

STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF DECEMBER 15, 2021

FILE NO: SUB-2021-0399

AGENDA ITEM: 6.A

STAFF CONTACT: Heather Manzo, Associate Planner

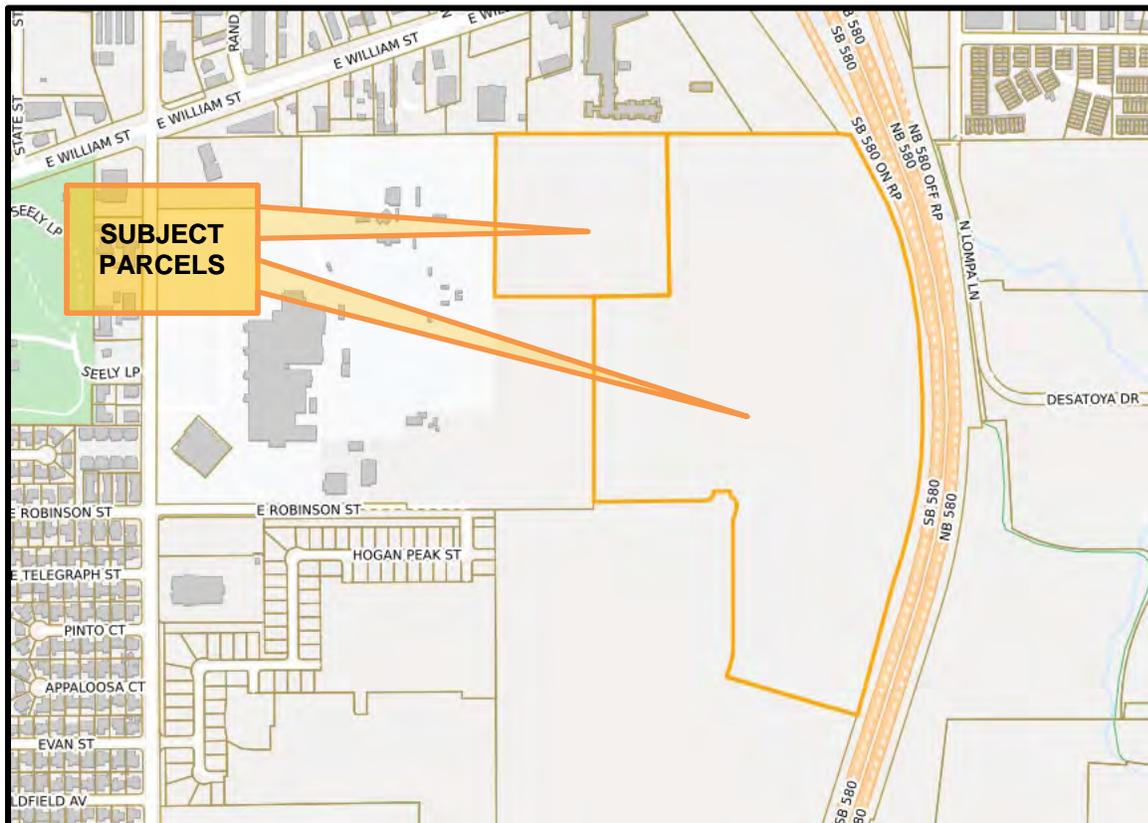
AGENDA TITLE: For Possible Action: Discussion and possible action regarding a request for a tentative subdivision map for a common open space development, known as East Robinson Street and North Saliman Road – Blackstone Ranch North, to create 137 single family residential lots on a ± 41.07 acre portion of a ± 78.81 acre site within the Lompa Ranch North Specific Plan Area (“SPA”) on property zoned Multi-Family Duplex (“MFD”), Multi-Family Apartment (“MFA”), and General Commercial (“GC”), located west of Interstate 580, north and east of Robinson Street, and south of East William Street, APNs 010-041-39 and 010-041-52 (hmanzo@carson.org)

Summary: The applicant is requesting to subdivide a ± 41.07 acre site into 137 single family residential lots with a minimum lot size of 3,500 square feet and a maximum lot size of 6,791 square feet. The proposed subdivision will also include ± 5.89 acres of common open space including a clubhouse. The applicant is seeking to subdivide the land as a common open space development per the provisions of Chapter 17.10 of the Carson City Municipal Code (“CCMC”). The Board of Supervisors is authorized to approve a Tentative Subdivision Map. The Planning Commission makes a recommendation to the Board.

RECOMMENDED MOTIONS:

“I move to recommend approval of Tentative Subdivision Map SUB-2021-0399 based on the ability to make the required findings and subject to the conditions of approval.”

VICINITY MAP:



RECOMMENDED CONDITIONS OF APPROVAL:

The following are conditions of approval are recommended consistent with CCMC 18.02.105 (5) for a tentative map:

1. All final maps shall be in substantial accord with the approved tentative map.
2. Prior to submittal of any final map, the Development Engineering Department shall approve all on-site and off-site improvements. The applicant shall provide construction plans to the Development Engineering Department for all required on-site and off-site improvements, prior to any submittals for approval of a final map. The plan must adhere to the recommendations contained in the project soils and geotechnical report.
3. Lots not planned for immediate development shall be left undisturbed and mass grading and clearing of natural vegetation shall not be allowed. Any and all grading shall comply with City standards. A permit from the Nevada Division of Environmental Protection shall be obtained prior to any grading. Noncompliance with this provision shall cause a cease-and-desist order to halt all grading work.
4. All lot areas and lot widths shall meet the zoning requirements approved as part of this tentative map with the submittal of any final map.
5. With the submittal of any final maps, the applicant shall provide evidence to the Planning and Community Development Department from the Health and Fire Departments indicating the agencies' concerns or requirements have been satisfied. Said correspondence shall be included in the submittal package for any final maps and shall include approval by the Fire Department of all hydrant locations.
6. The following note shall be placed on all final maps stating: *"These parcels are subject to Carson City's Growth Management Ordinance and all property owners shall comply with provisions of said ordinance."*
7. Placement of all utilities, including AT&T Cablevision, shall be underground within the subdivision. Any existing overhead facilities shall be relocated prior to the submittal of a final map.
8. The applicant must sign and return the Notice of Decision for conditions for approval within ten (10) days of receipt of notification after the Board of Supervisors meeting. If the Notice of Decision is not signed and returned within ten (10) days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.
9. Prior to the issuance of each site improvement permit, the applicant shall add a note to the plans stating: *"Hours of construction shall be limited to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 7:00 a.m. and 5:00 p.m. on Saturday"*

and Sunday. If the hours of construction are not adhered to, the Carson City Building Department will issue a warning for the first violation, and upon a second violation, will have the ability to cause work at the site to cease immediately.”

10. The applicant shall adhere to all City standards and requirements for water and sewer systems, grading, drainage, and street improvements.
11. The applicant shall obtain a dust control permit from the Nevada Division of Environmental Protection. The site grading must incorporate proper dust control and erosion control measures.
12. A detailed storm drainage analysis, water system analysis, and sewer system analysis shall be submitted to the Development Engineering Department prior to approval of a final map.
13. Prior to the recordation of the final map for any phase of the project, the improvements associated with the project must either be constructed and approved by Carson City, or the specific performance of said work secured, by providing the City with a proper surety in the amount of one hundred fifty percent (150%) of the engineer's estimate. In either case, upon acceptance of the improvements by the City, the developer shall provide the City with a proper surety in the amount of ten percent (10%) of the engineer's estimate to secure the developer's obligation to repair defects in workmanship and materials which appear in the work within one (1) year of acceptance by the City.
14. A "will serve" letter from the water and wastewater utilities shall be provided to the Nevada Health Division prior to recordation of the first final map.
15. The District Attorney's Office shall approve any Covenants, Conditions & Restrictions ("CC&R's") prior to recordation of the first final map.

The following conditions are required per CCMC 17.10.050 Common Open Space Development

16. Three-Year Maintenance Plan: Provisions shall be made to monitor and maintain, for a period of three (3) years regardless of ownership, a maintenance plan for the common open space area. The maintenance plan for the common open space area shall, at a minimum, address the following:
 - a) Vegetation management;
 - b) Watershed management;
 - c) Debris and litter removal;
 - d) Fire access and suppression;
 - e) Maintenance of public access and/or maintenance of limitations to public access;
and

- f) Other factors deemed necessary by the commission or the board, including vector control and noxious weed control.
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- 17. Permanent Preservation and Maintenance: Provisions shall be made for the permanent preservation and ongoing maintenance of the common open space and other common areas using a legal instrument acceptable to the city.
 - 18. Screening and Buffering of Adjoining Development: Provisions shall be made to assure adequate screening and buffering of existing and potential developments adjoining the proposed common open space development.
 - 19. Common Open Space Restrictions: Designated common open space shall not include areas devoted to public or private vehicular streets or any land which has been, or is to be, conveyed to a public agency via a purchase agreement for such uses as parks, schools or other public facilities. This shall be demonstrated at the time of final map.

Other Conditions of Approval:

- 20. Prior to the issuance of the first site improvement permit, the applicant shall submit an updated traffic impact study (“TIS”) that shows trip distribution and mitigation for intersections with failing levels of service (“LOS”). The methodology and assumptions shall be adequately explained and/or corrected to the satisfaction of the Transportation Manager and the City Engineer. The updated TIS shall include a signal warrant analysis for the intersection of Saliman Road and East Robinson Street with the additional traffic for the year 2025 and the long-term future year projected traffic. Any intersections that are shown to be failing or shown to meet pre-established triggers for mitigation shall be mitigated for based on the recommendations of the TIS. This includes the LOS triggers for Saliman Road and East William Street which may necessitate a connection from the project to East William Street.
- 21. Prior to the recording of the first final map, the applicant shall provide all materials for the traffic signal at the intersection of Saliman Road and East Robinson Street. Materials shall include, but are not limited to, poles, mast arms, and signal heads. The applicant shall not be responsible for providing the signal control cabinet.
- 22. Prior to the issuance of the first site improvement permit, the applicant shall comply with one of the options listed as a) or b) below, based upon the findings of the updated TIS and the traffic signal warrant analysis for Saliman Road and East Robinson Street as required by Condition No. 20. The applicant may enter into an agreement that includes a stipulation that within 10 years of the Board of Supervisors’ approval of the subject tentative map, the applicant may file a request for reimbursement of funds equivalent to the contributions received by other projects that contribute to the need for the signal, and have contributed toward the cost of the installation of the traffic signal.
 - a) If the signal is shown to be warranted, the applicant shall pay for the installation of the traffic signal improvements; or

- b) If the intersection is shown to be failing, but the signal is not yet warranted, the applicant shall file a bond for the full cost to install the traffic signal at the intersection. If, within 10 years, future approved projects do not cause the traffic signal to be warranted in long-term traffic projections, then the bond will be released.
- 23. If the project is developed in phases, each phase shall stand alone. The site improvement permit for the first phase of this development shall include identified mitigations for the entire project, including but not limited to: a looped water system, secondary access, and other mitigations or improvements that are necessary to support this project at buildout.
- 24. Prior to the issuance of a site improvement permit that includes any local roadways, the applicant shall demonstrate that all local roads shall have a minimum asphaltic concrete thickness of 4 inches.
- 25. Prior to the issuance of the first site improvement permit, the applicant shall have plans approved that demonstrate the intersection of Robinson Street and Monroe Street has been designed to minimize turning conflicts by aligning the intersection with the entrance of Blackstone Ranch Phase 2, by installing a center median on Robinson Street in front of Monroe Street, or by a similar approved mitigation.
- 26. Prior to the issuance of each site improvement permit, the applicant shall have plans approved that include a plan showing the areas where soils are to be over excavated, and the depths required to be excavated.
- 27. Prior to the issuance of a site improvement permit, the water main analysis must be updated to verify that the system can deliver fire flow in addition to domestic flow at the extents of the project without dropping below 20 pounds per square inch (“psi”) and will deliver domestic flow without dropping below 60 psi.
- 28. Prior to the issuance of a site improvement permit, the applicant shall have plans approved that show the width of the existing water line easement has been increased to 50 feet wide along its entirety.
- 29. Cast in place manholes shall not be allowed, regardless of depth of new sewer mains, and riser depths shall meet Carson City standard details. If sewage pumping is required, lift stations shall be privately owned and operated.
- 30. Prior to the issuance of a site improvement permit, the applicant shall have plans approved that demonstrate the width of the existing sewer easement has been increased to 50 feet wide along its entirety.
- 31. Prior to the issuance of a site improvement permit, the 12-inch sewer mains that are shown as having velocities below 2 feet per second (“fps”) shall be re-designed with the necessary slope and diameter to maintain a minimum velocity of 2 fps.

32. Prior to the issuance of a site improvement permit, the swale on the north side of the project shall be located completely on the project site with an additional 5 feet of width for maintenance access.
33. Prior to the issuance of the first site improvement permit for the project, the applicant shall demonstrate that the Federal Emergency Management Agency (“FEMA”) Conditional Letter of Map Revision (“CLOMR”) has been re-validated to include the proposed development layout. Site improvement plans shall be consistent with the approved CLOMR, to the approval of the City Engineer.
34. Prior to the issuance of the first site improvement permit, the applicant shall demonstrate that the Vicee Canyon Channel is substantially complete.
35. The CC&R’s shall clearly state that a Landscape Maintenance District (“LMD”) is required for maintaining the private storm drain infrastructure including any mains, basins, and LID infrastructure.
36. All multi-use paths will be designed and constructed to a 10-foot wide (minimum) American Association of State Highway and Transportation Officials (“AASHTO”) standard concrete multi-use path (off street/paved/shared) with an adjacent 3-foot-wide decomposed granite path.
37. The applicant shall include APN 010-041-52 on the final map for the creation of the remainder parcel, inclusive of the future Monroe Street right-of-way.
38. Prior to the recordation of the first final map, the applicant shall demonstrate that secondary access has been constructed and approved by the Carson City Fire Department and the Development Engineering Division. Should secondary access be provided through a connection from the project site to East William Street, Monroe Street shall not be required.
39. Prior to the recordation of the first final map, homeowner’s association (HOA) or similar entity shall be formed for maintenance, including landscaping and irrigation, of all common open space and/or common area parcels including the clubhouse site, common open space, landscaping within public rights of way, and other areas that are not a part of the LMD.
40. Carson City is a Bee City USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City’s approved tree species list or other tree species, as approved by the City.
41. Prior to the issuance of any site improvement permit, the applicant shall incorporate “best management practices” into their construction documents and specifications to reduce the

spread of noxious weeds, to the approval of the Development Engineering Division and Parks, Recreation, and Open Space Department.

42. Prior to the issuance of a site improvement permit, the applicant shall have plans approved which include a public decomposed granite (“DG”) path system that shall be installed as depicted on the approved tentative map site plan. An additional DG path shall also be installed within the common open space parcel that provides connectivity from Matterhorn to Anders Street. In addition to landscaping, the applicant shall incorporate pedestrian amenities that may include benches, dog waste stations, and trash receptacles along the DG path system.
43. Prior to the issuance of a site improvement permit, the applicant shall have plans approved that: 1) identify all common open space parcels and public areas within these parcels, 2) identify lands within the subject site that will be included in the LMD, and 3) that demonstrates that the quantitative and qualitative common open space requirements are being met by this project.
44. Prior to the recordation of the first final map, the applicant shall demonstrate that a LMD has been established for the Lompa Ranch North SPA, inclusive of all properties within the SPA on the west side of I-580.
45. Prior to the recordation of the first final map, the applicant shall demonstrate that the developer has entered into an agreement with the Parks, Recreation, and Open Space Department regarding the 10-acre park site. Additionally, the conceptual site plan for the park site shall be submitted to the Parks, Recreation, and Open Space department prior to the issuance of the 400th Certificate of Occupancy within the Lompa Ranch North SPA, west of I-580.
46. Prior to the issuance of any site improvement permit or approval of any final map containing lots 127 through 137, the applicant shall incorporate a minimum 6-foot-wide landscaped buffer area on the south side of Robinson Street adjacent to the future park site.
47. Prior to the issuance of any site improvement permit or approval of any final map containing lots 34 through 41, the applicant shall incorporate a minimum 5-foot-wide landscaped buffer area along the north project property line. Landscaping shall include one large evergreen tree per every 75 linear feet and three shrubs for every tree to serve as a buffer between the project site and possible future development to the north.
48. Prior to the issuance of a site improvement permit, the applicant shall have a landscape and irrigation plan approved which includes common open space landscaping consisting of a minimum of 1 tree per 1,000 square feet, and 3 shrubs per tree within the common open space parcels. Landscaping may be clustered in areas to provide a visual or recreational benefit to residents. Trees and shrubs required as part of other conditions of

approval that are within a common open space parcel may be counted toward meeting this condition.

49. Prior to or concurrent with the recordation of a final map, the applicant shall demonstrate that the park and school site parcels have been created.
50. Prior to the issuance of each site improvement permit, the applicant shall have a plan approved that indicates that the side of the street where on-street parking is prohibited be striped and signed.
51. Prior to the issuance of a site improvement permit, the applicant shall submit and have approved front architectural elevations and house floor plans for the proposed home masters. A minimum of 3 unique and distinctly different house plans shall be required. At least 2/3rd of the proposed house plans shall include a minimum of five feet of habitable space located in front of the face of the garage. The remaining house plans shall utilize other architectural elements and features as allowed by the SPA Handbook to draw emphasis away from the garage.
52. Prior to the recordation of any final map, the applicant shall demonstrate that:
 - a) Lot widths shall be varied to provide a mixture of 35 foot wide and minimum 45 foot wide lots along the same side of the street. Grouping of contiguous narrow lots that would cause the same house plan to be placed on adjacent lots shall be prohibited.
 - b) All corner lots shall be a minimum of 45 feet wide. If a common open space parcel at least 5 feet wide is located between the side property line and the public right-of-way, this requirement shall not apply.
53. The required internal setbacks shall be as follows:

Front:	15 feet
Driveway	20 feet
Side:	5 feet
Street Side:	10 feet
Rear:	10 feet

These setbacks shall be stated on the final map as well as in the CC&Rs.

54. Prior to the issuance of a site improvement permit that includes development activities adjacent to the wetland located on the northeast side of the subject site, the applicant shall demonstrate that there is 5-foot minimum separation between the limits of disturbance for the wetland and the sidewalk. The entirety of the wetland shall be located within a common open space parcel and shall be maintained by the HOA.

55. Prior to the recordation of the first final map, the applicant shall coordinate with staff to develop a plan for the tracking of approved or recorded residential units and C of O's for the properties within Lompa Ranch North SPA, west of I-580.

LEGAL REQUIREMENTS: CCMC 17.05 (Tentative Maps); CCMC 17.07 (Findings); CCMC 17.10 (Common Open Space Development); NRS 278.330

SITE DEVELOPMENT INFORMATION:

SUBJECT SITE AREA: ±41.07 acres

EXISTING LAND USE: Vacant

MASTER PLAN DESIGNATION: Mixed Use Commercial, Medium Density Residential (3-8 du/ac), High Density Residential (8-36 du/ac), and Open Space. All properties are within the Lompa Ranch North Specific Plan Area.

ZONING: Multifamily Apartments (“MFA-SPA”), and Multifamily Duplex (“MFD-SPA”), and General Commercial (“GC-SPA”). All properties are located within the Lompa Ranch North SPA.

KEY ISSUES: Is the tentative map consistent with the required findings? Does the proposal meet the tentative map and common open space development requirements and other applicable requirements?

SURROUNDING ZONING AND LAND USE INFORMATION

NORTH: MFA and GC-SPA / Gold Dust West casino & vacant land

SOUTH: SF6-SPA & MFD-SPA / future single family residences

EAST: MFA-SPA, SF6-SPA, Agricultural (“A”) / Interstate 580 & vacant

WEST: Public (“P”) / Carson High School

ENVIRONMENTAL INFORMATION:

FLOOD ZONES: X Shaded, AE, and AO

SLOPE: Generally flat

SEISMIC ZONE: Zone II (Moderate Severity)

FAULT: Beyond 500 feet

Previous Reviews:

MPA-15-162: (March 17, 2016) Adoption of the Lompa Ranch North Specific Plan.

MISC-17-001 (March 17, 2016) approval of the Lompa Ranch North Phasing Plan

ZMA-15-163: (April 7, 2016) Adoption of a Zoning Map Amendment with an effective date of the date of a change of ownership.

TSM-17-184 (October 24, 2018) approval of a tentative map for Blackstone Ranch Phase 2

TSM-17-005-1 (April 18, 2019) approval of a modification to Blackstone Ranch Phase 1

PUD-2021-0263, PUD-2021-0349, and CSM-2021-0004 (July through December 2021) Conceptual subdivision map requests for Blackstone Ranch Phase 3 (proposed project)

BACKGROUND:

Lompa Ranch is one of four areas identified in the Master Plan that are designated as a Specific Plan Area. The Specific Plan designation requires development proposals within the area to be reviewed in a comprehensive manner. The policies contained in the Lompa Ranch North Specific Plan Area Handbook (“SPA Handbook”) adopted on March 17, 2016, provide a framework for development in the area.

The Lompa Ranch North Specific Plan Area (“SPA”) is ±251.33 acres in size located on the east and west side of Interstate 580 (“I-580”), generally south of East William Street and north of East 5th Street. The SPA is intended to include a mix of uses including residential areas of various densities, commercial areas, two park sites, pedestrian connectivity, and a ten-acre school site. The SPA Handbook addresses design standards, parks, open space, trails, sanitary sewer, water service, stormwater management, utility services, roadways and traffic, fire and police protection, and schools.

With respect to infrastructure and public services, the SPA Handbook includes a phasing plan that addresses storm water and drainage, traffic and roadways, water, and sanitary sewer planning for the west side of the SPA. The SPA Handbook also addresses parks, open space, and trail amenities, as well as fire mitigation. Per the SPA Handbook, these improvements will be constructed by the developer and maintained via a homeowner’s association, landscape maintenance district, or combination thereof. The ten-acre park on the west side is to be constructed and dedicated to the City prior to the 750th residential unit west of Interstate 580. Conditions are recommended to ensure that milestones are met at the appropriate time in development. One of which includes submittal of a parks conceptual plan at the time of the 400 residential unit and execution of related agreements for development located to the west of Interstate 580. The intent is to ensure the required improvements do not result in a construction delay, but rather are being planned concurrent with other construction activities.

In addition to the SPA Handbook, the property is subject to a development agreement that was adopted by Ordinance No. 2017-25. The development agreement includes voluntary contributions to mitigate the impacts of the development on fire services, in lieu of residential construction tax (“RCT”), and to go toward the cost of the Carson City School District purchase of the school site. These contributions are paid at the time of building permit.

The project boundary encompasses the remaining undeveloped residential phases on the west side of I-580. The SPA Handbook and recorded development agreement outline the need for agreements, improvements, and timing for the dedication of land. As such, conditions of approval are recommended to require improvements associated with Phases C2 and C4 of the SPA Phasing Plan.

DISCUSSION:

The proposed subdivision is located on the west side of I-580, to the south of the Gold Dust West casino, north of the East Robinson Street extension, and east of Carson High School.

The applicant proposes to subdivide a ±41.07 acre site to create 137 single family residential lots with a minimum lot width of 35 feet and minimum lot size of 3,500 square feet. A total of ±5.9 acres of common open space is proposed and each lot will have private yards and a community clubhouse. The applicant is seeking to utilize the provisions of CCMC 17.10: Common Open Space Development. Common Open Space developments must comply with the allowable density of the zoning district, but may have flexibility on lot size, lot width, and setbacks. The maximum allowable density in the MFA and MFD zoning district is 36 and 14.52 dwelling units per acre, respectively. The applicant proposes 4.68 dwelling units per acre, consistent with the SPA Handbook density range of between 4 and 36 dwelling units per acre. **Condition Nos. 1**

through 19 are standard conditions from CCMC for tentative map and common open space developments.

The overall design concept consists of two lot configurations that include 70 lots that are a minimum 35 feet wide and 3,500 square feet in size and 67 lots that are a minimum 45 feet wide and 4,500 square feet in size with the largest lot being ±6,791 square feet. The subdivision is proposed to be accessed via the roundabout at Matterhorn Lane and East Robinson Street. The local streets will include a 50-foot right-of-way with a 5-foot sidewalk on both sides of the street and on-street parking on one side of the street. Homes are anticipated to each have a standard two-car garage and a minimum 20-foot-long driveway.

The Planning Commission conducts a public hearing and advises the Board if the proposed tentative map is consistent with the provisions of the CCMC and NRS 278.320.

PUBLIC COMMENTS: Public notices were mailed on November 30, 2021 to 84 property owners within 900 feet of the subject site pursuant to the provisions of NRS and CCMC for the Tentative Subdivision Map application. No comments were received at the time this report was prepared. Any written comments that are received after this report is completed will be submitted prior to or at the Planning Commission meeting on December 15, 2021 depending upon their submittal date to the Planning Division.

