moist, stiff to hard with caliche seams					
10			As Above, fine to medium grained sands		53-2	41	109.7	12.3
			Boring Terminated @ 13.5' No Groundwater encountered					

Figure Number 57

LOG OF TEST BORING

BORING 54

Boring No: 54

Project No: VV545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

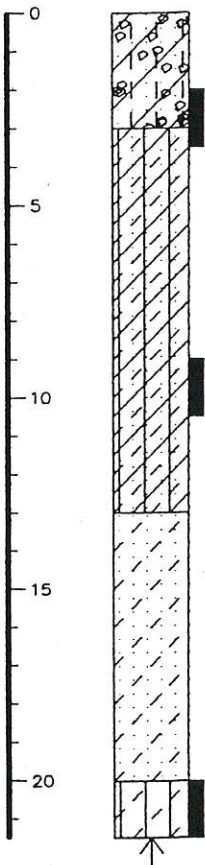
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark to medium Brown Silty CLAY, with some sands and gravels, moist, stiff	C = 781psf $\phi = 21^\circ$	54-1	15	104.4	18.4
5		CL/ ML	Light Brown Sandy CLAY/ Clayey SILT, moist, very stiff					
10					54-2	27		
15		SC	Clayey SAND 15-20'					
20			Brown Clayey SILT, moist, very stiff, with caliche seams		54-3	27		
			Boring Terminated @ 21.5' No Groundwater encountered					

Figure Number 58

LOG OF TEST BORING

BORING 55

Boring No: 55

Project No: VV545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

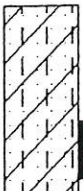
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Sandy Silty CLAY moist, stiff		55-1	66	106.3	13.8
5		ML	Light Brown Clayey SILT, slightly moist, hard					
10		SC	Light Brown Clayey SAND, moist, medium dense		55-2	28	109.1	5.9
15			Boring Terminated @ 15' No Groundwater encountered					

Figure Number 59

LOG OF TEST BORING

BORING 56

Boring No: 56

Project No: W545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

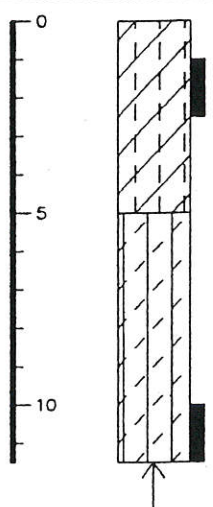
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY, wet to moist, soft to stiff with caliche seams	LL = 62% PI = 40 - #200 = 91%	56-1	66	106.5	16.7
5		ML	Light Brown Clayey SILT, slightly moist, very stiff with occasional gray sand lenses					
10					56-2	38	100.2	8.2
			Boring Terminated @ 11.5' No Groundwater encountered					

Figure Number 60

LOG OF TEST BORING

BORING 57

Boring No: 57

Project No: VV545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: 22 Feet

After: At Time of Drilling

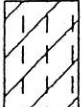
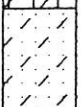
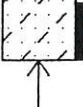
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CH	Dark Brown Silty CLAY, wet and soft then moist and stiff					
5		ML	Light Brown Clayey SILT, Fine grained, moist, very hard, dense		57-1	14	95.3	7.3
10								
15		SC/ SM	Light Brown Clayey SAND, moist, dense		57-2	76	107.6	18.5
20								
				- #200 = 27.7%	57-3	62		
			Boring Terminated @ 23.5' Groundwater @ 22'					

Figure Number 61

LOG OF TEST BORING

BORING 58

Boring No: 58

Project No: WV545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

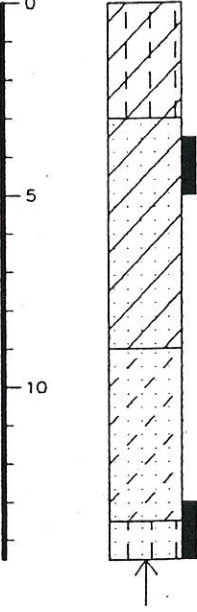
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, moist, stiff					
5		CL	Light Brown Sandy CLAY, moist, very stiff		58-1	17	101.1	14.7
10		SC	Medium Brown Clayey SAND moist					
		SM	Silty SAND		58-2	54	111.2	4.9
			Boring Terminated @ 14.5' No Groundwater encountered					

Figure Number 62

LOG OF TEST BORING

BORING 59

Boring No: 59

Project No: WV545

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL/ CH	Dark Brown Silty CLAY, moist, stiff with minor sands & gravels with caliche	C = 284psf φ = 35°	59-1	19	97.3	21.1
5		ML/ SC	Light Brown Clayey Sands, medium dense to dense, moist					
10		SM/ SC	medium Brown Clayey Silty SAND, moist, medium dense		59-2	29	105.6	10.9
			Boring Terminated @ 12.5' No Groundwater encountered					

Figure Number 63

LOG OF TEST BORING

BORING 60

Project No: WV545

Boring No: 60

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

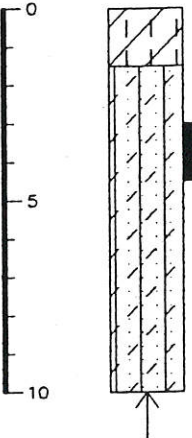
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0		CL	Brown Silty CLAY, moist, stiff					
		SC/ ML	Light Brown Clayey SAND/ SILT, moist, hard, dense		60-1	40		
5			very hard					
10			Boring Terminated @ 10' No Groundwater encountered					

Figure Number 64

LOG OF TEST BORING

BORING 61

Project No: WV545

Boring No: 61

Date Drilled: 10/13/00

Elevation: N/A

Logged by: DVC

Water Level: N/A

After: N/A

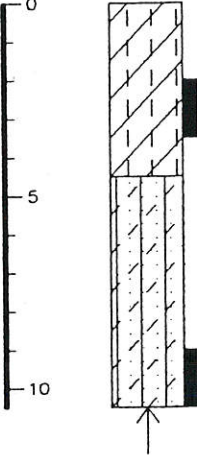
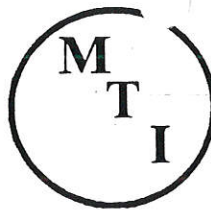
ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	USCS	SOIL DESCRIPTION	REMARKS	Sample No.	Blows foot	Density Dry-pcf	Moisture Percent
DEPTH								
0			Dark Brown Silty CLAY, moist, very stiff		61-1	42	101.0	16.0
5		SC/ ML	Medium to Light Brown Sandy SILT/Clayey SAND, moist, hard		61-2	42		
10			Boring Terminated @ 10.5' No Groundwater encountered					

Figure Number 65



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

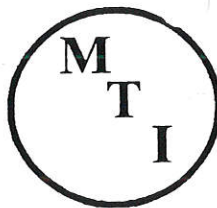
CLIENT: Golden State Developers
10 Crown Canyon Court, Suite 110
San Ramon, CA 94583

SUBJECT: Cordes Ranch
Tracy, CA

CLIENT NO: VV545-001
REPORT NO: 0300-001
DATE: 08/23/00
SUBMITTED: 08/15/00
SUBMITTED BY: KC Engineering

**DENSITY OF SOIL INPLACE BY THE DRIVE TUBE METHOD (ASTM D2937)
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX OF SOILS (ASTM D4318)
DATA SHEET**

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
1-1 @ 2'	Dark Brown Silty Clay (visual)	100.3	18.1	61	22	39
1-2 @ 7'	Lt. Brown Clayey Sand (visual)	105.1	9.2			
1-3 @ 19'	Lt. Brown Sandy Clay (visual)	107.3	17.0			
2-1 @ 1.5'	Dark Brown Silty Clay (visual)	86.3	13.7	55	19	36
2-2 @ 10'	Lt. Brown Silty Sandy Clay (visual)	108.0	13.5			
3-1 @ 4'	Lt. Brown Silty Sand (visual)	106.5	6.7			
3-2 @ 12'	Lt. Brown Sandy Clay (visual)	110.1	16.7			
3-3 @ 18'	Lt. Brown Silty Clay (visual)	85.1	35.2			
4-1 @ 2'	Dark Brown Silty Clay (visual)	92.2	12.0	45	19	26
4-2 @ 8'	Lt. Brown Silty Sand (visual)	97.4	6.6			
5-2 @ 10'	Lt. Brown Silty Sand (visual)	112.6	7.3			
5-3 @ 20'	Lt. Brown Sandy Clay (visual)	107.9	19.4			
6-1 @ 1.5'	Dark Brown Silty Clay (visual)	102.6	18.7	50	20	30
6-2 @ 9'	Lt. Brown Sandy Clay (visual)	101.8	20.7			
6-3 @ 19'	Lt. Brown Sandy Clay (visual)	105.2	19.8			
6-4 @ 29'	Lt. Brown Sandy Clay (visual)	101.9	19.4			
7-1 @ 3'	Dark Brown Silty Clay (visual)	107.6	14.0			
7-3 @ 20'	Lt. Brown Clayey Sand (visual)	105.0	20.5			
8-2 @ 9'	Lt. Brown Clayey Sand (visual)	109.9	14.4			



Materials Testing, Inc.

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Redding, California 96002
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(707) 447-4025, fax 447-4143

CLIENT: Golden State Developers
10 Crown Canyon Court, Suite 110
San Ramon, CA 94583

SUBJECT: Cordes Ranch
Tracy, CA

CLIENT NO: VV545-002
REPORT NO: 0300-005
DATE: 10/19/00
SUBMITTED: 10/09/00
SUBMITTED BY: KC Engineering

**DENSITY OF SOIL INPLACE BY THE DRIVE TUBE METHOD (ASTM D2937)
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX OF SOILS (ASTM D4318)
DATA SHEET**

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
9-1 @ 2'	Brown Silty Sand w/Gravel (Visual)	99.3	7.0	38	21	17
9-3 @ 18'	Brown Sand w/Clay (Visual)	107.7	9.3			
10-2 @ 0'-4'	Brown Silty Clay w/Sand (Visual)	---	11.6			
10-3 @ 14'	Brown Sand w/Clay (Visual)	105.0	8.4			
11-1 @ 3'	Brown Silty Clay w/Sand (Visual)	---	17.1			
11-2 @ 10'	Olive Brown Sandy Clay (Visual)	110.4	18.7			
12-2 @ 6'	Brown Silty Sand w/Clay (Visual)	108.8	8.1			
12-3 @ 19'	Light Brown Sandy Clay (Visual)	96.4	15.4			
13-1 @ 6'	Brown Silty Sand w/Clay (Visual)	---	8.4			
13-2 @ 13'	Light Brown Sandy Clay (Visual)	97.8	22.4			
14-2 @ 8'	Light Brown Clayey Sand (Visual)	99.0	11.6			
14-3 @ 15'	Light Brown Sand (Visual)	104.3	4.5			

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
15-1 @ 4'	Dark Brown Silty Clay (Visual)	105.1	18.5			
15-2 @ 12'	Olive Brown Silty Clay (Visual)	106.8	19.9			
17-1 @ 0'	Dark Brown Silty Sand w/Clay (Visual)	98.4	7.8			
17-2 @ 9'	Brown Sand (Visual)	---	11.1			
18-1 @ 3'	Brown Silty Clay (Visual)	93.5	9.6			
19-1 @ 2'	Brown Silty Sand w/Clay (Visual)	95.9	6.1			
19-2 @ 8'	Brown Sandy Clay (Visual)		13.3			
20-1 @ 5'	Light Brown Silty Sand (Visual)	112.7	12.1			
20-2 @ 15'	Brown Silty Clay w/Sand (Visual)	113.2	16.4			
21-1 @ 2.5'	Brown Silty Clay (Visual)	110.7	21.6			
21-2 @ 8'	Brown Silty Clay w/Sand (Visual)	---	13.5			
22-2 @ 10'	Brown Sand (Visual)	108.9	8.5			
23-1 @ 5'	Light Brown Silty Sand w/Clay (Visual)	93.8	12.6			
23-2 @ 13'	Brown Sand (Visual)	102.7	5.5			
24-1 @ 1'	Brown Silty Sand w/Clay (Visual)	95.6	9.0			
24-3 @ 17'	Light Brown Clayey Silt (Visual)	88.8	30.4			
25-1 @ 3'	Light Brown Silty Clay (Visual)	90.9	26.7	59	23	36
25-2 @ 8'	Olive Silty Clay (Visual)	97.1	25.2			
26-1 @ 2'	Dark Brown Silty Sand (Visual)	---	4.9			
27-1 @ 3'	Dark Brown Clayey Sand (Visual)	97.1	10.7			
27-2 @ 10'	Brown Sandy Clay (Visual)	106.0	16.9			
28-1 @ 4'	Brown Silty Sand w/Clay (Visual)	---	13.5			

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
28-2 @ 14'	Brown Silty Sand w/Clay (Visual)	116.3	13.6			
29-1 @ 5'	Light Brown Sandy Silt (Visual)	115.1	13.6			
29-2 @ 15'	Sand (Visual)	---	4.0			
30-1 @ 2'	Brown Silty Clay (Visual)	105.9	20.0			
30-2 @ 12'	Brown Silty Sand w/Clay (Visual)	94.3	10.0			
Bag 15 @ 0'-4'	Dark Brown Silty Clay (Visual)	---	14.5	54	20	34
Bag 16 @ 10'-15'	Brown Silty Sand w/Gravel (Visual)	---	4.6			
31-1 @ 3'	Brown Clayey Sand (Visual)	92.8	11.8			
31-2 @ 10'	Brown Clayey Sand (Visual)	88.8	13.3			
32-1 @ 5'	Brown Sandy Clay (Visual)	114.7	11.3			
33-1 @ 2'	Dark Brown Silty Clay (Visual)	94.8	11.0			
34-1 @ 2'	Brown Sandy Clay (Visual)	81.5	15.2			
34-2 @ 7'	Brown Sandy Clay (Visual)	92.2	28.4			
35-1 @ 5'	Brown Clayey Sand (Visual)	109.1	12.8			
36-1 @ 1'	Dark Brown Silty Clay (Visual)	99.0	10.1			
36-2 @ 7'	Dark Brown Silty Clay (Visual)	101.9	13.6			
36-3 @ 15'	Brown Clayey Sand (Visual)	105.9	19.2			
37-1 @ 3'	Dark Brown Sandy Clay (Visual)	95.7	11.7			
37-2 @ 13'	Light Brown Clayey Sand (Visual)	102.0	15.0			
38-1 @ 3'	Dark Brown Silty Clay (Visual)	97.5	9.7			
38-2 @ 10'	Light Brown Sandy Clay (Visual)	105.5	13.9			

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
39-1 @ 4'	Brown Sandy Clay (Visual)	84.0	10.7			
39-2 @ 15'	Brown Clayey Sand (Visual)	112.2	6.7			
40-1 @ 5'	Brown Silty Clay (Visual)	103.1	11.6			
41-1 @ 2'	Brown Sandy Clay (Visual)	98.7	18.5	82	24	58
41-2 @ 8'	Brown Sandy Clay (Visual)	109.1	15.4			
42-1 @ 5'	Dark Brown Silty Clay (Visual)	102.8	12.9			
43-2 @ 10'	Brown Clayey Sand (Visual)	112.9	12.7			
44-1 @ 3'	Dark Brown Silty Clay (Visual)	93.4	12.1			
44-2 @ 14'	Brown Clayey Sand (Visual)	114.6	13.2			
45-1 @ 1.5'	Dark Brown Sandy Clay (Visual)	95.6	10.8			
45-2 @ 8'	Brown Clayey Silt (Visual)	92.0	25.6			
46-1 @ 5'	Olive Brown Clayey Silt (Visual)	96.2	21.1			
46-2 @ 13'	Brown Clayey Silt (visual)	106.0	15.2			
47-1 @ 2'	Brown Clayey Sand (Visual)	103.1	7.6			
47-2 @ 10'	Brown Clayey Silt (Visual)	101.0	22.7			
48-3 @ 25'	Brown Silty Clay (Visual)	103.8	24.0			
49-1 @ 3'	Dark Brown Silty Clay (Visual)	108.4	17.4			
49-2 @ 18'	Light Brown Silty Clay (Visual)	101.6	17.7			
50-1 @ 5'	Brown Sand (Visual)	111.2	6.8			
50-2 @ 15'	Brown Silty Clay (Visual)	85.4	31.7			
51-1 @ 5'	Brown Silty Clay (Visual)	108.8	15.6			

Sample #	Description	Dry Density pcf.	Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %
51-2 @ 12'	Olive Brown Sandy Clay (Visual)	97.2	15.0			
51-3 @ 20'	Brown Clayey Sand (Visual)	100.0	24.3			
52-1 @ 2'	Brown Silty Clay (Visual)	109.6	15.3	59	21	38
53-1 @ 3'	Brown Clayey Silt (Visual)	99.4	11.7			
53-2 @ 12'	Brown Clayey Silt (Visual)	109.7	12.3			
55-1 @ 3'	Dark Brown Silty Clay (Visual)	106.3	13.8			
55-2 @ 12'	Brown Clayey Sand (Visual)	109.1	5.9			
56-1 @ 1'	Brown Silty Clay (Visual)	106.5	16.7	62	22	40
56-2 @ 10'	Brown Clayey Silt (Visual)	100.2	8.2			
57-1 @ 3'	Brown Clayey Silt (Visual)	95.3	7.3			
57-2 @ 11'	Brown Clayey Silt (Visual)	107.6	18.5			
58-1 @ 3.5'	Brown Sandy Clay (Visual)	101.1	14.7			
58-2 @ 13'	Brown Silty Sand (Visual)	111.2	4.9			Non Plastic
59-1 @ 1.5'	Dark Brown Silty Clay (Visual)	97.3	21.1			
59-2 @ 11'	Brown Clayey Sand (Visual)	105.6	10.9			
59-3 @ 22'	Olive Brown Silty Sand w/Clay (Visual)	111.5	19.1			
61-1 @ 2'	Dark Brown Silty Clay (Visual)	101.0	16.0			
Bag 32 @ 8'-18'	Brown Clayey Sand (Visual)	---	16.0			
Bag 40 @ 0'-5'	Dark Brown Silty Clay (Visual)	---	---	63	22	41
Bag 48 @ 10'-20'	Brown Sandy Clay (Visual)	---	36.1			
Bag 52 @ 7'-13'	Brown Clayey Sand (Visual)	---	12.3			

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	65.3		34.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8 in.	100.0		
#4	100.0		
#8	99.0		
#16	98.0		
#30	95.0		
#50	79.0		
#100	52.0		
#200	34.7		

* (no specification provided)

Soil Description
Light Brown, Clayey Sand (Visual)

Atterberg Limits
 PL= LL= PI=
 D₈₅= 0.362 D₆₀= 0.186 D₅₀= 0.141
 D₃₀= D₁₅= D₁₀=
 C_u= C_c=

Classification
USCS= SC AASHTO=

Remarks

Sample No.: 1-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

08/15/00 Date: 08/15/00
Elev./Depth: 7'

