



PLANNING COMMISSION MEETING STAFF REPORT

DATE OF MEETING: February 15, 2017

NAME OF PROJECT: Deer Creek Estates Subdivision

NAME OF APPLICANT: Return Development LLC

AGENDA ITEM: Preliminary Review

LOCATION OF ITEM: 300 East Michie Lane (south side)

ZONING DESIGNATION: R-1-15

ITEM: 5

Christopher Huffman & Ethan Poppleton, agents for Return Development LLC, is requesting Master Plan Approval for the Deer Creek Estates Subdivision. The proposal is a large-scale subdivision that is 14.84 acres in size and comprises two phases containing 20 lots. The property is located at 300 East Michie Lane (south side) and is in the R-1-15 zone.

BACKGROUND:

Christopher Huffman & Ethan Poppleton are proposing preliminary approval of Deer Creek Estates Phase 1. The property is 14.86 acres and is zoned R-1-15 which allows for third-acre lots, though the developer has chosen to reduce the density and create lots closer to a half-acre in size. The property will be developed as a large-scale standard subdivision which will be developed in two phases. There are 20 lots total and ten of those lots are in phase 1. There will also be 15% open space that is proposed to be deeded to the City as a public park and is 2.23 acres in size. The park covers two separate parcels, one on each side of 300 East. Phase 1 will include all the required open space for the entire development (both phase 1 and phase 2).

There are two roads planned in the subdivision. The first is 300 East that will run north to south and create a four-way intersection with 300 East at Michie Lane as it enters Bowden Fields. Also 400 South is planned and runs East to West. This road will connect to the stub road in Fox Pointe and this road will stub to the west boundary of the proposed subdivision so it can connect to future developments. Some of the roads will require temporary turnarounds as required by the City Engineer.

The City code promotes that open space is located along collector roads wherever possible to benefit the most members of the community and the applicant has complied with this request. The property has historically been used mostly as agricultural land.

LAND USE SUMMARY:

- 14.86-acre parcel
- R-1-15 zoning
- Proposal contains 20 lots
- Developer is providing 2.23 acres of open space which does comply with the 15% requirement.
- Access from Michie Lane and 400 South
- The lots will connect to the Midway Sanitation District sewer, Midway City's culinary water line, and Midway Irrigation Company's secondary water line

ANALYSIS:

Access – The subdivision will have access from Michie Lane and from 400 South. The City is planning to construct Michie Lane from Center Street to 480 East this year. The developer will deed the Michie Lane right-of-way to the City as soon as they close on the property in March. Michie Lane will be a limited access collector road and will allow good traffic circulation for the southeast section of town.

Geotechnical Study – The Geotechnical Study was prepared by CMT Engineering Laboratories. Several pages from that study have been attached to this report.

Sensitive Land – The developers have submitted to the City that no sensitive land or located on the property.

Water Connection – The lots will connect to water lines that will be built by the developer and connect to the City's water lines along Michie Lane.

Sewer Connection – The lot will connect to Midway Sanitations District’s sewer lines located in the area.

Secondary Water Connection – The lots will connect to Midway Irrigation Company’s secondary which is already servicing the property. Laterals will be created for all 20 lots and both park parcels. Secondary water meters are required for each lateral including the park laterals.

Sidewalks – The developer will construct five-foot sidewalks on both sides of the streets within the development. The City will construct a six-foot sidewalk along the south side of Michie Lane.

Open Space/public park – The Land Use Code requires a minimum of 15% open space for the development and the proposal does comply with that requirement. The developer is proposing that the open space is dedicated to the City as a public park. The City’s Master Park Plan Map indicates that a park should be located in the general vicinity of this proposal therefore, accepting the park will comply with the vision as described in the General Plan. The developer has proposed to develop some of the park facilities but if the City would like to upgrade those facilities or add others then park impact fees could be used to accomplish this. Two park plans have been attached to this report. Page L-101 is the park the developer is willing to construct and page L-100 is an upgraded park that may be constructed with public assistance. Some amenities in the park include a sledding hill, park equipment, pavilion, sports court, walking trails, and landscaping.

WATER BOARD RECOMMENDATION:

The Water Board has recommended that 36.5 acre feet are tendered to the City before the recording of each plat. Phase 1 will need to tender 20.5 acre feet. Phase 2 will need to tender 16 acre feet. The Water Board also recommended secondary water meters are installed on each lot.

