



# Board of Adjustment Staff Report

Meeting Date: December 5, 2019

Agenda Item: 8E

SPECIAL USE PERMIT CASE NUMBER: WSUP19-0019 (Mustang Industrial Development Grading)

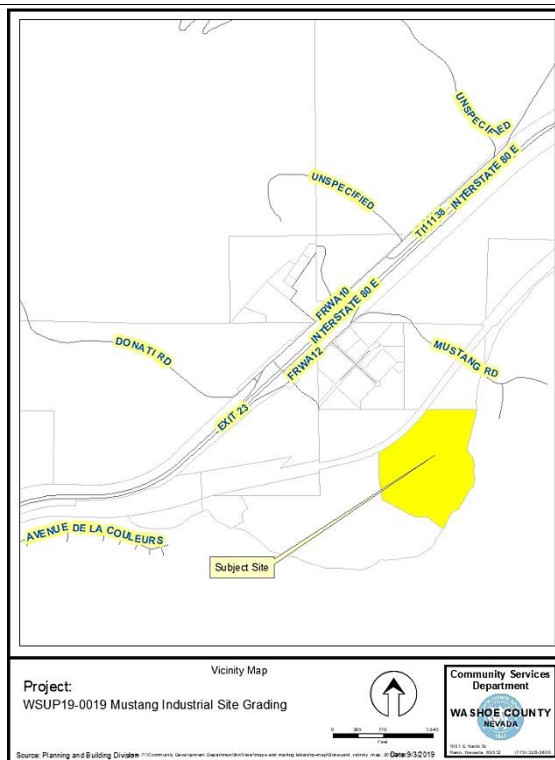
**BRIEF SUMMARY OF REQUEST:** Modify the design of previously-approved grading to allow a cut slope, up to approximately 30 feet in height, with a slope of approximately 1 horizontal to 1 vertical (1:1) and a length of approximately 900 feet, and a rip-rap slope, up to approximately 25 feet in height, with a slope of approximately 2 horizontal to 1 vertical (2:1) and a length of approximately 120 feet and to provide for the mitigation of rock stockpile areas by revegetation.

**STAFF PLANNER:** Roger Pelham, MPA, Senior Planner  
775.328.3622  
[rpelham@washoecounty.us](mailto:rpelham@washoecounty.us)

## CASE DESCRIPTION

For possible action, hearing, and discussion to approve a special use permit to modify the design of grading that was previously permitted under Special Use Permit Case Number SB15-001, the grading has already been done. The applicant seeks approval of a cut slope, up to approximately 30 feet in height, with a slope of approximately 1 horizontal to 1 vertical (1:1) and a length of approximately 900 feet, in a location that was previously approved to be stabilized by terraced retaining walls. The applicant also seeks approval of a rip-rap slope, up to approximately 25 feet in height, with a slope of approximately 2 horizontal to 1 vertical (2:1) and a length of approximately 120 feet, in an area that was previously approved to be stabilized by a slope of 3 horizontal to 1 vertical (3:1), and to provide for the mitigation of rock stockpile areas by revegetation. Varying the allowable height of slopes, steepness of slopes and use of rip-rap for stabilization of slopes is requested.

- Applicant: Scannell Properties
- Property Owner: Scannell Properties #257, LLC
- Location: South of Mustang Road, between the railroad tracks and the Truckee River
- Assessor's Parcel Number(s): 084-370-07
- Parcel Size: 45.75 Acres
- Master Plan Category: Industrial
- Regulatory Zone: Industrial
- Area Plan: Truckee Canyon
- Citizen Advisory Board: East Truckee Canyon
- Development Code: Authorized in Article 438, Grading
- Commission District: 4 – Commissioner Hartung



## STAFF RECOMMENDATION

APPROVE

**APPROVE WITH  
CONDITIONS**

NO RECOMMENDATION

DENY

**POSSIBLE MOTIONS**

Approval:

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions Special Use Permit Case Number WSUP19-0019 for Scannell Properties, having made all five findings in accordance with Washoe County Code Section 110.810.30.

Denial:

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment deny Special Use Permit Case Number WSUP19-0019 for Scannell Properties, being unable to make all five findings in accordance with Washoe County Code Section 110.810.30.

*(Motions with Findings on Page 25)*

**Staff Report Contents**

Special Use Permit.....3

Vicinity Map.....4

Site Plans.....6

Project Evaluation .....6

East Truckee Canyon Citizen Advisory Board (ETCCAB).....22

Reviewing Agencies .....22

Recommendation .....25

Motions .....25

Appeal Process .....25

**Exhibits Contents**

Conditions of Approval .....Exhibit A

Project Application.....Exhibit B

Public Notice .....Exhibit C

Agency Comments .....Exhibit D

Additional Information Submitted by Applicant (November 2019) .....Exhibit E

**Special Use Permit**

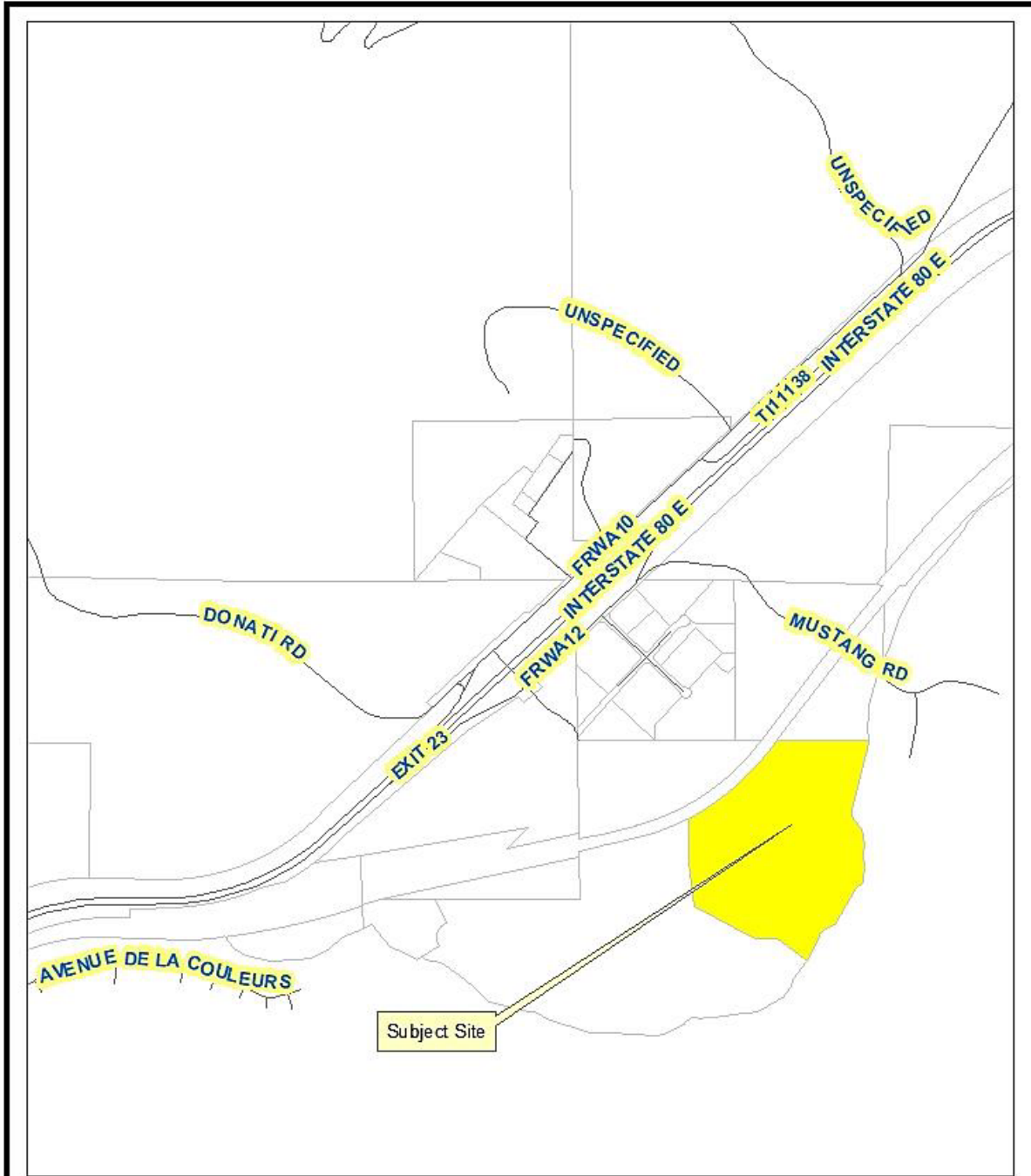
The purpose of a special use permit is to allow a method of review to identify any potential harmful impacts on adjacent properties or surrounding areas for uses that may be appropriate within a regulatory zone; and to provide for a procedure whereby such uses might be permitted by further restricting or conditioning them so as to mitigate or eliminate possible adverse impacts. If the Board of Adjustment grants an approval of the special use permit, that approval is subject to conditions of approval. Conditions of approval are requirements that need to be completed during different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e. a grading permit, a building permit, etc.)
- Prior to obtaining a final inspection and/or a certificate of occupancy on a structure
- Prior to the issuance of a business license or other permits/licenses
- Some conditions of approval are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the business or project.

The conditions of approval for Special Use Permit Case Number WSUP19-0019 are attached to this staff report and will be included with the action order, if approved.

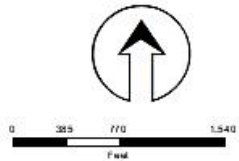
The subject property is designated as Industrial (i). The proposed major grading is permitted in all zones with a special use permit per WCC 110.438. Therefore, the applicant is seeking approval of this SUP from the Board of Adjustment.

Additionally, the SUP ordinance allows variances to be granted in conjunction with the approval process per WCC 110.810.20(e). The applicant is seeking to vary the allowable height of cut slopes, to allow slopes steeper than otherwise allowed and to allow rock rip-rap stabilization of a portion of the cut slope. The Board of Adjustment will also be ruling on these request(s).



Vicinity Map

Project:  
WSUP19-0019 Mustang Industrial Site Grading



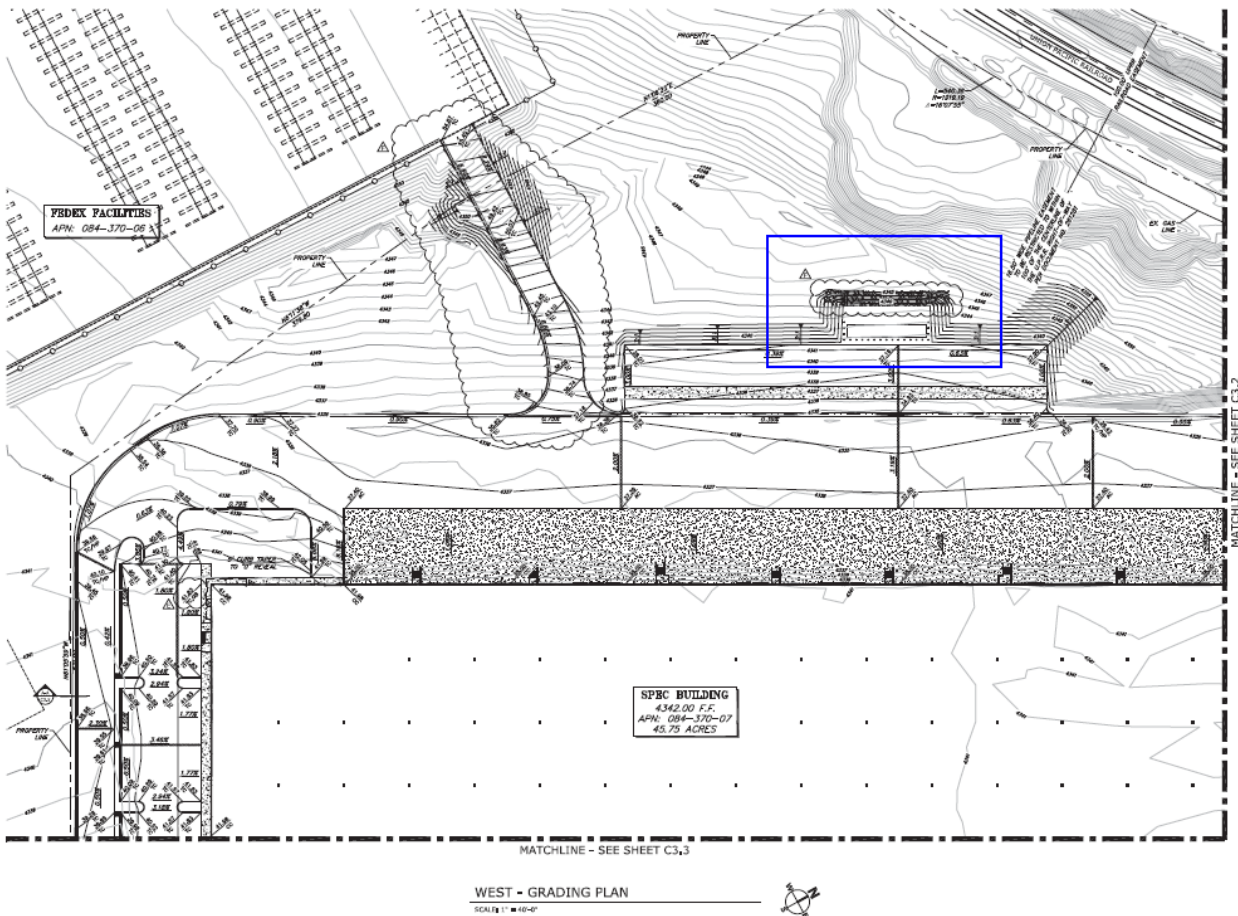
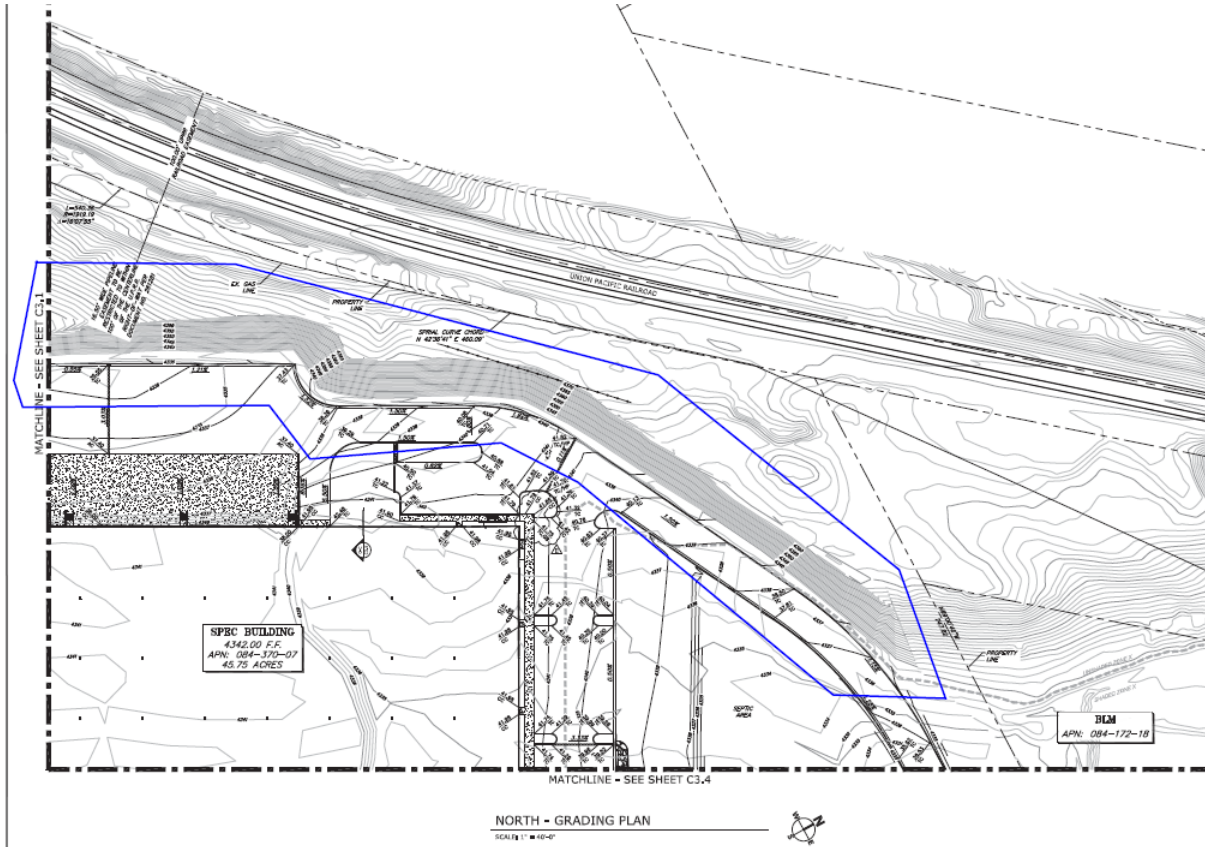
Community Services  
Department

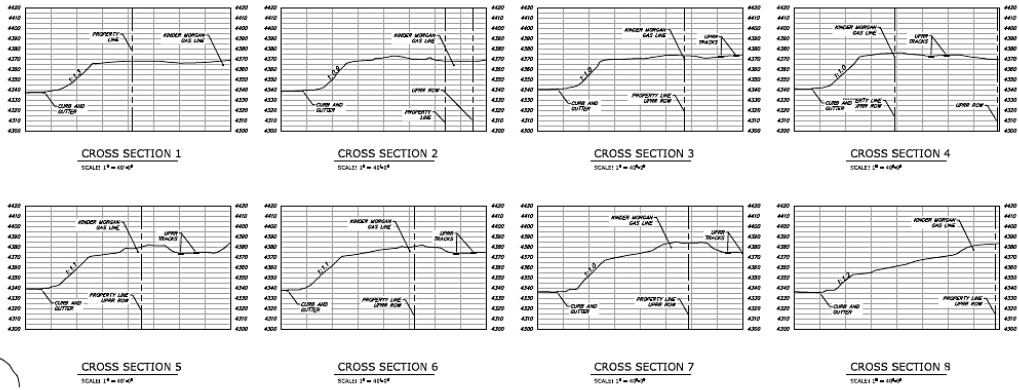
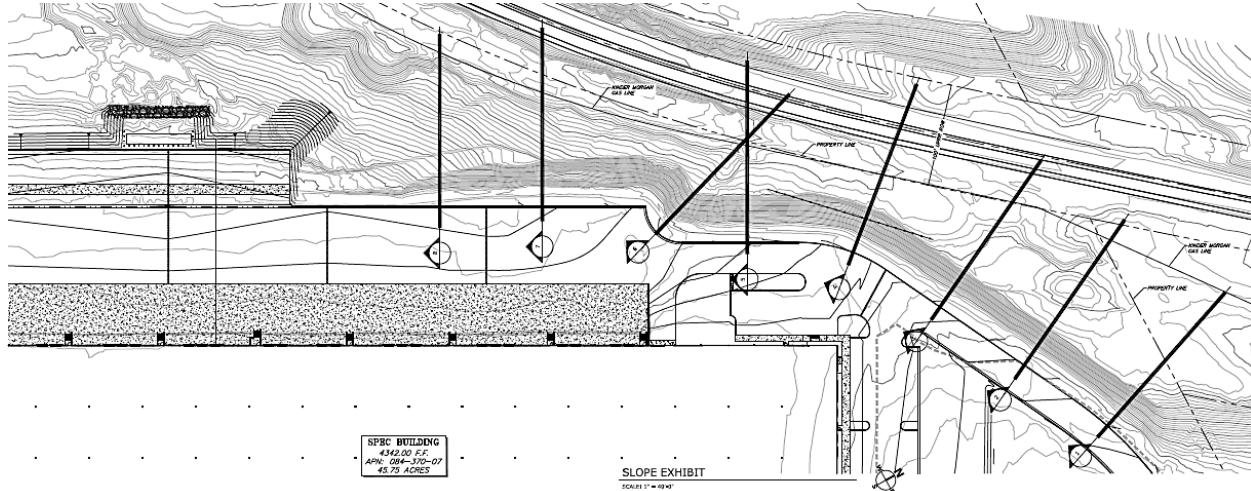
1001 E. North St.  
Reno, Nevada 89512 (775) 325-3600

Source: Planning and Building Division \\Community Development Department\ArcView\maps and mailing labels\pp-map\conwyand\_vicinity\_map.aprx Date: 9/3/2019

**Vicinity Map**

Grading plans proposed by the applicant follow:





**Proposed Site Plans**

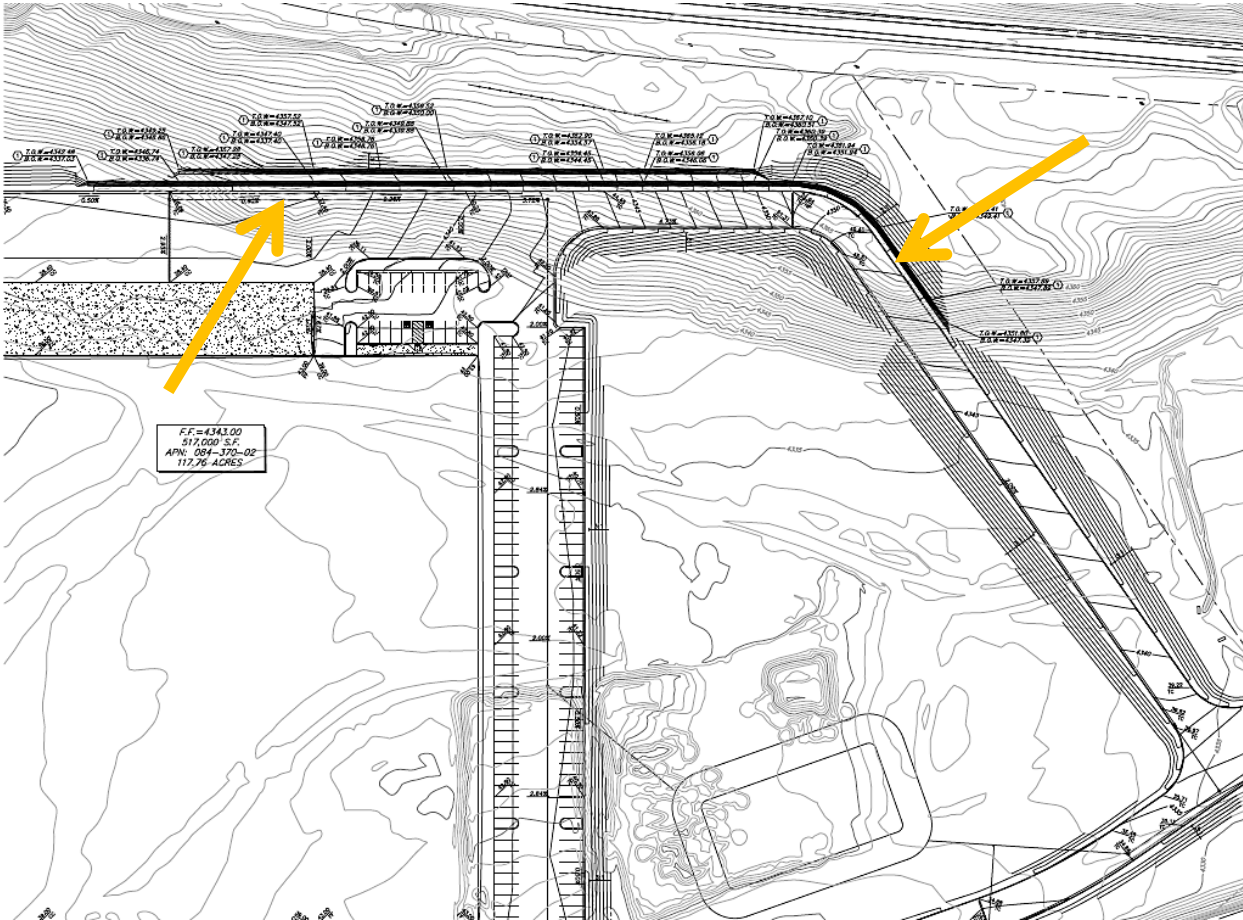
**Project Evaluation**

In 2015 the applicant, Scannell Properties, applied for and was granted, conditional approval for major grading on the subject site. That permit allowed, “grading of approximately 81 acres and excavation of a total of approximately 355,417 cubic yards of earth in preparation of construction of two industrial buildings and associated driveways and parking areas.”

During that review and approval process county staff and the applicant worked together and grading plans that were generally compliant with Article 438 were submitted and provided to the Board of Adjustment.

The grading done on the subject site is substantially different than the approved plans in three particular aspects.

The first of these three differences surrounds the requirement for construction of a series of retaining walls at the northeast corner of the subject site. The relevant part of the approved plans are shown below. Please note the series of retaining walls indicated with the orange arrows.



The applicant obtained building permit number 16-1945 for site improvements and grading. Those plans indicated that the required retaining walls would be permitted separately. Please see the cover sheet of that plan set, following:

*Plans 16-1945*

## MUSTANG INDUSTRIAL DEVELOPMENT

SPEC Building - SITE IMPROVEMENT PLANS  
12475 MUSTANG ROAD, SPARKS, NV 89434  
APN 084-370-02

DRAWING INDEX	DRAWING	DESCRIPTION
001	001	PROJECT INFORMATION, EXISTING AND PROPOSED, VICINITY MAP, SECTION LINE
002	002	GENERAL NOTES
003	003	EXISTING AND PROPOSED
004	004	GRADING PLAN - EXISTING
005	005	GRADING PLAN - PROPOSED
006	006	RETAINING WALL PLAN - EXISTING
007	007	RETAINING WALL PLAN - PROPOSED
008	008	CONSTRUCTION DETAILS
009	009	CONSTRUCTION DETAILS
010	010	CONSTRUCTION DETAILS
011	011	CONSTRUCTION DETAILS
012	012	CONSTRUCTION DETAILS
013	013	CONSTRUCTION DETAILS
014	014	CONSTRUCTION DETAILS
015	015	CONSTRUCTION DETAILS
016	016	CONSTRUCTION DETAILS
017	017	CONSTRUCTION DETAILS
018	018	CONSTRUCTION DETAILS
019	019	CONSTRUCTION DETAILS
020	020	CONSTRUCTION DETAILS
021	021	CONSTRUCTION DETAILS
022	022	CONSTRUCTION DETAILS
023	023	CONSTRUCTION DETAILS
024	024	CONSTRUCTION DETAILS
025	025	CONSTRUCTION DETAILS
026	026	CONSTRUCTION DETAILS
027	027	CONSTRUCTION DETAILS
028	028	CONSTRUCTION DETAILS
029	029	CONSTRUCTION DETAILS
030	030	CONSTRUCTION DETAILS
031	031	CONSTRUCTION DETAILS
032	032	CONSTRUCTION DETAILS
033	033	CONSTRUCTION DETAILS
034	034	CONSTRUCTION DETAILS
035	035	CONSTRUCTION DETAILS
036	036	CONSTRUCTION DETAILS
037	037	CONSTRUCTION DETAILS
038	038	CONSTRUCTION DETAILS
039	039	CONSTRUCTION DETAILS
040	040	CONSTRUCTION DETAILS
041	041	CONSTRUCTION DETAILS
042	042	CONSTRUCTION DETAILS
043	043	CONSTRUCTION DETAILS
044	044	CONSTRUCTION DETAILS
045	045	CONSTRUCTION DETAILS
046	046	CONSTRUCTION DETAILS
047	047	CONSTRUCTION DETAILS
048	048	CONSTRUCTION DETAILS
049	049	CONSTRUCTION DETAILS
050	050	CONSTRUCTION DETAILS
051	051	CONSTRUCTION DETAILS
052	052	CONSTRUCTION DETAILS
053	053	CONSTRUCTION DETAILS
054	054	CONSTRUCTION DETAILS
055	055	CONSTRUCTION DETAILS
056	056	CONSTRUCTION DETAILS
057	057	CONSTRUCTION DETAILS
058	058	CONSTRUCTION DETAILS
059	059	CONSTRUCTION DETAILS
060	060	CONSTRUCTION DETAILS
061	061	CONSTRUCTION DETAILS
062	062	CONSTRUCTION DETAILS
063	063	CONSTRUCTION DETAILS
064	064	CONSTRUCTION DETAILS
065	065	CONSTRUCTION DETAILS
066	066	CONSTRUCTION DETAILS
067	067	CONSTRUCTION DETAILS
068	068	CONSTRUCTION DETAILS
069	069	CONSTRUCTION DETAILS
070	070	CONSTRUCTION DETAILS
071	071	CONSTRUCTION DETAILS
072	072	CONSTRUCTION DETAILS
073	073	CONSTRUCTION DETAILS
074	074	CONSTRUCTION DETAILS
075	075	CONSTRUCTION DETAILS
076	076	CONSTRUCTION DETAILS
077	077	CONSTRUCTION DETAILS
078	078	CONSTRUCTION DETAILS
079	079	CONSTRUCTION DETAILS
080	080	CONSTRUCTION DETAILS
081	081	CONSTRUCTION DETAILS
082	082	CONSTRUCTION DETAILS
083	083	CONSTRUCTION DETAILS
084	084	CONSTRUCTION DETAILS
085	085	CONSTRUCTION DETAILS
086	086	CONSTRUCTION DETAILS
087	087	CONSTRUCTION DETAILS
088	088	CONSTRUCTION DETAILS
089	089	CONSTRUCTION DETAILS
090	090	CONSTRUCTION DETAILS
091	091	CONSTRUCTION DETAILS
092	092	CONSTRUCTION DETAILS
093	093	CONSTRUCTION DETAILS
094	094	CONSTRUCTION DETAILS
095	095	CONSTRUCTION DETAILS
096	096	CONSTRUCTION DETAILS
097	097	CONSTRUCTION DETAILS
098	098	CONSTRUCTION DETAILS
099	099	CONSTRUCTION DETAILS
100	100	CONSTRUCTION DETAILS

**PROJECT INFO**

**DATE OF REVISION:**  
2019.09.10 (REVISED) 1617 (REV. 1617)

**DATE OF REVISION:**  
2019.09.10 (REVISED) 1617 (REV. 1617)

**DESIGN TEAM**

**Client:**  
MUSTANG INDUSTRIAL DEVELOPMENT  
12475 MUSTANG ROAD, SPARKS, NV 89434

**Civil Engineer:**  
TECTONICS DESIGN GROUP  
12475 MUSTANG ROAD, SPARKS, NV 89434  
10/10/19

RETAINING WALLS  
UNDER SEPARATE  
PERMIT.

**TECTONICS DESIGN GROUP**

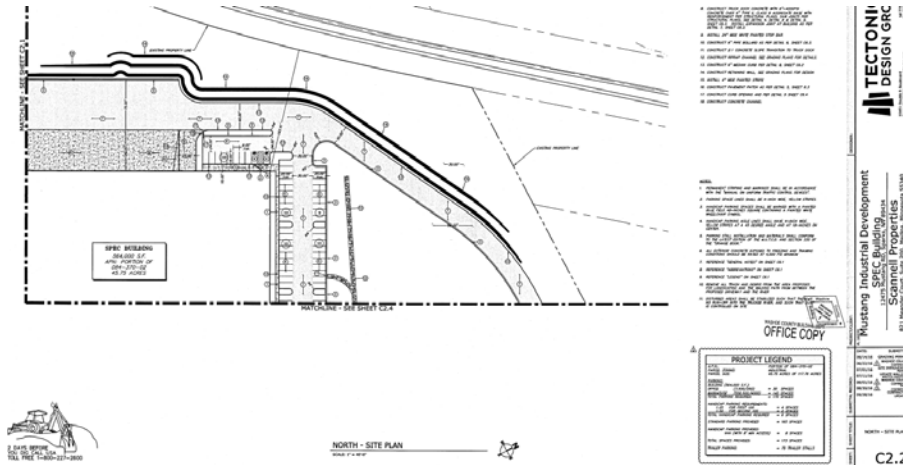
Mustang Industrial Development  
12475 MUSTANG ROAD, SPARKS, NV 89434  
10/10/19

PROJECT: MUSTANG INDUSTRIAL DEVELOPMENT  
SHEET: SPEC BUILDING - SITE IMPROVEMENT PLANS  
CONTROL: PROJECTS  
8127 PAVILION DRIVE, SUITE 100, SPARKS, NV 89434  
702.734.1111

PROJECT: MUSTANG INDUSTRIAL DEVELOPMENT  
SHEET: SPEC BUILDING - SITE IMPROVEMENT PLANS  
CONTROL: PROJECTS  
8127 PAVILION DRIVE, SUITE 100, SPARKS, NV 89434  
702.734.1111

PS.1

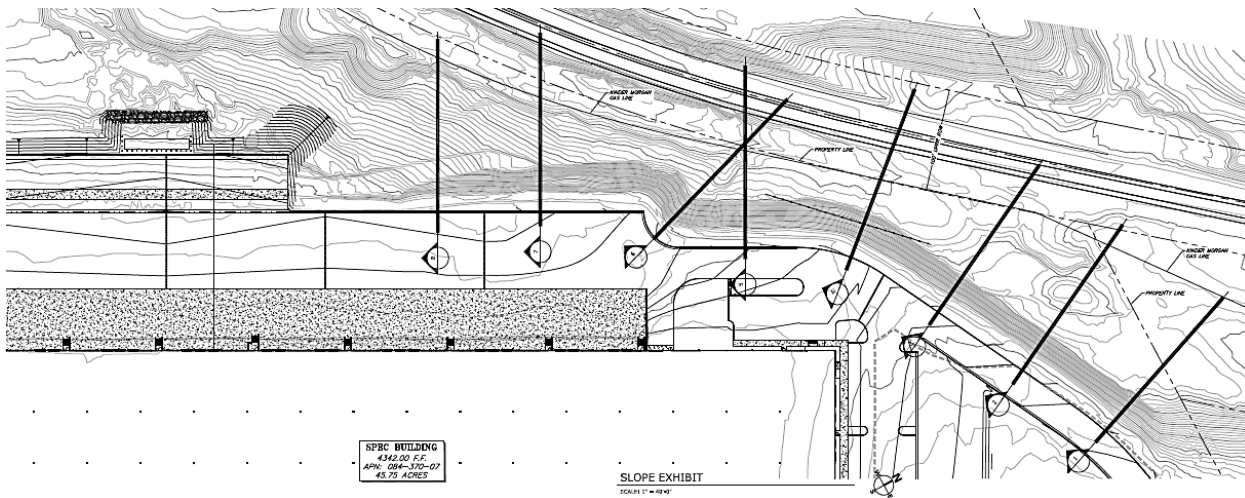
Retaining walls were shown on those plans in accordance with the approved special use permit, as shown below:



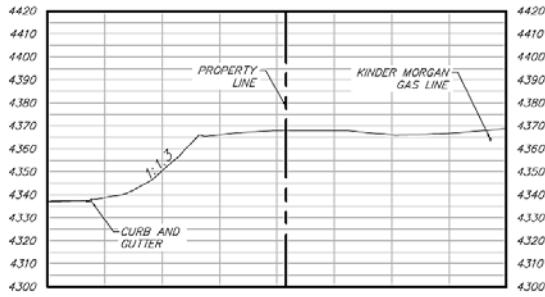
The applicant did not apply for permits for the retaining walls, nor did they apply for revised permits to allow the retaining walls to be eliminated. The applicant provided reports to the Washoe County Engineer stating that the cut slope in that area was stable, but no approval, by means of any permit approvals were given.

This situation was brought to the attention of Washoe County Planning when the applicant sought a final inspection on the development. Planning staff informed the applicant that the configuration of the grading is not in conformance with the plans approved with the special use permit. The applicant has applied for the current special use permit to allow modification of the grading and to seek certain variances to Article 438, Grading.

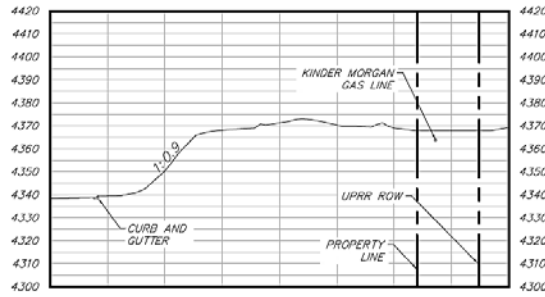
The applicant now proposes that the cut slope in the northeast corner of the subject site be configured as shown below (and on page 6 of this report).



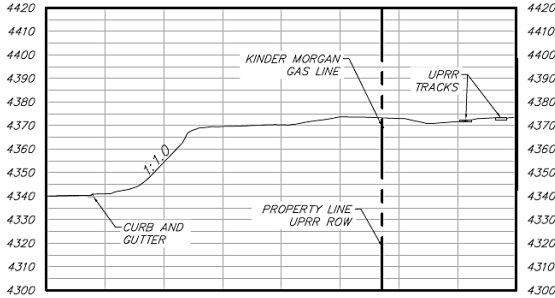




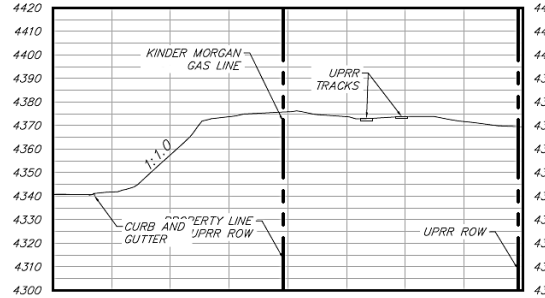
**CROSS SECTION 1**  
SCALE: 1" = 40'-0"



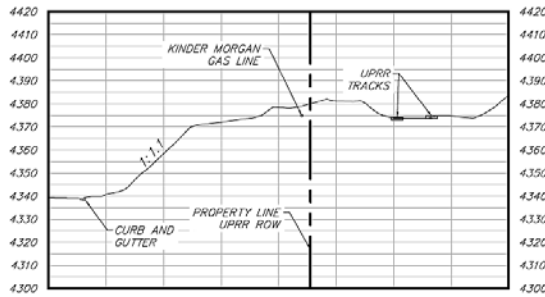
**CROSS SECTION 2**  
SCALE: 1" = 40'-0"



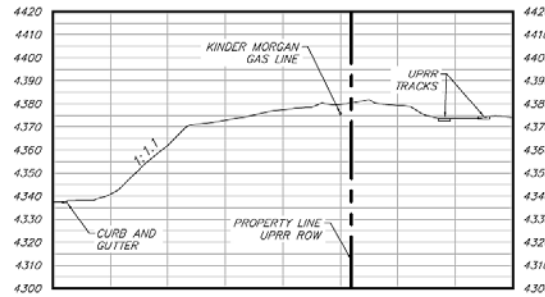
**CROSS SECTION 3**  
SCALE: 1" = 40'-0"



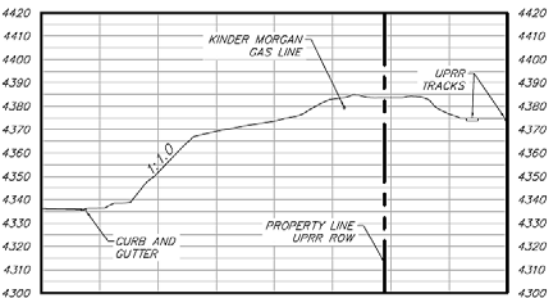
**CROSS SECTION 4**  
SCALE: 1" = 40'-0"



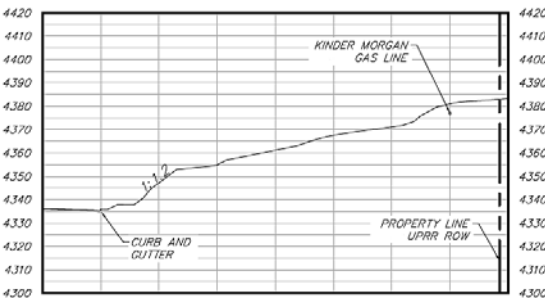
**CROSS SECTION 5**  
SCALE: 1" = 40'-0"



**CROSS SECTION 6**  
SCALE: 1" = 40'-0"



**CROSS SECTION 7**  
SCALE: 1" = 40'-0"



**CROSS SECTION 8**  
SCALE: 1" = 40'-0"

Photos of the current condition of the slope follow:





Existing slopes, as indicated on the cross sections provided by the applicant (page 9), range from the steepest of a ratio of 1 horizontal to 0.9 vertical (1:0.9) to the flattest at a ratio of 1 horizontal to 1.3 vertical (1:1.3). Generally speaking, this slope averages approximately 1 horizontal to 1 vertical (1:1). The height of the cut slope ranges up to approximately 30 feet.

Washoe County Code Section 110.438.45 Grading of Slopes includes the following relevant standards:

- (a) Grading shall not result in slopes in excess of, or steeper than, three horizontal to one vertical (3:1)...

- (c) Finish grading shall not vary from the natural slope by more than ten (10) feet in elevation. Exposed finish grade slopes greater than ten (10) feet in height may be allowed upon the approval of a director's modification of standards by the Director of Community Development upon recommendation by the County Engineer.
- (1) Approval of a director's modification of standards requires a determination that:
- (i) The proposed cut and/or fill slopes include stepped-back structural containment (retaining walls) that form terraces, and;
  - (ii) The proposed terraces include landscaping, are a minimum of six (6) feet in width, and have a slope flatter than three horizontal to one vertical (3:1).
  - (iii) Retaining walls used to create terraces are limited to a maximum vertical height of ten (10) feet, when located outside any required yard setback.

Washoe County Code Section 110.810.20 Review Procedures includes the following relevant provision:

- (e) Action. The Planning Commission, Board of Adjustment or a hearing examiner may take action to approve, approve with conditions, modify, modify with conditions, or deny the special use permit request. The Planning Commission, Board of Adjustment or a hearing examiner may also vary standards of the Development Code as part of the approval of a special use permit application. Failure of the Planning Commission, Board of Adjustment or a hearing examiner to hold a public hearing or take action within the time frames provided in this article shall constitute approval of the application. [highlight added]

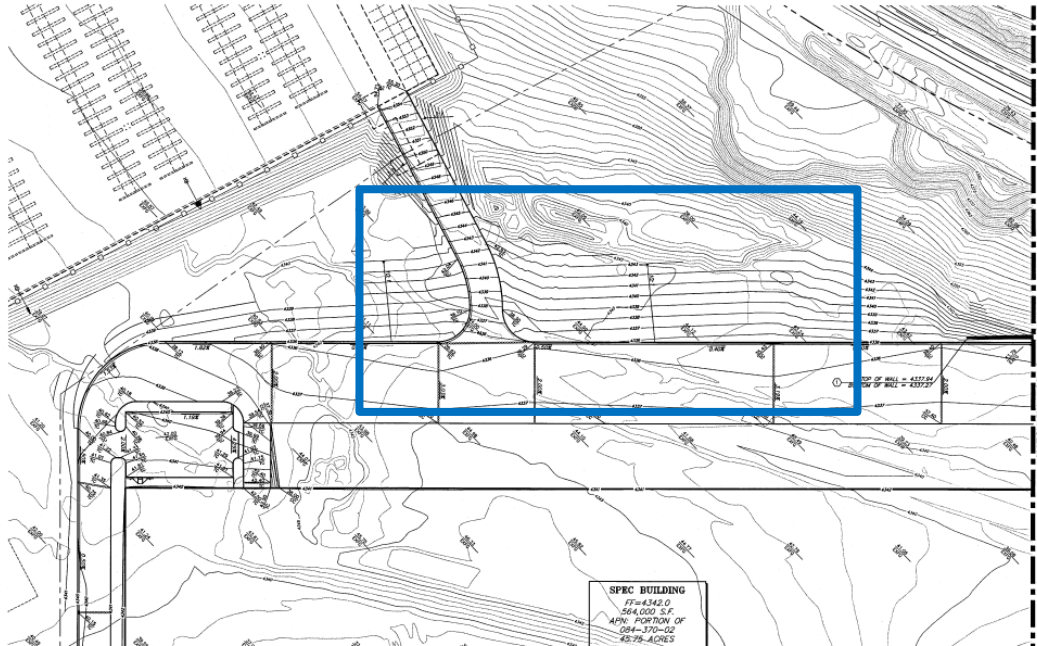
Washoe County Engineering and Planning have evaluated the request and find that there are practical difficulties on the subject site, including the proximity to the boundary of the site and an existing gasoline pipeline that make construction of the previously-approved retaining walls difficult. County Engineering has provided the following condition as part of their recommendation for approval, **"The existing cut slope shall be stabilized by a method(s) approved by Washoe County. If the competency of the cut slope cannot be confirmed, additional methods such as retaining walls, application of wire mesh or spray-on concrete may be required."** Discussion with the applicant has led to the proposal that the slope be stabilized by means of a metal mesh, as generally represented in the following photo. This understanding is included in Exhibit E to this report.



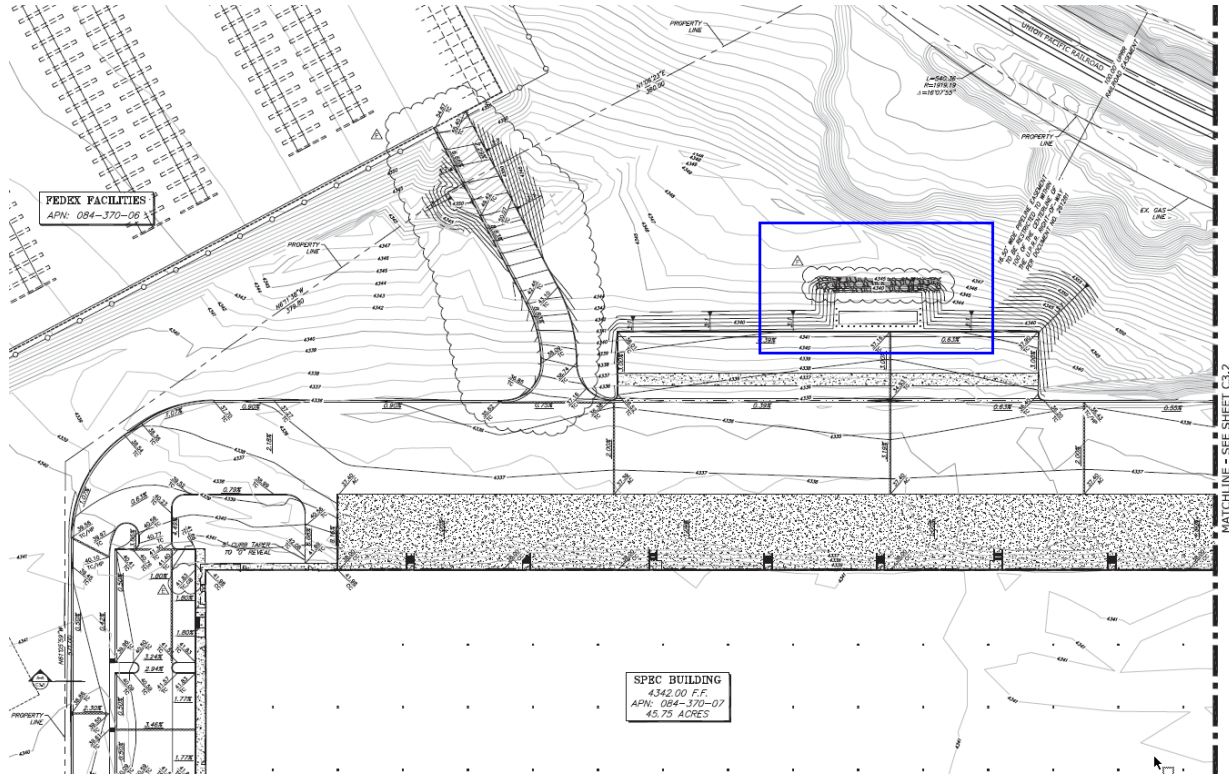
Given the relatively remote location of the project site, its location within an industrial area, that there are no residences adjacent to the proposed cut, and that the slope is required to be further stabilized, it is the opinion of planning staff that approval, by the Board of Adjustment of the cut slope and variances necessitated by it, may be reasonable.