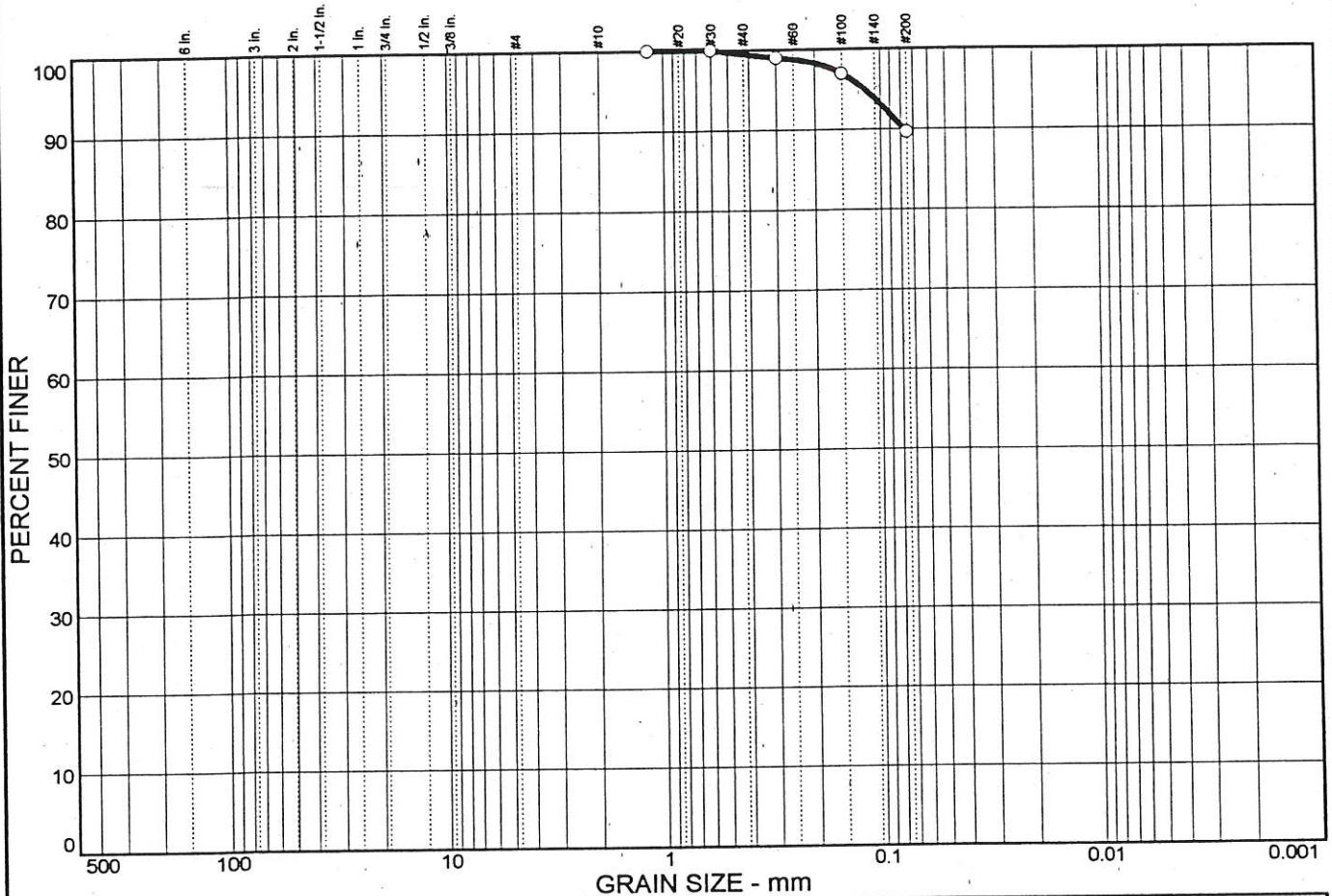


**Materials
Testing, Inc.**

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-001

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	10.4	89.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#16	100.0		
#30	100.0		
#50	99.0		
#100	97.0		
#200	89.6		

* (no specification provided)

Soil Description
Light Brown, Sandy Clay (Visual)

Atterberg Limits
PL= LL= PI=

Coefficients
D₈₅= D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification
USCS= CL AASHTO=

Remarks

Sample No.: 3-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

08/15/00 Date: 08/15/00
Elev./Depth: 12'

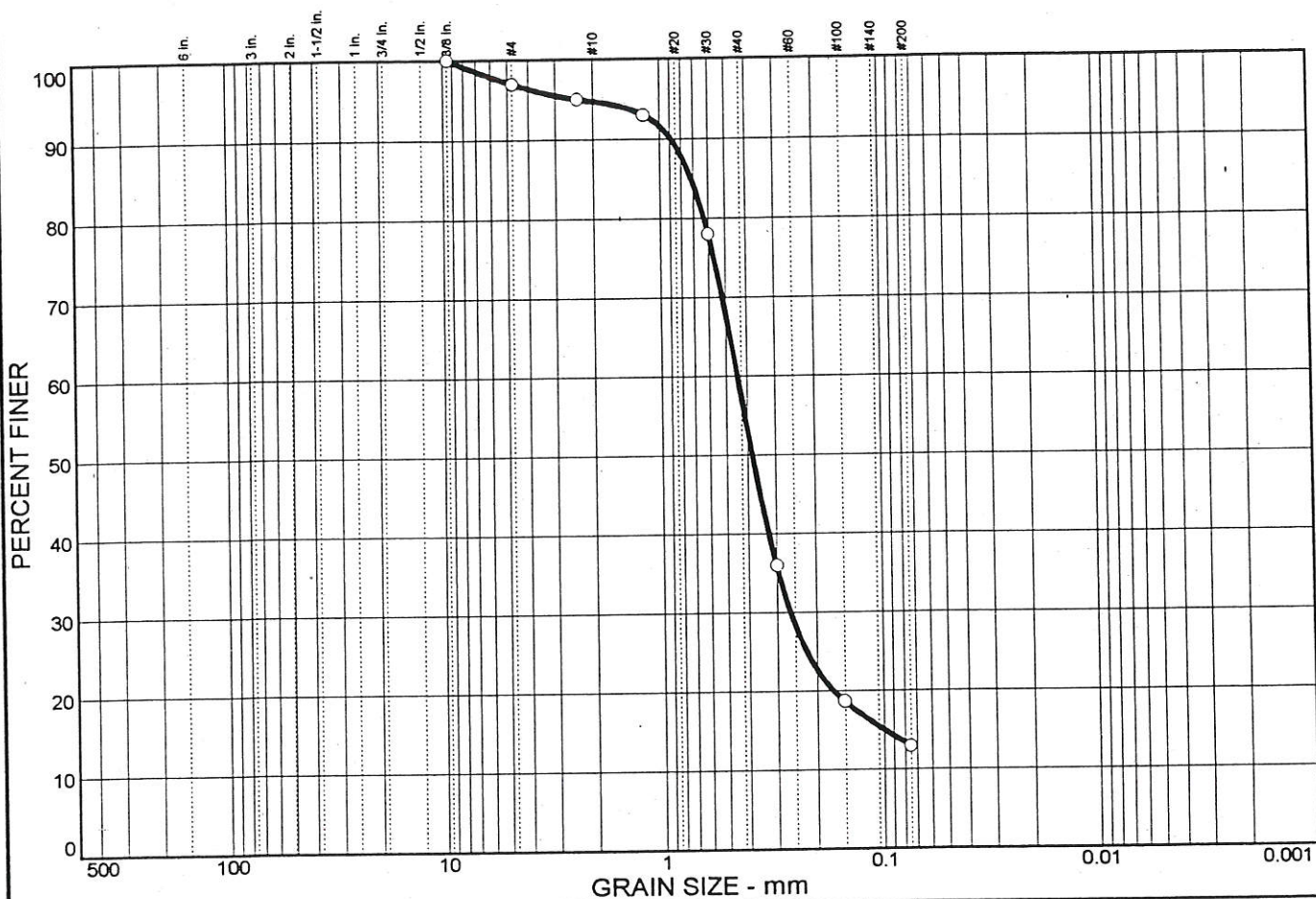


Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-002

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	3.0	84.0	13.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8 in.	100.0		
#4	97.0		
#8	95.0		
#16	93.0		
#30	78.0		
#50	36.0		
#100	18.7		
#200	13.0		

* (no specification provided)

Sample No.: 4-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

08/15/00 Date: 08/15/00
Elev./Depth: 8'

Soil Description

Light Brown, Silty Sand (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.717 D₆₀= 0.443 D₅₀= 0.381
D₃₀= 0.261 D₁₅= 0.0992 D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks



Materials
Testing, Inc.

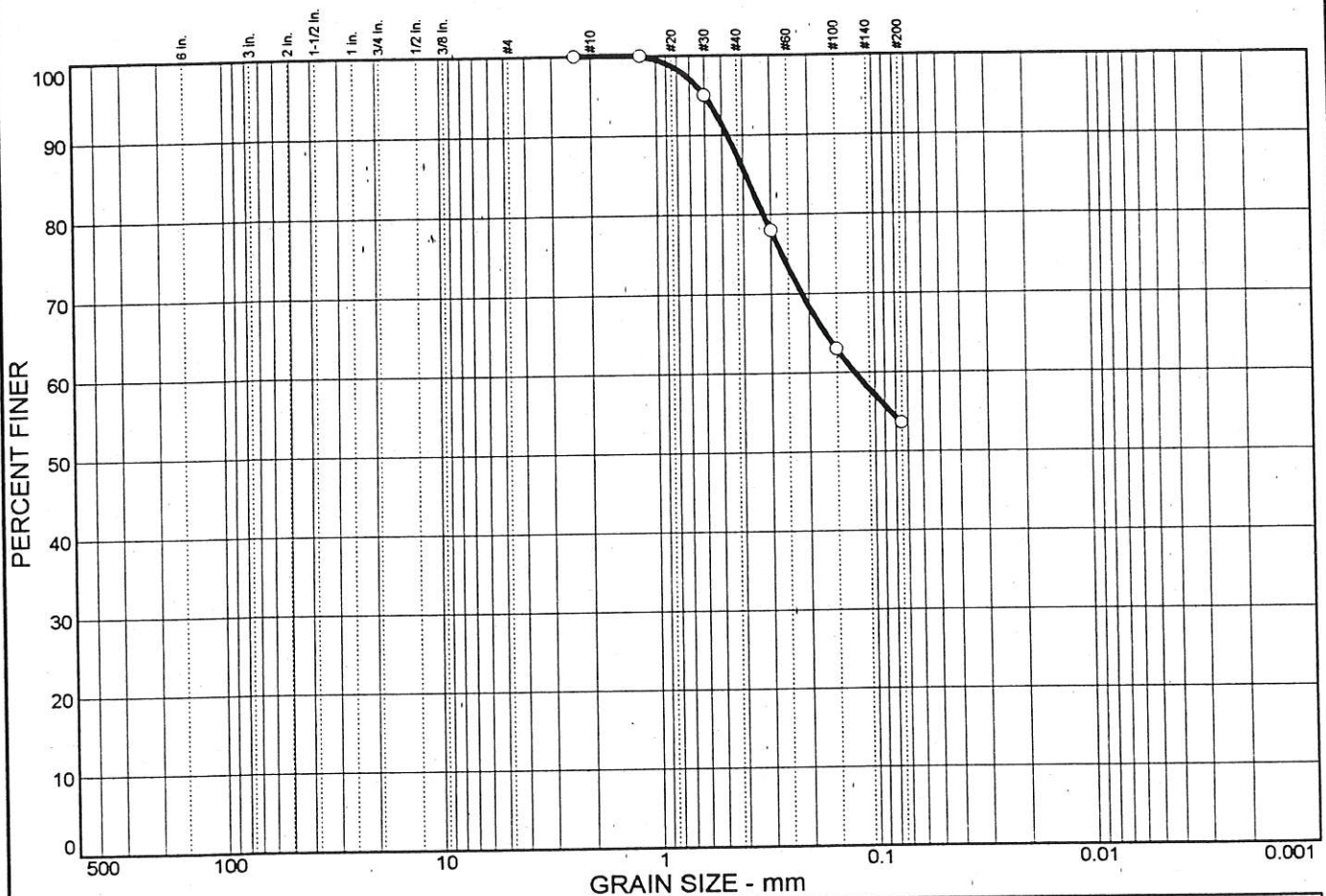
Client: Golden State Developers

Project: Cordes Ranch
Tracy, CA

Project No: VV545-001

Plate 0400-003

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	46.4		53.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	100.0		
#30	95.0		
#50	78.0		
#100	63.0		
#200	53.6		

* (no specification provided)

Sample No.: 6-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

08/15/00 Date: 08/15/00
Elev./Depth: 9'

Soil Description

Light Brown, Sandy Clay (Visual)

Atterberg Limits

PL= LL= PI=

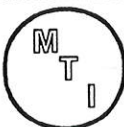
Coefficients

D₈₅= 0.389 D₆₀= 0.124 D₅₀=
D₃₀= C_u= D₁₅= D₁₀=
C_c=

Classification

USCS= CL AASHTO=

Remarks

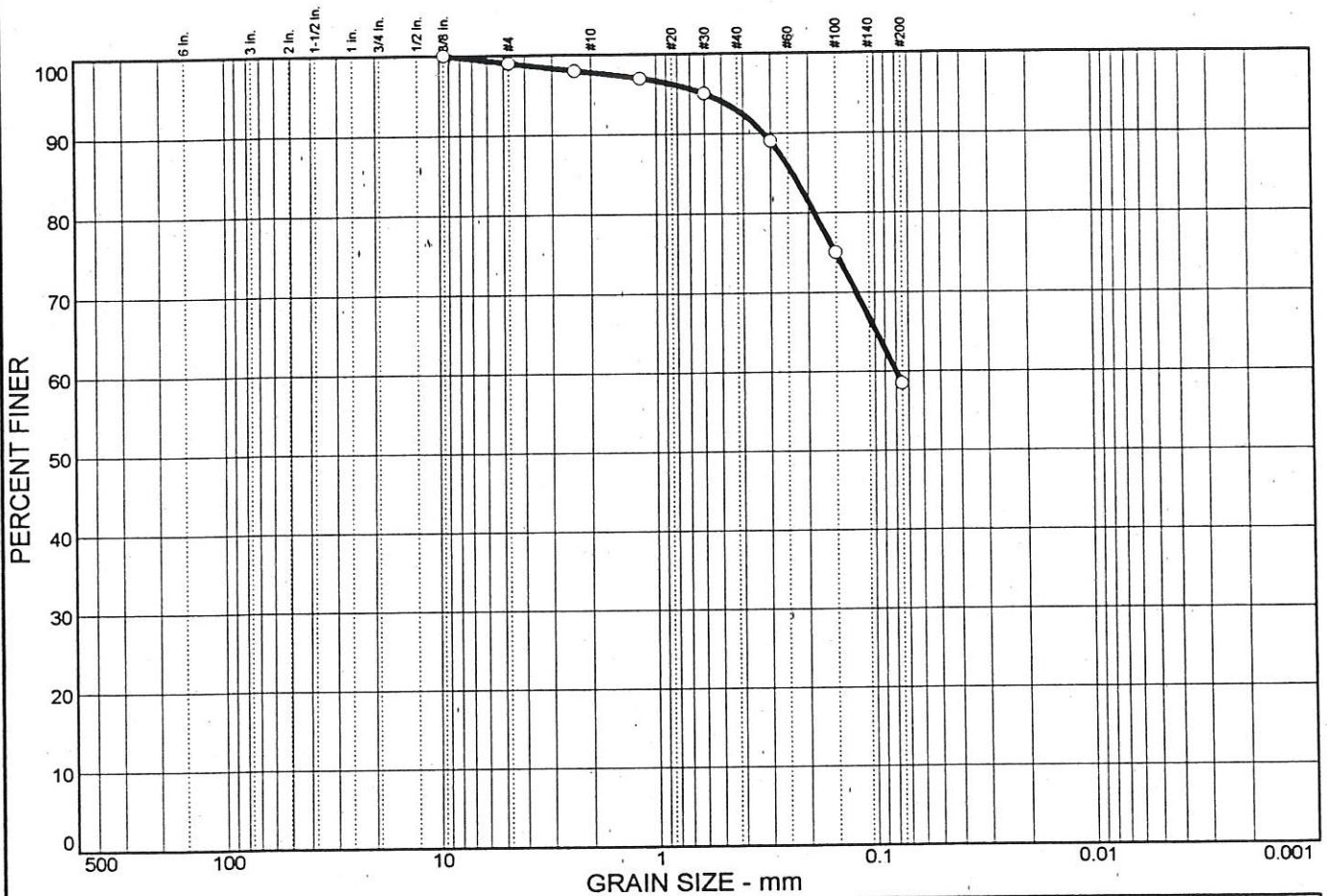


Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-004

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.0	40.5	58.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8 in.	100.0		
#4	99.0		
#8	98.0		
#16	97.0		
#30	95.0		
#50	89.0		
#100	75.0		
#200	58.5		

Soil Description

Light Brown, Sandy Clay (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.237 D₆₀= 0.0798 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO=

Remarks

* (no specification provided)

Sample No.: 6-3
Location: Cordes Ranch

Source of Sample: Cordes Ranch

08/15/00 Date: 08/15/00
Elev./Depth: 19'



Materials
Testing, Inc.

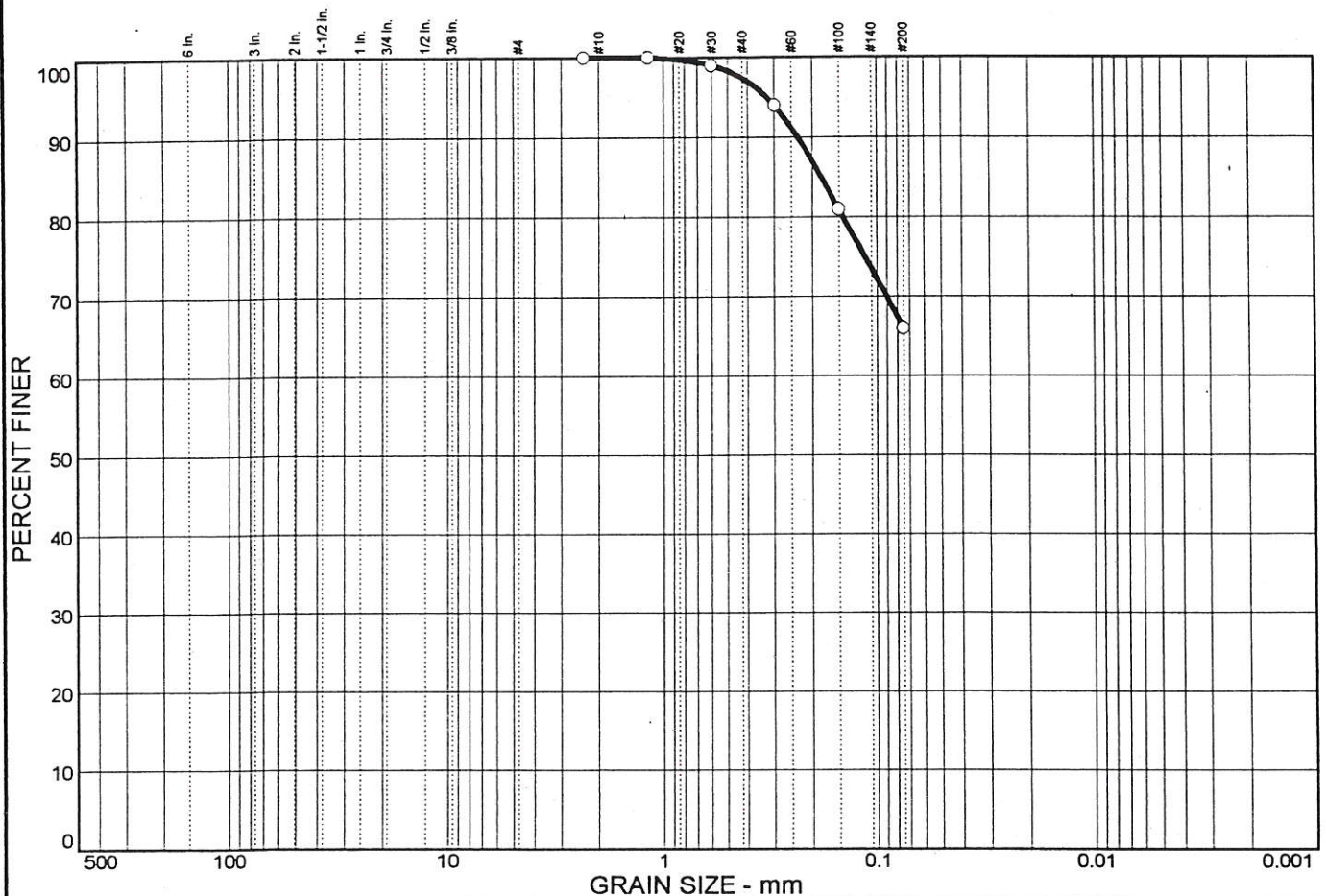
Client: Golden State Developers

Project: Cordes Ranch
Tracy, CA

Project No: VV545-001

Plate 0400-005

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	34.0	66.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	100.0		
#30	99.0		
#50	94.0		
#100	81.0		
#200	66.0		

* (no specification provided)

Soil Description

Brown Silty Clay w/Sand (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.181 D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO=

Remarks

Sample No.: 10-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/09/00
Elev./Depth: 8'