OTHER CITY DEPARTMENT OR OUTSIDE AGENCY COMMENTS: The following comments were received from City departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

Engineering Division:

The Engineering Division has no preference or objection to the tentative map request and offers the following conditions of approval:

- The traffic impact study has been amended to include traffic from the school site identified by the Lompa Ranch North SPA handbook. The traffic impact study must be further updated to show the trip distribution and mitigation for intersections with failing LOS. Any unclear methodology or assumptions must also be explained and/or corrected to the satisfaction of the Transportation Manager and the City Engineer. The study must also be updated to include a signal warrant analysis of the intersection of Saliman Road and Robinson Street with this additional traffic for 2025 and the long term, future year projected traffic. Any intersections that are shown to be failing or shown to be meeting pre-established triggers for mitigation, must be mitigated. This includes the LOS triggers for Saliman Road and East William Street which may necessitate a connection to East William Street. For a detailed response on the applicability of **Condition No. 20**, please refer to the engineering discussion of the findings below.
- The Lompa Ranch Specific Plan Design Standards Handbook calls for the development to provide a traffic signal at the intersection of Saliman Road and Robinson Street no later than the completion of 460 housing units that contribute trips directly to Robinson Street. With this project there are 530 applicable housing units. Prior to the recording of the first final map, the project must provide materials for a traffic signal at the intersection of Saliman Road and Robinson Street including poles, mast arms, and signal heads. The signal control cabinet will not be included (**Condition No. 21**).

- The Lompa Ranch Specific Plan Design Standards Handbook states that the above traffic signal shall not be constructed until MUTCD traffic signal warrant criteria are formally met. The MUTCD signal warrant has not been analyzed to include school site traffic in the long-term projection. The project must complete this analysis. If the signal is shown to be warranted, the project must pay for the installation of the traffic signal. If the intersection is shown to be failing, but a signal is not yet warranted, the project must bond for the full installation of the traffic signal **(Condition No. 22)**.
- If this project is to be developed in phases, each phase must be able to stand alone, but should also mitigate cumulative impacts across all phases **(Condition No. 23)**.
- Local roads will have a minimum AC pavement thickness of 4-inches **(Condition No. 24)**.
- The intersection of Robinson Street and Monroe Street must be designed to minimize turning conflicts by aligning the intersection with the entrance of Blackstone Ranch Phase 2, or by installing a center median on Robinson Street in front of Monroe Street, or by a similar approved mitigation **(Condition No. 25)**.
- The site improvement permit must include a plan showing the areas where soils are to be over excavated, and the depths required to be excavated **(Condition No. 26)**.
- The water main analysis must be updated to verify that the system can deliver fire flow in addition to domestic flow at the extents of the project without dropping below 20 psi and deliver domestic flow without dropping below 60 psi **(Condition No. 27)**.
- The width of the existing waterline easement must be increased to 50 feet along its entirety **(Condition No. 28)**.
- Cast in place manholes will not be allowed, regardless of depth of new sewer mains, and riser depths must meet Carson City Standard details. If sewage pumping is required, lift stations will be privately owned and operated **(Condition No. 29)**.
- The width of the existing sewer easement must be increased to 50 feet along its entirety **(Condition No. 30)**.
- The 12-inch sewer mains that are shown as having velocities below 2 fps must be re-designed with the necessary slope and diameter to maintain a minimum velocity of 2 fps **(Condition No. 31)**.
- The swale on the north side of the project must be located completely on the project site with an additional 5' of width for maintenance access **(Condition No. 32)**.
- The CLOMR must be revalidated to include the updated layout prior to issuing the first site improvement permit **(Condition No. 33)**.
- The Vicee Canyon Channel must be substantially complete prior to commencing grading operations for the subdivision. The Vicee Channel will need to be identified as a separate parcel as the SPA Handbook requires that the drainage channels be parceled and dedicated to the City upon completion of improvements **(Condition No. 34)**.
- The CC&R's must clearly state that a LMD is required for maintaining the private storm drain infrastructure including any mains, basins, and LID infrastructure **((Condition No. 35)**.
- All multi-use paths will be designed and constructed to a 10-foot wide (minimum) AASHTO standard concrete multi-use path (off street/paved/shared) with an adjacent 3-foot-wide decomposed granite path **(Condition No. 36)**.

- The project must meet all Carson City Development Standards (“CCDS”) and Standard Details including but not limited to the following:
 - Structures and fences will not be permitted within utility easements.
 - All public utilities on private property must be located within utility easements meeting the requirements of CCDS Division 18.
 - The utility plan does not show the sewer main extending along the frontage of lots 81 or 5712. The sewer main will be required to be extended along these lots to serve them.
 - Monroe Street and Monroe Avenue must both be renamed Monroe Drive.
 - A water study that includes an update of the city’s model using a format that is compatible with the current model is required. The new water system must meet all city and NAC requirements. For any questions, please reach out to Michael Friend at (775) 283-7713 or mfriender@carson.org. Please provide a copy of the model in WaterGEMS format that is compatible with the City’s current model.
 - The water main extension from Robinson Street to 5th Street must be completed with or prior to this project and the water main must extend through the intersection. Also, to meet looping requirements the water mains north and east of the proposed roundabout must connect to the proposed mains west and south of the roundabout.
 - Grading shall comply with FEMA and City floodplain regulations. For FEMA AO (1 ft) zone, must have 2 ft of freeboard above the base flood elevation (“BFE”) (finished floor shall be a minimum of 3’ above the existing ground).

FINDINGS:

The Engineering Division has reviewed the application within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 17.07.005. The following Tentative Map Findings by the Engineering Division are based on approval of the above conditions of approval:

1. *Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.*

Water: Per CCMC Division 15 – Water, Sewer, Reclaimed Water Standards 15.3.1.a - “Water mains shall be designed to deliver a minimum of sixty (60) psi at the meter during peak demand periods and to provide adequate fire flow as required by the fire department.” The Water Study in Appendix 3 shows pressures below 60 psi for the Peak Hour Scenario. The water study will need to demonstrate that a minimum of 60 psi during peak demand periods can be provided at the meter for this project. It is anticipated that this requirement can be met, however additional infrastructure may be required.

Sewer: There is sufficient capacity in the City sewer system to supply sewer service to the project.

2. *The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.*

The City has sufficient system capacity and water rights to meet the required water allocation for the subdivision.

3. *The availability and accessibility of utilities.*

Water, storm water, and sanitary sewer utilities are available and accessible.

4. *The availability and accessibility of public services such as schools, police protection, transportation, recreation, and parks.*

To make this finding, Development Engineering is requesting a condition of approval that would require the traffic impact study to include school traffic for the 2025 and the long-term forecast and mitigate any failing intersections or intersections that are shown to meet pre-existing triggers for mitigation. The intent of this requirement is to ensure that a school can be provided to meet the demand imposed by developments within the Lompa Ranch North SPA, and that the subject entitlement does not use up all the remaining capacity of the road network, thus precluding a school. Development Engineering feels that it is appropriate to include the future school project for the following reasons:

- The Specific Plan calls for a school site to be offered to the Carson City School District to meet demand imposed by the residential development which is part of the Lompa Ranch Specific Plan.
- The development agreement which encumbers the subject parcel and other parcels within the Lompa Ranch SPA, requires the school site to be made available no later than June 30, 2019. The school site has not been made available to date; therefore the Carson City School District had no opportunity to seek an entitlement when they should have had a right to.
- The Lompa Ranch North Specific Plan calls for Matterhorn Drive (formerly referred to as the Spine Road) to connect to William St no later than 810 single family residential units (or permits for the equivalent trip generation). The subject tentative map would leave a remainder of 8 weekday trips, which is approximately equal to the trips that would be generated by 1 single family detached home. In other words, only one house can be built before a connection is required to be made to William Street. This trigger was established based on anticipated levels of service at intersections in and around the project. Requiring the traffic impact study to account for the estimated school traffic demand will ensure that these intersections will function properly if a school is built before the connection to William Street is triggered and constructed by private development.
- Furthermore, it is unclear at this time where a connection to William Street will be made, but a likely location is on the east side of the Gold Dust West Casino. If this is the case, the majority of the 2.49-acre multi-family site would be dedicated to right-of-way. Due to this fact, it is appropriate to consider that nearly all the residential development that is making a school necessary will be entitled with this tentative map and therefore a school is required to serve the residential developments with this entitlement.

Condition Nos. 20 through 22 are recommended to address the above noted transportation related concerns.

5. *Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.*

There are public trails proposed along the proposed drainage channels.

6. *Conformity with the zoning ordinance and land use element of the city's master plan.*

Development engineering has no comment on this finding.

7. *General conformity with the city's master plan for streets and highways.*

The development is in conformance with the City's master plan for streets and highways.

8. *The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.*

The traffic impact study must be updated to as described in **Condition No. 20**. The project must also provide materials for a traffic signal at Robinson Drive and Saliman Drive and, if applicable, provide funding for the installation of the traffic signal (**Condition Nos. 21 & 22**). Please see finding 4 above for a discussion on why the school traffic should be included in the analysis of the road network.

9. *The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.*

Earthquake faults: The closest fault is over 500 feet away with a slip rate of less than 0.2 mm/yr.

FEMA flood zones: The current FEMA flood zone is Zone AO (depth 1 ft), Zone AE, and Zone X (shaded). The project must comply with FEMA and City floodplain regulations. For AO (1 ft) zone, must have 2 ft of freeboard above BFE (finished floor shall be a minimum of 3' above the existing ground).

Site slope: The site's slope is between 0 to 2 percent.

Soils: The soil is mainly Voltaire silty clay loam and Orizaba loam with the water table at some parts about 0 to 18-inches from the surface. Parts of the project must be over excavated. A plan for this work is recommended by **Condition No. 26**.

10. *The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.*

Development Engineering has no comment on this finding.

11. *The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.*

The applicant will need to demonstrate that the connection from Matterhorn to Monroe Street can be made. A condition is recommended to require mapping that will create the remainder parcel inclusive of the future Monroe Street connection across the General Commercial zoned parcel to the north of the school site (**Condition No. 37**). As proposed and with recommended conditions, the subdivision has sufficient secondary access, and sufficient fire water flows (**Condition Nos. 23, 25, 27, 37, & 38**).

12. *Recreation and trail easements.*

The project is providing public trails on land proposed to be owned by the City along proposed drainage channels.

These comments are based on the tentative map plans and reports submitted. All applicable code requirements will apply whether mentioned in this letter or not.

Fire Department:

1. The project must comply with the International Fire Code and Northern Nevada Fire Code amendments as adopted by Carson City.
2. The secondary access on Monroe Street must be paved, and improvements constructed and approved by the Carson City Fire Department and the Development Engineering Division, prior to recording the first Final Map for the project (**Condition No. 38**).

Parks, Recreation & Open Space Department:

1. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the street(s) right of ways in perpetuity (**Condition No. 39**).
2. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City Pollinator Plant list and other plant selection resources can be found on the City's website (**Condition No. 40**).
3. The site improvement plan should be required to include preliminary landscape and common open space improvement plans. Where landscaped areas are planned, subsurface materials must include appropriate soils to support tree and shrub growth in accordance with CCMC. The applicant should consult with CCMC and a licensed landscape architect for proper subsurface treatment, tree, and plant selections within the public right of way and within public open space areas.
4. The developer is required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds (**Condition No. 41**). The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:
 - Educating workers about the importance of managing weeds on an ongoing basis;
 - Properly identifying weed species to determine most appropriate treatment strategies;
 - Avoiding or treating existing weed populations; and
 - Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

For more information on “best management practices” please contact The Carson City Parks, Recreation and Open Space Department.

5. Where possible, deciduous trees must be planted a minimum of 5 feet from any city/public street, sidewalk or pathway. Evergreen trees must be planted a minimum of 10 feet from any city/public street, sidewalk or pathway. Fruit bearing, “non-fruiting” flowering or any other trees that drop debris such as seed pods will not be permitted near or placed where they will eventually hang over city/public sidewalks or pathways.
6. Carson City Municipal Code: Title 18, Division 3 should be reviewed by any/all parties involved in the proposed landscape design prior to landscape plans being submitted to the city for final approval of a building permit.
7. Proposed common open space areas which connect more than one residential and/or collector streets should provide pathways for off-street connectivity throughout the development. **Condition No. 42** is recommended to require a decomposed granite (“DG”) trail network as shown on the proposed plans. An additional DG trail system should be incorporated into other through common open space parcels for connectivity.
8. Public pathways shall be reserved with public use easements and all common open space should be maintained solely by the HOA. Public open space is subject to approval and the applicant will enter into an agreement with the City for a LMD as required by the SPA Handbook and the development agreement (**Condition Nos. 43 & 44**).
9. A conceptual site plan for the 10-acre park site must be submitted no later than the issuance of the certificate of occupancy for the 400th residential unit subject to review, approval, and execution of agreed upon terms and conditions memorialized in the developer’s agreement. The planning process and public meetings for the park agreement shall be coordinated through and agreed upon by the Carson City Parks, Recreation and Open Space Department (**Condition No. 45**).
10. Development proposed adjacent to the park site shall include vehicle and pedestrian connections to the future park site. Where development roadways are adjacent to the park site, frontage landscaped area should be provided by this development, to the approval of the Community Development and Parks Departments (**Condition No. 46**). To comply with the required buffer between uses, a landscape buffer area along the north side of the site should be created (**Condition No. 47**).
11. Per the SPA Handbook, at the applicant’s expense, the park will be constructed, accepted, and the land dedicated to the city prior to the issuance of the certificate of occupancy for the 750th residential unit on the west side of I-580 within the SPA. Upon successful completion, final project acceptance of said work will be done to the satisfaction of the City, through its Parks, Recreation, and Open Space Department.
12. The development is required to submit a voluntary deposit of funds equivalent to the money that would otherwise have been collected as RCT. Please refer to Section 2.6 of the Development Agreement for terms related to this comment.
13. Common open space and common area parcels should be landscaped (**Condition No. 48**).
14. For additional requirements related to the Lompa Ranch North SPA, please refer to the SPA Handbook and Development Agreement.

TENTATIVE MAP FINDINGS: Staff recommends approval of the tentative subdivision map based on the findings below and in the information contained in the attached reports and documents, pursuant to CCMC 17.05 (Tentative Maps); 17.07 (Findings) and NRS 278.349, subject to the recommended conditions of approval, and further substantiated by the applicant's written justification. In making findings for approval, the Planning Commission and Board of Supervisors must consider:

- 1. *Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.***

The development is required to comply with all applicable environmental and health laws concerning water and air pollution and disposal of solid waste. A copy of the proposed tentative map was submitted to the Nevada Division of Water Resources and the Nevada Division of Environmental Protection ("NDEP") on November 12, 2021. An intent to serve or a will serve letter from the municipal sewer service provider is required at the time the final map is presented to the state for final approval and signature. The Public Works department has advised of adequate capacity to provide sewer services to the project. Conditions are recommended to require the applicant to submit an updated water study at the time that a site improvement permit is requested to ensure that there is sufficient water to serve the project and to meet Fire Department flow requirements and to reserve sufficient easement width over utilities to allow for future maintenance of the infrastructure (**Condition Nos. 27 through 31, 37 & 38**), .

- 2. *The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.***

Water supplied to the development will meet applicable health standards. The City has sufficient system capacity and water rights to meet the required water allocation for the subdivision.

- 3. *The availability and accessibility of utilities.***

All utilities are available in the area to serve this development. The utility design will be reviewed at the time of a site improvement permit to ensure it meets all applicable standards, including applicable conditions of approval.

- 4. *The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks.***

Schools: The project is located adjacent to a future 10+ acre school site. The school site is proposed to be adjacent to Carson High School and as currently shown the high school and future school site are separated by Monroe Street. The approved development agreement requires a \$1,000 per unit contribution to be collected by the School District and placed in escrow for use in the District's future purchase of the school site.

Parks: The project location is adjacent to a future 10-acre public park site. The applicant is required to contribute \$1,000 per residential unit in lieu of RCT, based on the Lompa Ranch North development agreement. In addition to a per-unit contribution, the applicant is required to enter into an agreement with the City for the design, construction, and eventual dedication of the park site. A condition is recommended to require the applicant to demonstrate that all necessary agreements between the developer and the Parks, Recreation, and Open Space Department are approved prior to the issuance of the first site improvement permit.

Condition No. 49 is recommended to require the park and school site parcels be created in conjunction with the mapping for this project.

Police Protection: The Carson City Sheriff's Office ("CCSO") provides police protection to the site. The site will continue to be served by the CCSO once developed.

Transportation: **Condition Nos. 20 through 22** are recommended to address transportation related concerns including an updated traffic study, a traffic signal warrants analysis, and improvements based upon the updated traffic study.

5. Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.

While there are no public lands adjacent or easily accessed from the site, the applicant has proposed continuation of the 10-foot-wide multi-use system from Robinson Street and the future park site to the northern project terminus. Additionally, a pedestrian trail has been incorporated into the design within the common open space areas which transect the project site. The proposed pedestrian and multi-use improvements are consistent with the SPA Handbook and will provide residents with convenient means of non-vehicular access to public facilities within proximity to the site.

6. Conformity with the zoning ordinance and land use element of the City's Master Plan.

Per Division 2 of the Development Standards, the applicant must provide two parking spaces per dwelling unit provided the internal or abutting streets provide for on-street parking. The local streets are designed with a 50-foot wide right of way that will accommodate parking on one side of the street and each lot will provide for a minimum of two parking spaces, typically via a two-car garage. A condition is recommended to require the site improvement permit application to include a plan to stripe the curb and install signage to indicate that there is no parking on one side of the street (**Condition No. 50**). Should the applicant wish to design house plans which include a single-car garage and tandem parking, a special use permit would be required as outlined in the CCDS Division 2, Section 2.3 (5)(a) (Parking for Single Family Developments).

The applicant has requested a reduction to the minimum lot size and minimum lot width standards as is allowed per CCMC 17.10 Common Open Space Development. The minimum lot width is proposed to be 35 feet for approximately 70 of the single-family lots, while the remaining 67 lots are proposed to be a minimum of 45 feet wide. The lots are generally 100 feet deep offering sufficient options to vary placement of the house as it relates to the front lot line.

It should be noted that in addition to standards for single family development in CCMC, the SPA Handbook addresses a variety of design requirements as outlined in Sections: 2.2 (Single Family Residential Areas) and 2.4 (Architecture Standards and Guidelines). As it relates to this project, of particular note are:

- 2.2.2 (a) which encourages forward architecture that places entries, windows, front porches and living spaces closest to the street on "most" house plans.
- 2.2.2 (c) which states that garages shall not be the dominant feature of the building façade facing the street and should be offset through architectural detailing when the garage forward elevation is used.
- 2.2.2(h) states that setbacks should be varied, and this standard allows for a reduction to the 20 foot setback requirement by up to 5 feet, for living space only. In reviewing past residential development within the SPA, setbacks should not only be 15 or 20, but should also provide for setbacks in between, or greater than 20 feet. Having more variety in

house placement helps to break up a pattern than can arise from utilizing one or two setback standards for house placement.

- 2.4.2 speaks to architectural elements required for residential development.
- 2.4.8 through 2.4.10 outlines the standards for single family massing and form, roof form, and use of materials and colors. These standards include several requirements for residential development. Of particular note is a requirement to have at least 3 unique house plans, distinct front elevations, and varied setbacks.
- 2.4.11(a) states that garages shall (must) include at least 5 feet of offset from habitable (living) space. Front elevations should provide a focus on living areas, not garages.
- 2.4.11(b) states that plans shall incorporate either 1) recessed garages back at least 5 feet in relationship to the front of the house, or 2) utilize side loaded garages to eliminate the continuous view of the garage from the street.
- 2.4.11(c) when garage forward plans are utilized, an offset between the garage faces shall be at least 5 feet. This standard is intended for 3 car garage design as illustrated by the text and illustrations. This standard may not be an option for this subdivision as the small lot design lends itself to single car or two car garages only.

Staff has discussed concerns with the applicant regarding possible challenges related to providing multiple house plans that will fit on a narrow lot, meet street image diversity requirements, and that will comply with the SPA Handbook standards for single family development. **Condition No. 51** is recommended to ensure that the development architecture will comply with the SPA Handbook standards prior to site improvements. This early coordination between the developer and staff will prevent possible issues arising after driveway cuts and other site work has been completed. Conditions of approval are recommended to 1) require corner lots to be a minimum of 45 feet wide to facilitate placement of a house with a 2-car garage and to meet required street side setbacks; and 2) to require the minimum lot widths to vary rather than grouping similar lot sizes together on the same street (**Condition No. 52**).

As part of the requirements for a Common Open Space Development, the applicant must provide for 250 square feet of open space per dwelling unit, which may include private open space and/or common open space. At least 100 square feet per dwelling unit of common open space must be designed for recreational use. This translates to a total minimum open space requirement of 34,250 square feet (± 0.79 acres). The proposed project includes approximately 5.9 acres of common open space, including a community clubhouse and pedestrian pathways. The application materials show common area parcels are proposed to be revegetated and no formal landscape areas are proposed. Staff has recommended conditions to require common open space areas be landscaped at a minimum rate of 1 tree per 1,000 square feet of area, with 3 shrubs per tree, and that an open space diagram be submitted at the time a site improvement permit application is submitted that demonstrates compliance with the open space requirements and shows landscaping within these areas (**Condition Nos. 39 through 48**).

The Master Plan designations for the site are Mixed Use Commercial, Medium Density Residential (3-8 du/ac), High Density Residential (8-36 du/ac), and Open Space. All properties are within the Lompa Ranch North Specific Plan Area. The site is subject to the provisions of the SPA Handbook. As proposed, and with recommended conditions, the proposal is consistent with the adopted Master Plan and Elements.

Per CCMC 17.10.030.4 the periphery boundary setbacks shall be those established for yard areas by the underlying zoning district. The table below summarizes the setback requirements based upon the zoning districts and **Condition No. 53** is recommended to allow the proposed setback standards to be utilized for this project:

Zoning District	Minimum Lot Size	Max Height	Min. Lot Width	Front	Side	Street Side	Rear
MFA	6,000	45	60	10	10	10	20
MFD	6,000	26	60	20	5	10	10
PROPOSED	3,500	26	35	15 living area /20 driveway	5	10	10

The proposed periphery setbacks meet or exceed the required setbacks for the MFA and MFD zoning districts. Per the standard conditions for a Common Open Space Development, the project must provide for adequate screening and buffering of existing and potential development adjoining the proposed development. The proposal does not address proposed screening and buffering; therefore, staff has included conditions of approval requiring landscaped buffers along the northern edge of the site as well as on the southern portion of the site where the site abuts parcels that will be developed in the future (**Condition Nos. 46 & 47**). A buffer area between the wetland extent and the sidewalk is also recommended (**Condition No. 54**).

7. General conformity with the City’s Master plan for streets and highways.

The development is in conformance with the City’s Master Plan for streets and highways.

8. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.

As previously discussed in the Development Engineering and Finding 4 sections of this report, conditions are recommended to ensure that this project mitigates the potential impacts that will result from this development.

9. The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.

The Conditional Letter of Map Revision (“CLOMR”) will need to be revalidated to include the proposed project design prior to the issuance of the first site improvement permit (**Condition No. 33**).

10. The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.

The proposed tentative map has been routed to the NDEP and the Nevada Division of Water Resources. A will serve letter for the sewer and water services will be required prior to the recordation of any final map.

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

As noted in the SPA Handbook, the development of Lompa Ranch North will impact the Fire Department’s level of service. In response to this concern, the project development agreement addresses per unit contributions and improvements relative to fire safety. The terms of the development agreement apply to this project. Additionally, a condition is recommended to require secondary access to the site be developed in the first phase of

development (**Condition No. 38**). The subject site is not located within a wildland/urban interface area.

12. Recreation and trail easements.

The Lompa Ranch Specific Plan specifically addresses Parks, Open Space, and Trails. The trail system is required to conform with the standards and policies of the Unified Pathways Master Plan. The Parks and Recreation staff has reviewed the tentative map for compliance with the requirements of the Specific Plan and finds, subject to the incorporation of the conditions of approval, the proposed tentative map will be in compliance with the requirements. Several conditions are recommended to address recreation and trails.

The Specific Plan includes a requirement for the construction and dedication of a ten-acre park at the time of the 750-dwelling unit on the west side of Interstate 580. This request will result in entitlement of more than 750 dwelling units within the SPA located to the west of I-580. The Specific Plan also obligates a homeowner's association, and/or a landscape maintenance district be formed for purposes of maintaining landscaped areas, open space and drainage facilities, trails, parks, and recreation facilities. Of note, as part of the improvement plans, the applicant must demonstrate that the area for the park will be ten acres. Since there are unit triggers for park agreements, submittal and approval of the conceptual plan for the design of the park site, and construction of the park site, **Condition No. 55** is recommended to require a method of tracking be established to ensure that the timing of development and associated triggers can be met.

