

HARRIS CREEK HEIGHTS PRELIMINARY STORM DRAINAGE REPORT

Prepared for:

Boise County

August 22, 2025

Prepared By: Pat Colwell, P.E. Colton Bunn, P.E.



Table of Contents

NTRODUCTION	1
PROPOSED DEVELOPMENT	1
SOIL CONDITIONS	1
DESIGN CRITERIA	2
DESIGN CALCULATIONS	2
CONCLUSION	2

Appendices

Appendix A. Vicinity Map

Appendix B. Drainage Basin Map Appendix C. Drainage Calculations Appendix D. Geotechnical Report

Introduction

This report is the description of the post development stormwater and drainage management plan for proposed Harris Creek Heights subdivision south of Placerville, Idaho. The project lies in the northwest quarter of Section 33, Township 7 North, Range 4 East, Boise Meridian, Boise County, Idaho.

Proposed Development

The proposed development of Harris Creek Heights Subdivision will be 34 buildable lots. There will be roadside swales with check dams to convey water to retention ponds. Any overflow from ponds during a flood event will flow to existing drainage systems along Harris Creek Rd.

Soil Conditions

A geotechnical investigation was conducted in 2021 by GeoTek, Inc on a neighboring property (Trail Creek Ranch Subdivision). Groundwater and soil conditions were evaluated and logged. An additional 8 test pits were evaluated October 2022 for a total of 37 site test pits. No infiltration testing has been done at this time. Ground water in the area varied between half a foot and 9 feet of depth based on proximity to Trail Creek. See Appendix D for the project Geotechnical Report dated June 25th, 2024.

Design Criteria

The following design criteria were used in the preparation of this report and corresponding design calculations:

- The Rational Method was used for calculating peak runoff flow.
- No freeboard on the retention ponds is to be used.
- Rainfall intensities are taken from the ITD Hydraulics Design Manual IDF curve Zone C.
- Runoff Coefficients were taken from Idaho DEQ Catalog of Stormwater Practices.
- A Percolation Rate of 4 inches per hour was estimated based on test pit data in the geotechnical report.

Design Calculations

Drainage Basins

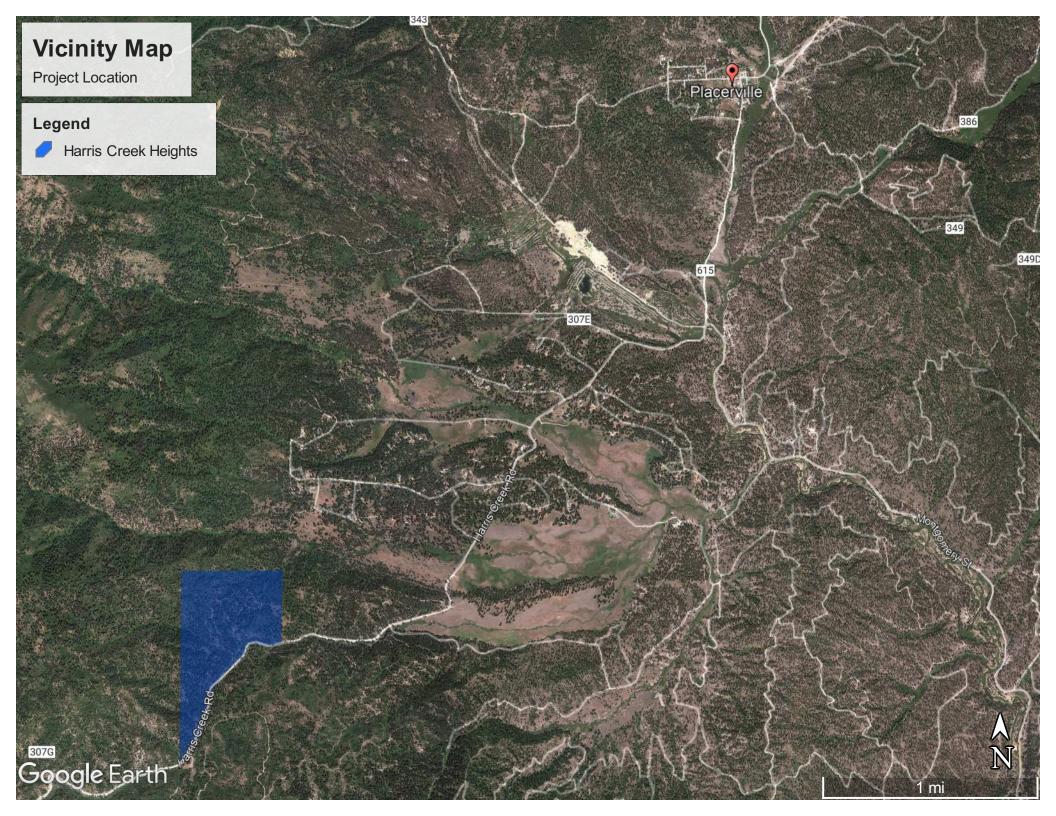
The project is split into 3 drainage basins. All 3 basins will have water sheet flowing to roadside swales with check dams. The swales will then convey the water to culverts, that will flow to retention ponds sized for the 100 year storm. These ponds will retain all storm water caused by improvements to the site. Existing storm water will be handled by existing drainage systems. The ponds were designed such that any overflow will flow to existing drainage systems rather than flooding. See appendix C for Sizing Calculations.

Conclusion

The proposed post development storm water management plan for Harris Creek Heights Subdivision is to convey all storm water to retention ponds through roadside swales and culverts. All storm water not retained in retention ponds will flow into existing drainage ditches per existing drainage patterns.

APPENDIX A

VICINITY MAP



APPENDIX B

DRAINAGE BASIN MAP

(2) 2025 ARDURRA GROUP, INC. THIS INSTRUMENT IS THE PROPERTY OF ARDURRA. ANY REPRODUCTION, REUSE OR MODIFICATION OF THIS INSTRUMENT OR ITS CONTENTS WITHOUT SPECIFIC WRITTEN PERMISSION OF ARDURRA IS STRICTLY PROHIBITED. VISTA CREEK WAY BASIN 3 AREA:53.76 ACRES **AVERAGE C VALUE: .20** PROPOSED ROAD POND 3 POND 2 BASIN 2 AREA:43.87 ACRES AVERAGE C VALUE: .18 BASIN 1 AREA:28.22 ACRES **AVERAGE C VALUE: .18** POND 1 **BASIN MAP** DATE: 8/20/25 JOB: 230661 332 N. BROADMORE WAY NAMPA, IDAHO 83687 208-442-6300 | WWW.ARDURRA.COM

APPENDIX C

DRAINAGE CALCULATIONS

$\begin{array}{c} \textbf{Design Criteria} \\ Q = CIA \\ Q_R = R*A_R \\ Q_P = (1.49*A_P*R_h^{2/3}*S^{1/2})/n \\ V_R = Q*Duration \\ T_P = V_R/Q_R \\ A_T = \textit{Baffle Dist.}*Inside Width \\ V_{S\&G} = Q/A_T \\ R_h = D/4 \ (for full \ flow \ pipe) \\ V_P = Q/A_P \end{array}$

		Abbreviations
A	=	Drainage Area (acres)
A_R	=	Percolation Area (sf)
C	=	Runoff Coefficient
I	=	Rainfall Intensity (in/hr)
Q	=	Peak Runoff (cfs)
Q Q	=	Percolation Flow Rate (in/hr)
r	=	Percolation Rate (in/hr)
S	=	Slope
T_p	=	Time to Percolate (hr)
V_R	=	Runoff Volume (cf)

	Storm Frequency Table									
	2-year	5-year	10-year	25-year	50-year	100-year				
Duration	Intensity	Intensity	Intensity	Intensity	Intensity	Intensity				
(minutes)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)				
10	0.85	1.30	1.80	2.10	2.40	2.70				
15	0.72	1.30	1.40	1.70	2.00	2.30				
30	0.55	0.76	0.95	1.20	1.30	1.50				
60	0.40	0.54	0.65	0.79	0.89	1.00				
120	0.30	0.37	0.44	0.51	0.56	0.77				
180	0.24	0.30	0.35	0.40	0.45	0.52				
360	0.16	0.20	0.23	0.27	0.29	0.34				
720	0.11	0.13	0.14	0.17	0.18	0.21				
1440	0.07	0.08	0.09	0.10	0.12	0.13				

Runoff Coefficients	
General Areas C	
Lanscaped	0.2
Asphalt/Concrete	0.9
Gravel	0.45
Gravel driveway	0.45
Roofs	0.95
Downtown	0.95
Urban Neighborhood	
Single-Family	0.5
Multi-Family	0.75
Residential (Rural)	
Apartment Dwelling	0.7
Industrial & Commercial Areas, Light	0.8
Industrial & Commercial Areas, Heavy	0.9
Parks & Cemeteries	0.2
Playgounds	
Railroad yard	0.2
Unimproved	0.15

Pond 1

Total Area (A)= 28.22 Acres

Run-off Coeffecient (C)= 0.18

Historic Flow Rate= 0 cfs

Percolation Rate= 4 in/hr

Side Slope (S)= 2 :1

Free Board= 0 ft

Water Depth=	3	ft
Water Top Width=	25	ft
Water Top Length=	73	ft
Percolation Area (Ar)=	793	SF
Above Ground		
Storage Volume=	3855	CF