Staff would like to emphasize that without with the addition of further stabilization efforts to the cut slope, such as the application of metal mesh, staff would be unable to recommend approval of the proposed SUP.

The second of these three substantial differences involves the stabilization of a slope behind (to the north of) a large propane tank. The approved plan set (building permit # 16-1945) shows that area as being a consistent, graded slope at a 3 horizontal to 1 vertical (3:1) ratio. The relevant portion of the approved plan set follows:



The plans proposed by the applicant with the current request follow:



As can be seen by comparing the two previous drawings, the parking area has been increased in size by expanding further to the north and a propane tank has been added. Behind the propane tank a rip-rap slope at a ratio of 2 horizontal to 1 vertical (2:1) has been constructed.

Photos of the current condition of that area follow:





Again, the applicant did not apply for permits to revise the configuration of the grading to include a rip-rap slope at a ratio of 2H:1V. Had the applicant applied for permits to allow this configuration, staff would have referred them to Washoe County Code Section 110.438.50 Cuts. That section reads as follows:

**Section 110.438.50 Cuts.** In addition to the requirements in Section 110.438.45, cut slope design and construction will also be based on a geotechnical report as required by Section 110.438.36 unless not required by the County Engineer.

(a) **The use of riprap and gabions as a mechanical stabilization for cut slopes is prohibited**, except where essential for safe access, for passage within the rights-of-way of public roads, and for storm drainage control device(s). [emphasis added]

As previously noted in this report, Washoe County Code Section 110.438.45 prohibits slopes in excess of, or steeper than, three horizontal to one vertical (3:1). However, again, Washoe County Code Section 110.810.20 allows for the Board of Adjustment to vary standards of the Development Code as part of the approval of a special use permit application.

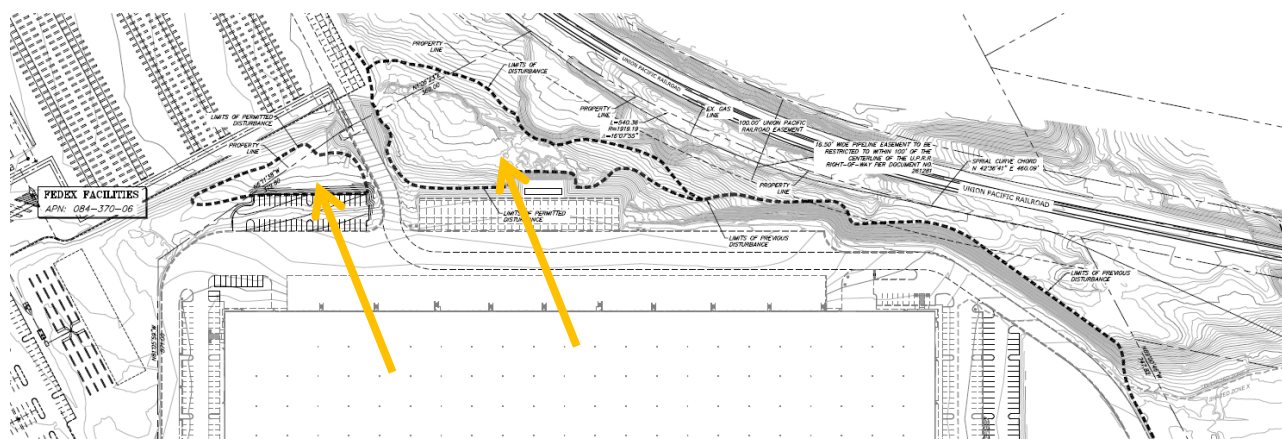
The Washoe-Storey Conservation District has recommended that conditions of approval be included to require small rocks to be placed within all voids between the larger rocks that make up the rip-rap slope to reduce undermining by small animals. That condition of approval has been included in the recommendation.

Generally speaking, planning staff is reluctant to recommend approval of grading after-the-fact that is not in conformance with an approved special use permit. In this case, the area of rip-rap is relatively small, in relation to the entire graded site and not generally visible from off the subject site. It is the opinion of planning staff that approval, by the Board of Adjustment of the variance to allow rip-rap slope stabilization may be reasonable. If approval is granted, staff believes that it is crucial that visual mitigation be required. A condition of approval has been recommended that all rip-rap areas, as well as all newly-excavated rocks and boulders that will remain on the subject site after work is complete, will be treated with a simulated desert varnish product to mimic the look of rocks and boulders that have been exposed for many years. Requirement of this condition will help to implement the purpose of Article 438, Grading, which follows:

**Section 110.438.00 Purpose.** The purpose of this article is to safeguard life, limb, property and the public welfare as well as set standards that **conserve the natural character of our hillsides and minimize disruption of the natural landscape**, by regulating grading on private and public property. [emphasis added]

As noted previously, staff would like to emphasize that without with the addition of further mitigation efforts to the rip-rap slope, such as the application of simulated desert varnish, staff would be unable to recommend approval of the proposed SUP.

The final of these three substantial differences, between the approved grading and the grading that was done, involves the use of a large area in the northwestern corner of the site for stockpiling rocks and boulders. This area is generally located to the west and north of the propane tank. That area was shown on the approved plans to remain undisturbed. The area in question is shown within the thick dashed line (note orange arrows), on the following plan:



As can be seen on the following plans areas proposed to be graded are shown by darker contour lines (note orange arrows), while areas without such lines are proposed to remain ungraded. There is a gated access to the adjacent facility (FedEx) that splits the disturbed area.





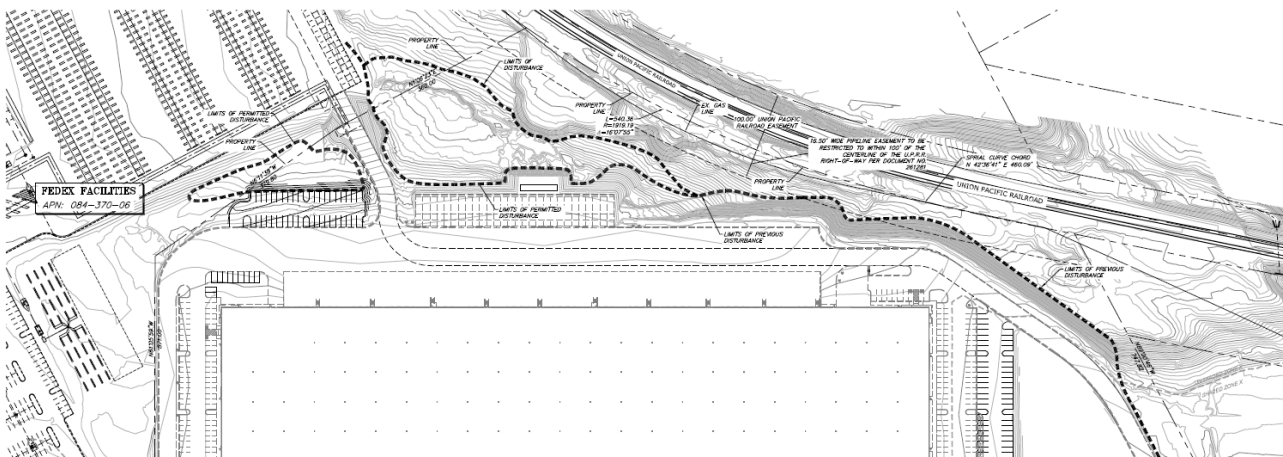


Photos of the current condition of the area to the east of the road / driveway follow:



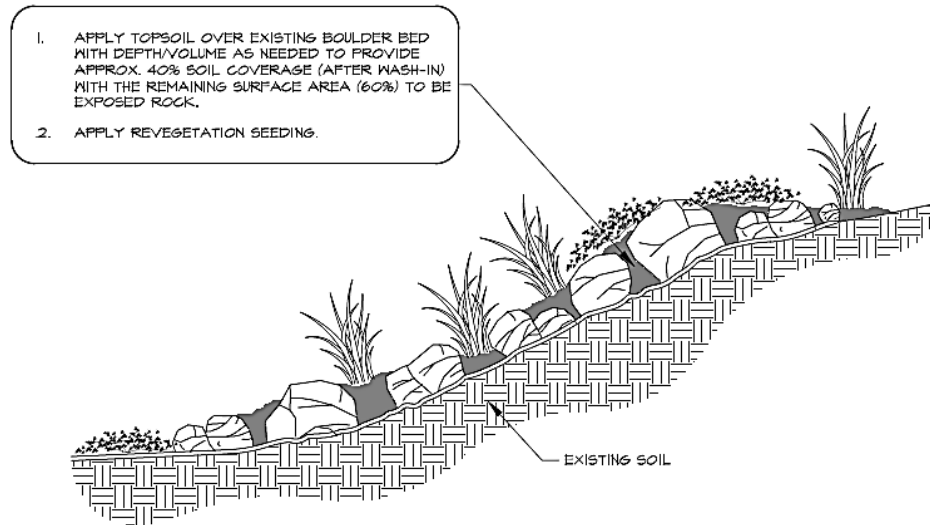


The grading plans approved by Washoe County show the areas in question to remain in an undisturbed condition. However, these areas have been used as a stockpile area for many tons of rock and earth. Those areas are shown on the following plans that have been submitted by the applicant in November of 2019. These plans are the result of many hours of consultation and negotiation between the applicant and planning staff.



The plan for mitigation of the remaining disturbed areas includes several aspects. The piles of rock and boulders will be dispersed to include new areas. The applicant will import topsoil to all rock-pile areas. That soil will be washed into the gaps between the rocks by means of a water truck and all areas will receive application of revegetation efforts. The rock piles are to be covered 40% by topsoil, which will eventually include native vegetation and the remaining 60% will be exposed rock.

The following graphic is from the revised landscape plans submitted by the applicant in November of 2019, and shows the general treatment proposed for the rock-stockpile areas.



## BOULDER STOCKPILE REVEGETATION TREATMENT

NOT TO SCALE

The rock-pile areas include many large boulders. Conditions of approval have been recommended that all boulders that remain exposed greater than 12" in height above the adjacent topsoil will be at least 15 feet from any other rock or boulder with an exposed height of greater than 12". This will help to mitigate the visual impact of the rock-pile areas.

The relevant recommended conditions of approval read as follows:

- b. All disturbed areas shall be returned to a natural contour that mimics the adjacent undisturbed area. Grading in all disturbed areas shall include varying curvilinear contours.
- c. All disturbed areas shall be revegetated with native plant material.
- d. All piles of rocks and boulders shall be treated with topsoil and revegetated in accordance with the revised landscape plans submitted by the applicant on November 4, 2019 (Sheet L-1 and L-2 by L.A. Studio Nevada, dated 10/30/19).
- e. The revised landscape plans submitted by the applicant on November 4, 2019 (Sheet L-1 and L-2 by L.A. Studio Nevada, dated 10/30/19) do not call for irrigation of areas to be revegetated ("dryland revegetation").
  - i. The applicant may provide Washoe County with financial assurances equal to 120% of cost of installation of temporary irrigation and may attempt dryland revegetation for 24 months from the completion of earthwork to comply with this special use permit.
  - ii. The applicant shall call Washoe County for inspection of revegetation 24 months after application.
  - iii. At that time, if vegetation throughout the revegetation and rock pile areas is equal to, or greater than, 50% of the vegetation on the adjacent, undisturbed slopes, then revegetation is successful.
  - iv. At that time, if vegetation throughout the revegetation and rock pile areas is less than, 50% of the vegetation on the adjacent, undisturbed slopes, then revegetation is unsuccessful.

- v. If revegetation is unsuccessful the applicant shall install temporary irrigation throughout the entire revegetation area for a time period of not less than three years.
- vi. The applicant shall call Washoe County for inspection of revegetation 36 months after installation of temporary irrigation throughout the entire revegetation area. The same standards for revegetation shall apply as in Condition # 1(e)(iii) and (iv). If revegetation is unsuccessful temporary irrigation shall be maintained for a further three years.
- f. After application of topsoil, a minimum of 40% of the rock pile areas shall be covered with topsoil. Not more than 60% of the rock pile areas shall be comprised of exposed rocks or boulders.
- g. All rocks remaining partially exposed after application of topsoil shall be 12" or less in height above the adjacent topsoil.
- h. Boulders (24" or greater in size) may remain exposed greater than 12" in height if they are distributed throughout the project area in a random manner that mimics the surrounding, natural, undisturbed area.
- i. Any single boulder (24" or greater in size) remaining partially exposed, greater than 12" in height, after application of topsoil shall be spaced at least 15 feet from any other any single boulder (24" or greater in size) remaining partially exposed, greater than 12" in height.
- j. Any combination of boulders (24" or greater in size), not to exceed a total of four boulders (24" or greater in size) may be placed in a cluster to mimic natural rock outcroppings. Any cluster of boulders (24" or greater in size) shall be spaced at least 45 feet from any other cluster of boulders (24" or greater in size) and shall be spaced at least 15 feet from any single boulder (24" or greater in size) remaining partially exposed.
- k. Revegetation with native plant material is required between all boulders and rocks.
- l. All rocks and boulders remaining partially exposed and all rip-rap slopes shall be treated with a permanent simulated desert varnish to mimic the color of weathered boulders in the surrounding, undisturbed, areas.
- m. The applicant shall demonstrate conformance to the plans approved as part of this special use permit. The Planning and Building Division shall determine compliance with this condition.
- n. Detailed and accurate grading plans must be submitted and approved by Washoe County prior to any additional work on the subject site.

The purpose of the Grading Code, as noted previously in this report, includes conservation of "the natural character of our hillsides and minimize disruption of the natural landscape." It is important to note that mitigation, preservation and restoration of disturbed areas are conditions that are generally applied to all development within Washoe County.

These conditions are the result of extensive work, conversation and negotiation between the applicant and Planning staff. It is the opinion of Planning staff that the recommended conditions of approval represent the best opportunity to restore and conserve the natural character of the subject site. With such conditions of approval to ensure that appropriate mitigation takes place, staff is able to recommend approval of the special use permit request.

Overall, substantial grading has been done that is not in conformance with the previous special use permit. Stringent conditions of approval have been provided, so that, should the Board of Adjustment choose to approve the requested special use permit, and the requested variances to generally-applicable standards, significant impacts upon the surrounding area have the opportunity to be appropriately mitigated, hillsides will be restored, and consistent application of the Development Code will have been achieved.

Should the Board of Adjustment choose to deny the current request, compliance with the previously approved special use permit would be required.

Given the considerations above, staff recommends that the Board of Adjustment approve, with conditions, the requested special use permit.

### **East Truckee Canyon Citizen Advisory Board (ETCCAB)**

The Citizen Advisory Board did not meet during the review time for this request. Individual comments were requested from CAB members, no comments were received by planning staff.

### **Reviewing Agencies**

The following agencies received a copy of the project application for review and evaluation.

- Washoe County Community Services Department
  - Planning and Building Division
  - Engineering and Capital Projects Division
  - Utilities/Water Rights
- Washoe County Health District
  - Air Quality Management Division
  - Vector-Borne Diseases Program
  - Environmental Health Services Division
- Washoe County Regional Animal Services
- Washoe County Sheriff
- State of Nevada
  - Environmental Protection
  - Water Resources
  - Wildlife
- Truckee Meadows Fire Protection District
- Regional Transportation Commission
- Washoe – Storey Conservation District
- US Army Corps of Engineers

Four of the above-listed agencies/departments provided comments and/or recommended conditions of approval in response to their evaluation of the project application. A **summary** of each agency's comments and/or recommended conditions of approval and their contact information is provided. The Conditions of Approval document is attached to this staff report and will be included with the Action Order.

- Washoe County Planning and Building Division addressed conditions to mitigate the impacts associated with grading that was done outside of the previously-approved special use permit.  
**Contact: Roger Pelham, 775.328.3622, rpelham@washoecounty.us**
- Washoe Storey Conservation District provided recommendations for stormwater conveyances. Those recommendations are included in the Agency Comments, attached to this report.  
**Contact: Jim Shaffer, 775.857.8500, shafferjam51@gmail.com**

- Washoe County Engineering addressed technical considerations for stabilization of slopes and requirements for engineered plans.  
**Contact: Leo Vesely, 775.328.2313, lvesely@washoecounty.us**
- Washoe County Air Quality Management addressed the requirement for a dust control permit.  
**Contact: Michael Wolf, 775.784.7206, mwolf@washoecounty.us**

### **Staff Comment on Required Findings**

WCC Section 110.810.30, Article 810, *Special Use Permits*, requires that all of the following findings be made to the satisfaction of the Washoe County Board of Adjustment before granting approval of the request. Staff has completed an analysis of the special use permit application and has determined that the proposal is in compliance with the required findings as follows.

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Truckee Canyon Area Plan.  
*Staff Comment: It is the opinion of staff that the BOA can make this finding in relation to the SUP request overall. Additional stabilization of the cut slope is proposed, and the rip-rap slope is conditioned to be treated with simulated desert varnish, the rock pile areas will be mitigated, if the conditions of approval as recommended are included in the action taken.*
2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.  
*Staff Comment: It is the opinion of staff that the BOA can make this finding as the major grading currently proposed has little effect on roadways and utilities.*
3. Site Suitability. That the site is physically suitable for major grading and for the intensity of such a development.  
*Staff Comment: It is the opinion of staff that the BOA can make this finding. Approval of the SUP, with conditions, will mitigate impacts associated with the grading that was done that does not conform to the approved SUP. The intensity of grading, that is to say, the amount, is substantially more than was previously approved, and encompasses a greater area. If approval is granted, the intensity of such development can be mitigated by implementation of stringent conditions of approval. Only with such mitigation can the site be deemed to be suitable to the intensity of the proposed major grading.*
4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.  
*Staff Comment: It is the opinion of staff that significant detriment can be avoided by imposition of strict conditions of approval, as recommended with this report. Most particularly, negative impacts associated with the rock pile area have the opportunity to be mitigated. Absent stringent conditions of approval to return the subject site to a state that mimics the adjacent undisturbed area, staff would not be able to recommend that that Board of Adjustment make this finding in the affirmative.*
5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.  
*Staff Comment: There is no military installation located within the area required to be noticed for this permit.*

**Recommendation**

Those agencies which reviewed the application recommended conditions to address applicable codes and impacts associated with the project. After a thorough analysis and review, staff recommends that the BOA carefully consider all aspects of Special Use Permit Case Number WSUP19-0019 and the nature of the stringent recommended conditions of approval and approve the requested special use permit. Staff offers the following motions for the Board's consideration.

**Motions**

Approval:

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions as included as Exhibit A to the Staff Report, Special Use Permit Case Number WSUP19-0019 for Scannell Properties, having made all five findings in accordance with Washoe County Code Section 110.810.30.

Denial:

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment deny Special Use Permit Case Number WSUP19-0019 for Scannell Properties, being unable to make all five findings in accordance with Washoe County Code Section 110.810.30.

***(please state the reasons that each finding can or cannot be made)***

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Truckee Canyon Area Plan;
2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven;
3. Site Suitability. That the site is physically suitable for major grading, and for the intensity of such a development;
4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area;
5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

**Appeal Process**

Board of Adjustment action will be effective 10 calendar days after the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant, unless the action is appealed to the Washoe County Board of County Commissioners, in which case the outcome of the appeal shall be determined by the Washoe County Board of County Commissioners. Any appeal must be filed in writing with the Planning and Building Division within 10 calendar days from the date the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant.

Applicant: Scannell Properties  
 Attn: Mike Simmons  
 800 East 96<sup>th</sup> Street, Suite 175  
 Indianapolis, IN 46240



Owner: Scannell Properties #257, LLC  
Attn: Mike Simmons  
8801 River Crossing Blvd, Suite 300  
Indianapolis, IN 46240

Representatives: Tectonics Design Group  
Attn: Matthew Rasmussen  
730 Sandhill Rd, Suite 250  
Reno, NV 89521



# Conditions of Approval

Special Use Permit Case Number WSUP19-0019

The project approved under Special Use Permit Case Number WSUP19-0019 shall be carried out in accordance with the conditions of approval granted by the Board of Adjustment on December 5, 2019. Conditions of Approval are requirements placed on a permit or development by each reviewing agency. These conditions of approval may require submittal of documents, applications, fees, inspections, amendments to plans, and more. These conditions do not relieve the applicant of the obligation to obtain any other approvals and licenses from relevant authorities required under any other act.

**Unless otherwise specified**, all conditions related to the approval of this special use permit shall be met or financial assurance must be provided to satisfy the conditions of approval prior to issuance of a grading or building permit. The agency responsible for determining compliance with a specific condition shall determine whether the condition must be fully completed or whether the applicant shall be offered the option of providing financial assurance. All agreements, easements, or other documentation required by these conditions shall have a copy filed with the County Engineer and the Planning and Building Division.

Compliance with the conditions of approval related to this special use permit is the responsibility of the applicant, his/her successor in interest, and all owners, assignees, and occupants of the property and their successors in interest. Failure to comply with any of the conditions imposed in the approval of the Special Use Permit may result in the institution of revocation procedures.

Washoe County reserves the right to review and revise the conditions of approval related to this special use permit should it be determined that a subsequent license or permit issued by Washoe County violates the intent of this approval.

For the purpose of conditions imposed by Washoe County, “may” is permissive and “shall” or “must” is mandatory.

Conditions of approval are usually complied with at different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e., grading permits, building permits, etc.).
- Prior to obtaining a final inspection and/or a certificate of occupancy.
- Prior to the issuance of a business license or other permits/licenses.
- Some “conditions of approval” are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the project or business.

FOLLOWING ARE CONDITIONS OF APPROVAL REQUIRED BY THE REVIEWING AGENCIES. EACH CONDITION MUST BE MET TO THE SATISFACTION OF THE ISSUING AGENCY.

## **Washoe County Planning and Building Division**

1. The following conditions are requirements of Planning and Building, which shall be responsible for determining compliance with these conditions.

**Contact Name – Roger Pelham, 775.328.3622, [rpelham@washoecounty.us](mailto:rpelham@washoecounty.us)**

- a. The applicant shall attach a copy of the Action Order approving this project to all administrative permit applications (including building permits) applied for as part of this special use permit.
- b. All disturbed areas shall be returned to a natural contour that mimics the adjacent undisturbed area. Grading in all disturbed areas shall include varying curvilinear contours.
- c. All disturbed areas shall be revegetated with native plant material.
- d. All piles of rocks and boulders shall be treated with topsoil and revegetated in accordance with the revised landscape plans submitted by the applicant on November 4, 2019 (Sheet L-1 and L-2 by L.A. Studio Nevada, dated 10/30/19).
- e. The revised landscape plans submitted by the applicant on November 4, 2019 (Sheet L-1 and L-2 by L.A. Studio Nevada, dated 10/30/19) do not call for irrigation of areas to be revegetated (“dryland revegetation”).
  - i. The applicant may provide Washoe County with financial assurances equal to 120% of cost of installation of temporary irrigation and may attempt dryland revegetation for 24 months from the completion of earthwork to comply with this special use permit.
  - ii. The applicant shall call Washoe County for inspection of revegetation 24 months after application.
  - iii. At the end of 24 months, if vegetation throughout the revegetation and rock pile areas is equal to, or greater than, 50% of the vegetation on the adjacent, undisturbed slopes, then revegetation is successful.
  - iv. At the end of 24 months, if vegetation throughout the revegetation and rock pile areas is less than, 50% of the vegetation on the adjacent, undisturbed slopes, then revegetation is unsuccessful.
  - v. If revegetation is unsuccessful the applicant shall install temporary irrigation throughout the entire revegetation area for a time period of not less than three years.
  - vi. The applicant shall call Washoe County for inspection of revegetation 36 months after installation of temporary irrigation throughout the entire revegetation area. The same standards for revegetation shall apply as in Condition # 1(e)(iii) and (iv). If revegetation is unsuccessful temporary irrigation shall be maintained for a further three years.
- f. After application of topsoil, a minimum of 40% of the rock pile areas shall be covered with topsoil. Not more than 60% of the rock pile areas shall be comprised of exposed rocks or boulders.
- g. All rocks remaining partially exposed after application of topsoil shall be 12” or less in height above the adjacent topsoil.
- h. Boulders (24” or greater in size) may remain exposed greater than 12” in height if they are distributed throughout the project area in a random manner that mimics the surrounding, natural, undisturbed area.
- i. Any single boulder (24” or greater in size) remaining partially exposed, greater than 12” in height, after application of topsoil shall be spaced at least 15 feet from any other any single boulder (24” or greater in size) remaining partially exposed, greater than 12” in height.

- j. Any combination of boulders (24" or greater in size), not to exceed a total of four boulders (24" or greater in size) may be placed in a cluster to mimic natural rock outcroppings. Any cluster of boulders (24" or greater in size) shall be spaced at least 45 feet from any other cluster of boulders (24" or greater in size) and shall be spaced at least 15 feet from any single boulder (24" or greater in size) remaining partially exposed.
- k. Revegetation with native plant material is required between all boulders and rocks.
- l. All rocks and boulders remaining partially exposed and all rip-rap slopes shall be treated with a permanent simulated desert varnish to mimic the color of weathered boulders in the surrounding, undisturbed, areas.
- m. The applicant shall demonstrate conformance to the plans approved as part of this special use permit. The Planning and Building Division shall determine compliance with this condition.
- n. Detailed and accurate grading plans must be submitted and approved by Washoe County prior to any additional work on the subject site.
- o. The applicant shall submit construction and grading plans, with all information necessary for a complete and comprehensive review by Washoe County, and building permits shall be issued within **six months** from the date of approval by Washoe County. The applicant shall complete construction and grading prior to the approval of any certificate of occupancy on the subject site. Compliance with this condition shall be determined by the Planning and Building Division.
- p. A note shall be placed on all construction drawings and grading plans stating:

NOTE

Should any cairn or grave of a Native American be discovered during site development, work shall temporarily be halted at the specific site and the Sheriff's Office as well as the State Historic Preservation Office of the Department of Conservation and Natural Resources shall be immediately notified per NRS 383.170.

- q. Small rocks shall be placed within all voids between the larger rocks that make up the rip-rap slope to reduce undermining by small animals.
- r. The following **Operational Conditions** shall be required for the life of the project:
  - i. Failure to comply with the conditions of approval shall render this approval null and void. Compliance with this condition shall be determined by Planning and Building.

**Washoe County Engineering and Capital Projects**

- 2. The following conditions are requirements of the Engineering Division, which shall be responsible for determining compliance with these conditions.

**Contact Name – Leo Vesely, P.E. (775) 328-3600, [ivesely@washoecounty.us](mailto:ivesely@washoecounty.us)**

- a. A complete set of construction improvement drawings, including an on-site grading plan, shall be submitted when applying for a building/grading permit. Grading shall comply with best management practices (BMPs) and shall include detailed plans for grading, site drainage, erosion control (including BMP locations and installation details), slope stabilization, and mosquito abatement. Placement or removal of any excavated materials shall be indicated on the grading plan. Silts shall be controlled on-site and not allowed onto adjacent property.

- b. Grading shall comply with best management practices (BMPs) and shall include detailed plans for grading, site drainage, erosion control (including BMP locations and installation details), slope stabilization, and mosquito abatement.
- c. The existing cut slope shall be stabilized by a method(s) approved by Washoe County. If the competency of the cut slope cannot be confirmed, additional methods such as retaining walls, application of wire mesh or spray-on concrete may be required.
- d. Any grading not covered by this SUP shall be in accordance with Article 110.438 Grading Standards.
- e. Any portions that are to be revegetated, shall have specifications for revegetation procedure and seed mix prepared by a licensed landscape architect or NV licensed design professional.

\*\*\* End of Conditions \*\*\*



# MUSTANG INDUSTRIAL CENTER SPECIAL USE PERMIT FOR

Application to Washoe County

FOR

**Scannell Properties**  
800 East 96th Street, Suite 175  
Indianapolis, IN 46240

*Prepared by:*



730 Sandhill Road, Suite 250  
Reno, Nevada 89521

August 15<sup>th</sup>, 2019

Job Number: 181122





August 15<sup>th</sup>, 2019

Washoe County  
Building & Safety  
1001 E 9<sup>th</sup> St  
Reno, NV 89512

**Re: Mustang Industrial Center Special Use Permit**

To Whom It May Concern,

I am pleased to submit this application on behalf of Scannell Properties for consideration of a Special Use Permit for the Mustang Industrial Center. The Mustang Industrial Center is comprised of two parcels (APN 084-370-06 and 084-370-07) for a total of 117.65 Acres. APN 084-370-06 has a 343,024 SF warehouse building that is currently occupied by FedEx. APN 084-370-07 has just completed construction of a 560,820 SF warehouse that is currently unoccupied pending tenant improvements.

The Mustang Industrial Center was constructed under an existing SUP SB15-001 that allowed for the cut and fill required for construction of the center. The need for this SUP arose from bedrock encountered during grading along the northern slope of APN 084-370-07. These slopes and walls were required for the development to maintain safe clearance from existing high-pressure gas main on the north of the parcel. The bedrock presents different design requirements than the previously approved slope and tiered retaining walls. The Geotechnical investigation and design have been performed in order to determine the most appropriate and feasible slope and stabilization for the encountered bedrock.

Thank you for taking time to review this Mustang Industrial Center Special Use Permit. I, on behalf of Tectonics Design Group and Scannell Properties, appreciate your time and consideration. Should you have any questions or wish to request additional material, please feel free to contact me at your earliest convenience at (775) 624-7134, or via email at [jon@tdg-inc.com](mailto:jon@tdg-inc.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Jon", is written over a light blue rectangular background.

Jonathan Browning, P.E.

## Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

<b>Project Information</b>		Staff Assigned Case No.: _____	
Project Name: <b>Mustang Industrial Development</b>			
Project Description: This a completed 560,820 SF Industrial Warehouse Building. The cut and fill required was completed under SUP Case Number SB15-001. The proposed walls on SB15-001 could not be constructed due to bedrock encountered. Cut slopes designed by a geotechnical engineer are required to complete the project.			
Project Address: 12475 Mustang Road, Washoe County, NV 89434			
Project Area (acres or square feet): 45.75 Acres			
Project Location (with point of reference to major cross streets <b>AND</b> area locator):			
<small>East on Mustang Road from I-80 near the intersection of Mustang Road and Peri Ranch Road. Bound by the Union Pacific Railroad to the north/west and the Truckee River to the south/east.</small>			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
084-370-07	45.75		
Indicate any previous Washoe County approvals associated with this application: Case No.(s). SB15-001			
<b>Applicant Information</b> (attach additional sheets if necessary)			
<b>Property Owner:</b>		<b>Professional Consultant:</b>	
Name: Scannell Properties #257, LLC		Name: Tectonics Design Group	
Address: 8801 River Crossing Blvd, Suite 300		Address: 730 Sandhill Road, Suite 250	
Indianapolis, IN	Zip: 46240	Reno, NV	Zip: 89521
Phone: (763) 331-8854	Fax:	Phone: 775-824-9988 x11	Fax: 824-9986
Email: msimmons@scannellproperties.com		Email: matt@tdg-inc.com	
Cell: (763) 331-8854	Other:	Cell:	Other:
Contact Person: Mike Simmons		Contact Person: Matthew Rasmussen	
<b>Applicant/Developer:</b>		<b>Other Persons to be Contacted:</b>	
Name: Scannell Properties		Name:	
Address: 800 East 96th Street, Suite 175		Address:	
Indianapolis, IN	Zip: 46240		Zip:
Phone: (763) 331-8854	Fax:	Phone:	Fax:
Email: msimmons@scannellproperties.com		Email:	
Cell: (763) 331-8854	Other:	Cell:	Other:
Contact Person: Mike Simmons		Contact Person:	
<b>For Office Use Only</b>			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	



# Property Owner Affidavit

**Applicant Name:** Scannell Properties #257, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF ~~NEVADA~~ <sup>INDIANA</sup> )  
COUNTY OF ~~WASHOE~~ <sup>MARION</sup> )

I, Marc D. Pflieger  
(please print name)

being duly sworn, depose and say that I am the owner\* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

**(A separate Affidavit must be provided by each property owner named in the title report.)**

Assessor Parcel Number(s): 084-370-07

Printed Name Marc D. Pflieger

Signed *Marc D. Pflieger*

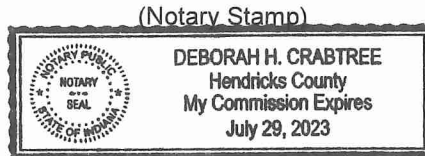
Address 8801 River Crossing Blvd, Suite 300

Indianapolis, IN 46240

Subscribed and sworn to before me this 16<sup>th</sup> day of August, 2019.

Deborah H. Crabtree  
Notary Public in and for said county and state

My commission expires: 7/29/23



\*Owner refers to the following: (Please mark appropriate box.)

- Owner
- Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- Power of Attorney (Provide copy of Power of Attorney.)
- Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- Property Agent (Provide copy of record document indicating authority to sign.)
- Letter from Government Agency with Stewardship

**CONSENT OF THE SOLE MEMBER**  
**OF**  
**SCANNELL PROPERTIES #257, LLC**  
**TO ACTION WITHOUT A MEETING**

The undersigned, constituting the Sole Member of SCANNELL PROPERTIES #257, LLC, an Indiana limited liability company (the "Company"), hereby consent to the following actions to be taken without a meeting.

WHEREAS, pursuant to that certain Operating Agreement of Scannell Properties #257, LLC dated May 23, 2016 (the "Operating Agreement"), the initial managers of the Company are Robert J. Scannell, Douglas L. Snyder and James C. Carlino; and

WHEREAS, the Members may designate or elect unanimously additional Managers of the Company pursuant to Section 2.3 of the Operating Agreement; and

WHEREAS, the Members deem it proper and advisable and in the best interests of the Company to appoint the following individuals as additional Managers for purposes of administering the management of the Company's business affairs:

Ralph I. Shiley  
Marc D. Pflieger

NOW, THEREFORE, IT IS:

**RESOLVED**, that each of the following individuals, be and they hereby are, appointed as additional Managers of the Company, to hold their offices until their successors are chosen and qualified:

Ralph I. Shiley  
Marc D. Pflieger

**FURTHER RESOLVED**, after giving effect to such appointment, the current Managers of the Company are:

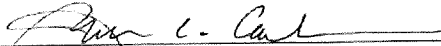
Robert J. Scannell  
Douglas L. Snyder  
James C. Carlino  
Ralph I. Shiley  
Marc D. Pflieger

**FURTHER RESOLVED**, that this Consent be filed with the records of the Company.

DATED as of this 31st day of July, 2018.

**SOLE MEMBER:**

SCANNELL PROPERTIES #249, LLC, an Indiana  
limited liability company

By:   
James C. Carlino, Manager

**Special Use Permit Application  
for Grading  
Supplemental Information**  
(All required information may be separately attached)

1. What is the purpose of the grading?

The site was graded in order to prepare for development of two light industrial buildings, associated parking and access roads. Work was completed under SUP SB15-001. Construction encountered bedrock that prohibited building the retaining walls that were proposed. The current slopes have been stabilized per Geotechnical Recommendation and must remain to support the development.

2. How many cubic yards of material are you proposing to excavate on site?

No additional work is proposed.

3. How many square feet of surface of the property are you disturbing?

No additional work is proposed. +

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

No additional work is proposed.

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

It is not possible to build the walls that were proposed in SB15-001 due to the bedrock encountered. There is also a high pressure gas main that prevents cutting the slopes back further. Geotechnical investigation and design allowed for proper stabilization of the slopes. The current slopes have been determined to be the only feasible solution for the site.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

All of the grading on the plan has been completed. It was done in two phases. The first phase was completed by Arco Construction in 2016-2017 under SB15-001. The second phase performed by United Construction completed the building and associated parking lot and drainage facilities also under SB15-001.

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain your answer.)

All of the grading is complete and only areas and amounts of cut and fill approved under SB15-001 have been completed.

8. Can the disturbed area be seen from off-site? If yes, from which directions and which properties or roadways?

Yes. The cut slope can be seen from the from across the Truckee River in Storey County. The slope is not visible without entering the Mustang Industrial Center from the Washoe side of the Truckee river.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

The slope supports an access route that also provides emergency access to the adjacent parcel that currently is occupied by FedEx.

10. What is the slope (horizontal/vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

The two slopes are approximately 1.5:1 and have been stabilized per the geotechnical recommendations. The slope along the access road is comprised of bedrock and is stable in its current state. The slope behind the propane tank has been treated with riprap.

11. Are you planning any berms?

Yes	NoX	If yes, how tall is the berm at its highest?
-----	-----	--

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

No retaining walls are proposed for the slopes as they are not feasible.

13. What are you proposing for visual mitigation of the work?

Both slopes blend with the surrounding area as currently constructed.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

No additional grading is proposed.

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

The slopes are comprised of bedrock and riprap and will not require revegetation

16. How are you providing temporary irrigation to the disturbed area?

No temporary irrigation is required.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

No revegetation is required. However, WSCD was consulted on the landscaping for the rest of the facility.

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes	No	If yes, please attach a copy.
-----	----	-------------------------------

**Second Amended**



**First American Title Insurance Company**  
**National Commercial Services**  
30 North LaSalle Street, Suite 2700  
Chicago, IL 60602

November 07, 2018

Debbie Crabtree  
Scannell Properties, LLC  
8801 River Crossing Blvd, Suite 300  
Indianapolis, IN 46240-3868  
Phone: (317)218-1661

Fax:

Title Officer: Patricia Rogers  
Phone: (312)553-0471  
Email: progers@firstam.com

Order Number: NCS-913217-CHI2

Property: 12475 Mustang Road, Sparks, NV

***First American Title Insurance Company***

Dennis J. Gilmore  
President

Jeffrey S. Robinson  
Secretary

Countersigned by:

Authorized Signatory

Attached please find the following item(s):

Commitment

Thank you for your confidence and support. We at First American Title Insurance Company maintain the fundamental principle:

**Customer First!**



## **First American Title Insurance Company**

### **INFORMATION**

The Title Insurance Commitment is a legal contract between you and the company. It is issued to show the basis on which we will issue a Title Insurance Policy to you. The Policy will insure you against certain risks to the land title, subject to the limitations shown in the policy.

The Company will give you a sample of the Policy form, if you ask.

The Commitment is based on the land title as of the Commitment Date. Any changes in the land title or the transaction may affect the Commitment and the Policy.

The Commitment is subject to its Requirements, Exceptions and Conditions.

This information is not part of the title insurance commitment.

### **TABLE OF CONTENTS**

	Page
Agreement to Issue Policy	3
Schedule A	
1. Commitment Date	4
2. Policies to be Issued, Amounts and Proposed Insured	4
3. Interest in the Land and Owner	4
4. Description of the Land	4
Schedule B-1 - Requirements	
Schedule B-2 - Exceptions	
Conditions	

**YOU SHOULD READ THE COMMITMENT VERY CAREFULLY.  
If you have any questions about the Commitment,  
please contact the issuing office.**

COMMITMENT FOR TITLE INSURANCE

Issued by

*First American Title Insurance Company*

Agreement to Issue Policy

We agree to issue a policy to you according to the terms of this Commitment.

When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this Commitment is limited by the following:

The Provisions in Schedule A.

The Requirements in Schedule B-1.

The Exceptions in Schedule B-2.

The Conditions.

This Commitment is not valid without Schedule A and Sections 1 and 2 of Schedule B.

### SCHEDULE A

1. Commitment Date: October 31, 2018 at 7:30 A.M.

2. Policy or Policies to be issued: Amount

(A) ALTA Owner's Policy \$TBD

Proposed Insured:

Scannell #257, LLC, an Indiana limited liability company

b. Loan Policy

Proposed Insured:

Delaware Life Insurance Company, its successors and/or assigns \$TBD

3. (A) The estate or interest in the land described in this Commitment is:

Fee as to Parcel 1 and Right of Way as to Parcel 2 and Easement as to Parcel 3

(B) Title to said estate or interest at the date hereof is vested in:

Scannell Properties #257, LLC, an Indiana limited liability company

4. The land referred to in this Commitment is situated in the City of Sparks, County of Washoe, State of Nevada, and is described as follows:

PARCEL 1:

REAL PROPERTY LOCATED IN THE WEST HALF OF SECTION 15, TOWNSHIP 19 NORTH, RANGE 21 EAST, M.D.M., WASHOE COUNTY, NEVADA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 2 OF LAND MAP 246 RECORDED FEBRUARY 3, 2017 IN INSTRUMENT NO. 4677122 OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

PARCEL 2:

RIGHTS UNDER A RIGHT OF WAY GRANT BY THE UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT, UNDER SERIAL NO. NVN 096615) AS EVIDENCED BY THE NOTICE OF BLM RIGHT-OF-WAY GRANT (SERIAL NO. NVN096615) RECORDED AUGUST 10, 2018 AS INSTRUMENT NO. 4840712 OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

PARCEL 3:

TOGETHER WITH EASEMENTS FOR WATER, FIRE PROTECTION AND STORM WATER MANAGEMENT FOR THE BENEFIT OF PARCEL 1 AS CREATED, LIMITED AND DEFINED IN DECLARATION OF COMMON MAINTENANCE AND CROSS-EASEMENTS AGREEMENT RECORDED SEPTEMBER 18, 2017 AS DOCUMENT NO. 4745261 OF THE OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.



## SCHEDULE B

### SECTION ONE REQUIREMENTS

The following requirements must be met:

- (A) Pay the agreed amounts for the interest in the land and/or the mortgage to be insured.
- (B) Pay us the premiums, fees and charges for the policy.
- (C) Documents satisfactory to us creating the interest in the land and/or the mortgage to be insured must be signed, delivered and recorded.
- (D) You must tell us in writing the name of anyone not referred to in this Commitment who will get an interest in the land or who will make a loan on the land. We may then make additional requirements or exceptions.
- (E) Releases(s) or Reconveyance(s) of Item(s): None
- (F) Other: None
- (G) You must give us the following information:
  - 1. Any off record leases, surveys, etc.
  - 2. Statement(s) of Identity, all parties.
  - 3. Other: None

The following additional requirements, as indicated by "X", must be met:

- (H) Provide information regarding any off-record matters, which may include, but are not limited to: leases, recent works of improvement, or commitment statements in effect under the Environmental Responsibility Acceptance Act, Civil Code Section 850, et seq.  
  
The Company's Owner's Affidavit form(as provided by company) must be completed and submitted prior to close in order to satisfy this requirement. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.
- (I) An ALTA/NSPS survey of recent date, which complies with the current minimum standard detail requirements for ALTA/NSPS land title surveys, must be submitted to the Company for review. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.
- (J) The following LLC documentation is required:
  - (i) a copy of the Articles of Organization
  - (ii) a copy of the Operating Agreement, if applicable
  - (iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
  - (iv) express Company Consent to the current transaction
- (K) The following partnership documentation is required :
  - (i) a copy of the partnership agreement, including all applicable amendments thereto
  - (ii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
  - (iii) express Partnership Consent to the current transaction

- (L) The following corporation documentation is required:
  - (i) a copy of the Articles of Incorporation
  - (ii) a copy of the Bylaws, including all applicable Amendments thereto
  - (iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
  - (iv) express Corporate Resolution consenting to the current transaction
  
- (M) Based upon the Company's review of that certain partnership/operating agreement dated **Not disclosed** for the proposed insured herein, the following requirements must be met:

Any further amendments to said agreement must be submitted to the Company, together with an affidavit from one of the general partners or members stating that it is a true copy, that said partnership or limited liability company is in full force and effect, and that there have been no further amendments to the agreement. This Commitment will then be subject to such further requirements as may be deemed necessary.
  
- (N) A copy of the complete lease, as referenced in Schedule A, #3 herein, together with any amendments and/or assignments thereto, must be submitted to the Company for review, along with an affidavit executed by the present lessee stating that it is a true copy, that the lease is in full force and effect, and that there have been no further amendments to the lease. This Commitment will then be subject to such further requirements as may be deemed necessary.
  
- (O) Approval from the Company's Underwriting Department must be obtained for issuance of the policy contemplated herein and any endorsements requested thereunder. This Commitment will then be subject to such further requirements as may be required to obtain such approval.
  
- (P) Potential additional requirements, if ALTA Extended coverage is contemplated hereunder, and work on the land has commenced prior to close, some or all of the following requirements, and any other requirements which may be deemed necessary, may need to be met:
  
- (Q) The Company's "Indemnity Agreement I" must be executed by the appropriate parties.
  
- (R) Financial statements from the appropriate parties must be submitted to the Company for review.
  
- (S) A copy of the construction contract must be submitted to the Company for review.
  
- (T) An inspection of the land must be performed by the Company for verification of the phase of construction.
  
- (U) The Company's "Mechanic's Lien Risk Addendum" form must be completed by a Company employee, based upon information furnished by the appropriate parties involved.

## **SCHEDULE B**

### **SECTION TWO**

#### **EXCEPTIONS**

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction. The printed exceptions and exclusions from the coverage of the policy or policies are set forth in Exhibit A attached. Copies of the policy forms should be read. They are available from the office which issued this Commitment.

1. Water rights, claims or title to water, whether or not shown by the public records.
2. Any taxes that may be due, but not assessed, for new construction which can be assessed on the unsecured property rolls, in the Office of the County Assessor, per Nevada Revised Statute 361.260.
3. Any taxes that may be due as provided under NRS 361.4725.
4. Any unpaid charges due the Washoe County Sewer & Water District. Specific amounts may be obtained by calling the Washoe County Water Resources, Utility Services Division at P.O. Box 11130, Reno, NV 89520, (775) 954-4601.
5. Any adverse claim based upon the assertion that:
  - (A) Any portion of the land lies below the last natural high water mark of the Truckee River.
  - (B) Some portion of the land has been created by artificial means or has accreted to such portion so created.
  - (C) Some portion of the land has been brought within the boundaries thereof by an avulsive movement of the Truckee River or has been formed by accretion of any such portion.
  - (D) Any rights of access to the Truckee River for recreational purposes which may exist over the land.
6. Reservations and provisions as contained in Patent from the United States of America, recorded February 09, 1889, in Book A, Page 391 of Patents, as Instrument No. N/A.
7. Reservations and provisions as contained in Patent from the United States of America, recorded September 19, 1902, in Book A, Page 746 of Patents, as Instrument No. N/A.
8. An easement for public utilities and incidental purposes in the document recorded January 29, 1942 in Book No. 146, Page 21 as Instrument No. 100923 of Official Records.
  - A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.
9. An easement for public utilities and incidental purposes in the document recorded January 11, 1949 in Book No. 228, Page 585 as Instrument No. 170211 of Official Records.

- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.
  - A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629744 of Official Records.
10. An easement for pipelines, valves, necessary appurtenances and incidental purposes in the document recorded June 20, 1956 in Book No. 416, Page 61 as Instrument No. 261281 of Deed Records.
11. An easement for public utilities and incidental purposes in the document recorded November 17, 1964 in Book No. 38, Page 260 as Instrument No. 12830 of Official Records.
- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.
  - A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629745 of Official Records.
12. An easement for public utilities and incidental purposes in the document recorded March 24, 1965 in Book No. 69, Page 485 as Instrument No. 23503 of Official Records.
- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.
  - A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629746 of Official Records.
13. Fifty foot (50') wide flood control, access and greenbelt easement along the north bank of the Truckee River as provided for or delineated on Subdivision Tract Map #1878 , as amended by document entitled "Resolution and Order of Abandonment" recorded January 17, 1989, in Book 2854, Page 851 as Instrument No. 1299517 of Official Records and further amended by Reversion Tract Map #2561.
14. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Survey Map No. 5012. Reference is hereby made to said plat for particulars.

**NOTE:** Said Map depicts a 30' wide access easement purportedly granted per BLM-Nevada Serial No. 77824.

15. The terms and provisions contained in the document entitled "Retail Water Service Area Annexation Agreement" recorded May 19, 2016 as Instrument No. 4590526 of Official Records.
16. A document entitled "Notice of BLM Right-of-Way Grant (Serial No. NVN 096615)" recorded August 10, 2018 as Instrument No. 4840712 of Official Records.
17. The terms and provisions contained in the document entitled "Amended and Restated Indenture" recorded May 23, 2016 as Instrument No. 4591762 of Official Records.

(Affects Parcel 2)

18. The terms and provisions contained in the document entitled "Novation Agreement" recorded May 23, 2016 as Instrument No. 4591763 of Official Records.



19. An easement for access and water facilities and incidental purposes in the document recorded July 20, 2016 as Instrument No. 4611761 of Official Records.
20. An easement for public utilities and incidental purposes in the document recorded August 30, 2016 as Instrument No. 4626980 of Official Records.
21. An easement for public utilities and incidental purposes in the document recorded August 30, 2016 as Instrument No. 4626984 of Official Records.
22. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Land Map No. 246 referenced in the legal description contained herein. Reference is hereby made to said plat for particulars.
23. Covenants, conditions, easements and restrictions in a Declaration of Common Maintenance and Cross-Easements Agreement recorded September 18, 2017 as Instrument No. 4745261 of Official Records.
24. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Survey Map No. 5948. Reference is hereby made to said plat for particulars.
25. The existence of any reversionary interest, possibility of reverter, power of termination, right of first refusal, or similar interest, of the United States of America, or any other person or entity in that portion of the land lying within the right of way granted to the Southern Pacific Railroad by the United States Government.
26. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/NSPS survey.
27. Rights of parties in possession.
28. Those taxes for the fiscal year July 1, 2018 through June 30, 2019, including any secured personal property taxes collected by the County Treasurer.

APN 084-370-07

<b>1st installment</b>	<b>\$ 8,430.53</b>	<b>PAID</b>
<b>2nd installment</b>	<b>\$ 8,253.98</b>	<b>PAID</b>

<b>3rd installment</b>	<b>\$ 8,253.98</b>	
<b>4th installment</b>	<b>\$ 8,253.98</b>	

<b>Total</b>	<b>\$ 33,192.47</b>	
--------------	---------------------	--

**NOTE:**

Said taxes become a lien on July 1, 2018 , each installment will become due and payable on the following dates:

- 1st installment is due on the 3rd Monday of August, 2018.
- 2nd installment is due on the 1st Monday of October, 2018.
- 3rd installment is due on the 1st Monday of January, 2019.
- 4th installment is due on the 1st Monday of March, 2019.

Each installment will become delinquent ten (10) days after due.

**INFORMATIONAL NOTES**

NOTE to proposed insured lender only: No Private transfer fee covenant, as defined in Federal Housing Finance Agency Final Rule 12 CFR Part 1228, that was created and first appears in the Public Records on or after February 8, 2011, encumbers the Title except as follows: None

**NOTE:** We find no open deeds of trust. Escrow please confirm before closing.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

## CONDITIONS

### 1. DEFINITIONS

(a)"Mortgage" means mortgage, deed of trust or other security instrument.

(b)"Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

### 2. LATER DEFECTS

The Exceptions in Schedule B - Section Two may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements (a) and (c) of Schedule B - Section One are met. We shall have no liability to you because of this amendment.

### 3. EXISTING DEFECTS

If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

### 4. LIMITATION OF OUR LIABILITY

Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying on this Commitment when you acted in good faith to:

comply with the Requirements shown in Schedule B - Section One

or

eliminate with our written consent any Exceptions shown in Schedule B - Section Two.

We shall not be liable for more than the Policy Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

### 5. CLAIMS MUST BE BASED ON THIS COMMITMENT

Any claim, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this commitment and is subject to its terms.



## First American Title

### Privacy Information

#### We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

#### Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

#### Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

#### Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

#### Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

#### Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

#### Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet. In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site. There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

#### Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

#### Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive. [FirstAm.com](http://FirstAm.com) uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

#### Fair Information Values

**Fairness** We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.

**Public Record** We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.

**Use** We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.

**Accuracy** We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.

**Education** We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.

**Security** We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.

**EXHIBIT A  
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)**

**1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990  
SCHEDULE B**

**EXCEPTIONS FROM COVERAGE**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

**EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.  
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:  
(a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;  
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;  
(c) resulting in no loss or damage to the insured claimant;  
(d) attaching or created subsequent to Date of Policy; or  
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

**2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970  
SCHEDULE OF EXCLUSIONS FROM COVERAGE**

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

**3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970  
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

**4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970  
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE  
SCHEDULE OF EXCLUSIONS FROM COVERAGE**

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

**5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970  
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

**SCHEDULE B**

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

**6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992  
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE  
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy; (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:  
(a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;  
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;  
(c) resulting in no loss or damage to the insured claimant;  
(d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or  
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.

4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
  - (i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
  - (ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
  - (iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
    - (a) to timely record the instrument of transfer; or
    - (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

**7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992  
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

**SCHEDULE B**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

**8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992  
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1.
  - (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
  - (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
  - (a) created, suffered, assumed or agreed to by the insured claimant;
  - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
  - (c) resulting in no loss or damage to the insured claimant;
  - (d) attaching or created subsequent to Date of Policy; or
  - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
  - (i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
  - (ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
    - (a) to timely record the instrument of transfer; or
    - (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

**9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992  
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

**SCHEDULE B**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:  
Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

**ALTA RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)  
EXCLUSIONS**

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
  - (a) and use
  - (b) improvements on the land
  - (c) and division
  - (d) environmental protectionThis exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date. This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
  - (a) a notice of exercising the right appears in the public records on the Policy Date
  - (b) the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
3. Title Risks:
  - (a) that are created, allowed, or agreed to by you
  - (b) that are known to you, but not to us, on the Policy Date -- unless they appeared in the public records
  - (c) that result in no loss to you
  - (d) that first affect your title after the Policy Date -- this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
  - (a) to any land outside the area specifically described and referred to in Item 3 of Schedule A OR
  - (b) in streets, alleys, or waterways that touch your landThis exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

**11. EAGLE PROTECTION OWNER'S POLICY**

**CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998  
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998**

**Covered Risks 14 (Subdivision Law Violation). 15 (Building Permit). 16 (Zoning) and 18 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability**

**EXCLUSIONS**

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:

a. building	b. zoning
c. land use	d. improvements on the land
e. land division	f. environmental protection

This exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date. This exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
  - a. a notice of exercising the right appears in the Public Records at the Policy Date; or
  - b. the taking happened before the Policy Date and is binding on You if You bought the Land without Knowing of the taking.
4. Risks:
  - a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
  - b. that are Known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
  - c. that result in no loss to You; or
  - d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.d, 22, 23, **WSUP19-0019**



5. Failure to pay value for Your Title.
6. Lack of a right:
  - a. to any Land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
  - b. in streets, alleys, or waterways that touch the Land.This exclusion does not limit the coverage described in Covered Risk 11 or 18.

## **12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)**

### **EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or (iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.  
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
  - (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

## **13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006**

### **EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.  
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
  - (a) a fraudulent conveyance or fraudulent transfer, or

- (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

#### **14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006 WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

##### **SCHEDULE B**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

#### **15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors rights laws, that the transaction vesting the Title as shown in Schedule A, is
  - (a) a fraudulent conveyance or fraudulent transfer; or
  - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

#### **16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

##### **SCHEDULE B**

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

Washoe County Treasurer  
Tammi Davis

## Bill Detail

[Back to Account Detail](#)
[Change of Address](#)
[Print this Page](#)

## Washoe County Parcel Information

Parcel ID	Status	Last Update
08437007	Active	8/16/2019 2:07:46 AM

**Current Owner:**  
SCANNELL PROPERTIES #257 LLC  
8801 RIVER CROSSING BLVD STE 300  
INDIANAPOLIS, IN 46240

**SITUS:**  
12475 MUSTANG RD  
WASHOE COUNTY NV

**Taxing District:**  
4000

**Geo CD:**

Legal Description  
SubdivisionName \_GOVERNMENT HOMESITES Section 15 Lot 2 Block Range 21 Township 19

## Pay By Check

Please make checks payable to:  
**WASHOE COUNTY TREASURER**

## Mailing Address:

P.O. Box 30039  
Reno, NV 89520-3039

## Overnight Address:

1001 E. Ninth St., Ste D140  
Reno, NV 89512-2845

## Change of Address

All requests for a mailing address change must be submitted in writing, including a signature (unless using the online form).

To submit your address change online [click here](#)

Address change requests may also be faxed to:  
(775) 328-3642

Address change requests may also be mailed to:  
Washoe County Assessor  
1001 E 9th Street  
Reno, NV 89512-2845

## Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/19/2019	2019	\$0.00	\$0.00	\$0.00	\$0.00
INST 2	10/7/2019	2019	\$25,774.34	\$0.00	\$0.00	\$25,774.34
INST 3	1/6/2020	2019	\$25,774.34	\$0.00	\$0.00	\$25,774.34
INST 4	3/2/2020	2019	\$25,774.34	\$0.00	\$0.00	\$25,774.34
<b>Total Due:</b>			<b>\$77,323.02</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$77,323.02</b>

## Tax Detail

	Gross Tax	Credit	Net Tax
State of Nevada	\$5,834.33	(\$429.85)	\$5,404.48
Truckee Meadows Fire Dist	\$18,532.58	(\$1,365.42)	\$17,167.16
Washoe County	\$47,762.58	(\$3,518.99)	\$44,243.59
Washoe County Sc	\$39,072.88	(\$2,878.75)	\$36,194.13
Water District	\$170.28	\$0.00	\$170.28
TRACY SEGMENT WATER BASIN	\$6.48	\$0.00	\$6.48
RECLAMATION DAM SAFETY	\$88.00	\$0.00	\$88.00
<b>Total Tax</b>	<b>\$111,467.13</b>	<b>(\$8,193.01)</b>	<b>\$103,274.12</b>

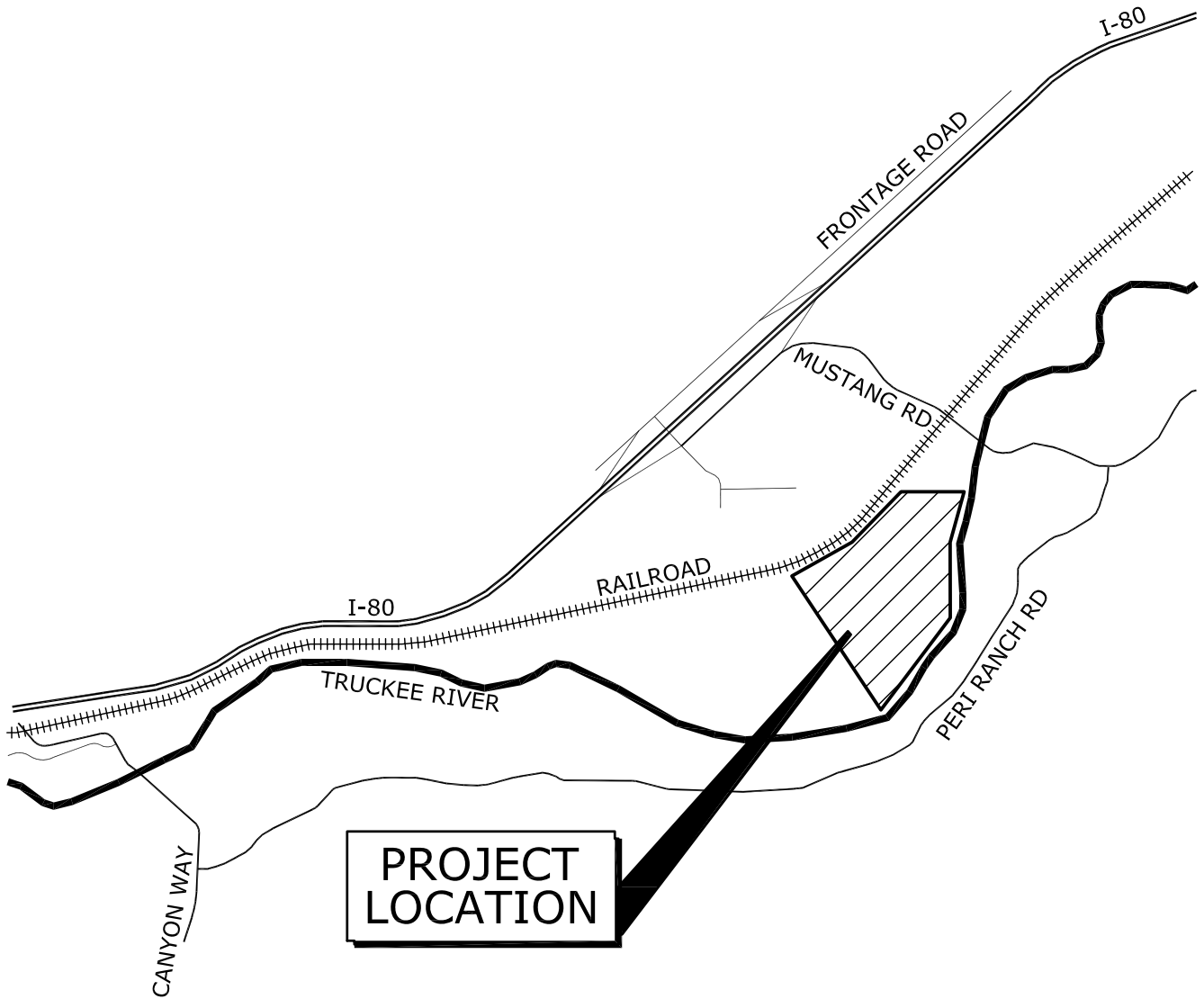
## Payment History

Tax Year	Bill Number	Receipt Number	Amount Paid	Last Paid
2019	2019182676	B19.29051	\$25,951.10	8/6/2019

The Washoe County Treasurer's Office makes every effort to produce and publish the most current and accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use, or its interpretation. If you have any questions, please contact us at (775) 328-2510 or tax@washocounty.us

This site is best viewed using Google Chrome, Internet Explorer 11, Mozilla Firefox or Safari.

DRAWN:	J.P.B.	DATE:	08/01/18
DESCRIPTION:	VICINITY MAP	APN:084-370-07	SUBMITTAL: EX-1



**PROJECT  
LOCATION**

**VICINITY MAP**

SCALE: N.T.S.



PROJECT/CLIENT:

**MUSTANG INDUSTRIAL DEVELOPMENT**  
McCarran, NV

JOB #: 18091

**SCANNELL PROPERTIES**  
821 Meander Court, Suite 200, Medina, Minnesota 55340



10451 Double R Boulevard, Reno, NV 89521  
www.tectonicsdesigngroup.com

tel 775-824-9988  
fax 775-824-9986

All drawings herein are the property of Tectonics Design Group and may not be reproduced in any form without the written authorization of Tectonics Design Group.

DRAWN: J.P.B. / W.T.G.  
 DESIGNED: J.P.B.  
 CHECKED/STAMPED:

STAMP:

**TECTONICS**  
 DESIGN GROUP

730 Sandhill Rd., #250, Reno, Nevada 89521  
 www.tectonicsdesigngroup.com  
 Tel: 775-824-9988 Fax: 775-824-9986

PROJECT/CLIENT: # 18991  
 MUSTANG INDUSTRIAL DEVELOPMENT  
 12475 MUSTANG ROAD Washoe County, NV  
 Scannell Properties  
 821 Meander Court, Suite 200, Medina, Minnesota 55340

DATE: 06/14/16  
 PRELIMINARY DESIGN  
 CLIENT UPDATES  
 09/26/18 BUILDING PERMITS  
 09/28/18 PERMITS REF 11  
 01/02/18 SERVICE CONTRACT UPDATES PER  
 01/16/19 THIRD COMMENTS UPDATES  
 05/30/19 UPDATES SD CHANGES  
 08/14/19 UPDATED CATALOG DETAIL  
 ASBUILT DRAWINGS

SHEET TITLE: SHEET: WSUP19-0019 EXHIBIT B



Photo Locations  
 SCALE: NTS

TO DUMP

View 1



View 2



View 3



View 4





View 5



View 6



Copyright: TECTONICS DESIGN GROUP

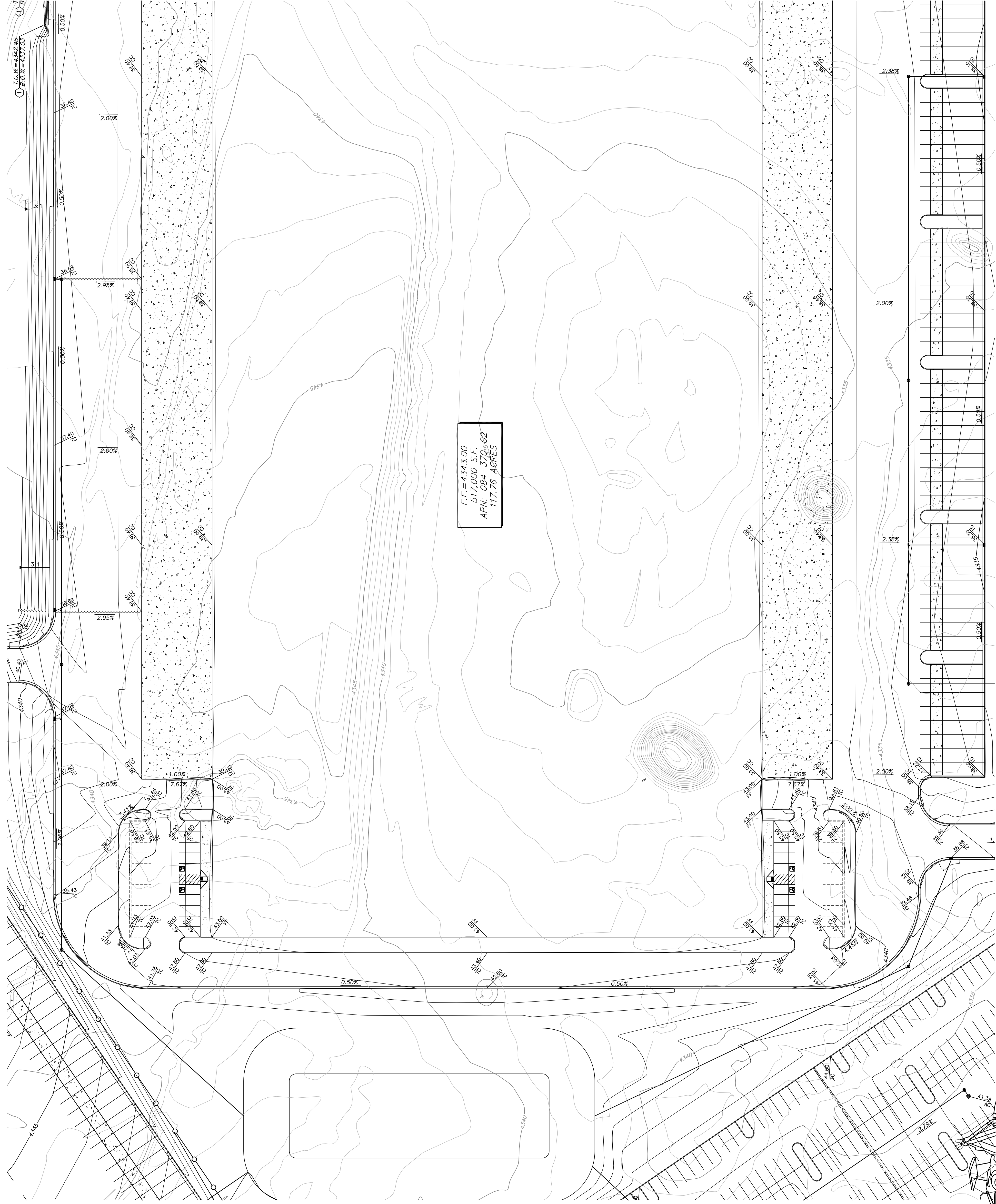
DESIGNER: TECTONICS DESIGN GROUP  
 PROJECT/CLIENT: Mustang Industrial Development  
 DATE: 03/10/15  
 SUBMITTAL RECORD: SUP-SUBMITTAL

STAMP: S.W.T. MATT N. CASMUSSEN, P.E.

DESIGNER: TECTONICS DESIGN GROUP  
 PROJECT/CLIENT: Mustang Industrial Development  
 DATE: 03/10/15  
 SUBMITTAL RECORD: SUP-SUBMITTAL

DESIGNER: TECTONICS DESIGN GROUP  
 PROJECT/CLIENT: Mustang Industrial Development  
 DATE: 03/10/15  
 SUBMITTAL RECORD: SUP-SUBMITTAL

SHEET TITLE: GRADING PLAN  
 SHEET: C3.5



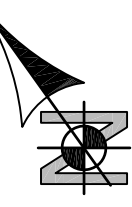
F.F. = 4343.00  
 517,000 S.F.  
 APN: 084-370-02  
 117.76 ACRES

PRELIMINARY ESTIMATED EARTHWORK QUANTITIES (TO SUB-GRADE):  
 CUT: 332,860 CY CUT  
 FILL: 4,275 CY FILL  
 TOTAL: 4,275 CY EXPORT  
 NOTE: THESE ARE ESTIMATED QUANTITIES ONLY. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROJECT TO LINES AND GRADES AS SHOWN ON THE PLANS.

- NOTES:
1. REFERENCE "GENERAL NOTES" ON SHEET C6.1
  2. REFERENCE "ABBREVIATIONS" ON SHEET C6.1
  3. REFERENCE "LEGEND" ON SHEET C6.1
  4. ADD 4300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
  5. PERMANENT STRIPING, BIKE LANES, AND MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"
  6. DISTURBED AREAS TO BE RE-VEGETATED WITH IRRIGATION

CONSTRUCTION NOTES:

1. CONSTRUCT ROCK RETAINING WALL, DESIGN BY OTHERS.



GRADING PLAN

SCALE: 1" = 40'-0"

Impacted Page 1 of 2 - from SB15-001

2 DAYS BEFORE YOU DIG CALL USA TOLL FREE 1-800-227-2600

Copyright: TECTONICS DESIGN GROUP

Drawn: S.W.T.  
 Designed: S.W.T.  
 Checked: MATT K. RASMUSSEN, P.E.  
 Project: MUSTANG INDUSTRIAL DEVELOPMENT

Stamp: [Blank]

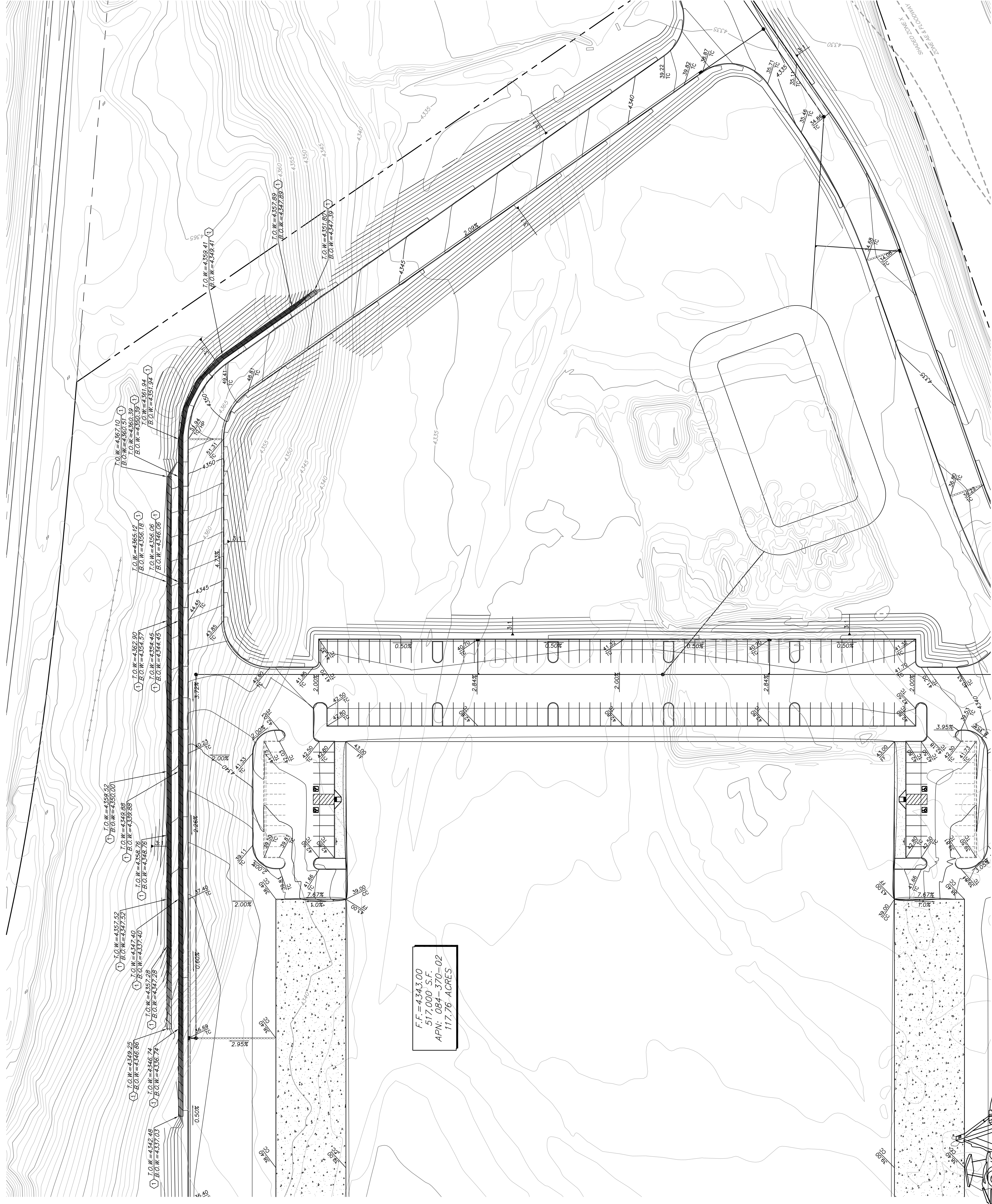
**TECTONICS**  
 DESIGN GROUP

10451 Double R Boulevard  
 Reno, NV 89521  
 Tel: 775-824-9988  
 www.tdg-inc.com

**Mustang Industrial Development**  
 McCarren, NV  
**Scannell Properties**  
 821 Meander Court, Suite 200, Medina, Minnesota 55340

Project/Client: # 14217  
 Date: 03/10/15  
 Submittal: SUP-SUBMITTAL

Submittal Record: [Blank]  
 Sheet Title: GRADING PLAN  
 Sheet: C3.6

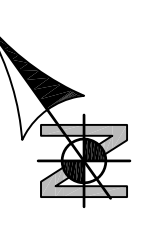


**PRELIMINARY ESTIMATED EARTHWORK QUANTITIES (TO SUB-GRADE):**  
 CUT: 332,860 CY  
 FILL: 1,420,000 CY  
 TOTAL: 4,875 CY EXPORT  
 NOTE: THESE ARE ESTIMATED QUANTITIES ONLY. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROJECT TO LINES AND GRADES AS SHOWN ON THE PLANS.

- NOTES:**
1. REFERENCE "GENERAL NOTES" ON SHEET C6.1
  2. REFERENCE "ABBREVIATIONS" ON SHEET C6.1
  3. REFERENCE "LEGEND" ON SHEET C6.1
  4. ADD 4300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
  5. PERMANENT STRIPING, BIKE LANES, AND MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"
  6. DISTURBED AREAS TO BE RE-VEGETATED WITH IRRIGATION

**CONSTRUCTION NOTES:**

1. CONSTRUCT ROCK RETAINING WALL, DESIGN BY OTHERS.



GRADING PLAN  
 SCALE: 1" = 40'-0"

Impacted Page 2 of 2 - from SB15-001

2 DAYS BEFORE YOU DIG CALL USA TOLL FREE 1-800-227-2600

All drawings herein are the property of Tectonics Design Group, Inc. and shall not be reproduced or used in any capacity without the written authorization of Tectonics Design Group.

DESIGNED BY: J.P.B. / W.T.G.  
J.P.B.

CHECKED/STAMPED:

**TECTONICS**  
DESIGN GROUP

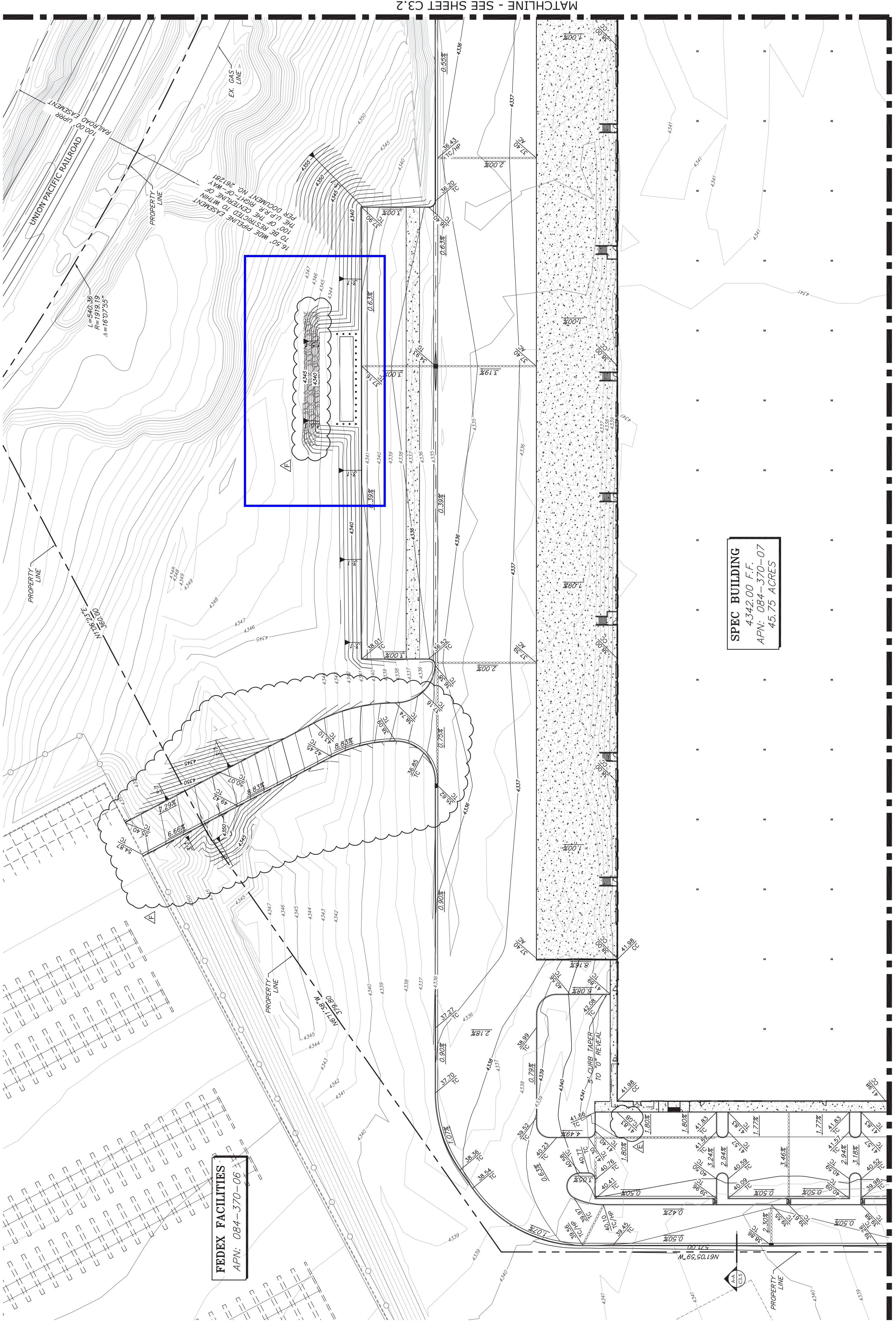
730 Sandhill Rd., #250, Reno, Nevada 89521  
www.tectonicsdesigngroup.com  
Tel: 775-824-9888  
Fax: 775-824-9866

**MUSTANG INDUSTRIAL DEVELOPMENT**  
12475 MUSTANG ROAD Washoe County, NV  
Scannell Properties  
821 Meander Court, Suite 200, Medina, Minnesota 55340

DATE:	SUBMITTAL
06/14/16	SITE IMPROVEMENT
09/26/18	PERMIT # 16-0945
09/28/18	BUILDING SHIFT
01/02/18	SEWER I/E UPDATES
01/02/18	TRUCK I/E UPDATES
01/16/19	UPDATES PER ARCH.
05/30/19	UPDATES PER ARCH.
08/14/19	ASBUILT DRAWINGS

WEST - GRADING PLAN

C3.1

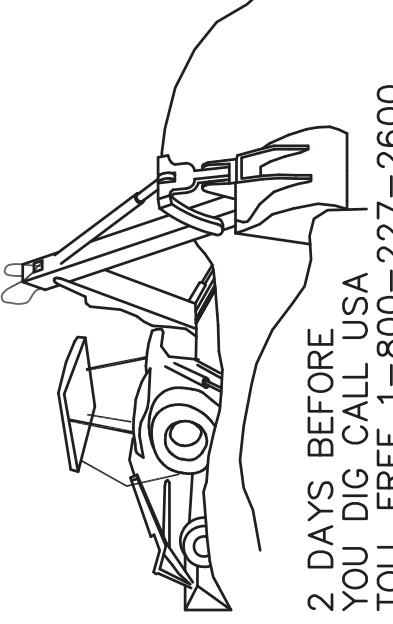


MATCHLINE - SEE SHEET C3.3

WEST - GRADING PLAN  
SCALE: 1" = 40'-0"

**SPEC BUILDING**  
4,342.00 F.F.  
APN: 084-370-07  
45.75 ACRES

**FEDEX FACILITIES**  
APN: 084-370-06



2 DAYS BEFORE  
YOU DIG CALL USA  
TOLL FREE 1-800-227-2600

- NOTE:**  
SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED DURING THE COURSE OF THIS PROJECT, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE ARCHITECT AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DISCOVERY. RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE A MINIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.
- CONSTRUCTION NOTES:**
- CONSTRUCT INFILTRATION BASIN AS PER DETAIL 1, SHEET C6.4 TO THE SPECIFICATIONS AND THE STATE HISTORIC PRESERVATION OFFICE OF THE ARCHITECT AND THE STATE HISTORIC PRESERVATION OFFICE OF THE ARCHITECT. ALL INFILTRATION BASINS SHALL MEET WATER QUALITY REQUIREMENTS ESTABLISHED BY THE IDEP.
  - CONSTRUCT RIPRAP CHANNEL AS PER DETAIL 6, SHEET C6.4
- NOTES:**
- REFERENCE "GENERAL NOTES" ON SHEET C6.1
  - REFERENCE "ABBREVIATIONS" ON SHEET C6.1
  - REFERENCE "LEGEND" ON SHEET C6.1
  - ADD 4.500 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
  - DISTURBED AREAS TO BE RE-VEGETATED
  - SEE GEOTECHNICAL REPORT FOR OVER EXCAVATION REQUIREMENTS
  - ALL CREATED SLOPES GREATER THAN 3:1 SHALL BE TREATED WITH 0.5' DEEP 6"-8" ROCK RIPRAP
  - TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AT THE LIMITS OF GRADING
  - ALL MATERIALS (SUCH AS GRAVEL, CONCRETE, SOIL AND OTHER DUMPED MATERIALS) SHALL BE STORED AT A LOCATION APPROVED BY WASHOE COUNTY. REMOVE FROM THE PROJECT SITE TO A LOCATION APPROVED BY WASHOE COUNTY.
  - BOULDERS UNARMED DURING GRADING SHALL BE PLACED ON ALL CUTS AND FILL SLOPES TO HELP STABILIZE THE SLOPES AND TO HELP CREATE A MORE NATURAL APPEARANCE
  - EVERY ATTEMPT HAS BEEN MADE TO GRADE THIS DEVELOPMENT AS A BALANCED SITE WITH MINIMAL IMPORT OR EXPORT OF FILL REQUIRED.

MATCHLINE - SEE SHEET C3.2

All drawings herein are the property of Tectonics Design Group. No part of this drawing may be reproduced or used in any capacity without the written authorization of Tectonics Design Group. DRAWN: J.P.B. / W.T.G. DESIGNED: J.P.B. CHECKED/STAMPED:	STAMP:	DESIGNER:	PROJECT/CLIENT:	SUBMITTAL RECORD:	SHEET TITLE:
MUSTANG INDUSTRIAL DEVELOPMENT 12475 MUSTANG ROAD Washoe County, NV Scannell Properties 821 Meander Court, Suite 200, Medina, Minnesota 55340 WWW.TECTONICSDESIGNGROUP.COM 730 Sandhill Rd., #250, Reno, Nevada 89521 TEL: 775-824-9888 FAX: 775-824-9866				DATE: 06/14/16 09/26/18 09/28/18 01/02/18 01/16/19 05/30/19 08/14/19 SUBMITTAL RECORD:	NORTH - GRADING PLAN C3.2

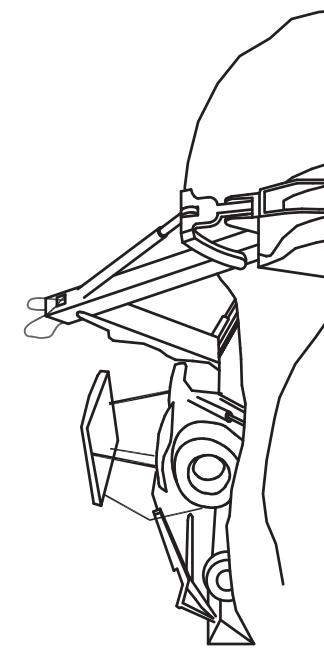
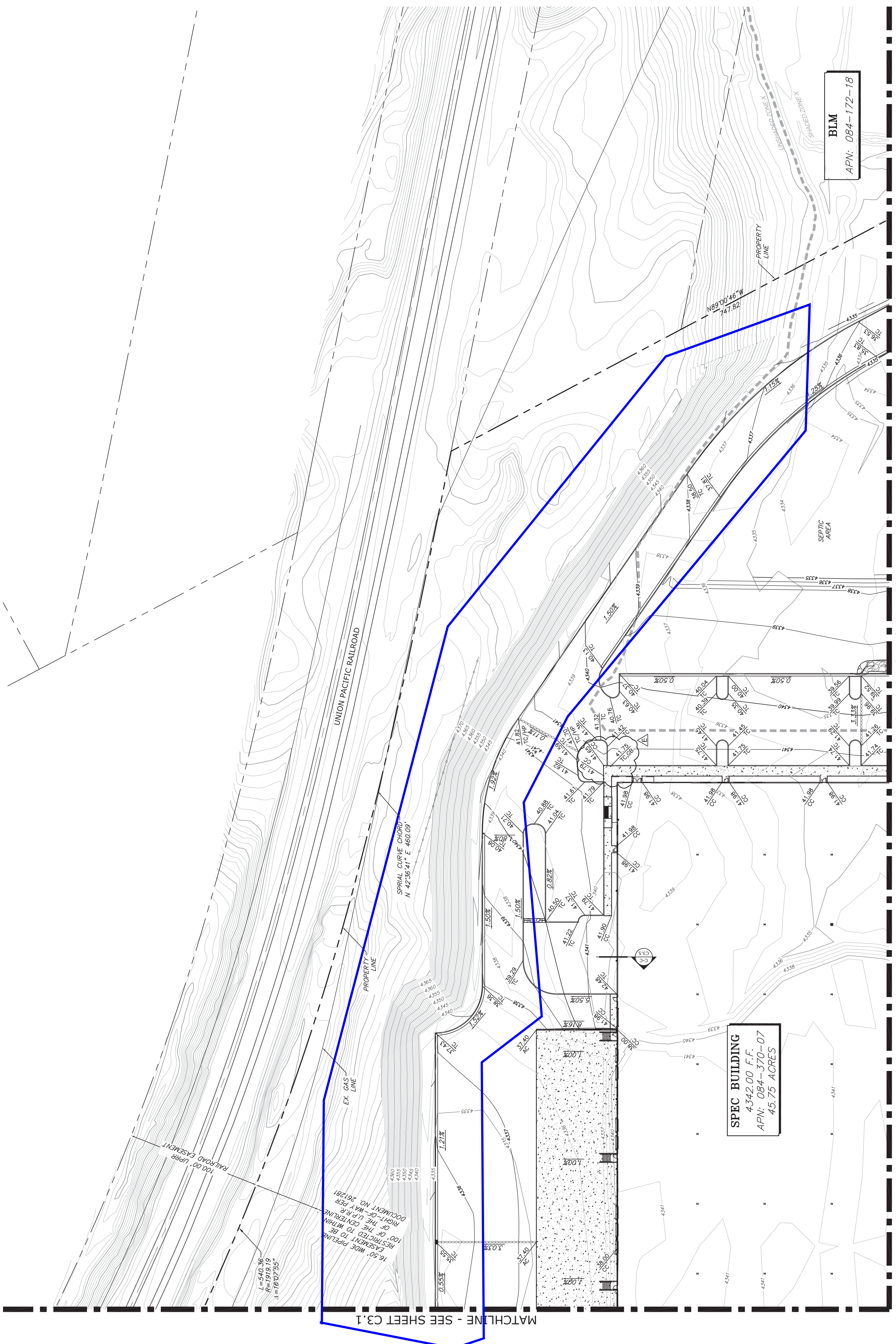
**NOTE:**  
 SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED WHILE CONDUCTING THE WORK, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE HISTORIC PRESERVATION OFFICE OF THE STATE OF NEVADA, COUNTY ENGINEER, COUNTY HISTORIC PRESERVATION OFFICE OF THE COUNTY OF WASHOE, LIBRARY AND ARTS SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.

**CONSTRUCTION NOTES:**

- CONSTRUCT INFILTRATION BASIN AS PER DETAIL 1, SHEET C6.4 TO THE EXISTING GRADE. THE INFILTRATION BASIN SHALL BE CONSTRUCTED TO MEET THE DESIGN AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE MDEP.
- CONSTRUCT RIPRAP CHANNEL AS PER DETAIL 6, SHEET C6.4

**NOTES:**

- REFERENCE "GENERAL NOTES" ON SHEET C6.1
- REFERENCE "ABBREVIATIONS" ON SHEET C6.1
- REFERENCE "LEGEND" ON SHEET C6.1
- ADD 4.500 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
- DISTURBED AREAS TO BE RE-VEGETATED
- SEE GEOTECHNICAL REPORT FOR OVER EXCAVATION REQUIREMENTS
- ALL CREATED SLOPES GREATER THAN 3:1 SHALL BE TREATED WITH 0.5' DEEP 6"-8" ROCK RIPRAP
- TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AT THE LIMITS OF GRADING
- ALL MATERIALS (SUCH AS GRAVEL, CONCRETE, SOIL AND OTHER DUMPED MATERIALS) SHALL BE STORED IN A DESIGNATED AREA AND ALL MATERIALS REMOVED FROM THE PROJECT SITE TO A LOCATION APPROVED BY WASHOE COUNTY.
- BOULDERS UNARMED DURING GRADING SHALL BE PLACED ON ALL CUT AND FILL SLOPES TO HELP STABILIZE THE SLOPES AND TO HELP CREATE A MORE NATURAL APPEARANCE
- EVERY ATTEMPT HAS BEEN MADE TO GRADE THIS DEVELOPMENT AS A BALANCED SITE WITH MINIMAL IMPORT OR EXPORT OF FILL REQUIRED.



2 DAYS BEFORE YOU DIG CALL USA TOLL FREE 1-800-227-2600

Mr. Mike Simmons  
Scannell Properties  
8801 River Crossing Boulevard Suite 300  
Indianapolis, IN 46240

Project No.: 1827-04-1  
August 16, 2019

**RE: Geotechnical Investigation Addendum – Bedrock Cut Slopes  
Mustang Industrial Development Spec Building  
Washoe County, Nevada**

Dear Mr. Simmons:

Black Eagle Consulting, Inc. (BEC) completed a geotechnical investigation for the above-referenced project titled *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada*, dated March 25, 2016. Black Eagle Consulting, Inc. provided inspection and testing services during the original mass grading for the overall project which included both the FedEx building and the Spec building as well as the construction of these buildings. This addendum provides a summary of the geotechnical conditions and BEC's evaluation associated with the bedrock cut slope that was constructed as part of the project.

The March 2016 geotechnical investigation report provides the recommendation that the bedrock cuts northwest of the Spec building can be sloped at a 1.5H:1V (horizontal to vertical) ratio. During grading, competent bedrock was encountered in this area and was consequently evaluated by BEC; we provided the recommendation that the bedrock cuts can be sloped at a 1H:1V ratio via a geotechnical memorandum dated August 12, 2016. The August 2016 memorandum also discussed the originally planned tiered rockery walls in this area which can be eliminated with the competent bedrock encountered and the possible steep cut slope in bedrock. Based on BEC's evaluation during grading as well as our recent evaluation (3 years after construction of the bedrock cut slope), the subject bedrock cut slope is globally stable and should provide sufficient long-term performance.

In addition, BEC also evaluated the cut slope associated with the propane tank pad northwest of the Spec building and provided geotechnical recommendations on its stability and for long-term performance. The evaluation by BEC as well as the recommendations were provided via a geotechnical memorandum dated April 23, 2019.

The geotechnical report for the project and geotechnical memorandums discussed within this letter are attached.

We appreciate being of service to you on this project. If you have any questions or require any additional information, please do not hesitate to contact us.



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600

Fax: 775/359-7766

Email: mail@blackeagleconsulting.com

**WSUP19-0019**

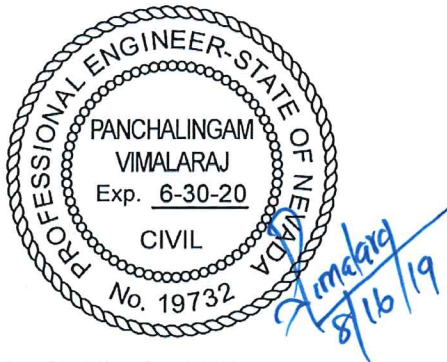
**EXHIBIT B**

Mr. Mike Simmons  
Scannell Properties  
August 16, 2019

2

Sincerely,

Black Eagle Consulting, Inc.