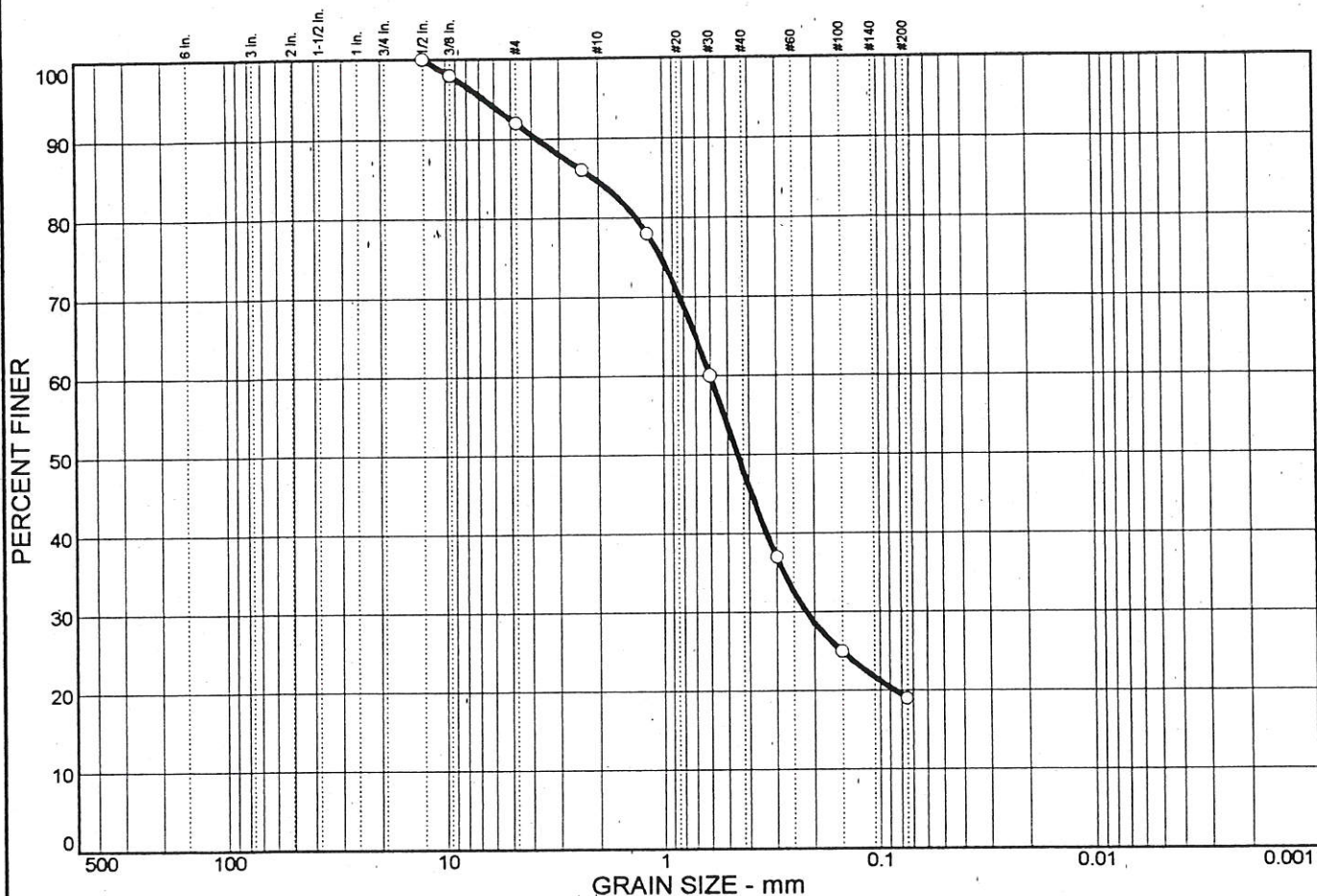


Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-001

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	8.0	73.0	19.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
3/8 in.	98.0		
#4	92.0		
#8	86.0		
#16	78.0		
#30	60.0		
#50	37.0		
#100	25.0		
#200	19.0		

* (no specification provided)

Soil Description

Brown Silty Sand w/Gravel (Visual)

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 2.09 D₆₀= 0.600 D₅₀= 0.450
 D₃₀= 0.217 D₁₅= D₁₀=
 C_u= C_c=

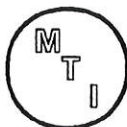
Classification
 USCS= SM AASHTO=

Remarks

Sample No.: 16-2 Bag
 Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/09/00
 Elev./Depth: 10' - 15'

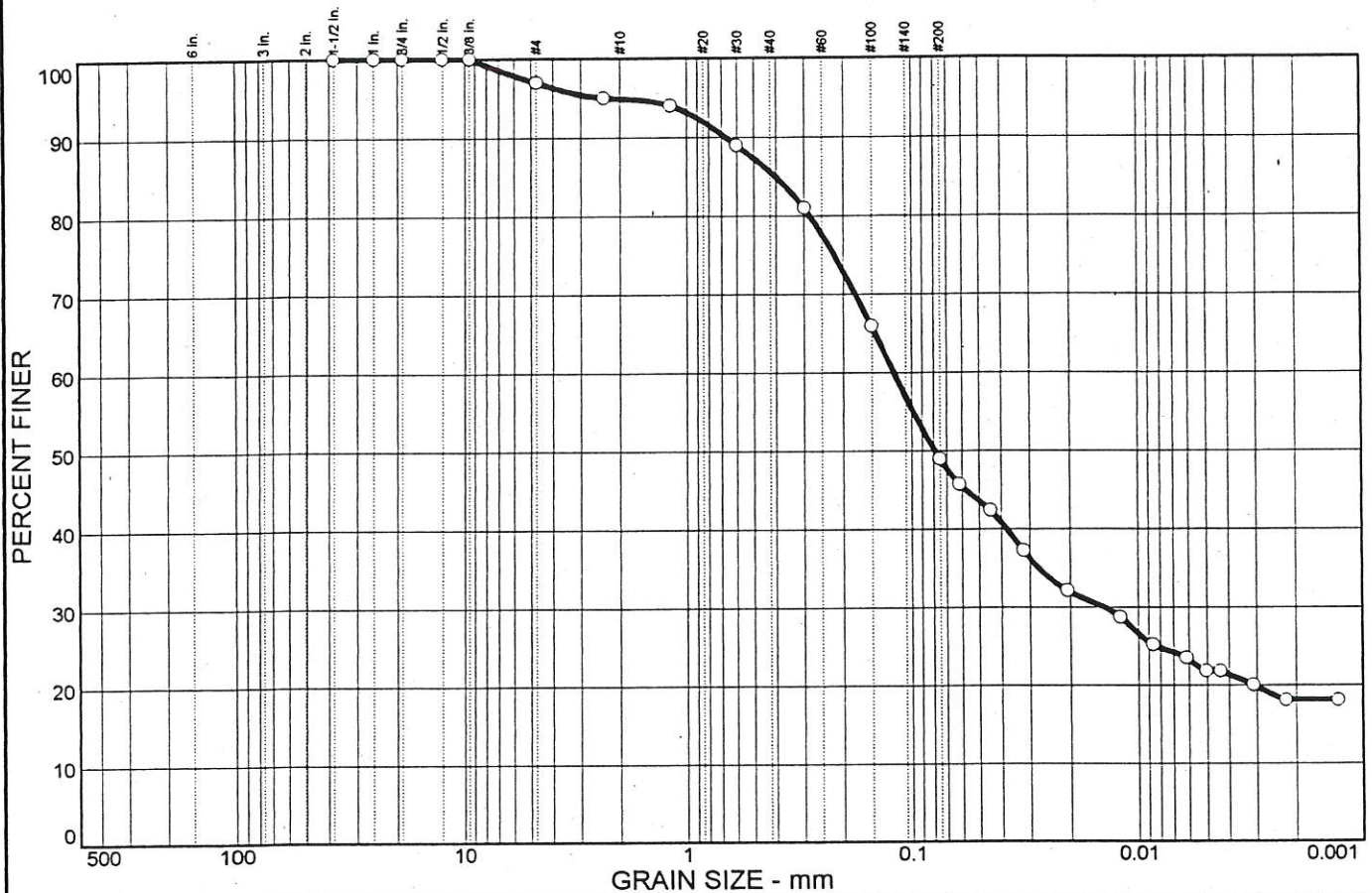


Materials
 Testing, Inc.

Client: Golden State Developers
 Project: Cordes Ranch
 Tracy, CA
 Project No: VV545-001

Plate 0400-003

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	3.0	2.1	9.2	36.7	27.2	21.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	97.0		
#8	95.0		
#16	94.0		
#30	89.0		
#50	81.0		
#100	66.0		
#200	49.0		

* (no specification provided)

Soil Description
Light Brown, Silty Sand with Clay

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.402 D₆₀= 0.119 D₅₀= 0.0788
 D₃₀= 0.0143 D₁₅= D₁₀=
 C_u= C_c=

Classification
 USCS= SM AASHTO=

Remarks
 F.M.=0.78

Sample No.: 23-1
Location:

Source of Sample:

Date: 10-18-00
Elev./Depth: 5'



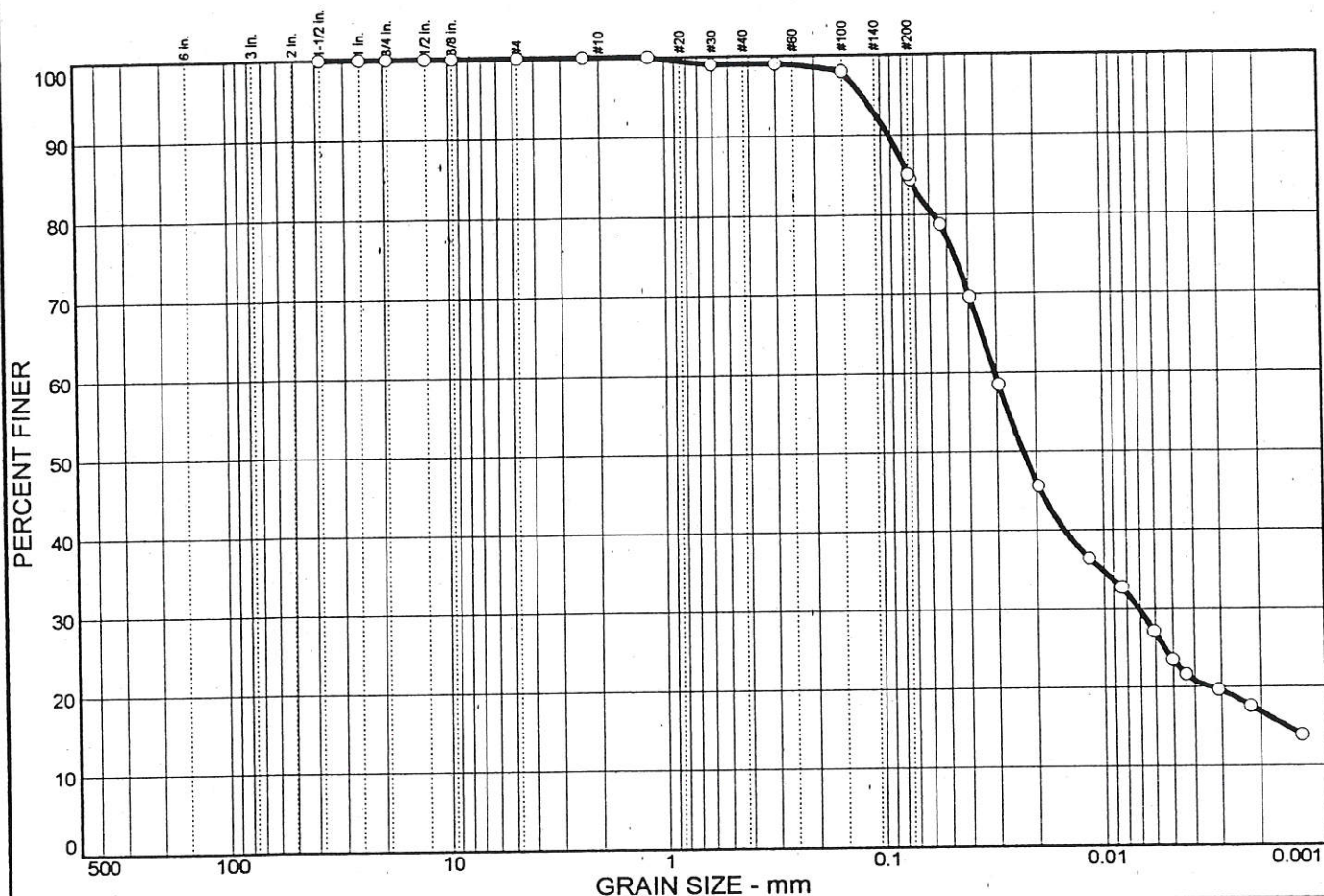
Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch

Project No: VV545

Report Number:

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	15.0	61.5	23.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	100.0		
#8	100.0		
#16	100.0		
#30	99.0		
#50	99.0		
#100	98.0		
#200	85.0		

* (no specification provided)

Soil Description
Light Brown, Clayey Silt

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.0750 D₆₀= 0.0306 D₅₀= 0.0229
 D₃₀= 0.0071 D₁₅= 0.0015 D₁₀=
 C_u= C_c=

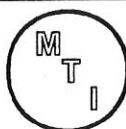
Classification
 USCS= ML AASHTO=

Remarks
 F.M.=0.04

Sample No.: 24-3
Location:

Source of Sample:

Date: 10-18-00
Elev./Depth: 17'



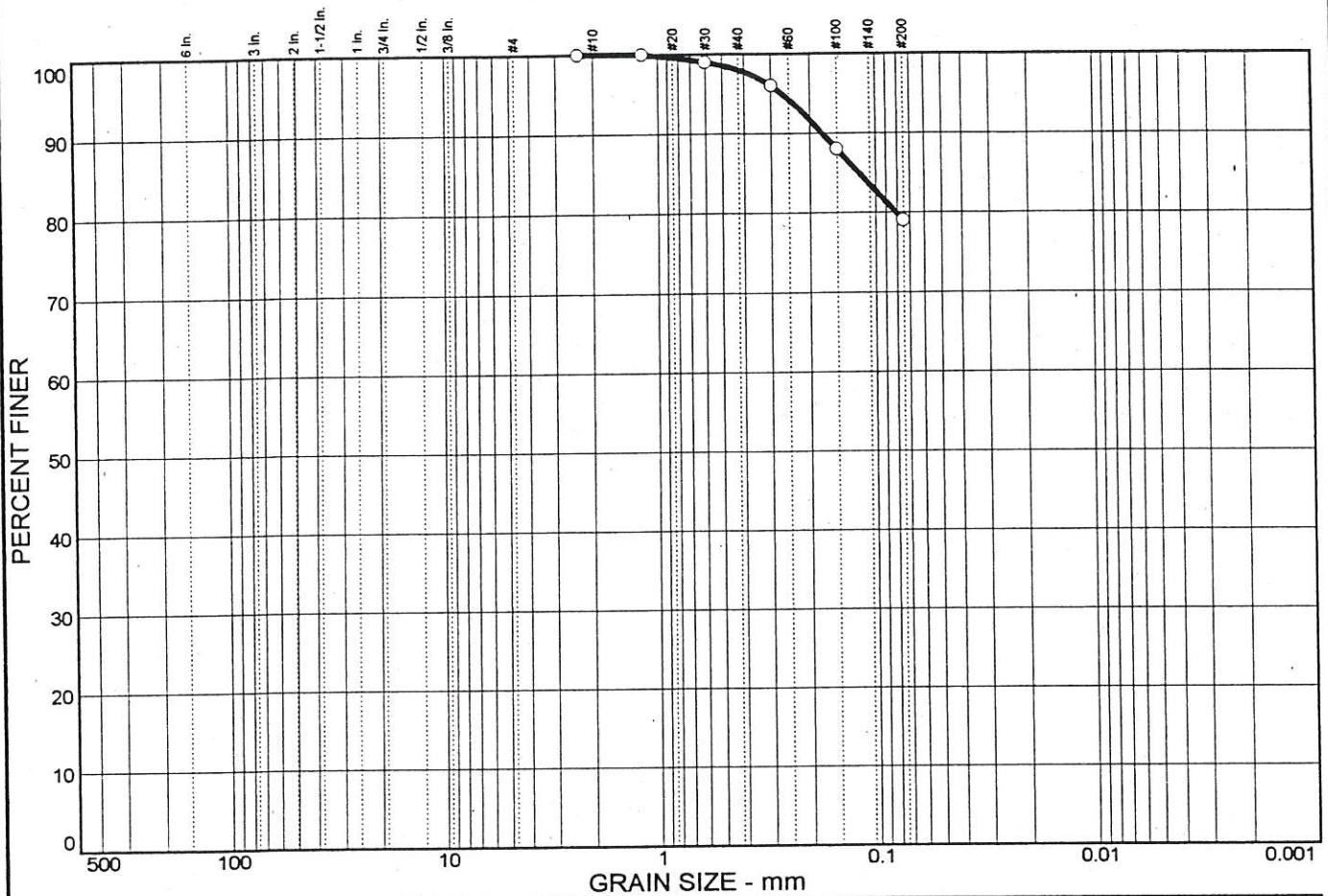
**Materials
Testing, Inc.**

Client: Golden State Developers
Project: Cordes Ranch

Project No: VV545

Plate

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	21.0	79.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	100.0		
#30	99.0		
#50	96.0		
#100	88.0		
#200	79.0		

* (no specification provided)

Soil Description

Brown Sandy Clay (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.119 D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO=

Remarks

Sample No.: 27-2
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/09/00
Elev./Depth: 10'

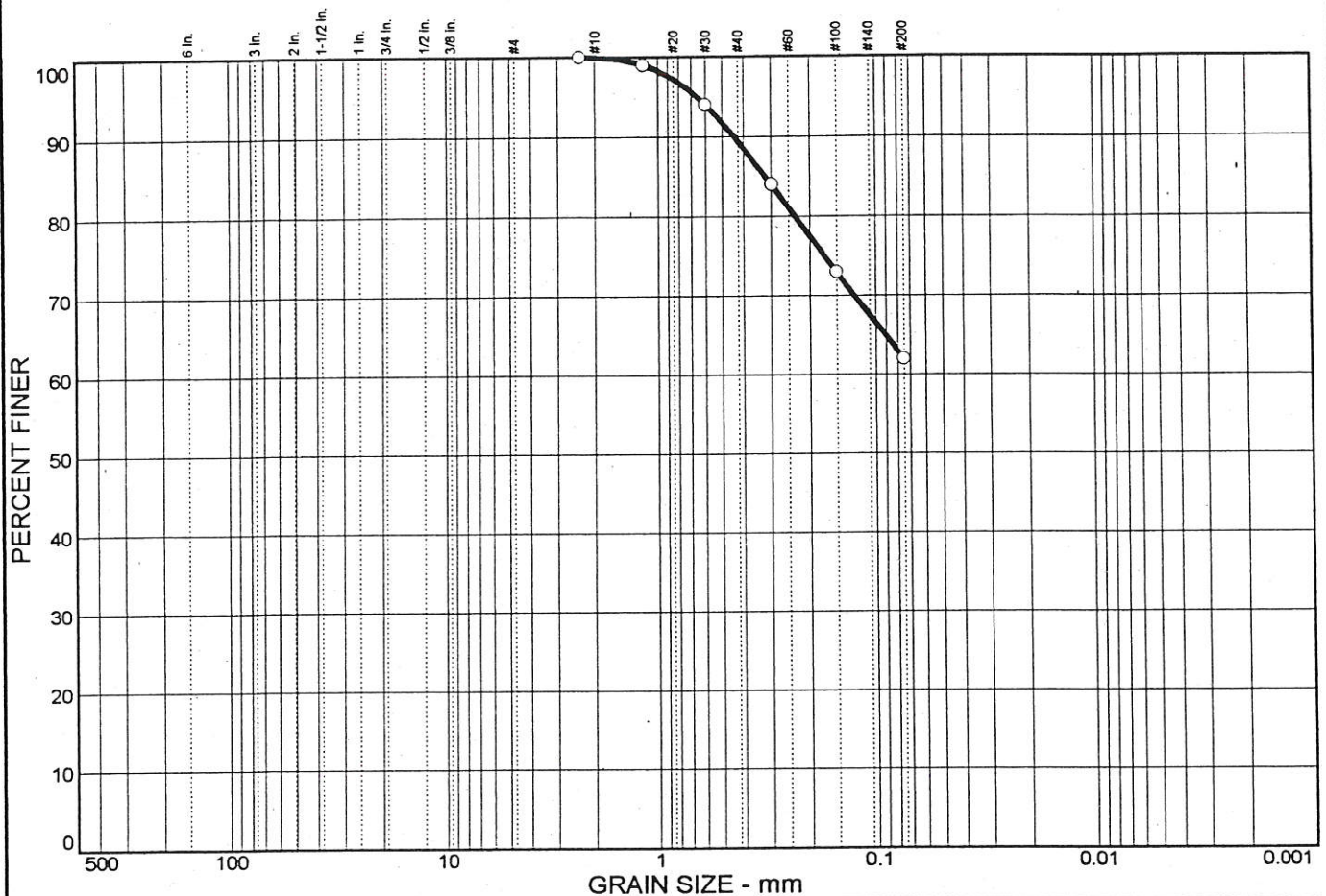


Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-002

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	38.0	62.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	99.0		
#30	94.0		
#50	84.0		
#100	73.0		
#200	62.0		