	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (r)(in/hr)	Perc Flow Rate (Q _R) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _R) (cf)	Total Runoff Volume (V _R) (cf)	Improvement Runoff Volume (V _R) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T _p) (hr)
10	2.70	28.22	13.40	0.00	4.00	0.07	13.33	6857	7997	1140	3855	-2715	4
15	2.30	28.22	11.42	0.00	4.00	0.07	11.34	8762	10209	1447	3855	-2408	5
30	1.50	28.22	7.45	0.00	4.00	0.07	7.37	11428	13270	1842	3855	-2013	7
60	1.00	28.22	4.96	0.00	4.00	0.07	4.89	15238	17605	2368	3855	-1487	9
120	0.77	28.22	3.82	0.00	4.00	0.07	3.75	23466	26991	3524	3855	-331	13
180	0.52	28.22	2.58	0.00	4.00	0.07	2.51	23771	27084	3313	3855	-542	13
360	0.34	28.22	1.69	0.00	4.00	0.07	1.61	31085	34868	3783	3855	-72	14
720	0.21	28.22	1.04	0.00	4.00	0.07	0.97	38399	41860	3460	3855	-395	13
1440	0.13	28.22	0.65	0.00	4.00	0.07	0.57	47542	49410	1867	3855	-1988	7

$\begin{array}{c} \textbf{Design Criteria} \\ Q = CIA \\ Q_R = R*A_R \\ Q_P = (1.49*A_P*R_h^{2/3}*S^{1/2})/n \\ V_R = Q*Duration \\ T_P = V_R/Q_R \\ A_T = \textit{Baffle Dist.}*Inside Width \\ V_{SkG} = Q/A_T \\ R_h = D/4 \ (for full \ flow \ pipe) \\ V_P = Q/A_P \end{array}$

		Abbreviations	
A	=	Drainage Area (acres)	
A_R	=	Percolation Area (sf)	
C	=	Runoff Coefficient	
I	=	Rainfall Intensity (in/hr)	
Q	=	Peak Runoff (cfs)	
Q Q	=	Percolation Flow Rate (in/hr)	
r	=	Percolation Rate (in/hr)	
S	=	Slope	
T_p	=	Time to Percolate (hr)	
V_R	=	Runoff Volume (cf)	

	Storm Frequency Table									
	2-year	5-year	10-year	25-year	50-year	100-year				
Duration	Intensity	Intensity	Intensity	Intensity	Intensity	Intensity				
(minutes)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)				
10	0.85	1.30	1.80	2.10	2.40	2.70				
15	0.72	1.30	1.40	1.70	2.00	2.30				
30	0.55	0.76	0.95	1.20	1.30	1.50				
60	0.40	0.54	0.65	0.79	0.89	1.00				
120	0.30	0.37	0.44	0.51	0.56	0.77				
180	0.24	0.30	0.35	0.40	0.45	0.52				
360	0.16	0.20	0.23	0.27	0.29	0.34				
720	0.11	0.13	0.14	0.17	0.18	0.21				
1440	0.07	0.08	0.09	0.10	0.12	0.13				

Runoff Coefficients	
General Areas C	
Lanscaped	0.2
Asphalt/Concrete	0.9
Gravel	0.45
Gravel driveway	0.45
Roofs	0.95
Downtown	0.95
Urban Neighborhood	
Single-Family	0.5
Multi-Family	0.75
Residential (Rural)	
Apartment Dwelling	0.7
Industrial & Commercial Areas, Light	0.8
Industrial & Commercial Areas, Heavy	0.9
Parks & Cemeteries	0.9
	0.2
Playgounds	
Railroad yard	0.2
Unimproved	0.15

Pond 2

Total Area (A)= 43.87

Run-off Coeffecient (C)= 0.18

Historic Flow Rate= 0 cfs

Percolation Rate= 4 in/hr

Side Slope (S)= 2 :1

Free Board= 0 ft

4	ft
25	ft
111	ft
855	SF
7089	CF

Duration (min)	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (r)(in/hr)	Perc Flow Rate (Q _R) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _R) (cf)	Total Runoff Volume (V _R) (cf)	Improvement Runoff Volume (V _R) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T _p) (hr)
10	2.70	43.87	20.84	0.00	4.00	0.08	20.76	10660	12454	1794	7089	-5296	6
15	2.30	43.87	17.75	0.00	4.00	0.08	17.67	13621	15903	2281	7089	-4808	8
30	1.50	43.87	11.58	0.00	4.00	0.08	11.50	17767	20693	2926	7089	-4163	10
60	1.00	43.87	7.72	0.00	4.00	0.08	7.64	23689	27496	3807	7089	-3283	13
120	0.77	43.87	5.94	0.00	4.00	0.08	5.86	36481	42212	5731	7089	-1358	20
180	0.52	43.87	4.01	0.00	4.00	0.08	3.93	36955	42483	5528	7089	-1562	19
360	0.34	43.87	2.62	0.00	4.00	0.08	2.54	48326	54962	6637	7089	-453	23
720	0.21	43.87	1.62	0.00	4.00	0.08	1.54	59696	66587	6891	7089	-199	24
1440	0.13	43.87	1.00	0.00	4.00	0.08	0.92	73910	79836	5926	7089	-1164	21

Design Criteria
Q = CIA
$Q_R = R * A_R$
$Q_P = (1.49 * A_P * R_h^{2/3} * S^{1/2}) / n$
$V_R = Q * Duration$
$T_p = V_R / Q_R$
$A_T = Baffle Dist. * Inside Width$
$V_{S\&G} = Q/A_T$
$R_h = D/4$ (for full flow pipe)
$V_P = Q/A_P$

		Abbreviations
A	-	Drainage Area (acres)
A_R	=	Percolation Area (sf)
C	=	Runoff Coefficient
I	=	Rainfall Intensity (in/hr)
Q	=	Peak Runoff (cfs)
Q Q_R	=	Percolation Flow Rate (in/hr)
r	=	Percolation Rate (in/hr)
S	=	Slope
T_p	=	Time to Percolate (hr)
V_R	=	Runoff Volume (cf)

	Storm Frequency Table						
	2-year	5-year	10-year	25-year	50-year	100-year	
Duration	Intensity	Intensity	Intensity	Intensity	Intensity	Intensity	
(minutes)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	(in/hr)	
10	0.85	1.30	1.80	2.10	2.40	2.70	
15	0.72	1.30	1.40	1.70	2.00	2.30	
30	0.55	0.76	0.95	1.20	1.30	1.50	
60	0.40	0.54	0.65	0.79	0.89	1.00	
120	0.30	0.37	0.44	0.51	0.56	0.77	
180	0.24	0.30	0.35	0.40	0.45	0.52	
360	0.16	0.20	0.23	0.27	0.29	0.34	
720	0.11	0.13	0.14	0.17	0.18	0.21	
1440	0.07	0.08	0.09	0.10	0.12	0.13	

Runoff Coefficients				
General Areas	С			
Lanscaped	0.2			
Asphalt/Concrete	0.9			
Gravel	0.45			
Gravel driveway	0.45			
Roofs	0.95			
Downtown	0.95			
Urban Neighborhood				
Single-Family	0.5			
Multi-Family	0.75			
Residential (Rural)				
Apartment Dwelling	0.7			
Industrial & Commercial Areas, Light	0.8			
Industrial & Commercial Areas, Heavy	0.9			
Parks & Cemeteries	0.3			
Playgounds	0.2			
Railroad yard	0.2			
Unimproved	0.15			

Pond 3

Total Area (A)=	53.76	Acres
Run-off Coeffecient (C)=	0.20	
Historic Flow Rate=	0	cfs
Percolation Rate=	4	in/hr
Side Slope (S)=	2	:1
Free Board=	0	ft

Sand Depth=	1.5	ft
Pond Depth=	3	ft
Pond Bottom Width=	13	ft
Pond Bottom Length=	121	ft
Pond Top Width=	25.0	ft

Water Depth=	3	ft
Water Top Width=	25	ft
Water Top Length=	133	ft
Percolation Area (Ar)=		SF
Above Ground		
Storage Volume=	14550	CF

Duration (min)	100-year Intensity (in/hr)	Area (acres)	Flow Rate Q = CIA (cfs)	Historical Flow Rate (cfs)	Perc Rate (r)(in/hr)	Perc Flow Rate (Q _R) (cfs)	Net Flow Rate (cfs)	Existing Runoff Volume (V _R) (cf)	Total Runoff Volume (V_R) (cf)	Runoff Volume Increase (V _R) (cf)	Available Storage (cf)	Req'd Above Ground Storage (cf)	Time to Percolate (T_p) (hr)
10	2.70	53.76	29.43	0.00	4.00	0.29	29.14	13063	17485	4422	14550	-10128	4
15	2.30	53.76	25.07	0.00	4.00	0.29	24.78	16692	22304	5612	14550	-8938	5
30	1.50	53.76	16.35	0.00	4.00	0.29	16.06	21772	28909	7137	14550	-7413	7
60	1.00	53.76	10.90	0.00	4.00	0.29	10.61	29029	38196	9167	14550	-5383	9
120	0.77	53.76	8.39	0.00	4.00	0.29	8.10	44705	58339	13635	14550	-915	13
180	0.52	53.76	5.67	0.00	4.00	0.29	5.38	45285	58076	12790	14550	-1760	12
360	0.34	53.76	3.71	0.00	4.00	0.29	3.42	59219	73767	14548	14550	-2	14
720	0.21	53.76	2.29	0.00	4.00	0.29	2.00	73153	86313	13159	14550	-1391	13
1440	0.13	53.76	1.42	0.00	4.00	0.29	1.13	90570	97275	6705	14550	-7845	6

APPENDIX D

GEOTECHNICAL REPORT

PRELIMINARY GEOTECHNICAL EVALUATION FOR THE "TRAIL CREEK RANCH" – LOCATED SOUTH OF THE CITY OF PLACERVILLE NEAR HARRIS CREEK ROAD BOISE COUNTY, IDAHO

Revised June 25, 2024 January 21, 2022

GTI-Project No. 2386-ID

Prepared For:

ARDURRA

332 N Broadmore Way Nampa, Idaho 83687

GeoTek, Inc.