Vimal P. Vimalaraj, P.E.  
Engineering Division Manager

PV:cjr

Copies to: Addressee (PDF via email)  
Mr. Jon Browning, PE, Tectonics Design Group (7 copies and PDF via email)



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600

Fax: 775/359-7766

Email: [mail@blackeagleconsulting.com](mailto:mail@blackeagleconsulting.com)

**WSUP19-0019**

**EXHIBIT B**

Black Eagle Consulting, Inc.

Geotechnical Investigation  
Update

**Mustang Industrial  
Development  
Spec Building**

Washoe County, Nevada

March 25, 2016

Prepared for  
Scannell Properties



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

**WSUP19-0019  
EXHIBIT B**



Mr. Dan Salzer  
Scannell Properties  
821 Meander Court, Suite 200  
Medina, MN 55340

Project No.: 1827-01-2  
March 25, 2016

**RE:    Geotechnical Investigation Update  
      Mustang Industrial Development Spec Building  
      Washoe County, Nevada**

Dear Mr. Salzer:

Black Eagle Consulting, Inc. (BEC) is pleased to present this update to our geotechnical investigation for the subject project titled *Geotechnical Investigation, H.P. Ranch Parcel Distribution Facility, Washoe County, Nevada*, dated April 13, 2015 (BEC, 2015). At the time the previous report was published, the project scope included 1 industrial building (Distribution Facility); the scope has since expanded to include an additional 564,000-square-foot (sf) warehouse building (Spec Building) within the eastern portion of the project site. Our scope of work for the subject project included research, exploration, laboratory testing and engineering analysis to provide updated or revised geotechnical recommendations, as necessary, for design and construction of the proposed Spec Building. Where not specifically addressed in this geotechnical update report, the geotechnical information and recommendations contained in the 2015 geotechnical report remain valid for the proposed Spec Building. The 2015 geotechnical report is included as Appendix A (Geotechnical Report for Distribution Facility).

## **Project Description**

The overall Mustang Industrial Development project site consists of an irregular-shaped parcel of approximately 114 acres located in Washoe County, Nevada. The project includes the design and construction of a 343,000-sf Distribution Facility, the subject 564,000-sf Spec Building, and associated improvements including automobile and truck parking lots, driveways, and a main access road to the site from Mustang Road. The subject building will be oriented southwest-northeasterly within the eastern half of the parcel.

The proposed Spec Building will be a Portland cement concrete (PCC) tilt-up panel structure founded on shallow spread footings and will have a PCC slab-on-grade floor. Loading docks with associated truck ramps will be located on both the northwestern (longer) and southeastern sides of the Spec Building.

A final grading plan for the project was not available at the time of this report. Based on the preliminary grading concepts developed by Tectonics Design Group, the finished floor elevation of the Spec Building will be approximately 4,343 feet above mean sea level (msl). Mass grading will require maximum cut and fill depths of approximately 4 and 7 feet, respectively, within the proposed building footprint. Cuts will occur within the northwestern third of the building footprint, and the remaining southeastern portion of the building footprint will receive fills. The loading docks will require an additional 4 feet of cut on the north side and shallower fills on the south side of the building.



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600

Fax: 775/359-7766

Email: [mail@blackeagleconsulting.com](mailto:mail@blackeagleconsulting.com)

**WSUP19-0019**  
**EXHIBIT B**

The parking lots and a secondary access roadway off of the primary access roadway north and northwest of the northern corner of the Spec Building will require additional relatively deep cuts into the existing steeper slope down from the Union Pacific Railroad (UPRR) tracks. Based on the preliminary grading plans, cuts up to 25 feet in depth will be supported by 1 to 3 tiers of retaining walls each up to 10 feet tall. Rockery retaining walls are currently proposed in this area. It is our understanding some changes to the grading concepts may still occur.

## Site Conditions

The overall site conditions of the parcel, including the area to host the Spec Building, are described in detail in the 2015 geotechnical report that is included in Appendix A. No additional description is included in this update report.

## Additional Exploration within the Spec Building Footprint

The site to host the proposed Spec Building at the Mustang Industrial Development was explored on February 25 and 26, 2016, by drilling 13 test borings (Boring BH-01 through BH-13). The locations of the borings were delineated by the project's general contractor. All borings were located within the footprint of the Spec Building. The small, deep cut area associated with the proposed parking lots north and west of the northern corner of the building is presently a steep slope (nearly at a 3H:1V [horizontal to vertical] ratio) that exhibits volcanic bedrock on the slope face; as such, exploration of the subject area via borings was not possible due to access constraints. In addition, advancing borings from the top of the subject steep slope may require a UPRR encroachment permit because the access needs to be obtained via a UPRR right of way. The borings were drilled using 8-inch-outside-diameter (O.D.), 4-1/4-inch-inside-diameter (I.D.), hollow-stem augers and a truck-mounted CME 75 soils sampling drill rig. The maximum depth of exploration was 15 feet below the existing ground surface. The locations of the test borings are shown on Plate 1 (Plot Plan).

The native soils were sampled in-place every 2.5 to 5 feet by use of a standard, 2-inch O.D., split-spoon sampler driven by a 140-pound automatic drive hammer with a 30-inch stroke. The number of blows to drive the sampler the final 12 inches of an 18-inch penetration (Standard Penetration Test [SPT] - American Society for Testing and Materials [ASTM] D 1586) into undisturbed soil is an indication of the density and consistency of the material. Pocket penetrometer testing was performed on various samples of fine-grained soils in order to evaluate unconfined compressive strength.

A 3-1/2-inch O.D., split-spoon sampler (ASTM D 3550) was also used to sample soils containing gravel or where approximate in-place densities of subsurface materials were required. Sampling methods used were similar to the SPT but also included the use of 2-1/2-inch diameter, 6-inch-long, brass sampling tubes placed inside the split-spoon sampler. Because of the larger diameter of the sampler, blowcounts are typically higher than those obtained with the SPT and should not be directly equated to SPT blowcounts. The logs indicate the type of sampler used for each sample.



Due to the relatively small diameter of the samplers, the maximum particle size that could be obtained was approximately 1.25 inches. The final logs may not, therefore, adequately represent the actual quantity or presence of cobbles or boulders. Exploration drilling encountered many cobbles and boulders, resulting in multiple attempts to achieve the desired boring depth and/or shallow drilling refusal.

A geologist examined and identified all soils in the field in accordance with ASTM D 2488. During drilling, representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing. Additional soil classification was subsequently performed in accordance with ASTM 2487 (Unified Soil Classification System [USCS]) upon completion of laboratory testing. Logs of the test borings are presented as Plate 2 (Boring Logs), and a USCS chart has been included as Plate 3 (Graphic Soils Classification Chart).

## Laboratory Testing

All soils testing performed in the BEC soils laboratory is conducted in accordance with the standards and methodologies described in Volume 4.08 of the ASTM Standards. Representative samples from the exploration were analyzed to determine their in-situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318); the results of these tests are shown on Plate 4 (Index Tests Results). Results of these tests were used to classify the soils according to ASTM D 2487, to verify the field classification, and to generate any updated geotechnical recommendations for the Spec Building.

Chemical testing was performed on a representative sample of site foundation soils to evaluate the material's potential to corrode buried steel and concrete in contact with the ground. The samples were tested for pH, resistivity, redox potential, soluble sulfates and sulfides. The results of the chemical tests are shown on Appendix B (Chemical Test Results). Chemical testing was performed by Sierra Environmental Monitoring Laboratory of Reno, Nevada.

## Geologic and Soil Conditions

The overall Mustang Industrial Development lies adjacent to the Truckee River east of Reno, Nevada. The site geology is extremely complex and consists of glacial outwash sand and gravel soils with abundant cobbles and boulders interbedded with lakebed deposits of fine sand and silt. Wind-deposited fine sands exist at the original ground surface. An older diatomaceous siltstone is present in isolated areas beneath the outwash and lakebed deposits. A more detailed description of the site geology is presented within our 2015 geotechnical report (BEC, 2015) that is enclosed in Appendix A.

Within the vicinity of the proposed Spec Building, the original ground surface has been mined throughout the majority of the southern and eastern portions of the site, removing the surficial wind-transported sands and some gravel soils throughout much of the site. There are stockpiles of fill material within the northeast corner of the site. Within the building footprint is a stockpile 4 to 6 feet thick of asphalt grindings. The majority of native site soils generally consist of sand and gravel deposits with abundant cobbles and occasional boulders. Within the southern corner of the building footprint, near boring BH-03, a siltstone sedimentary rock unit was



encountered through the maximum exploration depth of about 16.5 feet below existing ground surface. Lakebed silts are present on the exposed slope near test hole TH-01 (BEC, 2015), above outwash sands and gravels in boring BH-04, and below the outwash sands and gravels within boring BH-12.

The outwash sand and gravel soils generally consist of poorly graded sand to clayey sand to clayey gravel. During drilling, drill rig response indicated abundant cobbles and boulders. Cobbles and boulders resulted in drilling refusal in 3 borings; multiple attempts were made for drilling the subject borings in the general vicinity and were unsuccessful, resulting in refusal at similar depth. The outwash deposits are described as brown to gray to reddish brown, slightly moist to moist, medium dense to very dense, and as containing 5 to 32 percent non-plastic to medium plasticity fines and up to 60 percent subrounded to rounded gravel. Previous test pit exploration within this area estimated up to 35 percent of the total soil mass consists of cobbles and boulders up to 2 feet in diameter (BEC, 2015).

The lakebed silts and sands are located within the existing cut slope along the northern portion of the site near test hole TH-01 (BEC, 2015), at the ground surface along the southeast portion of the site near boring BH-04, and at depth in the northern corner of the site near boring BH-12. The lakebed deposits exposed at the existing ground surface are approximately 4 feet thick. These soils are described as olive to light brown with occasional orange staining, dry to very moist, medium dense (firm to hard) silt with sand to silty sand, and as containing 40 to 76 percent non-plastic to low plasticity fines and fine to medium sand.

The siltstone unit is present in the elevated bench at the southern corner of the building pad near boring BH-03. During previous test pit exploration, test pit TP-06 (BEC, 2015), and in SPT sampling of previous borings, this material mechanically broke down to elastic silt materials.

Volcanic bedrock units are exposed on the existing slope down from the UPRR tracks and are similar to the rock units encountered within the northwestern portion of the overall site in boring B-11 and test pit TP-07 (BEC, 2015). These rock units mechanically broke down into clayey gravel with sand and cobbles.

Groundwater was encountered in boring BH-06 at a depth of 15.5 feet beneath the existing ground surface, at an approximate elevation of 4,317.5 feet above msl. Additional discussion with respect to the groundwater level within the overall parcel is contained in the 2015 geotechnical report included as Appendix A. Based on the topographic elevation increases away from the Truckee River and the expected cut depths, groundwater is not anticipated to affect the design or construction of the Spec Building and associated improvements.

## Geologic Hazards

A discussion of the site's seismicity, known faults, liquefaction potential, ground motion, and other geologic hazards is provided within the 2015 geotechnical investigation report included as Appendix A.

No other geologic hazards beyond those already discussed were encountered during our exploration of the proposed Spec Building.



## Updates to Geotechnical Design and Construction Recommendations

The subsurface soils encountered within the building footprint are complex in nature, exhibiting various geological units because of the unique geological setting of the overall Mustang Industrial Development parcel. The majority of the subsurface within the proposed Spec Building contains outwash sand gravel soils with cobbles and boulders; however, sedimentary and lakebed units consisting of fine-grained and clay soils exist within local areas. The northern, steep slope down from the UPRR tracks that is expected to be cut through as deep as 25 feet exhibits volcanic bedrock units. No exploration was performed within the subject steep sloping area because of access constraints, and because the requested additional exploration only included advancement of borings.

The geotechnical recommendations contained in the 2015 geotechnical report for the distribution facility, which is attached as Appendix A, remain applicable for the design and construction of the Spec Building unless otherwise updated/revised in this update report.

1. Various stockpiles exist across the limits of the proposed Spec Building development. These materials shall be completely removed from structural areas to expose native materials. The stockpiled materials are primarily, but are not limited to, granular soils with cobbles and boulders, such that they will typically meet the requirements for use as structural fill (rock fill).
2. The lakebed sediments and sedimentary rock units exhibiting clay and fine-grained soils exist as lenses and isolated zones within various portions of the proposed building footprint. The clay and fine-grained soils are not suitable to directly host the proposed building footings, slabs, and asphalt pavement and will require structural fill separation following the recommendations contained in the **Site Preparation** section of the geotechnical report (Appendix A).
3. Excavation into the northern, steep slope down from the UPRR tracks exhibiting volcanic bedrock units is expected to generate materials that are suitable to use as structural fill within the southern fill areas. Based on the conditions of similar geologic units encountered within the northwestern limits of the overall parcel, these materials are expected to be excavatable with large construction equipment (dozers with rippers and large excavators). However, there is always a potential to encounter hard "core stones" within volcanic units that could demand aggressive excavation techniques. Once the grading plans are finalized, we recommend BEC be provided the opportunity to advance 1 or 2 exploratory test pits into the existing steep slope using a large excavator to characterize the volcanic units in this area.
4. Based on the provided preliminary grading plans, up to 3-tier retaining walls each measuring up to 10 feet in exposed height are proposed to support the cuts into the northern steep slope described above in Item 3. The retaining wall design parameters provided in the project geotechnical report can be used in the design of these walls, including rockery walls. However, based on the anticipated volcanic bedrock in this area, the subject retaining wall design parameters may be conservative. Once the grading plans are finalized, BEC can reevaluate the retaining wall design parameters with the advancement of additional test pits discussed in item 3. If requested, BEC can also provide final design for rockery or other segmental



block retaining walls (with non-uniform geogrid tiebacks) in this area as an additional scope of work. The final design of retaining walls in this area must include a global stability evaluation of the tiered walls supporting a steep slope. Further, the upper wall must be setback from the lower wall at a horizontal distance equal to the exposed height of the lower wall.

## Closing

The information presented in this updated report provides any updated/revised geotechnical design and construction recommendations for the Spec Building and associated improvements. All other recommendations contained in the 2015 geotechnical report that is attached as Appendix A remain applicable.

The recommendations presented in this report are based on the assumption that sufficient field testing and construction review will be provided during all phases of construction. We should review the final plans and specifications for conformance with the intent of our recommendations. Prior to construction, a pre-job conference should be scheduled to include, but not be limited to, the owner, civil design engineer, general contractor, building official, and geotechnical engineer. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to and reviewed by the geotechnical engineer.

During construction, we should have the opportunity to provide sufficient on-site observation of preparation and grading, over-excavation, fill placement, and foundation installation. These observations would allow us to verify that the geotechnical conditions are as anticipated and that the contractor's work is in conformance with the approved plans and specifications.

This report has been prepared in accordance with generally accepted geotechnical practices. The analyses and recommendations submitted are based upon field exploration performed at the locations described above and in the 2015 geotechnical report (Appendix A). This report does not reflect soils or groundwater variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary.

The owner shall be responsible for distribution of this geotechnical investigation to all designers and contractors whose work is related to geotechnical factors. In the event of changes in the design, location, or ownership of the project from the time of this report, recommendations should be reviewed and possibly modified by the geotechnical engineer. If the geotechnical engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation or misapplication of his recommendations or their validity in the event changes have been made in the original design concept without his prior review. The geotechnical engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.



Mr. Dan Salzer  
Scannell Properties  
March 25, 2016

7

We appreciate being of service to you on this project. If you have any questions, or require any additional information, please do not hesitate to contact us.

Sincerely,

Black Eagle Consulting, Inc.



Vimal P. Vimalaraj, P.E.  
Engineering Division Manager

JW:PV:LJJ:cr

Enclosures: Plate 1 - Plot Plan  
Plate 2 - Boring Logs  
Plate 3 - Graphic Soils Classification Chart  
Plate 4 - Index Tests Results  
Appendix A - Geotechnical Report for Distribution Facility  
Appendix B - Chemical Test Results

Copies to: Addressee (4 copies, PDF)

### References:

American Society for Testing and Materials (ASTM), 2015, *Soil and Rock*; Volume 4.08.

Black Eagle Consulting, Inc. (BEC), 2015, *Geotechnical Investigation, H.P. Ranch Parcel Distribution Facility, Washoe County, Nevada*, private consultants report, dated March 6, 2015 and revised April 13, 2015.



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600

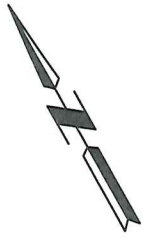
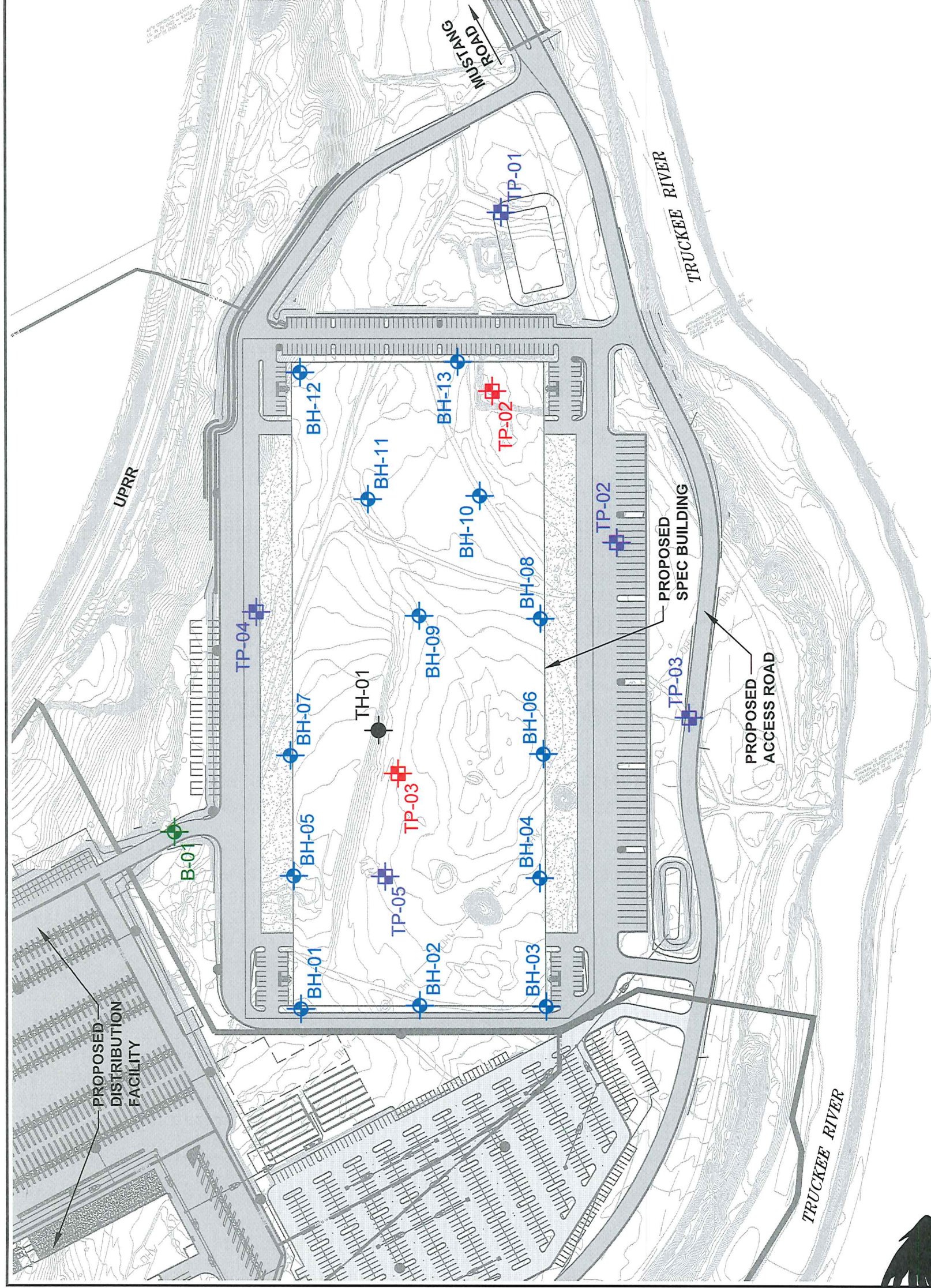
Fax: 775/359-7766

Email: mail@blackeagleconsulting.com

**WSUP19-0019**  
**EXHIBIT B**

# PLATES





SCALE: 1"=200'  
1' CONTOUR INTERVAL

**LEGEND**

-  APPROXIMATE BORING LOCATION
-  APPROXIMATE 2015 BORING LOCATION
-  APPROXIMATE 2015 TEST PIT LOCATION
-  APPROXIMATE 2015 TEST HOLE LOCATION
-  APPROXIMATE 2007 TEST PIT LOCATION

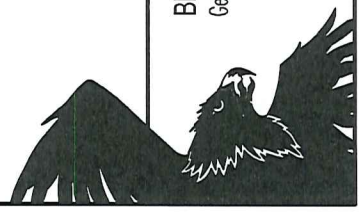
**NOTES**

1. BASE MAP PROVIDED BY TECTONIC DESIGN GROUP.

**SPEC BUILDING SITE LOCATION**

**SITE LOCATION MAP**  
N.T.S.

**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services  
1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140  
Telephone: 775/359-6600  
Facsimile: 775/359-7766



SCANNELL PROPERTIES  
**PLOT PLAN**  
MUSTANG INDUSTRIAL DEVELOPMENT SPEC BUILDING  
WASHOE COUNTY, NEVADA

Project No.  
1827-01-2  
  
Plate 1

# BORING LOG

BORING NO.: BH-01  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/25/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SM		<b>Silty Sand</b> Brown, moist, loose to medium dense, with an estimated 20% low plasticity fines, 70% fine to coarse sand, and 10% subrounded gravel up to 2 inches in diameter.
A	SPT	28			2	SC		Cobbles starting at 1.5 feet below the ground surface (bgs) indicated by drilling response. <b>Clayey Sand</b> Light brown, moist, medium dense, with an estimated 25% low to medium plasticity fines, 65% fine to coarse sand, and 10% subrounded to rounded gravel up to 1-1/4 inches in diameter.
B	SPT	30			6	SC		Cobbles throughout soil layer indicated by drilling response. <b>Clayey Sand with Gravel</b> Brown, medium dense, with an estimated 35% medium plasticity fines, 45% fine to coarse sand, and 20% subrounded to rounded gravel up to 1-1/4 inches in diameter. Strongly cemented soil matrix.
C	SPT	56			8			Cobbles throughout soil layer indicated by drilling response. <b>Poorly Graded Gravel with Silt and Sand</b> Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 35% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter.
D	SPT	85/11.5"			10	GP-GM		Cobbles throughout soil layer indicated by drilling response.
E	SPT	85/11.5"			16			

N 4377061 E 274420 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-02  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/25/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Poorly Graded Gravel with Sand</b> Brown, slightly moist to moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.
A	SPT	90/11"			4	GP		Cobbles and boulders throughout soil layer indicated by drilling response.  Drilling refusal at 1.5 feet, 5 feet and 5.5 feet bgs on boulders.
B	SPT	50/5.5"			6			Drilling refusal at 5.5 feet bgs on boulder.
					8			
					10			
					12			
					14			
					16			

Attempted 3 locations within the exploration area, refusal at 5.5 feet bgs.  
 N 4377026 E 274481 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE\_GDT\_3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2



# BORING LOG

BORING NO.: BH-04  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/25/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	ML		<b>Sandy Silt</b> Olive with slight orange mottling, moist, very stiff, with an estimated 55% low plasticity fines and 45% fine to coarse sand.
A	SPT	21			4			
					6	SM	Cobbles and boulders indicated by drilling response.	<b>Silty Sand with Gravel</b> Brown, moist, very dense, with an estimated 20% low plasticity fines, 45% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter.
B	MC	50/4"			8			Drilling refusal at 7.0 feet bgs due to boulder, hole offset.
					10		Cobbles and boulders indicated by drilling response.	<b>Clayey Gravel with Sand</b> Gray to olive to dark brown, moist, very dense, with an estimated 20% medium plasticity fines, 25% fine to coarse sand, and 55% subangular to subrounded gravel up to 1-1/4 inches in diameter.
C	SPT	50/5.5"			12	GC		Sample composed of rotten, fractured volcanic rock fragments.
					14			Sample D: Very low recovery.
D	SPT	50/1"			16			Sample E: No recovery.
E	SPT	50/2"						

Hole offset due to refusal at 7.0 feet bgs.  
 N 4377055 E 274571 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-05  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4345 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Poorly Graded Gravel with Sand</b> Reddish brown to brown to gray, slightly moist to moist, very dense, with an estimated 5% non-plastic to low plasticity fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.
A	SPT	54			4	GP		Cobbles and boulders throughout soil layer indicated by drilling response.
					6			
B	SPT	63			8			
C	SPT	34	8.2	18	10	SM		<b>Silty Sand with Gravel</b> Brown, slightly moist, dense, with an estimated 20% low plasticity fines, 60% fine to coarse sand, and 20% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					12			<b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 45% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					14	GP		Gravel and cobbles throughout soil layer indicated by drilling response.
E	SPT	56			16			

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-06  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/25/2016  
 DEPTH TO GROUND WATER (ft): 15.5  
 GROUND ELEVATION (ft): 4333 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<p><b>Poorly Graded Sand with Silt and Gravel</b> Brown to olive, slightly moist to moist, dense, with an estimated 10% low plasticity fines, 45% fine to coarse sand, and 45% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Cobbles throughout soil layer indicated by drilling response.</p>
A	SPT	37			4	SP-SM		
					6			
B	SPT	43			8	SM		<p><b>Silty Sand with Gravel</b> Brown to olive, moist, very dense, with an estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% subrounded to rounded gravel up to 1.5 inches in diameter.</p>
					10			<p>Cobbles and boulders indicated by drilling response.</p> <p><b>Poorly Graded Gravel with Sand</b> Brown to olive, moist, dense, with an estimated 5% low plasticity fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p>
D	SPT	49			12	GP		<p>Cobbles throughout soil layer indicated by drilling response.</p>
					14			<p><b>Poorly Graded Sand with Silt and Gravel</b> Brown to gray, moist to wet, dense, with an estimated 10% non-plastic fines, 55% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p>
E	SPT	36			16	SP-SM		<p>Gravels throughout soil layer indicated by drilling response.</p>

N 4377120 E 274613 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2



# BORING LOG

BORING NO.: BH-07  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4345 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		<p><b>Clayey Sand with Gravel</b> Reddish brown to brown, moist, dense, with an estimated 15% low to medium plasticity fines, 60% fine to coarse sand, and 25% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Cobbles and boulders throughout soil layer indicated by drilling response.</p>
A	SPT	31			4			
					6	GP		<p><b>Poorly Graded Gravel with Sand</b> Gray to brown, slightly moist, very dense, with an estimated 5% non-plastic fines, 45% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Cobbles and boulders throughout soil layer indicated by drilling response.</p>
B	SPT	82			8	SM		<p><b>Silty Sand</b> Brown, slightly moist, medium dense, with an estimated 35% non-plastic fines, 65% fine to medium sand, and trace amounts of gravel up to 1/2 inch in diameter. Weakly cemented soil matrix.</p>
C	SPT	25			10	SM		<p><b>Silty Sand</b> Brown, moist, dense, with an estimated 20% non-plastic fines and 80% fine to medium sand.</p>
D	SPT	31			12			
					14	GP		<p><b>Poorly Graded Gravel with Sand</b> Gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Gravel and cobbles throughout soil layer indicated by drilling response.</p>
E	SPT	98/11"			16			

N 4377188 E 274495 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

**WSUP19-0019**  
**EXHIBIT B**





# BORING LOG

BORING NO.: BH-08  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<p><b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Abundant cobbles and boulders throughout soil layer indicated by drilling response.</p> <p>Sample A: Very low recovery.</p> <p>Sample B: No recovery.</p> <p>Sample D: No recovery.</p> <p>Drilling refusal at 10.5 feet bgs on boulder.</p>
A	X SPT	50/5.5"			4	GP		
B	X SPT	50/5.5"			6			
C	X SPT	86			8			
D	X SPT	30/0"			10			
					12			
					14			
					16			

N 4377186 E 274650 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:	1827-01-2
PLATE:	2

# BORING LOG

BORING NO.: BH-09  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		<p><b>Silty Sand with Gravel</b> Reddish brown to brown, moist, dense, with an estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% subrounded to rounded gravel up to 3 inches in diameter (from cuttings).</p>
A	SPT	28			3			<p>Cobbles and boulders throughout soil layer indicated by drilling response.</p>
					4			<p><b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist, medium dense to dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p>
B	SPT	30			6	GP		<p>Abundant cobbles and boulders throughout soil layer indicated by drilling response.</p>
					7.5			<p>Sample A: No recovery.</p>
					10			<p>Hard cobbles or boulders at 7.5 and 10 feet bgs, no SPT sampling.</p>
					10			<p>Drilling refusal at 10 feet bgs on boulder.</p>
					12			
					14			
					16			

Attempted 3 locations within the exploration area, refusal at 10.0 feet bgs.  
 N 4377207 E 274595 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-10  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4337 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		<b>Silty Sand</b> Brown, moist, medium dense to dense, with an estimated 25% low plasticity fines and 75% fine to coarse sand.
A	SPT	56			4	SM		<b>Silty Sand</b> Brown, slightly moist to moist, very dense, with an estimated 20% non-plastic fines, 70% fine to coarse sand, and 10% subrounded to rounded gravel up to 1-1/4 inches in diameter.
B	SPT	74/11.5"			6			<b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.
C	SPT	72			8			Cobble or boulder at 5 feet bgs indicated by drilling response. Cobbles through remainder of soil profile indicated by drilling response.
D	SPT	30/0"			10	GP		
E	SPT	50/5.5"			16			

N 4377256 E 274672 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-11  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4338 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Silty Sand</b> Brown, moist, medium dense to dense, with 29% non-plastic fines, 69% fine to coarse sand, and 2% fine gravel. Occasional weak cement.
A	SPT	31	7.6	NP	4	SM		
					6			<b>Sandy Silt</b> Brown, slightly moist to moist, very stiff, with an estimated 55% low plasticity fines and 45% fine sand. Weakly cemented soil matrix.
B	SPT	20			8	ML		
					10			<b>Silty Sand</b> Brown, slightly moist to moist, medium dense, with an estimated 40% non-plastic fines and 60% fine to medium sand.
C	SPT	16			12	SM		
					14			<b>Poorly Graded Gravel with Silt and Sand</b> Brown to gray, slightly moist, dense, with an estimated 10% non-plastic fines 40% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter. Contains friable volcanic gravel.
D	SPT	13			16	GP-GM		
E	SPT	41						

N 4377290 E 274616 UTM NAD83

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

# BORING LOG

BORING NO.: BH-12  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GC		<p><b>Clayey Gravel with Sand</b> Reddish brown to brown, moist to very moist, dense, with 32% medium plasticity fines, 30% fine to coarse sand, and 38% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p> <p>Cobbles and boulders throughout soil layer indicated by drilling response.</p>
A	SPT	30	17.1	22	4			
					6	SC		<p><b>Clayey Sand with Gravel</b> Reddish brown to brown, moist, very dense, with an estimated 20% medium plasticity fines, 55% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter.</p>
B	SPT	84/10"			8	CL		<p><b>Sandy Lean Clay</b> Brown, moist, very stiff, with an estimated 60% low to medium plasticity fines and 40% fine sand. Weakly cemented soil matrix.</p>
C	SPT	20			10	SM		<p><b>Silty Sand</b> Brown, slightly moist, very dense, with an estimated 40% low plasticity fines and 60% fine to medium sand. Moderately cemented soil matrix.</p> <p>Tight, slow drilling.</p>
D	SPT	50/3"			14	ML		<p><b>Silt with Sand</b> Olive with orange mottling, slightly moist, very stiff, with an estimated 85% non-plastic to low plasticity fines and 15% fine sand.</p> <p>Easy drilling.</p>
E	SPT	13			16			

N 4377376 E 274622 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2



# BORING LOG

BORING NO.: BH-13  
 TYPE OF RIG: CME 75  
 LOGGED BY: JP

DATE: 2/26/2016  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4337 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Silty Sand</b> Brown, moist, medium dense, with an estimated 25% non-plastic to low plasticity fines, 75% fine to medium sand, and trace amounts of gravel up to 3/4 inch in diameter.
A	SPT	22			4	SM		
					6			<b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.  Cobbles and boulders throughout soil layer indicated by drilling response.
B	SPT	30			8			
					10			
C	SPT	77			12			
D	SPT	63			14	GP		
					16			
E	SPT	63						

N 4377344 E 274691 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**Mustang Industrial Development Spec**  
**Building**  
**Washoe County, NV**

PROJECT NO.:  
 1827-01-2  
 PLATE:  
 2

BORING\_LOG\_1827012.GPJ BLKEAGLE.GDT 3/25/2016

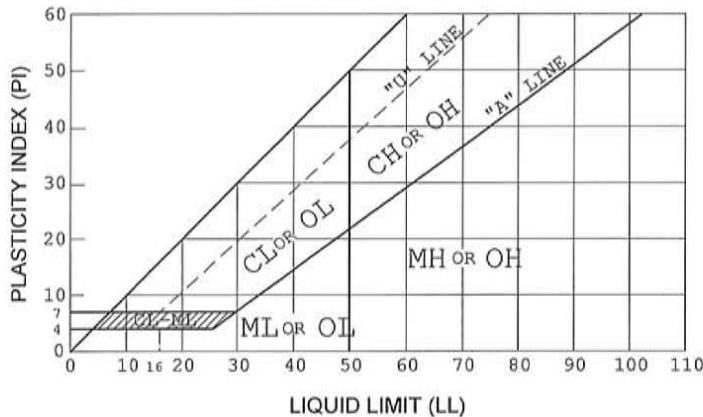


# SOIL CLASSIFICATION CHART

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

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

## PLASTICITY CHART



FOR CLASSIFICATION OF FINE-GRAINED SOILS AND FINE-GRAINED FRACTION OF COARSE-GRAINED SOILS

## EXPLORATION SAMPLE TERMINOLOGY

Sample Type	Sample Symbol	Sample Code
Auger Cuttings		Auger
Bulk (Grab) Sample		Grab
Modified California Sampler		MC
Shelby Tube		SH or ST
Standard Penetration Test		SPT
Split Spoon		SS
No Sample		

## GRAIN SIZE TERMINOLOGY

Component of Sample	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75mm)
Sand	# 4 to #200 sieve (4.75mm to 0.074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

## RELATIVE DENSITY OF GRANULAR SOILS

N - Blows/ft	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
greater than 50	Very Dense

## CONSISTENCY OF COHESIVE SOILS

Unconfined Compressive Strength, psf	N - Blows/ft	Consistency
less than 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,000 - 2,000	5 - 8	Firm
2,000 - 4,000	9 - 15	Stiff
4,000 - 8,000	16 - 30	Very Stiff
8,000 - 16,000	31 - 60	Hard
greater than 16,000	greater than 60	Very Hard

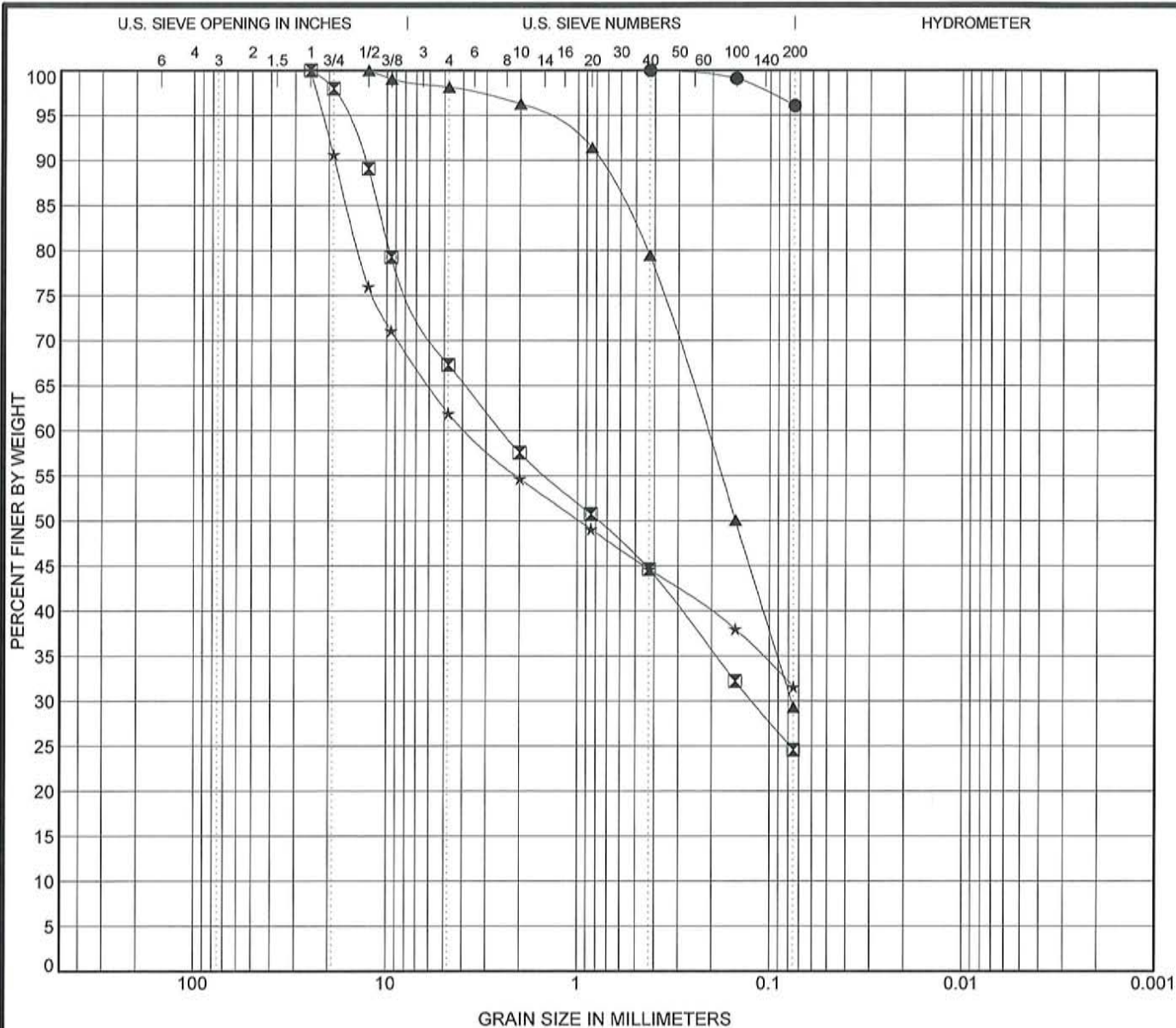
USCS CHART 1827012.GPJ US\_LAB\_GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

## USCS Soil Classification Chart

Project: Mustang Industrial Development Spec Building  
 Location: Washoe County, NV  
 Project Number: 1827-01-2 Plate: 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	USCS Classification	LL	PL	PI	Cc	Cu
● BH-03 2.5'	ELASTIC SILT (MH)	68	43	25		
☒ BH-05 7.5'	CLAYEY SAND with GRAVEL (SC)	37	19	18		
▲ BH-11 2.5'	SILTY SAND (SM)	NP	NP	NP		
★ BH-12 2.5'	CLAYEY GRAVEL with SAND (GC)	44	22	22		

Specimen Identification	D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
● BH-03 2.5'	0.425				47.0	0.0	3.9	96.1	
☒ BH-05 7.5'	25	2.483	0.123		8.2	32.7	42.7	24.6	
▲ BH-11 2.5'	12.5	0.213	0.077		7.6	1.9	68.8	29.3	
★ BH-12 2.5'	25	3.779			17.1	38.1	30.3	31.6	

US GRAIN SIZE 1827012.GPJ US LAB.GDT 3/25/2016



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

**GRAIN SIZE DISTRIBUTION**  
 Project: Mustang Industrial Development Spec Building  
 Location: Washoe County, NV  
 Project Number: 1827-01-2 Plate: <sup>4a</sup> **WSUP19-0019**

**EXHIBIT B**





# APPENDICES

# APPENDIX A

## GEO TECHNICAL REPORT FOR DISTRIBUTION FACILITY

Mr. Dan Salzer  
Scannell Properties  
821 Meander Court, Suite 200  
Medina, MN 55340

March 6, 2015  
Revised April 13, 2015  
Project No.: 1827-01-1

L

**RE: Geotechnical Investigation**  
**H.P. Ranch Parcel Distribution Facility APN 084-370-02**  
**Washoe County, Nevada**

Dear Mr. Salzer:

Black Eagle Consulting, Inc. (BEC) is pleased to present the results of our geotechnical investigation for the above-referenced project. Our investigation consisted of research, field exploration, laboratory testing, and engineering analysis to allow formulation of geotechnical conclusions and recommendations for design and construction of the subject distribution facility.

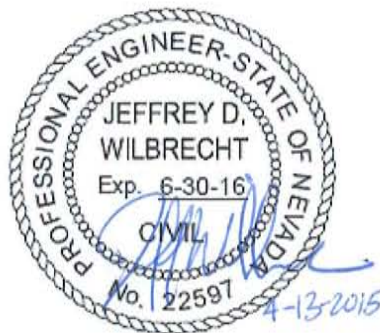
The proposed project will involve the design and construction of a distribution facility within the H.P. Ranch Parcel located north of the Truckee River, which previously hosted a sand and gravel quarry. The facility will include a tilt-up panel building of 343,000 square feet within the western portion of the parcel. An access way off of Mustang Road, driveways, truck, and automobile parking lots will also be constructed.

The predominant sand and gravel Tahoe Outwash soils that underlie the parcel will provide adequate support in cuts and will perform well as fill. Volcanic bedrock that is present within the western and northern limits of the parcel will generally be excavatable and will produce good quality fill. Lakebed sediments and sedimentary bedrock, clay, and fine-grained soils exist as local zones within the northern limits of the site and will require separation from structural improvements.

We appreciate having the opportunity to work with you on this project. If you have any questions regarding the content of the attached report, please do not hesitate to contact me.

Sincerely,

Black Eagle Consulting, Inc.



Jeffery Wilbrecht, P.E.  
Project Engineer

Copies to: Addressee (3 copies and PDF via email)

JP:PV:LJJ:kad



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600 Fax: 775/359-7766  
Email: mail@blackeagleconsulting.com

**WSUP19-0019**  
**EXHIBIT B**

Introduction.....	1
Project Description.....	2
Structure/Development Information.....	2
Grading Concepts.....	3
Site Conditions.....	5
Existing Structures.....	5
Topography.....	6
Vegetation.....	6
Exploration.....	7
Drilling.....	7
Test Pits.....	8
Material Classification.....	8
Laboratory Testing.....	9
Index Tests.....	9
Chemical Tests.....	9
Geologic and General Soil Conditions.....	10
Site Geology.....	10
Site Materials.....	11
Ground Water.....	12
Geologic Hazards.....	13
Seismicity.....	13
Faults.....	13
Ground Motion and Liquefaction.....	14
Flood Plains.....	14
Other Geologic Hazards.....	14
Discussion and Recommendations.....	15
General Information.....	15
Site Preparation.....	16
Trenching and Excavation.....	18
Mass Grading.....	20
Utility Trench Backfill.....	22
Seismic Design Parameters.....	22



Foundations.....	23
Retaining Walls.....	24
Portland Cement Concrete Flatwork.....	26
Asphalt Concrete.....	27
Subsidence and Shrinkage.....	28
Site Drainage.....	28
On-site Sewage Disposal System Considerations.....	28
Slope Stability and Erosion Control.....	29
Corrosion Potential.....	29
<b>Anticipated Construction Problems.....</b>	<b>31</b>
<b>Quality Control.....</b>	<b>32</b>
<b>Standard Limitations Clause.....</b>	<b>33</b>
<b>References.....</b>	<b>34</b>
<b>Tables</b>	
1 - Required Thickness of Structural Fill between Clay Soils and Improvements	
2 - Minimum Required Properties for Separator Geotextile	
3 - Maximum Allowable Temporary Slopes	
4 - Guideline Specification for Imported Structural Fill	
5 - Seismic Design Criteria Using 2012 <i>International Building Code</i>	
6 - Lateral Earth Pressure Values (Equivalent Fluid Density)	
7 - Minimum Required Properties for Drainage Geotextile	
8 - Sulfate Exposure Class	
<b>Plates</b>	
1 - Plot Plan	
2 - Boring and Test Pit Logs	
3 - Graphic Soils Classification Chart	
4 - Index Test Results	
<b>Appendices</b>	
A - 2007 Geotechnical Data	
B - Chemical Test Results	



# Introduction

Presented herein are the results of Black Eagle Consulting, Inc.'s (BEC's) geotechnical investigation, laboratory testing, and associated geotechnical design recommendations for the proposed distribution facility to be located within the H.P. Ranch Parcel, Assessor's Parcel Number (APN) 084-370-02, southwest of Mustang Road between the Truckee River and the Union Pacific Railroad (UPRR) in Washoe County, Nevada. These recommendations are based on surface and subsurface conditions encountered in our explorations, and on details of the proposed project as described in this report. The objectives of this study were to:

1. Determine general soil, bedrock, and ground water conditions pertaining to design and construction of the proposed distribution center.
2. Provide recommendations for design and construction of the project, as related to these geotechnical conditions.

The area covered by this report is shown on Plate 1 (Plot Plan). Our investigation included field exploration, laboratory testing, and engineering analysis to determine the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report and form the basis for all conclusions and recommendations.

Black Eagle Consulting, Inc.'s exploration and testing program was planned and executed based on the original development plan provided by Scannell Properties that included a building on the west portion of the panel, nearby parking areas, and access roadway off of Mustang Road. As currently proposed, the site is planned to be mass graded; as such, the geotechnical recommendations contained in this report for the eastern half of the site shall be considered preliminary and shall be updated as necessary, when design details become available.