* (no specification provided)

Soil Description
Light Brown Sandy Silt (Visual)

Atterberg Limits
PL= LL= PI=

Coefficients
D₈₅= 0.319 D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

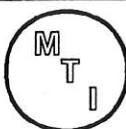
Classification
USCS= ML AASHTO=

Remarks

Sample No.: 29-1
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/09/00
Elev./Depth: 5'

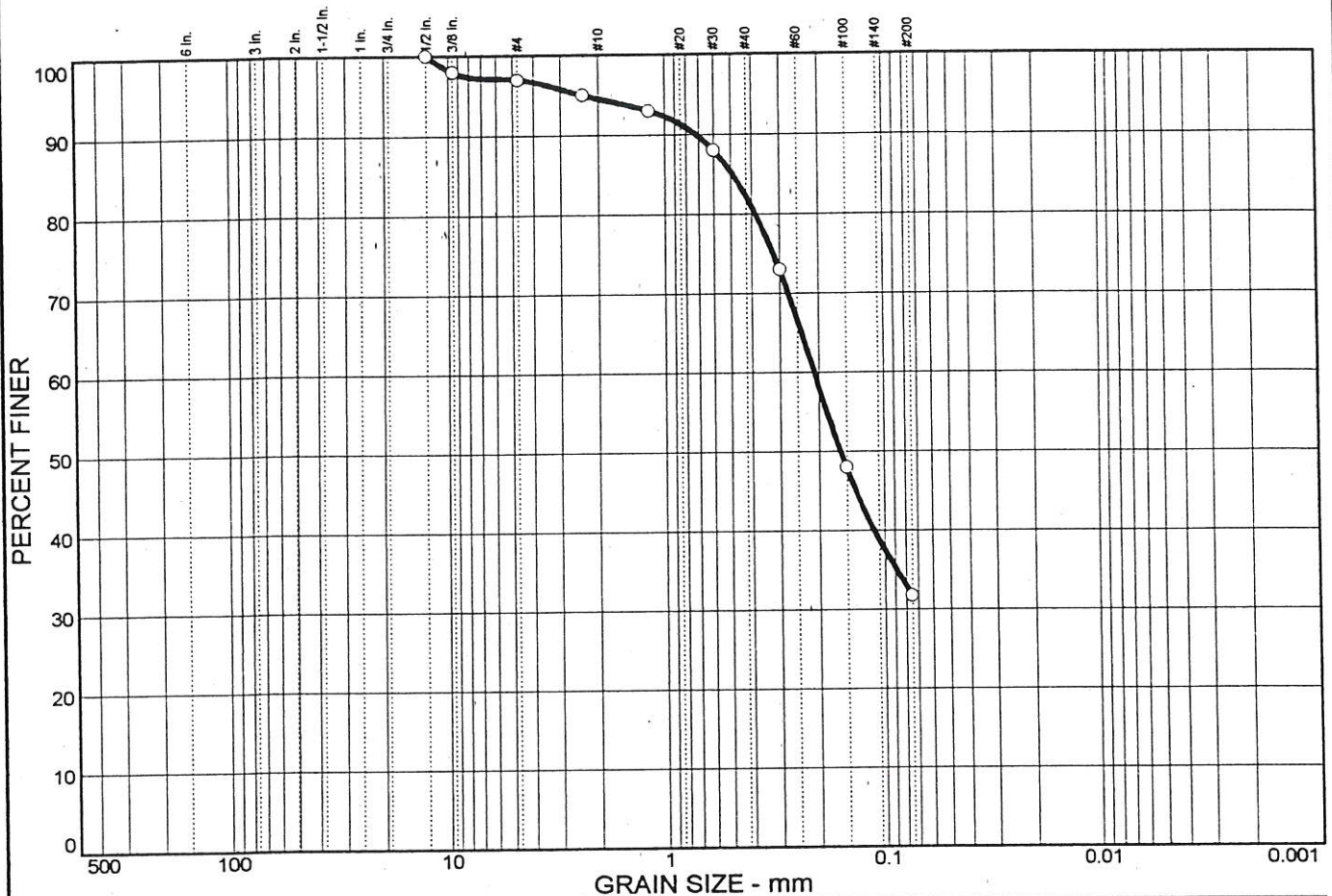


Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-004

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	3.0	65.2		31.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
3/8 in.	98.0		
#4	97.0		
#8	95.0		
#16	93.0		
#30	88.0		
#50	73.0		
#100	48.0		
#200	31.8		

* (no specification provided)

Soil Description
Brown Clayey Sand (Visual)

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.491 D₆₀= 0.210 D₅₀= 0.159
 D₃₀= D₁₅= D₁₀=
 C_u= C_c=

Classification
 USCS= SC AASHTO=

Remarks

Sample No.: Bag 32
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/13/00
Elev./Depth: 8'-18'

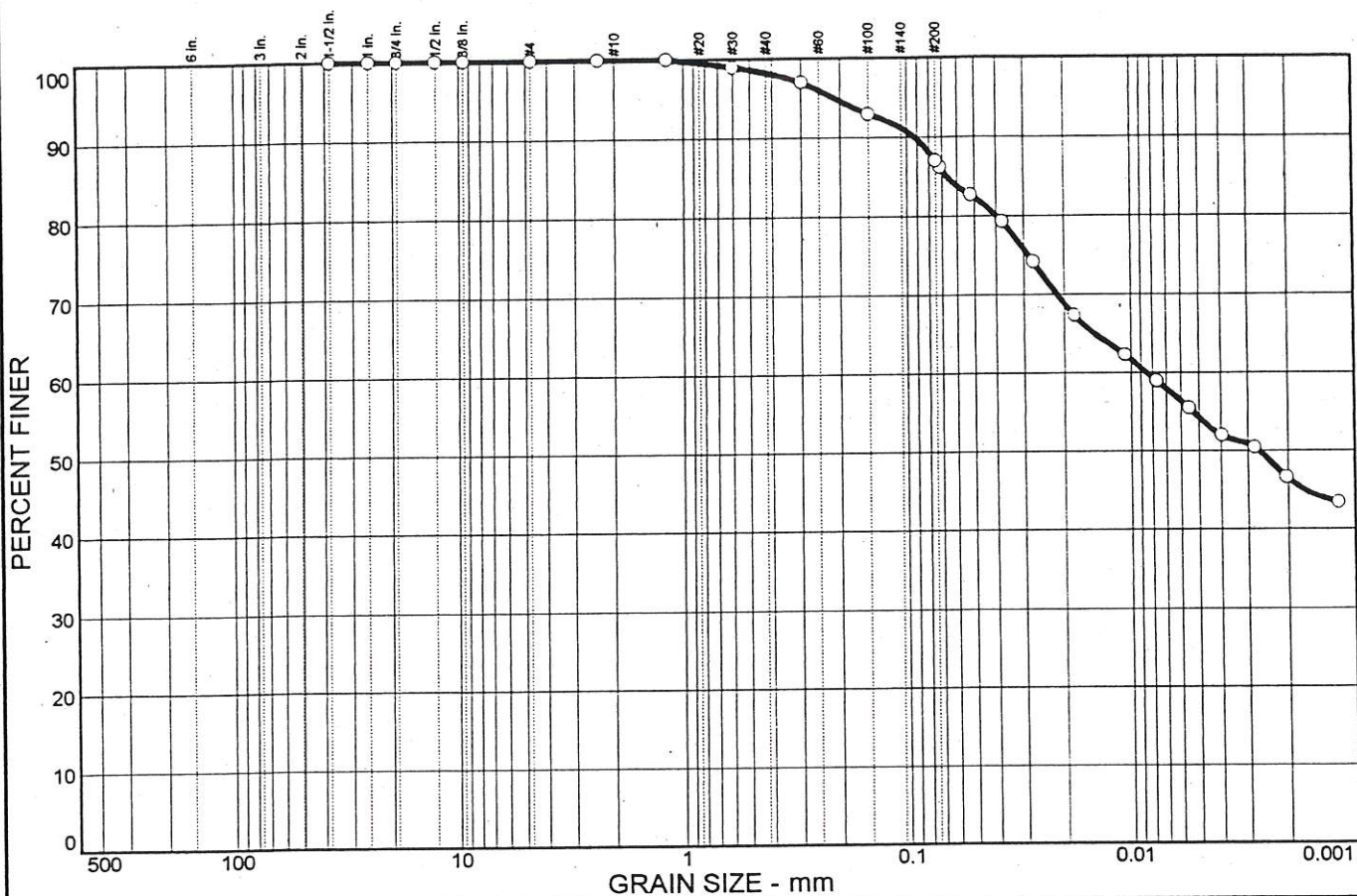


**Materials
Testing, Inc.**

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-010

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.0	1.7	11.3	32.7	54.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	100.0		
#8	100.0		
#16	100.0		
#30	99.0		
#50	97.0		
#100	93.0		
#200	87.0		

Soil Description

Brown, Silty Clay

Atterberg Limits

PL= 22

LL= 63

PI= 41

Coefficients

D₈₅= 0.0666

D₆₀= 0.0085

D₅₀= 0.0027

D₃₀=

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS= CH

AASHTO=

Remarks

F.M.=0.11

* (no specification provided)

Sample No.: Bag #40

Source of Sample:

Location:

Date: 10-23-00

Elev./Depth: 0-5'



Materials
Testing, Inc.

Client: Golden State Developers

Project: Cordes Ranch

Project No: VV545

Report Number:

The graph displays the grain size distribution of a sample. The y-axis represents the percentage of material finer than a given grain size, ranging from 0 to 100. The x-axis represents the grain size in millimeters on a logarithmic scale, ranging from 500 mm to 0.001 mm. The curve shows that approximately 100% of the sample is finer than 4.75 mm, and about 68% is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
4.75	100
2.0	100
1.0	100
0.85	100
0.75	100
0.6	100
0.425	100
0.3	100
0.25	100
0.2	100
0.15	100
0.106	100
0.075	100
0.06	100
0.05	100
0.0425	100
0.0375	100
0.03	100
0.025	100
0.02	100
0.015	100
0.0106	100
0.0075	100
0.006	100
0.005	100
0.00425	100
0.00375	100
0.003	100
0.0025	100
0.002	100
0.0015	100
0.00106	100
0.00075	100
0.0006	100
0.0005	100
0.000425	100
0.000375	100
0.0003	100
0.00025	100
0.0002	100
0.00015	100
0.000106	100
0.000075	100
0.00006	100
0.00005	100
0.0000425	100
0.0000375	100
0.00003	100
0.000025	100
0.00002	100
0.000015	100
0.0000106	100
0.0000075	100
0.000006	100
0.000005	100
0.00000425	100
0.00000375	100
0.000003	100
0.0000025	100
0.000002	100
0.0000015	100
0.00000106	100
0.00000075	100
0.0000006	100
0.0000005	100
0.000000425	100
0.000000375	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000015	100
0.000000106	100
0.000000075	100
0.00000006	100
0.00000005	100
0.0000000425	100
0.0000000375	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000015	100
0.0000000106	100
0.0000000075	100
0.000000006	100
0.000000005	100
0.00000000425	100
0.00000000375	100
0.000000003	100
0.0000000025	100
0.000000002	100
0.0000000015	100
0.00000000106	100
0.00000000075	100
0.0000000006	100
0.0000000005	100
0.000000000425	100
0.000000000375	100
0.0000000003	100
0.00000000025	100
0.0000000002	100
0.00000000015	100
0.000000000106	100
0.000000000075	100
0.00000000006	100
0.00000000005	100
0.0000000000425	100
0.0000000000375	100
0.00000000003	100
0.000000000025	100
0.00000000002	100
0.000000000015	100
0.0000000000106	100
0.0000000000075	100
0.000000000006	100
0.000000000005	100
0.00000000000425	100
0.00000000000375	100
0.000000000003	100
0.0000000000025	100
0.000000000002	100
0.0000000000015	100
0.00000000000106	100
0.00000000000075	

<u>Soil Description</u>		
Brown Sandy Clay (Visual)		
<u>Atterberg Limits</u>		
PL=	LL=	PI=
<u>Coefficients</u>		
D ₈₅ = 0.150	D ₆₀ =	D ₅₀ =
D ₃₀ =	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= CL	AASHTO=	
<u>Remarks</u>		

Plate 0400-011

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.2	2.5	15.3	58.1	23.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	100.0		
#8	100.0		
#16	99.0		
#30	98.0		
#50	96.0		
#100	92.0		
#200	82.0		

Soil Description

Light Brown, Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₈₅= 0.0826

D₆₀= 0.0361

D₅₀= 0.0269

D₃₀= 0.0092

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS= ML

AASHTO=

Remarks

F.M.=0.15

* (no specification provided)

Sample No.: 46-1

Source of Sample:

Location:

Date: 10-24-00

Elev./Depth: 5'



Materials
Testing, Inc.

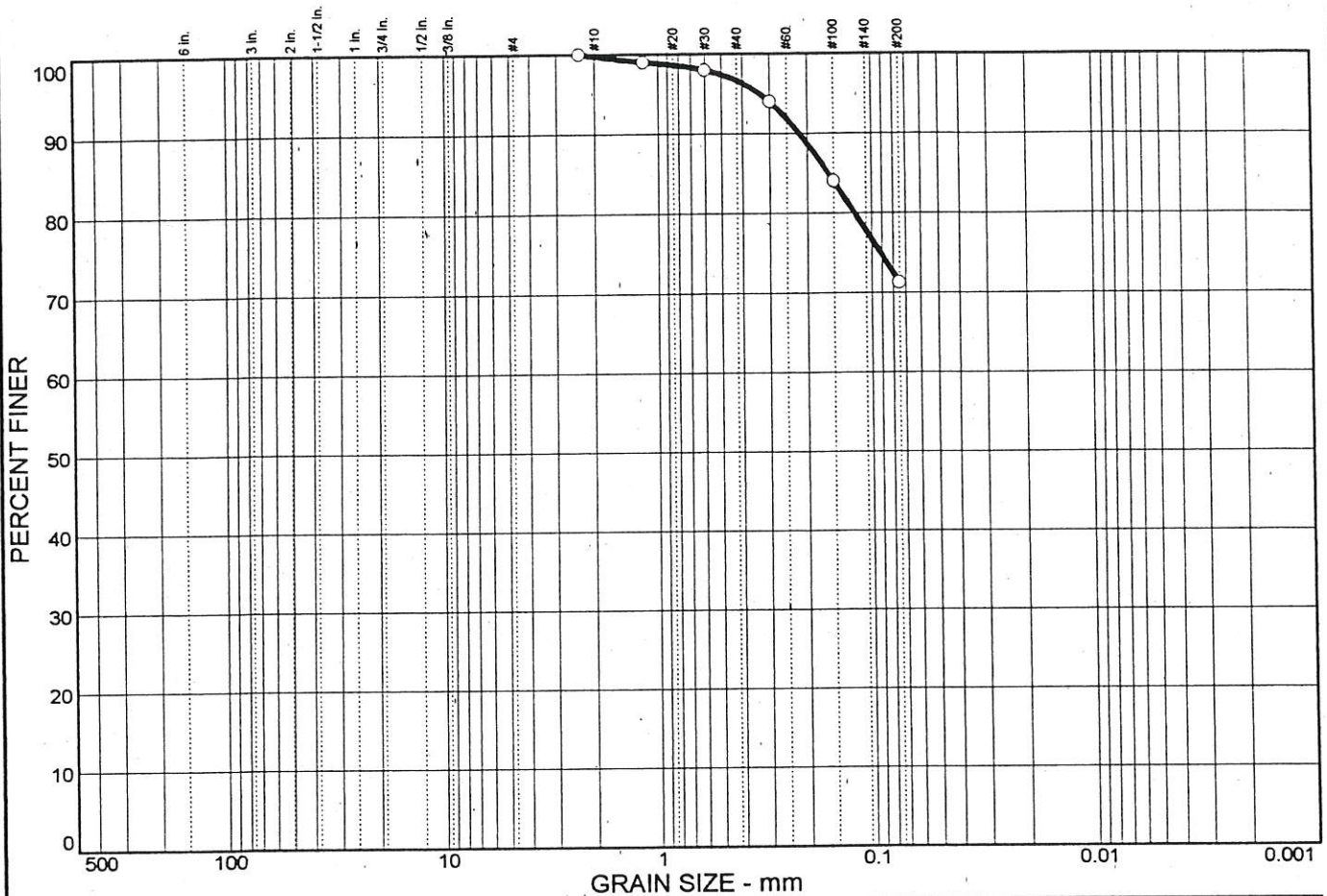
Client: Golden State Developers

Project: Cordes Ranch

Project No: VV545

Report Number:

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	28.7	71.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	99.0		
#30	98.0		
#50	94.0		
#100	84.0		
#200	71.3		

* (no specification provided)

Sample No.: Bag 48
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/13/00
Elev./Depth: 10'-20'



Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-012

Soil Description

Brown Sandy Clay (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.159 D₆₀= D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= CL AASHTO=

Remarks

The graph displays the grain size distribution of a soil sample. The vertical axis represents the percentage of soil finer than a given grain size, ranging from 0 to 100. The horizontal axis represents the grain size in millimeters, on a logarithmic scale from 500 mm to 0.001 mm. The curve shows that approximately 100% of the soil is finer than 500 mm, and the percentage finer decreases as the grain size decreases, reaching about 55% finer at 0.075 mm.

Grain Size (mm)	Percent Finer (%)
500	100
250	100
125	100
63	100
31.5	100
15.75	100
7.875	100
3.9375	100
1.96875	100
0.984375	100
0.4921875	100
0.24609375	100
0.123046875	100
0.0615234375	100
0.03076171875	100
0.015380859375	100
0.0076904296875	100
0.00384521484375	100
0.001922607421875	100
0.0009613037109375	100
0.00048065185546875	100
0.000240325927734375	100
0.0001201629638671875	100
0.00006008148193359375	100
0.000030040740966796875	100
0.0000150203704833984375	100
0.00000751018524169921875	100
0.000003755092620849609375	100
0.0000018775463104248046875	100
0.00000093877315521240234375	100
0.000000469386577606201171875	100
0.0000002346932888031005859375	100
0.00000011734664440155029296875	100
0.000000058673322200775146484375	100
0.0000000293366611003875732421875	100
0.00000001466833055019378662109375	100
0.000000007334165275096893310546875	100
0.0000000036670826375484466552734375	100
0.00000000183354131877422332763671875	100
0.000000000916770659387111663818359375	100
0.0000000004583853296935558319091796875	100
0.00000000022919266484677791595458984375	100
0.000000000114596332423388957977294921875	100
0.0000000000572981662116944789886474609375	100
0.00000000002864908310584723949432373046875	100
0.000000000014324541552923619747161865234375	100
0.0000000000071622707764618098735809326171875	100
0.00000000000358113538823090493679046630859375	100
0.000000000001790567694115452468395233154296875	100
0.0000000000008952838470577262341976165771484375	100
0.00000000000044764192352886311709880828857421875	100
0.000000000000223820961764431558549404144287109375	100
0.0000000000001119104808822157792747020721435546875	100
0.00000000000005595524044110788963735103607177734375	100
0.000000000000027977620220553944818675518035888671875	100
0.0000000000000139888101102769724093377590179443359375	100
0.00000000000000699440505513848620466887950897216796875	100
0.000000000000003497202527569243102334439750448583984375	100
0.0000000000000017486012637846215511672198752242919921875	100
0.00000000000000087430063189231077558360993761214599609375	100
0.000000000000000437150315946155387791804968806072998046875	100
0.0000000000000002185751579730776938959024844030364990234375	100
0.00000000000000010928757898653884694795124220151824951171875	100
0.000000000000000054643789493269423473975621100759124755859375	100
0.0000000000000000273218947466347117369878105503795623779296875	100
0.00000000000000001366094737331735586849390527518978118896484375	100
0.000000000000000006830473686658677934246952637594890594482421875	100
0.0000000000000000034152368433293389671234763187974452972412109375	100
0.00000000000000000170761842166466948356173815939872264862060546875	100
0.0000000	

Plate 0400-013

Grain size distribution curve showing Percent Finer versus Grain Size (mm). The curve indicates that approximately 48% of the material is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
500	100
250	100
125	100
63	100
31.5	100
15.75	100
7.75	100
3.75	100
1.9	100
0.85	100
0.425	100
0.25	100
0.15	100
0.075	100
0.0475	98
0.025	95
0.015	80
0.0075	63
0.00425	58
0.0025	55
0.0015	50
0.00075	48
0.000425	48
0.00025	48
0.00015	48
0.000075	48

% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.0	2.0	12.0	39.2	46.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	100.0		
#8	100.0		
#16	100.0		
#30	99.0		
#50	97.0		
#100	94.0		
#200	86.0		

Brown, Sandy Clay

PL= 21

LL= 59

LL= 59

PI= 38

$$D_{85} = 0.0694$$
$$D_{60} = 0.0169$$
$$D_{50} = 0.0064$$
 $D_{30} =$ $D_{15} =$
$$D_{10} =$$
 C_{11}

CC-0

Classification

USCS= CH

AASHTO=

Remarks

F.M.=0.10

★ (no specification provided)

Sample No.: 52-1

Source of Sample:



Materials Testing, Inc.