Attachments:

Application- SUB-2021-0399

BLACKSTONE RANCH NORTH TENTATIVE SUBDIVISION MAP



NOVEMBER 3, 2021

BLACKSTONE RANCH NORTH – TENTATIVE MAP

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Appendices:

Tentative Subdivision Map Application
Affidavit Form
Proposed Street Names
Conceptual Map Review Letter
Property Tax Verifications

Attachments:

Preliminary Engineering Plans and Reports (by RED Ltd)
Traffic Impact Analysis (Headway Transportation)

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Introduction

This application includes the following request:

A **Tentative Subdivision Map** to allow for the creation of 137 single-family lots within the MFD and MFA zones.

Project Location

Blackstone Ranch North (portion of APN # 10-041-39 and 52) consists of 41.07± acres located within the Lompa Ranch North Specific Plan. Specifically, Blackstone Ranch North is located north of the eastern terminus of Robinson Street, east of the Lompa Ranch “spine road”, west of Interstate 580. Figure 1 (below) depicts the project location.



Figure 1 – Vicinity Map

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Existing Conditions

The project site is currently vacant and is included in the Lompa Ranch North Specific Plan. The 35.2± acres proposed for development includes a mix of MFD and MFA zoning, as depicted in Figure 2 (below).

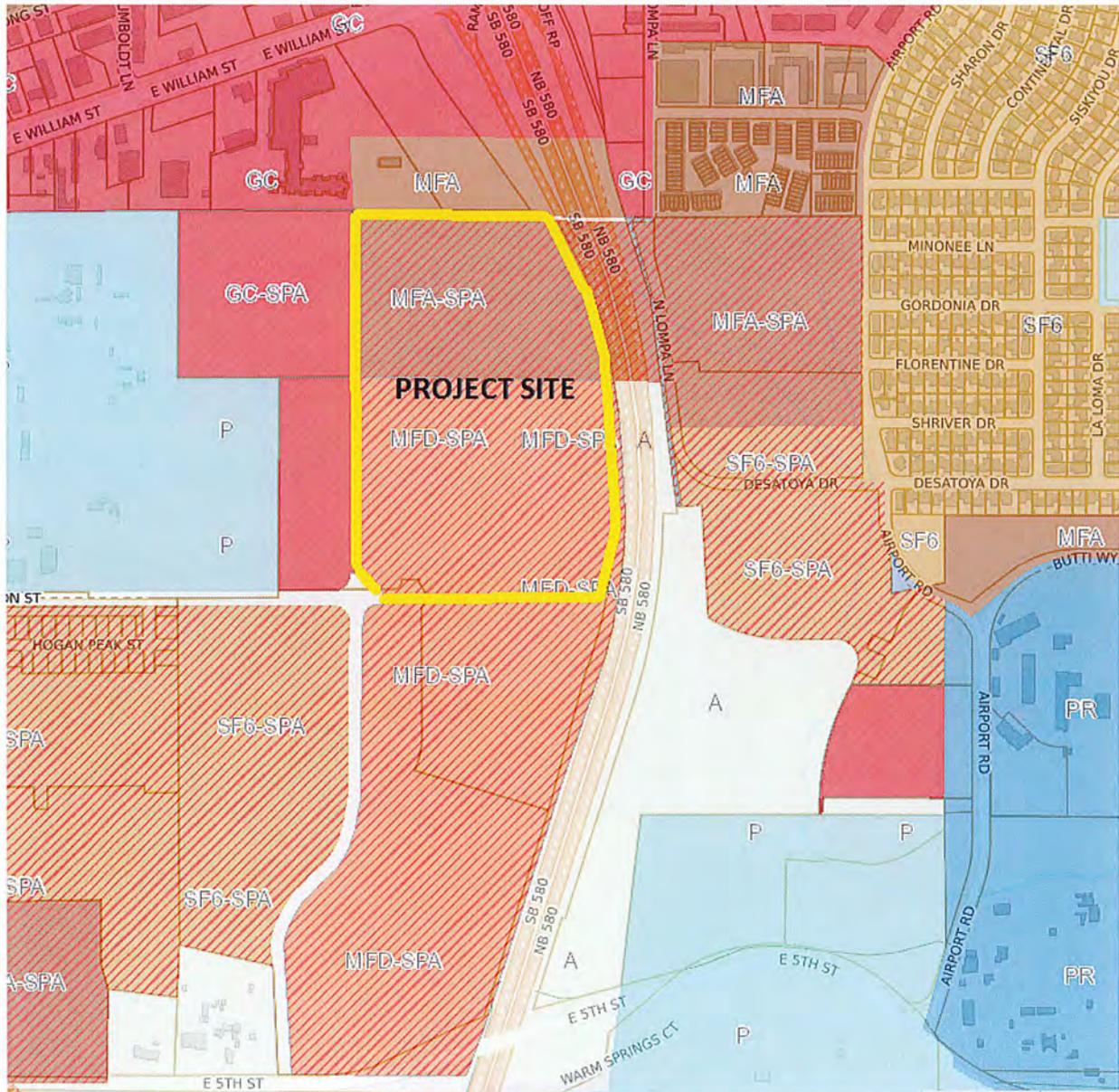


Figure 2 – Existing Zoning

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Project Description

Blackstone Ranch North includes a small-lot clustered single family product. Lot sizes range from 3,500 to 6,791± square feet and are clustered amongst open space and community amenities. In addition to the regional trail linkages included in the Lompa Ranch Specific Plan (SPA), the project will also include a 15,546± square foot clubhouse for the exclusive use of Blackstone Ranch North residents. This clubhouse is included within dedicated common area.

A total of 5.89± acres of open space/common area is proposed (14% of site) of which 0.36± acres is dedicated to recreational open space (excluding clubhouse). The open space also includes the preservation of onsite wetlands which will remain undisturbed. Additionally, the overall design and layout of the project has been updated to reflect Conceptual Map review comments provided by Carson City staff.

The project will be accessed via an extension of the north/south spine road, extending north from Robinson Street. A total of 5 access points from the spine road and 2 accesses from Robinson Street are proposed (includes secondary access west of school site), connecting with an internal loop road that parallels Interstate 580 on the east. Additionally, the project has incorporated a secondary access road that loops from Robinson Street, west of the Lompa Ranch school site, connecting to the spine road at the northern portion of the project. This access will include a 50-foot right-of-way and will be constructed to a rural roadway standard with curb/gutter/sidewalk on one side (adjacent to school site). The access was developed based on previous meetings with and input from the Carson City Fire Department and ensures that full emergency access to the site can be achieved even if the roundabout at Robinson Street and the spine road were to become obstructed.

Blackstone Ranch proposes to utilize the provisions of section 17.10 of the Carson City Municipal Code which allows for clustering of units in order to preserve open space and sensitive areas. This results in smaller lots (3,500 and 4,500 square feet) and reduction in proposed lot widths (35 and 45 feet). Clustering allows for the protection of wetlands at the northern portion of the site, incorporation of drainage improvements, recreational amenities, and linkages to the overall Lompa Ranch SPA open space preserves.

The clustered single family product proposed is permissible in the underlying MFD and MFA zoning districts. Overall density proposed is 4.68 dwelling units per acre (excluding NDOT easement area). However, when factoring out constrained areas, easements, right-of-way, etc., net density of the project is actually 8.48 units per acre, consistent with the underlying Master Plan designation for the site. The proposed clustered design protects sensitive areas of the site (i.e. wetlands) and perpetuates existing easements that are in place. Additionally, the product type proposed will add diversity to the offerings within the SPA and is a housing type currently unavailable in Carson City.

Architecture developed for Blackstone Ranch North is consistent with SPA standards. Proposed elevations incorporate a traditional style and include architectural elements such as covered porches, shutters, varied siding, stone trim, etc. which add visual interest and sophistication to the primary elevations.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Figure 3 (below) depicts the project site plan while Figures 4 and 5 (following pages) depict preliminary home elevations.



Figure 3 – Preliminary Site Plan

BLACKSTONE RANCH NORTH – TENTATIVE MAP



Figure 4 – Preliminary Elevations

BLACKSTONE RANCH NORTH – TENTATIVE MAP



Figure 5 – Preliminary Elevations

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Blackstone Ranch North will include 4 two-story floor plans ranging from approximately 2,004± square feet to 2,651± square feet. Each elevation will include a minimum of three elevation options that will allow for varied interest within the neighborhood. Per SPA standards, identical elevations may not be replicated on adjoining lots. Elevations depicted in Figures 4 and 5 represent the architectural style and detailing of proposed homes and will be refined with final map. All elevations must comply with the architectural standards included in the SPA.

As part of the clustered design approach, it is also proposed to modify setbacks within Blackstone Ranch North. As indicated on the attached plans, front yard setbacks are proposed to be 20 feet with the option to reduce to 15 feet (maintaining a 20-foot driveway), side yards will be a minimum of 5 feet (10 feet adjacent to streets/corner lots), with a 10 foot rear yard. Maximum building height will be 26 feet, allowing for planned two-story elevations.

All new homes will include a two-car garage providing for off-street parking within the garages and driveways. Additionally, parking will be permitted on one side of internal local streets. A total of 126 on-street parking spaces are provided. This ensures that all Municipal Code parking requirements are met. Although it is anticipated that residents will likely walk or bicycle to the planned clubhouse facility, and off-street parking lot that includes 18 spaces is provided to fully comply with Carson City requirements.

Headway Transportation has completed a comprehensive traffic impact analysis for Blackstone Ranch North. The project is anticipated to generate approximately 1,293 average daily trips (ADT), with 101 am peak hour trips, 102 afternoon peak hour trips, and 136 pm peak hour trips. With the addition of the project traffic, all study intersections are anticipated to operate at acceptable level of service conditions (LOS “D” or better).

As detailed further in the following section and the attached traffic study, the project, as proposed, is in full conformance with the traffic sections of the SPA.

The following table provides an overall summary of Blackstone Ranch North

Blackstone Ranch North – Overall Development Summary	
Development Standard	Proposed with Conceptual Map
Total Project Area	41.07± acres
Total Units	137
Total Lot Area	16.15± acres
Right-of-Way Area	8.17± acres
Common Area/Open Space	5.89± acres ¹
Gross Density	4.68 dwelling units per acre ¹
Net Density	8.48 dwelling units per acre ¹
Minimum Lot Size	3,500± square feet
Maximum Lot Size	6,791± square feet

¹ Refer to attached density and open space exhibit.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Lompa Ranch Specific Plan Compliance

The Lompa Ranch Specific Plan (SPA) was adopted in March 2016 and envisions a mix of residential, commercial, and public facility use types. The underlying zoning within the SPA encourages a mix of densities and residential product types. As noted previously, the small lot cluster product proposed with Blackstone Ranch North is a new product type within Lompa Ranch and is generally new to the Carson City marketplace as a whole. The lot sizes and plan configuration add to the diversity of housing already approved within the SPA which includes traditional single family (5,000 to 6,000 square foot lots) and multi-family. The Blackstone Ranch North product essentially provides a third housing option and is targeted towards the “missing middle” providing single family living opportunities at a more attainable price point. This concept is fully compliant with the SPA standards and requirements.

Although the proposed project density is less than that permitted within the underlying zoning districts, there are no minimum densities required per the Municipal Code or SPA standards. Given the unique site characteristics, including wetlands and existing infrastructure easements, the proposed plan, density, and design is logical and forwards the goals and policies of the SPA by providing a diverse housing mix.

As part of the SPA adoption, a development agreement was adopted that provides triggers for various improvements, facility dedications, etc. The Blackstone Ranch North proposal fully complies with the adopted development agreement. The Master Developer, Blackstone Development Group, is fully committed to providing the various amenities, per the SPA requirements including a new 10-acre park, dedication of a school site, and the various trail/pathway improvements. As development occurs within the SPA, design aspects such as access to these facilities will be coordinated with the appropriate parties/agencies including, but not limited to, the Carson City Parks and Public Works Departments, Carson City School District, etc.

A key element of the SPA relates to traffic and a future connection of the spine road to Gold Dust Way/William Street to the north. Although acquiring the needed right-of-way for this connection has proven to be a challenge, the Master Developer is diligently working on negotiations with Jacobs Entertainment to acquire this roadway link.

As negotiations for the Gold Dust Way connection continue, Blackstone Ranch North fully complies with the SPA standards and development agreement (DA) provisions already in place. The DA mandates that no more than 810 single family unit building permits (or permits for the equivalent trip generation) shall be issued in the SPA area west of Interstate 580 along with various level of service requirements (refer to attached traffic analysis). With the 137 units proposed, the project meets the SPA traffic section requirements under the “2040 Plus Project” scenario.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

The DA is a binding legal agreement between Carson City and the Master Developer. The Blackstone Ranch North proposal is in direct and full compliance with the provisions of the SPA and supplemental DA. It is recognized that further development will be limited until a connection to Gold Dust West Way can be achieved. However, there is growing optimism that this connection can be made which will allow for development of commercial parcels within the SPA. This can (and likely will) include a mix of commercial and higher intensity multi-family uses in the future.

Tentative Map Findings

The Carson City Municipal Code establishes findings for Tentative Map approval. These findings are listed below and addressed in **bold face** type.

Section 17.07.005 of the Carson City Municipal Code establishes findings that the Planning Commission and/or Board of Supervisors must make in approving a tentative subdivision map:

In considering parcel maps, planned unit developments and tentative subdivision maps the director shall consider the following:

1. Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal.

All necessary infrastructure and municipal services necessary to serve the project are in place or can easily be extended (at the expense of the developer). The project will be served by municipal water and sewer, solid waste disposal, NV Energy, Southwest Gas, cable television, etc. in accordance with Carson City and State of Nevada standards.

2. The availability of water which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision.

The project will be served by the existing municipal water system and it will be demonstrated by the project applicant that sufficient water rights have been dedicated/acquired to serve the project.

3. The availability and accessibility of utilities.

As an infill development, all necessary utilities are in place or can be easily extended to serve the project.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

4. The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks.

All City services and infrastructure already serve the area around the site. More importantly, the SPA and Development Agreement clearly provide triggers for various improvements within the plan area. This includes provisions for parks, trails, school site dedication, etc. Also, the plan includes supplemental fire mitigation fees. The Blackstone Ranch North honors all of these commitments and proposes no changes, deviations, or variances from such.

As the traffic study demonstrates, this project does not trigger the William Street connection which will occur with a subsequent phase(s). All pathway improvements applicable to this phase will be constructed concurrently with the development. As building permits continue to be issued within the SPA boundary, the Master Developer will coordinate with Parks Department staff on the final design of the park and ensure construction concurrent with the applicable triggers called out in the plan/development agreement.

5. Access to public lands. Any proposed subdivision that is adjacent to public lands shall incorporate public access to those lands or provide an acceptable alternative.

The project does not border public lands but does perpetuate the pathway/trail plan included in the SPA, providing enhanced connectivity within the area.

6. Conformity with the zoning ordinance and land use element of the city's master plan.

Single family dwellings are listed as a "primary permitted use" within MFA and MFD per Title 18 of the Carson City Municipal Code. The zoning districts do not establish a minimum residential density and the product type proposed is fully permissible. In fact, the MFD district states that the purpose of the district is to establish lots "primarily for medium to low density single family and duplex units." The Blackstone Ranch North design concept is clearly compliant with the stated purpose. While the MFA zone would allow for additional density, the proposed plan is more logical (while remaining compliant) as it allows for the protection of sensitive areas (i.e. wetlands) and perpetuates existing infrastructure easements. When factoring out constrained areas, easements, and utilities, net density of the project is over 8 units per acre which is directly compatible with the Master Plan.

7. General conformity with the city's master plan for streets and highways.

The project uses existing streets for access and will not result in levels of service that violate Carson City standards. More importantly, as demonstrated in the attached traffic impact analysis, the project fully complies with the much more stringent requirements of the SPA/development agreement. These requirements were put in place to protect the public's health, safety, and welfare, and are a binding contract between Carson City and the Master Developer. All aspects of that contract are fulfilled, as presented with Blackstone Ranch North.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

8. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision.

A detailed traffic impact analysis is included as an attachment to this report. The analysis clearly demonstrates that all provisions, requirements, and standards adopted with the SPA and development agreement are met/fulfilled. Traffic generated by the project will conform with the level of service standards adopted with the SPA and the total number of single family units will not exceed 810. This was given great scrutiny with the original SPA adoption and the supplemental development agreement provisions were put in place to ensure full compliance and provide a clear agreement of what was expected. Blackstone Ranch north is fully compliant with each and every one of these provisions.

9. The physical characteristics of the land such as flood plains, earthquake faults, slope and soil.

The site is designed to incorporate sensitive areas such as wetlands into open space areas. Not only does this provide for protection, it incorporates the features into community amenities that will add aesthetic value and passive recreation opportunities for new residents.

10. The recommendations and comments of those entities reviewing the subdivision request pursuant to NRS 278.330 thru 278.348, inclusive.

This tentative subdivision map request will be sent to reviewing agencies per the requirements of the Carson City Municipal Code and Nevada Revised Statutes. Once comments are received, they can be incorporated into the final design of the project or included as conditions of approval.

11. The availability and accessibility of fire protection including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires including fires in wild lands.

As noted previously, a secondary access route has been added based on comments from and meetings with the Carson City Fire Department. This will ensure that all access standards are fully met/implemented. Additionally, all units within the project will be subject to the supplemental fire mitigation/impact fees adopted with the SPA.

12. Recreation and trail easements.

The project will provide trail/pathway linkages per the adopted SPA. As noted, the overall SPA will include a comprehensive trail and park plan. The adopted triggers for these improvements remain and will occur as the project is advancing forward.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

Master Plan Policy Checklist

Consistent with Carson City Tentative Subdivision Map application requirements, this section is taken directly from Carson City documents and forms part of the Tentative Map application process. Responses to the checklist questions are included in this section and are printed in **bold** type.

PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to tentative subdivision maps. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: **Blackstone Ranch North**

Reviewed By:

Date of Review:

DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed amendment meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

CHAPTER 3: A BALANCED LAND USE PATTERN

The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

Is or does the proposed amendment:

- ✓ Consistent with the Master Plan Land Use Map in location and density?

Blackstone Ranch North is consistent with the Master Plan Land Use map in that it does not exceed the residential density allowed under the current master plan and zoning designations. The proposed density complements existing housing in the area and provides for further diversification of the single family offerings within the SPA. When considering net density (8+ units per acre), the project is in direct compliance with the underlying Master Plan designation as well as the zoning called out in the SPA. Not only that, but it will provide for a new and innovative product type not currently available in the marketplace.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

- ✓ Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?

This project meets the provisions of the Growth Management Ordinance by locating housing in an area that is adjacent to existing roadways and services. The project is an infill development and serves to better maximize the use of Carson City’s infrastructure, as encouraged in the Master Plan. The project has convenient access to all community services and is appealing to a wide range of potential residents.

- ✓ Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation (1.1e and f)?

New construction will incorporate green and energy efficient building materials that are consistent with this goal. Additionally, drought tolerant landscaping and drip irrigation will be included within open space areas and individual lots to reduce water consumption.

Located in a priority infill development area (1.2a)?

Although the project site is not in an identified priority area, it is an infill project.

- ✓ Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

This project will provide identified trails and pathways included in the SPA which are taken from the adopted Unified Pathways Master Plan.

- ✓ Encourage cluster development techniques, particularly at the urban interface with surrounding public lands, as appropriate, and protect distinctive site features (1.4b and c, 3.2a)?

The project clusters development to preserve a large amount of permanent open space that incorporates sensitive wetland areas and existing infrastructure easements.

At adjacent county boundaries, coordinated with adjacent existing or planned development with regards to compatibility, access, and amenities (1.5a)?

The site is not located along a county boundary.

- ✓ Located to be adequately served by City services including fire and sheriff services, and coordinated with the School District to ensure the adequate provision of schools (1.5d)?

The adopted SPA includes a supplemental fire mitigation fee which Blackstone Ranch North will be subject to. The SPA also identifies a 10 acre elementary school site which is depicted on the project plan and will be dedicated per the development agreement triggers.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?

The site is not within an identified mixed-use area.

✓ Provide a variety of housing models and densities within the urbanized area appropriate to the development size, location and surrounding neighborhood context (2.2a, 9.1a)?

The project will provide new single family residential options that properly relate to the existing neighborhoods that adjoin the site. The project will provide for a new single family option within Lompa Ranch and is a new and unique offering within the SPA.

Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?

All environmental issues can be properly mitigated and will be detailed with a forthcoming tentative map.

If at the urban interface, provide multiple access points, maintain defensible space (for fires) and are constructed of fire resistant materials 3.3b)?

The site is not within an urban/wildlife interface area. However, irrigated open space buffers will provide for defensible space for both new and existing homes.

Site outside the primary floodplain and away from geologic hazard areas or follow the required setbacks or other mitigation measures (3.3d, e)?

The project is consistent with all Carson City requirements related to drainage, flood plains, etc. The property is outside of the primary floodplain. A CLOMR has been approved by Carson City and FEMA, and plans for the Vicee Canyon Channel have been approved by Carson City.

✓ Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?

The project meets or exceeds all standards of the SPA in terms of connectivity, roadway level of service, etc.

If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

As detailed previously, Blackstone Ranch North is fully compliant with the adopted SPA and development agreement.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES

The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed amendment:

✓ Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b)?

The adopted SPA established requirements for parks and trails, including triggers for when these facilities are to be constructed. As presented, Blackstone Ranch North is fully compliant with these requirements.

✓ Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

This project advances the goals of the Open Space Master Plan by providing for consistency with the SPA standards which were adopted to implement the Open Space Master Plan.

CHAPTER 5: ECONOMIC VITALITY

The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the project:

✓ Incorporating public facilities and amenities that will improve residents' quality of life (5.5e)?

The project will greatly enhance neighborhood connectivity and will benefit both pedestrians and emergency response times. Much of this was previously analyzed and memorialized in the SPA to which the project fully conforms.

Promote revitalization of the Downtown core (5.6a)?

Not applicable.

Incorporate additional housing in and around the Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

Not applicable. The site is outside of the downtown core.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS

The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed amendment:

- ✓ Provide variety and visual interest through the incorporation of varied lot sizes, building styles and colors, garage orientation and other features (6.1b)?

The clustering of lots proposed and the new single housing type offered within Blackstone Ranch North, directly addresses this policy.

- ✓ Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?

Building styles will be varied and will present an appealing streetscape through the use of various architectural detailings.

- ✓ Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?

The project will be complementary to surrounding development in terms of height, setbacks, and use and will therefore be directly compatible.

If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?

The project is not in a mixed-use activity center.

If located Downtown:

- o Integrate an appropriate mix and density of uses (8.1a, e)?

Not applicable.

- o Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?

Not applicable.

BLACKSTONE RANCH NORTH – TENTATIVE MAP

o Incorporate appropriate public spaces, plazas and other amenities (8.1d)?

Not applicable, although the project does include a significant amount of open space that will add aesthetic appeal to the community.

CHAPTER 7: A CONNECTED CITY

The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

Is or does the project:

✓ Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?

The project is located a short walk from existing transit stops. This will allow future residents easy access to transit services.

✓ Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?

The project is accessed by the existing roadway network. As proposed, the project is fully compliant with all SPA/development agreement requirements and is conforms with the limitations included in the SPA for new development that can occur prior to the Gold Dust Way connection.

✓ Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan and the proposed use and density (12.1a, c)?

The project will provide for trails and pathways identified within the SPA which provide connections to the overall Lompa Ranch network, including the future park and school sites.

APPENDICES

Carson City Planning Division
 108 E. Proctor Street • Carson City NV 89701
 Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:
 CCMC 17.06 and 17.07

FILE #

TENTATIVE SUBDIVISION MAP

APPLICANT **PHONE #**
 Blackstone Development Group (520) 400-4845

FEE*: \$3,500.00 + noticing fee

*Due after application is deemed complete by staff

MAILING ADDRESS, CITY, STATE, ZIP
 439 W. Plumb Ln. Reno, NV 89509

EMAIL
jgm@blackstonedevelopmentgroup.com

SUBMITTAL PACKET – 5 Complete Packets (1 Unbound Original and 4 Copies) including:

- Application Form including Applicant's Acknowledgment
- Property Owner Affidavit
- Copy of Conceptual Subdivision Map Letter
- Detailed Written Project Description
- Proposed Street Names
- Master Plan Policy Checklist
- Wet Stamped Tentative Map (24" x 36")
- Reduced Tentative Map (11" x 17")
- Conceptual Drainage Study
- Geotechnical Report
- Traffic Study (if applicable)
- Documentation of Taxes Paid to Date

PROPERTY OWNER **PHONE #**
 Myers Family Exempt Trust 520-400-4845

MAILING ADDRESS, CITY, STATE, ZIP
 5330 E. Placita Casa Rio, Tucson, AZ 85737

EMAIL
jgm@blackstonedevelopmentgroup.com

CD or USB DRIVE with complete application in PDF

STATE AGENCY SUBMITTAL including:

- 2 Wet-stamped copies of Tentative Map (24" x 36")
- Check made out to NDEP for \$400.00 + \$3/lot
- Check made out to Division of Water Resources for \$180.00 + \$1/lot

APPLICANT AGENT/REPRESENTATIVE **PHONE #**
 Christy Corporation, Ltd. (775) 250-3455

MAILING ADDRESS, CITY, STATE, ZIP
 1000 Kiley Pkwy. Sparks, NV 89436

EMAIL
mike@christynv.com

Application Reviewed and Received By:

Project's Assessor Parcel Number(s)
 010-041-39 and 52

Submittal Deadline: Planning Commission application submittal [schedule](#).