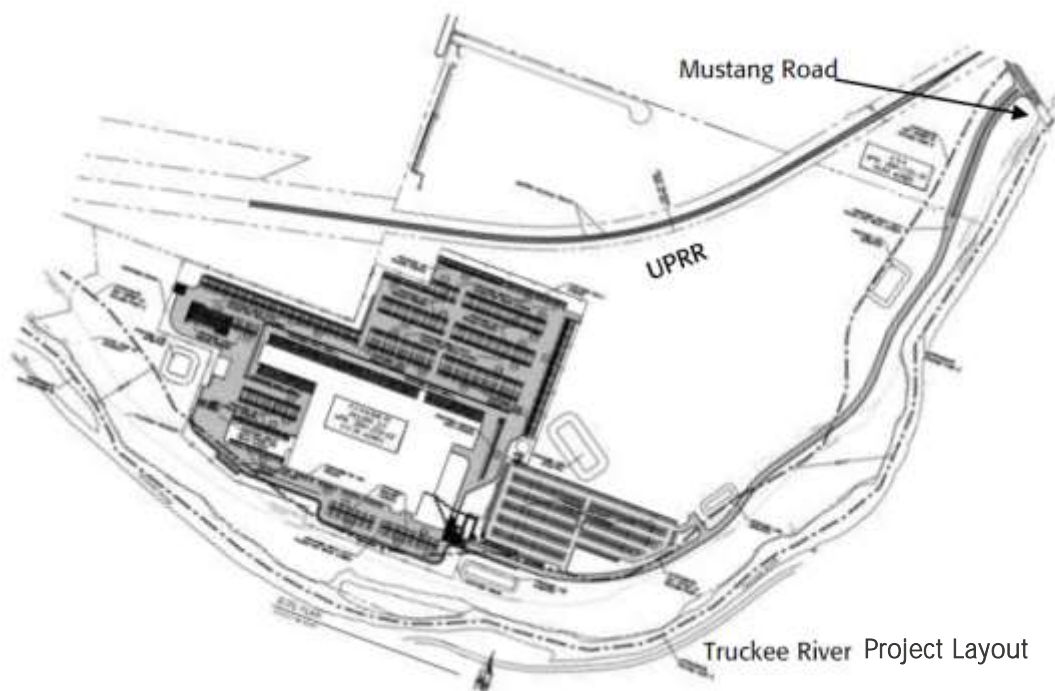
The services described above were conducted in accordance with the BEC Professional Geotechnical Agreement dated December 11, 2014 and revised December 17, 2014, which was signed by Mr. Daniel Salzer of Scannell Properties.

Black Eagle Consulting, Inc. performed a feasibility-level geotechnical investigation of the site to develop preliminary recommendations and design for the planning of a commercial development titled, *Feasibility-Level Geotechnical Investigation, Mustang Parcel, APN 084-370-02, Washoe County, Nevada*, dated August 13, 2007 (BEC, 2007).



## Project Description

The H.P. Ranch parcel to host the proposed distribution facility consists of an irregular-shaped parcel of approximately 114 acres located in Washoe County, Nevada. The site is located in Sections 15 and 16, Township 19 North, Range 21 East, Mount Diablo Meridian. The parcel is bordered to the north by the Union Pacific Railroad. The Truckee River flows around the western, southern, and eastern perimeter of the parcel. Mustang Road borders the extreme northeastern property line. The parcel was previously operated as a sand and gravel pit, and is presently undeveloped land. Access to the site is obtained by an unimproved road from Mustang Road.



## Structure/Development Information

The project will involve the design and construction of a distribution building and associated improvements that will include automobile and truck parking lots, driveways, and an access road off of Mustang Road. The building will measure approximately 343,000 square feet (sf) and will be oriented east-westerly. The building will be a Portland cement concrete (PCC) tilt-up panel structure supported by shallow spread footings and will have a PCC slab-on-grade floor. Loading docks with associated truck ramps will be located on the northern side of the building.





An asphalt concrete access roadway from Mustang Road will be constructed to follow the Truckee River within the southern limits of the parcel. Two major parking areas north and east of the building will be constructed and will have truck and automobile parking spaces, respectively. Parking lots will also be incorporated in other areas of the project. Portland cement concrete curbs and gutters will be constructed along the parking lots and access roadways. Paved edges will also incorporate PCC walkways where necessary to accommodate pedestrian traffic. Five storm water detention basins of various sizes and depths will be constructed within various areas of the project. The detention basin located between the proposed parking areas will be the largest of all and will be as deep as 10 feet. Utilities will be extended to service the facility from the existing stubs in the area. We understand there are no nearby sewer stubs, therefore, the facility will likely require an on-site sewage disposal system. The location of the on-site sewage system (septic tank and leach field) is not known. An on-site sewage system will require design and percolation testing within the areas to host the primary and secondary leach fields. Black Eagle Consulting, Inc. can provide these services, as a separate scope of work once the on-site sewage disposal system location is finalized.

Structural loads were unknown at the time of this report. In general, roof loads from similar structures are transferred to steel or PCC interior and exterior columns located at variable spacing/spans. Columns will be supported on PCC isolated spread footings that are sized to resist structural loading based on the geotechnical design parameters for the foundation soils provided in this report. The structural loading will vary depending on the selected span lengths between columns. Based on our experience with similar structures, we anticipate the widths of the isolated footings could be on the order of 4 to 8 feet. Wall loads will be supported by PCC continuous spread footings, typically with variable widths.

## Grading Concepts

A grading plan has been developed by Tectonics Design Group for the project. The site will be graded cut to fill. Cuts will occur within the northern limits of the project site and the generated materials will be placed as compacted fill within the southern limits. The finished floor elevation for the building will be set at 4,348.75 feet above mean sea level (msl).

The building will generally require cuts within the northwestern quadrant and western edge, and the remainder of the building footprint will receive fill. Cuts will be up to 14 feet within the building footprint, except for the northern loading docks, where about 18 feet of cut will occur to establish their depressed grade. A maximum fill up to 13 feet will be placed in the southeastern corner of the small building pad.

The northern large truck parking area will primarily lie in cuts up to 17 feet. The southeastern corner of this northern parking lot will receive up to 5 feet of fill. The small parking area and driveway northwest of the building will lie on cuts up to 22 feet where they occur immediately north of the building. The automobile parking lot east of the building and the smaller truck parking and driveway south of the building will all lie on fills up to 10 feet. The main access roadway within the southern limits primarily follows the existing topography (within plus or minus 2 feet) with the exception of some local segments, where the existing ground will require up to 6 feet of fill. An emergency



access roadway that will head northwest off of the main access road starting east of the large detention basin will be placed on fill up to 10 feet until it reaches the steep slope south of the railway track, where significant grading will occur. Cuts up to 20 feet will be necessary in this steep sloping topography to establish the emergency access roadway grade. The extension of this access roadway northeast of the building will also require cuts in the range of 10 to 18 feet. All cut and fill slopes are currently proposed to be at a 3H:1V (horizontal to vertical) ratio. The existing slope north of the building is slightly flatter than 3H:1V; as such, the proposed cut slope (at a 3H:1V ratio) into this existing slope will extend up to 45 feet in vertical height from toe to crest. This will primarily involve steepening of the existing slope by removing 0 to 18 feet of material.

The grading plan calls for a retaining wall that will generally follow the northern property line and will be up to 8 feet in exposed height above the proposed cut slope northwest of the building. In this area, the vertical height of the proposed 3H:1V cut slope below the retaining wall will be about 10 to 12 feet in vertical height.



# Site Conditions

## Existing Structures

The site was formerly operated as a sand and gravel quarry. As a result, the natural topography has been modified extensively by these operations. The quarry operations lowered the ground elevation of the eastern and western portions of the site by approximately 4 to 15 feet based on the surrounding topography. A deeper pit is located at the southwest corner of the proposed building footprint, approximately 15 to 17 feet deep, and is roughly 400 feet long by 200 feet wide. A soil berm up to 12 feet in height follows the southern and eastern boundary along the Truckee River.



Site Conditions

Stockpiles of discarded sand, gravel, and boulders are abundant and scattered throughout the site. The boulders range in size throughout the site, however, the largest observed boulder is up to 25 feet in diameter. The stockpiles are most prevalent within the northern portion of the proposed building footprint. Additional stockpiles are also located immediately southwest of the building footprint. More obvious stockpiled soil and construction debris are located in the eastern portion of the site. Only a small wooden well house is left from the quarry operations and possibly has an existing well inside. No areas of deep fill are documented and only minor fill or disturbed surface areas are noted.

Several overhead power and communications lines and easements are present within the parcel. One east-westerly and then northeasterly trending line crosses through the center of the site for its entire length. Three shorter segments extend southward to the Truckee River. Overhead power lines and buried fiber optic cable and gas lines are located along the northern property line within and/or adjacent to the UPRR right of way.



## Topography

As stated above, the original topography of the site has been extensively modified by the sand and gravel quarry operations. The depth of the remaining sand and gravel appears to vary across the site. Pillars of original ground occupied by overhead utility poles indicate that approximately 4 to 8 feet of soil had been mined from the area west of the predominant pit, which itself is about 17 feet in depth. Approximately 10 to 15 feet of soil had been excavated in the area east of the pit. The areas east and west of the pit are relatively level, or benched, sloping to the south.

Overall, the site slopes down southeasterly at less than 5 percent. The highest elevations lie along the northern edges of the proposed improvements and are in the range of 4,365 feet above msl. The southern lower limits of the parcel, above the slope down to the Truckee River, are at an elevation of about 4,335 feet above msl. In between these elevations, the existing topographic elevations within the site are irregular due to sand and gravel quarry activity and locally exhibit steeper side walls. However, in no case does the bottom of the quarried areas extend deeper than the southern ground elevations.

## Vegetation

Moderately dense sagebrush, rabbit brush, and greasewood up to 4 feet in height have regrown throughout the quarry area. Intervening areas and localized areas exhibit only sparse vegetation.



## Exploration

As described earlier, the site was previously explored in 2007 as part of a feasibility-level investigation to develop recommendations for preliminary planning and design of a commercial development. The 2007 geotechnical investigation included advancement of 16 test pits. Approximate locations of the 2007 test pits are shown on Plate 1. Logs of the test pits and laboratory testing on representative samples associated with the 2007 investigation are included as Appendix A (2007 Geotechnical Data).

The recent exploration activities within the parcel included advancement of 11 test borings to a maximum depth of 26.5 feet below the existing ground surface and excavation of 11 test pits, as detailed below.

### Drilling

The H.P. Ranch parcel to host the proposed distribution facility was explored in late December 2014 by drilling 11 test borings. The borings were drilled using 8-inch-outside-diameter (O.D.), 4-¼-inch-inside-diameter (I.D.), hollow-stem augers, and a truck-mounted BK 81 soils sampling drill rig. The maximum depth of exploration was 26.5 feet below the existing ground surface. The locations of the test borings are shown on Plate 1. As requested, borings were generally located within the footprint of the originally planned building location in the western portion of the site.



The native soils were sampled in-place every 2 to 5 feet by use of a standard 2-inch O.D., split-spoon sampler driven by a 140-pound automatic drive hammer with a 30-inch stroke. The number of blows to drive the sampler the final 12 inches of an 18-inch penetration (Standard Penetration Test [SPT]; American Society for Testing and Materials [ASTM] D 1586) into undisturbed soil is an indication of the density and consistency of the material.

#### Boring Exploration

Due to the relatively small diameter of the samplers, the maximum particle size that could be obtained was approximately 1-¼ inches. The final boring logs may not, therefore, adequately represent the actual quantity or presence of cobbles or boulders.

Ground water levels were recorded when encountered.



## Test Pits

The H.P. Ranch parcel to host the proposed distribution facility was also explored December 31, 2014 by excavating 11 test pits using a CAT® 330 L track-mounted excavator. Locations of the test pits are shown on Plate 1. The maximum depth of exploration was 21 feet below the existing ground surface. Bulk samples for index testing were collected from the trench wall sides at specific depths in each soil horizon. The test pits were backfilled immediately after exploration. Backfill was loosely placed and the area re-graded to the extent possible with equipment on hand.



Test Pit Exploration

## Material Classification

A geologist examined and identified all soils in the field in accordance with ASTM D 2488. During drilling and test pitting, representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing. Additional soil classification was subsequently performed in accordance with ASTM 2487 (Unified Soil Classification System [USCS]) upon completion of laboratory testing as described in the **Laboratory Testing** section. Logs of the borings and test pits are presented as Plate 2 (Boring and Test Pit Logs), and a USCS chart has been included as Plate 3 (Graphic Soils Classification Chart).



## Laboratory Testing

All soils testing performed in the BEC soils laboratory is conducted in general accordance with the standards and methodologies described in Volume 4.08 of the ASTM Standards.

### Index Tests

Samples of each significant soil type were analyzed to determine their in-situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318). The results of these tests are shown on Plate 4 (Index Test Results). Test results were used to classify the soils according to ASTM D 2487 and to verify field logs, which were then updated as appropriate. Classification in this manner provides an indication of the soil's mechanical properties and can be correlated with standard penetration testing and published charts (Bowles, 1996; Naval Facilities Engineering Command [NAVFAC], 1986a and b) to evaluate bearing capacity, lateral earth pressures, and settlement potential.



Grain Size Analysis

### Chemical Tests

Chemical testing was performed on representative samples of site foundation soils to evaluate the site materials' potential to corrode steel and PCC in contact with the ground. The samples were tested for pH, resistivity, redox potential, soluble sulfates, and sulfides. The results of the chemical tests are shown on Appendix B (Chemical Test Results). Chemical testing was performed by Sierra Environmental Monitoring of Reno, Nevada.

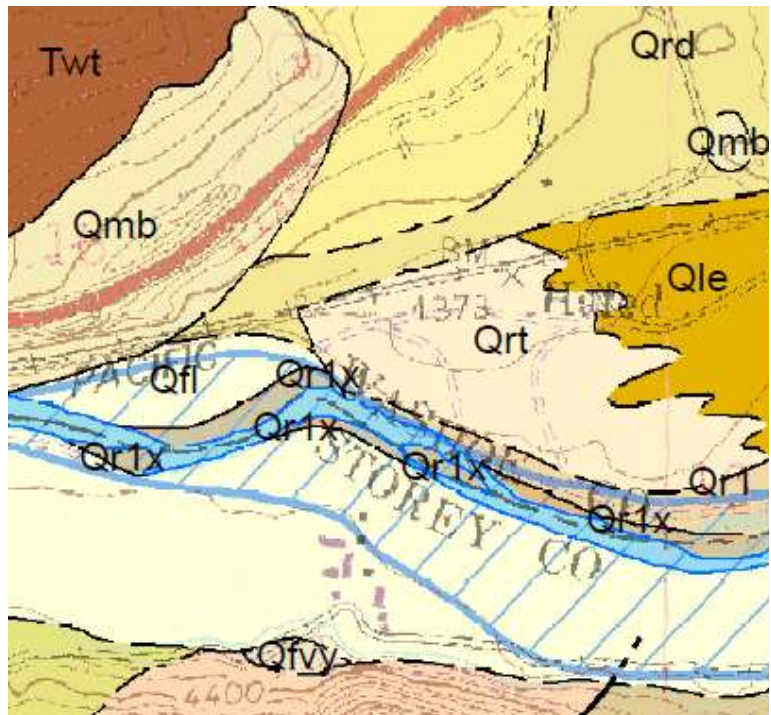


# Geologic and General Soil Conditions

## Site Geology

The site is located east of Reno, Nevada within the inside portion of an ancient meander terrace of the Truckee River. The site has been mapped by the Nevada Bureau of Mines and Geology (NBMG) as lying between Quaternary Age Tahoe Outwash (Qrt) and Quaternary Age Eetza Formation (Qle) (Ramelli et. al, 2011). The extreme southern limit of the parcel immediately along the Truckee River is mapped as Holocene to Modern Truckee River deposits (Qr1).

The materials encountered during our field exploration and the surficial geological units observed within the parcel generally correspond with NBMG mapping; however, some native geologic units (particularly outwash soils) have been removed by quarry operations exposing deeper geologic units.



Geologic Map

The Tahoe Outwash deposits are a result of glacial floods and consist of coarse-grained sand and gravel deposits with cobbles and boulders, some of which are massive. Lake Lahontan occupied a vast area of western Nevada including the Carson Sink to the east and Black Rock Desert to the north during the same geologic time (Pleistocene Age) as when repeated glacial floods resulted in Tahoe Outwash deposits along the path of the Truckee River. The Eetza Formation soils are shore and deltaic deposits associated with Pleistocene Lake Lahontan and consist of fine sand, silts and clays. Outwash soils and lake bed sediments are complexly interbedded within the site because of the parcel's unique geologic setting. Glacial flooding eroded lake sediments and deposited outwash soils; the preceding lake shore resulted in lake bed sediments above outwash soils.

Basalt rock exists as isolated remnants within fluvial and lacustrine deposits and as deeper units beneath outwash soils within the northwestern corner and western edges of the parcel. These basalt bedrock units are either





members of the McCellan Peak Basalt or basalt lava and intrusion of Tertiary Age Loosetown Formation (Ramelli et. al, 2011). Tertiary age basalt and andesite bedrock is also exposed in the slopes below the UPRR tracks along the eastern half of the northern edge of the parcel.

A sedimentary rock unit overlying volcanic rocks at the surface or beneath outwash soils (where they are not mined) was also encountered in the exploration. The older sedimentary rocks that were exposed on the cuts/slopes are not correlative to any lithologies mapped by the NBMG in this area (Ramelli et. al, 2011; Bell and Bonham, 1987; Bonham and Papke, 1969)

## Site Materials

Areas of stockpiled sand, gravel, and construction debris; quarry waste rock; and disturbed ground are present in isolated areas within the parcel. Boulders of various sizes up to 25 feet in diameter, remnants of sand and gravel mining activities, exist within and near the pits. No areas of deep fills are documented or were identified during the exploration. Approximate areas exhibiting quarry waste, stockpiles, disturbed ground, or widespread large boulders are shown on Plate 1.

The northern undisturbed portion of the parcel is surfaced with a thin layer of eolian sand that is about 2 to 4 feet in thickness. This surficial sand soil layer includes poorly graded sand and silty sand soils with 5 to 30 percent non-plastic fines and 70 to 95 percent fine to medium sand.

The remainder of the soil units within the site primarily consist of outwash soils and some interbedded layers of lake sediments. Outwash soils vary from silty/clayey sand with gravel to poorly graded sand/gravel with silt and silty/clayey gravel with sand. These deposits of the Truckee River generally consist of approximately 5 to 20 percent non-plastic to low plasticity fines, 30 to 80 percent fine to coarse sand, and 10 to 65 percent fine to coarse subrounded to rounded gravel. In general, the outwash soils profile also includes cobbles and boulders accounting for up to about 30 percent of the total excavated soil mass. Cobbles are common in the Tahoe Outwash in this area; however, boulders up to 4 feet in diameter were also encountered. Outwash soils also include a few thin layers of clean sand soils at depth. Occasionally, clayey sand soils near the surface consist of slightly elevated medium plasticity fines up to about 30 percent.

As described earlier, lakebed sediments are present as interbeds within outwash soils or at the surface in the higher areas of the site away from the Truckee River. In particular, these sediments were encountered as 2- to 5-foot-thick layers at the surface or at various depths (as deep as 20 feet below existing ground surface) within the northern edge of the proposed building, the northern truck parking lots, and western quadrant of the parcel. The lakebed sediments do not exhibit clearly defined horizontal beds throughout these areas at any depth; the thickness and depth of sediments vary between 2 adjacent exploration locations. Lake bed sediments vary from silty/clay sand to sandy lean clay to silt with sand and generally contain approximately 40 to 77 percent low to high plasticity fines and 23 to 60 percent fine to medium sand.



Basalt bedrock was encountered within the northwestern portion of the parcel in test pit TP-07 and boring B-11. The upper weathered bedrock material is easily excavated with the medium truck-mounted excavator used in the exploration to about 6 feet below the existing ground surface. Basalt is less weathered below 6 feet deep and excavation of test pit TP-07 reached refusal at about 7 feet below the existing ground surface. However, nearby boring B-11 was drilled to about 16.5 feet deep with the hollow stem auger technique. Basalt bedrock in test pit TP-07 was excavated as poorly graded gravel consisting of approximately 5 percent low plasticity fines, 20 percent fine to coarse sand and 75 percent subangular to angular fine to coarse gravel. Excavated material also includes small cobbles up to 4 inches in diameter. In boring B-11, basalt bedrock was sampled as dense to very dense clayey gravel consisting of about 15 percent low to medium plasticity fines, 40 percent fine to coarse sand and 45 percent gravel. Cobbles were indicated by the drilling response in boring B-11.

A sedimentary rock unit consisting of diatomaceous siltstone was encountered in test pits TP-06 and TP-11 and in boring B-06. Test pit TP-11 was excavated as a short trench to examine the contact of the sedimentary unit with the overlying outwash deposits. The contact between the outwash deposits and the underlying siltstone is irregular and has been altered by the Truckee River cutting into this soft sedimentary bedrock material. During the Tahoe glacial period, the Truckee River was extremely active and migrated laterally throughout the Truckee River canyon. Glacial flooding events would have cut/scoured into underlying soft sedimentary rocks and filled multiple channels throughout the site generating an irregular erosional surface. Siltstone extends 16.5 feet or more below the existing grade within the bottom of the western quarry pit. In the higher ground (test pit TP-06 and boring B-06) above the western quarry, siltstone is present beneath 4 to 10 feet of outwash soils and/or lakebed sediments. The siltstone breaks down to a blocky gravel-sized material during excavation. Subsequent transportation and compaction will further breakdown the soft rock to silty sand or sandy silt with variable amounts of gravel and cobble-sized blocks. Mechanical processing of siltstone in the laboratory yielded silty sandy soils with about 28 to 43 percent low to high plasticity fines.

## Ground Water

During exploration, ground water was encountered at the approximate depths of 21 and 16 feet below existing ground surface in borings B-05 and B-02, respectively. Ground water was not encountered in all of the remaining borings that were advanced about 15 to 26.5 feet below existing ground surface. The depth to ground water in boring B-05 and B-02 corresponds with ground water elevations of approximately 4,326 feet and 4,324 feet above msl, respectively. The shallower ground water elevation measured in boring B-05 that was advanced relatively closer to Truckee River is nearly equal or slightly lower than the Truckee River water elevation. The depth to ground water appears to increase away from the Truckee River. At the encountered depths, ground water is not expected to affect the design or construction of the project. Deeper cuts will occur within the higher elevations where depth to ground water is expected to be adequately below the bottom of the cuts. Based on the increase of depth to ground water away from the river, it appears the Truckee River is tributary to the ground water within the parcel. Changes in ground water within the parcel should be anticipated with the changes in the river level.



# Geologic Hazards

## Seismicity

Much of the Western United States is a region of moderate to intense seismicity related to movement of crustal masses (plate tectonics). By far, the most active regions, outside of Alaska, are in the vicinity of the San Andreas Fault system of western California. Other seismically active areas include the Wasatch Front in Salt Lake City, Utah, which forms the eastern boundary of the Basin and Range physiographic province, and the eastern front of the Sierra Nevada Mountains, which is the western margin of the province. The Mustang area lies along the eastern base of the Sierra Nevadas, within the western extreme of the Basin and Range.

The Mustang area lies within an area with a potential for strong earthquake shaking. Seismicity within the Reno-Sparks area is considered about average for the western Basin and Range Province (Ryall and Douglas, 1976). It is generally accepted that a maximum credible earthquake in this area would be in the range of magnitude 7 along the Olinghouse fault approximately 7 miles northeast of the site. The Olinghouse fault has been suggested to be the source of a magnitude 6.7 earthquake that occurred in 1869. Another active fault system in the geologic vicinity of the site is in the Reno area located at the base of the mountains near Thomas Creek, Whites Creek, and Mt. Rose Highway, some 18 miles southwest of the project.

## Faults

An earthquake hazards map is not available for the project area. The Quaternary Fault Map of Nevada (Bell, 1984) shows no faults with movement in the Pleistocene Age or younger within 3 miles of the site. The geologic map shows a Tertiary age bedrock fault south of the Truckee River, adjacent to the project site (Ramelli et. al, 2011; Bell and Bonham, 1987). This fault progresses in a northwesterly trend, and it is not mapped as passing through the project site. A concealed extension of this fault had been shown within the site in an older geologic map at a scale of 1:250,000 for the region (Bonham and Papke, 1969); however, the subject concealed extension within the site is not shown in recent more detailed geologic maps that are at a scale of 1:24,000 (Bell and Bonham, 1987; Ramelli et. al, 2011). As per the Quaternary Fault Map of Nevada, the nearest Pleistocene Age faults are north to northeast-trending fault splays associated with the Spanish Springs Peak Fault Zone mapped about 3.5 miles north of the project site. The Holocene Age Olinghouse fault is mapped about 7 miles to the northeast.

The Nevada Earthquake Safety Council (NESC, 1998) has developed and adopted the criteria for evaluation of Quaternary age earthquake faults. *Holocene Active Faults* are defined as those with evidence of movement within the past 10,000 years (Holocene time). Those faults with evidence of displacement during the last 130,000 years are termed *Late Quaternary Active Faults*. A *Quaternary Active Fault* is one that has moved within the last 1.6 million years. An *Inactive Fault* is a fault *without recognized activity within Quaternary time* (last 1.6 million years). The bedrock fault mapped south of the Truckee River is considered to be an *Inactive Fault* without any recent movement.



Since no faults of Pleistocene Age or younger (*Quaternary Active Fault*) are mapped or were identified in the field investigation as passing through or in the vicinity of the project site, no further fault investigation or mitigation is necessary.

## Ground Motion and Liquefaction

Mapping by the United States Geological Survey (USGS, 2015) indicates that there is a 2 percent probability that a *bedrock* ground acceleration of 0.59 g will be exceeded in any 50-year interval.

Because the site area is underlain by old and dense granular soils and bedrock at shallow depth, liquefaction potential is minimal due to the type, age, and density of materials present.

## Flood Plains

The Federal Emergency Management Agency (FEMA) has identified majority of the site as lying in unshaded Zone X or outside the limits of a 500-year floodplain (FEMA, 2009). The southern strip of the parcel located along the Truckee River that extends a maximum of 300 feet within the parcel is mapped as lying in shaded Zone AE with 100-year base flood elevations of 4,340 feet above msl in the western, upstream end, to 4,328 feet above msl in the northeastern, downstream end (FEMA, 2009).

## Other Geologic Hazards

A moderate to high potential for dust generation is present if grading is performed in dry weather. No other geologic hazards were identified.



# Discussion and Recommendations

## General Information

The site is geotechnically well-suited to host the proposed improvements. Site subsurface materials mostly consist of sand and gravel outwash soils and volcanic bedrock that will provide, when properly prepared, excellent support for the proposed distribution facility building and associated improvements. Excavation of these materials will also generate excellent quality fill material. Lakebed sediments and sedimentary rocks that are also present within localized zones are not suitable to directly support structural improvements and will not be suitable to use as structural fill directly beneath improvements, as described in the **Site Preparation** and **Mass Grading** sections. These clay and fine-grained soils will require separation from structural improvements.

The volcanic bedrock present within the western and northwestern limits of the parcel and northern exposed slopes will generally be excavatable, as described in the **Trenching and Excavation** section. Difficulty in excavation and trenching should be anticipated in bedrock as well as outwash soils due to the presence of cobbles and boulders. Outwash soils excavated and compacted as structural fill are expected to experience significant quantity shrinkage, as much as 25 percent, due to the removal of oversized particles (refer to the **Subsidence and Shrinkage** section).

The recommendations provided herein, and particularly under **Site Preparation, Mass Grading, Foundations, and Quality Control**, are intended to minimize risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the structure and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or is poorly implemented, the performance of the project will suffer. Sufficient quality control should be performed to verify that the recommendations presented in this report are followed.

Structural areas referred to in this report include all areas of buildings, concrete slabs, asphalt pavements, as well as pads for any minor structures. The term engineer, as presented below, pertains to the civil or geological engineer that has prepared the geotechnical engineering report for the project or who serves as a qualified geotechnical professional on behalf of the owner.

All compaction requirements presented in this report are relative to ASTM D 1557. For the purposes of this project:

- Fine-grained soils are defined as those with more than 40 percent by weight passing the number 200 sieve, and a plastic index lower than 15.
- Clay soils are defined as those with more than 30 percent passing the number 200 sieve, and a plastic index greater than 15.
- Granular soils are those not defined by the above criteria.



Any evaluation of the site for the presence of surface or subsurface hazardous substances is beyond the scope of this investigation. When suspected hazardous substances are encountered during routine geotechnical investigations, they are noted in the exploration logs and immediately reported to the client. No such substances were revealed during our exploration.

## Site Preparation

The parcel previously hosted a sand and gravel quarry many years ago. As a result, a majority of the site has been disturbed during excavating and processing of the fine to coarse aggregates. Several sand/gravel stockpiles exist throughout the parcel. Stockpiles of debris also exist, primarily within the eastern limits of the parcel. These materials will require removal from all structural areas. As necessary, the materials can be selectively used in various aspects of the project.

Various sizes of boulders are present at the surface throughout and near the areas of quarry operations. All boulders shall be removed from structural areas; smaller boulders could be placed at the toe of the slope in areas of deep fill or can be partially buried on fill slopes. Massive boulders will require splitting or blasting into manageable sizes for their use on the project.

Existing power and communication lines shall be rerouted, as necessary.

The well house shall be demolished and removed. Any existing well inside the well house will require proper abandoning following the guidelines of the State of Nevada Water Resources Division.

All vegetation shall be stripped and grubbed from structural areas and removed from the site. A stripping depth of 0.2 to 0.3 feet is anticipated. Resulting excavations shall be backfilled with structural fill compacted to 90 percent relative compaction.

No areas of existing deep fill were documented or identified in the exploration activities. However, disturbed ground exhibiting loose near surface soil layers is present in various localized areas throughout the parcel. Disturbed areas to receive structural fill or structural loading shall be scarified through 12 inches depth, moisture conditioned, and re-compacted to a minimum 90 percent relative compaction.

The test pits were excavated by backhoe at the approximate locations shown on Plate 1. Locations were determined in the field by approximate means. All test pits were backfilled upon completion of the field portion of our study. The backfill was compacted to the extent possible with equipment on hand. However, the backfill was not compacted to the requirements presented herein under **Mass Grading**. If structures, concrete flatwork, pavement, utilities, or other improvements are to be located in the vicinity of any of the test pits, the backfill should be removed and re-compacted in accordance with the requirements contained in the soils report. Failure to properly compact backfill could result in excessive settlement of improvements located over test pits.



Lakebed sediments that are present within the north-central portions (northern higher areas) of the site at various horizons consists of fine-grained and clay soils. Sedimentary rocks that are present from the surface or below native soils near and within northwestern portions of the western quarry and some sidewall segments of the eastern quarry will also result in clay and fine-grained soils when mechanically processed (excavation, handling, and compaction by construction equipment). Clay and fine-grained soils are continuous between nearby exploration locations in some areas, but are mostly present as discontinuous/isolated pockets. Fine-grained and clay soils within this site will exhibit considerable shrink-swell with changes in moisture content or could lose significant strength with moisture increases. Such soils are common, but sporadically distributed and must be identified during grading. Failure to recognize and properly mitigate these soils will result in damage to improvements. Fine-grained and clay soils shall be separated from improvements by structural fill in order to decrease potential shrink-swell movements and/or to provide subgrade soils that will not undergo strength loss with moisture increases. The minimum separation is presented in Table 1 (Required Thickness of Structural Fill between Clay Soils and Improvements).

TABLE 1 - REQUIRED THICKNESS OF STRUCTURAL FILL BETWEEN CLAY SOILS AND IMPROVEMENTS	
Improvement	Minimum Separation
Footings	2.5 feet
Interior Floor Slabs*	2.5 feet
Concrete Loading Dock Flatwork*	2.5 feet
Exterior Concrete Flatwork, including Curbs, Gutters, Sidewalk*	2.0 feet
Asphalt Pavements*	2.0 feet
* Includes aggregate base section.	

The required separation may be achieved by any combination of site filling or over-excavation and replacement. Based on the current grading concept, over-excavation is expected in localized areas within the northern limits of the project. In particular, areas in and around the northwestern corner of the building. Since clay and fine-grained soils exist as isolated pockets and zones because of the unique geologic setting of the parcel, potholing and evaluation by an experienced geotechnical technician is mandatory during mass grading to identify these areas and to provide the required separation. Special attention should be given to cut to fill transition areas. Any over-excavation shall be backfilled with structural fill to footing grade, or subgrade for pavements and slabs. The width of over-excavation shall extend laterally from the edges of footings, concrete slabs, or asphalt pavements at least 12 inches on all sides.

Clays to be left in place and covered with fill shall be moisture-conditioned to 2 to 4 percent over optimum for a minimum depth of 12 inches. This moisture level will significantly decrease the magnitude of shrink-swell movements in the upper foot of clay. The high moisture content must be maintained by periodic surface wetting, or other methods, until the surface is covered by at least one lift of fill. If allowed to dry out, subsequent expansion of clay soils beneath foundations and floor slabs could significantly exceed the design criteria set forth previously.



All areas to receive structural fill or structural loading shall be densified to, at least, 90 percent relative compaction. Where less than 70 percent passes the ¾-inch sieve, soils are too coarse for standard density testing techniques. In this case, as will commonly occur in outwash soils, a proof rolling of a minimum five single passes with a minimum 10-ton roller in mass grading, or five complete passes with hand compactors in footing trenches is recommended. This alternate has proved to provide adequate project performance, as long as all other geotechnical recommendations are closely followed. In all cases, the final surface shall be smooth, firm, and exhibit no signs of deflection.

If wet weather construction is anticipated, surface clay and fine-grained soils may become well above optimum moisture and impossible to compact. In some situations, moisture conditioning may be possible by scarifying the top 12 inches of subgrade and allowing it to air dry to near-optimum moisture prior to compaction. Where this procedure is ineffective or where construction schedules preclude delays, mechanical stabilization will be necessary. Mechanical stabilization may be achieved by over-excavation and/or placement of an initial 12- to 18-inch-thick lift of 12-inch-minus, 3-inch-plus, well graded, angular rock fill. The more angular and well graded the rock is, the more effective it will be. This fill shall be densified with large equipment, such as a self-propelled sheeps-foot or a large loader, until no further deflection is noted. Additional lifts of rock may be necessary to achieve adequate stability. The use of a separator geotextile will prevent mud from pumping up between the rocks, thereby increasing rock-to-rock contact and decreasing the required thickness of stabilizing fill. The separator geotextile shall meet or exceed the following minimum properties presented in Table 2 (Minimum Required Properties for Separator Geotextile).

TABLE 2 - MINIMUM REQUIRED PROPERTIES FOR SEPARATOR GEOTEXTILE	
Trapezoid Strength (ASTM D 4533)	80 x 80 lbs.
Puncture Strength (ASTM D 4833)	500 lbs.
Grab Tensile Strength/Elongation (ASTM D 4632)	200 x 200 @ 50 %

As an alternate to rock fill, a geotextile/gravel system may be used for stabilization. Aggregate base (*Standard Specifications for Public Works Construction [SSPWC]*, 2012), Class C or D drain rock (*SSPWC*, 2012), or pit run gravels shall be placed above the geotextile. Regardless of which alternate is selected, a test section is recommended to determine the required thickness of stabilization.

## Trenching and Excavation

The degree of weathering and frequency of fractures/joints in volcanic bedrock are expected to vary, resulting in variable excavatability. We expect that most of the site bedrock can be graded mostly or entirely using heavy grading equipment (dozers with rippers). However, localized zones of "core stones" requiring hoe ram, blasting, and other aggressive excavation techniques may be present. We expect similar excavation characteristics in the volcanic slope





exposed below the UPPR tracks northwest westof the building. As much as 17 feet of cut and steepening of the existing slope is necessary for this project. Sedimentary bedrock within the site will be more easily excavated.

Trenching for utilities and footings in bedrock will also be difficult. Use of a rock saw and other aggressive trenching techniques should be anticipated locally.

Trenching and excavation in outwash soils will also pose difficulty due to the presence of small to large boulders. Neat line trenching will not be possible in outwash soils. Where outwash soils exhibit minimal non-plastic fines, caving and sloughing of sidewalls will occur particularly when they are allowed to dry out.

Temporary trenches with near-vertical sidewalls in soils should be stable to a depth of approximately 4 feet. Temporary trenches are defined as those that will be open for less than 24 hours. Excavations to greater depths will require shoring or laying back of sidewalls to maintain adequate stability. Regulations contained in Part 1926, Subpart P, of Title 29 of the Code of Federal Regulations (CFR, 2010) require that temporary sidewall slopes be no greater than those presented in Table 3 (Maximum Allowable Temporary Slopes).

TABLE 3 - MAXIMUM ALLOWABLE TEMPORARY SLOPES	
Soil or Rock Type	Maximum Allowable Slopes <sup>1</sup> for Deep Excavations less than 20 Feet Deep <sup>2</sup>
Stable Rock	Vertical (90 degrees)
Type A <sup>3</sup>	3H:4V (53 degrees)
Type B	1H:1V (45 degrees)
Type C	3H:2V (34 degrees)
<i>Notes:</i>	
<sup>1</sup> Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off. <sup>2</sup> Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer. <sup>3</sup> A short-term (open 24 hours or less) maximum allowable slope of 1H:2V (63 degrees) is allowed in excavation in Type A soils that are 12 feet or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet in depth shall be 3H:4V (53 degrees).	

The State of Nevada, Department of Industrial Relations, Division of Occupational Safety and Health Administration (OSHA), has adopted and strictly enforces these regulations, including the classification system and the maximum slopes. In general, Type A soils are cohesive, non-fissured soils, with an unconfined compressive strength of 1.5 tons per square foot (tsf) or greater. Type B are cohesive soils with an unconfined compressive strength between 0.5 and 1.5 tsf. Type C soils have an unconfined compressive strength below 0.5 tsf. Numerous additional factors and exclusions are included in the formal definitions. The client, owner, design engineer, and contractor shall refer to Appendix A and B of Subpart P of the previously referenced Federal Register for complete definitions and



requirements on sloping and benching of trench sidewalls. Appendices C through F of Subpart P apply to requirements and methodologies for shoring.

On the basis of our exploration, the majority of site soils are Type C. Lakebed sediments can be considered Type B. Both volcanic and sedimentary bedrock units within the site shall be considered Type A unless evaluated to be stable rock by the engineer during construction. Any area in question shall be considered Type C, unless specifically examined by the engineer during construction. All trenching shall be performed and stabilized in accordance with local, state, and OSHA standards.

If loose, soft, wet, or disturbed soils are encountered at the foundation subgrade, these soils should be removed to expose undisturbed soils/bedrock, and the resulting over-excavation backfilled with compacted structural fill. The base of all excavations should be dry and free of loose soils at the time of concrete placement.

## Mass Grading

Mass grading of the site will involve as much as 20 feet of cuts within the northern limits and fills up to 13 feet within southern limits. The exposed volcanic bedrock slope north and northeast of the proposed building footprint will require a combination of excavation (up to 18-foot-cuts) and slope steepening resulting in a cut slope that is up to 45 feet in vertical height from toe to crest. An emergency access roadway along the UPRR tracks will also require up to 20 feet of cuts.

Site subsurface soils generally include outwash granular soils with minor interbeds of lakebed, fine-grained, and clay soils. Volcanic bedrock is present within the northwestern limits of the parcel beneath near surface deposits and sediments and on the northern exposed slopes. Sedimentary rocks also present overlying basalt bedrock in localized areas.

Native clay and fine-grained soils shall be placed as fill only in nonstructural areas, particularly near the toe of the fill slopes, or at the bottom of deep structural fill within paved areas below required structural fill separation. In general, excavation of lakebed sediments and sedimentary rock units will result in clay and fine-grained soils. Native granular soils and excavated volcanic bedrock will be suitable for structural fill provided particles larger than 6 inches are removed, although rock up to 12 inches can be incorporated in rock fill as detailed later in this section. Oversized rock can be stockpiled for later use as erosion protection or placed in the bottom of deep nonstructural fill, particularly beneath the slopes. In deep fills, oversized rocks must be scattered in such a manner as to preclude development of voids between the particles (nesting). If imported structural fill is required on this project, we recommend it satisfy the specifications presented in Table 4 (Guideline Specification for Imported Structural Fill).



TABLE 4 - GUIDELINE SPECIFICATION FOR IMPORTED STRUCTURAL FILL

Sieve Size	Percent by Weight Passing	
4 Inch	100	
3/4 Inch	70 – 100	
No. 40	15 – 70	
No. 200	5 – 30	
Percent Passing No. 200 Sieve	Maximum Liquid Limit	Maximum Plastic Index
5 – 10	50	20
11 – 20	40	15
21 – 30	35	10

These recommendations are intended as guidelines to specify a readily available, prequalified material. Adjustments to the recommended limits can be provided to allow the use of other granular, non-expansive material. Any such adjustments must be made and approved by the engineer, in writing, prior to importing fill to the site.

All fill placed on hillsides steeper than 5H:1V shall be keyed into existing materials in equipment wide benches. The maximum vertical separation between benches shall be 6 feet.

Whenever possible, structure foundations shall not be placed partially on bedrock and partially on structural fill. Where structure foundations will be placed partially on bedrock and partially on structural fill due to cut and fill operations, differential settlement of the structural fill may be on the order of 1 percent of the maximum fill height, which would result in differential settlement of structure foundations. Such differential settlement should be minimized. Measures to minimize such differential settlement may include providing a gradual transition from the bedrock to structural fill and/or over-excavating a portion of the bedrock and backfilling with structural fill.

Any structural fill within the building area shall be placed in maximum 12-inch-thick (loose) lifts, each densified to, at least, 95 percent relative compaction. All other structural fill shall be densified to a minimum 90 percent relative compaction. Nonstructural fill shall be densified to, at least, 85 percent relative compaction to minimize consolidation and erosion.

Commonly, outwash soils and excavated bedrock materials will have greater than 30 percent retained on the ¾-inch sieve; as such standard density testing is not valid. These materials will be treated as rock fills with a maximum lift thickness and maximum particle size of 12 inches. A proof rolling program of at least 5 single passes of a minimum CAT® 815 roller in mass grading or at least 5 complete passes with hand compactors in footing trenches is



recommended. If a CAT<sup>®</sup> 825 or larger compactor is used, it could be possible to increase both lift thickness and particle size to a maximum of 18 inches. However, this will require a test section to verify the contractor's competency in properly compacting such thick lifts.

Properly constructed rock fills have a long history of excellent performance in northern Nevada. Within 4 feet of finished subgrade elevation, the maximum particle size and maximum lift thickness contained in rock fill placed during mass grading should be 18 inches. Additionally, the rock fill should exhibit maximum particle size and maximum lift thickness of 12 inches. As an alternate, the owner may wish to restrict the maximum particles size to 6 inches in the upper 2 feet to facilitate fine grading, trenching, and footing excavation. Acceptance of this rock fill is based upon observation of particle size, lift thickness, moisture content, and applied compactive effort. Compaction must continue to the satisfaction of the engineer. In all cases, the finished surface shall be firm and show no signs of deflection.

Grading shall not be performed with or on frozen soils.

## Utility Trench Backfill

The maximum particle size in trench backfill shall be 4 inches. Bedding and initial backfill 12 inches over the pipe will require import and shall conform to the requirements of the utility having jurisdiction. Bedding and initial backfill shall be densified to at least 90 percent relative compaction. Native granular soils and excavated bedrock materials will provide adequate final backfill as long as oversized particles are excluded, and shall be placed in maximum 8-inch-thick loose lifts that are compacted to a minimum of 90 percent relative compaction in all structural areas.

## Seismic Design Parameters

The 2012 *International Building Code (IBC)* (International Code Council [ICC], 2012) adopted by Washoe County requires a detailed soils evaluation to a depth of 100 feet to develop appropriate soils criteria. However, the code states that a Site Class D may be used as a default value when the soil properties are not known in sufficient detail to determine the soil profile type. The Site Class D soil profile is for stiff soils with a shear velocity between 600 and 1,200 feet per second, or with an N (SPT) value between 15 and 50 or an undrained shear strength between 1,000 and 2,000 pounds per square foot (psf). Based on our experience and the geology at the H.P. Ranch Parcel, it is our opinion that the default Site Class D is appropriate. With that assumption, the recommended seismic design criteria are presented in Table 5 (Seismic Design Criteria Using 2012 *International Building Code*).



TABLE 5 - SEISMIC DESIGN CRITERIA USING 2012 *INTERNATIONAL BUILDING CODE* (USGS, 2015)

Approximate Latitude	39.513
Approximate Longitude	-119.627
Spectral Response at Short Periods, $S_s$ , percent of gravity	148.0
Spectral Response at 1-Second Period, $S_1$ , percent of gravity	49.3
Site Class	D
Occupancy Category	II
Site Coefficient $F_a$ , decimal	1.00
Site Coefficient $F_v$ , decimal	1.50
Site Adjusted Spectral Response at Short Periods, $S_{MS}$ , percent of gravity	148.0
Site Adjusted Spectral Response at Long Periods, $S_{M1}$ , percent of gravity	74.3
Design Spectral Response at Short Periods, $S_{DS}$ , percent of gravity	98.7
Design Spectral Response at Long Periods, $S_{D1}$ , percent of gravity	49.5
Seismic Design Category	D

## Foundations

Clay and fine-grain soils exist as isolated pockets and as lenses of geologic units (lakebed sediments and sedimentary bedrock) within the northern half of the parcel. Clay and fine-grained soils are considered poor foundation materials because of their expansive nature or potential to lose strength with moisture increases and therefore, are not suitable to directly support footings. The most economical method of foundation support lies in spread footings bearing on native granular soils, volcanic bedrock or a minimum 2.5 feet of structural fill.

Individual column footings and continuous wall footings underlain by properly prepared native granular soils or bedrock or a minimum 2.5 feet of compacted structural fill can be designed for a net maximum allowable bearing pressure of 3,000 psf, and should have minimum footing widths of 24 and 12 inches, respectively. The net allowable bearing pressure is the pressure at the base of the footing in excess of the adjacent overburden pressure. This allowable bearing value should be used for dead plus ordinary live loads. Ordinary live loads are the portion of the design live load that will be present during the majority of the life of the structure. Design live loads are loads which are produced by the use and occupancy of the building, such as by moveable objects, including people or equipment, as well as snow loads. This bearing value may be increased by one-third for total loads. Total loads are defined as the maximum load imposed by the required combinations of dead load, design live loads, snow loads, and wind or seismic loads.



With this allowable bearing pressure, total foundation movements of approximately  $\frac{3}{4}$  inch should be anticipated. Differential movement between footings with similar loads, dimensions, and base elevations should not exceed  $\frac{1}{2}$  inch. The majority of the anticipated movement will occur during the construction period as loads are applied.

Lateral loads, such as wind or seismic, may be resisted by passive soil pressure and friction on the bottom of the footings. The recommended coefficient of base friction is 0.45 and has been reduced by a factor of 1.5 on the ultimate soil strength. Design values for active and passive equivalent fluid pressures of footings lying within either native granular soils or structural fill are 32 and 400 pounds per square foot per foot of depth, respectively. These design values are based on spread footings bearing on native granular soils, volcanic bedrock, or structural fill, and backfilled with structural fill. All exterior footings should be placed a minimum 2 feet below adjacent finish grade for frost protection.

## Retaining Walls

Retaining walls up to 8 feet in maximum exposed height are anticipated to support cuts north and northwest of the building. The grading plan shows the proposed retaining wall is to align above a 3H:1V slope of up to 12 feet in vertical height. Segmental block retaining walls may be appropriate. It will be preferable to build the retaining wall at the edge of the parking lots and to have a cut slope above the wall for global stability and to minimize necessary backfilling activities beyond the property line. If the wall is to be located above the slope, the wall embedment depth should be increased significantly and/or a horizontal bench of a minimum 4 feet should be included near the front face of the wall for global stability. Geotechnical recommendations for the design and construction of retaining walls are provided in this section. If necessary, BEC can provide design of the segmental retaining wall as a separate scope of work. Short, terraced rockery walls can also be considered, but on-site rocks are not generally suitable for rockery walls.