Client: Golden State Developers

Project: Cordes Ranch

Date: 10-23-00

Elev./Depth: 2'

Project No: VV545

Report Number:

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	10.0	49.6		40.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
3/8 in.	96.0		
#4	90.0		
#8	85.0		
#16	82.0		
#30	75.0		
#50	66.0		
#100	51.0		
#200	40.4		

* (no specification provided)

Sample No.: Bag 52
Location: Cordes Ranch

Source of Sample: Cordes Ranch

10/09/00 Date: 10/13/00
Elev./Depth: 7'-13'



Materials
Testing, Inc.

Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

Plate 0400-014

Soil Description

Brown Clayey Sand (Visual)

Atterberg Limits

PL= LL= PI=

Coefficients

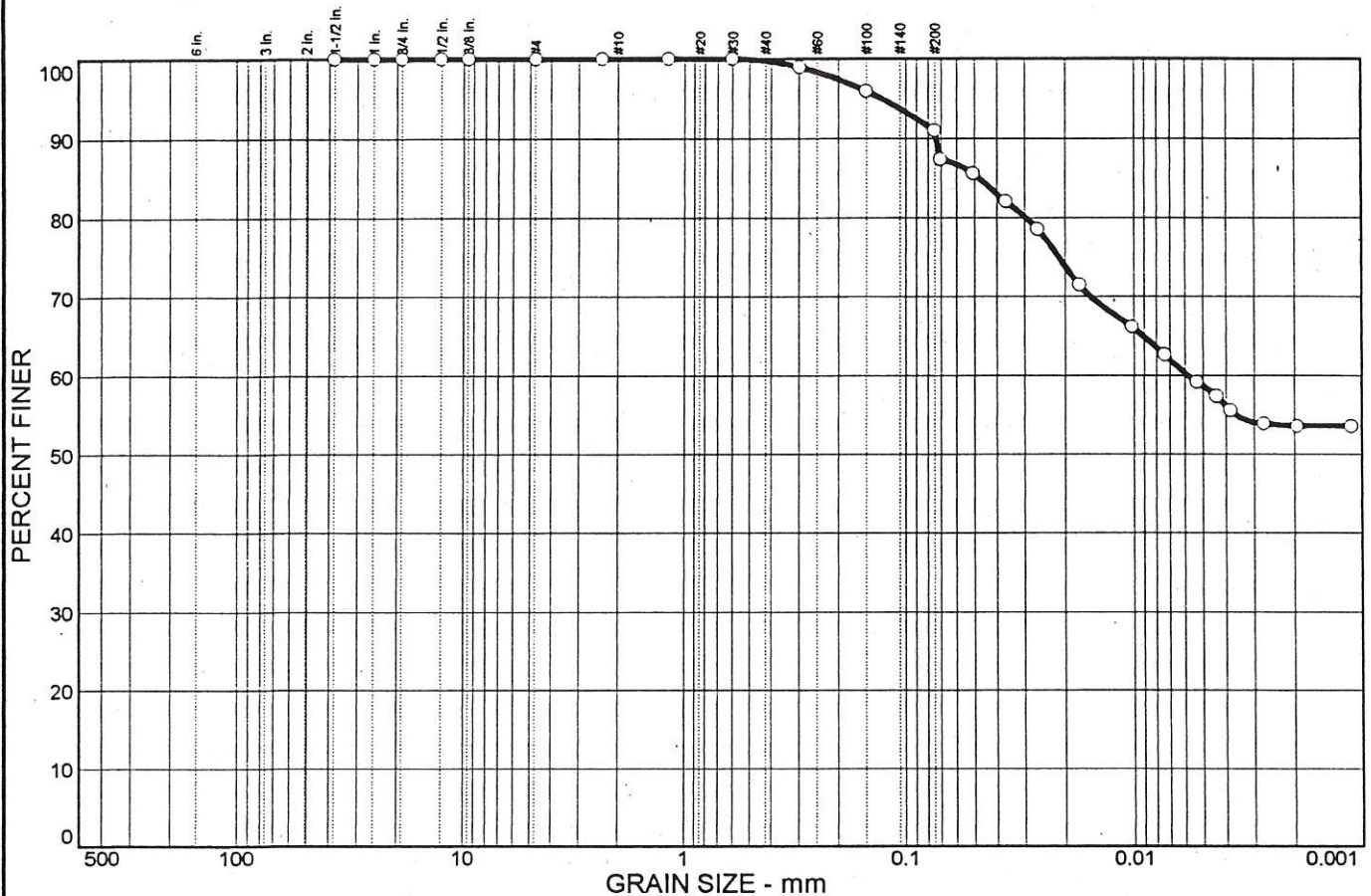
D₈₅= 2.36 D₆₀= 0.225 D₅₀= 0.142
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= SC AASHTO=

Remarks

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.0	0.3	8.7	32.3	58.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5 in.	100.0		
1 in.	100.0		
3/4 in.	100.0		
1/2 in.	100.0		
3/8 in.	100.0		
#4	100.0		
#8	100.0		
#16	100.0		
#30	100.0		
#50	99.0		
#100	96.0		
#200	91.0		

Soil Description
Brown, Silty Clay

Atterberg Limits
PL= 22 LL= 62 PI= 40

Coefficients
D₈₅= 0.0477 D₆₀= 0.0058 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification
USCS= CH AASHTO=

Remarks
F.M.=0.05

* (no specification provided)

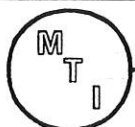
Sample No.: 56-1

Source of Sample:

Date: 10-23-00

Location:

Elev./Depth: 1'



Materials
Testing, Inc.

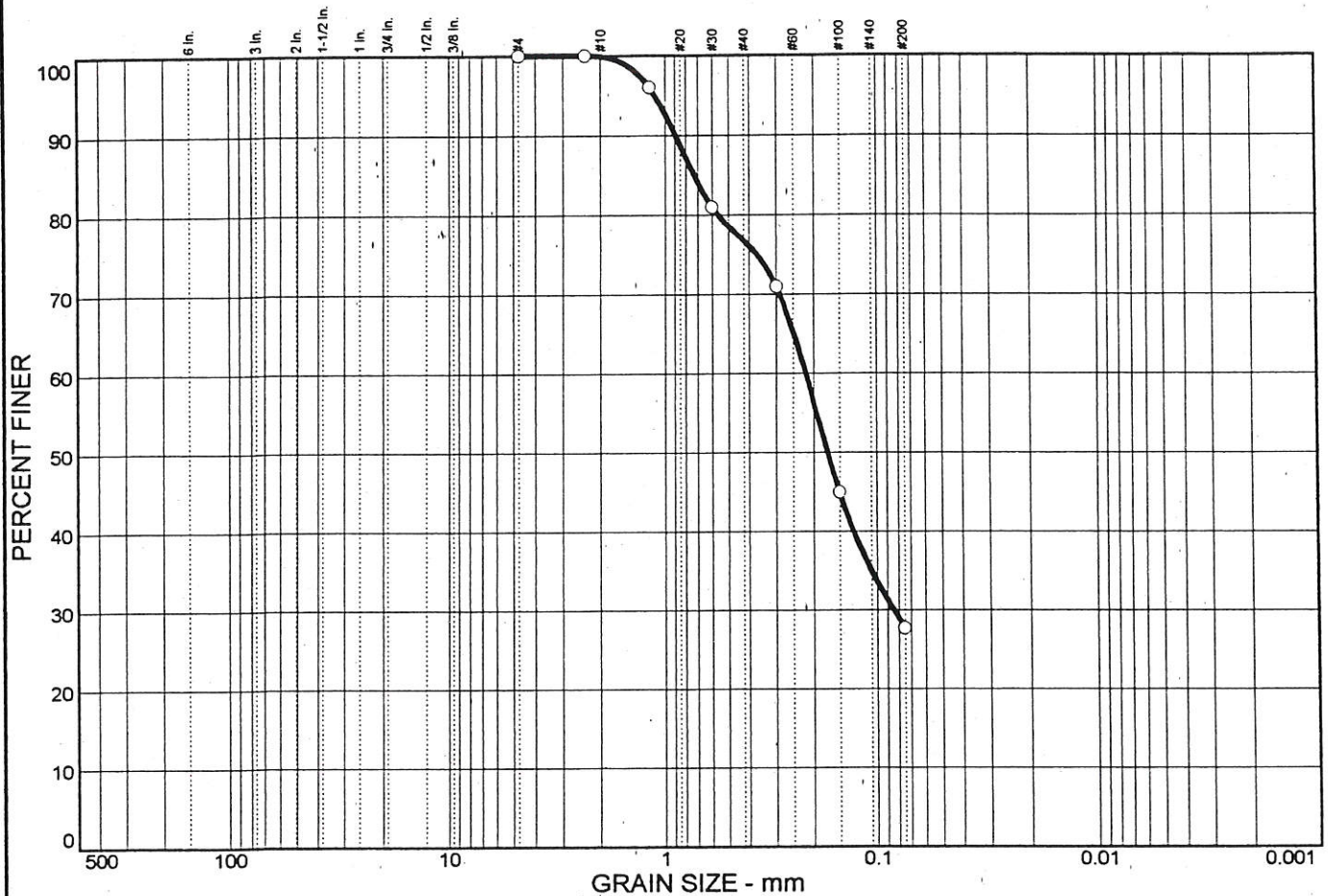
Client: Golden State Developers

Project: Cordes Ranch

Project No: VV545

Report Number:

PARTICLE SIZE DISTRIBUTION TEST REPORT



% + 3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	72.3		27.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	100.0		
#16	96.0		
#30	81.0		
#50	71.0		
#100	45.0		
#200	27.7		

Soil Description
Olive Brown Silty Sand w/Clay (Visual)

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₈₅= 0.729 D₆₀= 0.218 D₅₀= 0.171
 D₃₀= 0.0842 D₁₅= D₁₀=
 C_u= C_c=

Classification
 USCS= SM-SC AASHTO=

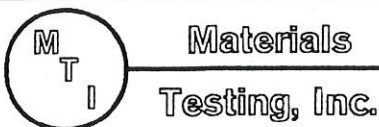
Remarks

* (no specification provided)

Sample No.: 57-3
Location: Cordes Ranch

Source of Sample: Cordes Ranch

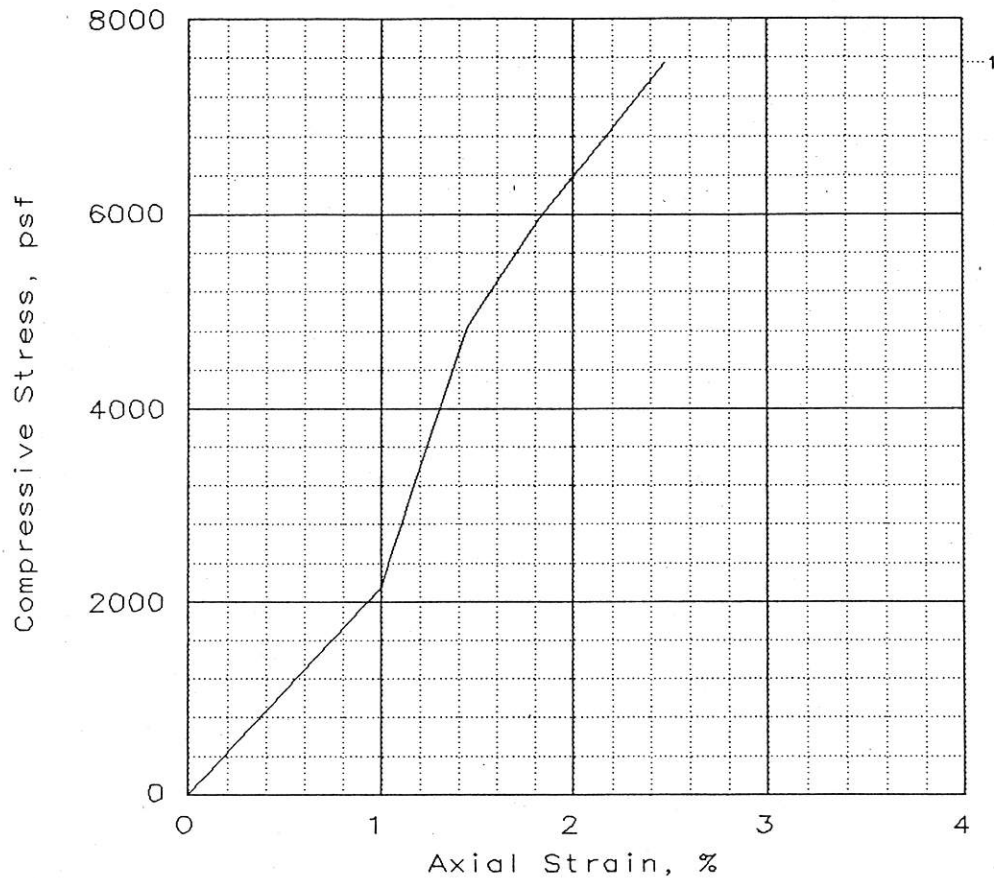
10/09/00 Date: 10/13/00
Elev./Depth: 22'



Client: Golden State Developers
Project: Cordes Ranch
Tracy, CA
Project No: VV545-001

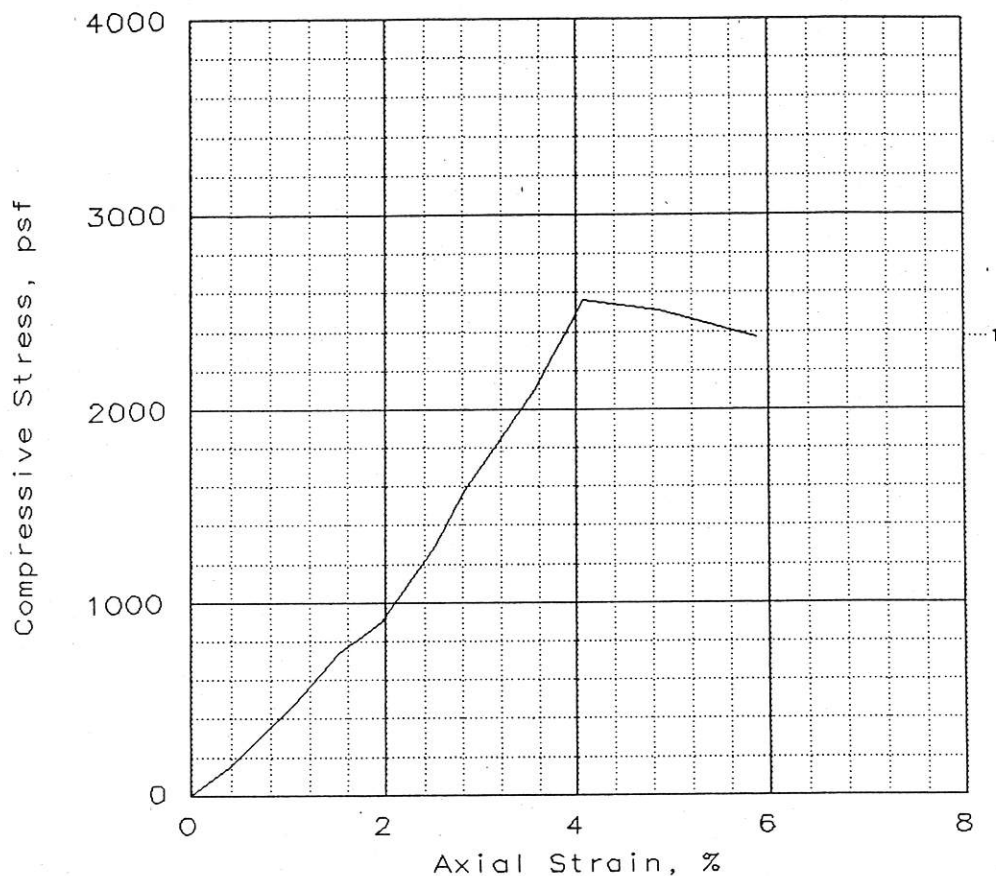
Plate 0400-015

UNCONFINED COMPRESSION TEST



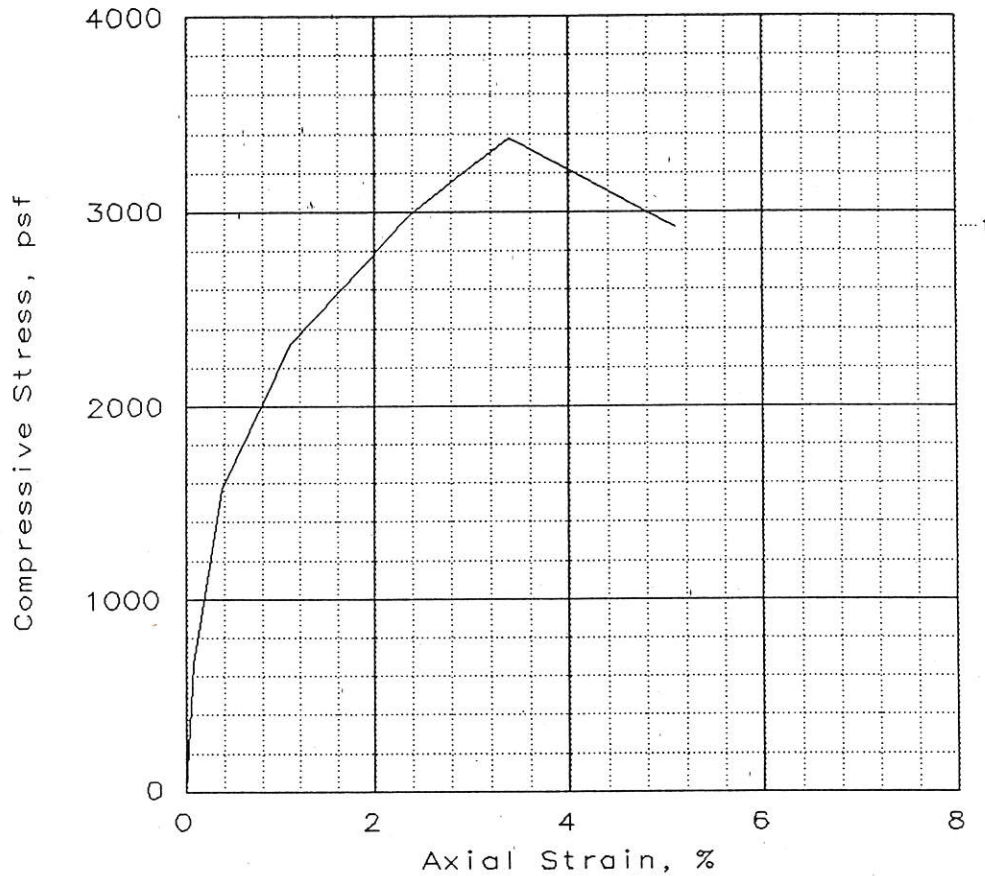
SAMPLE NO.:	1			
Unconfined strength, psf	7546			
Undrained shear strength, psf	3773			
Failure strain, %	2.5			
Strain rate, %/min				
Water content, % (cuttings after test)	18.7			
Wet density, pcf	121.8			
Dry density, pcf	102.6			
Saturation, %	86.3			
Void ratio	0.5515			
Specimen diameter, in	1.940			
Specimen height, in	2.900			
Height/diameter ratio	1.49			
Description: Dark Brown Silty Clay (CL) visual				
LL = 50	PL = 20	PI = 30	GS = 2.55	Type: Tube
Project No.: VV545		Client: Golden State Developers		
Date: 8-22-00		Project: Cordes Ranch		
Remarks:		Location: 6-1@1.5'		
Testing discontinued				
Report No.: _____		UNCONFINED COMPRESSION TEST MATERIALS TESTING, INC.		