Project's Street Address
 W. of I-580, S. of William St., E. of Saliman Rd. at eastern terminus of Robinson St.

Nearest Major Cross Street(s)
 Saliman Rd./Robinson St.

Note: Submittals must be of sufficient clarity and detail for all departments to adequately review the request. Additional information may be required.

Project's Master Plan Designation
 MDR and HDR

Project's Current Zoning
 MFA and MFD

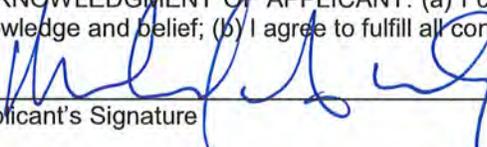
Project Name
 Blackstone Ranch North

<u>Total Project Area</u>	<u>Number of Lots</u>	<u>Smallest Parcel Size</u>
41.07 acres	137	3,500 sq.ft.

Please provide a brief description of your proposed project below. Provide additional pages to describe your request in more detail. This is a request for a single family subdivision including 137 lots. The project proposes to utilize the provisions of section 17.10 to allow clustering and the preservation of open space. Refer to attached report for a detailed project description.

NOTE: If your project is located within the Historic District or airport area, it may need to be scheduled before the Historic Resources Commission or the Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

ACKNOWLEDGMENT OF APPLICANT: (a) I certify that the foregoing statements are true and correct to the best of my knowledge and belief; (b) I agree to fulfill all conditions established by the Board of Supervisors.


 Applicant's Signature

11/3/21
 Date

PROPERTY OWNERS AFFIDAVIT

Myers Family Exempt Trust

(Print Name) Myers Family Exempt Trust being duly deposed, do hereby affirm that I am the record owner of the subject property located at Lompa Ranch (Property Address and APN) and that I have knowledge of, and I agree to, the

filing of this Tentative Subdivision Map application.

Signature [Signature] Address 439 W Plumb Lane Reno NV 89509 Date 11/1/21

Use additional page(s) if necessary for other names.

STATE OF ~~NEVADA~~ Arizona
COUNTY Pima

On November 2nd 2021, personally appeared before me, a notary public, [Signature], personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she executed the foregoing document.



Notary Public

**ORIGINAL AFFIDAVIT SUBMITTED
UNDER SEPARATE COVER.**

TENTATIVE SUBDIVISION MAP SUBMITTAL CHECKLIST

Each application must include the following information:

- Copy of Conceptual Map Letter from Carson City. Completing the Conceptual Subdivision Map process is required prior to submitting for a Tentative Subdivision Map. If you have not completed this step, your Tentative Subdivision Map application will not be accepted. Please contact the Planning Division for additional information.
- Detailed Written Project Description including the following:
 - General project details (number of lots, lot sizes, setbacks, proposed uses, etc.)
 - Information indicating the benefits of the development to Carson City, any impacts which may arise from the development and the mitigation programs, how the proposed development will enhance or benefit the surrounding areas and how dust will be controlled.
 - Address how your project complies with the findings outlined in Carson City Municipal Code, Section 17.07 and NRS 278.349(3), listing each finding and providing a separate response for each.
 - Information addressing the Master Plan Policy Checklist for a Tentative Subdivision Map of the five items that appear in the Carson City Master Plan. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. Address each theme in the checklist and provide written support of the policy statement in your own words. For additional guidance, please refer to the Carson City Master Plan document on our website at www.carson.org/planning or you may contact the Planning Division to review the document in our office or request a copy.
 - A master plan for potential development of the property under the ownership or control of the developer in the area of the proposed development, if applicable.
 - In the case of plans which call for development over a period of years, a schedule showing proposed time within which applications for final approval of all sections of the development are intended to be filed.
 - An indication of the type of water system to be used, its water sources and engineering data flows.
 - Solid waste provision.
 - An indication of method of sewage disposal to be used and the area of disposal.
 - The form of organization proposed to own and maintain any common open space, if applicable.
- Completed Carson City Road Name Reservation/Approval Application.
- Completed Master Plan Policy Checklist.
- Tentative Subdivision Map drawn to scale including:
 - Subdivision name.
 - North arrow, scale and all sheets numbered.
 - Name and address of developer and engineer and date of map.
 - Ownership interest in land.
 - Legal description of land described by 40 acre subdivision, section, township and range.
 - Vicinity map.
 - Existing Master Plan and zoning of site.
 - Adjacent subdivision(s), land uses, zoning and ownership abutting the project.
 - Location of existing buildings and improvements, if any.
 - Areas not a part of the subdivision to be designated as "Not a Part".
 - Table showing the total project area, number of lots, calculation of residential densities and percentage designated for each proposed use. The density shall be described in terms of units per acre (gross and net building areas).
 - Topography at 2.5-foot contour intervals for slopes of less than 10 percent and 5-foot contour intervals for slopes of greater than 10 percent. The location of natural features including trees may be required.
 - Proposed lot layout, lot sizes and setbacks. Blocks and parcels are to be numbered consecutively and the dimensions of all parcels are to be shown.
 - Typical lot detail.
 - Height, size, location and use of all structures, fences and walls shown.
 - Location and size of proposed parks, common areas and/or open space and amount of recreational improvements.
 - Conceptual landscape plan, if applicable.

- Proposed circulation system showing all public and private streets (including proposed street names), sidewalks, and bikeways, the width of all streets, typical street cross sections, location of adjoining streets (with street names), sidewalks and bikeways.
- Proposed parking.
- Proposed boat and/or RV parking, if applicable.
- Layout of proposed water, sewer and storm drainage facilities.
- Location of all natural drainages shown.
- Show 100-year floodplain, as determined by FEMA Flood Insurance Maps or recognized methods, for those areas subject to flooding.
- Show earthquake fault lines through the proposed development with building setbacks from fault line as recommended by a geotechnical study.
- Grading plan for the site (including streets) meeting Carson City Development Standards and requirements showing all cuts, fills and retaining walls.
- Erosion control plan including stream protection, road drainage, erosion prevention and prevention of untreated discharge to streams, if applicable.
- All existing and proposed easements.
- Conceptual Drainage Study per Carson City Development Standards Sections 14.6 and 14.8. Contact Development Engineering at (775) 887-2300 for additional information.
- Geotechnical Report including soil types, seasonal high water table and percolation rates.
- Traffic Study per Carson City Development Standards Section 12.13.1 (if applicable).
- Documentation of property taxes paid to date on all parcels associated with the proposed project.

Once staff has determined your application is complete, you will be required to provide 15 hard copies of the entire application packet, including a wet stamped tentative map (24"x36") and a reduced copy of the map (11"x17").

STATE AGENCY SUBMITTALS

To assure the necessary reviews are completed, the Planning Division will submit the Tentative Subdivision Map on your behalf to the Nevada Division of Environmental Protection and the Nevada Division of Water Resources.

To complete these submittals, we will require two wet-stamped copies of the Tentative Subdivision Map and payment of the State fees at the time of the City application submittal. This can be handled by submitting two checks to the Planning Division office: one payable to NDEP for \$400 per map plus \$3.00 per lot; the second payable to STATE WATER RESOURCES in the amount of \$180 per map plus \$1.00 per lot. The checks will be routed to the State offices with their copy of the Tentative Subdivision Map.

NOTE: Fees are subject to change. While Carson City makes every effort to keep this application up to date, it is the applicant's responsibility to ensure State agency checks submitted are for the current fee amounts.



Carson City Planning Division

108 E. Proctor St.
 Carson City, Nevada 89701
 (775) 887-2180
 Planning@carson.org
 www.carson.org

Carson City Road Name Reservation/Approval Application

Request Date: November 3, 2021	Requested By: Scott Baumgardner
Phone Number: (520) 305-5343	Email: scott@blackstonedevelopmentgroup.com
Total Number of Roads: 8	Subdivision Name: Blackstone Ranch North

Road #	Proposed Road Name	Public or Private	Accepted or Denied	Reason for Denial	Comments
1	Matterhorn Lane	Public			
2	Kona Avenue	Public			
3	Harvey Street	Public			
4	Dime Avenue	Public			
5	Devin Avenue	Public			
6	Dolly Avenue	Public			
7	Monroe Avenue	Public			
8	Monroe Street	Public			

This application is not complete without the road layout map with the proposed street names shown.



Carson City Planning Division

108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180-Hearing Impaired: 711

www.carson.org
www.carson.org/planning

October 21, 2021

Christy Corporation
Attn: Mike Railey
1000 Kiley Parkway
Sparks, NV 89436

Conceptual Map Project Review: PUD-2021-0349

Project Description: Conceptual PUD Review for a 137-unit single family detached residential subdivision within the Lompa Ranch North Specific Plan Area. The application states that lot sizes will range from between 3,500 and 6,364 square feet in size.

Review Date: October 5, 2021

Conceptual PUD Subdivision Comments

The Conceptual PUD proposing a 137-unit single family residential lot subdivision has been reviewed. The site is located on a ±35.2 acre portion of a ±65.52-acre parcel within the Lompa Ranch North Specific Plan Area. The following requirements and comments are provided for your use in preparing final plans and submittals for the project. Please be advised that the comments presented in this letter are based on the plans submitted with the Conceptual Planned Unit Development application and may not include all the requirements or conditions which may be placed on the project at the time of submittal of planning applications for approval (if applicable) or final plans for building permits. It is hoped, however, that this review will expedite the completion of your project.

Some of the requirements noted below may have already been shown or otherwise indicated in the plans and need only be submitted in the final improvement plan form. Final on- and off-site improvement plans shall be submitted to the Permit Center, (108 E. Proctor Street). These plans must contain all appropriate requirements of Development Engineering, Health, Utilities, Fire, and Planning Divisions/Departments.

These comments are based on a very general site plan and do not indicate a complete review. All pertinent requirements of Nevada State Law, Carson City Code, and Carson City Development Standards will still apply whether mentioned in this letter or not.

Planning applications (if applicable), such as Master Plan Amendments, Zoning Changes, Special Use Permits, Variances, Lot Line Adjustments, Parcel Maps, etc. shall be submitted to the Planning Division (108 E. Proctor Street) for review and possible approval.

Based on the number of comments, a new Conceptual PUD application will be necessary prior to a tentative PUD subdivision submittal.

SITE INFORMATION:

Location: North of Robinson and West of I-580
APN: 010-041-39 (portion)
Parcel Size: ±35.2-acre portion of a 65.52-acre parcel

Master Plan Designation: Mixed Use Commercial, Medium Density Residential (3-8 du/ac), High Density Residential (8-36 du/ac), and Open Space. All properties are within the Lompa Ranch North Specific Plan Area.

Zoning: Within the Specific Plan Area - Multifamily Apartments (MFA-SPA), and Multifamily Duplex (MFD-SPA), and General Commercial (GC-SPA).

PLANNING DIVISION

Contact Heather Manzo, Associate Planner

1. General Project Comments – The proposed plan includes development of a portion of roadway within the General Commercial (GC-SPA) zoned property (APN 010-041-52).
 - a. Most of the proposed project is located within Phases C2 and C4 as identified in the approved Lompa Ranch North Phasing Plan. The proposed map identifies APN 010-041-39 as the only parcel proposed for development as part of this request. There are improvements proposed across the GC zoned parcel (APN 010-041-52) which affect both the net acreage and propose to create parcels without identifying the proposed parcel acreage or that the parcel will meet required minimum lot dimensions.
 - b. The GC zoned parcel is labeled as Open Space.
 - c. The school site is proposed to be relocated. Please coordinate with the Carson City School District prior to the submittal of a tentative map application to ensure that the proposed design can be supported by the CCSD.
 - d. Labels on parcels do not appear to accurately depict acreages and square footages (eg: OS H). Staff would highly encourage the design team to review proposed plans and narratives to verify information that has been provided for accuracy. A proposed project should not include plans with calculation errors or that depicts information that does not match the project narrative.
 - e. All sheets should show labels in a manner where the labels do not cover other details below the label box. For example: SHT CS 3 of 18 has multiple labels which interfere with improvements and lot lines. Additionally, it is not clear to which improvement or location some labels have been placed to represent.
 - f. The grading plans do not identify proposed grading. The proposed contours should be shown on each of the grading sheets and any areas that are not to be disturbed need to be clearly labeled as such. Where cuts or fills are proposed, the slope treatments should be shown.
 - g. The Master Plan policies note that small lot development should be allowed when the development densities are consistent with the Master Plan land use designation. The

SPA is a tool to allow urban intensity development that will support a broader mix than otherwise would have been permitted. Master Plan land use is in place to facilitate development consistent with the land use designation. The portion of development within Phase C2 should serve as a transition between the higher intensity gaming and commercial uses to the north and the lower density single family residential uses to the south. The proposed density within the HDR Master Plan land use is not consistent with the HDR land use, the density ranges allowed, and at 2.5 du/ac within the HDR designated land, would result in a low density development in the highest density residential Master Plan land use designation. In order for the project to be consistent with the Master Plan policies, land use designation and the SPA Handbook, the site should be designed at a higher density.

2. Permitted Use – CCMC 17.09.015, 18.04.100, 18.04.105, and the Lompa Ranch North SPA Handbook.

Single family residential development is allowed with the approval of a tentative map and subsequent recordation of a final map. The applicant has proposed alternative design as allowed by the Planned Unit Development section of CCMC.

3. Lot Size, Setbacks & Height (measurements in feet) – CCMC 18.04.190 (Residential)

The request notes that the minimum lot size proposed is 3,500 square feet. However, the proposed plan shows several lots which fall below the listed minimum lot size.

Zoning District	Minimum Lot Size	Max Height	Min. Lot Width	Front	Side	Street Side	Rear
MFA	6,000	45	60	10	10	10	20
MFD	6,000	26	60	20	5	10	10

The table above summarizes the code standards for the MFA and MFD zones. A request to modify setbacks, lot size minimums, height, etc. may be considered with a PUD subdivision. In order for a PUD subdivision to be approved, the plan must be in substantial compliance with the statement of objectives for a PUD and the project must comply with certain requirements as stated throughout code.

The tentative PUD subdivision application will need to include a table of the standards as well as the requested modification to the standard. If the maximum building height as defined in CCMC for the MFD zoning district is to be modified, the application should clearly state such a request. A SUP will be required if the maximum height within the MFD zoning district will exceed 26 feet.

With regard to setbacks and building placement:

- a. It should be noted that driveways will be required to meet a minimum 20-foot length regardless of the approved front setback for the living area.
- b. The conceptual building footprint does not include the garage vs. living space. The tentative PUD subdivision application must include a building footprint which demonstrates compliance with the setbacks, parking, and other requirements outlined in the SPA and CCMC.
- c. Side setbacks may be modified, however a minimum 10-foot separation between buildings will be required per CCMC 17.09.

4. Signs - Carson City Development Standards, Division 4.7.1 Single-Family Residential Uses and Lompa Ranch North SPA Handbook.

All signs must be consistent with Division 4.7.2 of the Development Standards and the SPA Handbook.

5. Landscaping - Carson City Development Standards, Division 3 and SPA Handbook.

Landscaping must be consistent with Division 3 of the Development Standards as well as any landscape standards that may be included in the SPA Handbook. Since a conceptual landscape plan was not provided, staff is unable to review the request to evaluate project compliance with these standards.

6. Parking and Loading – Carson City Development Standards, Division 2

The parking standard is 2 spaces per unit and guest parking is required either on-street or with parking areas located throughout the development. The intent of code is to provide on-street parking, or guest parking pockets, or a combination thereof at a rate of at least 1 parking space for every 2 residences. The proposal will need to demonstrate that this standard can be met.

7. Architectural Design - Carson City Development Standards, Division 1 and SPA Handbook
 - a. The SPA Handbook calls for house (living space) forward design with a minimum 5 feet of offset between the garage and living space.
 - b. The front elevation will need to include a minimum of 4 distinct roof planes.
 - c. The proposed clubhouse will need to meet the architectural standards outlined in the Development Standards, Division 1.1.

The tentative PUD subdivision application will need to demonstrate compliance with these standards.

8. Lighting - Carson City Development Standards, Division 1
Lighting for the clubhouse and other community parking lots must meet the standards outlined in Development Standards 1.3.

9. Roof-Mounted Equipment - Carson City Development Standards, Division 1
If the clubhouse includes roof mounted equipment, it must meet the standards outlined in Carson City Development Standards 1.1.7.

10. Trash Storage - Carson City Development Standards, Division 1
Trash storage must meet the standards outlined in Carson City Development Standards 1.2.6.

11. PUD Subdivision – If a request includes: modified lot size, modified setbacks, or modifications to building height, it will need to be demonstrated that the proposal will be able to comply with the PUD standards, other applicable sections of CCMC, and the Lompa Ranch North SPA standards and approved documents.

- a. An Open Space exhibit will be required to demonstrate that the open space requirements for a PUD have been met. The exhibit should include a colored map and acreage breakdown of the different types of open space being provided.
- b. In order to demonstrate that modification to site development standards will result in a developable project, conceptual elevations, a building envelope exhibit showing minimum dimensions on the smallest lot, and on-street parking exhibit will be necessary.

12. In addition to the development agreement and SPA Handbook, there are triggers for improvements, agreements, and other conditions that are applicable to the overall SPA that are outlined in TM-17-005. Please review the conditions to ensure that any of them that would be applicable to this project will be addressed with the Tentative PUD Subdivision map application.

ENGINEERING AND UTILITIES

Contact Stephen Pottey, Development Engineering Manager

Transportation:

1. Driveways must be oriented so that there is a minimum of 22 feet for on street parking per standard detail C-5.5.2.
2. Local roads will have a minimum ACC pavement thickness of 4-inches.
3. Coordinate with Blackstone Ph 2 to ensure Spine Road naming and cross section are consistent with either side of the roundabout.
4. The 50 ft wide local street ROW only provides parking for one side of the street per standard detail C-5.1.8. With the site improvement permit, a signage and striping plan will need to be provided that indicates where parking will be prohibited.
5. The intersection of Robinson Street and Madison Street must be designed to minimize turning conflicts by aligning the intersection with the entrance of Blackstone Ranch Phase 2, or by installing a center median on Robinson Street in front of Madison Street, or by a similar approved mitigation. Any modification to this access will need to be reviewed by Engineering and Fire to ensure the changes address applicable requirements.
6. Finding #4 for PUD Subdivision and Tentative Maps states that the planning commission must consider "The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks." The proposed project represents the buildout of the residential phases in the Lompa Ranch North SPA area. The school and the regional park contemplated in the SPA and phasing plans are necessitated by the demand imposed by the residential developments within the Lompa Ranch North SPA. In order to make finding #4 above, the traffic impact study must be updated to include anticipated traffic associated with the school site and the park, and any necessary mitigation must be determined in order to maintain acceptable levels of service. Please reach out to the City's transportation engineer, Chris Martinovich, at 775-283-7367 to discuss the details of the scope of this traffic impact study.
 - a. A draft of this TIS must be submitted to City staff for initial review and comments, and any necessary corrections made, prior to submitting a tentative map application.
7. The East-West alignment of Anders Avenue needs to be named Robinson Street.
8. The following street names need to be changed due to already existing or being too close to existing street names: Madison Ave and Madison St, Evan Ave, and Anders St.
9. All multi-use paths will be designed and constructed to a 10-foot wide (minimum) AASHTO standard concrete multi-use path (off street/paved/shared) with an adjacent 3-foot wide decomposed granite path.
 - b. The multi-use paths will include a variety of trees (either evergreen or deciduous) that will be planted at a minimum rate of 1 tree per 50 lineal feet (tree groupings are acceptable) with a minimum of 4 shrubs per tree.

- c. Path amenities include but not limited to park benches/seating areas (per 1000 linear feet of trail along the path), per waste stations/trash cans, signage depicting direction and trail distance.

Water:

10. The existing water main is 8-inch PVC on E Robinson St. The proposed water main to the south (Blackstone Phase 2) has not been constructed at this time.
11. A wet stamped water main analysis must be submitted in accordance with CCDS 15.3.1(a) to show that adequate pressure will be delivered to the meter and fire flows meet the minimum requirements of the Carson City Fire Department. Please see the attached fire flow data sheet for a recent fire flow that was completed in that area (**Attachment 1**).
12. Please clarify how this phase will be connecting to the previous phase water connection to ensure the water is looped. No more than 15 connections may be on a dead-end water line. Water should be looped and valved such that no more than 15 customers are taken out of service in the event of a main break or system maintenance per CCDS 15.3. Therefore the 8-inch water line should be extended in Robinson and connected at Anders Court to complete the loop.
13. A water study that includes an update of the city's model using a format that is compatible with the current model is required. The new water system must meet all city and NAC requirements. For any questions, please reach out to Michael Friend at (775) 283-7713 or mfriender@carson.org.
14. The existing PUE will need to be expanded to accommodate the 8-inch water line and the 24-inch transmission main plus the required benching to work on the water main. Please submit a cross section for both of the water mains with the tentative map application to show how much space will need to be added to the easement for benching.
15. The irrigation service will need a reduced pressure backflow preventer if a vacuum breaker system cannot be designed to operate properly. These backflow preventers must be above ground in a hot box and must be located as close to the property line as possible.
 - d. If a backflow preventer is not required, it is advisable to provide space and an electrical conduit if a backflow preventer is needed in the future.
16. Connections are not allowed to connect to the 24-inch transmission main. The City will allow 2 free hot taps into the City's water system on the west side of the Lompa Ranch North SPA, per Document 414956, however these hop taps will be on other active mains. One of the two hot taps was already completed with Blackstone Ranch Phase 1.
17. All water services shall be perpendicular to water mains.
18. All water services and mains shall have proper clearance from other utilities.

Sewer:

19. The existing sewer main is 33-inch reinforced concrete pipe going diagonally through the property. This main is approximately 40% full (d/D).
20. A wet stamped sewer main analysis must be submitted with the tentative map application that includes addressing the effect of flows on the existing City system. See section 15.3.2 of CCDS.
21. Cast in place manholes will not be allowed, regardless of depth of new sewer mains, and riser depths must meet Carson City Standard details.

22. The existing sewer easement will need to be extended to 20 feet plus benching required to work on the sewer main. With the tentative map application please submit a cross section for the sewer main to show how much room will need to be added to the easement for benching.
23. The sewer main easement cannot be located within any of the single family residential lots.

Storm Drainage and Flooding:

24. The current FEMA flood zone is Zone AO (depth 1 ft), Zone AE, and Zone X (shaded). Must comply with FEMA and City floodplain regulations. For AO (1 ft) zone, must have 2 ft of freeboard above BFE (finished floor shall be a minimum of 3' above the existing ground).
25. The CLOMR must be revalidated to include the updated layout. The CLOMR may require to be resubmitted if the new layout is radically different than the previously approved layout.
26. Recently, Carson City has adopted changes to the detention design storm requirements from a 5-year, 24-hour event to a 10-year 24-hour event and includes Low Impact Development (LID) design requirements. The drainage manual is available here: <https://www.carson.org/home/showpublisheddocument/76010/637605816521670000>
27. Conceptual drainage plans do not include underground piping system. To allow for omission of a storm drain system, the following criteria must be met and shown in the drainage study submitted with the tentative map application:
 - a. Dry lane requirements (provided in drainage manual).
 - b. Clear flow paths provided.
28. Minimum storm drain size shall be 15" (reference drainage manual). More information on storm drain outlet into channel south of Anders Ave shall be provided.
29. There is an existing basin to the west of the proposed development that currently overflows to the east. Storm drain infrastructure for this basin will need to be constructed with this project and must be shown in the tentative map application, including proposed storm drain location/elevation in conjunction with other utilities.
30. More information regarding water quality treatment for the stormwater conveyed via BMP swales to the drainage easement to the east must be provided with the tentative map application.
31. Additional information regarding the proposed multi-use path and various crossings shall be provided with the tentative map application including where the path will terminate. The path shown south of Robinson Street (currently shown as Anders Ave) is the location of the existing maintenance access road. The proposed path must cross the channel and follow along the south side of the channel.
32. Prior to a site improvement permit being issued, results must be provided for the Army Corps of Engineers report concerning the wetlands:
 - a. Prior to the submittal of an application for a tentative map, please provide the contact information for the reviewer for the 404 permit and the consultant working on the analysis, so that City staff can confirm that the Army Corps agrees that the wetland will be sustained without water from the Vicee Canyon Channel.