Revised June 25, 2024 January 21, 2022 Project No. 2386-ID

ARDURRA

332 N. Broadmore Way Nampa, Idaho 83687

Attention: Mr. Pat Colwell

Subject: **Preliminary Geotechnical Evaluation** for "Trail Creek Ranch" – Located South

of the City of Placerville Near Harris Creek Road, Boise County, Idaho

In accordance with your request, GeoTek, Inc. (GTI) has completed a preliminary geotechnical evaluation of the subject property for the construction of a(n) asphalt roadway and other associated improvements for future construction of single-family residential structures.

SCOPE OF SERVICES

The scope of our services has included the following:

- 1. Review of soils and geologic reports and maps for the site.
- 2. Excavating and logging of thirty-seven (37) exploratory test pits (Appendix A).
- 3. Laboratory testing results (Appendix B).
- 4. Preparation of this draft report.

PROPOSED DEVELOPMENT

It is our understanding that site development would consist of performing typical cut and fill earthwork to attain the desired graded configuration(s) for the construction of a(n) asphalt roadway and other associated improvements for future construction of single-family residential structures.

FIELD STUDIES

Subsurface conditions at the site were explored by using a rubber-tired backhoe. Thirty-seven (37) exploratory test pits were advanced onsite. A log of each exploration is included within this report in Appendix A. Field studies were completed during November of 2021 and October of 2022 by GTI field personnel who conducted field excavation location mapping, logged the excavations, and obtained samples of representative soils for laboratory testing. The approximate locations of the explorations are indicated on the enclosed Site Exploration Plan (Figure 2). The Unified Soil Classification System (USCS) Classification was used to visually classify the subgrade soils during the field evaluation.

PRELIMINARY PAVEMENT SECTIONS

Pavement sections presented in the following table are based on an estimated R-value of 15 and preassigned traffic index(s) for residential construction and estimated traffic index(s) for commercial construction. These pavement sections are presented for planning purposes only and should be verified based on specific laboratory testing performed subsequent to rough grading of the site.

Pavement Construction and Maintenance

All section changes should be properly transitioned. If adverse conditions are encountered during the preparation of subgrade materials, special construction methods may need to be employed. All subgrade materials should be processed to a minimum depth of 12 inches and compacted to a minimum relative compaction of 90 percent near optimum moisture content. All aggregate base should be compacted to a minimum relative compaction of 95 percent at optimum moisture content.

		MINIMUM ASPHALT	MINIMUM AGGREGATE THICKNESS (in.)		
ASSUMED TRAFFIC RIGHT-OF-AWAY	SUBGRADE R-VALUE	CONCRETE THICKNESS (in.)	Aggregate Base (3/4" minus)*	Subbase (Pitrun)*	
Residential Normal Traffic TI = 6.0	15	2.5	4.0	11.0	
Collector Normal Traffic TI = 8.0	15	3.0	6.0	14.0	

^{*}Aggregate Base and Subbase gradation specification requirement per the current edition of the Idaho Standards for Public Works Construction (ISPWC) Manual. Asphalt mix design shall meet the requirements of ISPWC, Section 810 Class III Plant mix. Materials shall be placed in accordance with ISPWC Standard Specifications for Highway Construction.

The recommended pavement sections provided are meant as minimums. If thinner or highly variable pavement sections are constructed, increased maintenance and repair should be expected. If the ADT (average daily traffic) or ADTT (average daily truck traffic) increases beyond that intended, as reflected by the traffic index(s) used for design, increased maintenance and repair could be required for the pavement section. Positive site drainage should be maintained at all times. Water should not be allowed to pond or seep into the ground. If planters or landscaping are adjacent to paved areas, measures should be taken to minimize the potential for water to enter the pavement section.

PLAN REVIEW

Final grading, foundation, and improvement plans should be submitted to this office for review and comment as they become available, to minimize any misunderstandings between the plans and recommendations presented herein. In addition, foundation excavations and earthwork construction performed on the site should be observed and tested by this office. If conditions are found to differ substantially from those stated, appropriate recommendations would be offered at that time.

REVISED JUNE 25, 2024 JANUARY 21, 2022 PAGE 3

LIMITATIONS

The materials encountered on the project site and utilized in our laboratory study are believed representative of the area; however, soil materials vary in character between excavations and conditions exposed during mass grading. Site conditions may vary due to seasonal changes or other factors. GeoTek, Inc. assumes no responsibility or liability for work, testing, or recommendations performed or provided by others. Since our study is based upon the site materials observed, selective laboratory testing and engineering analysis, the conclusions and recommendations are professional opinions. These opinions have been derived in accordance with current standards of practice and no warranty is expressed or implied. Standards of practice are subject to change with time.

The opportunity to be of service is greatly appreciated. If you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

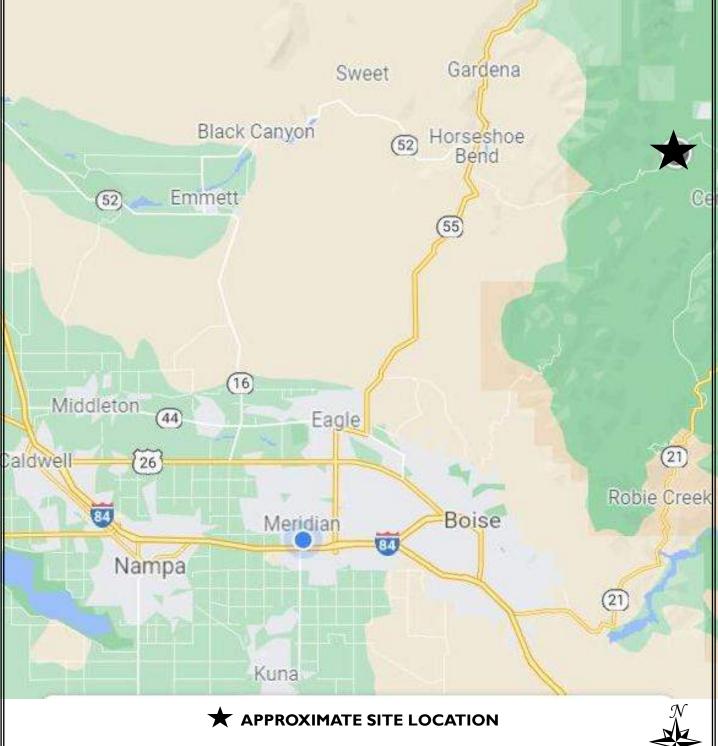
Respectfully submitted, **GeoTek**, **Inc.**

Kyle C. Miley, PE

Staff Professional

David C. Waite, PE

Branch Manager - Senior Engineer



Source: Google Maps, 2022. GeoTek Field Observations, 2021 and 2022. Not to Scale



GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

320 E. Corporate Dr, Suite 300, Meridian, ID 83642 (208) 888-7010 (phone) / (208) 888-7924 (FAX)

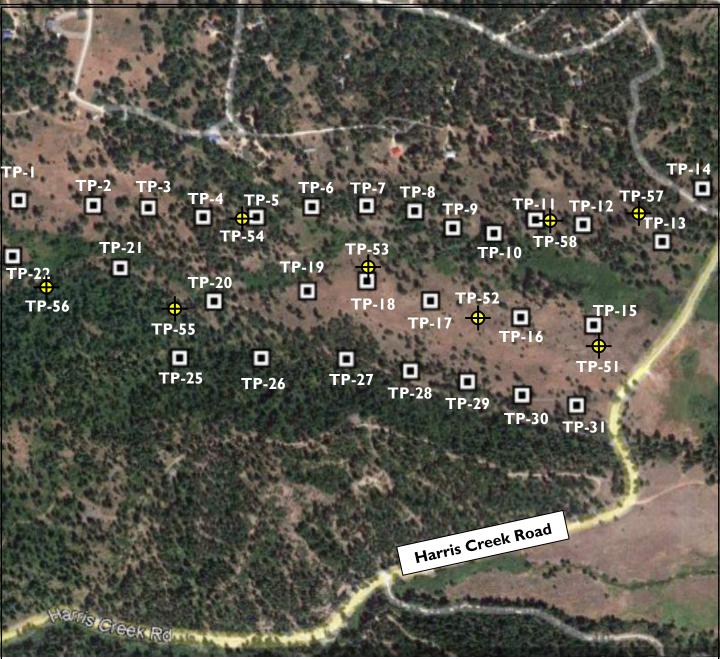
FIGURE I SITEVICINITY MAP Trail Creek Near Harris Creek Road Placerville, Idaho Prepared for: ARDURRA