UNCONFINED COMPRESSION TEST



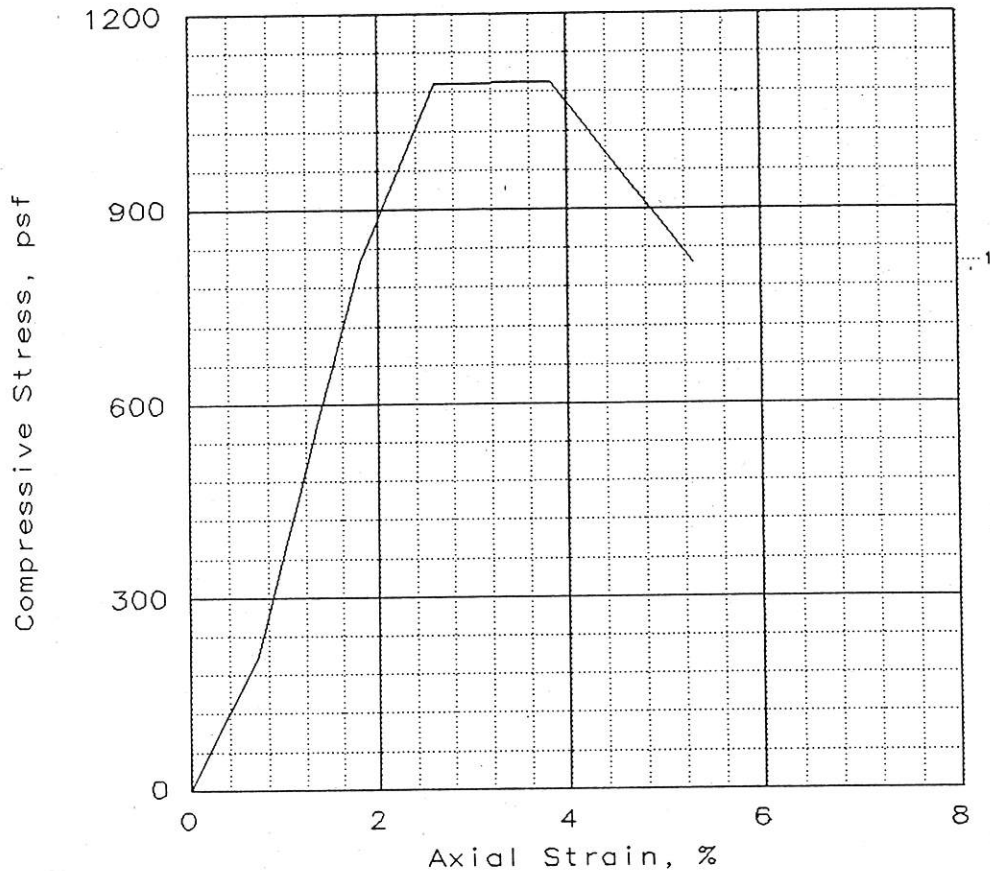
SAMPLE NO.:	1			
Unconfined strength, psf	2565			
Undrained shear strength, psf	1283			
Failure strain, %	4.1			
Strain rate, %/min				
Water content, % (cuttings after test)	9.6			
Wet density, pcf	102.6			
Dry density, pcf	93.6			
Saturation, %	33.3			
Void ratio	0.7647			
Specimen diameter, in	2.410			
Specimen height, in	2.500			
Height/diameter ratio	1.04			
Description: Brown, Silty Clay				
		GS= 2.645		Type: Tube
Project No.: VV545		Client: Golden State Developers		
Date: 10-16-00		Project: Cordes Ranch		
Remarks:		Location: 18-103'		
Type of Failure				
Columnar				
Report No.: _____		UNCONFINED COMPRESSION TEST MATERIALS TESTING, INC.		

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1		
Unconfined strength, psf	3376		
Undrained shear strength, psf	1688		
Failure strain, %	3.4		
Strain rate, %/min			
Water content, % (cuttings after test)	30.5		
Wet density, pcf	118.2		
Dry density, pcf	90.6		
Saturation, %	97.9		
Void ratio	0.8234		
Specimen diameter, in	1.940		
Specimen height, in	2.350		
Height/diameter ratio	1.21		
Description: Light Brown, Silty Clay			
		GS= 2.645	Type: Tube
Project No.: VV545		Client: Golden State Developers	
Date: 10-16-00		Project: Cordes Ranch	
Remarks:		Location: 24-3@17'	
Type of Failure			
Columnar			
Report No.: _____		UNCONFINED COMPRESSION TEST MATERIALS TESTING, INC.	

UNCONFINED COMPRESSION TEST

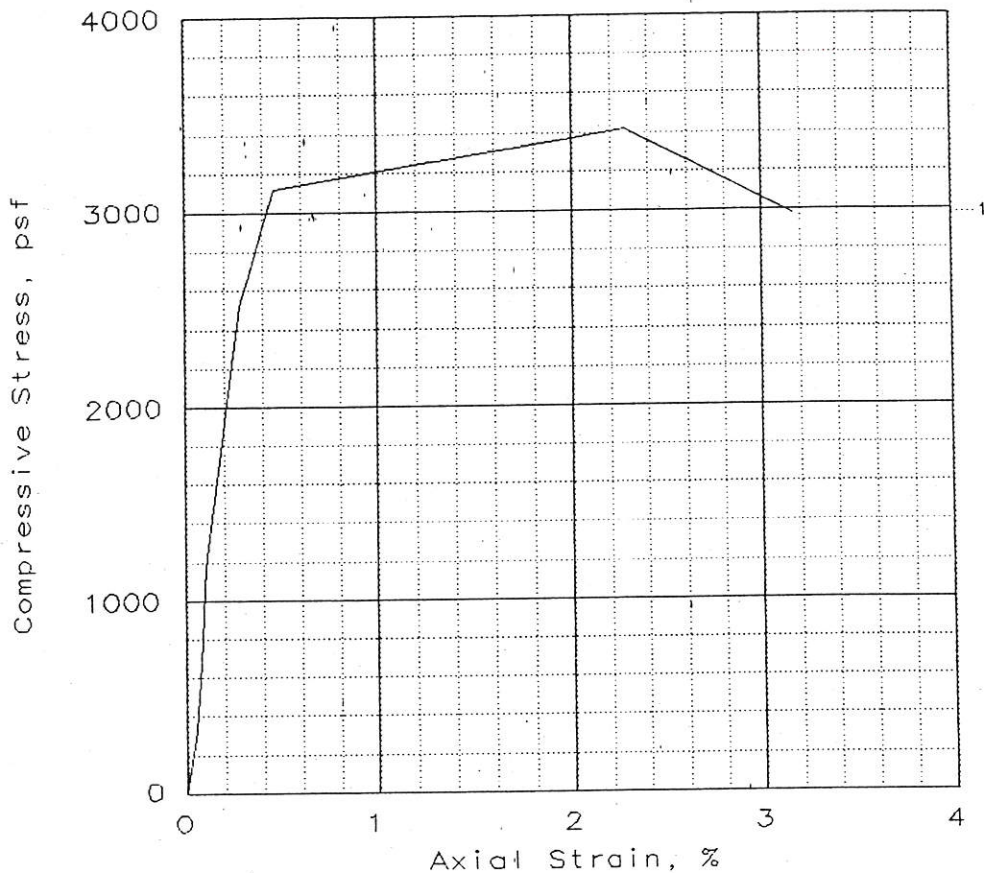


SAMPLE NO.:	1		
Unconfined strength, psf	1094		
Undrained shear strength, psf	547		
Failure strain, %	3.8		
Strain rate, %/min			
Water content, % (cuttings after test)	10.0		
Wet density, pcf	96.9		
Dry density, pcf	88.1		
Saturation, %	30.2		
Void ratio	0.8783		
Specimen diameter, in	2.410		
Specimen height, in	2.600		
Height/diameter ratio	1.08		

Description: Brown, Silty Sand with Clay

		GS= 2.65	Type: Tube
Project No.: VV545	Client: Golden State Developers		
Date: 10-16-00	Project: Cordes Ranch		
Remarks:	Location: 30-102'		
Type of Failure			
Columnar			
Report No.: _____	UNCONFINED COMPRESSION TEST MATERIALS TESTING, INC.		

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1		
Unconfined strength, psf	3415		
Undrained shear strength, psf	1707		
Failure strain, %	2.3		
Strain rate, %/min			
Water content, % (cuttings after test)	11.0		
Wet density, pcf	105.2		
Dry density, pcf	94.8		
Saturation, %	39.2		
Void ratio	0.7461		
Specimen diameter, in	1.940		
Specimen height, in	3.850		
Height/diameter ratio	1.98		

Description: Dark Brown, Silty Clay

GS= 2.651

Type: Tube

Project No.: VV545

Date: 10-24-00

Remarks:

Type of Failure

Cone & Split

Report No.: _____

Client: Golden State Developers

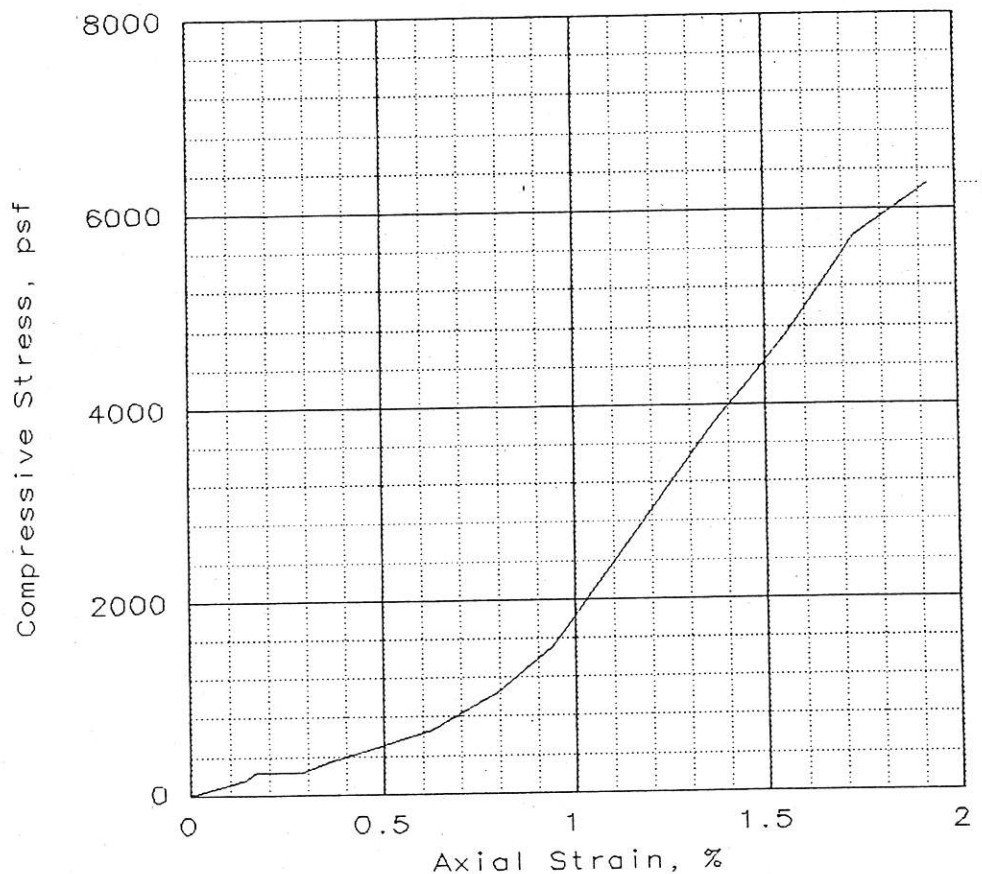
Project: Cordes Ranch

Location: 33-102'

UNCONFINED COMPRESSION TEST

MATERIALS TESTING, INC.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1		
Unconfined strength, psf	6250		
Undrained shear strength, psf	3125		
Failure strain, %	1.9		
Strain rate, %/min			
Water content, % (cuttings after test)	10.1		
Wet density, pcf	109.0		
Dry density, pcf	99.0		
Saturation, %	38.5		
Void ratio	0.7071		
Specimen diameter, in	2.410		
Specimen height, in	4.150		
Height/diameter ratio	1.72		

Description: Dark Brown, Silty Clay

GS= 2.708

Type: Tube

Project No.: VV545

Date: 10-24-00

Remarks:

Type of Failure

Exceeded load ring capacity

Report No.: _____

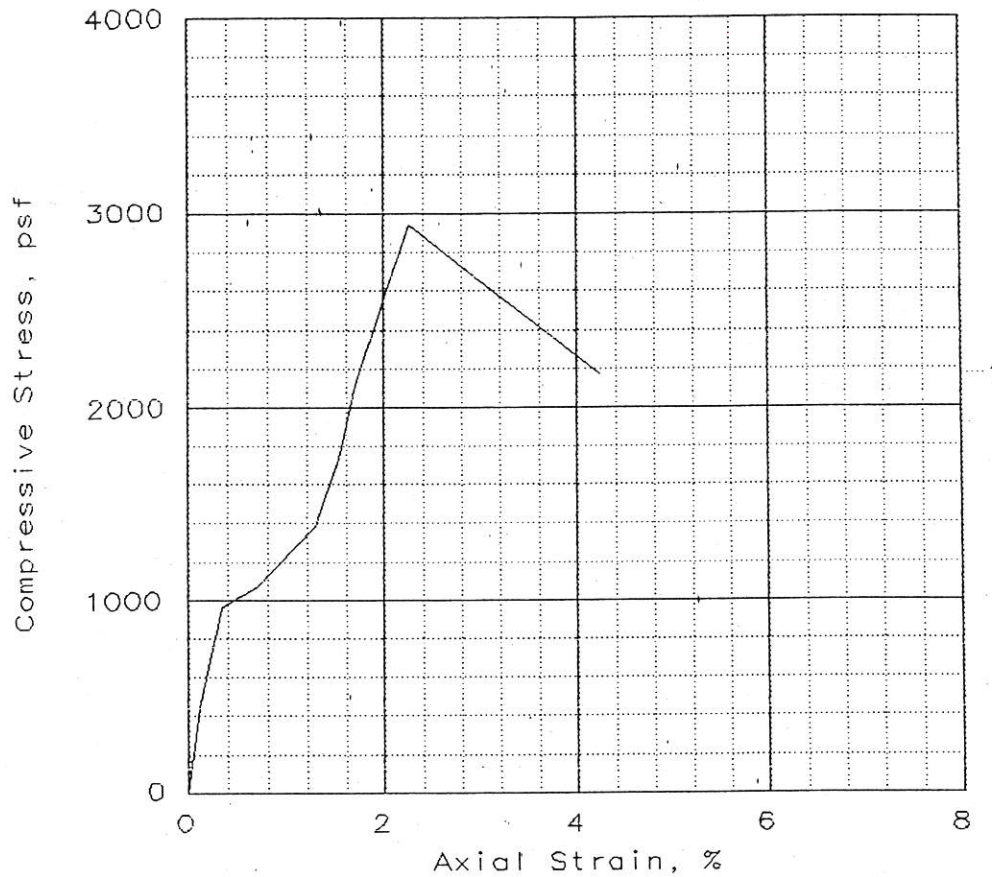
Client: Golden State Developers

Project: Cordes Ranch

Location: 36-1@1

UNCONFINED COMPRESSION TEST
MATERIALS TESTING, INC.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, psf	2940			
Undrained shear strength, psf	1470			
Failure strain, %	2.3			
Strain rate, %/min				
Water content, % (cuttings after test)	12.9			
Wet density, pcf	116.1			
Dry density, pcf	102.8			
Saturation, %	54.2			
Void ratio	0.6440			
Specimen diameter, in	2.410			
Specimen height, in	3.400			
Height/diameter ratio	1.41			

Description: Dark Brown, Silty Clay

GS= 2.708

Type: Tube

Project No.: VV545

Date: 10-24-00

Remarks:

Type of Failure

Cone & Split

Report No.: _____

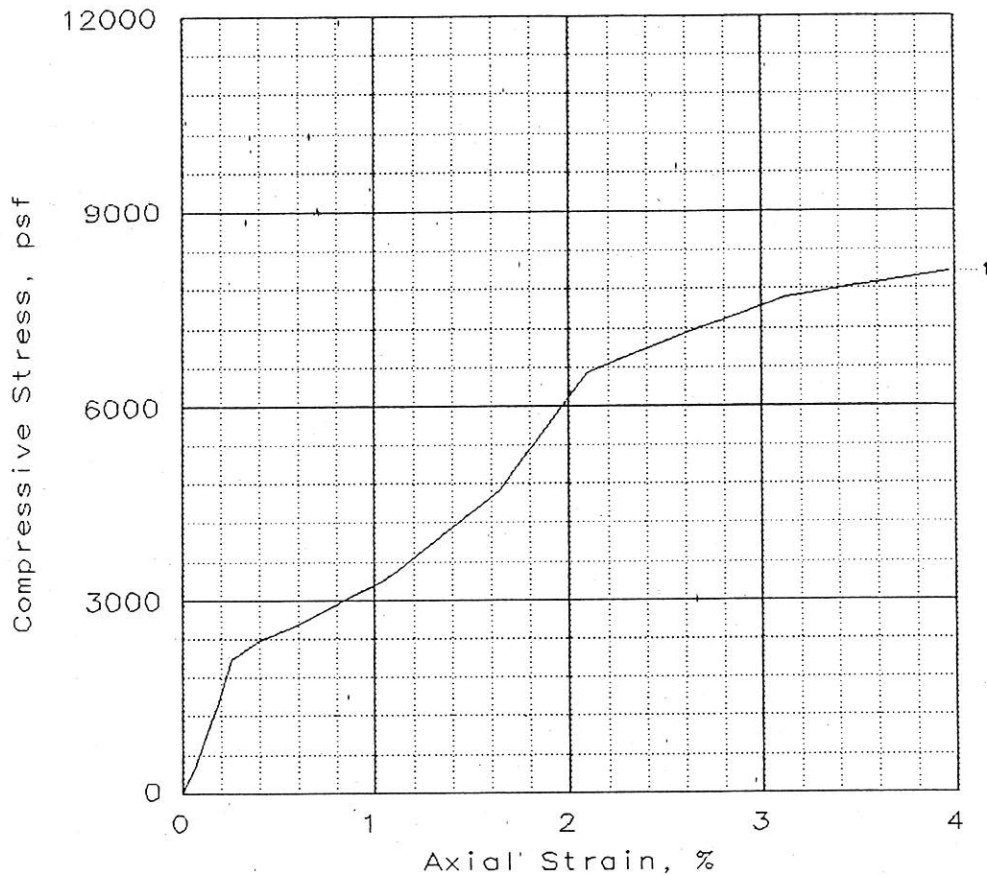
Client: Golden State Developers

Project: Cordes Ranch

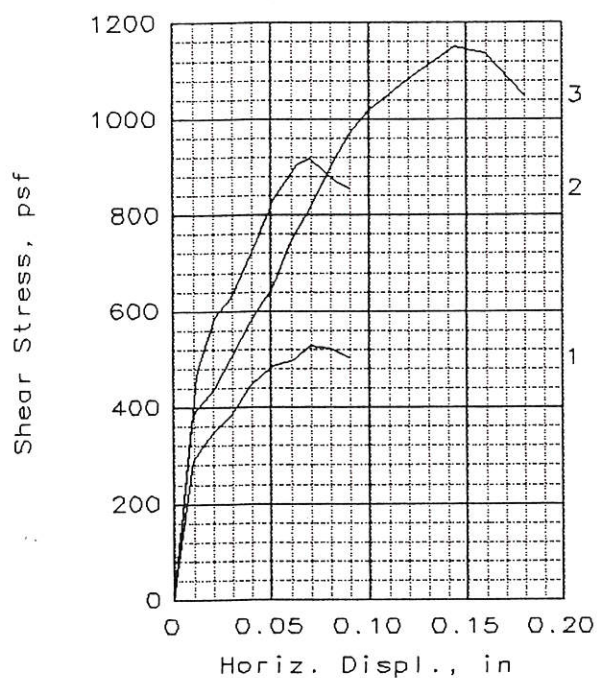
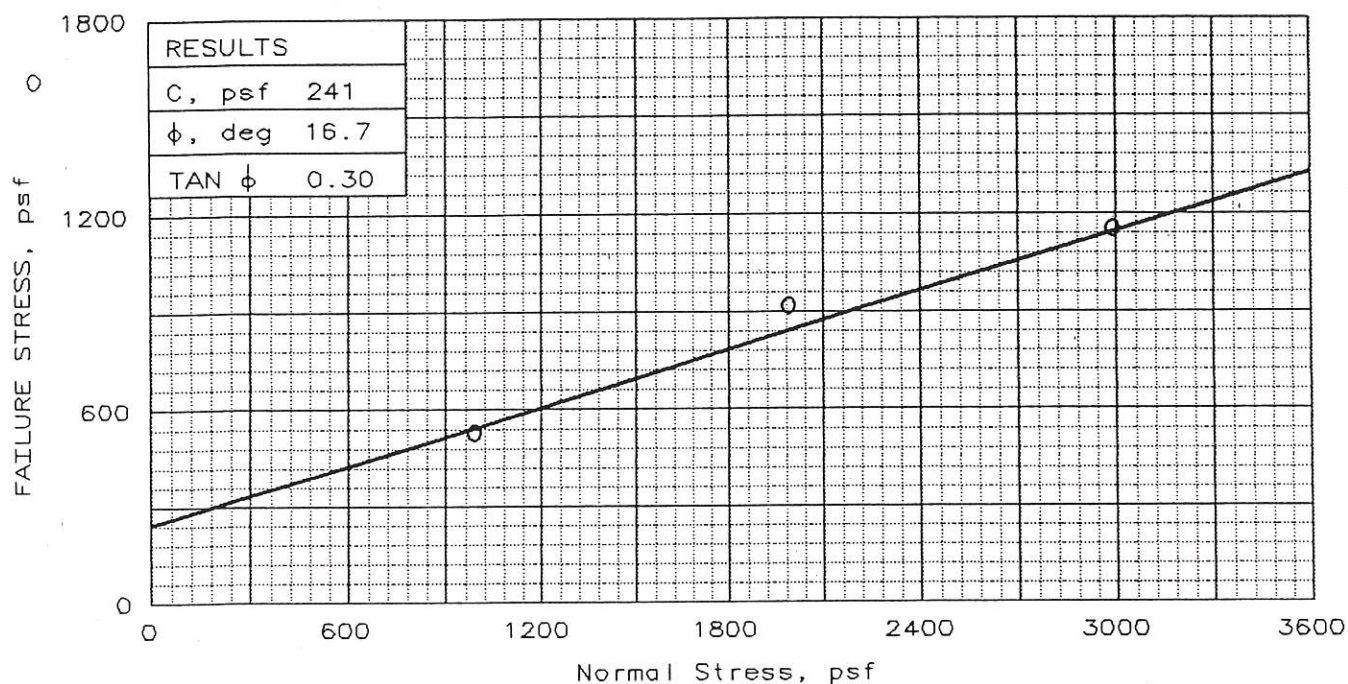
Location: 42-105'

UNCONFINED COMPRESSION TEST
MATERIALS TESTING, INC.