Dock walls up to about 4 feet in exposed height will be necessary along the side of the building where loading docks are to be constructed.

### Retaining Wall Design Parameters

Table 6 (Lateral Earth Pressure Values [Equivalent Fluid Density]) provides design parameters for fully drained retaining walls with vertical back faces, horizontal backfill, and no surcharge loads next to the top of the wall. Recommendations for retaining wall drainage are provided in the **Retaining Wall/Foundation Drainage Design** section. Dock walls will not require drainage. Surcharge loads, including construction and traffic loads, should be added to the following values. While the recommendations here may be suitable for other conditions, the engineer should be consulted for retaining walls with unusual conditions such as sloping backfill, sloping retaining walls, or the presence of hydrostatic pressure. The engineer should also be consulted where retaining walls exceed 10 feet in height.



TABLE 6 - LATERAL EARTH PRESSURE VALUES (EQUIVALENT FLUID DENSITY), pcf

Retained Slope	Static		Dynamic	
	Active <sup>1</sup>	Passive <sup>2</sup>	Active <sup>1</sup>	Passive <sup>2</sup>
Level	32	140	47	210
3H:1V	39	140 <sup>3</sup>	74	210 <sup>3</sup>

<sup>1</sup>For walls that are free to yield at least 0.2 percent of the wall height.

<sup>2</sup>The values presented have been reduced from the ultimate passive resistance values by 67 and 50 percent to limit deflection under static and dynamic conditions, respectively.

<sup>3</sup>No sloping ground on the passive side. Provide a minimum 4 feet horizontal bench where sloping ground exist.

Restrained walls should be designed to resist an at-rest equivalent fluid density of 55 pounds per cubic foot (pcf).

Lateral loads will be resisted by friction along the base of retaining wall footings and by passive resistance against buried foundation walls. Foundation wall footings cast directly on properly prepared native granular soils, volcanic bedrock, or on properly compacted structural fill, may be designed using a coefficient of base friction of 0.45. This factor has been reduced by a factor of 1.5 on the ultimate soil strength.

## Retaining Wall/Foundation Drainage Design

Subsurface foundation drainage must be installed along the retaining wall foundations. Dock walls will not require drainage. This may be accomplished by placing a non-woven geotextile/gravel system with a network of perforated drain pipes below and along the outside base of the exterior footings. The geotextile shall meet or exceed the minimum properties presented in Table 7 (Minimum Required Properties for Drainage Geotextile).

TABLE 7 - MINIMUM REQUIRED PROPERTIES FOR DRAINAGE GEOTEXTILE

Grab Tensile (ASTM D 4632)	90 lbs.
Puncture Strength (ASTM D 4833)	50 lbs.
Burst Strength (ASTM D 3786)	150 psi.
or if native soils have sharp, angular rocks:	
Grab Tensile (ASTM D 4632)	130 lbs.
Puncture Strength (ASTM D 4833)	75 lbs.
Burst Strength (ASTM D 3786)	250 psi.

A trench shall be excavated to a depth of at least 6 inches below the base and directly adjacent to the outside of the footings. A perforated 4-inch-diameter drain pipe shall be placed in the bottom of the trench, and graded to drain downslope of the wall. Class C drain rock (*SSPWC*, 2012) shall be placed a minimum of 12 inches above the drain pipe and around the footing, and covered by the geotextile.



Retaining wall drainage can be accomplished by installing granular backfill (and a weep hole drain system at the bottom of the wall) that is hydraulically connected to the foundation drain system. The drain rock section shall be a minimum of 18 inches wide and extend to within 12 inches of finished grade. A drainage geotextile (Table 7) shall be placed between the drain rock backfill and the native soils to prevent migrations of fines into the drain rock.

A shallow swale with adequate grade shall be incorporated at the backfill surface to direct runoff away from the wall.

### Retaining Wall Backfill

Outwash granular soils and excavated volcanic bedrock materials will be suitable for retaining wall backfill provided particles larger than 6 inches are excluded. Native clay and fine-grained soils shall not be used as retaining wall backfill within a horizontal distance equal to the height of the wall from the wall back face. Backfill behind retaining walls shall be compacted to 90 percent of the material's maximum dry density in accordance with ASTM D 1557, but shall not be densified to more than about 92 percent relative density to minimize pressure against the wall. Care must be exercised when compacting backfill against retaining walls and foundations. To reduce temporary construction loads on the walls, heavy equipment shall not be used for placing and compacting fill within a region as determined by a 0.5H:1V line drawn upward from the bottom of the wall, or within 3 feet of the wall, whichever is greater. We recommend that hand-operated compaction equipment be used to compact soils adjacent to walls.

## Portland Cement Concrete Flatwork

The design of the facility floor slab shall be performed by the structural engineer. A vertical subgrade modulus (K-value) of 250 pounds per cubic inch (30-inch-diameter plate) can be used for design of the main floor slab for the facility building.

Any other miscellaneous interior concrete slab-on-grade floors (i.e. office floor slabs, etc.) shall be a minimum of 4 inches thick. Floor slab reinforcement for these miscellaneous floors, as a minimum, shall consist of No. 3 reinforcing steel placed on 24-inch-centers in each direction, or flat sheets of 6x6, W4.0xW4.0 welded wire mesh (WWM), or as dictated by the structural engineer. Rolls of WWM are not recommended for use since vertically centered placement of rolled WWM within a floor slab is difficult to achieve. All reinforcing steel and WWM shall be centered in the floor slab through the use of concrete dobies or approved equivalent.

The thickness of base material beneath PCC flatwork shall be a minimum of 4 inches for curbs, gutters, sidewalks, floor slabs, and private flatwork. The strength of the base material is particularly critical for impact loads (fork lifts) and point loads, as occurs with storage racks. Aggregate base courses shall be densified to at least 95 percent relative compaction.

The structural section for exterior truck ramps, aprons, and dolly pads shall be a minimum of 6 inches of 4,000 pounds per square inch (psi) concrete overlying 6 inches of Type 2, Class B, aggregate base (SSPWC, 2012). Valley gutters shall include at least 7 inches of fibermesh concrete (4,000 psi). These exterior rigid pavements have been





designed using the American Association of State Highway and Transportation Officials (AASHTO, 1993) method for concrete with a 28-day flexural strength of 570 psi (approximately 4,000 psi compressive strength).

The northern Nevada area is a region with exceptionally low relative humidity. As a consequence, concrete flatwork is prone to excessive shrinking and curling. Concrete mix proportions and construction techniques, including the addition of water and improper curing, can adversely affect the finished quality of concrete and result in cracking, curling, and spalling of slabs. We recommend that all placement and curing be performed in accordance with procedures outlined by the American Concrete Institute (ACI, 2008) and this report. Special considerations shall be given to concrete placed and cured during hot or cold weather temperatures, low humidity conditions, and windy conditions such as are common in the Truckee Meadows area.

Proper control joints and reinforcement shall be provided to minimize any damage resulting from shrinkage. In particular, crack-control joints should be installed on maximum 10-foot-centers and shall be installed to a minimum depth of 25 percent of the slab thickness. Final layout of the crack control joints for the main floor slab shall be determined by the structural engineer. Saw-cuts, zip strips, and/or trowel joints are acceptable; however, saw-cut joints must be installed as soon as initial set allows and prior to the development of internal stresses that will result in a random crack pattern. If trowel joints are used in the office areas, they will need to be grouted over prior to installation of floor coverings.

Concrete shall not be placed on frozen in-place soils.

Any interior concrete slab-on-grade floors with moisture sensitive flooring will require a moisture barrier system. Installation shall conform to the specifications provided for a Class B vapor restraint (ASTM E 1745-97). The vapor barrier shall consist of placing a 10-mil-thick StegoRap<sup>®</sup> vapor barrier or approved equal directly on a properly prepared subgrade surface. A 4-inch-thick layer of aggregate base shall be placed over the vapor barrier and compacted with a vibratory plate. The base layer that overlies the moisture barrier membrane shall remain compacted and a uniform thickness maintained during the concrete pour, as its intended purpose is to facilitate even curing of the concrete and minimize curling of the slab. Extra attention shall be given during construction to ensure that rebar reinforcement and equipment do not damage the integrity of the vapor barrier. Care must be taken so that concrete discharge does not scour the base material from the vapor barrier. This can be accomplished by maintaining the discharge hose in the concrete and allowing the concrete to flow out over the base layer.

## Asphalt Concrete

Paved areas subject to truck traffic shall consist of 4 inches of asphalt concrete underlain by 6 inches of Type 2, Class B, aggregate base (SSPWC, 2012). Paved areas restricted to automobile parking can consist of 3 inches of asphalt concrete underlain by 6 inches of aggregate base. All aggregate base beneath asphalt pavements shall be densified to, at least, 95 percent relative compaction.



Asphalt concrete pavements have been designed for a standard 20-year life expectancy. Due to the local climate and available construction aggregates, an entire 20 years of performance life is only achieved with diligent maintenance. Between 15 and 20 years after initial construction (average 17 years), major rehabilitation (structural overlay or reconstruction) is often required. To achieve maximum performance life, periodic maintenance is required, including regular crack sealing, seal coats, and patching as necessary. Failure to provide the required maintenance will significantly reduce pavement design life and performance.

## Subsidence and Shrinkage

Subsidence of about 0.1 feet should be anticipated from construction traffic in soils. Subsidence of bedrock exposed in cut should be negligible. Granular outwash soils excavated and re-compacted as structural fill/rock fill will experience quantity shrinkage in the range of 20 to 25 percent including the removal of oversized particles larger than 12 inches. Granular outwash soils excavated and re-compacted as final utility backfill will experience quantity shrinkage in the range of 30 to 35 percent including the removal of particles larger than 4 inches in size.

Bedrock will have varying degrees of volume change, ranging from shrinkage to swell, when excavated and placed as fill. Deeply weathered bedrock will exhibit a quantity shrinkage similar to granular soil without cobbles and boulders (approximately 10 to 15 percent). Firm bedrock may exhibit no quantity shrinkage. Where hard bedrock excavates into gravel and larger sized particles, a quantity swell of up to 30 percent could be experienced. This volume increase will be partially to completely offset by removal of oversized particles, which will vary with geology and excavation methods. Therefore, an overall earthwork quantity balance at this site becomes difficult to predict and manage.

## Site Drainage

Adequate surface drainage shall be provided so moisture is directed away from the structure. A system of roof drains is recommended to collect roof precipitation and direct it away from the building foundations unless pavement extends to the walls. Foundation backfill shall be thoroughly compacted to decrease permeability and reduce the potential for irrigation and storm water to migrate below the building floor slab. The ponding of water on finish grade or at the edge of pavements shall be prevented by proper grading.

## On-site Sewage Disposal System Considerations

The project will likely require an on-site sewage disposal system. The planning and permitting of such a sewage system will require coordination with the Nevada Division of Environmental Protection, particularly because of the parcel's proximity to host the Truckee River. Design of the on-site sewage disposal system will require percolation testing within the site area host the primary and secondary leach fields. The bottom of the leach fields must be adequately above the highest seasonal ground water table. Geological units within the parcel are expected to exhibit significantly varying percolation rates. Outwash sand and gravel soils will likely have a significantly low percolation rate (highly permeable). Bedrock will have a high percolation rate depending on the fracture. If outwash soils exhibit a



percolation rate faster than 5 minutes per inch, a sand filter bed leach field may be necessary when the on-site sewage system is located in these soils.

## Slope Stability and Erosion Control

Stability of cut and filled surfaces involve 2 separate aspects. The first concerns true slope stability related to mass wasting, landslides or the en masse downward movement of soil or rock. Stability of cut and fill slopes is dependent upon shear strength, unit weight, moisture content, and slope angle. The 2012 *IBC* (ICC, 2012) adopted by the City of Reno allows cut and fill slopes up to 2H:1V in the type of soils present at this site. The exploration and testing program conducted during this investigation confirms 2H:1V slopes will be stable in the soils. Bedrock cuts northwest of the large building can be sloped at a 1.5H:1V ratio, if necessary.

The second aspect of stability involves erosion potential and is dependent on numerous factors involving grain size distribution, cohesion, moisture content, slope angle, and the velocity of the water or wind on the ground surface. Slopes between 3H:1V and 5H:1V can be stabilized by hydroseeding. Slopes steeper than 3H:1V require mechanical stabilization. Protection could be provided by a variety of methods such as rip-rap or "geo-cell" systems; however, the abundance of rock excavated from the site will make rip-rap the most cost-effective alternative. The type and sizing of rip-rap on the fill slopes that extend within the 100-year floodplain shall be determined based on the floodwater velocity of the Truckee River. It may be necessary to provide rip-rap protection for flatter than 3H:1V slopes along Truckee River based on floodwater velocity of the Truckee River.

Dust potential at this site will be moderate during dry periods. Temporary (during construction) and permanent (after construction) erosion control will be required for all disturbed areas. The contractor shall prevent dust from being generated during construction in compliance with all applicable city, county, state, and federal regulations. The contractor shall submit an acceptable dust control plan to the Washoe County District Health Department prior to starting site preparation or earthwork. Project specifications should include an indemnification by the contractor of the owner and engineer for any dust generation during the construction period. The owner will be responsible for mitigation of dust after accepting the project.

In order to minimize erosion and downstream impacts to sedimentation from this site, best management practices with respect to storm water discharge shall be implemented at this site.

## Corrosion Potential

### Metal Pipe Design Parameters

Laboratory testing was performed to evaluate the corrosion potential of the soils with respect to metal pipe in contact with the ground. The results of the laboratory testing indicate that the site soils are not corrosive to buried steel (American Water Works Association [AWWA], 1999). As a result, metal pipe in contact with the ground will not require corrosion protection.



## Portland Cement Concrete Mix Design Parameters

Soluble sulfate content has been determined for representative samples of the site foundation soils. The sulfate was extracted from the soil at a 10:1 water to soil ratio in order to assure that all soluble sodium sulfate was dissolved. The results are reported in milligrams of sulfate per kilogram of soil and can be directly converted to percent by dividing by 10,000. The percent sulfate in the soil is used to determine the sulfate exposure Class (S) from the information presented in Table 8 (Sulfate Exposure Class).

TABLE 8 - SULFATE EXPOSURE CLASS*				
S Sulfate			Water-Soluble Sulfate (SO <sub>4</sub> ) in Soil, Percent by Weight	Dissolved Sulfate (SO <sub>4</sub> ) in Water, ppm
	Not Applicable	S0	SO <sub>4</sub> < 0.10	SO <sub>4</sub> < 150
	Moderate	S1	0.10 ≤ SO <sub>4</sub> < 0.20	150 ≤ SO <sub>4</sub> < 1,500 Seawater
	Severe	S2	0.20 ≤ SO <sub>4</sub> ≤ 2.00	1,500 ≤ SO <sub>4</sub> ≤ 10,000
	Very Severe	S3	SO <sub>4</sub> > 2.00	SO <sub>4</sub> > 10,000

\*From Table 4.2.1 Exposure Categories and Classes. ACI 318, *Buildings Code and Comments*.

The results of the testing (Appendix B) indicate that concrete in contact with the site foundation soils should be designed for Class S0 Sulfate exposure. Therefore, Type II cement can be used for all concrete work.



## Anticipated Construction Problems

Some difficulty will be encountered in trenching due to the presence of small to large boulders in areas of granular outwash soils. Difficulty in excavation and trenching will also be encountered in bedrock. Outwash soils may cave and slough from sidewalls, especially when allowed to dry out. Fine-grained and clay soils are presented in isolated locations at various depths within the northern half of the parcel and will require diligent and continuous monitoring and inspection in order to properly identify these soils during mass grading in order to provide the required separation from structural improvements.



## Quality Control

All plans and specifications should be reviewed for conformance with this geotechnical report and approved by the engineer prior to submitting them to the building department for review.

The recommendations presented in this report are based on the assumption that sufficient field testing and construction review will be provided during all phases of construction. We should review the final plans and specifications to check for conformance with the intent of our recommendations. Prior to construction, a pre-job conference should be scheduled to include, but not be limited to, the owner, architect, civil engineer, the general contractor, earthwork and materials subcontractors, building official, and engineer. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to and reviewed by the engineer.

The parcel exhibits various geological units with significantly varying physical and engineering properties; as such, the project will need sufficient quality control during construction. We should have the opportunity to provide sufficient on-site observation of preparation and grading, over-excavation, fill placement, foundation installation, and paving during construction. These observations would allow us to verify that the geotechnical conditions are as anticipated and that the contractor's work is in conformance with the approved plans and specifications.



## Standard Limitations Clause

This report has been prepared in accordance with generally accepted geotechnical practices. The analyses and recommendations submitted are based on field exploration performed at the locations shown on Plate 1 of this report. This report does not reflect soils variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary. We recommend our firm be retained to perform construction observation in all phases of the project related to geotechnical factors to ensure compliance with our recommendations. The owner shall be responsible for distributing this geotechnical investigation to all designers and contractors whose work is related to geotechnical factors.

Equilibrium water level readings were made on the date shown on Plate 2 of this report. Fluctuations in the water table may occur due to rainfall, temperature, seasonal runoff or adjacent irrigation practices. Construction planning should be based on assumptions of possible variations in the water table.

It is anticipated that the site will be graded cut to fill. As such, minor deviations from the recommendations and assessments presented in this report are anticipated. Fills are to be generated on site using cut-to-fill methods and will not be purchased from a commercial borrow source. Therefore, the potential exists for soils within the building pads to fall outside the material limits recommended in this report. Unless these deviations can be proven to be fundamental to any observed distress or performance issue, such deviations should not be considered a failure to adhere to the recommendations presented in this report or a design flaw, but should be considered an acceptable variation in mass grading when on-site materials are used as the fill source. Acceptable performance of such materials is formulated around the provisions and requirements of the *IBC*.

This report has been produced to provide information allowing the architect or engineer to design the project. The owner is responsible for distributing this report to all designers and contractors whose work is affected by geotechnical aspects. In the event there are changes in the design, location, or ownership of the project from the time this report is issued, recommendations should be reviewed and possibly modified by the engineer. If the engineer is not granted the opportunity to make this recommended review, he or she can assume no responsibility for misinterpretation or misapplication of his or her recommendations or their validity in the event changes have been made in the original design concept without his or her prior review. The engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.



## References

- American Association of State Highway and Transportation Officials (AASHTO), 1993, *Design Manual for Design of Rigid and Flexible Pavements*.
- American Concrete Institute (ACI), 2008, *ACI Manual of Concrete Practice: Parts 1 through 5*.
- American Society for Testing and Materials (ASTM), 2012a, *Soil and Rock (I and II)*, Volumes 4.08 and 4.09.
- American Water Works Association (AWWA), 1999, *American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems*, American Water Works Association ANSI/AWWA C105/A21.5-99 (Revision of ANSI/AWWA C105/A21.9-93).
- Bell, J. W., 1984, *Quaternary Fault Map of Nevada, Reno Sheet*: Nevada Bureau of Mines and Geology (NBMG), Map 79.
- Bell, J. W. and H. F. Bonham, 1987, *Geologic Map, Vista Quadrangle*: Nevada Bureau of Mines and Geology, Map 4Hg.
- Black Eagle Consulting, Inc. (BEC), 2007, *Feasibility-Level Geotechnical Investigation, Mustang Parcel, APN 084-370-02, Washoe County, Nevada*, August 13, 2007, private consultants report.
- Bonham, H. F. and K. G. Papke, 1969, *Geology and Mineral Deposits of Washoe and Storey Counties, Nevada*: (Nevada Bureau of Mines and Geology) Bulletin 70, 1969.
- Bowles, J. E., 1996, 5<sup>th</sup> ed., *Foundation Analysis and Design*, McGraw Hill.
- Code of Federal Regulations (CFR), 2010, Title 29, Part 1926, Subpart P – Excavations.
- Federal Emergency Management Agency (FEMA), 2009 (March 16, 2009), *Flood Insurance Rate Maps 32031C3069G and 32031C3088G, Washoe County, Nevada*.
- International Code Council (ICC), 2012, *International Building Code (IBC)*.
- Naval Facilities Engineering Command (NAVFAC), 1986a, *Foundations and Earth Structure; Design Manual 7.2*.
- NAVFAC, 1986b, *Soil Mechanics*, Design Manual 7.1.
- Nevada Earthquake Safety Council (NESC), November 1998, "Guidelines for Evaluating Potential Surface Fault Rupture/Land Subsidence Hazards in Nevada (*Revision 1*)
- Ramelli, A. R., Henry, C. D., and Walker, J. P., 2011, *Preliminary Revised Geologic Map of the Reno Urban Area, Nevada*, Nevada Bureau of Mines and Geology, Open File Report 11-7, Plate 1 of 3.





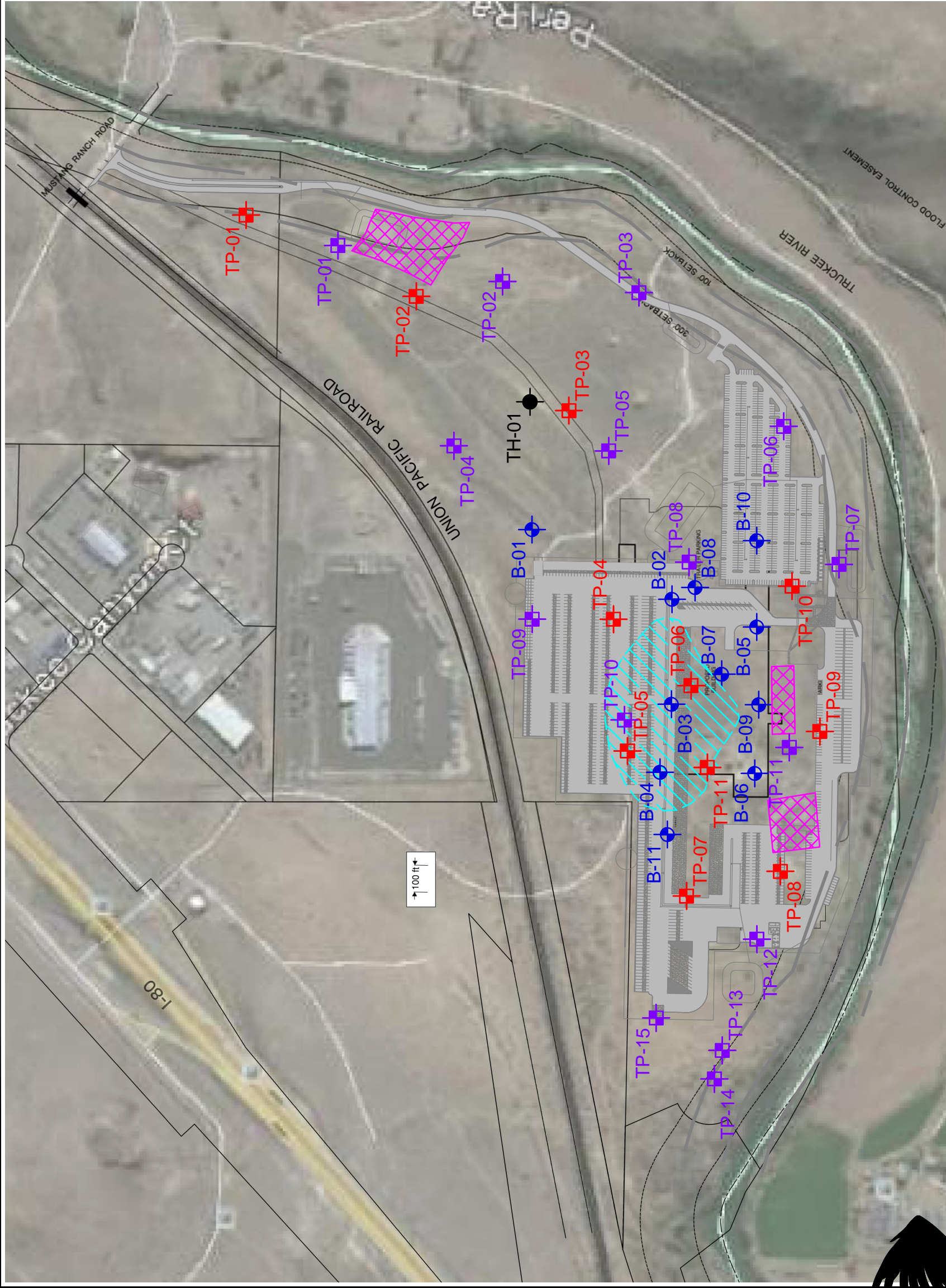
Ryall, A. and B. M. Douglas, 1976, *Regional Seismicity*, Reno Folio: Nevada Bureau of Mines and Geology.

*Standard Specifications for Public Works Construction (SSPWC)*, 2012 (Washoe County, Sparks-Reno, Carson City, Yerington, Nevada).

United States Geological Survey (USGS), 2015, *Earthquake Hazards Program Using 2008 US Seismic Hazard Maps*.  
Online at <http://earthquake.usgs.gov/designmaps/us/application.php>, accessed February 2015.



# PLATES



SCALE: 1"=400'  
(APPROXIMATE)

**LEGEND**

- B-01 APPROXIMATE BORING LOCATION
- TP-01 APPROXIMATE TEST PIT LOCATION
- TH-01 APPROXIMATE TEST HOLE LOCATION
- TP-01 APPROXIMATE 2007 TEST PIT LOCATION
- APPROXIMATE AREA OF WIDESPREAD LARGE BOULDERS
- APPROXIMATE AREA OF QUARY WASTE, STOCKPILES, OR DISTURBED GROUND

**NOTES**

- BASE MAP PROVIDED BY SCANNELL PROPERTIES.

**SITE LOCATION MAP**  
N.T.S.

**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services  
1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140  
Telephone: 775/359-6600  
Facsimile: 775/359-7766

SCANNELL PROPERTIES  
**PLOT PLAN**  
H. P. RANCH PARCEL DISTRIBUTION FACILITY  
WASHOE COUNTY, NEVADA

Project No.  
1827-01-1  
  
Plate 1



# BORING LOG

BORING NO.: B-01  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,350 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<p><b>Silty Sand with Gravel</b> Brown to tan, slightly moist to moist, medium dense to very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% subangular gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response, SPT Sample A driven through cobble.</p> <p>Boulders up to 4 feet in diameter present on exploration surface.</p>
A	SPT	50/4"			4	SM		
B	SPT	18			6			
C	SPT	30/1" Bouncing			8	SM		
D	SPT	88			10			
					12			
					14	SM		
E	SPT	50/2.5"			16			
					18			
F	SPT	37			20	SM		
					22			
					24			
G	SPT	29			26	SP	<p><b>Poorly Graded Sand</b> Gray to brown, moist, medium dense, with an estimated 5% non-plastic fines and 95% fine to coarse sand.</p>	

N 4377220 E 274389 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:









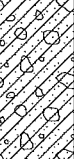



2a



# BORING LOG

BORING NO.: B-02  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): 21.0  
 GROUND ELEVATION (ft): ±4,345 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	35	6.1	13	2	SC		<b>Clayey Sand</b> Brown, slightly moist, dense, with 34% medium plasticity fines, 62% fine to coarse sand, and 4% rounded gravel up to 1/2 inch in diameter. Moderately cemented soil matrix.
					4			Surficial boulders up to 8 feet in diameter present near exploration area.
B	SPT	61			6	SM		<b>Silty Sand with Gravel</b> Brown to tan, slightly moist, very dense, with an estimated 20% non-plastic to low plasticity fines, 70% fine to coarse sand, and 15% rounded to subrounded gravel up to 1-1/4 inches in diameter.
C	SPT	50/6"			8			<b>Poorly Graded Sand with Silt and Gravel</b> Brown to tan, slightly moist, very dense, with an estimated 10% non-plastic fines, 70% fine to coarse sand, and 20% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles at 8 feet bgs indicated by drilling response.
D	SPT	50/1"			10	SP-SM		Sample D: No recovery.
					12			Boulder at 10 to 12 feet bgs indicated by drilling response.
E	SPT	65			14			<b>Clayey Sand with Gravel</b> Brown to gray, slightly moist to wet, dense to very dense, with an estimated 20% low to medium plasticity fines, 55% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter.
					16			
F	SPT	44			20			
					22			
G	SPT	41			24	GP-GC		<b>Poorly Graded Gravel with Clay and Sand</b> Brown to gray, wet, dense, with an estimated 10% low to medium plasticity fines, 45% fine to coarse sand, and 45% rounded to subrounded gravel up to 1-1/4 inches in diameter. Moderately cemented soil matrix.
					26			

N 4377046 E 274300 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2b

**WSUP19-0019**  
**EXHIBIT B**

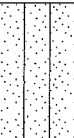



BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



# BORING LOG

BORING NO.: B-03  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	17	4.3	NP	2	SM		<b>Silty Sand</b> Brown to tan, slightly moist, medium dense, with 20% non-plastic fines, 79% fine to coarse sand, and 1% rounded to subrounded gravel up to 1/2 inch in diameter. Cobbles indicated by drilling response.
					4			Surficial boulders up to 8 feet in diameter present near exploration area.
B	SPT	50/4" Bouncing			6	CL		<b>Sandy Lean Clay</b> Brown to tan, slightly moist, very hard, with an estimated 50% low plasticity fines and 50% fine to medium sand. Boulder from 5 to 6 feet bgs indicated by drilling response. SPT Sample B low recovery.
C	SPT	89/11.5"			8	GC		<b>Clayey Gravel with Sand</b> Gray, slightly moist, very dense, with an estimated 15% low to medium plasticity fines, 25% fine to coarse sand, and 60% subrounded to angular gravel up to 1-1/4 inches in diameter. Probable weathered boulder.
D	SPT	50/6"			10			<b>Silty Sand with Gravel</b> Brown, very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% rounded to subrounded gravel up to 2 inches in diameter. Cobbles and boulders indicated by drilling response.
E	AUGER				12	SM		SPT Sample D: Very low recovery.
					14			
					16			Drilling refusal at 15 feet bgs on boulder.
					18			
					20			

N 4377040 E 274173 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2c

**WSUP19-0019**

**EXHIBIT B**



# BORING LOG

BORING NO.: B-04  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,363 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		<b>Silty Sand with Gravel</b> Brown to tan, slightly moist, very dense, with 37% low plasticity fines, 47% fine to medium sand, and 16% rounded gravel up to 1/2 inch in diameter.
A	X SPT	67	6.3	5	4			Surficial boulders up to 6 feet in diameter present near exploration area.
B	X SPT	41			6			<b>Silty Sand with Gravel</b> Brown to gray, slightly moist to moist, dense to very dense, with an estimated 20% non-plastic to low plasticity fines, 55% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Gravel and cobbles indicated by drilling response.
C	X SPT	59			8	SM		
D	X SPT	50/4" Bouncing			10			Cobbles or boulder at 10 to 11 feet bgs indicated by drilling response.
					12			<b>Silty Sand with Gravel</b> Brown to tan, slightly moist, very dense, with an estimated 20% low plasticity fines, 65% fine to coarse sand, and 15% subrounded to subangular gravel up to 1/2 inch in diameter.
E	X SPT	30/1" Bouncing			16	SM		SPT Sample E low recovery.
					18			
					20			SPT Sample F no recovery.
F	X SPT	50/3" Bouncing			22			Boulder at 20 feet bgs indicated by drilling response. Lithologic contact indicated by drilling response.
					24	SC		<b>Clayey Sand</b> Olive to light brown with orange mottling, moist, dense, with an estimated 30% medium plasticity fines and 70% fine to coarse sand. Moderately to strongly cemented soil matrix.
G	X SPT	32			26			

N 4377053 E 274121 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2d

**WSUP19-0019**  
**EXHIBIT B**



# BORING LOG

BORING NO.: B-05  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/23/2014  
 DEPTH TO GROUND WATER (ft): 16.25  
 GROUND ELEVATION (ft): ±4,342 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		<b>Silty Sand</b> Brown to tan, moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 80% fine to medium sand, and trace amounts of rounded to subrounded gravel up to 1/2 inch in diameter. Weakly cemented soil matrix.
A	SPT	16			4			
					6	SM		<b>Silty Sand</b> Brown to tan, moist, medium dense, with an estimated 25% non-plastic to low plasticity fines, 75% fine to medium sand, and trace amounts of rounded to subrounded gravel up to 1/2 inch in diameter.
B	SPT	23			8	SM		<b>Silty Sand with Gravel</b> Gray, slightly moist, very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Gravel and cobbles at 8 feet bgs indicated by drilling response. SPT Sample C: low recovery.
C	SPT	30/0.5" Bouncing			10	SC		<b>Clayey Sand</b> Brown, slightly moist, dense, with an estimated 30% medium plasticity fines, 60% fine to coarse sand, and 10% subangular gravel up to 1-1/4 inches in diameter.
D	SPT	38			12	SC		Cobbles or boulders at 12 to 14 feet bgs indicated by drilling response.
E	SPT	41			14	GM		<b>Silty Gravel with Sand</b> Gray to brown, very moist to wet, dense, with an estimated 15% non-plastic to low plasticity fines, 40% fine to coarse sand, and 45% rounded to subrounded gravel up to 1 inch in diameter.
					16			
					18			
					20			

N 4376936 E 274276 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2e

**WSUP19-0019**  
**EXHIBIT B**





# BORING LOG

BORING NO.: B-06

DATE: 12/22/2014

TYPE OF RIG: BK 81

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,345 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
	AC		17.4	10	2		XXXXXXXXXX	<b>Siltstone</b> Mechanically breaks down to Silty Sand with Gravel. Light tan to light olive, moist, very dense, with 28% low plasticity fines, 55% fine to coarse sand, and 17% subrounded to subangular gravel up to 3/4 inch in diameter.
A	SPT	50/2.5"			4	SM	XXXXXXXXXX	Boring located in old pit. Massive boulders (>10 feet in diameter) present in pit.  SPT Sample A very low recovery. Auger cuttings sampled.
B	SPT	76			6		XXXXXXXXXX	
C	SPT	62			8	SM	XXXXXXXXXX	<b>Siltstone</b> Mechanically breaks down to Silty Sand. Olive mottled tan, very dense, with an estimated 35% low plasticity fines, 60% fine to coarse sand, and 5% subrounded to subangular gravel up to 1/4 inch in diameter.
D	SPT	50/4"			10	SM	XXXXXXXXXX	<b>Siltstone</b> Mechanically breaks down to Silty Sand with Gravel. Olive to gray, moist, very dense, with an estimated 20% low to medium plasticity fines, 50% fine to coarse sand, and 30% subangular gravel up to 1 inch in diameter. SPT Sample D: very low recovery.
E	SPT	25			16	ML	XXXXXXXXXX	<b>Siltstone</b> Mechanically breaks down to Sandy Silt. Light tan to light olive, moist, very stiff, with an estimated 50% low to medium plasticity fines, 50% fine to medium sand, and trace amounts of fine gravel.
					18		XXXXXXXXXX	
					20		XXXXXXXXXX	

N 4376949 E 274125 UTM NAD83

Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2f









**WSUP19-0019**  
**EXHIBIT B**



# BORING LOG

BORING NO.: B-07  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/23/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,358 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		<b>Clayey Sand</b> Brown to reddish brown, moist, dense, with an estimated 40% low to medium plasticity fines, 55% fine to coarse sand, and 5% subrounded to subangular gravel up to 1 inch in diameter.
A	SPT	48			4			Boring located near bottom of previous cut area.
B	SPT	49			6	GC		<b>Clayey Gravel with Sand</b> Brown, moist, dense to very dense, with an estimated 15% low plasticity fines, 40% fine to coarse sand, and 45% subrounded to angular gravel up to 1-1/4 inches in diameter. Gravels are fractured during SPT sampling. Gravel and cobbles indicated by drilling response.
C	SPT	50/6"			8			SPT Sample C: Very low recovery.
D	SPT	44			10			<b>Silty Sand with Gravel</b> Brown, slightly moist, dense, with an estimated 15% non-plastic to low plasticity fines, 55% fine to coarse sand, and 30% rounded to subrounded gravel up to 2 inches in diameter in drill cuttings. SPT Sample D: low recovery.
					12	SM		Cobbles at 8 feet bgs indicated by drilling response.
E	SPT	30/2" Bouncing			16	SC		<b>Clayey Sand</b> Olive brown, moist, very dense, with an estimated 35% low to medium plasticity fines and 65% fine to coarse sand. Thinly bedded. SPT Sample E: very low recovery.
F	SPT	23			20	SM		<b>Silty Sand with Gravel</b> Gray, moist, medium dense, with an estimated 15% non-plastic to low plasticity fines, 50% fine to coarse sand, and 35% subrounded to subangular gravel up to 3/4 inch in diameter. Granitic composition, possible decomposed boulder.

N 4377006 E 274243 UTM NAD83

BORING\_LOG\_1827011.GPJ\_BK81.GDT\_2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:





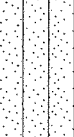

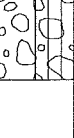



2g

**WSUP19-0019**  
**EXHIBIT B**

# BORING LOG

BORING NO.: B-08  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,339 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Clayey Sand with Gravel</b> Brown to gray, slightly moist, medium dense, with an estimated 25% low to medium plasticity fines, 50% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response. Weakly to moderately cemented soil matrix.
A	SPT	25			4	SC		Surficial cobbles up to 12 inches in diameter present near exploration area.
					6			
B	SPT	27			8			<b>Poorly Graded Sand with Silt and Gravel</b> Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 55% fine to coarse sand, and 35% rounded to subrounded gravel up to 1-1/4 inches in diameter.
C	SPT	60			10	SP-SM		<b>Silty Sand</b> Brown, slightly moist, medium dense, with an estimated 20% non-plastic fines, 75% fine to coarse sand, and 5% rounded to subrounded gravel up to 1-1/4 inches in diameter.
					12	SM		Cobbles from 10 to 13 feet bgs indicated by drilling response.
D	SPT	19			14			<b>Poorly Graded Gravel with Silt and Sand</b> Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 40% fine to coarse sand, and 50% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response.
E	SPT	61			16	GP-GM		
					18			
					20			

N 4377017 E 274330 UTM NAD83

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2h

# BORING LOG

BORING NO.: B-09  
 TYPE OF RIG: BK 81  
 LOGGED BY: JP

DATE: 12/22/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,344 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			<b>Poorly Graded Sand with Silt and Gravel</b> Brown to tan, slightly moist, medium dense, with an estimated 10% non-plastic fines, 70% fine to coarse sand, and 20% rounded to subrounded gravel. Gravel up to 2 inches in diameter in drill cuttings. Gravel and cobbles indicated by drilling response.
A	SPT	20			4	SP-SM		
					6			<b>Poorly Graded Sand with Silt</b> Gray, slightly moist, medium dense to very dense, with an estimated 10% non-plastic fines, 80% fine to coarse sand, and 10% rounded to subrounded gravel up to 1/2 inch in diameter.
B	SPT	21			8			
					10			Cobbles or boulders at 8 to 10 feet bgs indicated by drill response.  SPT Sample D: Very low recovery.
C	SPT	19			12	SP-SM		
					14			<b>Silty Sand with Gravel</b> Brown, slightly moist, very dense, with an estimated 15% non-plastic to low plasticity fines, 50% fine to coarse sand, and 35% rounded to subrounded gravel up to 3/4 inch in diameter. Very low SPT sample recovery.  Boulder at about 12 to 14 feet bgs indicated by drill response.
D	SPT	50/4" Bouncing			16	SM		
					18			
E	SPT	30/2" Bouncing			20			

N 4376942 E 274212 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2i



# BORING LOG

BORING NO.: B-10




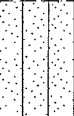

DATE: 12/22/2014

TYPE OF RIG: BK 81

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,338 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		<b>Clayey Sand with Gravel</b> Brown, moist, medium dense, with an estimated 25% medium plasticity fines, 60% fine to coarse sand, and 15% subrounded to subangular gravel up to 2 inches in diameter in drill cuttings. Cobbles indicated by drilling response.
A	SPT	15			4			No SPT sample recovery. Auger cuttings field classified. Surficial boulders up to 3 feet in diameter present in exploration area.
			7.3	16	6	SC		<b>Clayey Sand</b> Brown to tan, moist, medium dense, with 34% medium plasticity fines, 53% fine to coarse sand, and 13% subrounded to subangular gravel up to 1-1/4 inches in diameter. Moderately cemented soil matrix.
					8	SM		<b>Silty Sand with Gravel</b> Brown, slightly moist to moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 65% fine to coarse sand, and 15% rounded to subangular gravel up to 1-1/4 inches in diameter.
					10	SM		<b>Silty Sand</b> Brown, slightly moist to moist, medium dense, with an estimated 15% non-plastic fines, 75% fine to coarse sand, and 10% rounded to subangular gravel up to 1-1/4 inches in diameter.
					14	SP		<b>Poorly Graded Sand with Silt and Gravel</b> Brown, slightly moist, dense, with an estimated 10% non-plastic fines, 60% fine to coarse sand, and 30% rounded to subrounded gravel up to 1-1/4 inches in diameter.
E	SPT	47			16			
					18			
					20			

N 4376943 E 274365 UTM NAD83

BORING\_LOG\_1827011.GPJ BLKEAGLE\_GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2j

**WSUP19-0019**  
**EXHIBIT B**

# BORING LOG

BORING NO.: B-11

DATE: 12/23/2014

TYPE OF RIG: BK 81

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,365 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		<b>Clayey Sand</b> Light tan to yellow, moist, very dense, with an estimated 45% medium plasticity fines and 55% fine to coarse sand.
A	SPT	85			4	GC		Surficial boulders up to 6 feet in diameter present near exploration area. Cobbles indicated by drilling response throughout the boring.
B	SPT	62			6	GC		<b>Basalt</b> Mechanically breaks down to Clayey Gravel with Sand. Light tan to yellow with black clasts, moist, very dense, with an estimated 15% low plasticity fines, 40% fine to coarse sand, and 45% subangular gravel up to 1-1/4 inches in diameter. Fine sediments with fractured volcanic cobbles.
C	SPT	50/2"			8	GC		<b>Basalt</b> Mechanically breaks down to Clayey Gravel with Sand. Light tan to yellow with black clasts, moist, dense to very dense, with an estimated 20% low to medium plasticity fines, 40% fine to coarse sand, and 45% subangular gravel up to 1-1/4 inches in diameter. Fine sediments with fractured volcanic cobbles.
D	SPT	42			10	GC		SPT Sample C: No recovery.
E	SPT	50/3.5"			12	GC		SPT Sample E: Very low recovery.
					14			
					16			
					18			
					20			

N 4377051 E 274028 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2k

**WSUP19-0019**

**EXHIBIT B**

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



# TEST HOLE LOG

BORING NO.: TH-01

DATE: 12/31/2014

TYPE OF RIG: Existing quarry cut slope

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,340 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB		9.1	5	2	ML		<b>Silt with Sand</b> Light gray with orange mottling, dry to slightly moist, firm to stiff, with 76% low plasticity fines and 24% fine to medium sand. Laminar bedding. Weakly cemented.
					4			<b>Silty Sand</b> Brown with orange mottling, slightly moist, loose to medium dense, with an estimated 20% non-plastic to low plasticity fines and 80% fine to medium sand. Fine bedding.
					6	SM		
					8			
					10			

N 4377184 E 274545 UTM NAD83



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2I

**WSUP19-0019**

**EXHIBIT B**

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015

# TEST PIT LOG

TEST PIT NO.: TP-01

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,335 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SM	[Dotted pattern]	<b>Silty Sand</b> Brown, slightly moist, medium dense, with an estimated 15% non-plastic fines, 75% fine to coarse sand, and 10% subrounded gravel up to 2 inches in diameter. Weakly cemented soil matrix.
B	GRAB				2	GM	[Dotted pattern with larger circles]	<b>Silty Gravel with Sand</b> Brown to gray, slightly moist, dense, with an estimated 15% non-plastic fines, 40% fine to coarse sand, and 45% rounded to subrounded gravel up to 3 inches in diameter. Weakly cemented soil matrix.
					4	SM	[Dotted pattern]	<b>Silty Sand</b> Light gray with orange mottling, slightly moist, medium dense to dense, with an estimated 35% non-plastic to low plasticity fines and 65% fine to medium sand. Weakly cemented soil matrix. Finely bedded.
C	GRAB				6	SM	[Dotted pattern with larger circles]	<b>Silty Sand with Gravel</b> Brown, slightly moist, dense, with an estimated 20% non-plastic fines, 45% fine to coarse sand, and 35% rounded to subrounded gravel up to 3 inches in diameter.
					8			
					10			

N 4377533 E 274790 UTM NAD83

BORING\_LOG\_1827011.GPJ\_BK/EAGLE.GDT\_2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2m

**WSUP19-0019**

**EXHIBIT B**



# TEST PIT LOG

TEST PIT NO.: TP-02

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,334 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SM		<b>Silty Sand</b> Brown to tan, slightly moist, loose to medium dense, with an estimated 25% non-plastic to low plasticity fines, 70% fine to medium sand, and 5% subrounded gravel up to 1 inch in diameter. Weakly to moderately cemented soil matrix. Fine roots to a depth of 4 inches.
B	GRAB				4	SM	Gravel	<b>Silty Sand with Gravel</b> Brown, slightly moist to moist, medium dense to dense, with an estimated 20% non-plastic to low plasticity fines, 65% fine to medium sand, and 15% rounded to subrounded gravel up to 1-1/2 inches in diameter. Moderatly cemented soil matrix to 7 feet below the ground surface (bgs) and weakly cemented below.
					6			
					8			
					10			

N 4377316 E 274659 UTM NAD83

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2n

# TEST PIT LOG

TEST PIT NO.: TP-03


DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,346 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2 4 6 8 10	GP		<p><b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist to moist, medium dense, with an estimated 5% low plasticity fines, 30% fine to coarse sand, and 65% rounded to subangular fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 30% of the total soil mass (tsm). Cobbles and boulders up to 2 feet in diameter make up an additional 5% of the tsm.</p>

N 4377157 E 274534 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

20

**WSUP19-0019**

**EXHIBIT B**

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



# TEST PIT LOG

TEST PIT NO.: TP-04

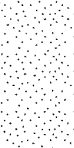



DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,353 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0 - 2	SP		<b>Poorly Graded Sand</b> Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines and 85% fine to coarse sand.
B	GRAB		6.7	3	2 - 4	SM		<b>Silty Sand with Gravel</b> Light gray with orange mottling, dry to slightly moist, medium dense, with 46% low plasticity fines, 35% fine to coarse sand, and 19% subangular gravel up to 1/2 inch in diameter. Finely bedded. Weakly cemented soil matrix.
C	GRAB		7.2	11	4 - 6			<b>Well-Graded Gravel with Clay and Sand</b> Brown to gray with orange mottling, slightly moist to moist, medium dense, with 8% medium plasticity fines, 32% fine to coarse sand, and 60% rounded to subrounded fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 10% of the tsm. Cobbles up to 12 inches in diameter make up an addition 5% of the tsm.
D	GRAB				12 - 14	GW-GC		<b>Well-Graded Gravel with Clay and Sand</b> Brown to gray with orange mottling, slightly moist to moist, dense to very dense, with an estimated 10% low plasticity fines, 40% fine to coarse sand, and 50% rounded to subrounded fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 15% of the tsm. Cobbles and boulders up to 4 feet in diameter make up an addition 15% of the tsm. Excavation depth limited due to multiple boulders greater than 3 feet in diameter at 13 to 15 feet bgs.