Project No.:

2386-ID

Report Date:
June 2024

Drawn By:
KCM



APPROXIMATE ADDITIONAL TEST PIT LOCATIONS

Source: Google Earth, 2022. GeoTek Field Observations, 2021 and 2022. Not to Scale





GEOTECHNICAL | ENVIRONMENTAL | MATERIALS

320 E. Corporate Dr, Suite 300, Meridian, ID 83642 (208) 888-7010 (phone) / (208) 888-7924 (FAX)

SITE EXPLORATION PLAN

Trail Creek Near Harris Creek Road

FIGURE 2

Placerville, Idaho Prepared for: ARDURRA

Project No.:

2386-ID

Report Date: | une 2024

Drawn By:
KCM

APPENDIX A

LOG GENERAL NOTES

CONSISTENCY OF FINE-GRAINED SOILS						
Unconfined Compressive Strength, Qu, psf	Standard Penetration or N- Value (SS) Blows/Ft	Consistency				
< 500	<2	Very Soft				
500 - 1,000	2 - 3	Soft				
1,001 - 2,000	4 - 7	Firm				
2,001 - 4,000	8 - 16	Stiff				
4,001 - 8,000	17 - 32	Very Stiff				
> 8,001	32+	Hard				

RELATIVE DENSITY OF COARSE-GRAINED SOILS						
Standard Penetration (SPT) or N-Value (SS) Blows/Ft	Relative Density					
0 - 3	Very Loose					
4 - 9	Loose					
10 - 29	Medium Dense					
30 - 49	Dense					
50+	Very Dense					

SPT penetration test using 140 pound hammer, with 30 inch free fall on 2 inch outside diameter (1-3/8 ID) sampler. For ring sampler using 140 lb hammer, with a 30 inch free fall on 3 inch outside diameter (2-1/2 ID) sample, use N-value \times 0.7 to get Standard N-value

For fine grained soil consistency, thumb penetration used per ASTM D-2488

RELATIVE PROPORTIONS OF SAND & GRAVEL					
Descriptive Term of other constituents	Percent of Dry Weight				
Trace	< 15				
With	15 - 29				
Modifier	> 30				

GRAIN SIZE TERMINOLOGY				
Major Component of	Particle Size			
Sample				
Boulders	Over 12 inches			
Cobbles	3 inches to 12 inches			
Gravel	#4 Sieve to 3 inches			
Sand	#200 Sieve to #4 Sieve			
Silt or Clay	Passing #200 Sieve			

RELATIVE HARDNESS OF CEMENTED SOILS (CALICHE)							
Description	General Characteristics						
Very Dense to Moderately Hard	Partially Cemented Granular Soil - Can be carved with a knife and broken with force by hand.						
Very Stiff to Moderately Hard	Partially Cemented Fine-Grained Soil - Can be carved with a knife and broken with force by hand.						
Moderately Hard	Moderate hammer blow required to break a sample						
Hard	Heavy hammer blow required to break a sample						
Very Hard	Repeated heavy hammer blow required to break a sample						

LOG LEGEND

	MATERIAL	DESCRIPTION
Soil Pattern	USCS Symbol	USCS Classification
	FILL	Artificial Fill
	GP or GW	Poorly/Well graded GRAVEL
	GM	Silty GRAVEL
	GC	Clayey GRAVEL
	GP-GM or GW-GM	Poorly/Well graded GRAVEL with Silt
	GP-GC or GW-GC	Poorly/Well graded GRAVEL with Clay
	SP or SW	Poorly/Well graded SAND
	SM	Silty SAND
	SC	Clayey SAND
	SP-SM or SW-SM	Poorly/Well graded SAND with Silt
	SP-SC or SW-SC	Poorly/Well graded SAND with Clay
	SC-SM	Silty Clayey SAND
	ML	SILT
	MH	Elastic SILT
	CL-ML	Silty CLAY
	CL	Lean CLAY
	CH	Fat CLAY
	PCEM	PARTIALLY CEMENTED
	CEM	CEMENTED
	BDR	BEDROCK

SAMPLING									
	SPT								
	Ring Sample								
NR	No Recovery								
$\geq \leq$	Bulk Sample								
\leq	Water Table								

	CONSISTENCY										
Cohesionless Soils Cohesive Soils Cementation											
VL	Very Loose	So	Soft	MH	Moderately Hard						
L	Loose	F	Firm	Н	Hard						
MD	Medium Dense	S	Stiff	VH	Very Hard						
D	Dense	VS	Very Stiff								
VD	Very Dense										

G	/ i E			Y	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	EXC	MET AVA	HOD: Backhoe ATOR: 11/9/21 TION:
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-I MATERIAL DESCRIPTION AND COMMENTS		Consistency	REMARKS
l				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist to Moist		So	USDA Soil Class: B-1
				SM	Brown, Silty SAND with Gravel, Slightly Moist to Moist		L	USDA Soil Class: B-I
2 - 3 - 4 - 5 - 6 - 7 - 8 -				GP-GM	Lt. Brown, Poorly graded GRAVEL with Silt, Slightly Moist to Moist -Large Boulders Throughout	1	MD	USDA Soil Class: B-1
9 🗕					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED			
10 -								
12 -								
13 –								
15 =								
16 -								
17 -								
19 =								
20 –	-							

G	/ E		<u> </u>	Y T T E	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	EXC	MET AVA	ED BY: _ HOD: _ ATOR: _ DATE: _ TION: _	KCM Backhoe
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-2 MATERIAL DESCRIPTION AND COMMENTS		Consistency	R	EMARKS
	-			ML	Brown, SILT with Sand, Slightly Moist to Moist		So	USDA S	oil Class: B-1
2 -				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to N-Several Boulders Throughout	1 oist	MD	USDA So	il Class: B-2
4 - 5 - 6 - 7 - 8 -					-Light Cementation				
					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED				
9 =					NO GROOMBWATER ENCOUNTERED				
10 –									
11-									
12 -									
13 =									
14 –									
15 =									
16 -									
17 =									
18 –									
19 🗕									
20 –									

			77		
,					\
G	E	0	Т	E	k

TEST PIT LOG

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

LOCATION: Placerville, Idaho ELEVATION:

)		: '	_	ı E	<u> </u>		
Depth (ft)	Sample Type	Blows / 6 in. $\frac{1}{6}$	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-3 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	U,			ML	Brown, Sandy SILT, Slightly Moist to Moist	So	USDA Soil Class: B-1
-				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
2 -					Orangish-Brown Poorly graded SAND with Silt, Trace Gravel, Slightly Moist to Moist	MD	USDA Soil Class: A-I
3 - 4 - 5 - 6 - 7 - 8 - 10 - 11 - 15 - 16 - 17 - 18 - 18 - 18 - 18 - 18 - 18 - 18					Slightly Moist to Moist Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED	MD	USDA Soil Class: B-2
19 – 20 –							
20							

				7	TES ⁻	T PIT LOG	10	AGG F	D BY:	KCM
					PROJECT #:	2386-ID			HOD:	Backhoe
	_		_	1	PROJECT:	Trail Creek			ATOR:	
					CLIENT:	TO Engineers		ı	DATE:	11/9/21
G	E	C		ΤЕ	K LOCATION:	Placerville, Idaho	EL	EVA	TION:	
-		IPLES								
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PI	T NUMBER: TP-4		Consistency	R	EMARKS
	Sar	Ble	S	Š	MATERIAL DESC	CRIPTION AND COMMENTS				
1 – 2 –				ML	Brown to Dk. Brown, Sand	dy SILT, Slightly Moist to Moist	-	So F		oil Class: B-1 Approx. 4.0'
3 -						raded GRAVEL with Silt and Sand,		MD	USDA So	il Class: B-1
4 —					Slightly Moist to Moist					
5 -										
6 –										
7 -										
8 –					END C	OF TEST PIT @ 8.0'				
9 🗕					NO GROUND	WATER ENCOUNTERED				
10 –										
11-										
12 -										
13 –										
15 =										
16 –										
17 -										
18 –										
19 🗕										
20 —										

GEOTEK Cocation: Placerville, Idaho Placerville, Idaho	M noe
TEST PIT NUMBER: TP-5 SAMPLES STAMPLES STAMPLES	
SM Brown, Silty SAND, Slightly Moist to Moist SM GP-GM Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist Fig. 10 - 11 - 12 - 13 - 14 - 15 - 16 - 16 - 16 - 16 - 16 - 16 - 16	RKS
SM Brown, Silty SAND, Signtly Moist to Moist GP-GM Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED NO GROUNDWATER ENCOUNTERED 11 - 12 - 13 - 14 - 15 - 16 - 16 - 16 - 16 - 16 - 16 - 16	B-I
GP-GM lan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED II =	B-I
9 — NO GROUNDWATER ENCOUNTERED 10 — 11 — 12 — 13 — 14 — 15 — 16 — 16 — 16 — 16 — 17 — 18 — 18 — 18 — 18 — 18 — 18 — 18	-1
12 - 13 - 14 - 15 - 16 -	
14 - 15 - 16 -	
15 – 16 –	
16 –	
∎''¬	
18 🗕	
19 = 20 =	