UNCONFINED COMPRESSION TEST



SAMPLE NO.:	1			
Unconfined strength, psf	8070			
Undrained shear strength, psf	4035			
Failure strain, %	4.0			
Strain rate, %/min				
Water content, % (cuttings after test)	17.4			
Wet density, pcf	127.2			
Dry density, pcf	108.4			
Saturation, %	84.0			
Void ratio	0.5594			
Specimen diameter, in	1.940			
Specimen height, in	2.720			
Height/diameter ratio	1.40			
Description: Dark Brown, Silty Clay				
		GS= 2.708		Type: Tube
Project No.: VV545		Client: Golden State Developers		
Date: 10-24-00		Project: Cordes Ranch		
Remarks:				
Type of Failure		Location: 49-103'		
Exceeded load ring capacity		UNCONFINED COMPRESSION TEST MATERIALS TESTING, INC.		
Report No.: _____				



SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	18.5	18.5	18.5
	DRY DENSITY, pcf	107.7	102.1	106.7
	SATURATION, %	92.2	79.6	89.9
	VOID RATIO	0.531	0.614	0.544
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	1.000	1.000	1.000
AT TEST	WATER CONTENT, %	19.0	18.7	17.6
	DRY DENSITY, pcf	108.9	104.3	109.1
	SATURATION, %	97.4	85.1	91.0
	VOID RATIO	0.514	0.580	0.511
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	0.989	0.979	0.978
NORMAL STRESS, psf		1000	2000	3000
FAILURE STRESS, psf		527	917	1151
DISPLACEMENT, in		0.07	0.07	0.14
ULTIMATE STRESS, psf				
DISPLACEMENT, in				
Strain rate, %/min				

SAMPLE TYPE:
DESCRIPTION: Dark Brown,
Silty Clay

SPECIFIC GRAVITY= 2.64
REMARKS:

Report No.: _____

CLIENT: Golden State Developers

PROJECT: Cordes Ranch

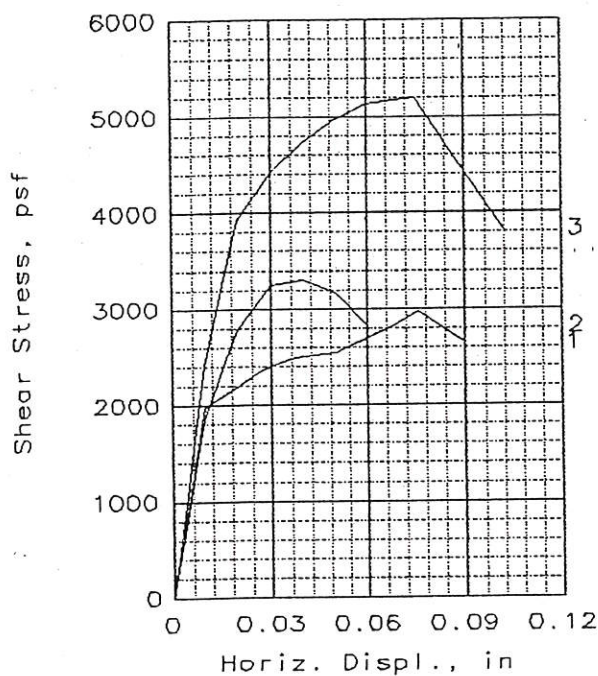
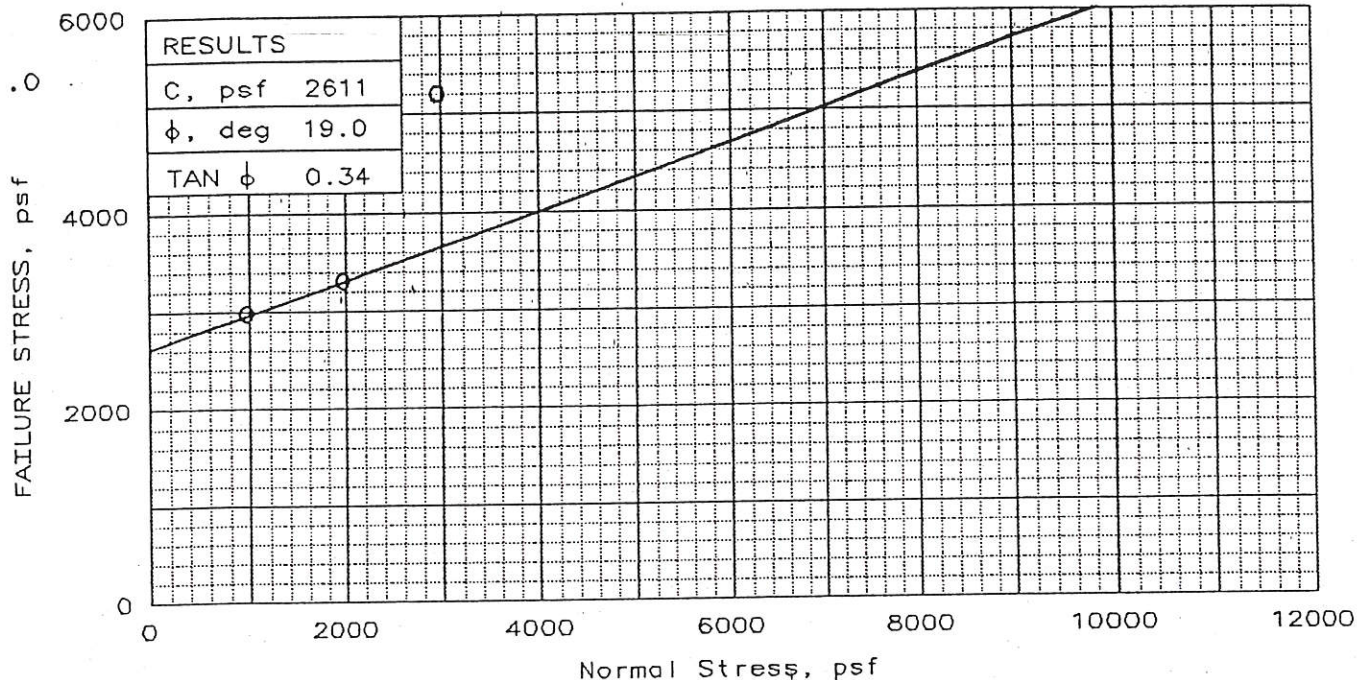
SAMPLE LOCATION: 15-104'

PROJ. NO.: VV545

DATE: 10-18-00

DIRECT SHEAR TEST REPORT

MATERIALS TESTING, INC.



SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	21.6	21.6	21.6
	DRY DENSITY, pcf	110.9	111.0	110.4
	SATURATION, %	118.5	119.1	117.0
	VOID RATIO	0.477	0.475	0.483
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	1.000	1.000	1.000
AT TEST	WATER CONTENT, %	20.6	21.9	21.5
	DRY DENSITY, pcf	111.7	112.0	111.4
	SATURATION, %	116.0	124.6	120.3
	VOID RATIO	0.466	0.462	0.470
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	0.993	0.991	0.991
NORMAL STRESS, psf		1000	2000	3000
FAILURE STRESS, psf		2975	3305	5193
DISPLACEMENT, in		0.08	0.04	0.08
ULTIMATE STRESS, psf				
DISPLACEMENT, in				
Strain rate, %/min				

SAMPLE TYPE: Tube
DESCRIPTION: Brown, Silty Clay

SPECIFIC GRAVITY= 2.623
REMARKS:

Report No.: _____

CLIENT: Golden State Developers

PROJECT: Cordes Ranch

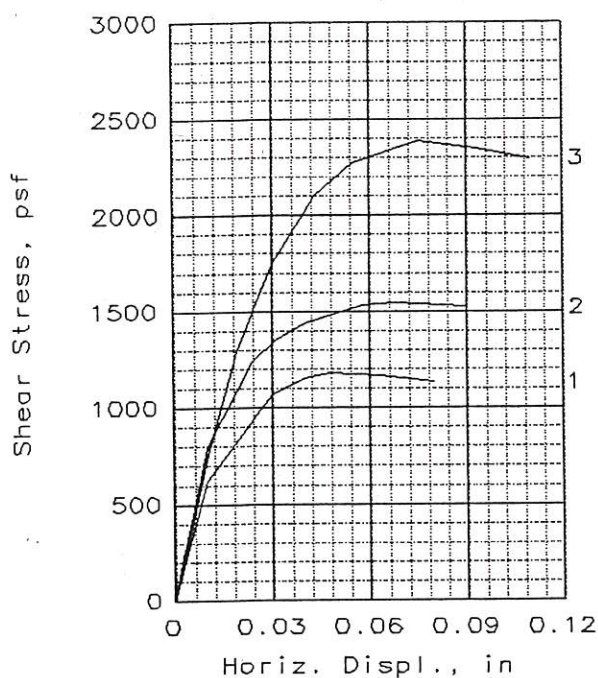
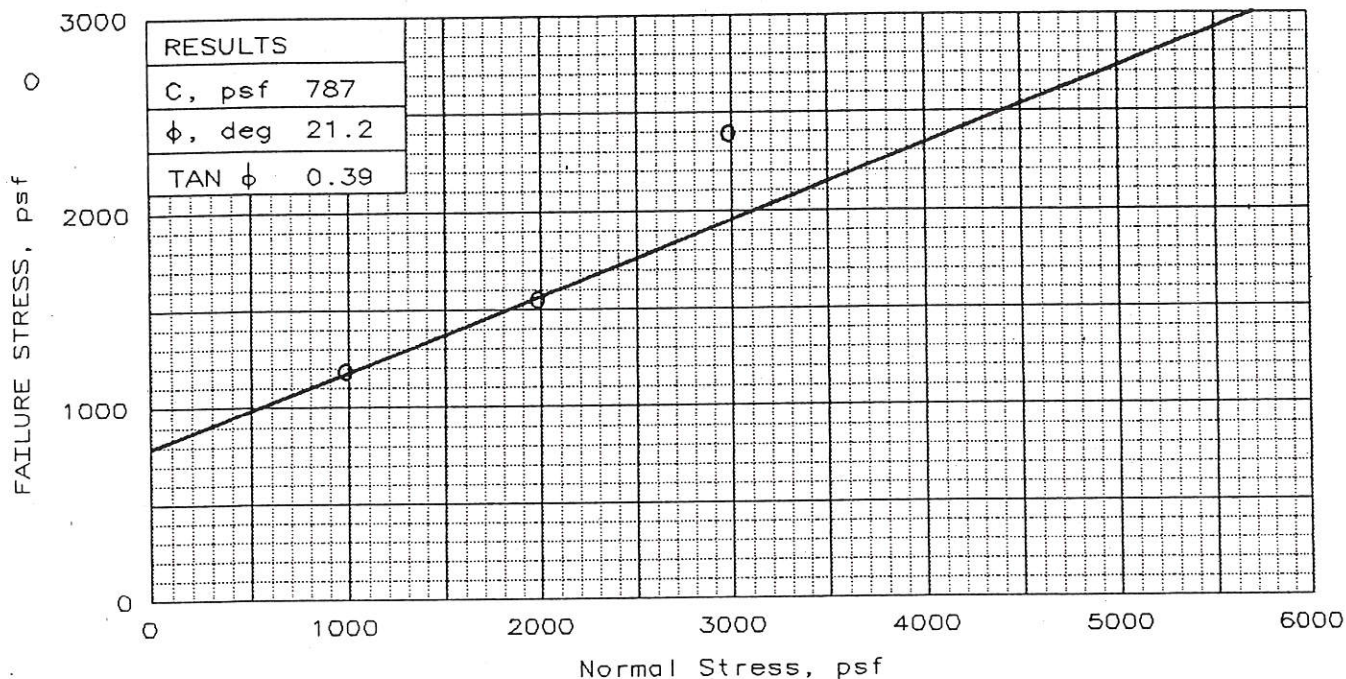
SAMPLE LOCATION: 21-1@2.5'

PROJ. NO.: VV545

DATE: 10-17-00

DIRECT SHEAR TEST REPORT

MATERIALS TESTING, INC.



SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	18.4	18.4	18.4
	DRY DENSITY, pcf	102.7	105.0	105.5
	SATURATION, %	77.0	81.6	82.6
	VOID RATIO	0.646	0.610	0.603
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	1.000	1.000	1.000
AT TEST	WATER CONTENT, %	23.4	23.3	23.7
	DRY DENSITY, pcf	103.8	106.7	107.6
	SATURATION, %	100.7	107.9	112.4
	VOID RATIO	0.629	0.584	0.571
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	0.989	0.984	0.980
NORMAL STRESS, psf		1000	2000	3000
FAILURE STRESS, psf		1183	1545	2388
DISPLACEMENT, in		0.05	0.07	0.08
ULTIMATE STRESS, psf				
DISPLACEMENT, in				
Strain rate, %/min				

SAMPLE TYPE: Tube
DESCRIPTION: Brown, Silty Clay

SPECIFIC GRAVITY= 2.708
REMARKS:

CLIENT: Golden State Developers

PROJECT: Cordes Ranch

SAMPLE LOCATION: 54-102'

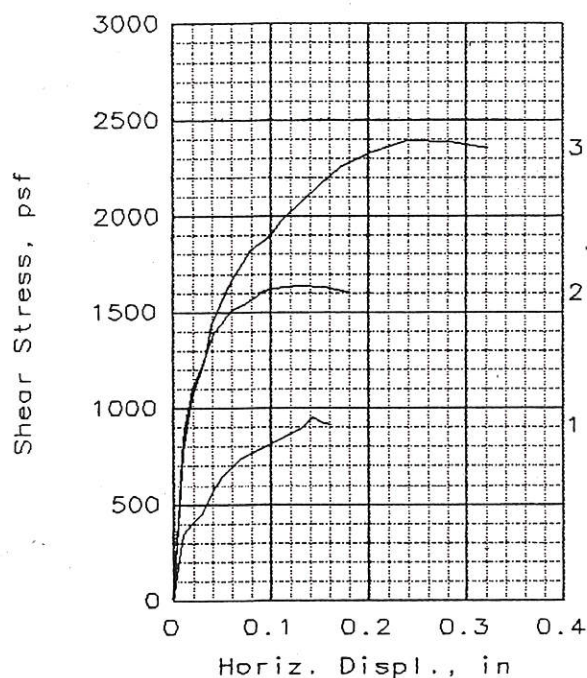
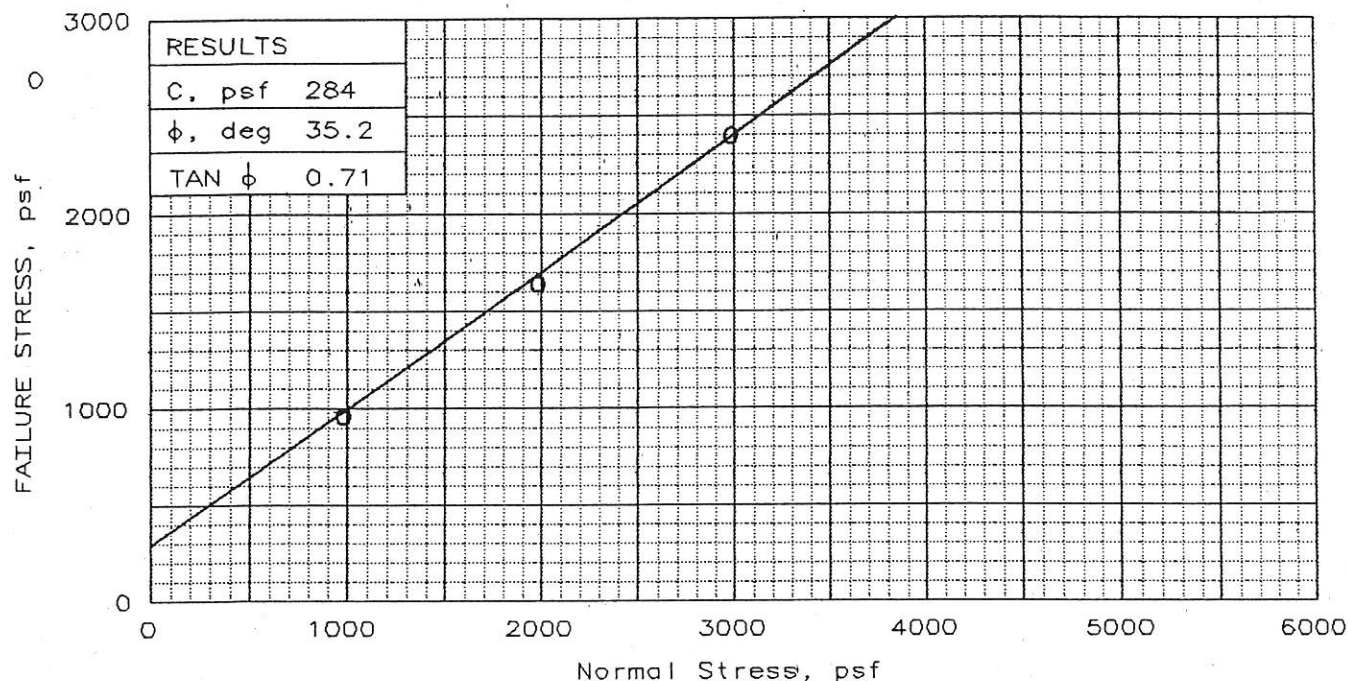
PROJ. NO.: VV545

DATE: 10-23-00

DIRECT SHEAR TEST REPORT

MATERIALS TESTING, INC.