POSSIBLE FINDINGS:

- The proposal does meet the intent of the General Plan for the R-1-15 zoning districts
- The proposal does comply with the land use requirements of the R-1-15 zoning districts
- The City’s Master Park Plan Map indicates that a public park should be in the general vicinity of the proposal

- A public park will benefit the future residents of this proposal and the residents of the surrounding subdivisions

ALTERNATIVE ACTIONS:

1. Recommendation of Approval (conditional). This action can be taken if the Planning Commission feels that conditions placed on the approval can resolve any outstanding issues.
 - a. Accept staff report
 - b. List accepted findings
 - c. Place condition(s)

2. Continuance. This action can be taken if the Planning Commission feels that there are unresolved issues.

Accept staff report

 - a. List accepted findings
 - b. Reasons for continuance
 - i. Unresolved issues that must be addressed
 - c. Date when the item will be heard again

3. Recommendation of Denial. This action can be taken if the Planning Commission feels that the request does not meet the intent of the ordinance.
 - a. Accept staff report
 - b. List accepted findings
 - c. Reasons for denial

February 15, 2017

Midway City
Attn: Michael Henke
75 North 100 West
Midway, Utah 84049

Subject: Deer Creek Estates Subdivision, Preliminary Review

Dear Michael:

Horrocks Engineers recently reviewed the Deer Creek Estates Subdivision plans for Preliminary Approval. The following issues should be addressed.

General Comments

- The plans propose to develop 20 lots on the south side of Michie Lane, south of Bowden Fields and West of Fox Point. Prior to the final plans being submitted a geotechnical report shall be submitted for the property.

Water

- The proposed development will be served from the gravity pressure zone. The water line within the development will be looped by connecting to both the existing 10" Michie Lane water line and the existing 8" water line within the Fox Point development.

Roads

- The development is proposing to install the standard Local street cross-section with 56' of right-of-way.
- For future roadway connectivity, the proposed development will stub a roadway to both the South and West limits of the development.
- Michie Lane will be widened to its Master Planned right-of-way width of 72'.

Trails:

- Public walkways will be installed within the each of the proposed public park open spaces.
- As part of the standard local roadway cross-section, a 5' sidewalks will be installed on each side of the roadway.

Storm Drain

- The storm water within this subdivision will be a public storm water system. The storm water will be collected and discharged into four proposed retention ponds throughout the subdivision.

Please feel free to call our office with any questions.

Sincerely,
HORROCKS ENGINEERS

A handwritten signature in blue ink, appearing to read 'Wesley Johnson', written over the printed name below.

Wesley Johnson, P.E.
Midway City Engineer

cc: Dayton Law, CivilSolutionsgroup (sent by email)



Goog

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Imagery Date: 7/8/2016 40°30'17.15" N 111°27'58.14" W elev 5534 f

E:850 S

1993

DEER CREEK ESTATES

SCALE: 1"=20'