				7	TEST	PIT LOG	LC	OGGE	D BY:	KCM
				•	PROJECT #:	2386-ID		MET	HOD:	Backhoe
			_	4	PROJECT:	Trail Creek	EX		ATOR:	
					CLIENT:	TO Engineers	_		DATE: _	11/9/21
G	E	: C) .	ΤΕ	K LOCATION:	Placerville, Idaho	_ El	_EVA	TION:	
		IPLES						1	1	
£		1	ern	Symbol				ιcy		
т) (f	Y	, 6 ii	atte	Syn	TEST PIT	NUMBER: TP-6		ster	R	EMARKS
Depth (ft)	ple	Blows / 6 in.	Soil Pattern	nscs				Consistency	"	
	Sample Type	Blo	So	NS	MATERIAL DESCR	RIPTION AND COMMEN	TS	ŭ		
	0.			ML	Brown to Dk. Brown, Sandy	SILT, Slightly Moist to Moist		So	USDA S	oil Class: B-1
I -								F		
_										
2 -										
3 —										
4 -										
_				SM	Tan to Lt. Brown, Silty SAN	D with Gravel, Slightly Moist (to Moist	MD	USDA S	oil Class: B-1
5 -										
6 -										
7 -										
8 –										
0 -						TEST PIT @ 8.0'				
9 -					NO GROUNDY	VATER ENCOUNTERED				
10 —										
11 -										
12 —										
13 =										
14 —										
15 =										
16 -										
17 =										
18 -										
19 =										
20 —										

_						
				7		TES
				•		PROJECT #:
		_	_	_		PROJECT:
						CLIENT:
					•	LOCATION:
G		: C	<u> </u>	<u>T</u> E	K	-
	SAM	IPLES	_	Ю		
Septh (ft)	nple Type	ws / 6 in.	oil Pattern	CS Symbol		TEST I

TEST PIT LOG

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

ELEVATION:

	SAM	IPLES		-			
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-7	Consistency	REMARKS
	Saı	Bi	S	Š	MATERIAL DESCRIPTION AND COMMENTS]	
				ML	Brown to Dk. Brown, SILT with Sand, Slightly Moist to Moist	So	USDA Soil Class: B-I
-				SM	Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
2 -							
3 -							
4 -							Thin Layer of Partially Cemented Sands/Gravels
5 -				SP-SM	Brown, Poorly graded SAND with Silt, Trace Gravel, Slightly Moist	MD	USDA Soil Class: A-I
6 -							
7 -							
8 –					END OF TEST PIT @ 8.0'		
9 -					NO GROUNDWATER ENCOUNTERED		
10 -							
11-							
12 -							
13 -							
14 -							
15 =							
16 –							
17 -							
18 -							
19 -							
20 —							

		1		<u>Y</u>		PIT LOG	LC		ED BY:	KCM
		7			PROJECT #:	2386-ID	EV		HOD:	Backhoe
					PROJECT:	Trail Creek TO Engineers	EX		ATOR: _ DATE:	11/9/21
_						Placerville, Idaho	FI		TION:	11/7/21
G	E	: C)	ΓΕ	K ESCATION:—	Tracer vine, idano			o	
Depth (ft)		Blows / 6 in.		USCS Symbol		NUMBER: TP-8		Consistency	R	EMARKS
	San	Blo	Š	SN	MATERIAL DESCR	IPTION AND COMMENT	S	Ŭ		
	0,			ML	Brown to Dk. Brown, Sandy			So	USDA S	oil Class: B-I
l										
2 — 3 — 4 — 5 — 7 — 8 —				GM		TEST PIT @ 8.0'	Moist	MD	USDA So	il Class: B-2
9 - 10 - 11 - 12 - 13 -					NO GROUNDW	ATER ENCOUNTERED				
14 —										
15 =										
16 -										
18 –										
19 🗕										
20 –										

		1		7	TEST	F PIT LOG	10	ogge	D BY:	KCM
				•	PROJECT #:	2386-ID	_,		HOD:	Backhoe
			_	4	PROJECT:	Trail Creek	EX	CAV	ATOR:	
					CLIENT:	TO Engineers	_		DATE:	11/9/21
G	E	C) .	ΤE	K LOCATION:	Placerville, Idaho	- El	_EVA	TION:	
H		1PLES		_						
£			ern	USCS Symbol				ncy		
ţ.	T a	9/	Patt	Syr	TEST PIT	NUMBER: TP-9		iste	R	EMARKS
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	SCS				Consistency		
	Sar	B	S			RIPTION AND COMMEN	TS			
				ML	Brown to Dk. Brown, Sandy	SILT, Slightly Moist to Moist		So	USDA S	oil Class: B-I
-										
2 -				SM	Tan to 14 Brown Ciley CAN	D with Gravel, Slightly Moist t	a Maiat	MD	I ICD V C	oil Class: B-I
l,				2141	Tan to Lt. Brown, Slity SAIN	D with Gravei, Slightly Moist t	O MOIST	טואן	USDA S	OII Class: B-1
3 -										
4 —										
5 =										
6 -									No Grav	/el
7 -										
8 –										
						F TEST PIT @ 8.0' WATER ENCOUNTERED				
9 =					NO GROOND	VATER ENCOUNTERED				
10 -										
l										
=										
12 -										
13 =										
14 -	1									
15 🗕	-									
16 —										
17 =	1									
18 –	ļ									
10-										
19 =										
20 —	1									
	Ī	I	1	1	i			Ī	1	

G			<u> </u>	Y T T E	PROJECT #: 2386-ID M PROJECT: Trail Creek EXCA CLIENT: TO Engineers			LOGGED BY: KCM METHOD: Backhoe EXCAVATOR: DATE: 11/9/21 ELEVATION:			
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	MATERIAL DESC	NUMBER: TP-10	S	Consistency	REMARKS		
				ML	Brown, SILT with Sand, Slig	htly Moist to Moist		So	USDA Soil Class: B-1		
2 - 3 - 4 -				SP-SM	Slightly Moist to Moist	raded SAND with Silt and Grave AVEL with Sand, Slightly Moist to			USDA Soil Class: A-I USDA Soil Class: B-2		
5 - 6 - 7 - 8 -				GM	,		Pioist	MD	USDA SOII Class: B-2		
						F TEST PIT @ 8.0' WATER ENCOUNTERED					
9 - 10 -											
12 —											
13 –											
15 =											

17 -

18 –

19 🗕

20 -

G	/ E			Y T T E	PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idah	EX	MET CAV	ED BY: KCM THOD: Backhoe ATOR: DATE: 11/9/21 TION:
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER:	OMMENTS	Consistency	REMARKS
-				ML	Brown to Dk. Brown, Sandy SILT, Slightly Moist	to Moist	So	USDA Soil Class: B-1
2 - 3 - 4 -				SP-SM	Orangeish-Tan, Poorly graded SAND with Silt, Slight	y Moist to Moist	MD	USDA Soil Class: A-I
5 – 6 – 7 – 8 –				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slig		MD	USDA Soil Class: B-2
9 - 10 -					END OF TEST PIT @ 8.0 NO GROUNDWATER ENCOU			
12 –								
14 – 15 –								
16 – 17 –								
18 –								
20 -								

				Y	TEST	PIT LOG	LOGG	ED BY: KCM
		•		T	PROJECT #:	2386-ID	ME	THOD: Backhoe
			_	_	PROJECT:	Trail Creek	EXCAV	ATOR:
					CLIENT:	TO Engineers		DATE: 11/9/21
G	F	: () .	ΓΕ	K LOCATION:	Placerville, Idaho	ELEV	ATION:
<u> </u>				<u> </u>	11		•	1
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol		NUMBER: TP-12	vi Consistency	REMARKS
	0,			ML	Brown to Dk. Brown, Sandy		So	USDA Soil Class: B-I
1 – 2 –					·	- '		
3 – 4 –				GM	Tan to Lt. Brown, Silty GRA	VEL with Sand, Slightly Moist to	o Moist MD	USDA Soil Class: B-2
5 –								Boulders
7 – 8 –					END OF	TEST PIT @ 8.0'		
9 =						VATER ENCOUNTERED		
10 -								
12 -	-							
13 =								
14 -								
16 -								
17 –								
19 =								
20 —								

G	/ i E		<u> </u>	Y I I E	PROJECT #: PROJECT: CLIENT:	2386-ID Trail Creek TO Engineers Placerville, Idaho	EXC	MET AVA	ED BY: THOD: ATOR: DATE: TION:	KCM Backhoe
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	MATERIAL DESCR	NUMBER: TP-13	TS	Consistency		MARKS
1 = 2 = 3 = 4 = 5 = 6 = 7 = 9 = 10 = 12 = 13 = 14 = 15 = 15 = 15				GM	END OF	VEL with Sand, Slightly Moist to TEST PIT @ 8.0' R ENCOUNTERED AT 7.5		L MD	USDA Soil	Class: B-2
16 17 18 19 20										