33. The Vicee Canyon Channel must be substantially complete prior to commencing grading operations for the subdivision.
34. The Vicee flood conveyance channel must be constructed with this phase. A deed restriction needs to be recorded declaring the obligation to construct the Vicee channel flood control improvements.
35. The CC&R's must clearly state that a Landscape Maintenance District (LMD), a Homeowners Association (HOA) or similar entity is responsible for maintaining the private storm drain infrastructure including any mains, basins, and LID infrastructure.
36. Plans must show and note that all flood channels (Vicee Canyon, Ash Canyon, and Kings Canyon) must provide sufficient access for City maintenance equipment along the full length, with access points spaced out no more than every 600 feet, and must note that Robinson St, the Spine Road, E 5th St, and N Saliman Rd are not to be considered part of this access. All flood channels and associated access must be on separate parcels to be dedicated to the city. Maintenance of these lands will be funded through a maintenance district or similar instrument, to be established prior to Final Map approval.

City Lands:

37. Easements must be shown in the tentative map. Some easements may need to be abandoned.
38. Multiple Public Utility Easements (PUE) and other easements granted on the parcel shown on Record of Survey and Boundary Line Adjustment 3007:
 - a. 10-foot PUE and 50-foot access easement per Parcel Map 975
 - b. 15-foot Sanitary Sewer Easement per Doc# 33702
 - c. Utility, Drainage and Pedestrian & Bicycle Path Easement per Doc# 353535
 - d. 20-foot Water Line Easement per Doc #s 414956 & 415803
 - e. 42-foot and 44-foot Storm Drain easements per Doc# 474720
 - f. Channel Easement per Doc# 503238
 - g. 5-foot and 10-foot PUEs per Doc# 516791

General Comments:

39. Phases of this project must be able to stand alone. This includes the ability to meet secondary access requirements and requirements for looping the water system.
40. Due to the conceptual level of design information provided in the conceptual PUD subdivision application, additional requirements may apply.
41. Project shall comply with all City and State codes and standards.
42. Exhibits must be provided for lots that have corners cut off or other unique shapes, to ensure that house pads will fit without encroaching into setbacks.
43. A private HOA, LMD, or similar instrument will need to be established for the Lompa Ranch North Specific Plan area to provide for the operations and maintenance of all parks, recreation, and path facilities. The applicant will need to draft an agreement for the Board of Supervisor's consideration and approval no later than issuance of the 200th residential unit.

- a. A private HOA, LMA, or similar instrument will be formed to provide 100% funding and maintenance for all the following areas in perpetuity: common landscape and open space areas, buffer areas between the development and neighborhoods, landscaping associated with the development's path system, landscape medians, street corridors, non-public recreation facilities/amenities, detention basin, and drainage channels. The maintenance and funding shall be address in the developer agreement. Common area maintenance shall include at a minimum, but not limited to, debris, weed, litter removal, noxious and invasive weed management (including fire prevention), care and replacement of plant material, plant material irrigation, and irrigation system repair.
44. The planning for the park will need begin no later than the issuance of 400th residential unit.
45. At the applicant's expense, the park will need to be constructed, accepted, and the land dedicated to the City prior to the issuance of the 750th residential unit.
46. A recorded covenant or deed restriction is required for all properties within the Specific Plan area to ensure maintenance of these amenities is funded in perpetuity. The restrictions will provide that should the HOA ever cease to exist or become inactive, an assessment will then be implemented by the city via the LMD per CCMC.
47. A Construction Stormwater Permit from the Nevada Division of Environmental Protection (NDEP) will be required for the construction of projects 1 acre or greater.
48. A Dust Control Permit from NDEP will be required for any project 5 acres or greater.
49. Both the water main and sewer main extension will require NDEP approval. The NDEP approval must be received before the site improvement permit will be approved.
50. A FEMA elevation certificate must be included with the plot plan submittal for each individual address if the CLOMR has not been accepted by FEMA by the time the plot plans are submitted. All FEMA requirements for this flood zone must be met.
51. An erosion control plan meeting section 13 of CCDS will be required in the plan set.
52. Proposed grading associated with a tentative map request should be identified on the grading sheets as required by CCMC. It should be shown whether walls or slopes are proposed to transition from the residential lots to the open space and drainage areas. Grading design should include smooth transitions into natural/existing features and slopes.
53. A geotechnical report will be required to be submitted with the permit application.
54. Water and sewer connection fees must be paid. If these fees were paid in the past, then the difference between the old and new amounts of water/sewer usages must be paid for. Please see CCMC 12.01.030 for the water connection fee schedule and 12.03.020 for the sewer connection fee schedule.
55. Any engineering work done on this project must be wet stamped and signed by an engineer licensed in Nevada. This will include site, grading, utility, and erosion control plans as well as standard details.
56. Please reach out to Waste Management before applying for a building permit for approval of the parking and access layout.
57. All construction work must be to Carson City Development Standards (CCDS) and meet the requirements of the Carson City Standard Details.
58. Addresses for units will be provided during the building permit review process.

59. Fresh water must be used for Dust control. Contact the Water Operations Supervisor Public Works at 283-7382 for more information.
60. A private testing agreement will be necessary for the compaction and material testing in the street right of way. The form can be obtained through Carson City Permit Engineering.
61. An erosion control plan meeting section 13 of CCDS will be required in the plan set.
62. New electrical service must be underground.
63. Please show sufficient utility information to ensure that minimum spacing is met between water meters and dry utilities.
64. Any work performed in the street right of way will require a traffic control plan and a timeline type schedule to be submitted before the work can begin. A minimum of one week notice must be given before any work can begin in the street right of way.
65. Please show any easements on the construction drawings.

FIRE DEPARTMENT

Contact Dave Ruben, Fire Marshall

1. Project must comply with the International Fire Code (IFC) and Northern Nevada fire code amendments as adopted by Carson City.
2. Plans will need to demonstrate that hydrant coverage for transportation hazards per IFC Appendix C, Footnote C are met.
3. Plans will need to demonstrate that there is adequate hydrant coverage on all proposed streets, but in particular Devin Avenue.

PARKS DEPARTMENT

Contact Nick Wentworth, Project Manager

1. The City will not be responsible for any landscape or irrigation system maintenance on the project. All landscaping and landscape maintenance in the right of way will be the sole responsibility of the owner. The developer is required to maintain all common landscape and open space areas within the development including any landscaping in the street(s) right of ways on in perpetuity.
2. Carson City is a Bee City, USA. As a result, the developer shall use approximately 50% pollinator friendly plant material for any required landscaping on the project site. Also, any remaining landscape plant material selection needs to be consistent with the City's approved tree species list or other tree species, as approved by the City. The Carson City Pollinator Plant list and other plant selection resources can be found at www.carson.org/beecityusa
3. The developer is required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds. The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Experience has demonstrated that

prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

- Educating workers about the importance of managing weeds on an ongoing basis;
- Properly identifying weed species to determine most appropriate treatment strategies;
- Avoiding or treating existing weed populations; and
- Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

For more information on “best management practices” please contact The Carson City Parks, Rec. and Open Space Dept.

4. Deciduous trees must be planted a minimum of 5’ from any city/public street, sidewalk or pathway. Evergreen trees must be planted a minimum of 10’ from any city/public street, sidewalk or pathway. Fruit bearing, “non-fruiting” flowering or any other trees that drop debris such as seed pods will not be permitted near or placed where they will eventually hang over city/public sidewalks or pathways.
5. Carson City Municipal Code: Title 18, Division 3 should be reviewed by any/all parties involved in the proposed landscape design prior to landscape plans being submitted to the city for final approval of a building or site improvement permit.

https://library.municode.com/nv/carson_city/codes/code_of_ordinances?nodeId=TIT18_APPENDIXCADEST_DIV3LA

6. The development is required to submit a voluntary deposit of funds equivalent to the money that would otherwise have been collected as RCT. Please refer to Section 2.6 of the Development Agreement for terms related to this comment.
7. Open space areas should include public pathways for trail connectivity throughout the development. These pathways should be designated as open to the public and would count toward recreation open space if improved as such per CCMC.

ENVIRONMENTAL CONTROL

Contact Jen Churchward, Environmental Control Officer

After initial plan review the Carson City Environmental Control Authority (ECA), a Division of Carson City Public Works Department (CCPW), has the following requirements per the Carson City Municipal Code (CCMC) and the Uniform Plumbing Code (UPC)

1. Project as shown includes a clubhouse for resident use. Clubhouse may be required to have a grease interceptor depending on the level of food service anticipated at this location.

The aforementioned comments are based on the review of the conceptual PUD subdivision request. If you have any questions, please feel free to contact the following members of staff, Monday through Friday 8:00 AM to 4:00 PM.

Planning Division –

Heather Manzo, Associate Planner
(775) 283-7075
Email: hmanzo@carson.org

Engineering Division –

Stephen Pottley, Development Engineering
(775) 283-7079
Email: spottey@carson.org

Fire Prevention –

Dave Ruben, Fire Marshall
(775) 283-7153
Email: druben@carson.org

Parks Department

Nick Wentworth, Project Manager
(775) 283-7733
Email: nwentworth@carson.org

Environmental Control –

Jen Churchward, Environmental Control Officer
(775) 283-7409
Email: jchurchward@carson.org

Sincerely,
Community Development Department, Planning Division



Heather Manzo
Associate Planner

cc: PUD-2021-0349

Attachment 1 – Fire Flow Test Data Sheet



Fire Flow Test Data Sheet

Location of Test (Street and Cross Street): N. Saliman Rd. and E. Robinson St.

Address Nearest Residual Hydrant: 1111 N. Saliman Road

Test Date: 5/2/2018 Test Time: 900

Testing Personnel: MT, NR

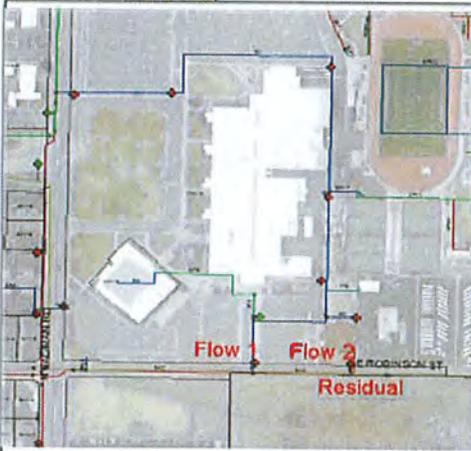
Pressure Zone: 4880 Main Size: 8"

Comments: Test on 8" main in Robinson. Residual taken in 1" pit setter adjacent to Flow 2 hydrant.

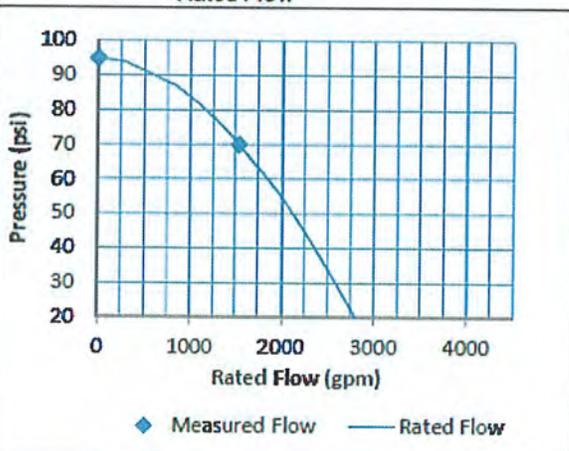
Test Results:

Residual Hydrant		Flow Hydrant(s)					
Static:	95 psi		Hydrant Tester	Pitot Pressure (psi)	Discharge Diameter (in)	Outlet Coeff. (c)	Pitot Flow (gpm)
Residual:	70 psi	Flow 1	HM1	25	2	1.307	780
Pressure Drop:	25 psi	Flow 2	HM2	24	2	1.307	764
	26 %	Flow 3					
Total							1544

Area Map



Rated Flow



◆ Measured Flow — Rated Flow

Rated Pressure (for Rated Capacity Calculation) 20 psi

Rated Capacity at 20 psi residual pressure. 2,800 gpm

Based on NFPA 291 - 2016 Edition and APWA Manual 17 - Fourth Edition
 Pursuant to NFPA 291, fire flow test data over five years old should not be used.

Hydrant OBJECTID: _____ FD Runbook Page: 116X00

Data Sheet File Name: Saliman-Robinson4.pdf

Carson City Property Inquiry

Property Information			
Parcel ID	010-041-39	Parcel Acreage	65.5200
Tax Year	2021	Assessed Value	3,761
Land Use Group	FARM	Tax Rate	3.5700
Land Use	600 - Agricultural	Total Tax	\$138.71
	Qualified per NRS 361A	Fiscal Year (2021 - 2022)	
	- Vacant	Total Unpaid All Years	\$138.71
Zoning	A		
Tax District	024		
Site Address	SEC 16 15/20		

No Sketches or Photos

Assessments					
Taxable Value	Land	Building	Per. Property	Totals	
Residential	0	0	0	0	0
Com / Ind.	0	0	0	0	0
Agricultural	10,746	0	0	0	10,746
Exempt	0	0	0	0	0
Pers. Exempt					0
Total	10,746	0	0	0	10,746

Assessed Value	Land	Building	Per. Property	Totals	
Residential	0	0	0	0	0
Com / Ind.	0	0	0	0	0
Agricultural	3,761	0	0	0	3,761
Exempt	0	0	0	0	0
Pers. Exempt					0
Total	3,761	0	0	0	3,761

	New Land	New Const.	New P.P.	Omit Bldg
Residential	0	0	0	0
Com / Ind.	0	0	0	0
Agricultural	0	0	0	0
Exempt	0	0	0	0
Totals	0	0	0	0

Assessor Descriptions					
Assessor Descriptions	Subdivision Name	Section	Township	Range	Block & Lot
	H1, R/S 3007, DOC # 516791				

No Personal Exemptions

Billing Fiscal Year (2021 - 2022)

Installment	Date Due	Date Paid	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Amount Paid	Total Unpaid
1	8/16/2021		\$34.94	\$0.00	\$1.40	\$36.34	\$0.00	\$36.34
2	10/4/2021		\$32.99	\$0.00	\$3.40	\$36.39	\$0.00	\$36.39
3	1/3/2022		\$32.99	\$0.00	\$0.00	\$32.99	\$0.00	\$32.99
4	3/7/2022		\$32.99	\$0.00	\$0.00	\$32.99	\$0.00	\$32.99
Total			\$133.91	\$0.00	\$4.80	\$138.71	\$0.00	\$138.71

Payment History

Fiscal Year	Total Due	Total Paid	Amount Unpaid	Date Paid
(2021 - 2022)	\$138.71	\$0.00	\$138.71	

Related Names

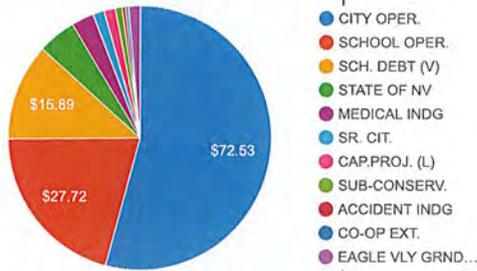
CURRENT OWNER FOR 2022 (2022 - 2023) Name MYERS, JOSHUA G TRUSTEE Mailing Address Status Current Account		CURRENT OWNER FOR 2022 (2022 - 2023) Name MYERS FAMILY EXEMPT TR 3/16/17 Mailing Address Status Current Account	
CURRENT MAIL TO FOR 2022 (2022 - 2023) Name MYERS FAMILY EXEMPT TR 3/16/17 Mailing Address JOSHUA G MYERS, TRUSTEE 5330 EAST PLACITA CASA RIO TUCSON, AZ, 85737 Status Current Account		OWNER FOR 2021 (2021 - 2022) Name MYERS, JOSHUA G TRUSTEE Mailing Address Status Current Account	
MAIL TO FOR 2021 (2021 - 2022) Name MYERS FAMILY EXEMPT TR 3/16/17 Mailing Address JOSHUA G MYERS, TRUSTEE 5330 EAST PLACITA CASA RIO TUCSON, AZ, 85737 Status Current Account		OWNER FOR 2021 (2021 - 2022) Name MYERS FAMILY EXEMPT TR 3/16/17 Mailing Address Status Current Account	

No Structure Information

Sales History						
DISCLAIMER: SOME DOCUMENTS MAY NOT BE SHOWN						
Year	Document #	Document Type	Sale Date	Sold By	Sold To	Price
2021	516791	BOUNDARY LINE ADJUSTMENT	2/19/2021			\$0
2021	516792	RECORD OF SURVEY	2/19/2021			\$0

Parcel Genealogy					
Relationship	Parcel Number	Action	Year	Change Effective Year	Completed
Parent Parcel	01004138	A	2021	2021	Yes

Taxing Entities		
Tax Entity	Tax Rate	Amount
CITY OPER.	1.9622	\$72.53
SCHOOL OPER.	0.7500	\$27.72
SCH. DEBT (V)	0.4300	\$15.89
STATE OF NV	0.1700	\$6.28
MEDICAL INDG	0.1000	\$3.69
SR. CIT.	0.0500	\$1.85
CAP.PROJ. (L)	0.0500	\$1.85
SUB-CONSERV.	0.0300	\$1.11
ACCIDENT INDG	0.0150	\$0.55
CO-OP EXT.	0.0128	\$0.47
Tax Entity Total	3.5700	\$131.94
EAGLE VLY GRND WTR	0.0000	\$1.97
Special Assessment Total	0.0000	\$1.97
Year Total	3.5700	\$133.91



Carson City Property Inquiry

Property Information			
Parcel ID	010-041-52	Parcel Acreage	13.2900
Tax Year	2021 ▾	Assessed Value	58
Land Use Group	FARM	Tax Rate	3.5700
Land Use	600 - Agricultural	Total Tax	\$4.40
	Qualified per NRS 361A	Fiscal Year (2021 - 2022)	
	- Vacant	Total Unpaid All Years	\$4.40
Zoning	A		
Tax District	024		
Site Address	SEC 16 15/20		

[Pay Taxes](#)

No Sketches or Photos

Assessments					
Taxable Value	Land	Building	Per. Property	Totals	
Residential	0	0	0	0	0
Com / Ind.	0	0	0	0	0
Agricultural	166	0	0	0	166
Exempt	0	0	0	0	0
Pers. Exempt					0
Total	166	0	0	0	166

Assessed Value	Land	Building	Per. Property	Totals	
Residential	0	0	0	0	0
Com / Ind.	0	0	0	0	0
Agricultural	58	0	0	0	58
Exempt	0	0	0	0	0
Pers. Exempt					0
Total	58	0	0	0	58

	New Land	New Const.	New P.P.	Omit Bldg	
Residential	0	0	0	0	0
Com / Ind.	0	0	0	0	0
Agricultural	0	0	0	0	0
Exempt	0	0	0	0	0
Totals	0	0	0	0	0

Assessor Descriptions					
Assessor Descriptions	Subdivision Name	Section	Township	Range	Block & Lot
POR PAR F #974 LESS		16	T15N	R20E	

No Personal Exemptions

Billing Fiscal Year (2021 - 2022)									
Installment	Date Due	Date Paid	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Amount Paid	Total Unpaid	
1	8/16/2021		\$4.04	\$0.00	\$0.16	\$4.20	\$0.00	\$4.20	
2	10/4/2021		\$0.00	\$0.00	\$0.20	\$0.20	\$0.00	\$0.20	
Total			\$4.04	\$0.00	\$0.36	\$4.40	\$0.00	\$4.40	

Payment History					
	Fiscal Year	Total Due	Total Paid	Amount Unpaid	Date Paid
+	(2021 - 2022)	\$4.40	\$0.00	\$4.40	
+	(2020 - 2021)	\$2.68	\$2.68	\$0.00	11/18/2020
+	(2019 - 2020)	\$2.83	\$2.83	\$0.00	3/16/2020
Show 23 More					

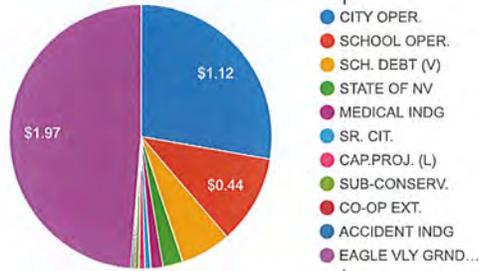
Related Names	
<p>CURRENT OWNER FOR 2022 (2022 - 2023)</p> <p>Name MYERS, JOSHUA G TRUSTEE</p> <p>Mailing Address Status Account Current</p>	<p>CURRENT OWNER FOR 2022 (2022 - 2023)</p> <p>Name MYERS FAMILY EXEMPT TR 3/16/17</p> <p>Mailing Address Status Account Current</p>
<p>CURRENT MAIL TO FOR 2022 (2022 - 2023)</p> <p>Name MYERS FAMILY EXEMPT TR 3/16/17</p> <p>Mailing Address Status Account JOSHUA G MYERS, TRUSTEE 5330 EAST PLACITA CASA RIO TUCSON, AZ, 85737 Current</p>	<p>OWNER FOR 2021 (2021 - 2022)</p> <p>Name MYERS, JOSHUA G TRUSTEE</p> <p>Mailing Address Status Account Current</p>
<p>MAIL TO FOR 2021 (2021 - 2022)</p> <p>Name MYERS FAMILY EXEMPT TR 3/16/17</p> <p>Mailing Address Status Account JOSHUA G MYERS, TRUSTEE 5330 EAST PLACITA CASA RIO TUCSON, AZ, 85737 Current</p>	<p>OWNER FOR 2021 (2021 - 2022)</p> <p>Name MYERS FAMILY EXEMPT TR 3/16/17</p> <p>Mailing Address Status Account Current</p>

No Structure Information

Sales History						
DISCLAIMER: SOME DOCUMENTS MAY NOT BE SHOWN						
Year	Document #	Document Type	Sale Date	Sold By	Sold To	Price
2020	504215	DEED	3/12/2020	SP 58 LLC	JOSHUA MYERS MYERS FAMILY EXEMPT TR 3/16/17	\$0
2018	485900	GRANT BARGAIN SALE DEED	6/12/2018	FAMILY 1993 TR 10/18/93 ARRAIZ	SP 58 LLC	\$4,500,000

No Genealogy Information

Taxing Entities		
Tax Entity	Tax Rate	Amount
CITY OPER.	1.9622	\$1.12
SCHOOL OPER.	0.7500	\$0.44
SCH. DEBT (V)	0.4300	\$0.25
STATE OF NV	0.1700	\$0.10
MEDICAL INDG	0.1000	\$0.06
SR. CIT.	0.0500	\$0.03
CAP.PROJ. (L)	0.0500	\$0.03
SUB-CONSERV.	0.0300	\$0.02
CO-OP EXT.	0.0128	\$0.01
ACCIDENT INDG	0.0150	\$0.01
Tax Entity Total	3.5700	\$2.07
EAGLE VLY GRND WTR	0.0000	\$1.97
Special Assessment Total	0.0000	\$1.97
Year Total	3.5700	\$4.04





January 9, 2017

Mr. Scott Baumgardner
Blackstone Development Group, Inc.
439 Plumb Lane
Reno Nevada, 89509

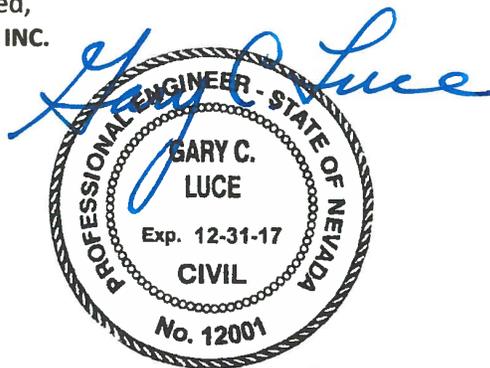
**Subject: ADDENDUM NO. 1-PRELIMINARY GEOTECHNICAL INVESTIGATION
 LOMPA RANCH PROJECT
 CARSON CITY, NEVADA**

Dear Mr. Baumgardner:

In accordance with your request, we are submitting an addendum to the Preliminary Geotechnical Investigation report for the Lompa Ranch Development Project, Carson City, Nevada dated October 24, 2016. This addendum is in response to a comment from Carson City Planning Division, dated December 29, 2016. Specifically, this addendum addresses item Number 17 on page five of the letter which requires the geotechnical report to be amended to read, the finish floor elevation of structures must be two feet above the base flood elevation. Attached is a revised page seven for the report which provides the corrected language. Please attach or insert this addendum into all original copies of the report.

We appreciate the opportunity to work with you on this project and apologize for the error in our original report.

Respectfully submitted,
RESOURCE CONCEPTS, INC.



Gary Luce
Senior Engineer



Jim Koch
Project Geologist

Attachment: Revised Page 7 dated January 9, 2017

FEMA has mapped almost all of the Site as within Flood Zone AE or areas within the 100-year flood where flood elevations have been determined. A small area of the Site is mapped as Flood Zone AO which indicates areas with from 1 to 3 feet of flood depth. The Flood Map is presented as Figure 8.

Mitigation for flooding is generally to raise the Site such that finish floor elevations are a minimum of two feet above the base flood elevation. Finish floor elevations for raised floor construction is the elevation of the crawl space per FEMA.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 General

Our conclusions are based on our investigation conducted in September of 2016, review of previous geotechnical reports for areas on and near the Site and our local experience.