N 4377116 E 274263 UTM NAD83

BORING\_LOG\_1827011.GPJ\_BLKEAGLE.GDT\_2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2p

**WSUP19-0019**

**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-05

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,361 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SP		<b>Poorly Graded Sand</b> Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines, 90% fine to coarse sand, and 5% rounded to subrounded gravel up to 1 inch in diameter. Fine roots to a depth of 4 inches bgs.
A	GRAB				4	SM		Surficial boulders up to 6 feet in diameter near exploration area. Boulders are of volcanic origin.
					6	SM		<b>Silty Sand</b> Brown, moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 70% fine to coarse sand, and 10% subrounded gravel up to 1 inch in diameter. Moderately cemented soil matrix.
					8	SP		Multiple boulders 3 to 6 feet in diameter encountered from 2 to 10 feet bgs. Boulders make up about 25% of the tsm from 2 to 10 feet bgs. Boulders are of volcanic composition, some were broken down to less than 2 feet in diameter during excavation.
B	GRAB				10			<b>Silty Sand</b> Light gray, moist, stiff to very stiff, with an estimated 45% low plasticity fines and 55% fine to coarse sand.
					12			<b>Poorly Graded Sand with Silt and Gravel</b> Brown, slightly moist to moist, medium dense to dense, with an estimated 10% non-plastic to low plasticity fines, 50% fine to coarse sand, and 40% subrounded fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 5% of the tsm (in addition to 25% boulders).
C	BULK				14			<b>Poorly Graded Gravel with Sand</b> Brown to gray, slightly moist to moist, medium dense to dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% rounded to subrounded fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 10% of the tsm. Occasional boulders up to 3 feet in diameter are also present.
					16	GP		
					18			
					20			

N 4377087 E 274144 UTM NAD83

Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2q

**WSUP19-0019**

**EXHIBIT B**



# TEST PIT LOG

TEST PIT NO.: TP-06  
 TYPE OF HOE: Cat 330L Trackhoe  
 LOGGED BY: JP

DATE: 12/31/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SP	[SP Pattern]	<b>Poorly Graded Sand</b> Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines, 90% fine to coarse sand, and 5% rounded to subrounded gravel up to 1 inch in diameter. Fine roots to a depth of 4 inches bgs.
					4	ML	[ML Pattern]	Surficial boulders up to 6 feet in diameter near exploration area. Boulders are of volcanic origin.
					4		[Sandy Silt Pattern]	<b>Sandy Silt</b> Light gray, moist, stiff to very stiff, with an estimated 60% low plasticity fines and 40% fine to coarse sand.
					6		[Siltstone Pattern]	<b>Siltstone</b> Light olive to light tan, moderately weathered, friable. Mechanically breaks down to Silty Sand. Moist to very moist, dense to very dense, with 43% high plasticity fines, 56% fine to medium sand, and 1% subangular to angular gravel up to 3/8 inch in diameter. This rock material is easily excavated and breaks down to angular gravel and cobble size material.
A	[Hand Icon] GRAB		59.5	29	8		[Siltstone Pattern]	
					10		[Siltstone Pattern]	
B	[Hand Icon] GRAB				14		[Siltstone Pattern]	
					12	SM	[SM Pattern]	
					16		[Siltstone Pattern]	
					18		[Siltstone Pattern]	
					20		[Siltstone Pattern]	

N 4377049 E 274207 UTM NAD83

BORING LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2r

# TEST PIT LOG

TEST PIT NO.: TP-07

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,358 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	BULK				2		Weathered Basalt	<p><b>Weathered Basalt</b> Dark brown to black with yellowish brown fines, moderately to highly weathered, weak to friable. Mechanically breaks down to Poorly Graded Gravel with Sand. Moist, medium dense to very dense, with an estimated 5% low plasticity fines, 20% fine to coarse sand, and 75% subangular to angular gravel and cobbles up to 4 inches in diameter. Material excavates to hard gravel and cobbles with sand and fines.</p> <p>Becomes very dense at 6 feet bgs, excavation slowed significantly.</p>
					4	GP	Gravel	
					6		Gravel	
					8		Gravel	
					10		Gravel	

N 4377032 E 273951 UTM NAD83

BORING\_LOG\_1827011.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2s

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-08

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,350 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SM		<p><b>Silty Sand</b> Light gray with orange mottling, slightly moist, loose to medium dense, with an estimated 45% low plasticity fines and 55% fine to medium sand.</p> <p>Rock tailings on the surface near exploration area.</p>
B	GRAB				4	SM		<p><b>Silty Sand with Gravel</b> Brown to gray with heavy orange staining, moist, medium dense to dense, with an estimated 20% low plasticity fines, 65% fine to coarse sand, and 15% rounded to subangular fine to coarse gravel. Cobbles up to 8 inches make up about 10% of the tsm. Moderately cemented soil matrix.</p>
					6			
					8			
					10			

N 4376929 E 274004 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2t

**WSUP19-0019**  
**EXHIBIT B**

BORING\_LOG\_1827011.GPJ\_BK\_EAGLE.GDT\_2/25/2015



# TEST PIT LOG

TEST PIT NO.: TP-09  
 TYPE OF HOE: Cat 330L Trackhoe  
 LOGGED BY: JP

DATE: 12/31/2014  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): ±4,343 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SM	[Dotted pattern]	<b>Silty Sand</b> Brown, moist, loose to medium dense, with an estimated 25% low plasticity fines, 70% fine to coarse sand, and 5% subrounded gravel up to 3/4 inch in diameter. Weakly cemented soil matrix.
B	GRAB				2	SM	[Dotted pattern]	<b>Silty Sand</b> Brown, slightly moist, medium dense, with an estimated 20% non-plastic fines and 80% fine to medium sand. Weakly cemented soil matrix.
					4	SP	[Pattern with larger circles]	<b>Poorly Graded Sand with Gravel</b> Gray, slightly moist, loose to medium dense, with an estimated 5% non-plastic fines, 80% fine to coarse sand, and 15% rounded to subrounded gravel up to 3 inches in diameter. This soil layer sloughs easily.
					6			
					8			Excavation depth limited due to severe sloughing below 4 feet bgs.
					10			

N 4376859 E 274226 UTM NAD83

BORING\_LOG\_1827011.GPJ\_BKKEAGLE.GDT\_2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:  
 1827-01-1  
 PLATE:  
 2u

**WSUP19-0019**  
**EXHIBIT B**



# TEST PIT LOG

TEST PIT NO.: TP-10








DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,335 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB		17.2	20		GM		<p><b>Silty Gravel with Sand</b> Brown with orange mottling, slightly moist to moist, medium dense, with 18% medium plasticity fines, 27% fine to coarse sand, and 45% subangular fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 10% of the tsm. Fine roots to a depth of 4 inches bgs.</p>
					2			<p><b>Silty Sand with Gravel</b> Brown with orange mottling, slightly moist to moist, medium dense to dense, with an estimated 20% low to medium plasticity fines, 60% fine to coarse sand, and 20% subrounded to subangular fine to coarse gravel. Cobbles and boulders up to 2 feet in diameter up about 15% of the tsm.</p>
					4			<p>Multiple 3 to 6-foot-diameter boulders encountered below 4 feet bgs make up an additional 10% of the tsm.</p>
B	GRAB					SM		
					6			
					8			
					10			

N 4376877 E 274421 UTM NAD83

Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

PROJECT NO.:

1827-01-1

PLATE:

2v

**WSUP19-0019**  
**EXHIBIT B**

BORING LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015



# TEST PIT LOG

TEST PIT NO.: TP-11

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2		●●●●●●●●●●	<p><b>Silty Sand with Gravel</b> Brown to tan with orange mottling, slightly moist to moist, medium dense to very dense, with an estimated 20% non-plastic to low plasticity fines, 55% fine to coarse sand, and 25% subrounded gravel. Cobbles and boulders up to 4 feet in diameter make up about 20% of the tsm. Boulders of volcanic and metasedimentary composition.</p>
					4		●●●●●●●●●●	
					6	SM	●●●●●●●●●●	
					8		●●●●●●●●●●	<p><b>Siltstone</b> Light olive to light tan, moderately weathered, friable. Mechanically breaks down to Silty Sand. Slightly moist to moist, dense, with an estimated 45% low to high plasticity fines and 55% fine to medium sand. This rock material is easily excavated and breaks down to angular gravel and cobble size material.</p>
					10		x x x x x x x x	
					12	ML	x x x x x x x x	
					14		x x x x x x x x	<p>Test pit excavated as a shallow trench in the deep pit sidewall slope. The contact between siltstone and overlying soils is irregular.</p>
					16		x x x x x x x x	
					18		x x x x x x x x	
					20		x x x x x x x x	

N 4377015 E 274115 UTM NAD83

BORING\_LOG\_1827011.GPJ\_BLKEAGLE.GDT\_2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Scannell Properties**  
**H.P. Ranch Parcel Distribution Facility**  
**Washoe County, Nevada**

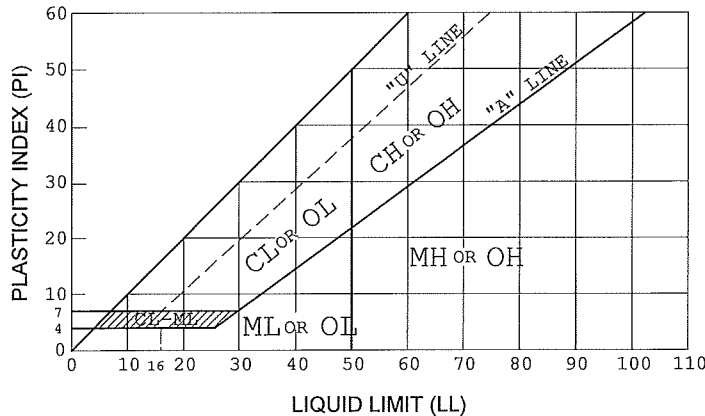
PROJECT NO.:	1827-01-1
PLATE:	2w

# SOIL CLASSIFICATION CHART

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

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

## PLASTICITY CHART



FOR CLASSIFICATION OF FINE-GRAINED SOILS AND FINE-GRAINED FRACTION OF COARSE-GRAINED SOILS

## EXPLORATION SAMPLE TERMINOLOGY

Sample Type	Sample Symbol	Sample Code
Auger Cuttings		Auger
Bulk (Grab) Sample		Grab
Modified California Sampler		MC
Shelby Tube		SH or ST
Standard Penetration Test		SPT
Split Spoon		SS
No Sample		

## GRAIN SIZE TERMINOLOGY

Component of Sample	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 2mm)
Sand	# 4 to #200 sieve (2mm to 0.074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

## RELATIVE DENSITY OF GRANULAR SOILS

N - Blows/ft	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
greater than 50	Very Dense

## CONSISTENCY OF COHESIVE SOILS

Unconfined Compressive Strength, psf	N - Blows/ft	Consistency
less than 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,000 - 2,000	5 - 8	Firm
2,000 - 4,000	9 - 15	Stiff
4,000 - 8,000	16 - 30	Very Stiff
8,000 - 16,000	31 - 60	Hard
greater than 16,000	greater than 60	Very Hard

USCS CHART 1827011.GPJ US LAB.GDT 2/25/2015

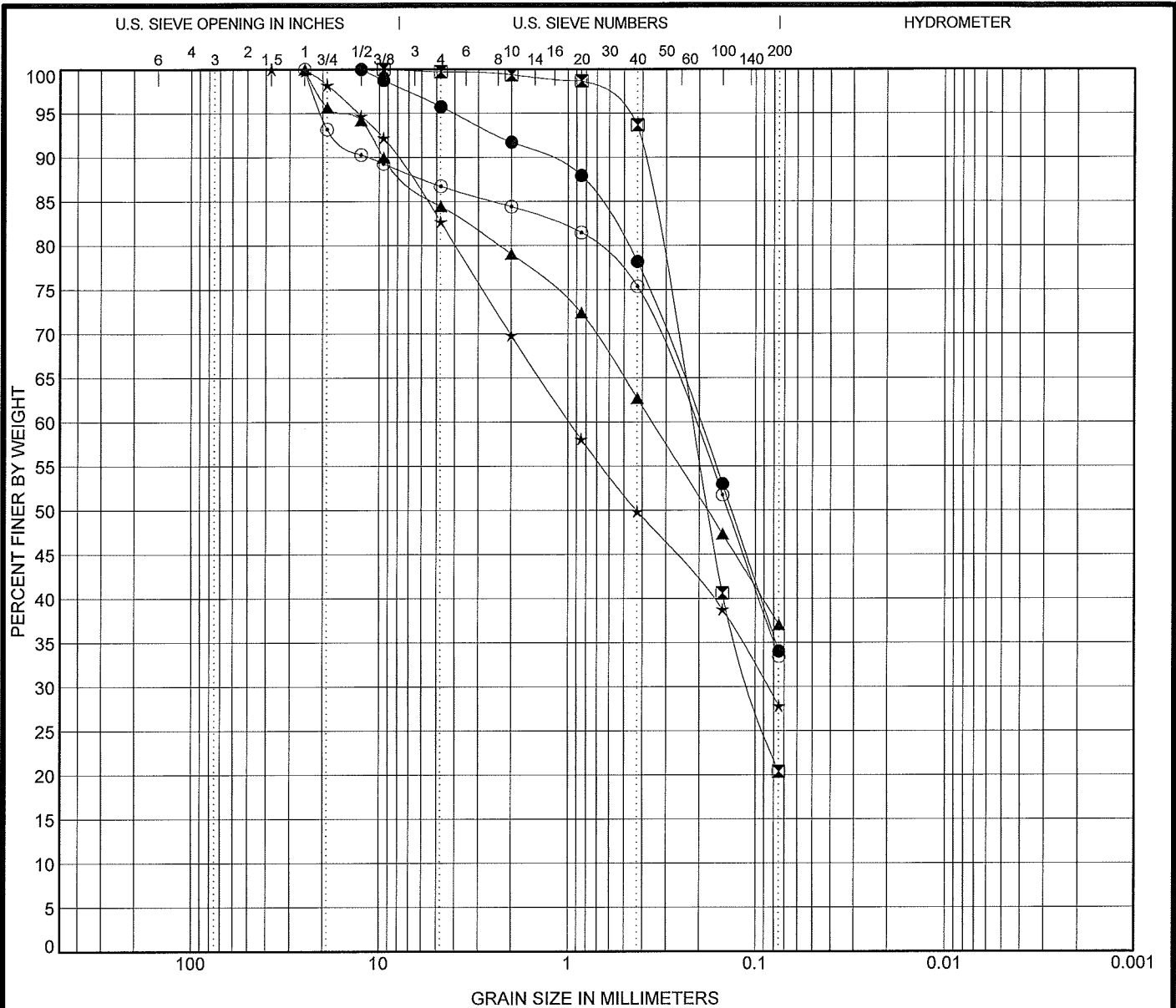


Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
Telephone: (775) 359-6600  
Fax: (775) 359-7766

## USCS Soil Classification Chart

Project: H.P. Ranch Parcel Distribution Facility  
Location: Washoe County, Nevada  
Project Number: 1827-01-1 Plate:

**WSUP19<sup>3</sup>0019**  
**EXHIBIT B**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	USCS Classification					LL	PL	PI	Cc	Cu
● B-02 2.5'	CLAYEY SAND (SC)					29	16	13		
⊠ B-03 2.5'	SILTY SAND (SM)					NP	NP	NP		
▲ B-04 2.5'	SILTY SAND with GRAVEL (SM)					27	22	5		
★ B-06 0.0'	SILTY SAND with GRAVEL (SM)					39	29	10		
⊙ B-10 5.0'	CLAYEY SAND (SC)					31	15	16		
Specimen Identification	D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay	
● B-02 2.5'	12.5	0.2			6.1	4.2	61.7		34.0	
⊠ B-03 2.5'	9.5	0.219	0.104		4.3	0.3	79.3		20.4	
▲ B-04 2.5'	25	0.354			6.3	15.5	47.4		37.0	
★ B-06 0.0'	37.5	0.977	0.086		17.4	17.3	54.9		27.8	
⊙ B-10 5.0'	25	0.216			7.3	13.3	53.3		33.5	

US GRAIN SIZE 1827011.GPJ US LAB.GDT 2/25/2015



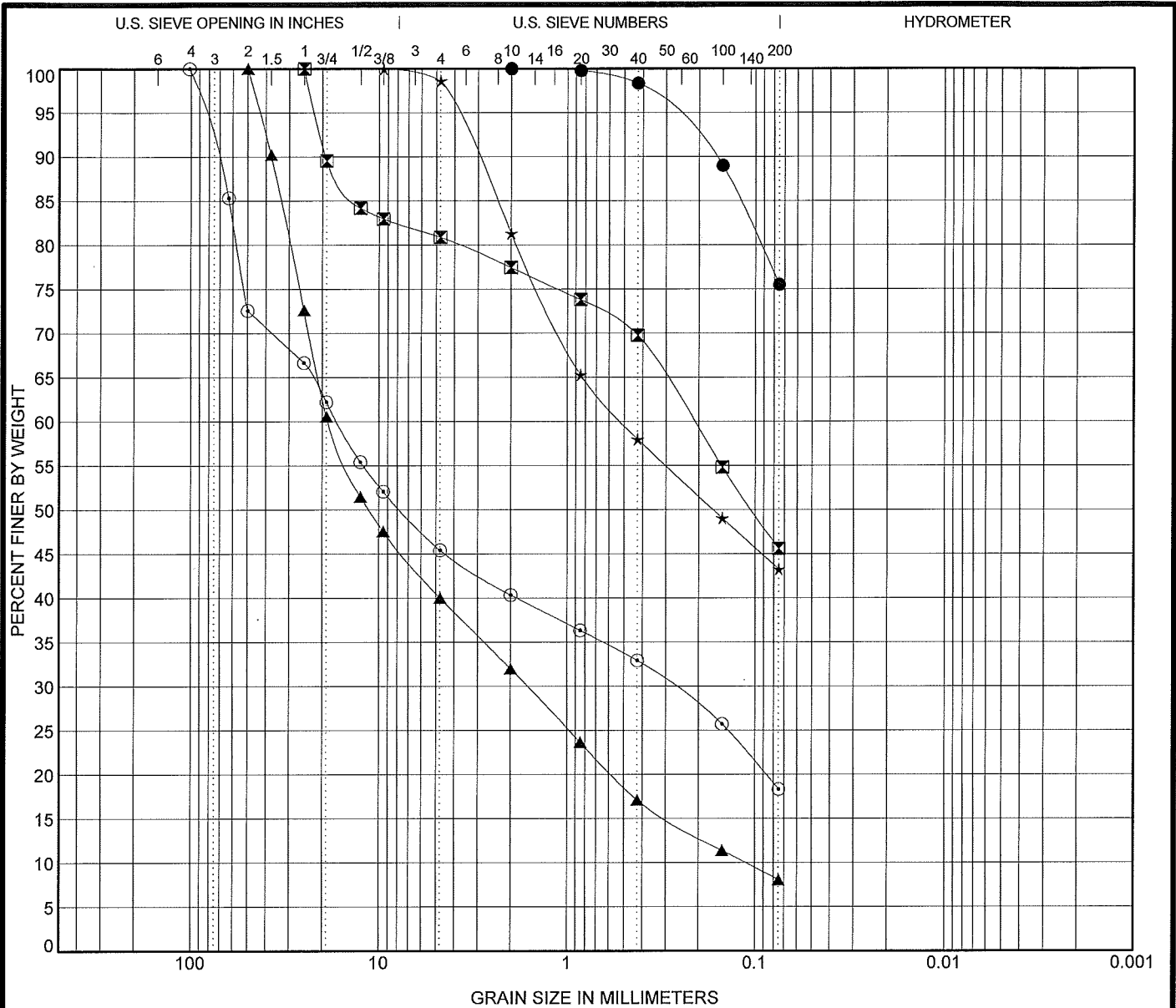
Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

### GRAIN SIZE DISTRIBUTION

Project: H.P. Ranch Parcel Distribution Facility  
 Location: Washoe County, Nevada  
 Project Number: 1827-01-1 Plate: 4a

**WSUP19-0019**

**EXHIBIT B**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	USCS Classification	LL	PL	PI	Cc	Cu
● TH-01 0.0'	SILT with SAND (ML)	29	24	5		
☒ TP-04 4.0'	SILTY SAND with GRAVEL (SM)	25	22	3		
▲ TP-04 5.0'	WELL-GRADED GRAVEL with CLAY and SAND (GW-GC)	33	22	11	1.28	164.76
★ TP-06 6.0'	SILTY SAND (SM)	93	64	29		
◎ TP-10 0.0'	SILTY GRAVEL with SAND (GM)	48	28	20		

Specimen Identification	D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
● TH-01 0.0'	2				9.1	0.0	24.5	75.5	
☒ TP-04 4.0'	25	0.215			6.7	19.1	35.3	45.6	
▲ TP-04 5.0'	50	18.517	1.63	0.112	7.2	60.0	32.0	8.1	
★ TP-06 6.0'	9.5	0.514			59.5	1.4	55.4	43.3	
◎ TP-10 0.0'	102	16.571	0.278		17.2	45.2	27.1	18.3	

US GRAIN SIZE: 1827011.GPJ US LAB.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

### GRAIN SIZE DISTRIBUTION

Project: H.P. Ranch Parcel Distribution Facility  
 Location: Washoe County, Nevada  
 Project Number: 1827-01-1 Plate:

4h  
**WSUP19-0019**

**EXHIBIT B**



# APPENDICES

APPENDIX A  
2007 GEOTECHNICAL DATA



# TEST PIT LOG

TEST PIT NO.: TP-01  
 TYPE OF HOE: Hitachi EX330LC  
 LOGGED BY: BE

DATE: 6/13/2007  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4333 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0.0 - 2.0	SM		0.0' - 2.0': <b>SILTY SAND</b> Light brown, gray, orange specs, slightly moist, medium dense, with estimated 15% non-plastic fines and 85% fine to medium sand, locally weakly cemented, roots common.
B	GRAB		12.5	17	2.0 - 4.0	GC		2.0' - 4.0': <b>CLAYEY GRAVEL WITH SAND AND COBBLES</b> Brown, slightly moist, medium dense, total soil mass contains estimated 20% angular to subrounded cobbles to 12-inches in diameter in a matrix of 26% medium plasticity fines, 37% fine to coarse sand, and 37% fine to coarse gravel, one 9 foot-diameter boulder was observed, roots present.
C	GRAB				4.0 - 5.0	SP		4.0' - 5.0': <b>POORLY GRADED SAND</b> Orange brown to grayish brown, slightly moist, dense, with estimated 5% non-plastic fines and 95% fine sand, weakly cemented, minor cross-bedding.
D	GRAB				5.0 - 8.0	SC		5.0' - 8.0': <b>CLAYEY SAND</b> Dark brown, slightly moist, dense, with estimated 30% medium plasticity fines and 70% very fine to medium sand, moderately to strongly cemented, roots common to 8 feet.
E	GRAB				8.0 - 12.0	SP-SM		8.0' - 12.0': <b>POORLY GRADED SAND WITH SILT</b> Brown to tan, slightly moist, very dense, with estimated 10-15% non-plastic fines and 85 to 90% very fine to medium sand, moderately to strongly cemented.
					12.0 - 14.0			

BORING\_LOG\_0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

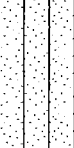




PROJECT NO.:  
 0465-17-1  
 PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-01  
 TYPE OF HOE: Hitachi EX330LC  
 LOGGED BY: BE

DATE: 6/13/2007  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4333 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SM		0.0' - 2.0': <b>SILTY SAND</b> Light brown, gray, orange specs, slightly moist, medium dense, with estimated 15% non-plastic fines and 85% fine to medium sand, locally weakly cemented, roots common.
B	GRAB		12.5	17	2	GC		2.0' - 4.0': <b>CLAYEY GRAVEL WITH SAND AND COBBLES</b> Brown, slightly moist, medium dense, total soil mass contains estimated 20% angular to subrounded cobbles to 12-inches in diameter in a matrix of 26% medium plasticity fines, 37% fine to coarse sand, and 37% fine to coarse gravel, one 9 foot-diameter boulder was observed, roots present.
C	GRAB				4	SP		4.0' - 5.0': <b>POORLY GRADED SAND</b> Orange brown to grayish brown, slightly moist, dense, with estimated 5% non-plastic fines and 95% fine sand, weakly cemented, minor cross-bedding.
D	GRAB				6	SC		5.0' - 8.0': <b>CLAYEY SAND</b> Dark brown, slightly moist, dense, with estimated 30% medium plasticity fines and 70% very fine to medium sand, moderately to strongly cemented, roots common to 8 feet.
E	GRAB				10	SP-SM		8.0' - 12.0': <b>POORLY GRADED SAND WITH SILT</b> Brown to tan, slightly moist, very dense, with estimated 10-15% non-plastic fines and 85 to 90% very fine to medium sand, moderately to strongly cemented.
					12			
					14			

BORING\_LOG\_0465171.GPJ, BLKEAGLE.GDT, 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
 0465-17-1  
 PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-02

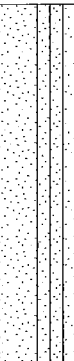

DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE

GROUND ELEVATION (ft): 4338 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A, B	GRAB				2	SP-SM		0.0' - 4.5': <b>POORLY GRADED SAND WITH SILT</b> Orange brown, gray, slightly moist, medium dense to dense, interbedded Poorly Graded Sand (80%, 4 to 8 inch beds) and Silty Sand (20%, 1 to 4 inch beds), overall contains estimated 10-15% non-plastic fines and 85-90% fine to medium sand, locally cross-bedded and moderately cemented, roots common to 4.5 feet.
C	GRAB				6	GP		4.5' - 13.0': <b>POORLY GRADED GRAVEL WITH SAND AND COBBLES</b> Light brown to grayish brown, slightly moist, very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 5% boulders to 18 inches in diameter in a matrix of estimated 0-5% non-plastic fines, 25-30% fine to coarse sand and 70% fine to coarse gravel.
					14			

BORING\_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
 0465-17-1  
 PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-03

DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE

GROUND ELEVATION (ft): 4332 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	GP-GC		0.0' - 4.0': <b>POORLY GRADED GRAVEL WITH CLAY, SAND, COBBLES AND BOULDERS</b> Orange brown to reddish brown, gray, slightly moist, dense to very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 15% boulders to 6 feet in diameter in a matrix of estimated 10% medium plasticity fines, 15% fine to coarse sand and 75% fine to coarse gravel, roots common.
B	GRAB				4	GP-GM		4.0' - 9.5': <b>POORLY GRADED GRAVEL WITH CLAY, SILT, SAND, COBBLES AND BOULDERS</b> Brown to dark grayish brown, slightly moist, very dense, total soil mass contains estimated 30% angular to subrounded cobbles and 5% subrounded boulders to 16 inches in diameter in a matrix of estimated 5-10% low to medium plasticity fines, 10-15% fine to coarse sand and 80% fine to coarse gravel.
C	GRAB				10	GP-GM		9.5' - 13.0': <b>POORLY GRADED GRAVEL WITH CLAY, SILT, SAND AND COBBLES</b> Brown, moist, dense, total soil mass contains estimated 20% subrounded cobbles to 12 inches in diameter in a matrix of estimated 5-10% low to medium plasticity fines, 40-45% fine to coarse sand and 50% fine to coarse subangular to rounded gravel.
					12			
					14			

BORING\_LOG\_0465171.GPJ, BL KEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-04



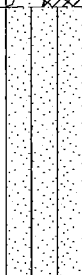
DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE

GROUND ELEVATION (ft): 4343 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	GP-GM		0.0' - 3.0': <b>POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES</b> Brown to grayish brown, slightly moist, dense, total soil mass contains estimated 30-40% angular to subrounded cobbles and 5% subangular boulders to 16 inches in diameter in a matrix of estimated 10% non-plastic fines, 25% fine to coarse sand and 65% fine to coarse gravel, roots common.
B	GRAB				4	GP-GC		3.0' - 9.5': <b>POORLY GRADED GRAVEL WITH CLAY, COBBLES AND BOULDERS</b> Light brown to grayish brown, slightly moist, dense to very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 15% angular to subangular boulders to 9 feet in diameter in a matrix of estimated 10% medium plasticity fines, 40% fine to coarse sand and 50% fine to coarse gravel.
C	GRAB				10	SM		9.5' - 13.0': <b>SILTY SAND</b> Brown to dark brown, moist, very dense, with estimated 30% low plasticity fines, 70% very fine to medium sand, and trace fine to coarse subrounded gravel to 3/4-inch diameter, moderately cemented.
					14			

BORING LOG 0465171.GPJ, BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-05




DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4338 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GP-GM		0.0' - 1.0': <b>POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES</b> Brown to orange brown, orange, dry to slightly moist, very dense, with total soil mass contains estimated 5-10% subrounded to rounded volcanic cobbles to 8 inches in diameter in a matrix of estimated 10% low plasticity fines, 30% fine to coarse sand and 60% fine to coarse gravel, roots common.
					4	GP		1.0' - 6.0': <b>POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS</b> Brown, dry to slightly moist, very dense, total soil mass contains estimated 25-30% subrounded to rounded cobbles and 5% boulders to 20 inches in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand and 60% fine to coarse gravel.
					6			6.0' - 12.0': <b>POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS</b> Brown, dry to slightly moist, very dense, total soil mass contains estimated 30-35% subrounded to rounded granite, basalt and metasediment cobbles and 15-20% boulders to 33 inches in diameter in a matrix of estimated 5% non-plastic fines, 30% medium to coarse sand and 65% fine to coarse gravel.
					8			
					10	GP		
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
0465-17-1  
PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-06



DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4336 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SC-SM		0.0' - 5.0': <b>CLAYEY, SILTY SAND WITH GRAVEL</b> Brown, dry to slightly moist, medium dense to dense, with estimated 20% non-plastic to medium plasticity fines, 65% fine to coarse sand, and 15% subrounded to rounded, fine to coarse gravel to 1/2-inch diameter, weakly cemented, local cobble- and gravel-rich zones with clasts to 8 inches in diameter, locally 25-30% low to medium plasticity fines.
					4			
					6			
					8	GP		5.0' - 10.0': <b>POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS</b> Brown to light brown, also orange brown and orange in upper 1.5 feet of interval, dry to slightly moist, very dense, total soil mass contains estimated 25-30% subangular to rounded volcanic, granitic, and metasediment cobbles and 10-15% boulders to 44 inches in diameter in a matrix of estimated 5% non-plastic to low plasticity fines, 40% medium to coarse sand and 55% fine to coarse gravel, strongly cemented with calcium carbonate and some iron oxide in upper 1 to 2 feet of interval, moderately cemented below.
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**

**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-07




DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4332 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SC-SM		0.0' - 4.0': <b>CLAYEY, SILTY SAND WITH GRAVEL AND COBBLES</b> Brown to light brown, dry to slightly moist, dense, total soil mass contains estimated 5-10% rounded cobbles to 5 inches in diameter in a matrix of estimated 20% non-plastic to medium plasticity fines, 45% fine to coarse sand, and 35% fine to coarse gravel, weakly cemented.
B	GRAB				4	GP-GM		4.0' - 7.0': <b>POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES</b> Brown, slightly moist, very dense, total soil mass contains estimated 15-20% rounded cobbles to 8 inches in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 40% medium to coarse sand and 50% fine to coarse gravel, unconsolidated.
C	GRAB				8	SP		7.0' - 10.0': <b>POORLY GRADED SAND WITH GRAVEL AND COBBLES</b> Brown to dark brown, moist, dense, total soil mass contains estimated 5-10% rounded cobbles to 8 inches in diameter in a matrix of estimated 5% non-plastic fines, 50% medium to coarse sand, and 45% fine to coarse gravel.
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**



# TEST PIT LOG

TEST PIT NO.: TP-08



DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4340 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	GP-GM		0.0' - 6.0': <b>POORLY GRADED GRAVEL WITH SILT, SAND, COBBLES, AND BOULDERS</b> Brown, dry to slightly moist, dense to very dense, total soil mass contains estimated 25-30% subround to rounded cobbles and 15-20% boulders to 6 feet in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 35% medium to coarse sand and 55% fine to coarse gravel, locally weakly cemented.
B	GRAB				8	SM		6.0' - 11.0': <b>SILTY SAND WITH GRAVEL AND COBBLES</b> Brown, slightly moist, medium dense to dense, total soil mass contains estimated 5% subrounded to rounded cobbles to 6 inches in diameter in a matrix of estimated 15-20% non-plastic fines, 60% medium to coarse sand, and 15-20% fine to coarse gravel, weakly cemented.
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**

**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-09


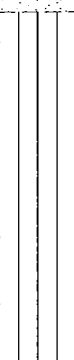

DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4350 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0.0 - 1.5	SP		<p><b>0.0' - 1.5': POORLY GRADED SAND WITH BOULDERS</b> Brown to dark brown, slightly moist, loose to medium dense, total soil mass contains estimated 0-30% angular to subangular boulders to 7 feet in diameter in a matrix of estimated 5% non-plastic fines and 95% fine to medium sand, local coarse sand and trace fine gravel, large boulders scattered on surface partially buried by dune sand.</p>
B	GRAB	>4.5	13.4	8	1.5 - 6.0	ML		<p><b>1.5' - 6.0': SILT WITH SAND</b> Light brown to brown, gray, orange brown to orange, slightly moist, hard, with 77% low to medium plasticity fines, 23% fine to medium sand and trace gravel, local interbeds with non-plastic fines, weakly cemented, common orange mottling.</p>
					6.0 - 10.0	GP		<p><b>6.0' - 10.0': POORLY GRADED GRAVEL WITH SAND AND COBBLES</b> Brown, orange to orange brown, slightly moist, dense to very dense, total soil mass contains estimated 10-15% subangular to rounded cobbles to 12 inches in diameter in a matrix of estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% fine to coarse gravel, weak to moderate cement in upper 3 feet of interval with common orange oxidation.</p>

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:









**WSUP19-0019**

**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-10  
 TYPE OF HOE: Hitachi EX330LC  
 LOGGED BY: MSL

DATE: 6/14/2007  
 DEPTH TO GROUND WATER (ft): NE  
 GROUND ELEVATION (ft): 4359 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0.0	SP		0.0' - 1.0': <b>POORLY GRADED SAND WITH BOULDERS</b> Brown to dark brown, slightly moist, loose to medium dense, total soil mass contains estimated 0-30% angular to subangular boulders to 7 feet in diameter in a matrix of estimated 5% non-plastic fines and 95% fine to medium sand, local coarse sand and trace fine gravel, large boulders scattered on surface partially buried by dune sand.
A	GRAB	>4.5			2	SC-CL		
					1.0	SP		1.0' - 2.0': <b>CLAYEY SAND, SANDY LEAN CLAY</b> Dark brown to brown, moist, medium dense or hard, with estimated 50% medium to high plasticity fines and 50% fine to coarse sand.
B	GRAB				2.0	SP		2.0' - 3.5': <b>POORLY GRADED SAND WITH GRAVEL</b> Brown to orange brown, slightly moist, medium dense to dense, with estimated 5% non-plastic fines, 75% medium to coarse sand, and 20% rounded fine gravel to 1/2-inch diameter, weak orange oxidation and weakly cemented.
					3.5	ML		3.5' - 8.0': <b>SANDY SILT</b> Light brown to brown, orange brown to orange, slightly moist, hard, with estimated 60% non-plastic to low plasticity fines and 40% fine sand, local 6- to 12-inch Sandy Lean Clay interbeds, common orange mottling.
C	GRAB	>4.5			6	ML		
					8	SP		8.0' - 10.0': <b>POORLY GRADED SAND WITH GRAVEL</b> Brown to orange brown, orange, moist, medium dense to dense, with estimated 5% non-plastic fines, 80% medium to coarse sand, and 15% subrounded to rounded fine to coarse gravel to 2 inches in diameter, abundant orange mottling.
					10	GP		10.0' - 11.0': <b>POORLY GRADED GRAVEL WITH SAND, COBBLES AND BOULDERS</b> Brown to light brown, slightly moist, very dense, total soil mass contains estimated 20-25% rounded cobbles and 10-15% boulders to 6 feet in diameter in a matrix of estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% fine to coarse gravel.
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
 0465-17-1  
 PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-11

DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4342 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0.0	SC		0.0' - 1.0': <b>CLAYEY SAND WITH GRAVEL</b> Brown to dark brown, slightly moist, medium dense to dense, with estimated 30% medium plasticity fines, 40% fine to coarse sand, and 30% rounded fine to coarse gravel to 3 inches in diameter.
B	GRAB				2.0	GP		1.0' - 8.0': <b>POORLY GRADED GRAVEL WITH SAND</b> Brown, white and dark gray, slightly moist, dense to very dense, with estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% rounded fine to coarse gravel to 3 inches in diameter, unconsolidated, crossbedded river gravels, common discontinuous buried soil horizons up to 1 foot thick with root mats.
C	GRAB				8.0	SP		8.0' - 10.5': <b>POORLY GRADED SAND</b> Brown, orange to orange brown, gray, slightly moist to moist, medium dense, with estimated 0-5% non-plastic fines, 90% medium to coarse sand and 5% rounded fine gravel to ¼-inch diameter.
					10.5	ML		10.5' - 11.0': <b>SANDY SILT</b> Light brown to brown, orange brown to orange, slightly moist, hard, with estimated 60% non-plastic to low plasticity fines and 40% fine sand, common orange mottling.
					12.0			
					14.0			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-12


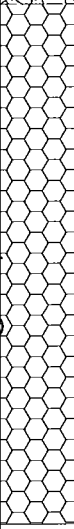
DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4350 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GP		0.0' - 3.0': <b>POORLY GRADED GRAVEL WITH SAND AND COBBLES</b> Orange to orange brown, brown, slightly moist, dense to very dense, total soil mass contains estimated 5% rounded cobbles to 6 inches in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand, and 60% fine to coarse gravel, local boulders to 18 inches in diameter, abundant orange oxidation, unconsolidated to weakly cemented with iron oxide.
					4			3.0' - 9.5': <b>BASALT</b> Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a <b>Poorly Graded Gravel with Silt, Sand and Cobbles</b> , in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					6	BASALT (GP-GM)		
					8			
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
0465-17-1  
PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-13



DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4354 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	GC-GM		0.0' - 1.0': <b>CLAYEY, SILTY GRAVEL WITH COBBLES</b> Brown to dark brown, slightly moist, medium dense to very dense, total soil mass contains estimated 20-25% angular to subrounded volcanic cobbles to 10 inches in diameter in a matrix of estimated 15% low to medium plasticity fines, 40% fine to coarse sand, and 45% fine to coarse gravel, roots common, surface clay development of underlying alluvium.
					2			1.0' - 12.0': <b>POORLY GRADED GRAVEL WITH SILT, SAND, COBBLES AND BOULDERS</b> Light brown to brown, gray to dark gray, slightly moist, very dense, total soil mass contains estimated 30-35% angular to subrounded basaltic cobbles and 5-10% angular to subrounded boulders to 24 inches in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 40% fine to coarse sand, and 50% fine to coarse gravel, metavolcanic and metasediment clasts, unconsolidated alluvial/colluvial material.
					4			
					6	GP-GM		
					8			
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
 0465-17-1  
 PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-14


DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4355 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	-BASALT (GP-GM)		0.0' - 2.0': <b>BASALT</b> Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a <b>Poorly Graded Gravel with Silt, Sand and Cobbles</b> , in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					4			
					6			
					8			
					10			
					12			
					14			

BORING LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:  
0465-17-1  
PLATE:

**WSUP19-0019**  
**EXHIBIT B**

# TEST PIT LOG

TEST PIT NO.: TP-15

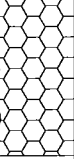
DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4358 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	-BASALT (GP-GM)		0.0' - 2.0': <b>BASALT</b> Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly weathered vesicular basalt bedrock excavates with slight difficulty to a <b>Poorly Graded Gravel with Silt, Sand and Cobbles</b> , in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					4			
					6			
					8			
					10			
					12			
					14			

BORING\_LOG\_0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
1345 Capital Blvd., Suite A  
Reno, Nevada 89502-7140  
(775) 359-6600

**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**



# TEST PIT LOG

TEST PIT NO.: TP-16

DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4346 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GP		0.0' - 3.0': <b>POORLY GRADED GRAVEL WITH SAND AND COBBLES</b> Orange to orange brown, brown, slightly moist, dense to very dense, total soil mass contains estimated 20-25% rounded cobbles and 5-10% boulders to 3 feet in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand, and 60% fine to coarse gravel, abundant orange oxidation, unconsolidated to weakly cemented with iron oxide.
					4	BASALT (GP-GM)		3.0' - 4.0': <b>BASALT</b> Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a <b>Poorly Graded Gravel with Silt, Sand and Cobbles</b> , in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					6			
					8			
					10			
					12			
					14			

BORING\_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 (775) 359-6600

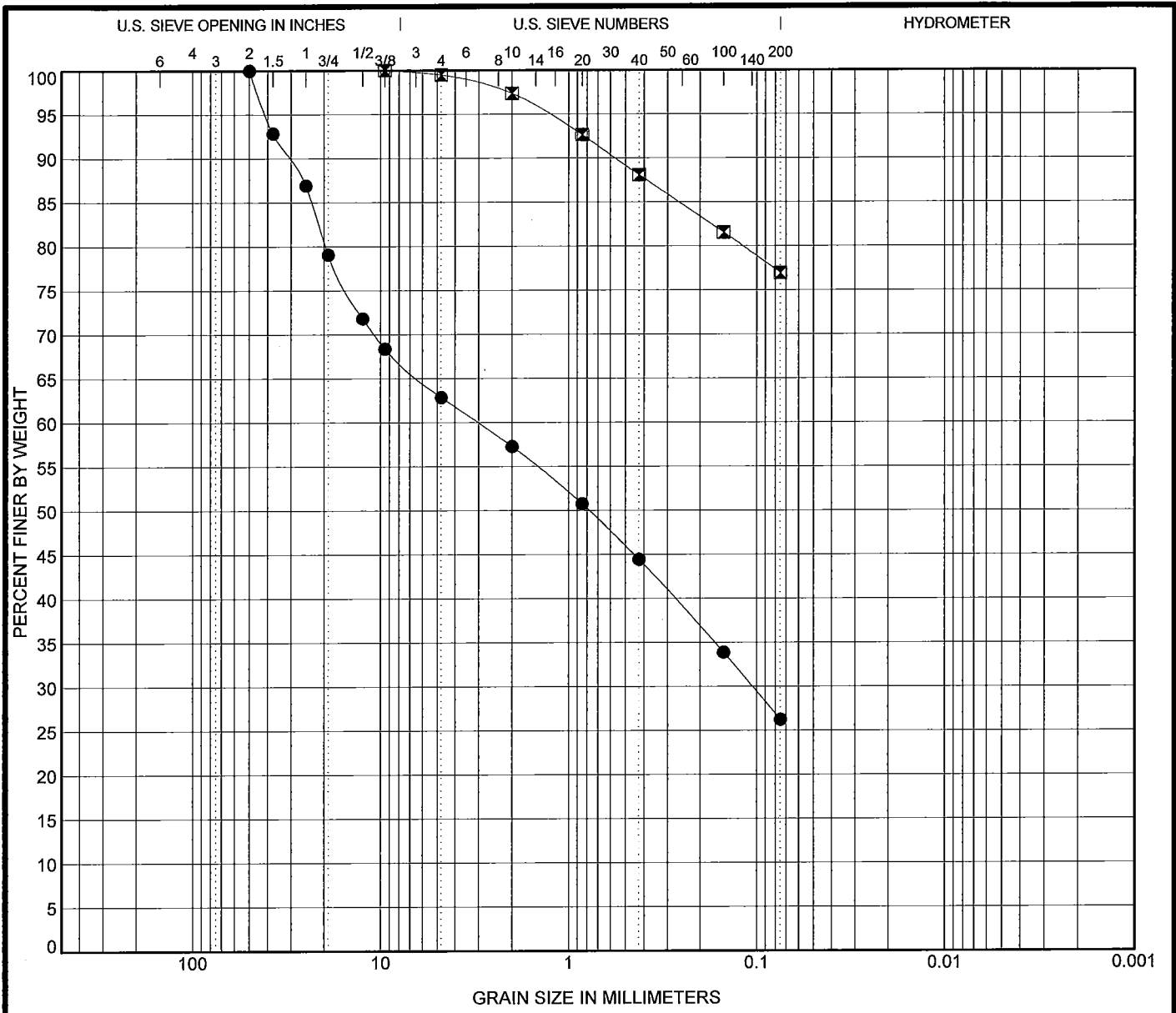
**Mustang Parcel, APN 084-370-02**  
**Washoe County, Nevada**

PROJECT NO.:

0465-17-1

PLATE:

**WSUP19-0019**  
**EXHIBIT B**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			USCS Classification			LL	PL	PI	Cc	Cu
●	TP-01	2.0'	CLAYEY GRAVEL with SAND (GC)			38	21	17		
☒	TP-09	1.5'	SILT with SAND (ML)			37	29	8		

Specimen Identification			D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
●	TP-01	2.0'	50	3.046	0.105		12.5	37.1	36.6		26.3
☒	TP-09	1.5'	9.5				13.4	0.5	22.5		77.0

US GRAIN SIZE 2 0465171.GPJ U.S. LAB.GDT 2/25/2015

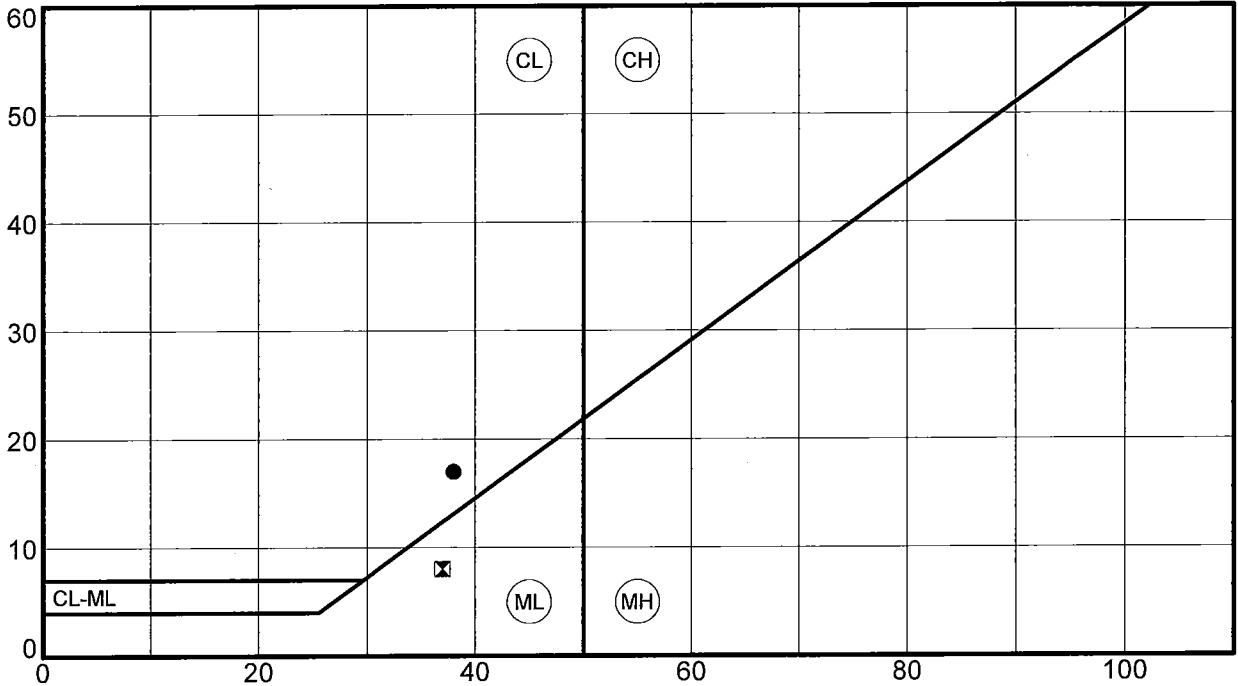


Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

**GRAIN SIZE DISTRIBUTION**

Project: Mustang Parcel, APN 084-370-02  
 Location: Washoe County, Nevada  
 Project Number: 0465-17-1 Plate: **WSUP19-0019**

P  
L  
A  
S  
T  
I  
C  
I  
T  
Y  
I  
N  
D  
E  
X



Specimen Depth in Feet.