G			<u> </u>	Y I I E	PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	EX	MET CAV	ED BY: _ THOD: _ ATOR: _ DATE: _ TION: _	KCM Backhoe	<u>_</u>
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-14 MATERIAL DESCRIPTION AND COMMENT	S	Consistency	R	EMARK	.S
				CL	Dk. Brown, Lean CLAY with Sand, Slightly Moist		So	USDA S	oil Class: N/A	۱ (Clay)
2 - 3 - 4 - 5 -				SM	Tan, Silty SAND, Trace Gravel, Slightly Moist to Moist		MD		oil Class: B-1	
7 =				SM	Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist			USDA So	oil Class: B-1	
8 - 9 - 10 - 11 - 12 - 13 - 15 - 16 - 16 - 16 - 17 - 18 - 18 - 18 - 18 - 18 - 18 - 18					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED					

18 –

19 🗕

20 –

,			77	_	
G	E	0	Т	E	k
	SAMP	LES	-	-	

TEST PIT LOG

PROJECT #: 2386-ID **PROJECT:** Trail Creek **CLIENT: TO Engineers** LOCATION: Placerville, Idaho

METHOD: Backhoe **EXCAVATOR: DATE:** 11/9/21 **ELEVATION:**

KCM

LOGGED BY:

GEOTEK

Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-15 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
 				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
2 -						MD	
3 –				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
5 –							
7 –				SP-SM	Lt. Brown to Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: A-1
9 –					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
11 =							
12 -							
14 -							
15 =							
16 -							
18 -							
19 🗕							
20 –							

			77		
					\
G	E	0	Т	F	k

PROJECT #: 2386-ID Trail Creek **PROJECT: CLIENT: TO Engineers** LOCATION: Placerville, Idaho

LOGGED BY: KCM **METHOD:** Backhoe **EXCAVATOR: DATE:** 11/9/21 **ELEVATION:**

Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-16 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
1 – 2 –						MD	
3 -				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4 – 5 –				314	Tall to Lt. Brown, Silty SAND, Siightly Ploist to Ploist	MD	OSDA SOII Class. B-1
6 -				GP-GM	Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand,	MD	USDA Soil Class: B-1
7 -					Slightly Moist to Moist		CODY Son Class. D-1
8 –					END OF TEST PIT @ 8.0'		
9 🗕					NO GROUNDWATER ENCOUNTERED		
10 -							
11-							
12 -							
13 🗕							
14 -	1						
15 =							
16 –							
17 -							
18 –							
19 =							
20 —							

7
I

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: | 1 | /9/2 |

ELEVATION:

	G	Ε	0	T	Ε	K
--	---	---	---	---	---	---

9		: C	<u> </u>	ГЕ	K		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-17 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	S	_			Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	USDA Soil Class: B-2
l				CM	Tan to Lt. Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-1
2 -				SM	Tan to Lt. Brown, Silty SAND with Graver, Slightly Ploist to Piolst	MD	USDA SOII Class; B-1
3 – 4 –				GM	Tan to Lt. Brown, Silty GRAVEL with Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-2
5 —				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt and Gravel,	MD	USDA Soil Class: A-I
6 –					Slightly Moist		Cobbles
7 -							
8 –					END OF TEST PIT @ 8.0'		
9 =					NO GROUNDWATER ENCOUNTERED		
10 -							
11-							
12 -							
13 -							
14 —							
15 -							
16 -							
17 -							
18 –							
19 =							
20 —							

		77	
	$\mathbf{\cap}$	T	L

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

ELEVATION:

GEOTEK

Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-18 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown, Clayey SAND, Slightly Moist to Moist		USDA Soil Class: B-2
1 -							
3 -				SM	Lt. Brown to Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
4 — 5 — 6 — 7 — 8 — 9 — 11 — 12 — 13 — 14 — 14 — 14 — 14 — 14 — 14 — 14					Tan to Lt. Brown, Poorly graded GRAVEL with Silt and Sand, Slightly Moist to Moist END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED	MD	USDA Soil Class: B-1
15 –							
17 -							
19 =							
20 —							

G	/ i E		<u> </u>	Y T T E	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	EX	MET CAVA	ED BY: _ THOD: _ ATOR: _ DATE: _ TION: _	KCM Backhoe	
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-19 MATERIAL DESCRIPTION AND COMMENTS		Consistency		EMARKS	
1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 8				GM	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist Lt. Brown to Brown, Silty GRAVEL with Sand, Slightly Moist to Moist		L MD	USDA So	oil Class: B-2 oil Class: B-2 oulders Throughou	ıt
9 = 10 = 11 = 12 = 14 = 15 = 16 = 19 = 20 = 100					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED					

		1		Y	TEST	Γ PIT LC
					PROJECT #:	2386-ID
			_	4	PROJECT:	Trail Creek
					CLIENT:	TO Engineers
	_					
		-	•	T E	LOCATION:	Placerville, Idaho
G				ΓΕ	K LOCATION:	Placerville, Idaho
Depth (ft)	SAM	IPLES	Pattern		K -	Placerville, Idaho
				USCS Symbol	TEST PIT	
	SAM	IPLES	Pattern		TEST PIT	NUMBER: TI

19 =

20 -

PIT LOG

2386-ID Trail Creek **TO** Engineers

EXCAVATOR: DATE: 11/9/21 **ELEVATION:**

KCM

Backhoe

LOGGED BY:

METHOD:

Consistency JMBER: TP-20 **REMARKS** ION AND COMMENTS ND, Slightly Moist to Moist USDA Soil Class: B-2 with Sand, Slightly Moist to Moist MD USDA Soil Class: B-2 6 • 7 -8 END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED 9 10 -|| = 12 -13 = 14 -15 = 16 -17 = 18 -

G			<u> </u>	Y T E	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers Placerville, Idaho	LOGO ME EXCA	THC VATO DA	DD: Backhoe DR: II/9/21
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-21 MATERIAL DESCRIPTION AND COMMENTS	Consistency		REMARKS
	0,			SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	L	. USI	DA Soil Class: B-2
1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 8				GM	Lt. Brown to Brown, Silty GRAVEL with Sand, Slightly Moist to Moist -Large Boulders Throughout	MI	D USI	DA Soil Class: B-2
9 = 10 = 11 = 12 =					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED			

14 -

15 -

16 —

17 -

18 -

19 🗕

20 -

		7		
	7			
				`
_			_	

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

ELEVATION:

GEOTE

Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-22 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS				
				CL	Dk. Brown to Black, Sandy Lean CLAY, Slightly Moist to Moist	So	USDA Soil Class: N/A (Clay)				
2 –				CL	Brown, Lean CLAY with Sand, Slightly Moist to Moist	F	USDA Soil Class: N/A (Clay)				
4 – 5 –				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist		USDA Soil Class: A-1				
6 –				o. o							
7 – 8 –				SP-SM	Lt. Gray to Gray, Poorly graded SAND with Silt, Slightly Moist to Moist		USDA Soil Class: A-I				
9 –					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED						
11 -											
13 –											
15 -											
16 – 17 –											
18 –											
20 –											

G	/ i E		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Y T T E	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	ME [®]	ED BY: THOD: ATOR: DATE: ATION:	KCM Backhoe
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-25 MATERIAL DESCRIPTION AND COMMENTS	Consistency	RE	MARKS
 -				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil	Class: B-2
2 -				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil	Class: B-I
3 - 4 - 5 -				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil	Class: B-1
6 - 7 - 8 -								
9 –					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED			
11 =								
13 –								
15 –								
17 =								
18 -								
20 –								

			G						
,					\				
	F	0	T	E	L				

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

ELEVATION:

GEOTEK

	SAM	PLES		_			
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-26	Consistency	REMARKS
	Sa	В			MATERIAL DESCRIPTION AND COMMENTS		
I -				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2 -				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-I
3 – 4 –				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5 – 6 –							
7 – 8 –					END OF TEST PIT @ 7.0' NO GROUNDWATER ENCOUNTERED		
9 – 10 –							
11 =							
13 =							
14 –							
16 –							
18 -							
19 - 20 -							

G	/ i E			Y I	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	EXC	MET CAVA	ED BY: _ THOD: _ ATOR: _ DATE: _ TION: _	KCM Backhoe
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-27 MATERIAL DESCRIPTION AND COMMENTS Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist		S Consistency		EMARKS pil Class: B-2
1 -				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist		F		oil Class: B-1
3 - 4 - 5 - 7 - 8 -				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist				pil Class: B-1
9 = 10 = 11 = 12 = 14 = 16 = 16 = 16 = 16 = 16 = 16 = 16					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED				

18 –

19 🗕

20 —

	_			7			PR F
G	E	C) .	Т	E	K	LO
Jepth (ft)	nple Type	ws / 6 in.	oil Pattern	C Symbol			

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

LOCATION: Placerville, Idaho ELEVATION:

	CAM	PLES				1	
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-28 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
1 - 2 - 3 -				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist		USDA Soil Class: B-1
4 -				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5 -				PCEM	Lt. Brown to Brown, PARTIALLY CEMENTED, Slightly Moist to Moist	МН	USDA Soil Class: N/A
6 –							
7 –							
8 –							
9 🗕					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
10 —							
11 =							
12 -							
14 -							
15 🗕							
16 –							
17 -							
18 –							
19 =							
20 —							

7
I

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR:

DATE: 11/9/21

ELEVATION:

G	Ε	0	T	Ε	K

9				ı E	K		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-29 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2 - 3 - 4 - 5 -				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
6 -							Liebe Comondesion
8 -							Light Cementation
9 - 10 -					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
12 -							
13 =							
15 –							
17 -							
19 =							
20 -							