CONCEPT PLANT SCHEDULE

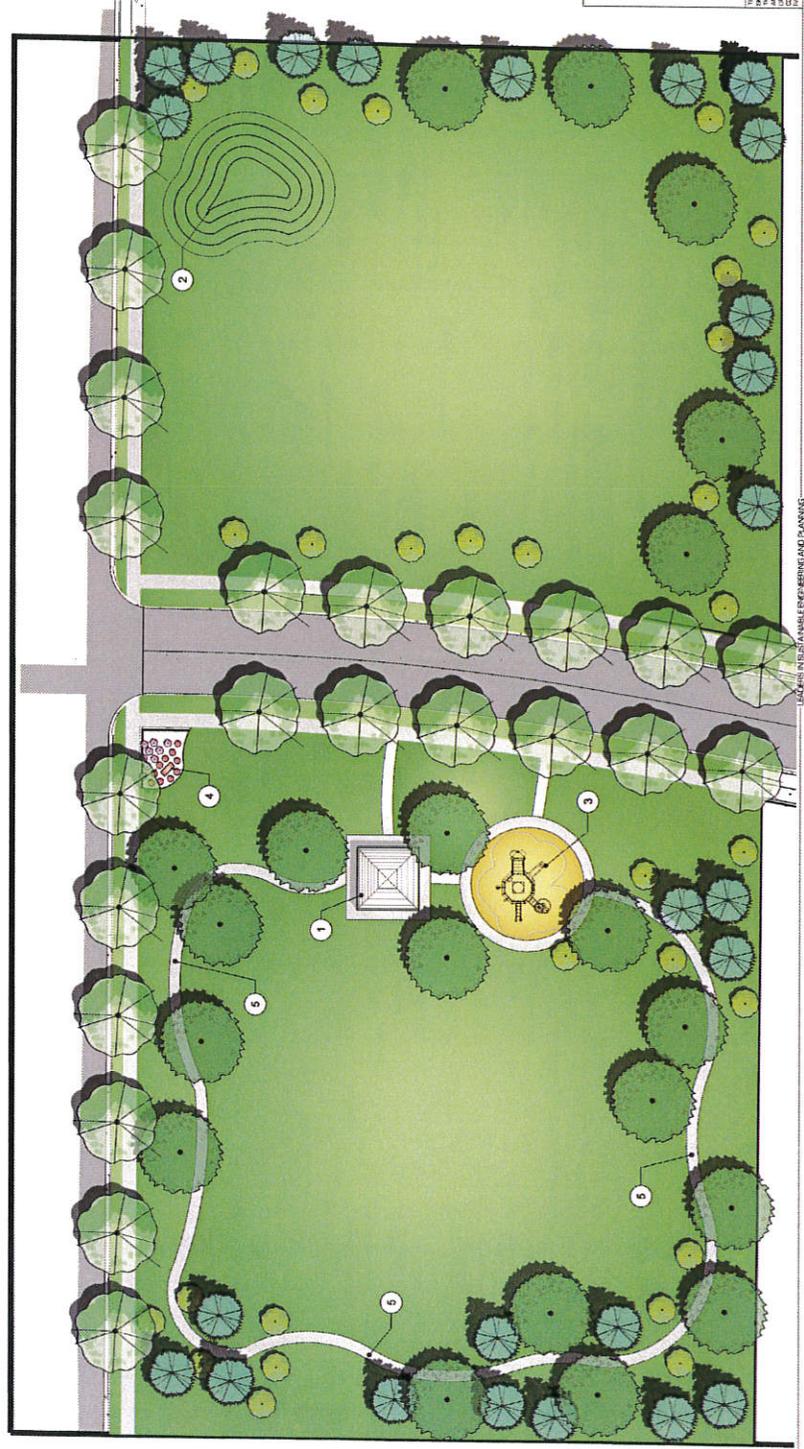
TREE - SPECIES	QUANTITY
TREE - SPECIES	24
TREE - SPECIES	20
TREE - SPECIES	26
TREE - SPECIES	22
PERENNIALS - SMALL	4
PERENNIALS	0

REFERENCE NOTES

SYMBOL	DESCRIPTION
1	PAVILION
2	SLEEPING HILL WITH GRASS
3	PLAYGROUND
4	DEVELOPMENT SIGN AND ENTRY PLANTING
5	TRAIL, GRAVEL OR CONCRETE

SITE DEVELOPMENT

SYMBOL	SITE	QTY
[Green Box]	GRASS	46,771 SF
[White Box]	CONCRETE	9,569 SF
[Yellow Box]	PLAYGROUND	1,271 SF
[Orange Box]	SIGN	10 SF



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DEER CREEK ESTATES
 300 SOUTH 400 EAST
 MIDWAY, UT 84049

MARK	DATE	DESCRIPTION
PROJECT 1	7/27/10	
REVISION 4	7/28/10	
REVISION 5	7/28/10	
REVISION 6	7/28/10	
REVISION 7	7/28/10	
REVISION 8	7/28/10	
REVISION 9	7/28/10	
REVISION 10	7/28/10	
REVISION 11	7/28/10	
REVISION 12	7/28/10	
REVISION 13	7/28/10	
REVISION 14	7/28/10	
REVISION 15	7/28/10	
REVISION 16	7/28/10	
REVISION 17	7/28/10	



02/09/17
LANDSCAPE CONCEPT

L-101

DEER CREEK ESTATES

SCALE: 1"=20'

CONCEPT PLANT SCHEDULE

	TREE - DECIDUOUS COLUMNAR	21
	TREE - DECIDUOUS MEDIAL	25
	TREE - DECIDUOUS COLUMNAR	25
	TREE - DECIDUOUS COLUMNAR	21
	TREE - DECIDUOUS COLUMNAR	4
	TREE - DECIDUOUS COLUMNAR	10