- 9.1.1 Based on the results of our investigation, the Site is geotechnically well suited for the proposed residential and commercial uses, provided the recommendations presented herein are implemented in the design and construction of the project.
- 9.1.2 Our field investigation indicates that soils on the Site are characterized by stratified layers of lean, sandy clay, clayey sand, silt, silty sand, poorly graded sand, and well graded sand. The majority of the Site is covered by from three to six feet of soft to very stiff, lean clay. Moist to saturated, medium dense to dense, thin sand layers are present in the range of approximately six to twenty feet below the surface. Below approximately 20 feet, stiff to hard, moist to saturated lean clay is present with occasional thin loose to dense, sand layers.
- 9.1.3 Shallow groundwater, less than five feet from the surface is present on the northerly portion of the Site. Depth to groundwater on the Site increases to the south to between 9 and 12 feet below the surface. High groundwater depths are estimated to range from one to two feet above the levels encountered.
- 9.1.4 Potential seismic hazards at the Site will likely be associated with possible moderate to strong ground shaking from an event along the regional active faults. No faults are known on the Site and therefore the risk of fault rupture is considered very low. Structures should be designed in accordance with 2012 IBC Seismic requirements.
- 9.1.5 The liquefaction potential for the area of the Site to be developed is estimated to be moderate but to only effect thin sandy layers. Only minor settlements on the order of a few inches over broad areas are estimated based on the worst case scenario. Therefore, we do not *recommend any liquefaction mitigation for the development of the Site for the proposed residential and commercial uses.*
- 9.1.6 Soil Conservation Service data and our local experience indicate that soils are not aggressive for either Type II or Type IP concrete. However, soils are moderately aggressive (corrosive) to very aggressive for uncoated steel. The project structural engineer should consider the use of coatings or other cathodic protection where uncoated steel may be in contact with native soils.

9.2 Seismic Design Criteria

The Site is located near faults capable of generating strong seismic shaking during the life of the project. The project area should be considered Site Class D or "Stiff Soil" as defined by the 2012 IBC.

**PRELIMINARY
GEOTECHNICAL INVESTIGATION**

**LOMPA RANCH PROJECT
CARSON CITY, NEVADA**



PREPARED FOR

**BLACKSTONE DEVELOPMENT GROUP, INC.
439 Plumb Lane,
Reno Nevada, 89509**

OCTOBER 2016



October 24, 2016

Mr. Scott Baumgardner
Blackstone Development Group, Inc.
439 Plumb Lane
Reno Nevada, 89509

**Subject: PRELIMINARY GEOTECHNICAL INVESTIGATION
LOMPA RANCH PROJECT
CARSON CITY, NEVADA**

Dear Mr. Baumgardner:

In accordance with your request, we are submitting our Preliminary Geotechnical Investigation report for the Lompa Ranch development project, Carson City, Nevada. The Lompa Ranch project as addressed herein consists of approximately 204 acres of open land located on the west side of US 395. The project as currently envisioned consists of multi-family, single family, commercial and mixed commercial uses as well as parks and recreation areas. The primary focus of the investigation was to provide geotechnical construction recommendations for building foundation design, mass grading, utility installation, slabs-on-grade, roadways, parking and driveways pavements.

The site is within a mapped FEMA 100-year flood zone. Therefore, much of the site will need to be raised for flood considerations. Native clay rich soils are found on the majority of the surface. Raising the site with engineered fill will provide the potential for reduced overexcavation and potentially thinner pavement sections, improved frost susceptibility as well as increased bearing capacity. In our opinion there are no other significant geotechnical constraints which would preclude the proposed construction provided the recommendations of this report are incorporated in the design and construction as applicable.

We appreciate the opportunity to work with you on this project. Should you have questions concerning the contents of this report, or if RCI may be of further service, please contact the undersigned at your convenience.

Respectfully submitted,
RESOURCE CONCEPTS, INC.



Gary Luce
Senior Engineer

10/24/2016
Jim Koch
Project Geologist

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Appendix A: Field Investigation
Appendix B: Laboratory Testing
Appendix C: Previous Site Exploration- Other Firms

PRELIMINARY GEOTECHNICAL INVESTIGATION

1.0 INTRODUCTION

This report presents the results of our preliminary geotechnical investigation for the Lompa Ranch Project (the "Site") in Carson City, Nevada as shown on Figure 1, the Vicinity Map. The Site is identified by the Carson City Assessor by Assessor Parcel Numbers (APN's) 010-014- 16,38,52, 70 and 71.

The Lompa Ranch has been an active cattle and sheep operation dating back to at least the 1930's. The ranch property extended to the east of US 395 to Butti Way, but only the portion of the Site west of U.S. 580 is considered herein. The Site was under active cattle grazing at the time of our field investigation.

The primary focus of the investigation was to evaluate the general subsurface geologic and soil conditions for the area of the Site. Based on the site characterization, recommendations for grading, foundation design, pavement sections, and related geotechnical concerns are provided. This report is considered preliminary in that no site grading, final street layouts or structural plans were available for review at the time of our investigation and report preparation.

Proposed zoning of the approximately 204-acre site includes multi-family, single family, commercial and mixed commercial uses as well as parks and recreation areas as shown on the Proposed Master Plan Land Use Plan, Figure 2. We have assumed that construction will include conventional lightly loaded one to two story residential and commercial buildings without basements. Associated improvements are anticipated to include asphalt concrete roadways, concrete cement sidewalks, curbs and gutters, parks, pedestrian trails, and landscaping elements.

Cut and fill depths required for construction of the project are assumed to range from approximately one to three feet based on the location of the Site in a flood zone (AE/AO). Flood elevations have been determined for the majority of the Site by Federal Emergency Management Agency (FEMA).

2.0 SCOPE OF SERVICES

Our scope of services for our geotechnical investigation for the subject project included:

- Review of published geologic maps, aerial photographs, in-house documents, and other literature pertaining to the project area to aid in evaluating geologic conditions and hazards that may be present.
- Review of previously prepared geotechnical reports for various aspects of the overall development prepared by Black Eagle Consulting, Inc., Geocon Consultants, Inc. and Lumos and Associates.
- Review of the Lompa Ranch North Specific Plan, Adopted March 17, 2016 by Carson City Board of Supervisors.
- Performed fourteen test pits and seven geotechnical borings to examine the prevailing soil conditions.
- Performed laboratory tests on representative soil samples recovered from the test pits to determine their engineering characteristics.

- Prepared this report presenting our preliminary findings, conclusions and recommendations regarding the geotechnical aspects of constructing the proposed project.

The recommendations presented herein are based on the analyses of the data obtained from exploratory test pit and boring excavations, laboratory tests, engineering analyses, and our experience with similar soil and geologic conditions.

3.0 SITE AND PROJECT DESCRIPTION

The Site is surrounded on the north and west by urban development including the original Lompa Ranch residences and out buildings, residential and commercial developments as well as an LDS Church, Carson High School and the Gold Dust West Casino.

U.S. 580 bounds the Site to the east and Fifth Street and the remaining Lompa Ranch property that is not a part of the project on the south. Saliman Road bounds the south west side of the Site. Many of the immediately surrounding developments and roadways are identified on Figure 2.

Gated access to the Site is currently provided through the Lompa Ranch property on Fifth Street, from Saliman Road, and from the Carson High School property south driveway access (the extension of the Robinson Street alignment).

Topography in the area of the project Site is generally flat lying to gently sloping to the southeast. Elevations in the area of the proposed project Site range from approximately 5,710 feet to 5,725 feet.

Vegetation on the Site ranges from areas of sage brush and other low shrubs to pasture grasses consisting of both native and agricultural.

The Site is located within the Kings Canyon drainage and just west of the Goni Canyon drainage. Development within Carson City and the construction of the US 395 Freeway across the ranch has significantly altered the natural drainages by piping and channelizing storm flows.

Existing water and sewer utilities cross the Site. A water transmission main follows the Robinson Street alignment on the south side of Carson High School and crosses the northerly portion of the Site from west to east to where it goes under US 395. Two sewer mains cross the northerly portion of the Site; one from the Gold Dust West Casino property and one from the High School. The two lines meet at a manhole located near the center of the north property line and a single line then crosses southeasterly to another manhole at the edge of the freeway right of way.

Overhead power, cable and telephone are located along both Fifth Street and Saliman Road. Underground water, sewer and gas are located within both the Fifth Street and Saliman Road right of ways.

4.0 FIELD EXPLORATION

Our field investigation was performed in September of 2016. On September 22 and 23, fourteen test pits were excavated under our direction. The test pits were excavated with a rubber-tired Case 590 backhoe. Representative bulk samples were taken from each test pit. On September 28 and 29, seven geotechnical borings were performed utilizing an CME 55 truck mounted drilling rig. Drilling was advanced by both hollow stem auger and mud rotary methods. Samples were obtained utilizing split spoon samplers driven with a 140-pound hammer falling 30 inches utilizing a rope and cathead lifting system. Blow counts were recorded in six inch intervals in accordance with the Standard Penetration Test (SPT) method, ASTM D1586.

gray, stratified to poorly bedded, poorly to moderately sorted fine silty sand, sandy silt, granular clayey coarse sand, and minor sandy gravel.

The local geology in the area of the project is presented as Figure 3, the Geologic Map.

7.0 SOIL AND GROUNDWATER CONDITIONS

7.1 General

The surface soil conditions to a depth of five feet that were observed in our test pits were relatively consistent with the descriptions found on the Natural Resources Conservation Service (NRCS) website and with the descriptions in the previous investigations on and near the Site. Soils from five feet to forty feet below the surface were generally consistent with the borings conducted on the Site and those performed for the US 395 Carson City By-pass. Test pit and boring logs from previous investigations are included in Appendix C.

7.2 Subsurface Conditions

Natural Resources Conservation Service mapping of the Site shows five different soil units on the Site. The NRCS data pertains only to the top five feet of soil present. The dominant soil units (and map numbers) are Bishop Loam (4), Orizaba Loam (50) and Voltaire Loam (77). These three map units cover approximately eighty percent of the Site. The remainder of the Site is covered by Jubilee Loam which crosses the northerly portion of the project area. The soil map units found on the Site are described below and the aerial distribution is illustrated on the Soils Map, Figure 5 for reference:

- Soil Unit 4 *Bishop Loam*, is mapped on the southerly one half of the Site. This Soil Unit consists of a clay loam (CL) from 0 to 28 inches followed by stratified sandy loam to clay loam (CL, CL-ML, ML, & SC-SM) to a depth 60 inches.
- Soil Unit 50, *Orizaba Loam*, is mapped as covering approximately the center of the project area and extending to the easterly site boundary. In addition, the soil unit covers the south west portion of the Site as well. Soil unit 50 is characterized by an 9-inch surface layer of clayey loam (CL) over stratified silty sand to silty clay loam to a depth of 60 inches.
- Soil Unit 77, *Voltaire Silty Clay Loam* covers the majority of the north portion of the Site and extends to the north westerly portion of the Site as well. This soil unit is described as consisting of 18 inches of silty clay sandy (CL) over stratified loamy sand to silty clay loam (SC, CL), which extends to a depth of 60 inches.
- Soil Unit 36, *Jubilee Coarse Sandy Loam*, is mapped as a linear (channelized) area near the northerly boundary of the Site. This soil unit is described as a top layer of 20-inch thickness made up of coarse sandy loam (SM) over stratified coarse sand to sandy loam (SM) that penetrates to a depth of 60 inches.

Based on our observations during exploration activities at the Site, the soils observed in our test pits were relatively consistent with the NRCS descriptions for the top five feet. Site soils to the total depth explored consisted of stratified layers of clay, clayey sand and sands. The soils classified per the USCS as lean clay (CL), clayey sand (SC) silty sand (SM), poorly graded sands (SP), well graded sand (SW) as well as sand layers with low fines content requiring dual classification. Soils were generally denser and more granular with depth to approximately 20 feet below the existing surface. Stiff lean clay layers were present at depths from approximately 20 to 40 feet below the surface.

7.3 Groundwater

Groundwater was encountered in most of the test pits that we excavated and each of the borings. Depth to groundwater ranged from approximately four feet to 14 feet below the existing surface. The shallowest groundwater depths were found in the northwest corner of the Site. Depth to groundwater generally increased to the south. Based on the boring logs the shallow water levels appear to be perched water associated with thin clean to silty sands resting on or within clay layers. Sand layers with mottling were observed from one to two feet above the static levels recorded in the test pits and borings. Based on our experience in the area of the project we would estimate seasonal high groundwater levels to be as little as three feet below the surface in the northwest corner of the Site. For the northerly-half of the Site high groundwater levels are estimated to be from six to seven feet below the surface. For the entire southerly portion of the Site (south of the water transmission line) high groundwater levels range from approximately eight to ten feet below the surface.

Fluctuations in the level of groundwater may occur due to variations in rainfall, temperature and climatic factors. Groundwater is anticipated to flow to south to southeast in the project area. East of Fairview Drive the groundwater flow is inferred to turn to the northeast toward the Carson River.

8.0 GEOLOGIC HAZARDS

8.1 Active Faulting

Carson City is located near active faults which are capable of producing significant ground motions due to seismic events. Figure 6, the Fault Map for the Site vicinity shows the distribution of active faults in the area. Based on the U.S. Geological Survey (USGS), 2008 Quaternary fault and fold database for the United States; <http://earthquake.usgs.gov/regional/q>. Faults considered active for the type of development planned are located near the project site. The nearest faults to the Site are located approximately one-quarter mile north of the Site. Based on the USGS data and the New Empire Earthquake Hazards Map (Nevada Bureau of Mines and Geology, 1979) no faults have been mapped across the Site nor was any evidence of faulting observed in the field. The risk of fault ground rupture at the Site is considered low.

Strong seismic shaking is considered likely during the life of the project. Ground shaking intensities for design considerations should be governed by seismic events occurring along the base of the Carson Range on the Kings Canyon fault zone and Southern Washoe Valley fault zone. Faulting along the Carson Range has been evaluated by the Nevada Bureau of Mines and Geology to be capable of producing earthquake Richter Magnitudes on the order of 7.0 with peak ground accelerations as high as 2.0 g. These values are equivalent to Modified Mercalli Intensities of X or greater.

The seismic risk due to shaking at the Site is not considered significantly greater than that of the surrounding developments and the Carson City area in general. We recommend that seismic design of the structures be performed in accordance with the latest version of the International Residential Code (IRC) or the International Building Code (IBC) as appropriate. Site-specific IRC and IBC geotechnical seismic design parameters are presented in Section 9.2 of this report.

8.2 Liquefaction

Liquefaction of granular soils can be caused by strong vibratory motion due to earthquakes. Soils that are highly susceptible to liquefaction are loose, granular and saturated. Liquefaction of soils may cause surface distress such as sand boils and lateral spreading, loss of bearing capacity and settlement of structures. Conditions required for lateral spreading include laterally continuous liquefiable

layer(s) and gently sloping terrain. In particular, geometries with a “free-face”, such as a river or creek banks are susceptible to lateral spreading. Liquefaction generally is restricted to within 50 feet of the surface due to confining pressures.

Groundwater is estimated to be at from as little as three to 15 feet below the surface (excluding seasonally perched layers) in the vicinity of the Site. Boring data on and adjacent to the Site indicates that there are only a few thin sandy layers that may be susceptible to liquefaction which are typically sandwiched between cohesive not liquefiable layers.

We performed liquefaction analyses utilizing the methods of Seed and Idriss (1982), with Tokimatsu & Yoshimi and with the methods of Youd, and Idriss, (2001). Based on our analyses and Black Eagle Consulting (BCE) analysis along the east side of the Site, liquefiable layers are thin and discontinuous and for the most part confined by cohesive layers or dense sands that are not considered liquefiable.

Using a worst case scenario, we estimate that liquefaction on the Site would result in settlements ranging from two to four inches. This conclusion is in general conformance with the BCE analysis.

The majority of the Site has a surface clay layer which will help to bridge any liquefaction settlement effects. Additional engineered fill placed on the Site for flooding consideration will further enhance the bridging effects. Sands at deeper levels are generally dense to very dense and not considered susceptible to liquefaction. Due to the flat lying nature of the project area, the potential effects of liquefaction are typically realized as settlement of a few inches over broad areas rather than differential settlements across short distances. Settlements of this magnitude are not considered a life-safety issue due to building collapse for the type of residential and commercial structures being considered. Some building and utility damage can be anticipated during a large earthquake as would be expected for similar developments in Carson City and the region. Therefore, we do not recommend any specific mitigations for liquefaction on the Site. Should any critical facilities such as a fire station or essential medical facility be considered on the Site we recommend a site specific liquefaction investigation be performed.

8.3 Landslides and Slope Stability

No landslides were observed at the Site or on adjacent areas that may affect the Site. We do not consider the potential for land sliding to be a hazard to this project area provided that the grading recommendations provided are strictly adhered to.

8.4 Expansive Soil

Lean clay soils were identified on a large portion of the Site during our investigation with low to moderate expansion potential. Although expansion pressures are low, due to the fine grained nature these surficial soils, there is a moderate to high potential for frost heaving of pavements and flatwork placed over them. Overexcavation of these soils in foundation, flatwork and pavement areas is described within Section 9 of this report. Good drainage away from pavements and flatwork is essential to mitigating frost heave potential.

8.5 Flooding

Historically, the entire Lompa Ranch area was part of the Kings Canyon and Goni Canyon flood plains as shown on the 1953 Aerial Photograph, Figure 7. Surface waters that emanate from the Kings Canyon drainage cross the Site along Fifth Street and from storm drain channels that outlet on the property on the north side of Carson High School. Numerous shallow flood irrigation ditches also cross the Site. The Goni Canyon drainage has been channelized along US 395 and outlets into a wetland area that was enhanced during the freeway construction.

FEMA has mapped almost all of the Site as within Flood Zone AE or areas within the 100-year flood where flood elevations have been determined. A small area of the Site is mapped as Flood Zone AO which indicates areas with from 1 to 3 feet of flood depth. The Flood Map is presented as Figure 8.

Mitigation for flooding is generally to raise the Site such that finish floor elevations are a minimum of one foot above the flood elevation. Finish floor elevations for raised floor construction is the elevation of the crawl space per FEMA.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 General

Our conclusions are based on our investigation conducted in September of 2016, review of previous geotechnical reports for areas on and near the Site and our local experience.

- 9.1.1 Based on the results of our investigation, the Site is geotechnically well suited for the proposed residential and commercial uses, provided the recommendations presented herein are implemented in the design and construction of the project.
- 9.1.2 Our field investigation indicates that soils on the Site are characterized by stratified layers of lean, sandy clay, clayey sand, silt, silty sand, poorly graded sand, and well graded sand. The majority of the Site is covered by from three to six feet of soft to very stiff, lean clay. Moist to saturated, medium dense to dense, thin sand layers are present in the range of approximately six to twenty feet below the surface. Below approximately 20 feet, stiff to hard, moist to saturated lean clay is present with occasional thin loose to dense, sand layers.
- 9.1.3 Shallow groundwater, less than five feet from the surface is present on the northerly portion of the Site. Depth to groundwater on the Site increases to the south to between 9 and 12 feet below the surface. High groundwater depths are estimated to range from one to two feet above the levels encountered.
- 9.1.4 Potential seismic hazards at the Site will likely be associated with possible moderate to strong ground shaking from an event along the regional active faults. No faults are known on the Site and therefore the risk of fault rupture is considered very low. Structures should be designed in accordance with 2012 IBC Seismic requirements.
- 9.1.5 The liquefaction potential for the area of the Site to be developed is estimated to be moderate but to only effect thin sandy layers. Only minor settlements on the order of a few inches over broad areas are estimated based on the worst case scenario. Therefore, we do not recommend any liquefaction mitigation for the development of the Site for the proposed residential and commercial uses.
- 9.1.6 Soil Conservation Service data and our local experience indicate that soils are not aggressive for either Type II or Type IP concrete. However, soils are moderately aggressive (corrosive) to very aggressive for uncoated steel. The project structural engineer should consider the use of coatings or other cathodic protection where uncoated steel may be in contact with native soils.

9.2 Seismic Design Criteria

The Site is located near faults capable of generating strong seismic shaking during the life of the project. The project area should be considered Site Class D or "Stiff Soil" as defined by the 2012 IBC.

The following table summarizes site seismic design criteria obtained from the 2012/15 IBC through the USGS Seismic Design Maps website <http://earthquake.usgs.gov/designmaps/us/application.php>.

TABLE 9.2
IBC SEISMIC DESIGN PARAMETERS

Parameter	Factors	IBC Reference
Site Class	D	Table 20.3-1 (2010 ASCE-7)
Spectral Acceleration	$S_s = 2.449$	Figure 1613.3.1(1)
	$S_1 = 0.874$	Figure 1613.3.1(2)
Seismic Coefficient, F_a	$F_a = 1.0$	Table 1613.3.3(1)
Seismic Coefficient, F_v	$F_v = 1.5$	Table 1613.3.3(2)
Adjusted Spectral Response S_{MS}, S_{MI}	$S_{MS} = 2.449$	Equation 16-37
	$S_{MI} = 1.310$	Equation 16-38
Design Spectral Acceleration S_{DS}, S_{D1}	$S_{DS} = 1.633$	Equation 16-39
	$S_{D1} = 0.874$	Equation 16-40

9.3 Soil Handling and Excavation Characteristics

- 9.3.1 Based on the results of our investigation, the Site is geotechnically well suited for the proposed construction and related infrastructure provided the recommendations presented herein are implemented in the design and construction of the project.
- 9.3.2 In our opinion, grading and excavations may be accomplished with light to moderate effort with conventional heavy-duty grading/excavation equipment. Excavations in native soils are not anticipated to generate significant quantities of oversized material (greater than six inches in dimension) that will require special handling or exporting from the Site.
- 9.3.3 Excavated native granular soils, free of organic matter or debris, generated from cut operations, after clearing and grubbing is complete, are anticipated to be suitable for use as engineered fill. Excavated native clay rich soils are not suitable for structural fill but may be utilized for common fill or in landscaping areas.
- 9.3.4 Where structural fill material is required, it should meet the Standard Specifications for Public Works specifications (304.03). Structural fill is defined herein as all fill within two feet laterally outside of building perimeter foundations. In addition, all fill placed beneath pavement sections should also be considered structural. Import structural fill material where required should be certified within the past year for public works usage or sampled and approved by RCI prior to its transportation to the Site.
- 9.3.5 Temporary excavations, such as utility trench sidewalls excavated within undisturbed native soils or structural fill should remain near-vertical to depths of at least four feet. Some minor sloughing should be expected within some of the cleaner surficial sand lenses or during periods of high precipitation. Native granular soils within ten feet of the existing surface should be considered Soil Type C by OSHA Standards. Native clay soils should be considered OSHA Type B soils. If the contractor is uncertain about the soil designation the Engineer should be contacted or the more conservative approach utilized by treating the excavation in

question as Soil Type C. It is the contractor's responsibility to provide sufficient and safe excavation support per OSHA Standards as well as protecting nearby utilities, structures, and other improvements, which may be damaged by earth movements.

9.4 Grading – General, Site Preparation

9.4.1 A preconstruction conference should be held at the Site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance. Soil handling and grading requirements can be discussed at that time.

9.4.2 Site preparation should begin with the removal of trees, brush, organic matter and debris if any. The depth of removal should be such that material exposed in the cut areas or soils to be used as fill is relatively free of organic matter. This will likely result in removal depths ranging from approximately 2 to 4 inches, depending on location. Material generated during stripping is not suitable for use in structural areas but may be placed in landscaped or other non-structural areas if deemed suitable for the specific application.

9.4.3 Earthwork operations should be observed and compacted fill tested by our representative.

9.4.4 All references to relative compaction and optimum moisture content in this report are based on the ASTM D1557-02 Test Procedure.

9.4.5 During or immediately following wet weather, the near-surface soil may deflect or pump under heavy equipment loads. Yielding soil conditions can typically be stabilized using one of the methods listed below. However, soil conditions and mitigation methods should be reviewed and approved by RCI when encountered.

- **Option 1.** Deeply scarify (10 to 12 inches) allow to air dry to near optimum moisture content and re-compact.
- **Option 2.** Remove unstable (wet) soils to a firm base and allow the wet subgrade soil to dry to near optimum moisture content and re-compact. Replace the removed soils with drier soil meeting the structural fill specifications.
- Other stabilization alternatives such as geosynthetic fabrics or grids, rock stabilization layers and soil chemical treatments may be appropriate depending on the situation. Consultation with us is crucial for expedient and appropriate mitigation.

9.5 Grading – Building Pads

The following discussion and recommendations are intended for mass grading of structural areas and finish grading for foundation, driveway areas, and flatwork. Due to the lack of a grading plan at the time of this report these recommendations are subject to review prior to plan submittal to Carson City.

9.5.1 Building pad areas or in soil areas to receive fill, should be scarified to a depth of 8 to 10 inches and granular soils compacted to at least 90% relative compaction near optimum moisture content. In areas to receive structural fill where clay layers are present, the soils should be scarified to a depth of 8 to 10 inches and compacted to from 85% to 90% relative compaction at from one percent under to three percent over optimum moisture content.