TEST	7		1		
PROJECT #:					
PROJECT:	4	_	_	_	
CLIENT:					
LOCATION:	ΤЕ	-			
<u> </u>	·	_			G
TEST PIT N	USCS Symbol	Soil Pattern	Blows / 6 in.	Sample Type	Depth (ft)
MATERIAL DESCRIP		0,	В	Sa	
Brown to Dk. Brown, Clayey S	SC				
Lt. Brown to Brown, Sandy SIL	ML				1 =
Lt. Brown, Silty SAND, Slightly	SM				_

PIT LOG

2386-ID Trail Creek TO Engineers

LOGGED BY: KCM METHOD: Backhoe **EXCAVATOR:**

DATE: 11/9/21

ON:	Placerville, Idaho	ELEVATION:	

)					IX.		
Depth (ft)	Sample Type	Blows / 6 in. $\frac{1}{6}$	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-30 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
1 – 2 –				ML	Lt. Brown to Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-1
3 –				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
5 – 6 –							
7 – 8 –				PCEM	Lt. Brown, PARTIALLY CEMENTED, Slightly Moist to Moist	МН	USDA Soil Class: N/A
9 –					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
11 – 12 –							
13 🗕							
14 -							
16 —							
17 -							
19 =							
20 –							

7
I

PROJECT #: 2386-ID

PROJECT: Trail Creek

CLIENT: TO Engineers

LOCATION: Placerville, Idaho

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR: 11/9/21

ELEVATION:

GEOTEK

	_				•		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-31 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SC	Brown to Dk. Brown, Clayey SAND, Slightly Moist to Moist	So	USDA Soil Class: B-2
2 –				SM	Tan to Lt. Brown, Silty SAND, Slightly Moist to Moist	F	USDA Soil Class: B-I
4 – 5 –							
6 –				SP-SM	Tan to Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: A-1
7 – 8 –					END OF TEST PIT @ 7.0' NO GROUNDWATER ENCOUNTERED		
9 –							
11-							
12 -							
14 -							
15 –							
17 –							
19 =							
20 —							

		N	
		-	
	7		

PROJECT #:	2386-ID	
PROJECT:	Trail Creek	_
CLIENT:	TO Engineers	_
LOCATION:	Placerville Idaho	_

LOGGED BY:	KCM
METHOD:	Backhoe
EXCAVATOR:	
DATE:	10/3/22
ELEVATION:	

_	CAN	4DL EC				1	
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-51 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
	0.2	i		ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-1
-							
2 —					Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1
3 –					Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-I
5 – 6 – 7 –					Brown, Silty SAND with Gravel, Slightly Moist to Moist	MD	USDA Soil Class: B-I
I^{\prime} $$				GP-GC	Brown, Poorly graded GRAVEL with Clay, Moist	MD	USDA Soil Class: B-2
8 — 9 — 10 — 11 — 12 — 13 — 14 — 15 — 17 — 18 — 18 — 18 — 18 — 18 — 18 — 18					END OF TEST PIT @ 8.0' NO GROUNDWATER ENCOUNTERED		
19 – 20 –							

	8		7		
53		7			\
G	E	0	Т	E	ŀ

PROJECT #:	2386-ID
PROJECT:	Trail Creek
CLIENT:	TO Engineers
LOCATION:	Placamilla Idaha

LOGGED BY: KCM

METHOD: Backhoe

EXCAVATOR: 10/3/22

ELEVATION:

Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-52 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS			
				SM	Lt. Brown to Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-1 Organics Top 1.5'			
2 -				GP	Lt. Brown, Poorly graded GRAVEL, Slightly Moist to Moist	MD	USDA Soil Class: B-1			
4 – 5 –				SP-SM	Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	USDA Soil Class: B-I			
6 – 7 –				SP-SC	Lt. Brown, Poorly graded SAND with Clay, Moist	MD	USDA Soil Class: B-2			
8 – 9 –					END OF TEST PIT @ 7.5' NO GROUNDWATER ENCOUNTERED					
10 –										
12 –										
14 – 15 –										
16 – 17 –										
18 –										
20 —										

		1		Y	TEST PIT LOG	LOGG	ED BY: KCM
		L	-		PROJECT # : 2386-ID		THOD: Backhoe
	552		_	_	PROJECT: Trail Creek	EXCAV	ATOR:
					CLIENT: TO Engineers		DATE: 10/3/22
6				ГΕ	LOCATION: Placerville, Idaho	ELEVA	ATION:
9					N .		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-53 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				GM	Brown, Silty GRAVEL wuth Sand, Slightly Moist to Moist	MD	USDA Soil Class: B-1
1 -				SC	Lt. Brown, Clayey SAND with Gravel, Slightly Moist to Moist	F	USDA Soil Class B-1 (2.0'-3.0')
١,				50	La Brown, Glayey or a to man Graves, Singilary 1 loise to 1 loise	'	
3 - 4 -							USDA Soil Class: C-1 (3.0'-6.0')
5 – 6 –				CD CM	Brown, Poorly graded GRAVEL with Silt, Moist	MD	USDA Soil Class: B-1
7 =				GI -GI	Brown, Foorly graded Grovele with sit, Floise		OSDA SUII Class. B-1
8 –					END OF TEST PIT @ 8.0'		
9 🗕	ļ				NO GROUNDWATER ENCOUNTERED		
10 —	_						
11 =							
13 =							
14 –							
15 🗕							
16 – 17 –							

				Y		TEST	Γ PIT LOG	1066	ED BY: KCM
		L	-	•		PROJECT #:	2386-ID		THOD: Backhoe
		_		_		PROJECT:	Trail Creek	EXCAV	
					`	CLIENT:	TO Engineers		DATE: 10/3/22
G	E	C	7	ГΕ	K	LOCATION:	Placerville, Idaho	ELEVA	ATION:
Depth (ft)		Blows / 6 in.	Soil Pattern	USCS Symbol		TEST PIT	NUMBER: TP-54	Consistency	REMARKS
Dep	ampl	Slows	Soil	USCS		MATERIAL DESCI	RIPTION AND COMMENTS	Cons	
	ν				Brown	SILT, Slightly Moist to Mo		l F	USDA Soil Class: B-2
1 – 2 –				ME	Bi Own,	SILT, Siightly Floist to Fic	JISL		USDA 30II Class. B-2
3 🗕				GP	It Brow	wn to Brown Poorly grad	led GRAVEL with Sand, Slightly Mo	ist to Moi MD	USDA Soil Class: B-1
4 —				Gr	Lt. Bi Ov	vii to brown, roony grad	led GIVAVEE with Sand, Slightly Flor	מוין ויסו זיסו	OSDA SOII Class. B-1
5 🗕									
6 —									
7 -									
8 –									
9 🗕						TND OF	TEST PIT @ 9.0'		
10 —							VATER ENCOUNTERED		
11 -									
12 —									
13 -									
14 —									
15 =									
16 —									
17 =									
18 –									
20 —									

		1		7	TEST PIT LOG	LOG	GED BY: KCM
			•		PROJECT #: 2386-ID		ETHOD: Backhoe
					PROJECT: Trail Creek CLIENT: TO Engineers	EXCA	VATOR: 10/3/22
					LOCATION: Discountille Idele	FLEV	DATE: 10/3/22 //ATION:
G	E	: C) 7	ΓΕ	R ESSATISM		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-55 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
1 -				ML	Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
3 - 4 - 5 - 6 -	X			ML	Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
7 -				SP-SM	Lt. Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	MD	
8 –				ML	Brown, Sandy SILT, Slightly Moist to Moist END OF TEST PIT @ 8.0'	F	USDA Soil Class: B-2
9 - 10 - 11 - 12 -					NO GROUNDWATER ENCOUNTERED		
13 - 14 - 15 -							
16 – 17 –							

G	/ E			T E	TEST PIT LOG PROJECT #: 2386-ID PROJECT: Trail Creek CLIENT: TO Engineers LOCATION: Placerville, Idaho	ME EXCAV	ED BY: KCM THOD: Backhoe VATOR: 10/3/22 ATION:
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-56 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				SM	Lt. Brown, Silty SAND, Slightly Moist to Moist	MD	USDA Soil Class: B-2
2 — 3 — 4 —	-			ML	Lt. Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2 Roots to 5.0'
5 – 6 – 7 –	X			CL	Brown, Sandy Lean CLAY, Slightly Moist to Moist	F	USDA Soil Class: Unsuitable
8 – 9 –					END OF TEST PIT @ 7.5' NO GROUNDWATER ENCOUNTERED		
11 -							
13 =							
15 –							
17 🗕	1						

		1		Y	TEST PIT LOG	LOGG	GED BY: KCM
		T	-		PROJECT #: 2386-ID		ETHOD: Backhoe
					PROJECT: Trail Creek	EXCA\	VATOR:
					CLIENT: TO Engineers		DATE: 10/3/22
G	E	C	7	ΓΕ	K LOCATION: Placerville, Idaho	ELEV	ATION:
		IPLES	ı				
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-57	Consistency	REMARKS
	Sa	B			MATERIAL DESCRIPTION AND COMMENTS		
1 - 2 - 3 - 4 -					Brown, SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
¬ –				SP-SM	Orangish-Brown, Poorly graded SAND with Silt, Slightly Moist to Moist	: MD	USDA Soil Class: B-I
5 🗕							
6 —							
7 🗕							
8 –							
9 🗕					END OF TEST PIT @ 8.5' NO GROUNDWATER ENCOUNTERED		
10 —					NO GROUNDWATER ENGOGRIERED		
II –							
12 —							
14 —							
15 🗕							
16 –							
17 -							
18 —							