REFERENCE NOTES

- 1 PAVILION
- 2 SLEEPING HILL WITH GRASS
- 3 PLAYGROUND
- 4 DEVELOPMENT SIGN AND ENTRY PLANTINGS
- 5 TRAIL GRAVEL OR CONCRETE
- 6 BASKETBALL/FISCCBALL COURTS
- 7 NATURAL PLAYGROUND WITH Boulders, Logs, AND STUMPS
- 8 STEERING STONE PATH THROUGH NATURAL PLAY AREA LEADING TO TOP OF HILL

SITE DEVELOPMENT

	GRASS	71,407 SF
	CONCRETE	4,571 SF
	PLAYGROUND	1,666 SF
	SIGN	10 SF
	PLANTER BED	20,000 SF



LANDSCAPE CONCEPT PLAN

MARK DATE	DESCRIPTION
PROJECT #	747-1801
REVISIONS	A YDANE
DESIGNED BY	S. PUGH
ISSUED	05/23/17



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CMT ENGINEERING LABORATORIES

January 16, 2017

Mr. Dayton Law
Civil Solutions Group, Inc.
698 North 1890 West, Suite 43B
Provo, Utah 84601

Subject: Geotechnical Engineering Study
14.5-Acre Subdivision
300 East 300 South
Midway, Utah
CMT Project Number 9300

Mr. Freston:

Submitted herewith is the report of our geotechnical engineering study for the subject site. This report contains the results of our findings and an engineering interpretation of the results with respect to the available project characteristics. It also contains recommendations to aid in the design and construction of the earth related phases of this project.

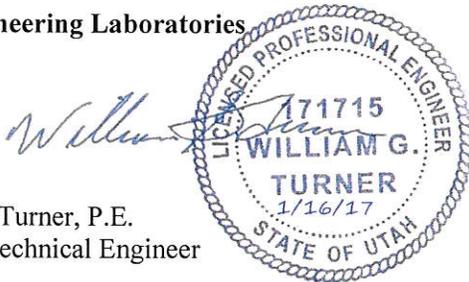
On January 11, 2017, a CMT Engineering Laboratories (CMT) geologist was on-site and supervised the excavation of five test pits extending to depths of approximately 3 to 10 feet below the existing grade. Soil samples were obtained during the field operations and subsequently transported to our laboratory for further testing.

Based on the findings of the subsurface exploration, the natural soils are suitable for supporting the proposed residences, provided the recommendations in this report are followed. A detailed discussion of design and construction criteria is presented in this report.

We appreciate the opportunity to work with you on this project. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at (801) 492-4132.

Sincerely,
CMT Engineering Laboratories

William G. Turner, P.E.
Senior Geotechnical Engineer



A handwritten signature in blue ink that reads "Steven L. Smith".

Steven L. Smith, P.E.
Senior Geotechnical Engineer

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1.0 INTRODUCTION

CMT Engineering Laboratories (CMT) was retained by Mr. Dayton Law of Civil Solutions Group, Inc. to conduct a geotechnical subsurface study for the development of the proposed 14.5-acre subdivision to be located at approximately 300 East 300 South in Midway, Utah (See **Figures 1 and 2** in the Appendix).

The purpose of this study was to provide an assessment of the subsurface soil conditions at the site and provide recommendations for design and construction of the proposed residences. Our scope of work included supervising the excavation of five test pits at the site, collecting samples of the subsurface soils from the test pits, performing laboratory tests, evaluating field and laboratory test data, and preparing this report which summarizes our findings.

Significant aspects regarding site development

- Single family residences are planned for the site. We project that residences will likely be two levels of wood frame construction above grade with a level of reinforced concrete below grade (basements).
- We project that continuous wall footings will have loads which will not exceed 4,000 pounds per lineal foot and spread footings will have loads that will not exceed 40,000 pounds. Uniform floor loads are projected to not exceed 150 pounds per square foot. If the loading conditions are different than we have projected, please notify us so that any appropriate modifications to our conclusions and recommendations contained herein may be made.