LIQUID LIMIT

Specimen Identification	LL	PL	PI	Fines	USCS Classification
● TP-01 B 2.0'	38	21	17	26	CLAYEY GRAVEL with SAND (GC)
☒ TP-09 B 1.5'	37	29	8	77	SILT with SAND (ML)

US ATTERBERG LIMITS 0465171.GPJ US LAB.GDT 2/25/2015



Black Eagle Consulting, Inc.  
 1345 Capital Blvd., Suite A  
 Reno, Nevada 89502-7140  
 Telephone: (775) 359-6600  
 Fax: (775) 359-7766

**ATTERBERG LIMITS RESULTS**

Project: Mustang Parcel, APN 084-370-02  
 Location: Washoe County, Nevada  
 Project Number: 0465-17-1 Plate:

**WSUP19-0019**

**EXHIBIT B**

APPENDIX B  
CHEMICAL TEST RESULTS



**Laboratory Report**  
**Report ID: 139247**

**Sierra  
 Environmental  
 Monitoring, Inc.**

Black Eagle Consulting, Inc.  
 Attn: Jeff Wilbrecht  
 1345 Capital Blvd., Suite A  
 Reno, NV 89502-7140

**Date:** 1/15/2015  
**Client:** BEC-100  
**Taken by:** J. Payne  
**PO #:**

***Analysis Report***

**Laboratory Accreditation Number: NV-0015**

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S201501-0072	1827-01-1 B-04A	12/22/2014	5:30 PM	1/6/2015	Reporting Limit	Analyst	Date Analyzed
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	9.10	pH Units		Malkiewich	1/9/2015	
pH - Temperature	SW-846 9045A	21.2	°C		Malkiewich	1/9/2015	
Redox Potential	SM 2580 B	314	MV		Faulstich	1/14/2015	
Resistivity	EPA 120.1	4500	ohm cm		Malkiewich	1/9/2015	
Sulfate - Ion Chromatography	EPA 300.0	27	mg/Kg	2	Faulstich	1/8/2015	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	1/14/2015	

**Laboratory Accreditation Number: NV-0015**

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S201501-0073	1827-01-1 TP-04B	12/31/2014	10:00 AM	1/6/2015	Reporting Limit	Analyst	Date Analyzed
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	9.45	pH Units		Malkiewich	1/9/2015	
pH - Temperature	SW-846 9045A	21.4	°C		Malkiewich	1/9/2015	
Redox Potential	SM 2580 B	329	MV		Faulstich	1/14/2015	
Resistivity	EPA 120.1	3200	ohm cm		Malkiewich	1/9/2015	
Sulfate - Ion Chromatography	EPA 300.0	14	mg/Kg	2	Faulstich	1/8/2015	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	1/14/2015	

**Data Flag Legend:**

John Kobza, Ph.D  
 Laboratory Director

Page 2 of 3  
 1135 Financial Blvd.  
 Reno, Nv 89502-2348  
 Phone (775) 857-2400 Fax  
 (888) 398-7002  
 jnava@sem-analytical.com

John Faulstich  
 Quality Assurance Manager

**WSUP19-0019  
 EXHIBIT B**

APPENDIX B  
CHEMICAL TEST RESULTS



**Laboratory Report**  
**Report ID: 146823**

**Sierra  
 Environmental  
 Monitoring**

Black Eagle Consulting, Inc.  
 Attn: Jeff Wilbrecht  
 1345 Capital Blvd., Suite A  
 Reno, NV 89502-7140

**Date:** 3/10/2016  
**Client:** BEC-100  
**Taken by:** J. Payne  
**PO #:** 1827-01-2

***Analysis Report***

Laboratory Accreditation Number: NV-00015

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S201603-0004	1827-01-2 B-03 A/B	2/25/2016	9:30 AM	3/1/2016			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	7.87	pH Units		Lax	3/4/2016	
pH - Temperature	SW-846 9045A	20.9	°C		Lax	3/4/2016	
Redox Potential	SM 2580 B	362	MV		Faulstich	3/9/2016	
Resistivity	EPA 120.1	2100	ohm cm		Lax	3/7/2016	
Sulfate - Ion Chromatography	EPA 300.0	110	mg/Kg	2	Faulstich	3/9/2016	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	3/10/2016	

*Data Flag Legend:*

John Faulstich  
 Laboratory Director

1135 Financial Blvd.  
 Reno, Nv 89502-2348  
 Phone (775) 857-2400 Fax  
 (888) 398-7002  
 jnava@sem-analytical.com

Carly Wood  
 Quality Assurance Manager

**WSUP19-0019**  
**EXHIBIT B**



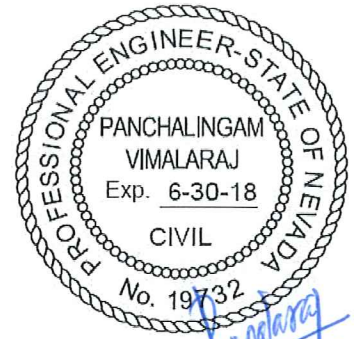
Geotechnical Memorandum

Black Eagle Consulting, Inc  
 1345 Capital Boulevard, Suite A  
 Reno, Nevada

Phone: 775 359-6600

Fax: 775 359-7766

Email: mail@blackeagleconsulting.com



Project No.: 1827-02-1 Project Name: Mustang Spec Building

To: Mr. Michael Simmons, Scannell From: Vimal P. Vimalaraj, P.E.  
 Mr. Dan Salzer, Scannell Jeff Wilbrecht, P.E.  
 Mr. George Green, ARCO  
 Mr. Matt Rasmussen, Tectonics

Date: August 9, 2016 Location: Washoe County, Nevada  
 Revised August 12, 2016

RE: Geotechnical Recommendations Update for Bedrock Cut Slope and Rockery Walls North and Northwest of Spec Building

This geotechnical memorandum provides Black Eagle Consulting, Inc.'s (BEC's) updated geotechnical recommendations related to the bedrock exposure within the existing cut slopes north and northwest of the proposed Spec Building. Black Eagle Consulting, Inc. completed a geotechnical investigation for the subject project entitled *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada*, dated March 25, 2016 (BEC, 2016). The geotechnical investigation report documented the presence of volcanic bedrock in the slopes below the Union Pacific Railroad (UPRR) tracks along the eastern half of the northern edge of the overall project site. We anticipated that most of the material could be excavated with large equipment, but localized areas could require aggressive techniques such as blasting. Explorations were not possible on or above the sloping area because of access constraints associated with the UPRR right-of-way above the slope and steepness of the slope. The geotechnical investigation report (BEC, 2016) recommended additional test pit exploration to quantify the excavated materials in this area.

A BEC geologist and engineer evaluated the bedrock that is exposed on the surface of the current cut face after ripping and excavation activities by the mass grading contractor. The current cut face exhibits volcanic bedrock of variable competency. Hard, competent, sound "core stones" exist within the bedrock matrix. The fracture spacing varies between 6 and 36 inches in the exposed competent bedrock. The abundance of core stones has inhibited the contractor's ability to excavate the hillside with traditional earthwork equipment such as dozers with ripper shanks. As such, blasting will most likely be completed in the area to facilitate removal of the bedrock material. Potentially rippable areas exist, but they are limited in extent and are present between hard core stones; as such, ripping operations may not be effective or efficient.

As per the mass grading plan prepared by Tectonics Design Group, the cuts into the existing slope were planned to be supported by a tiered rockery wall system with up to 3 tiers of rockery walls with maximum exposed heights of 10 feet. In addition, the original design cut above the uppermost wall sloped at 3H:1V (horizontal to vertical). Based on our evaluation, the volcanic bedrock material in the site area north and northwest of the



proposed Spec Building will be stable at a 1H:1V ratio. A drawing showing the area that was evaluated as part of this memorandum and where exposed bedrock could be sloped at a 1H:1V ratio is attached to this memorandum. At a bedrock cut slope of 1H:1V, dislodging of surficial rock particles with freeze-thaw cycles and erosion of any non-competent bedrock zones could be significant. Therefore, it is important to implement the additional geotechnical recommendations discussed below. Depending on the competency and hardness of the exposed bedrock surface after blasting operations, steel netting that is anchored above the crest of the slope should be installed on areas where the exposed bedrock surface exhibits a potential for dislodging of rock particles. In addition to netting, application of gunite should be anticipated in some areas where exposed bedrock may exhibit soil-like characteristics with increased potential for erosion. Black Eagle Consulting, Inc. should be provided the opportunity to evaluate the exposed bedrock surface after blasting and make a determination on the needed slope treatment. A shallow brow ditch of adequate width and depth should be incorporated near the crest of the cut slope to divert surface runoff away from the bedrock cut slope. In addition, a maintenance equipment-wide (minimum 8-foot-wide) ditch/catchment area also should be provided between the toe of the cut slope and back of the curb for the proposed paved surfaces to collect any falling rocks and eroding materials. The ditch can be cleaned as part of maintenance activities. A minimum 5-foot-tall chain-link fence should be added behind the pavement to minimize hazards from any large rocks that could dislodge from the cut slope with freeze-thaw cycles. Scaling of the permanent bedrock cut slope should also be performed to remove any large, exposed particles with a potential to ravel.

The blasting operation will be performed in relatively close proximity to the UPRR right-of-way and tracks. We also understand a major underground gas line exists within the UPRR right-of-way. Therefore, the blasting operation will require coordination with these entities and meeting their requirements. An experienced blasting contractor shall be retained to perform the blasting operations in a controlled manner. It may be necessary to measure and monitor vibrations associated with the blasting.

The blasting operations will likely produce oversized particles that will require additional processing before they can be used as fill or rock fill on the project. Depending on the competency of the blasted materials, they can also be used as rip-rap elsewhere on the project.

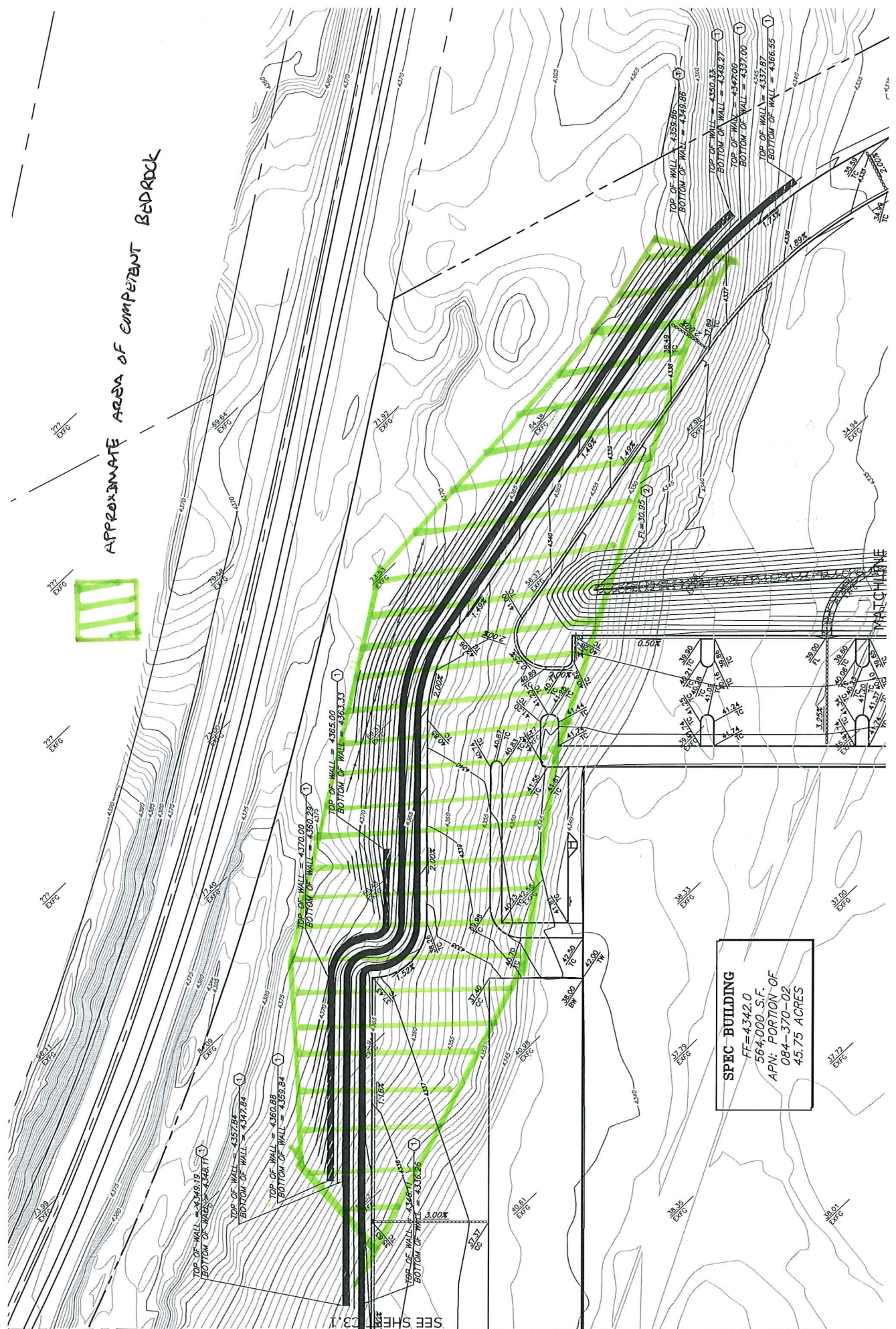
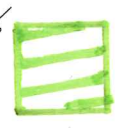
With the recommended 1H:1V permanent bedrock cut slopes, the heights and/or courses of the rockery walls shown in the original design will be reduced, and several segments of rockery walls may be completely eliminated. However, rockery walls will still be needed in some segments to retain cuts. Once a new grading plan is developed for this northern portion of the project, BEC will evaluate the rockery wall design that was provided for the original grading concepts in a report titled *Rockery Wall Design, Mustang Spec Building Site, Washoe County, Nevada*, and dated July 7, 2016.

Attachment:     Approximate Areas of Competent Bedrock

#### References:

Black Eagle Consulting, Inc. (BEC), 2016, *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada*, Private Consultant Report dated March 25, 2016.

APPROXIMATE AREA OF COMPETENT BEDROCK



**SPEC BUILDING**  
 FF=4342.0  
 564,000 S.F.  
 APN: PORTION OF  
 084-370-02  
 45.75 ACRES

SEE SHEET CS.1

Mr. Mike Simmons  
Scannell Properties  
8801 River Crossing Boulevard, Suite 300  
Indianapolis, IN 46240

Project No.: 1827-01-4  
April 23, 2019

**RE: Evaluation of Cut Slope Associated with Propane Tank Pad  
Mustang Industrial Development Spec Building  
Washoe County, Nevada**

Dear Mr. Simmons:

As requested by United Construction Company, Black Eagle Consulting, Inc. performed an evaluation of the cut slope associated with the propane tank pad northwest of the Spec Building. This letter summarizes our findings and recommendations for this cut slope. It is our understanding the cut slope to grade the pad for the propane tank is shown in the plans to be at a 3H:1V (horizontal to vertical) ratio. However, due to the topography and the existing large boulders in the area, cut slopes at a 3H:1V ratio would require significant grading work and possibly removal and replacement of boulders which exist in the uphill areas.

Based on our approximate measurements, the cut slope associated with the pad is at about a 1:5H:1V to 2H:1V ratio. A nearly horizontal bench of variable depths exists at the crest of the cut slope before the topography rises and includes large boulders. This flat area is associated with the bench for the excavator that was utilized to grade the slope. The materials exposed in the cut slope consist of native sand and gravel soils with cobbles and several large, embedded boulders. These materials generally exhibit a dense to very dense consistency. Based on the type and consistency of the slope materials and slope geometry, the cut slopes will be globally stable at the current 1.5H:1V ratio or flatter. However, for long-term performance against surface erosion, the slopes should be protected via rip-rap. For the subject 1.5H:1V slope, rip-rap shall include larger rocks (Class 300 or larger) and may grade to smaller rocks (Class 150) within the upper portion. The bottom rocks may need to be partially embedded for adequate stability of rip-rap on the relatively steep slope.

We appreciate being of service to you on this project. If you have any questions or require any additional information, please do not hesitate to contact us.

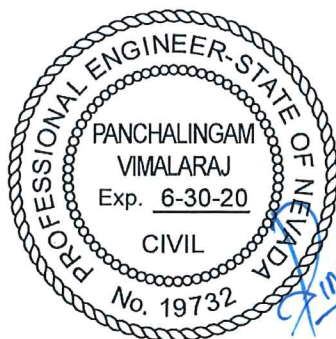
Sincerely,

Black Eagle Consulting, Inc.

Vimal P. Vimalaraj, P.E.  
Engineering Division Manager

PV:cjr

Copies to: Addressee (2 copies and PDF via email)  
Mr. Chuck Brown, United Construction Company (PDF)  
Mr. Kevin Julian, United Construction Company (PDF)



**Black Eagle Consulting, Inc.**  
Geotechnical & Construction Services

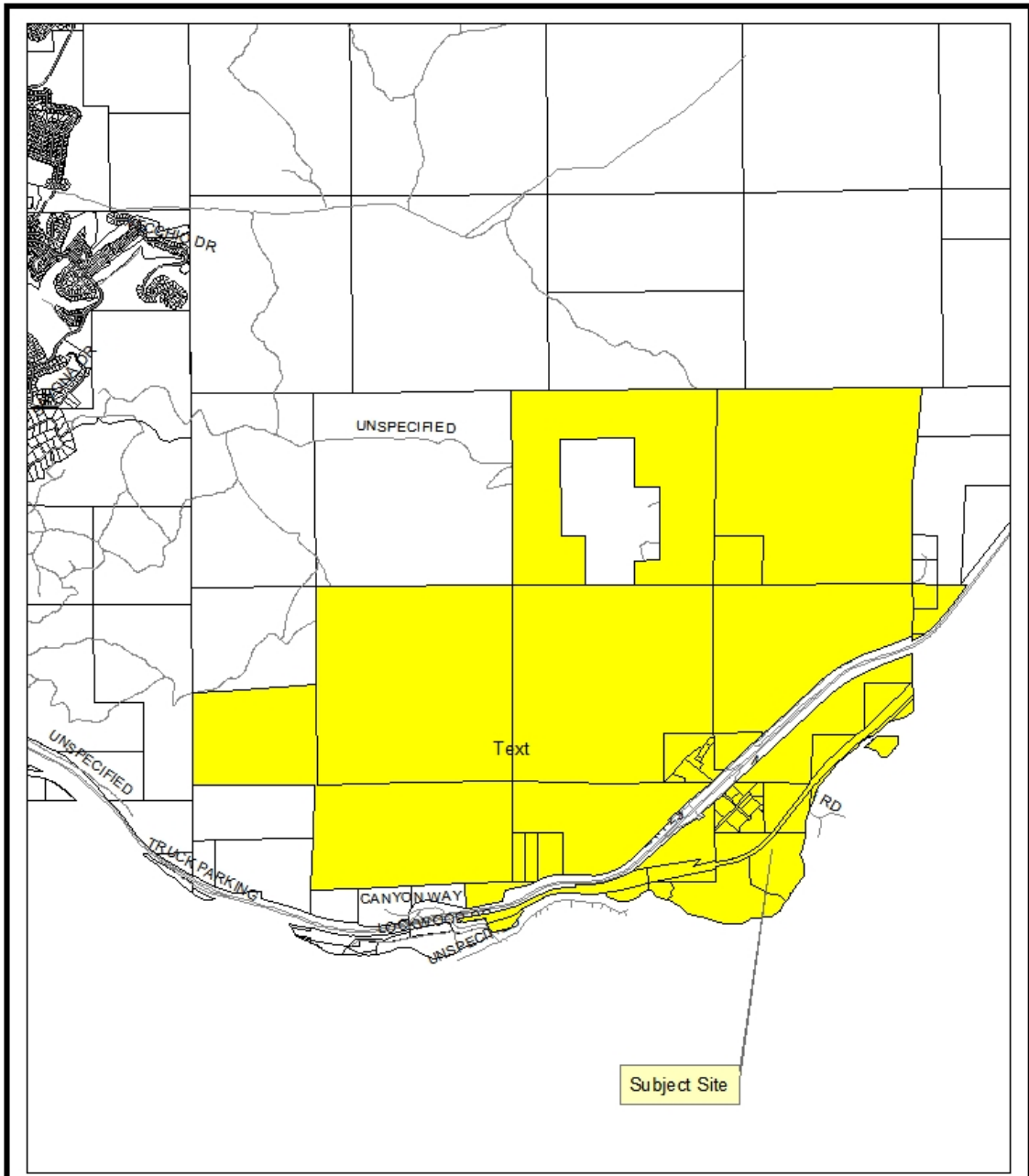
1345 Capital Boulevard, Suite A  
Reno, Nevada 89502-7140

Tel: 775/359-6600

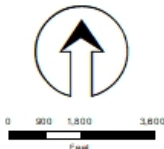
Fax: 775/359-7766

Email: mail@blackeagleconsulting.com

**WSUP19-0019**  
**EXHIBIT B**



Mailing and Vicinity Map  
**Special Use Permit Case Number WSUP19-0019**  
**(Mustang Industrial Development Grading)**  
 56 parcels selected at 7000 feet



Community Services  
 Department  
**WASHOE COUNTY**  
 NEVADA  
 1001 E. Ninth St.  
 Reno, Nevada 89512 (775) 328-3800

Source: Planning and Building Division \\P:\Community Development Department\ArcView\maps and mailing labels\sp-map\WSUP19-0019\locat.mxd Date: 9/12/2019

**From:** [Wines-Jennings, Tammy L](#)  
**To:** [Fagan, Donna](#); [Pelham, Roger](#)  
**Cc:** [Schull, Shyanne](#)  
**Subject:** RE: August Agency Review Memo IV  
**Date:** Thursday, August 22, 2019 11:39:43 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

---

From WCRAS perspective, we do not see any concerns.  
Thanks,  
Tammy Jennings

---

**From:** Fagan, Donna  
**Sent:** Wednesday, August 21, 2019 3:45 PM  
**To:** Schull, Shyanne <SSchull@washoecounty.us>  
**Cc:** Wines-Jennings, Tammy L <TWines-Jennings@washoecounty.us>  
**Subject:** August Agency Review Memo IV

Shyanne,

**From:** Wolf, Mike <MWolf@washoecounty.us>  
**Sent:** Thursday, August 22, 2019 8:55 AM  
**To:** Fagan, Donna <DFagan@washoecounty.us>  
**Subject:** RE: August Agency Review Memo IV

1-4 and 6 will require dust control permits

**Michael Wolf, CEM**

Permitting and Enforcement Branch Chief | Air Quality Management Division | Washoe County Health District

[mwolf@washoecounty.us](mailto:mwolf@washoecounty.us) | O: (775) 784-7206 | 1001 E. Ninth St., Bldg. B, Reno, NV 89512

[OurCleanAir.com](http://OurCleanAir.com)



 Please consider the environment before printing this e-mail.

STEVE SISOLAK  
Governor

STATE OF NEVADA

BRADLEY CROWELL  
Director



TIM WILSON, P.E.  
Acting State Engineer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
**DIVISION OF WATER RESOURCES**

901 South Stewart Street, Suite 2002  
Carson City, Nevada 89701-5250  
(775) 684-2800 • Fax (775) 684-2811  
<http://water.nv.gov>

August 30, 2019

**RE:** Comments on WSUP19-00129

**To:** Rodger Pelham  
Washoe County Community Services Department  
1001 East Ninth Street, Building A  
Reno, NV 89512

**Name:** *Mustang Industrial Development Grading*

**County:** Washoe County – Lockwood, U. S. Highway 80 and Frontage Road

**Location:** A portion of Section 15 and 16, Township 19 North, Range 21, East, MDB&M.

**Plat:** Tentative: Two lot totaling approximately 117.65 acres and being Washoe County Assessor's Parcel Numbers 084-370-06 and 084-370-07.

**Water Service  
Commitment**

**Allocation:** No water is committed at this time.

**Owner-** Scannell Properties #257, LLC  
**Developer:** 8801 River Crossing Boulevard, Suite 300  
Indianapolis, IN 46240

**Engineer:** Tectonics Design Group  
730 Sandhill Road, Suite 250  
Reno, NV 89521

**Water  
Supply:** Quasi-Municipal Water Permits

Washoe County Community Services Department  
August 30, 2019  
Page 2

**General:** There are active water rights appurtenant to the described lands in this proposed project. The lands of the proposed project lie within the Truckee Meadows Water Authority service area. Any water used on the described lands should be provided by an established utility or under permit issued by the State Engineer's Office.

Quasi-Municipal Permits 57826, 67149, 77614, and 87298 are appurtenant to the lands under this project.

All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS), and not otherwise.

Any water or monitor wells, or boreholes that may be located on either acquired or transferred lands are the ultimate responsibility of the owner of the property at the time of the transfer and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code. If artesian water is encountered in any well or borehole it shall be controlled as required in NRS § 534.060(3).

Municipal water service is subject to Truckee Meadows Water Authority rules and regulations and approval by the Office of the State Engineer regarding water quantity and availability.

**Action:** No action required for Mustang Industrial Development Grading.

Best regards,

*Steve Shell*

Steve Shell  
Water Resource Specialist II

**From:** [Lawson, Jacqueline](#)  
**To:** [Pelham, Roger](#)  
**Cc:** [Dayton, Brittany](#)  
**Subject:** FW: August Agency Review Memo IV  
**Date:** Thursday, August 22, 2019 8:14:21 AM  
**Attachments:** [August Agency Review Memo IV.pdf](#)  
[image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

---

Good morning Roger,

The EMS Program does not currently have any comments regarding the Special Use Permit Case Number WSUP19-0019 (Mustang Industrial Development Grading) included in August Application Review Memo IV. Please let me know if you have any questions.

Thank you

Jackie

**From:** [Gil, Donald](#)  
**To:** [Pelham, Roger](#)  
**Subject:** FW: August Agency Review Memo IV  
**Date:** Thursday, August 22, 2019 3:16:54 PM  
**Attachments:** [August Agency Review Memo IV.pdf](#)  
[image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

**Importance:** High

---

Roger,

The Washoe County Sheriff's Office Patrol Division has no issues with item #3 and #6. It was difficult for me to ascertain where our impact would come into play and I was trying to find information related to traffic issues, etc.? If I am missing something can you please advise?

Thank you,

Don

**Don Gil**

**Captain – Patrol Division**

911 Parr Blvd. Reno, NV 89512

Desk: 775-328-3354

Email: [dgil@washoecounty.us](mailto:dgil@washoecounty.us)

Web: [www.WashoeSheriff.com](http://www.WashoeSheriff.com)







**Washoe-Storey Conservation District**

Bret Tyler Chairman  
Jim Shaffer Treasurer  
Cathy Canfield Storey app  
Jean Herman Washoe app

1365 Corporate Blvd.  
Reno NV 89502  
775 857-8500 ext. 131  
nevadacconservation.com

September 04, 2019

Washoe County Community Services Department

C/O Roger Pelham, Senior Planner

1001 E Ninth Street, Bldg A

Reno, NV 89512

R: WADMIN19-0019 Mustang Industrial Development Grading

Dear Roger,

In reviewing the special use permit to store operable vehicles, the Conservation District has the following comments.

We recommend detention basins constructed with a 2 feet wide by 3 feet deep infiltration trench from the inlet to the outlet to encourage groundwater recharge and a 2 feet deep by 3 feet wide low flow channel from the inlet to the outlet to convey nuisance water flow.

The proposed channel we recommend constructed with a 2 feet wide by 3 feet deep infiltration trench to encourage ground water recharge and above the infiltration trench place 6 to 8 inch rock in the flow line to reduce sediment flow downstream.

With the 25 feet height of rip rap slope place smaller rock in the voids of the rip rap slope reducing any undermining by small animals.

Thank you for providing us the opportunity to review the project that may have impacts on our natural resources.

Sincerely,

Tyler-Shaffer





C3.1

WEST - GRADING PLAN

SHEET TITLE

GRAPHICAL RECORD

PROJECT/CLIENT

DATE

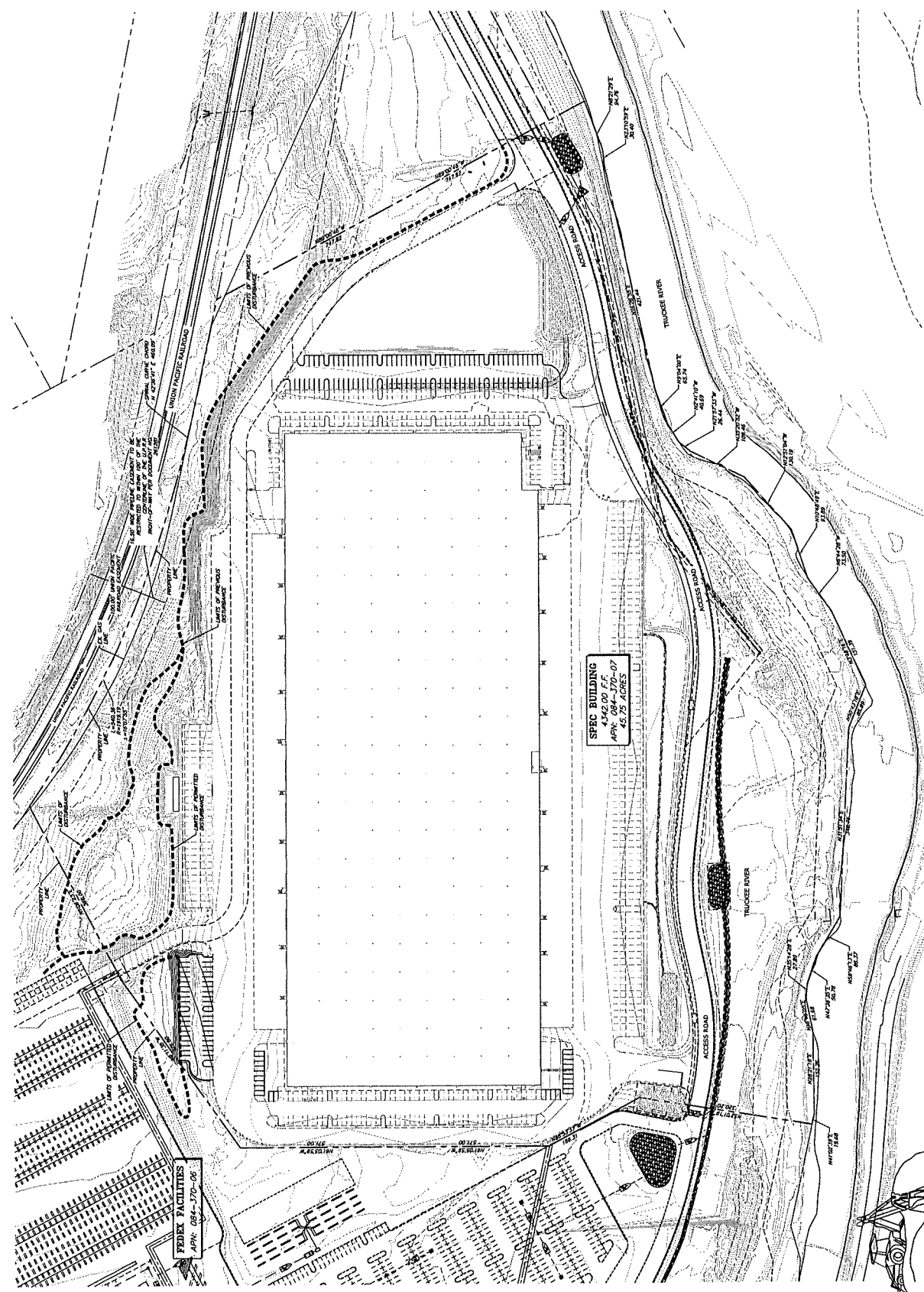
PROJECT/CLIENT

MUSTANG INDUSTRIAL DEVELOPMENT  
12475 MUSTANG ROAD Washoe County, NV  
Scannell Properties  
821 Meander Court, Suite 200, Medina, Minnesota 55340

**T E C T O N I C S**  
DESIGN GROUP  
720 Scannell Blvd., Reno, Nevada 89521  
TEL: 775-224-9888  
WWW.TECTONICSDESIGNGROUP.COM

DESIGNED: J.R. / M.T.C.  
DRAWN: J.R. / M.T.C.  
CHECKED: J.R. / M.T.C.  
DATE: 11/10/19

PROPERTY: [blank]  
SCALE: [blank]



**L.A. Studio Nevada**  
the landscape architecture studio

October 30, 2019

Jon Browning, PE  
Project Engineer  
**TECTONICS DESIGN GROUP**  
730 Sandhill Road, Suite 250  
Reno, NV 89521

**RE: MUSTANG INDUSTRIAL**  
*Rock Stockpile Revegetation Treatment*

Jon,

Per your request, L.A. Studio Nevada visited the Mustang Industrial Development on 10/28/19 to observe the native rock stockpile(s) on the west side of the spec building. The purpose of our visit was to develop a recommendation for restoring/revegetating the area where the rocks were placed.

Our recommendation is to leave the rock cobble in place except where it needs to be removed for future parking. The rocks currently located in the future parking area could be randomly redistributed onsite in or near the locations depicted on the attached Revegetation/Restoration Plan prepared by our office.

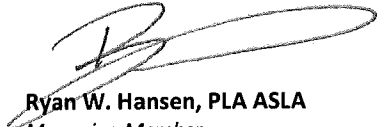
The rock stockpiles should be top-dressed (not buried) with topsoil. The topsoil should be applied as needed to a depth sufficient to achieve a uniform surface cover of about 40% topsoil/60% exposed rock. The topsoil should be "watered in" with a water truck to wash the topsoil into the cracks and crevasses between the boulders, and then over-seeded with a native seed blend. The boulders will enhance reestablishment of the native vegetation by creating small, shaded pockets where moisture can collect and germination will take place.

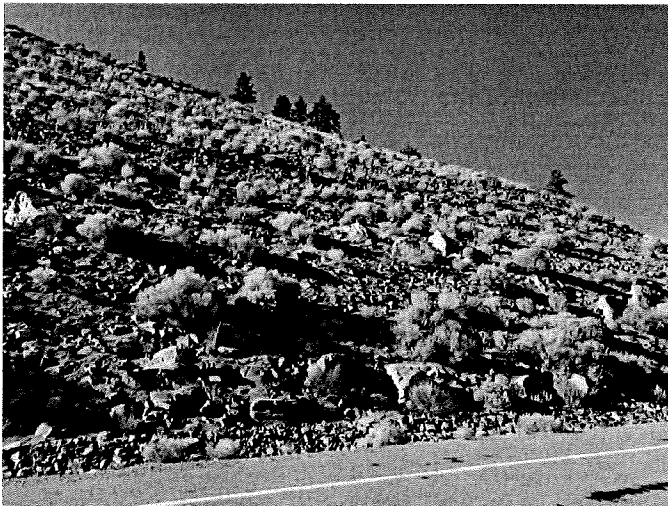
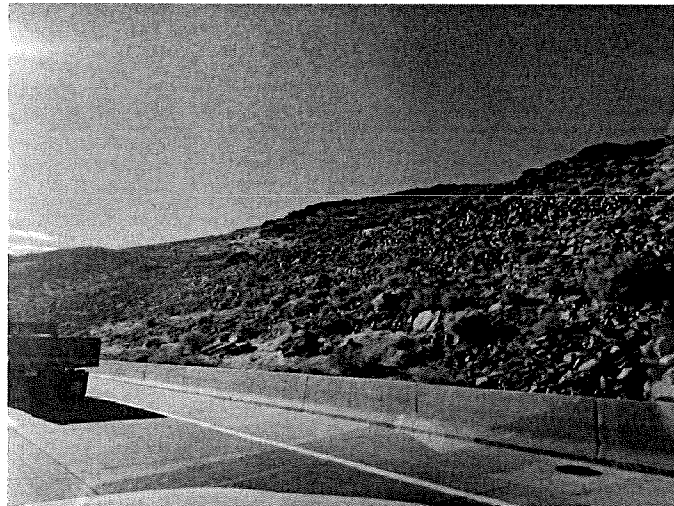
This approach is similar to the highly visible installation along I-580 between Reno and Carson City. The attached photos of the I-580 installation were taken on 10/29/19.

Please let us know if you have any questions.

Sincerely,

**L.A. Studio Nevada, LLC**

  
**Ryan W. Hansen, PLA ASLA**  
*Managing Member*  
*Principal Landscape Architect*  
*Nevada Professional Landscape Architect #440*



1552 C Street, Sparks, NV 89431  
Phone: (775) 323-2223 [www.lastudionevada.com](http://www.lastudionevada.com)

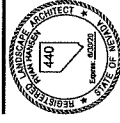
**WSUP19-0019**  
**EXHIBIT E**

Revegetation/Restoration Plan  
12475 Mustang Road  
Mustang Industrial

April 08-27-07

12475-07

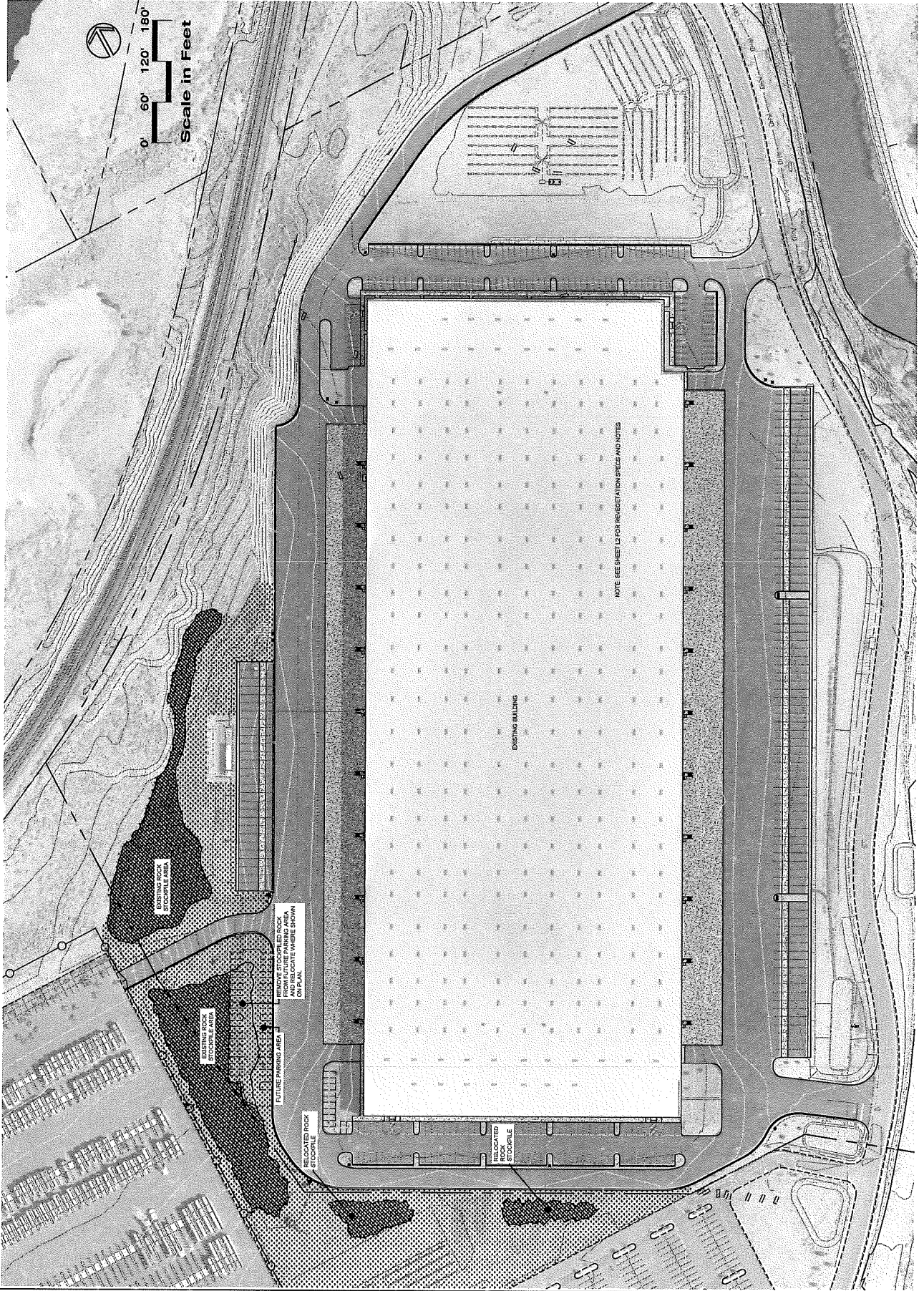
Washoe County

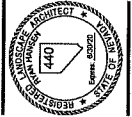


1552 C Street Sparks, NV 89431 (775) 323-2223 www.landscapestudio.com  
L.A. Studio Nevada the landscape architecture studio  
Landscape Architecture and Civil Engineering  
11077 S. Eastern Ave., Suite 200, Las Vegas, NV 89138  
Copyright © 2017 by L.A. Studio Nevada, LLC

Rev. No.	Revision Date

L.A. No.: MSUP19-0019  
Developed: 2017  
Project: LA  
Client: WCI  
Drawn: JANDERSON





LA No.	2019-0019
Designated RPN	
Project	LA
Checked RPN	
Date	04/06/20
Sheet	12
of	2

**DRYLAND REVEGETATION SPECIFICATIONS**

- APPLY IMPORTED TOPSOIL TO THE ROCK STOCKPILE AREAS. SOIL SHOULD BE APPLIED AT A MINIMUM OF 4" TO 6" DEPTH. SOIL SHOULD BE APPLIED TO THE STOCKPILE BOLLERS. GRADES SHOULD BE GRADUALLY SLOPED TO PREVENT EROSION. TOPSOIL SHOULD BE APPLIED TO THE STOCKPILE BOLLERS. ADDITIONAL TOPSOIL AS NEEDED TO MEET COVERAGE REQUIREMENT.
- TOPSOIL SHALL CONSIST OF NATURAL SURFACE SOIL. TOPSOIL SHALL BE APPLIED TO THE STOCKPILE BOLLERS. PLANTS PLANTED TO BE 40 TO 125 COUSLE BULL'S SHALL NOT EXCEED 300 PPM.
- SCARIFY EXISTING SOIL SURFACE WHERE SEEDS IS TO OCCUR AS NEEDED TO CREATE FAVORABLE CONDITIONS.
- THE FACILITY SEEDING IS RECOMMENDED TO TAKE PLACE IN THE FALL. SEEDING SHALL BE APPLIED IN THE FALL. SEEDS OF LARGE GRASS OR STUPEL OR SPOON GRASS SHALL BE APPLIED IN THE FALL. SEEDS SHALL BE APPLIED AT A MINIMUM RATE OF 32 PLS LB/ACRE.
- REVEGETATION SEEDING IN THE SPRING SHALL BE APPLIED AT 1/2 OF THE FALL APPLICATION RATE. IMMEDIATELY FOLLOWED BY A TACKLER APPLICATION USING 50% OF THE MANUFACTURERS RECOMMENDED RATE.
- FOLLOWING SEEDING, APPLY HYDRO-SLURRY MIX COVER. SEEDS SHALL BE COVERED WITH A HYDRO-SLURRY MIX CONSIST OF THE FOLLOWING:
  - FERTILIZER, GUANO # 200 LB/ACRE
  - TACKLER, MINOR # 60 LB/ACRE
  - HYDRO-SLURRY MIX, 100 GALS/ACRE
  - SEED, REVEGETATION SEED BLEND
- CONTRACTOR SHALL MAINTAIN SEEDS UNTIL ESTABLISHED. REPAIR ANY SURFACE EROSION/SLIDING UPON DISCOVERY. COVERAGE REQUIREMENT, NON-IRRIGATED SEEDS, SHALL BE MAINTAINED UNTIL ESTABLISHED. ANNUAL TREATMENTS MAY BE REQUIRED TO INSURE SUCCESSFUL ESTABLISHMENT. SEEDING REQUIREMENTS WILL BE REQUIRED UNTIL COVERAGE REQUIREMENTS ARE CONSISTENT WITH NON-IRRIGATED NATURAL CONDITIONS ARE ACHIEVED AND ACCEPTED BY THE NEIGHBOR.

**REVEGETATION NOTES**

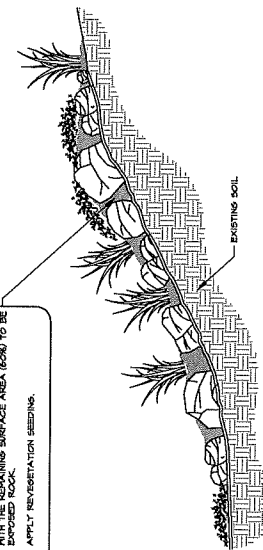
- CONTRACTOR SHALL FIELD VERIFY EXISTING LIMITS OF THE ROCK STOCKPILE AND MAINTAINING TO THE STOCKPILE AREA PER THE DRYLAND REVEGETATION SPECIFICATIONS.
- APPLY DRYLAND REVEGETATION SEEDING TO ALL DISTURBED AREAS ON SITE.

**REVEGETATION LEGEND**

- DRYLAND REVEGETATION SEEDING AREA - SCARIFY EXISTING SOIL SURFACE.
- DRYLAND REVEGETATION SEEDING WITH TOP SOIL APPLICATION OVER EXISTING BOLLERS PER SPECIFICATION IN THIS SPEC.

1. APPLY TOPSOIL OVER EXISTING BOLLER BED TO APPROX. 40% SOIL COVERAGE (AFTER WASH-IN) TO REMAINING SURFACE AREA (BOLL TO BE EXPOSED ROCK).

2. APPLY REVEGETATION SEEDING.



**BOULDER STOCKPILE REVEGETATION TREATMENT**

NOT TO SCALE