		1		7	TEST PIT LOG	LOGG	GED BY: KCM
		L	-		PROJECT #: 2386-ID		THOD: Backhoe
		_		_	PROJECT: Trail Creek	EXCAV	ATOR:
					CLIENT: TO Engineers		DATE: 10/3/22
6				ГΕ	LOCATION: Placerville, Idaho	ELEV	ATION:
9					N .		
Depth (ft)	Sample Type	Blows / 6 in.	Soil Pattern	USCS Symbol	TEST PIT NUMBER: TP-58 MATERIAL DESCRIPTION AND COMMENTS	Consistency	REMARKS
				ML	Brown, Sandy SILT, Slightly Moist to Moist	F	USDA Soil Class: B-2
1 – 2 –							
3 -				SP-SM	Orangish-Brown, Poorly graded SAND with Silt, Slightly Moist to Mois	st MD	USDA Soil Class: B-I
4 —							
5 -	i						
6 -							
7 -					END OF TEST PIT @ 7.0'		
8 –					NO GROUNDWATER ENCOUNTERED		
I ° -							
9 🗕							
10 —	1						
ш –							
12 —	İ						
13 🕳	ļ						
14 —	1						
15 🕳]						
16 –	1						
17 🕳							
I '′ [—]]						

APPENDIX B

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642

Phone: (208) 888-7010 Fax: (208) 904-2980

Coeur d'Alene, ID 83815 (208) 888-7924 (208) 904-2981

CC:



Limits

Report No: MAT:21-00995-S01

Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S01 **Date Sampled** 11/9/2021 **Specification** General Sieve Set Location TP-16, 3.0'-4.0'

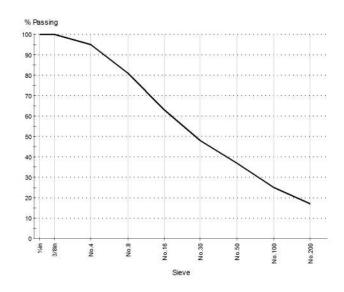
Sample Description:

SM, Silty sand

Atterberg Limit:

Liquid Limit: N/A Plastic Limit: NP Plasticity Index: NP

Particle Size Distribution



Grading: ASTM	C 136, ASTM C 117
---------------	-------------------

Date Tested: Tested By:

Sieve Size	% Passing
½in	100
3/8in	100
No.4	95
No.8	81
No.16	63
No.30	48
No.50	37
No.100	25
No.200	17

COBBLES	GRAVEL		SAND			FINES (17.1%)	
(0.0%)	Coarse (0.0%)	Fine (5.0%)	Coarse (18.0%)	Medium (34.6%)	Fine (25.4%)	Silt	Clay

D85: 2.8821 **D60**: 1.0307 **D50:** 0.6566 **D30:** 0.2002 **D15:** N/A **D10:** N/A

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642

Coeur d'Alene, ID 83815

CC:



Phone: (208) 888-7010 (208) 888-7924 (208) 904-2981 (208) 904-2980 Fax:

Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

Report No: MAT:21-00995-S01

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Manual

Sample Details

Sample ID 21-00995-S01 **Date Sampled** 11/9/2021

Specification General Sieve Set Location TP-16, 3.0'-4.0'

Other Test Results

Description Method Result Limits Group Symbol ASTM D 2487 SM **Group Name** Silty sand

Approximate maximum grain size

Material retained on 425µm (No. 40) (%)

Method of Removal Grooving Tool Type

Specimen preparation method

Drying Method

Special selection process

Liquid Limit Device Type

Rolling Method for PL Hand

ASTM D 4318

As Received Water Content (%)

Liquid Limit N/A NP Plastic Limit Plasticity Index NP Liquid Limit Procedure Multipoint (A)

Comments

N/A

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642

Phone: (208) 888-7010 Fax: (208) 904-2980 Coeur d'Alene, ID 83815 (208) 888-7924 (208) 904-2981

CC:



Limits

Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

Report No: MAT:21-00995-S02

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S02 **Date Sampled** 11/9/2021 **Specification** General Sieve Set TP-31, 3.0'-4.0' Location

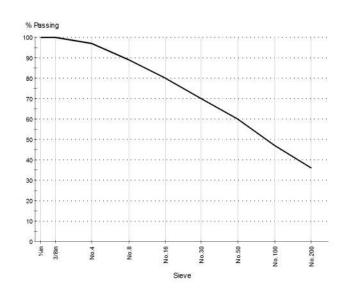
Sample Description:

SM, Silty sand

Atterberg Limit:

Liquid Limit: N/A Plastic Limit: NP Plasticity Index: NP

Particle Size Distribution



COBBLES	GRAVEL		SAND			FINES (36.0%)	
(0.0%)	Coarse (0.0%)	Fine (2.9%)	Coarse (10.0%)	Medium (22.1%)	Fine (28.9%)	Silt	Clay

Grading: ASTM C 136, ASTM C 117

Date Tested: Tested By:

Sieve Size	% Passing
½in	100
3/8in	100
No.4	97
No.8	89
No.16	80
No.30	70
No.50	60
No.100	47
No.200	36

D85: 1.7343 **D60**: 0.3000 **D50:** 0.1760 D30: N/A **D10:** N/A **D15**: N/A

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642

Coeur d'Alene, ID 83815 Phone: (208) 888-7010 (208) 888-7924 (208) 904-2981 (208) 904-2980 Fax:



Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

Report No: MAT:21-00995-S02

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Manual

Sample Details

Sample ID 21-00995-S02 **Date Sampled** 11/9/2021

Specification General Sieve Set Location TP-31, 3.0'-4.0'

Other Test Results

Description Method Result Limits Group Symbol ASTM D 2487 SM **Group Name** Silty sand

CC:

ASTM D 4318 Approximate maximum grain size

Material retained on 425µm (No. 40) (%)

Method of Removal Grooving Tool Type

Specimen preparation method

Drying Method

Special selection process

Rolling Method for PL Hand

As Received Water Content (%)

Liquid Limit Device Type Liquid Limit N/A NP Plastic Limit Plasticity Index NP Liquid Limit Procedure Multipoint (A)

\sim	_	 	_	_	
	\mathbf{a}	 m	7 🗖 1	a 1	re
v	w	 	ı	_	

N/A

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642

Phone: (208) 888-7010 Fax: (208) 904-2980 Coeur d'Alene, ID 83815 (208) 888-7924 (208) 904-2981

CC:



Limits

Report No: MAT:21-00995-S03

Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S03 **Date Sampled** 11/9/2021 **Specification** General Sieve Set TP-22, 7.0'-8.0' Location

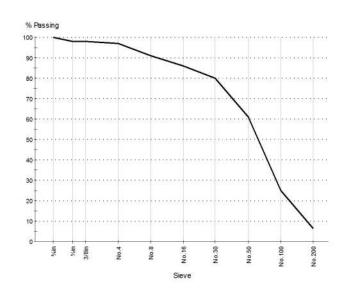
Sample Description:

SP-SM, Poorly graded sand with silt

Atterberg Limit:

Liquid Limit: N/A Plastic Limit: NP Plasticity Index: NP

Particle Size Distribution



Grauling.	ASTINIC	130, ASTW	0 117

Date Tested: Tested By:

Sieve Size	% Passing
¾in	100
½in	98
3/8in	98
No.4	97
No.8	91
No.16	86
No.30	80
No.50	61
No.100	25
No.200	6.3

COBBLES	GRAVEL		SAND			FINES (6.3%)	
(0.0%)	Coarse (0.0%)	Fine (3.1%)	Coarse (6.8%)	Medium (19.5%)	Fine (64.4%)	Silt	Clay

D85: 1.0542 **D60**: 0.2943 **D50**: 0.2427 **D30**: 0.1652 **D15**: 0.1035 **D10**: 0.0860

Cu: 3.42 **Cc:** 1.08

320 Corporate Drive, Ste #300 7950 Meadowlark Way, Ste E Meridian, ID 83642 Phone: (208) 888-7010 Fax: (208) 904-2980

Coeur d'Alene, ID 83815 (208) 888-7924 (208) 904-2981

CC:



Material Test Report

Client: T-O Engineers

332 N Broadmore Way Nampa ID 83687

Project: 2386-ID

Trail Creek Subdivision

Report No: MAT:21-00995-S03

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Sample Details

Sample ID 21-00995-S03 **Date Sampled** 11/9/2021

Specification General Sieve Set Location TP-22, 7.0'-8.0'

Description	Method	Result	Limits
Group Symbol	ASTM D 2487	SP-SM	
Group Name		Poorly graded sand with silt	
Approximate maximum grain size	ASTM D 4318		
Material retained on 425µm (No. 40) (%)			
Method of Removal			
Grooving Tool Type			
Specimen preparation method			
Drying Method			
Special selection process			
Rolling Method for PL		Hand	
As Received Water Content (%)			
Liquid Limit Device Type		Manual	
Liquid Limit		N/A	
Plastic Limit		NP	
Plasticity Index		NP	
Liquid Limit Procedure		Multipoint (A)	

Comments

N/A