2.0 EXECUTIVE SUMMARY

The following is a brief summary of our findings and conclusions:

1. At the locations of the test pits we encountered topsoil with roots and organic material on the surface extending to about 12 to 24 inches in depth. Tufa, locally known as potrock, was generally encountered beneath the topsoil, and refusal was encountered within the potrock in two of the test pits (TP-4 and TP-5) at depths of 3 to 5 feet, respectively. Natural soils were encountered below the potrock in the other three test pits consisting of Silty SAND (SM) to Sandy SILT (ML) with varying amounts of gravel and Clayey SAND (SC), extending to the maximum depths explored of 9.5 to 10 feet below the existing ground surface.
2. Groundwater was not encountered in the test pits at the time of field exploration.
3. Foundations and floor slabs should not be placed on topsoil with organics. We recommend that footings be constructed on suitable undisturbed natural soils, a minimum 12 inches of potrock, or entirely on structural/engineered fill which extends

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to natural soils or potrock. Footings may be designed using a maximum allowable bearing pressure of 2,000 psf.

3.0 DESCRIPTION OF PROPOSED CONSTRUCTION

The proposed construction will be single family residences which we project will have up to two levels of wood frame construction above grade and one level of reinforced concrete below grade (basements). We project that wall loads will not exceed 4,000 pounds per linear foot, column loads will not exceed 40,000 pounds, and uniform floor loads will not exceed 150 pounds per square foot.

We anticipate that utilities will be installed to service the proposed residences and that asphalt concrete paved local streets will be constructed to access the residences.

4.0 SITE CONDITIONS AND FIELD EXPLORATION

The general geology, as well as the existing surface and subsurface conditions associated with the subject property are presented in this section.

4.1 General Geology

The subject site is located in the northwest portion of the Heber Valley, part of the Wasatch Hinterlands Section of the Middle Rocky Mountain Physiographic Province of north-central Utah. The Wasatch Hinterlands are described by Stokes (1986) as “a belt of mixed, moderately rugged topography” located between the Wasatch Mountains to the west and the Uinta Mountains to the east. Stokes further describes the area as having “varied and unorganized topography with hilly areas dominating valley areas.” The site sits at an elevation of approximately 5,535 feet above sea level. The Heber Valley is believed to have been formed by late Tertiary normal faulting associated with Miocene to recent extension of the Basin and Range Physiographic Province to the west. These valley-forming faults are now considered to be inactive (no evidence of movement during the past 10,000, years). During Quaternary time the valley has been subject to both erosional and depositional processes associated with the Provo River and its tributaries. In addition during Quaternary time, the Midway area, including the location of the subject property, has also been impacted by hydrothermal spring activity. These spring waters have deposited layers of carbonate rock called tufa throughout much of the northwest portion of Heber Valley, in the Midway area.

The geology of the USGS 7.5 Minute Heber City, Utah Quadrangle, including the location of the subject property, has been mapped by Bromfield and others (1970). The surficial geology at the location of the subject property and adjacent properties is mapped as “calcareous spring

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deposits of tufa” (Map Unit Qtu) dated to be Holocene and Pleistocene. No fill has been mapped at the location of the target property on the geologic map.

No surface fault traces are shown on the referenced geologic map crossing or projecting toward the subject site. No landslide deposits or features, including lateral spread deposits, are mapped on or adjacent to the site. The site is not located within a known or mapped potential debris flow, stream flooding, or rock-fall hazard area.

4.2 Site Conditions

The site consists of undeveloped land that appears to be utilized for farming. Based upon aerial photos dating back to 1993 that are readily available on the internet, the site appears to have been used for farming/agricultural purposes the last few years but previously was not used for farming. The grade at the site slopes slightly downward to the southeast with an overall relief less than 10 feet. The site is bordered on the north by 300 South Street, on the east and southwest by existing residences, and on the south and west by similar undeveloped land (see **Figures 1 and 2** in the Appendix).

4.3 Field Exploration

The subsurface soil conditions were explored by excavating five test pits on the site at the approximate locations shown on **Figure 2** in the Appendix. The test pits extended to depths of approximately 3 to 10 feet below the existing ground surface. Excavation refusal was encountered in two of the test pits (TP-4 and TP-5) at depths of 3 to 5 feet, respectively. The subsurface soils encountered in the test pits were described in general accordance with ASTM 2488 and samples of the exposed soils were collected from those brought up by the backhoe bucket from varying depths. The subsurface conditions encountered in the field exploration are discussed in Section 4.4. Logs of the test pits, including a description of all soil strata encountered are presented on **Figures 3 through 7** in the Appendix. Sampling information and other pertinent data and observations are also included on the logs. In addition, a Key to Symbols sheet defining the terms and symbols used on the logs, is provided as **Figure 8** in the Appendix.