Report No.: _____



SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	21.1	21.1	21.1
	DRY DENSITY, pcf	97.2	95.6	99.0
	SATURATION, %	77.2	74.2	80.7
	VOID RATIO	0.739	0.769	0.707
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	1.000	1.000	1.000
AT TEST	WATER CONTENT, %	26.9	23.4	25.1
	DRY DENSITY, pcf	98.3	97.4	101.2
	SATURATION, %	101.2	86.0	101.3
	VOID RATIO	0.719	0.736	0.671
	DIAMETER, in	2.000	2.000	2.000
	HEIGHT, in	0.989	0.981	0.979
NORMAL STRESS, psf		1000	2000	3000
FAILURE STRESS, psf		953	1636	2393
DISPLACEMENT, in		0.14	0.13	0.24
ULTIMATE STRESS, psf				
DISPLACEMENT, in				
Strain rate, %/min				

SAMPLE TYPE: Tube
DESCRIPTION: Dark Brown,
Silty Clay

SPECIFIC GRAVITY= 2.708
REMARKS:

Report No.: _____

CLIENT: Golden State Developers

PROJECT: Cordes Ranch

SAMPLE LOCATION: 59-1@1.5'

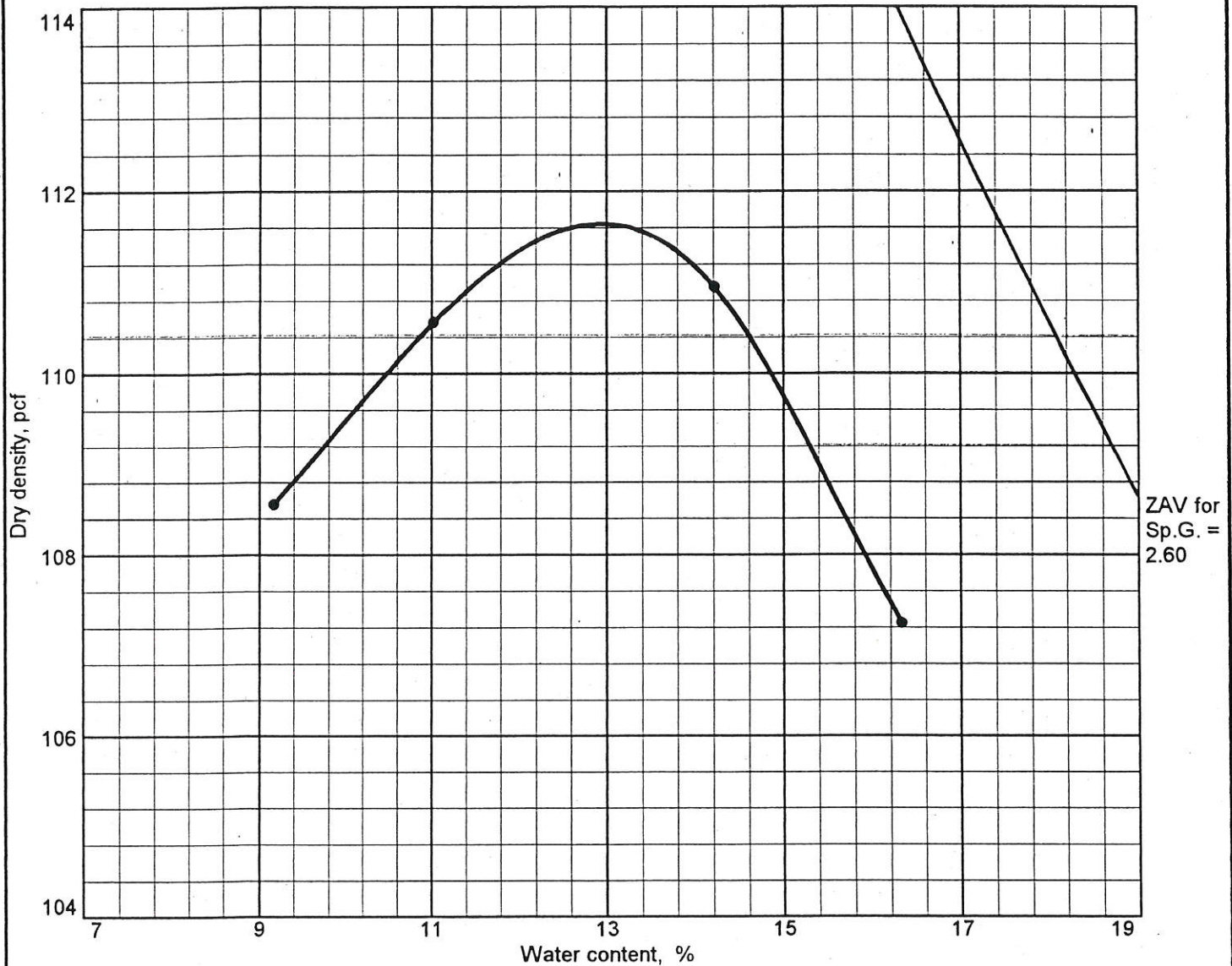
PROJ. NO.: VV545

DATE: 10-24-00

DIRECT SHEAR TEST REPORT

MATERIALS TESTING, INC.

COMPACTION TEST REPORT

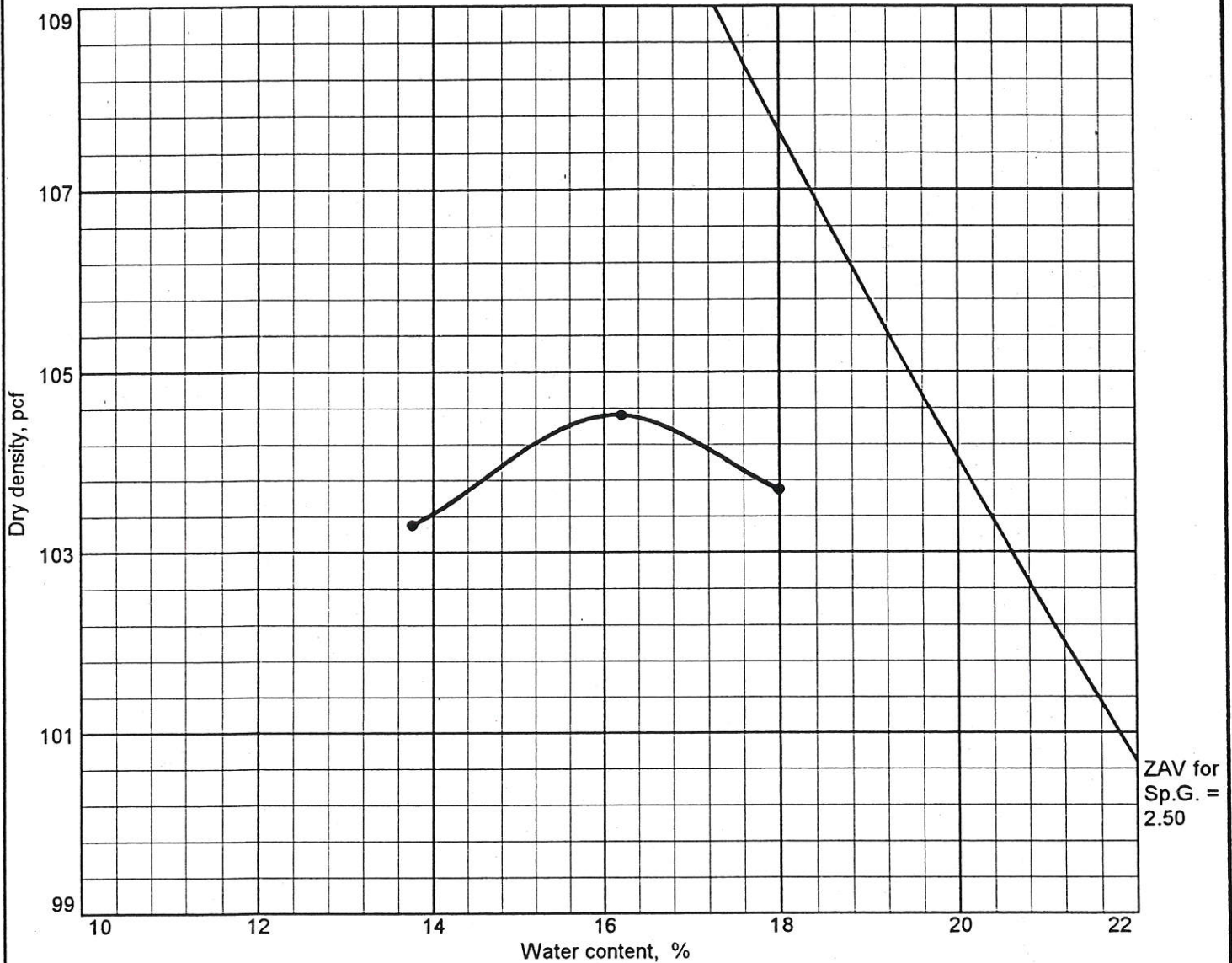


Test specification: ASTM D 1557-91 Procedure A Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
6"-18"	(CL) visual							

TEST RESULTS			MATERIAL DESCRIPTION	
Maximum dry density = 111.6 pcf			Light Brown, Silty Clay	
Optimum moisture = 13.0 %				
Project No. VV545 Client: Golden State Developers			Remarks: R-1@6"-18" 10-16-00	
Project: Cordes Ranch				
● Source: Sample No.: R-1 Elev./Depth: 6"-18"				
MTI Materials Testing, Inc.			Report Number:	

COMPACTION TEST REPORT



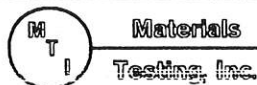
Test specification: ASTM D 1557-91 Procedure A Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
10'-15'	(ML) visual							

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 104.5 pcf	Light Brown, Clayey Silt
Optimum moisture = 16.2 %	

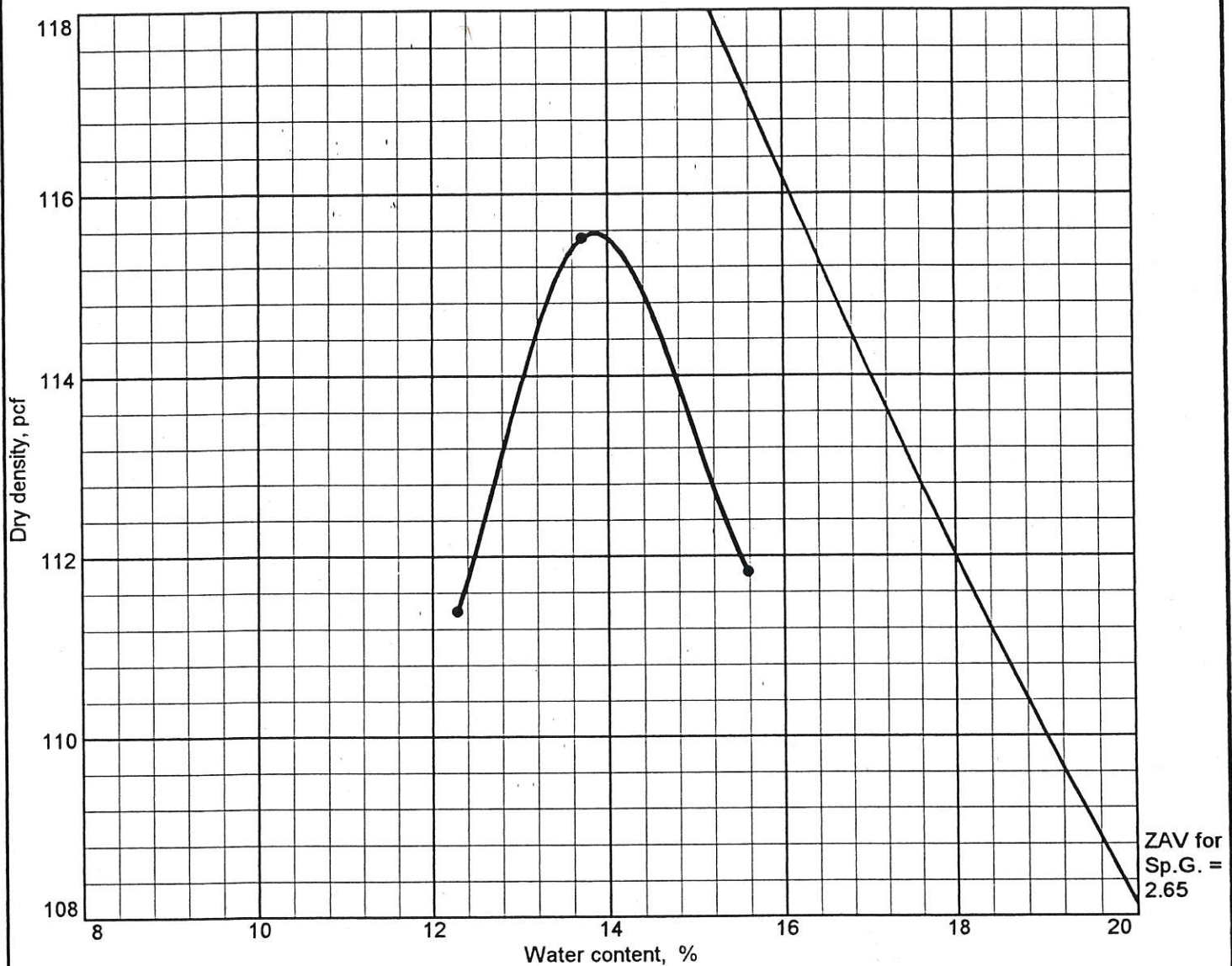
Project No. _____ **Client:** Golden State Developers
Project: Cordes Ranch
Source: _____ **Sample No.:** R-3 **Elev./Depth:** 10'-15'

Remarks:
 R-3@10"-15"
 10-16-00



Report Number: _____

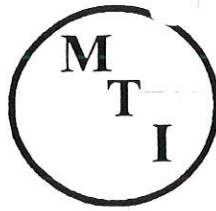
COMPACTION TEST REPORT



Test specification: ASTM D 1557-91 Procedure A Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	(CL) visual							

TEST RESULTS		MATERIAL DESCRIPTION
Maximum dry density = 115.6 pcf Optimum moisture = 13.9 %		Brown, Silty Clay
Project No. VV545 Client: Golden State Developers Project: Cordes Ranch Source: _____ Sample No.: R-5		Remarks: R-5 10-17-00 Report Number:
 Materials Testing, Inc.		



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

CLIENT: Golden State Developers
10 Crow Canyon Court, Suite 110
San Ramon, CA 94583

Client No: VV545-002
Report No: 0300-006
Date: 10/19/00

SUBJECT: Cordes Ranch
Tracy, CA

"R" VALUE TEST RESULT (CALTEST 301)

Sample: R-1
Date Tested: 10/10/00
Description: Brown Silty Clay

SIEVE ANALYSIS

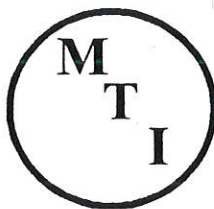
Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	#4
"As Received"						100
(Percent Pass)						
"As Used"						100
(Percent Pass)						

RESISTANCE VALUE

Specimen Number	Dry Unit Wt. PCF	Moisture %	Exudation Pressure, PSI	Expansion Pressure Dial Reading & PSF	"R" Value
<u>1</u>	103.9	20.8	621	69 299	23
<u>2</u>	99.8	22.7	387	24 104	16
<u>3</u>	96.5	24.5	263	12 52	10

"R" Value = 12 at 300 PSI Exudation Pressure.

Construction Materials Testing and Quality Control Services
Soil - Concrete - Asphalt - Steel - Masonry



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
(530) 222-1116, fax 222-1611

865 Cotting Lane, Suite A
Vacaville, California 95688
(707) 447-4025, fax 447-4143

CLIENT: Golden State Developers
10 Crow Canyon Court, Suite 110
San Ramon, CA 94583

Client No: VV545-002
Report No: 0300-007
Date: 10/19/00

SUBJECT: Cordes Ranch
Tracy, CA

"R" VALUE TEST RESULT (CALTEST 301)

Sample: R-2
Date Tested: 10/10/00
Description: Brown Silty Clay

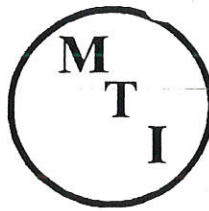
SIEVE ANALYSIS

Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	#4
"As Received"						100
(Percent Pass)						
"As Used"						100
(Percent Pass)						

RESISTANCE VALUE

Specimen Number	Dry Unit Wt. PCF	Moisture %	Exudation Pressure, PSI	Expansion Pressure Dial Reading & PSF	"R" Value
<u>1</u>	112.5	15.7	496	5 22	19
<u>2</u>	110.8	16.2	298	0 0	15
<u>3</u>	109.3	17.2	235	0 0	13

"R" Value = 15 at 300 PSI Exudation Pressure.



Materials Testing, Inc.

8798 Airport Road
Redding, California 96002
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865 Cotting Lane, Suite A
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(707) 447-4025, fax 447-4143

CLIENT: Golden State Developers
10 Crow Canyon Court, Suite 110
San Ramon, CA 94583

Client No: VV545-002
Report No: 0300-008
Date: 10/19/00

SUBJECT: Cordes Ranch
Tracy, CA

"R" VALUE TEST RESULT (CALTEST 301)

Sample: R-3
Date Tested: 10/11/00
Description: Light Brown Sandy Silt w/Trace Gravel

SIEVE ANALYSIS

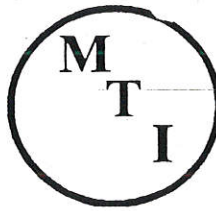
Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	#4
"As Received"						100
(Percent Pass)						
"As Used"						100
(Percent Pass)						

RESISTANCE VALUE

Specimen Number	Dry Unit Wt. PCF	Moisture %	Exudation Pressure, PSI	Expansion Pressure Dial Reading & PSF	"R" Value
1	117.7	14.9	462	35 152	33
2	113.2	16.6	207	9 39	14
3	109.9	17.7	134	2 9	10

"R" Value = 20 at 300 PSI Exudation Pressure.

Construction Materials Testing and Quality Control Services
Soil - Concrete - Asphalt - Steel - Masonry



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Client No: VV545-002
Report No: 0300-009
Date: 10/19/00

SUBJECT: Cordes Ranch
Tracy, CA

"R" VALUE TEST RESULT (CALTEST 301)

Sample: R-4
Date Tested: 10/11/00
Description: Brown Silty Clay

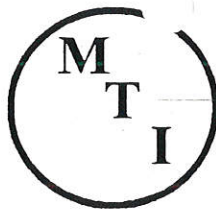
SIEVE ANALYSIS

Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	#4
"As Received"						100
(Percent Pass)						
"As Used"						100
(Percent Pass)						

RESISTANCE VALUE

Specimen Number	Dry Unit Wt. PCF	Moisture %	Exudation Pressure, PSI	Expansion Pressure Dial Reading & PSF	"R" Value
<u>1</u>	102.9	21.8	613	15 65	11
<u>2</u>	99.6	23.5	502	10 43	10
<u>3</u>	94.1	26.4	240	4 17	6

"R" Value = 7 at 300 PSI Exudation Pressure.



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CLIENT: Golden State Developers
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Client No: VV545-002
Report No: 0300-010
Date: 10/19/00

SUBJECT: Cordes Ranch
Tracy, CA

"R" VALUE TEST RESULT (CALTEST 301)

Sample: R-5
Date Tested: 10/11/00
Description: Brown Silty Clay

SIEVE ANALYSIS

Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	#4
"As Received"						100
(Percent Pass)						
"As Used"						100
(Percent Pass)						

RESISTANCE VALUE

Specimen Number	Dry Unit Wt. PCF	Moisture %	Exudation Pressure, PSI	Expansion Pressure Dial Reading & PSF	"R" Value
<u>1</u>	95.9	25.9	456	13 56	13
<u>2</u>	93.7	28.1	318	3 13	10
<u>3</u>	89.6	29.4	232	0 0	7

"R" Value = 9 at 300 PSI Exudation Pressure.

Table 1

JOB DESCRIPTION:

* Specific gravity was adjusted to yield Final Sample Data Saturation values of at or near 100%

Table 1 - Laboratory Tests on Soil Samples

Cordes Ranch

Your #VV545, MJS&A #00-0666LAB

13-Oct-00

Sample ID

B-11	B-23	
@ 5-10'	@ 0-4'	R-3

Resistivity		Units			
as-received		ohm-cm	35,000	2,700	1,900,000
saturated		ohm-cm	960	750	600
pH			7.5	7.0	7.5
Electrical					
Conductivity		mS/cm	0.23	0.25	0.37
Chemical Analyses					
Cations					
calcium	Ca ²⁺	ppm	76	92	40
magnesium	Mg ²⁺	ppm	10	41	22
sodium	Na ¹⁺	ppm	64	ND	271
Anions					
carbonate	CO ₃ ²⁻	ppm	ND	ND	ND
bicarbonate	HCO ₃ ¹⁻	ppm	342	415	177
chloride	Cl ¹⁻	ppm	64	25	351
sulfate	SO ₄ ²⁻	ppm	ND	ND	134
Other Tests					
ammonium	NH ₄ ¹⁺	ppm	na	na	na
nitrate	NO ₃ ¹⁻	ppm	na	na	na
sulfide	S ²⁻	qual	na	na	na
Redox		mv	na	na	na

Soluble salts determined per EPA 300

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.

ppm = parts per million (milligrams per kilogram of dry soil).

Redox = oxidation-reduction potential in millivolts

ND = not detected

na = not analyzed

