

LOG OF TEST TRENCH T-2

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1310 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1310 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Brown, dry, loose, fine- to medium-grained, SILTY SAND; porous with rootlets.							
1											
2			SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, dense, fine- to medium-grained, SILTY SAND; moderately weathered.							R-Val
3											
4											
5				Test trench terminated at 5 feet. No groundwater or seepage encountered.							
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:



Symbol Legend

Groundwater Level During Drilling



Groundwater Level After Drilling



Apparent Seepage



No Sample Recovery



Non-Representative Blow Count
(rocks present)

SHADY OAK
27522 VALLEY CENTER ROAD
VALLEY CENTER, CALIFORNIA

DATE: AUGUST 2016

JOB NO.: 2150438

BY: SRD

FIGURE NO.: A-2



CHRISTIAN WHEELER
ENGINEERING

LOG OF TEST TRENCH T-3

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1309 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1308 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Brown, dry, loose, fine- to medium-grained, SILTY SAND with gravels; porous.							
1											
2			SC	Subsoil: Brown, damp, medium dense, fine- to medium-grained, CLAYEY SAND with gravels.		CK		5.8	121.6		
3											
4			SW-SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, very dense, fine- to coarse-grained, WELL-GRADED SAND with SILT.							
5											
6				Test trench terminated at 6 feet. No groundwater or seepage encountered.							
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

	Groundwater Level During Drilling
	Groundwater Level After Drilling
	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-3



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-4

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1302 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1305 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Brown, dry, loose, fine- to medium-grained, SILTY SAND; porous with rootlets.							
1						CK		7.6	99.8		
2											
3			SC	Subsoil: Brown, moist, medium dense, very fine- to medium-grained, CLAYEY SAND with clay and gravels.		CK		8.5	124.3		SA EI MD SO4 DS
4											
5			SW-SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, very dene, fine- to coarse-grained, WELL-GRADED SAND with SILT.		CK		3.2	140.0		SA MD DS
6				Test trench terminated at 6 feet. No groundwater or seepage encountered.							
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

	Groundwater Level During Drilling
	Groundwater Level After Drilling
	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-4



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-5

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1305 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1306 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Artificial Fill (Qaf): Brown to grayish-brown, damp, loose to medium dense, fine- to medium-grained, SILTY SAND with AC debris and gravels.							R-Val
1											
2						CK		4.4	130.4		
3			SC	Topsoil: Brown, damp, loose, fine- to medium-grained, SILTY SAND; porous with rootlets.							
4											
5			SW-SM	Weathered Granitics (Kgr): Reddish-brown to grayish-brown, damp, very dense, fine- to coarse-grained, WELL-GRADED SAND with SILT.							
6				Test trench terminated at 6 feet. No groundwater or seepage encountered.							
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:



Symbol Legend

Groundwater Level During Drilling



Groundwater Level After Drilling



Apparent Seepage



No Sample Recovery



Non-Representative Blow Count
(rocks present)

SHADY OAK
27522 VALLEY CENTER ROAD
VALLEY CENTER, CALIFORNIA

DATE: AUGUST 2016

JOB NO.: 2150438

BY: SRD

FIGURE NO.: A-5



CHRISTIAN WHEELER
ENGINEERING

LOG OF TEST TRENCH T-6

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1306 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1309 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Light brown, damp, loose, fine- to medium-grained, SILTY SAND; porous.							
1											
2			SC	Subsoil: Light grayish-brown to reddish-brown, damp, medium dense, CLAYEY SAND with gravels.							
3											
4			SW-SM	Weathered Granitics (Kgr): Light grayish-brown, damp, very dense, fine- to coarse-grained, WELL-GRADED SAND with SILT.							
5				Practical refusal at 4½ feet . No groundwater or seepage encountered.							
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

	Groundwater Level During Drilling
	Groundwater Level After Drilling
	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-6



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-7

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1311 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1307 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Artificial Fill (Qaf): Light grayish-brown, dry, loose, very fine- to medium-grained, SILTY SAND with gravel and trace AC debris.							
1											
2			SM	Topsoil: Brown, damp, loose, very fine- to medium-grained, SILTY SAND; porous.							
3			SW-SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, very dense, very fine- to coarse-grained, WELL-GRADED SAND with SILT.							
4											
5				Test trench terminated at 5 feet . No groundwater or seepage encountered.							
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

▽	Groundwater Level During Drilling
▼	Groundwater Level After Drilling
??	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-7



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-8

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1311 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1310 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Brown, dry, very loose, very fine- to medium grained, SILTY SAND; porous.							
1			SM	Subsoil: Brown, damp, medium dense, very fine- to medium-grained, SILTY SAND with CLAY; slightly porous.							
2			SW-SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, very dense, fine- to coarse-grained, SILTY SAND; moderately weathered.		CK		5.7	116.7		
3			SW-SM			CK		2.2	146.9		
4											
5				Test trench terminated at 5 feet . No groundwater or seepage encountered.							
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

▽	Groundwater Level During Drilling
▼	Groundwater Level After Drilling
??	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-8



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-9

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk Density
SPT	Standard Penetration Test	DR	Density Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential		

Date Logged: 8/5/15 Equipment: Case 580L Backhoe
 Logged By: DJF Auger Type: N/A
 Existing Elevation: 1296 feet Drive Type: 18-inch Bucket
 Finish Elevation: 1302 feet Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			SM	Topsoil: Brown, dry, vlose, very fine- to medium-grained, SILTY SAND; porous with rootlets.							
1											
2			SM	Subsoil: Brown, damp, medium dense, SILTY SAND with CLAY and gravels.							
3											
4			SW-SM	Weathered Granitics (Kgr): Light grayish-brown to reddish-brown, damp, very dense, fine- to coarse-grained, WELL-GRADED SAND with SILT.							
5											
6				Test trench terminated at 5 feet . No groundwater or seepage encountered.							
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

▽	Groundwater Level During Drilling
▼	Groundwater Level After Drilling
??	Apparent Seepage
*	No Sample Recovery
**	Non-Representative Blow Count (rocks present)

SHADY OAK
 27522 VALLEY CENTER ROAD
 VALLEY CENTER, CALIFORNIA

DATE:	AUGUST 2016	JOB NO.:	2150438
BY:	SRD	FIGURE NO.:	A-9



CHRISTIAN WHEELER
 ENGINEERING

Appendix B

Laboratory Test Results