9.5.2 Structural fill should then be compacted in horizontal layers and brought to final subgrade elevations. Structural fill should be placed in level 8-inch loose lifts. Each lift should be

moisture conditioned at or near optimum moisture content and then compacted to a minimum of 90% relative compaction.

- 9.5.3 The cut portion of cut-fill transition building pads or pavements should be undercut at least one foot vertically for five feet laterally into the cut face from the point of transition and replaced with properly compacted structural fill. Where cut and fill soil slopes are required they should be constructed at a maximum gradient of 2:1 (horizontal to vertical).
- 9.5.4 Fills placed on slopes greater than 5H:1V, if any, should be keyed into the native slope. Keys should be constructed no more than five vertical feet in height and a minimum of six feet wide. If cobble rock fills are required, the Engineer should be contacted for specific recommendations relative to the maximum size of rock to be placed and performance criteria for compaction.

9.6 Grading – Underground Utilities

- 9.6.1 Bedding and pipe zone backfill should extend from the bottom of the trench excavation to a minimum of 6 inches above the crown of the pipe. Pipe bedding material should consist of Class A backfill material as defined by the Standard Specifications for Public Works (Orange Book). Bedding and pipe zone material should be hand compacted in 6-inch maximum lifts.
- 9.6.2 Trench backfill above the pipe zone should meet Orange Book Class E backfill requirements at a minimum and be compacted to a minimum of 90% relative density in structural areas and a minimum of 85% in landscape areas.
- 9.6.3 Underground utility trenches within structural areas (building pads and streets) should be backfilled with properly compacted material. Granular material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than six inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding eight inches. The lifts should be compacted to a minimum of 90% relative compaction at or near optimum moisture content. Native clay soils will not be suitable for backfill due to their high fines content and significant backfill importation should be planned for.
- 9.6.4 Wet trench conditions should be planned for especially on the northerly portion of the Site. Deep utility installations over approximately ten feet on the southerly portion of the Site are also likely to encounter groundwater or the effects of the capillary fringe just above the groundwater level. Importation of gravel bedding and backfill should be considered during project planning. The use of trench shields or shoring should also be planned for.

9.7 Grading – Pavement and Flatwork Areas

- 9.7.1 Pavement and flatwork subgrade areas underlain by native soil materials should be scarified to a depth of 8 to 10 inches and moisture conditioned at or near optimum moisture content. The upper six inches of pavement subgrade soils should be compacted to a minimum of 90% relative compaction at or near optimum moisture content. Where pavement or flatwork areas will be underlain by the weathered bedrock, the surface need not be scarified and compacted if cut “neat” and all loose material has been removed. A minimum of 4 inches of compacted aggregate base should be placed over the surface to act as a leveling course.
- 9.7.2 The subgrade soils for pavements should be finished to a compacted smooth unyielding surface. We recommend proof-rolling the subgrade with a loaded water truck (or similar equipment) to verify the stability of the subgrade prior to placing aggregate base.

9.7.3 Aggregate base used to support pedestrian and vehicular pavements should be compacted to a minimum of 95% relative compaction

9.8 Preliminary Foundation Design Criteria

The following foundation information is intended to provide project design criteria. When final grading plans are prepared they should be reviewed by the Geotechnical Engineer and recommendations amended if or as necessary.

9.8.1 Conventional foundations should consist of continuous perimeter strip footings and isolated interior spread footings. Minimum strip footing width should not be less than 12 inches; isolated spread footings should be at least 18 inches’ square. The structural engineer should determine if tie beams are required based on the estimated differential settlements.

9.8.2 Perimeter footings should extend at least 24 inches below lowest adjacent exterior grade bearing on compacted native soils, bedrock or structural fill. Interior footings should extend at least 8 inches below lowest adjacent grade. These embedment recommendations are crucial for frost protection, to develop bearing capacity, to inhibit surface water intrusion into crawl spaces and to provide lateral force resistance. Final surface grading should provide for positive drainage away from the structure per the 2012 IBC. Footing and foundation backfill should be compacted to at least 90% below paving, concrete slabs or flatwork. In landscaped areas only, compaction of the top foot of exterior foundation backfill may be reduced to a minimum relative density of 85%.

9.8.3 Adjacent utilities should not be constructed in the zone of influence parallel to footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom of the footing. Utility penetrations into the building envelope should be made perpendicular to the building stem wall if possible.

9.8.4 Shallow foundations proportioned as recommended above may be designed based on the following preliminary allowable bearing capacities:

**TABLE 9.8.4
ALLOWABLE BEARING CAPACITY/LATERAL BEARING/COEFFICIENT OF FRICTION**

Soil Type	On- Compacted Native Soil	On 12 -inches of Structural Fill
Lean Clay or Clayey Sand (CL, SC)	1,500 psf/100 psf/0.20	2,000 psf/200 psf/0.35
Sands (SM, SW, SP or combination thereof)	2,000 psf/300 psf/0.35	2,500 psf/300 psf/0.35

Note: Additional bearing capacity may be achieved based on greater width or depth of embedment of the footing. Contact the Engineer for analysis and recommendations for those specific cases.

9.8.5 Total and differential settlements of footings under the recommended allowable bearing capacities is estimated to be less than one inch and three-quarters inch respectively.

9.9 Retaining Walls

Allowable bearing capacities for retaining wall foundations may be assumed as indicated in Table 9.8.4 above. Earth pressures are dependent on the backfill and should be considered on a case by case basis. However, for preliminary planning of retaining walls less than eight feet tall and assuming structural fill backfill at least three feet behind the wall the values in Table 9.9 are recommended.

**TABLE 9.9
PRELIMINARY EARTH PRESSURE VALUES FOR RETAINING WALLS**

Passive Pressure	At Rest Pressure	Active Pressure
360 psf/f	55 psf/f	35 psf/f

Positive drainage is essential behind any earth retaining structure to prevent the backfill from becoming saturated. Saturated backfill can result in significant (a factor of 2 or more) increases in the lateral wall pressures above the previously recommended values. Positive drainage for retaining walls should consist of a vertical layer of permeable material positioned between the retaining wall and the soil backfill. The permeable material may be composed of a composite drainage fabric, or a natural permeable material, such as coarse sand or pea gravel at least 6 inches in thickness, with a synthetic, geotextile filter fabric between it and the soil backfill.

Final plans for retaining structures should be submitted to RCI for review to ensure that the generalized recommendations above are appropriate to the specific wall being designed.

9.10 Slabs-on-Grade

- 9.10.1 Conventional concrete slab-on-grade floors are suitable for the building pads prepared as recommended in Section 9.5. A minimum 10-mil-thick vapor retarder meeting ASTM E1745-97 Class C requirements may be placed below the slab where interior moisture is considered undesirable. The vapor retarder may be covered by an optional 2-inch layer of medium sand as a cushion. To reduce the potential for punctures, a higher quality vapor retarder (15 mil, Class A or B) may be used. The vapor retarder, if used, should extend to the edges of the slab, and should be sealed at all seams and penetrations. Slabs should be underlain by a minimum of 4 inches of compacted (95% minimum relative density) aggregate base. Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading.
- 9.10.2 If a significant amount of time has passed since building pad grading and the soil surface of the building pad has become dry, then it should be re-moistened prior to placing the moisture retarding system. The building pad should be moistened by soaking or sprinkling such that the upper 12 inches of soil is near optimum moisture, as determined by our representative at least 48 hours before concrete placement.
- 9.10.3 Some floor coverings, such as tile or linoleum, are sensitive to moisture that can be transmitted from and through the slab. Slab floors should be moist cured for a minimum of 7 days prior to placing any floor coverings. Floor coverings should be installed in accordance with the manufacturer’s recommendations including any moisture transmissivity testing requirements.
- 9.10.4 Crack control spacing should be determined by the project structural engineer based on slab thickness and intended usage.
- 9.10.5 All exterior concrete should be air entrained with from 4.5% to 7.0% air content. The water cement ratio for all exterior concrete should be 0.45 or less. The use of mid-range plasticizer is recommended to facilitate the finishing process while maintaining the desired water cement ratio.

- 9.10.6 Exterior concrete should be placed and finished in accordance with American Concrete Institute (ACI) recommendations for concrete placed in areas subject to freeze-thaw environments.
- 9.10.7 Recommendations presented herein are intended to reduce the potential for cracking of slabs as a result of differential movement. However, even with the incorporation of the recommendations presented herein, slabs-on-grade will still exhibit some cracking. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of concrete, the use of crack control joints and proper concrete placing and curing. Adherence to ACI and Portland Concrete Association (PCA) recommendations including those for low humidity and wind, if applicable, should be incorporated into project construction practices.

9.11 Pavements

The following discussion and preliminary paving sections are based on our experience with similar projects in the area and our knowledge of the soils in the area of the Site. A traffic study or detailed site layout would be required for final street sections to develop Average Daily Traffic (ADT) numbers for input into the design calculations.

- 9.11.1 Pavement sections are intended for on-site parking and driveway use only. Pavement sections are based on Carson City Design Standards and Asphalt Institute recommendations for parking areas subject to automobile and truck traffic (IS 182).
- 9.11.2 It is recommended that the use of AC 64-28NV (polymerized asphalt oil) be considered as we have found that it substantially reduces cracking due to thermal stresses prevalent in the freeze thaw environment of this area. The savings in long term maintenance of the pavement including crack sealing is in our opinion worth the extra expense. However, this asphalt oil recommendation should be considered optional in that it is relative to frequency of maintenance only and does not affect structural calculations.
- 9.11.3 The following preliminary Asphalt Concrete (AC) pavement sections are recommended for design to establish subgrade elevations for local streets, parking and driveways.

**TABLE 9.11.3
PRELIMINARY AC PAVEMENT SECTIONS**

Facility	AC Thickness (inches)	AB Thickness (inches)	Sub-base Thickness for Areas of Clay Subgrade*
Local Streets	3.0	6.0	8.0
Collectors	4.0	8.0	6.0
Parking Lots Subject to Automobile Traffic Only	3.0	6.0	6.0
Parking Lot Drive Isles or Dumpster Areas	4.0	6.0	6.0

*Note: Clay Subgrade is defined as Areas having R-values below 45.

- 9.11.4 If Portland Concrete Cement (PCC) driveways or trash enclosures are required, they should be constructed as shown in Table 9.11.4 below.

**TABLE 9.11.4
PCC PAVEMENT SECTIONS**

Alternate	PCC Thickness (inches)	AB Thickness (inches)	Sub-base Thickness for Areas of Clay Subgrade*
Automobile Parking Areas and Driveways	5.0	8.0	6.0
Areas Subject to Semi Truck Traffic or Dumpster Areas	6.0	8.0	6.0

*Note: Clay Subgrade is defined as Areas having R-values below 45.

- The minimum compressive strength (28 day) should be at least 3000 psi and meet the requirements stated in section 9.9 as appropriate for exterior concrete. Traffic on the slab should be avoided until at least 80% of the design strength has been verified by testing.
- Reinforcement of the PCC driveways should be specified by the project structural (or Civil) engineer.
- Construction (or crack control) joints should also be as recommended by the project structural (or Civil) engineer.

9.12 Site Drainage

- 9.12.1 Adequate drainage is crucial to reduce the potential for differential soil movement, erosion and subsurface seepage. The Site should be graded and maintained such that surface drainage is directed away from structures and the top of slopes into swales or other controlled drainage devices.
- 9.12.2 Soil slopes constructed steeper than recommended in Section 9.5.4 or where subject to concentrated flows in excess of 3 feet per second should be stabilized with riprap, slope netting or other mechanical methods as designed by the project Civil Engineer.
- 9.12.3 Temporary erosion control during construction should be as per the approved storm water pollution prevention plan (SWPPP).
- 9.12.4 Landscape irrigation should be kept at least three feet away from all building foundations. We recommended that drip irrigation be installed near foundations wherever feasible.
- 9.12.5 An interceptor ditch or drain should be constructed at the top or bottom of the cut slopes for roads or buildings.
- 9.12.6 Under no circumstances should water be allowed to pond adjacent to footings.

9.13 Anticipated Construction Difficulties

- 9.13.1 Depending on the time of year and precipitation events, surface clay soils may be soft and difficult to moisture condition or to dry out sufficiently for compaction. These conditions may also result in the need for tracked equipment to traverse the Site effectively.
- 9.13.2 Underground utility installations are likely to encounter groundwater on the northerly portion of the Site. Deep utility installations (over ten feet from the surface) are likely to encounter groundwater or the effects therefrom.
- 9.13.3 Dewatering may be necessary during wet periods or for utility vault construction.
- 9.13.4 During dry periods, the native fine grained soils are a concern for the capability to produce large amounts of fugitive dust. Dust control palliatives should be considered depending on seasons of construction and amount of acreage exposed. Aggressive watering may be sufficient if amount of exposed area is limited by phasing or staging of construction.

10.0 CLOSURE

10.1 Grading Plan Review

RCI should review the grading plans and details prior to final design submittal to determine whether additional analysis and/or recommendations are required. Pavement sections for public streets will need to be addressed when ADT data is available. Should post tensioned slabs-on-grade be considered, additional laboratory analyses would be required to provide design parameters.

10.2 Limitations and Uniformity of Conditions

The preliminary recommendations of this report pertain only to the site investigated and are based upon the assumption that soil and groundwater conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, RCI should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by RCI.

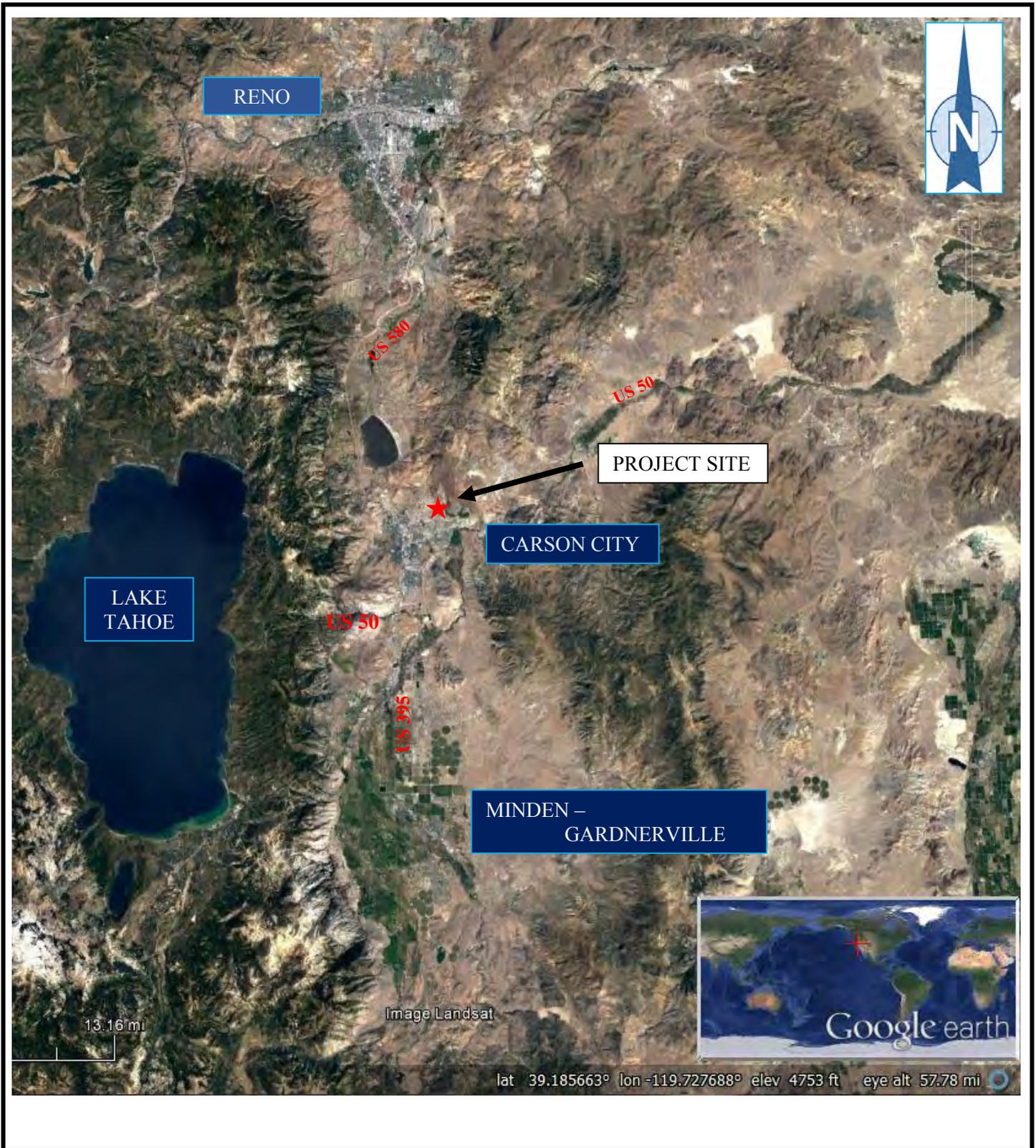
This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

11.0 REFERENCES

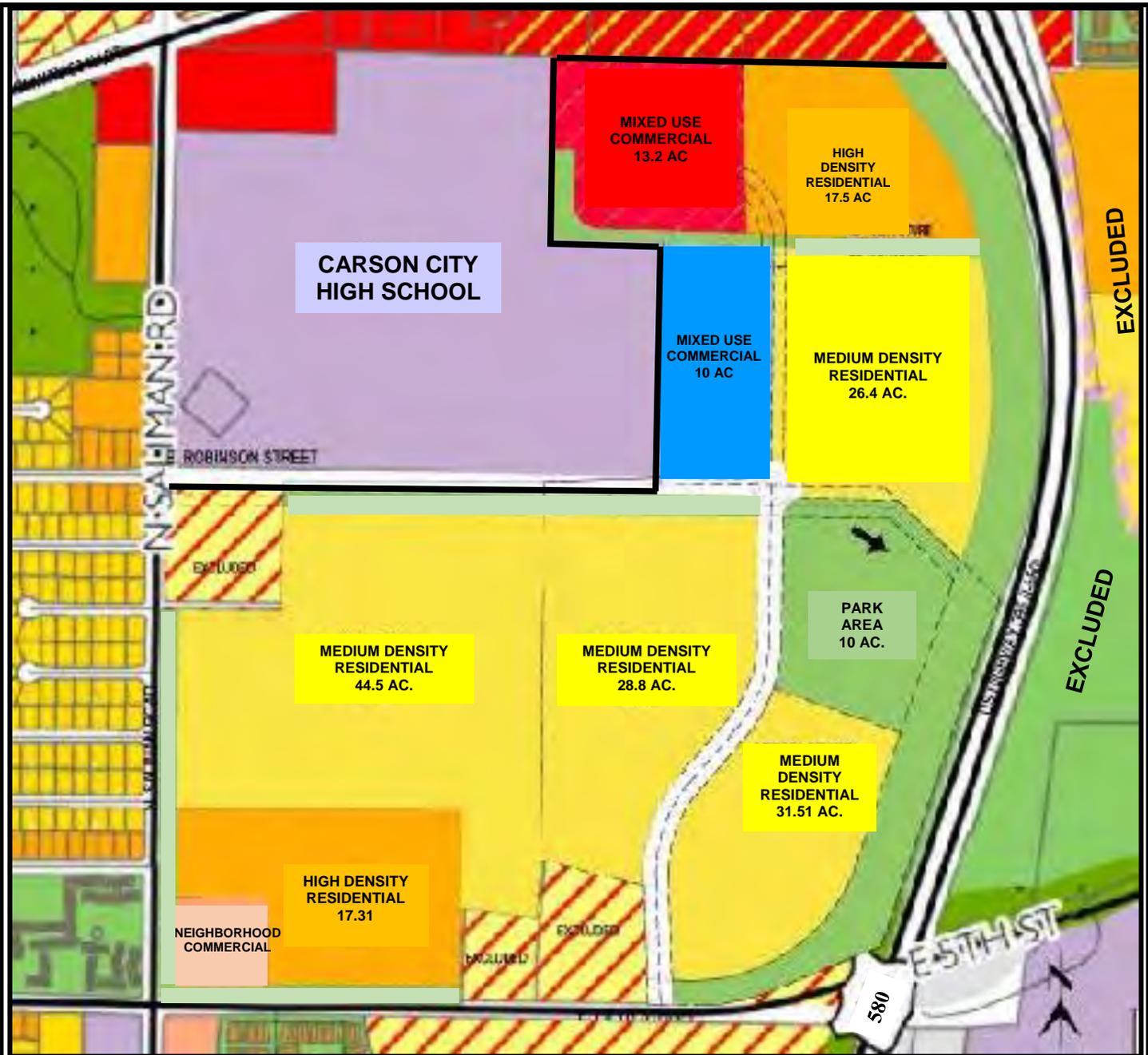
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FIGURES



	340 N. Minnesota St. Carson City, NV 89703 775 883-1600
	GCL

FIGURE 1 VICINITY MAP LOMPA RANCH PROJECT CARSON CITY, NV
PROJECT NO. 16-174.1



After Blackstone Development Group
 PLANNING COMMISSION PRESENTATION
 February 24, 2016