When backfilling the test pits only minimal effort was made to compact the backfill and no compaction testing was performed. Thus, settlement of the backfill in the test pits over time should be anticipated.

4.4 Subsurface Soils

At the locations of the test pits we encountered topsoil with roots and organic material on the surface extending to about 1 to 2 feet in depth. Tufa, locally known as potrock, was generally encountered beneath the topsoil (except in TP-2), and refusal was encountered within the

potrock in two of the test pits (TP-4 and TP-5) at depths of 3 to 5 feet, respectively. Natural soils were encountered below the potrock in the other three test pits consisting of light brown to light grayish brown Silty SAND (SM) to Sandy SILT (ML) with varying amounts of gravel, and light brown Clayey SAND (SC), extending to the maximum depths explored of 9.5 to 10 feet below the existing ground surface. The silt/sand soils were slightly moist to very moist, were visually dense, and contained some thin layers of potrock.

For a detailed description of the soil profiles encountered in our explorations, see the Test Pit Logs (**Figures 3 through 7**) in the Appendix. See **Figure 2** for approximate test pit locations.

4.5 Groundwater

Groundwater was not encountered in the test pits at the time of field exploration. Groundwater levels can fluctuate as much as 1.5 to 2 feet seasonally. Numerous other factors such as heavy precipitation, irrigation of neighboring land, and other unforeseen factors, may also influence ground water elevations at the site. This is a possibility at this site because of the potrock. Groundwater could flow across the top of the potrock during these types of scenarios. The detailed evaluation of these and other factors, which may be responsible for ground water fluctuations, is beyond the scope of this study.

4.6 Site Subsurface Variations

Based on the results of the subsurface explorations and our experience, variations in the continuity and nature of subsurface conditions should be anticipated. Due to the heterogeneous characteristics of natural soils, care should be taken in interpolating or extrapolating subsurface conditions between or beyond the exploratory locations. Seasonal fluctuations in ground water conditions may also occur.

In addition, once the subsurface explorations were completed the test pits were backfilled with the excavated soils but little effort was made to compact these soils. Settlement of the backfill in the test pits over time should be anticipated and caution should be exercised when constructing over these locations.

4.7 Seismic Setting

4.7.1 Faulting

As stated in section 4.1 General Geology of this report, no faults are mapped crossing or projecting toward the subject site. The nearest mapped fault trace is the Bald Mountain Fault, located more than 6 miles north-northeast of the site.

4.7.2 Liquefaction

Liquefaction of a soil is defined as the condition when saturated, loose, cohesion-less, (sand-type) soils have a sudden, large decrease in their ability to support loads. This is because of excessive pore water pressure which develops during a seismic event. Cohesive (clay type) soils typically do not liquefy during a seismic event.

Subsurface soils encountered consisted of dense to very dense sand soils, while groundwater was not encountered. These conditions indicate that susceptibility to liquefaction at this site is low.

4.7.3 Seismic Design Category

The Seismic Design Categories in the International Residential Code (IRC 2015) are based upon the subsurface soil conditions in the upper 100 feet of the subsurface soil profile and on the guidelines of the International Building Code (IBC 2015). We project that the subsurface soils at the site, in the upper 100 feet of the soil profile would have properties consistent with IBC Site Class D. Using Site Class D, S_{DS} is 0.546, and the **Seismic Design Category** is D_0 .

5.0 LABORATORY TESTING

5.1 Laboratory Examination

Selected samples of the subsurface soils were subjected to various laboratory tests to assess pertinent engineering properties. Chart 1 indicates typical laboratory tests, which may be applicable to some of the samples retrieved from the site.

Chart 1 Laboratory Soil Testing

<u>Test Conducted</u>	<u>Specification</u>	<u>To Determine</u>
Moisture Content	ASTM D 2216	% moisture representative of field conditions
Gradation Analysis	ASTM D 1140/C117	Grain Size Analysis

Laboratory test results are presented on the logs and on **Figure 9, Lab Summary**.

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14.5-Acre Subdivision

300 East 300 South, Midway, Utah

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Site Map

Date: 11-Jan-17
Job # 9300

Figure:

2