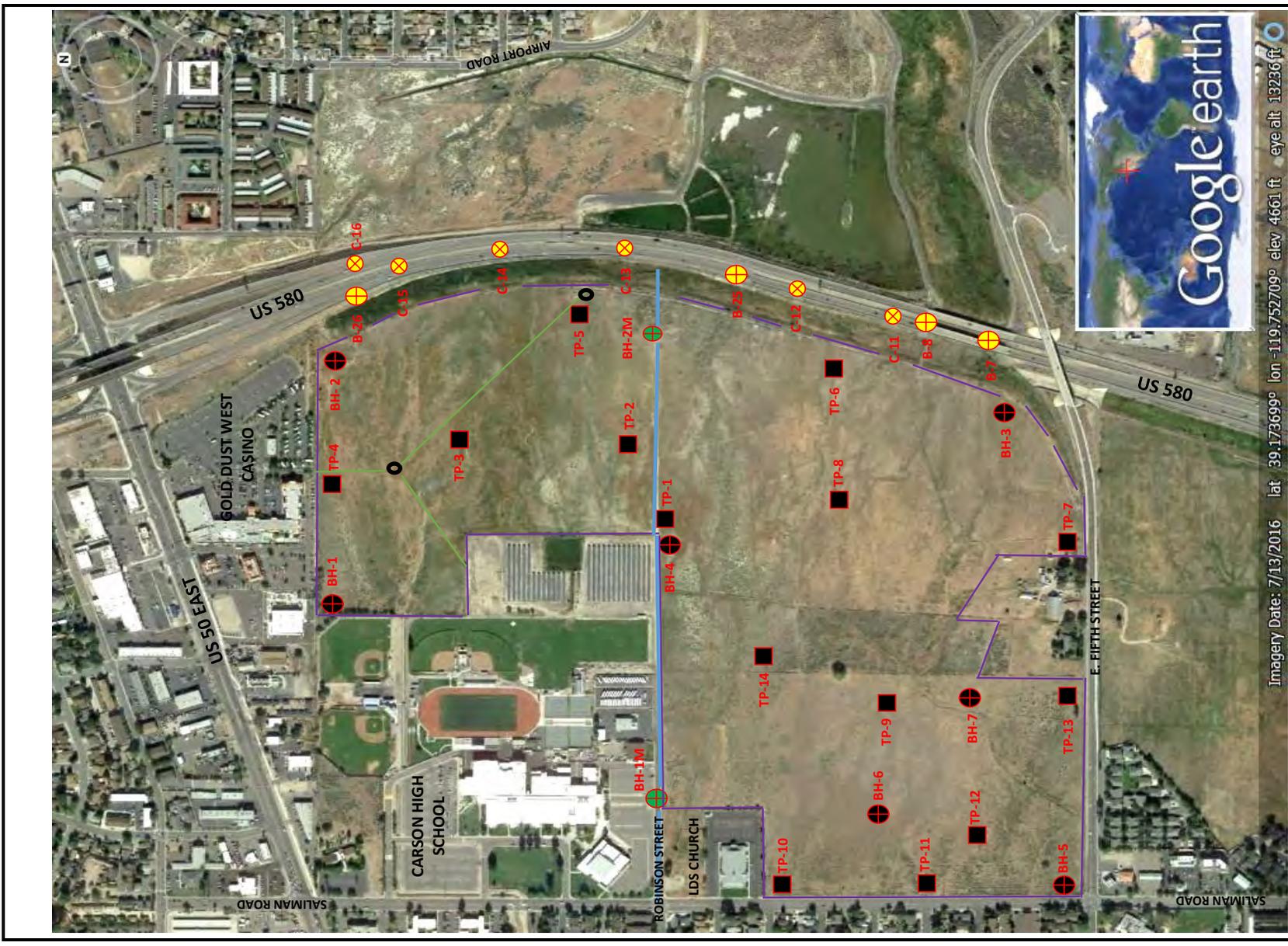


340 N. Minnesota St.
 Carson City, NV 89703
 775 883-1600

**FIGURE 2
 PROPOSED MASTER PLAN
 LAND USE PLAN**

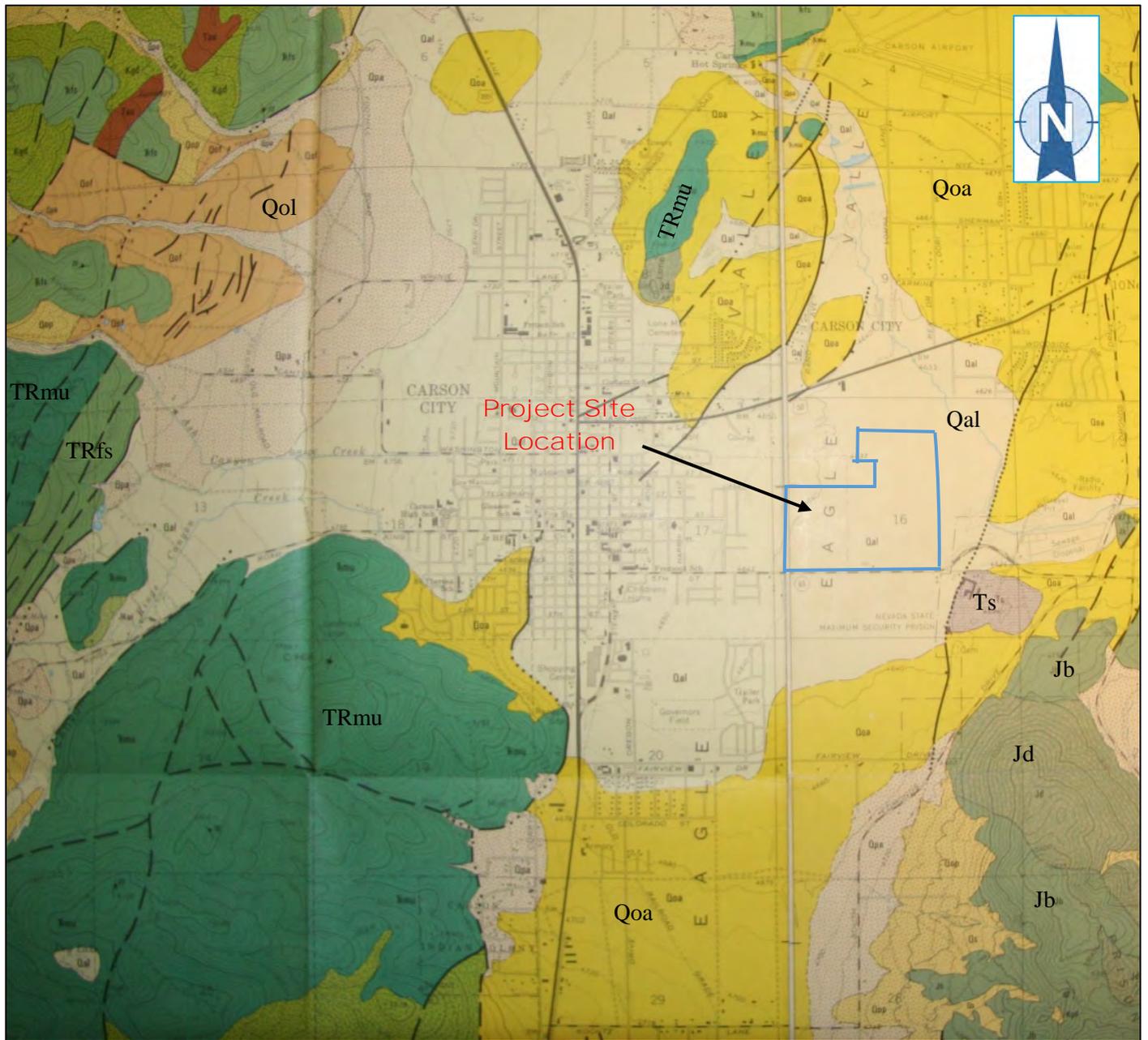
**LOMPA RANCH PROJECT
 CARSON CITY, NV**

PROJECT NO. 16-174.1



Imagery Date: 7/13/2016 lat 39.173699° lon -119.752709° elev 4661 ft eye alt 13236 ft

- ⊕ BH- RCI Boring
- ⊕ BH- Black Eagle Boring
- ⊗ C- Black Eagle CPT Sounding
- ⊕ BH- Geocor Boring
- TP #
- RCI Test Pit Location
- Sanitary Sewer Manhole
- Approximate Property Boundary
- Approximate Location Sanitary Sewer Line
- Approximate Location Water Transmission Mfn Line



Carson City and New Empire Geologic Maps
 Dennis Trexler, 1977 and Bingler, 1977

NOT TO SCALE

- | | |
|--|--|
| Qal Quaternary Alluvium | TRmu Triassic Mafic Metavolcanic Rocks |
| Qoa Older Alluvial-Plain Deposits | TRfs Triassic Felsic Schist |
| Qol Older Fan Deposits of Vicee Canyon | |
| Ts Tertiary Sandstone | ——— FAULT |
| Jb Jurassic Metavolcanic Breccia | - - - - INFERRED FAULT LOCATION |
| Jd Jurassic Dacite Porphyry | |

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FIGURE 4 GEOLOGIC MAP

LOMPA RANCH PROJECT
CARSON CITY, NV

PROJECT NO. 16-174.1



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Carson City Area, Nevada (NV629)

Map Unit Symbol	Map Unit Name	USCS SOIL TYPE
4	Bishop loam, saline	CL, CL-ML, ML, & SC-SM
36	Jubilee coarse sandy loam, 0 to 2 percent slopes	SM
38	Kimmerling silty clay loam	
50	Orizaba loam, saline-alkali	CL
71	Urban land	
73	Vamp fine sandy loam, drained	
74	Vamp fine sandy loam, slightly saline-alkali	
77	Voltaire silty clay loam, saline	CL



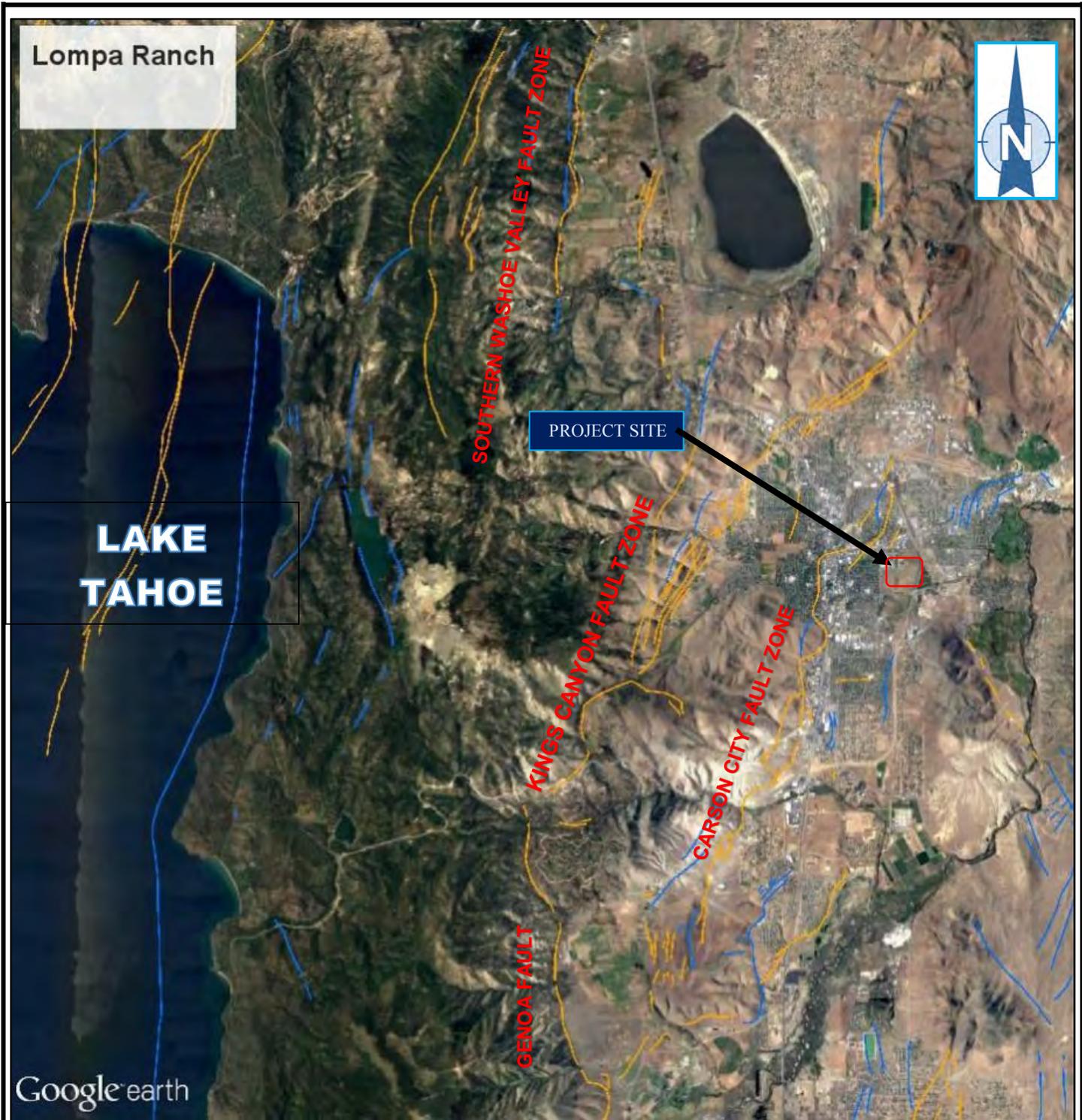
340 N. Minnesota St.
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775 883-1600

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FIGURE 5 SOILS MAP

LOMPA RANCH PROJECT
CARSON CITY, NV

PROJECT NO. 16-174.1



- Mapped Holocene (Active) Faults
- Quaternary Fault Older Than Holocene (Considered Inactive)

NOT TO SCALE

QUATERNARY FAULTING ON AND ADJACENT TO THE PROJECT SITE
 USGS QUATERNARY FAULTING DATA BASE- GOOGLE EARTH

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FIGURE 6 - USGS QUATERNARY FAULT MAP

LOMPA RANCH PROJECT
CARSON CITY, NV

PROJECT NO. 16-174.1



— Approximate Lompa Ranch Site Boundaries



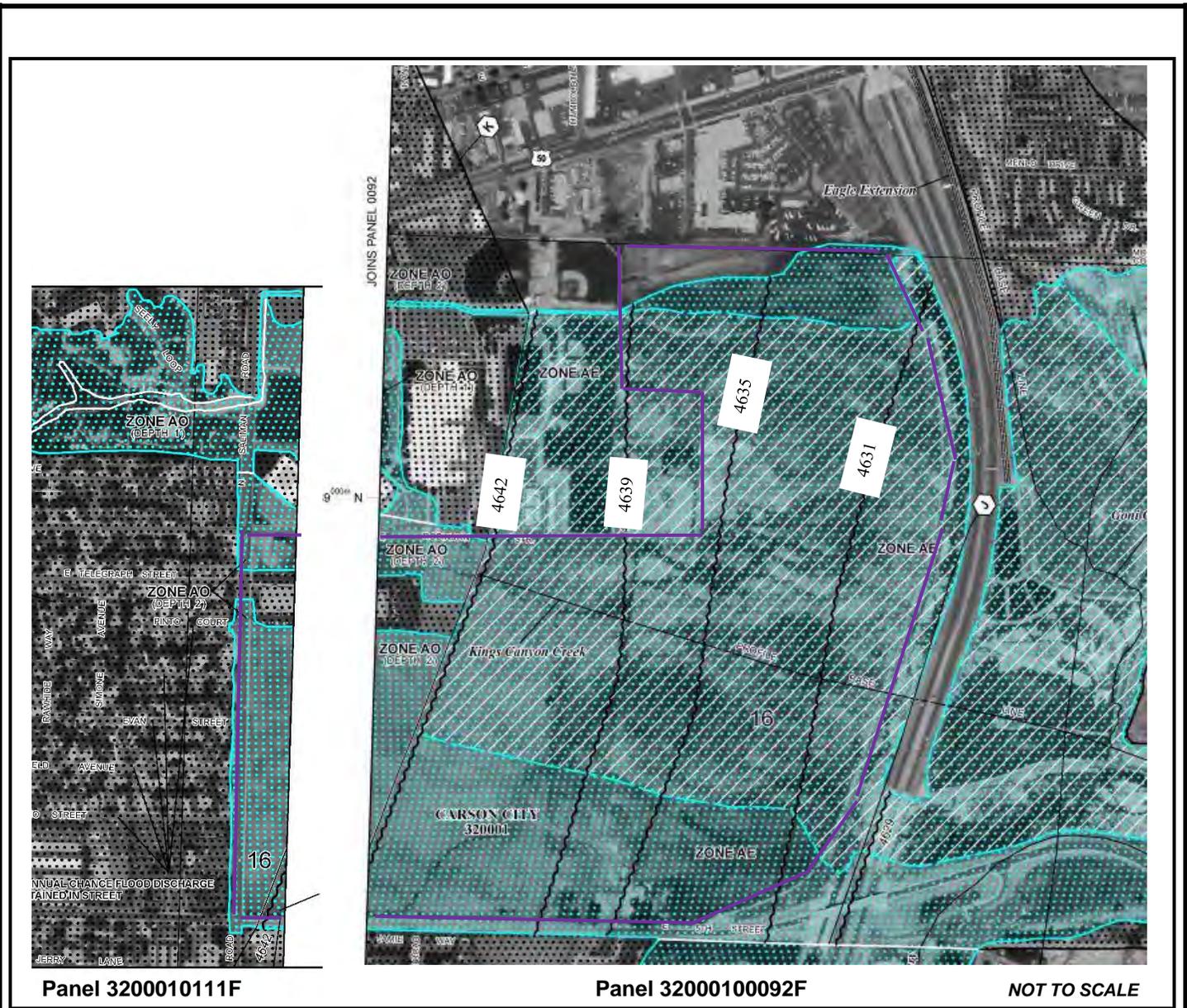
340 N. Minnesota St.
Carson City, NV 89703
775 883-1600

GCL

FIGURE 7 1953 AERIAL PHOTOGRAPH

LOMPA RANCH PROJECT
CARSON CITY, NV

PROJECT NO. 16-174.1



Legend

- ZONE AE** Base Flood Elevations Determined
- ZONE AO** Flood Depths of 1 to 3 Feet (usually sheet flow on sloping terrain); Average Depths Determined. Velocities Also Determined.
- Approximate Lompa Ranch Boundaries



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FIGURE 8 FEMA FLOOD MAP

LOMPA RANCH PROJECT
CARSON CITY, NV

PROJECT NO. 16-174.1

APPENDIX A

FIELD INVESTIGATION

Our field exploration was performed on September 2016 and consisted of excavating 14 test pits and advancing 7 borings. The test pits were excavated with a rubber-tire backhoe. Borings were completed using both hollow stem auger and mud rotary techniques. The soil conditions encountered in the test pits and borings were visually examined, classified, and logged in general accordance with the Unified Soil Classification System. Upon completion of sampling and logging, the test pits and bore holes were backfilled with native soil. Re-compaction of test pit backfill may be required during site grading. Locations of the test pits and borings are presented on the Site Exploration Map, Figure 3.



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TEST PIT NO. 1

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 8:30 Date: 9/22/2016
Elevation: Total Depth: 9.0	GWL: Depth: 7.3	Completed Time: 9:00 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 9:05 Date: 9/22/2016
Drill Rig Type: Cat 590 BH	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
						2		0.0-4.3 SILTY SAND - Dense, Dry to Moist, Light Brown	SM
						4		4.3-7.2 CLAYEY SAND - Dense, Moist, Gray	SC
						6			
						8		7.2- 9.0 LEAN CLAY - Stiff, Wet to Saturated, Gray	CL
						10			
						12			

Notes:



TEST PIT NO. 2

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: Date: 9/22/2016
Elevation: Total Depth: 11.0	GWL: Depth: 8.5	Completed Time: Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: Date: 9/22/2016
Drill Rig Type: Cat 590	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
						2		0.0-0.5 SOD 0.5- 5.3 SILTY SAND - Dense, Dry, Brown, 10YR5/3	SM
						4			
						6		5.3-6.3 CLAYEY SAND - Medium Dense, Moist, Yellowish Brown, 10YR5/4	SC
						8		6.3-11.0 SILT SAND - Medium Dense, Moist to Saturated, Brown, 10/YR5/3	SM
						10			
						12			

Notes:



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TEST PIT NO. 3

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 9:50 Date: 9/22/2016
Elevation: Total Depth:10.0	GWL: Depth: 8.2	Completed Time: 9:35 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 9:40 Date: 9/22/2016
Drill Rig Type: Cat 590 BH	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-4.9 SILTY SAND - Loose, Dry, Lt. Brownish Gray 10YR 6/2	SM
						4			
						6		4.9-6.2 CLAYEY SAND - Dense, Moist, Strong Brown 7.5YR 4/6	SC
						8		7.4-8.2 LEAN CLAY - Stiff, Wet, Yellowish Brown 10YR 5/8	CL
						10		8.2-10.0 SILTY SAND - Dense, Saturated, 10YR 5/3	SM
						12			

Notes:



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TEST PIT NO. 4

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 10:40 Date: 9/22/2016
Elevation: Total Depth: 9.5	GWL: Depth: 7.5	Completed Time: 10:55 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 11:00 Date: 9/22/2016
Drill Rig Type: Cat 590	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-2.7 POORLY GRADED SAND - Loose, Dry, Grayish Brown, 10YR 5/2	SP
						4		2.7-6.5 SILTY SAND - Dense, Moist, Grayish Brown	SM
						6			
						8		6.5-7.4 CLAYEY SAND - Medium Dense. Moist, Dark Grayish Brown 10YR 4/2	SC
						10		7.4-9.5 SILTY SAND - Dense, Wet to Saturated, Brown 10YR 5/3	SM
						12			

Notes:



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TEST PIT NO. 5

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 11:05 Date: 9/22/2016
Elevation: Total Depth: 11.0	GWL: NA Depth:	Completed Time: 11:20 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 11:40 Date: 9/22/2016
Drill Rig Type: Cat 590 BH	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 TOP SOIL	
						2		0.5-3.2 CLAYEY SAND - Dense, Dry, Brownish Gray	SC
						4		3.2-5.1 SANDY CLAY - Hard, Moist, Brown 10YR 5/3	CL
						6		5.1-11.0 CLAYEY SAND - Dense, Moist to Wet, Brown 10YR 5/3	SC
						8			
						10			
						12			

Notes:



TEST PIT NO. 6

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 12:30 Date: 9/22/2016
Elevation: Total Depth: 10.5	GWL: NA Depth:	Completed Time: 12:50 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 12:55 Date: 9/22/2016
Drill Rig Type: Cat 590	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
		22/1				2		0.5-2.9 SILTY SAND - Dense, Dry, Light Gray 2.5Y 7/1 w/ Clay	SM
						4		2.9-6.4 SILTY SAND - Dense, Moist, Reddish Brown 2.5YR 4/3 w/FeOx Mottling	SM
						6			
						8		6.4-9.4 CLAYEY SAND - Medium Dense, Moist to Wet, Dark Yellowish Brown 10YR 4/4	SC
						10			
						12			

Notes:



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TEST PIT NO. 7

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 1:20 Date: 9/22/2016
Elevation: Total Depth: 10.0	GWL: Depth: 10.0	Completed Time: 1:30 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 1:35 Date: 9/22/2016
Drill Rig Type: Cat 590 BH	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
		39/16	/5.5	31.0		2		0.0-3.5 CLAYEY SAND - Dense, Dry, Pale Red 2.5YR 6/2	SC
			/3.1	34.0		4		3.5-5.3 SILTY SAND - Dense, Dry, Light Reddish Brown 2.5YR 6/4, w/ Mottling	SM
			/1.6	3.8		6		5.3-6.6 POORLY GRADED SAND - Dense, Dry, Reddish Brown 2.5 YR 5/4 w/ Mottling	SP
						8		6.6-8.5 SILTY SAND - Dense, Moist, Brown 10YR 5/3 w/ Mottling	SM
						10		8.5-10.0 CLAYEY SAND - Stiff, Wet, Dark Greenish Gray, Gley 1 4/1	SC
						12			

Notes:



TEST PIT NO. 8

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 2:00 Date: 9/22/2016
Elevation: Total Depth: 11.5	GWL: Depth: 10.0	Completed Time: 2:15 Date: 9/22/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 2:25 Date: 9/22/2016
Drill Rig Type: Cat 590	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
		44/25	/13.3	28.2		2		0.0-0.5 SOD 0.5-3.7 CLAYEY SAND - Dense, Dry, Gray 7.5 YR 6/1	SC
			/14.9	31.7		4		3.7-5.1 SILTY SAND - Dense, Moist, Light Olive Brown 2.5Y 5/4	SM
			/17.1	29.3		6		5.1-7.5 CLAYEY SAND - Medium Dense, Moist, Dark Yellowish Brown 10YR 4/4	SC
						8		7.5-10.0 SILTY SAND - Dense, Moist to Wet, Dark Greenish Gray Gley 1 4/1	SM
			/16.7	4.2		10		10.0-11.5 POORLY GRADED SAND - Medium Dense, Saturated, Greenish Gray Gley 1 5/1	SP
						12			

Notes:



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TEST PIT NO. 9

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 7:55 Date: 9/23/2016
Elevation: Total Depth:11.0	GWL: NA Depth:	Completed Time: 8:30 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 8:40 Date: 9/23/2016
Drill Rig Type: Cat 590 BH	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-05 SOD	
						2		0.5- 2.9 LEAN CLAY - Hard, Sl. Moist, Very Dark Gray 10YR 3/1 w/ Rootlets	CL
						4		2.9-9.9 SILTY SAND - Medium Dense, Sl. Moist, Brwon, 10YR 4/3	SM
						6			
						8			
						10			
						12		9.9-11.0 SILTY SAND - Dense, Moist to Wet, Black 10YR 2/1	SM

Notes:



TEST PIT NO. 10

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name. Lompa Ranch	Coordinates:	Started Time: 9:05 Date: 9/23/2016
Elevation: Total Depth:10.0	GWL: Depth: 8.9	Completed Time: 9:20 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 9:30 Date: 9/23/2016
Drill Rig Type: Cat 590	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-2.9 SANDY LEAN CLAY - Hard, Dry, Dark Brown 10YR 3/3	CL
			/4.8	21.8		4		2.9-5.9 SILTY SAND - Dense to Very Dense, Moist Dark Yellowish Brown 10YR	SM
			/7.7	17.6		6			
			/16.0	9.1		8		5.9-10.0 SILTY SAND-POORLY GRADED SAND Dense, Moist to Saturated, Strong Brown 7.5YR 4/6 w/ Mottling	SM
						10			
						12			

Notes:



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TEST PIT NO. 11

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 9:38 Date: 9/23/2016
Elevation: Total Depth: 10.0	GWL: NA Depth:	Completed Time: 10:00 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 10:15 Date: 9/23/2016
Drill Rig Type: Cat 590 BH	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-Value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-8.9 CLAYEY SAND - Medium Dense, Dry,Dark Grayish Brown 10YR 4/2	SC
						4			
						6			
						8			
						10		8.9-10.0 SILTY SAND -Medium Dense, Moist to Wet, Dark Greenish Gray Gley 1 4/1	SM
						12			

Notes:



TEST PIT NO. 12

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 10:20 Date: 9/23/2016
Elevation: Total Depth: 11.0	GWL: NA Depth:	Completed Time: 10:35 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 10:45 Date: 9/23/2016
Drill Rig Type: Cat 590	Excavtion Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-1.6 SANDY LEAN CLAY - Hard, Dry, Grayish Brown 10YR 5/2	CL
						4		1.6-4.5 SILTY SAND - Dense, Sl. Moist, Yellowish Brown 10YR 5/4 w/ Clay	SM
						6		4.5-11.0 SILTY SAND - Dense, Moist, Brown 10YR 4/3	SM
						8			
						10			
						12			

Notes:



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TEST PIT NO. 13

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 11:00 Date: 9/23/2016
Elevation: Total Depth: 10.0	GWL: Depth: 9.5	Completed Time: 11:20 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 11:25 Date: 9/23/2016
Drill Rig Type: Cat 590 BH	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
						2		0.5-1.5 SANDY LEAN CLAY -Hard, Dry, Yellowish Brown 10YR 5/4	CL
			/11.9	37.7		4		1.5-2.7 CLAYEY SAND - Dense, Moist, Grayish Brown 10YR 5/2	SC
			/5.9	17.4		6		2.7-7.4 SILTY SAND - Medium Dense, Moist, Dark Yellowish Brown 10YR 4/4	SM
			/15.9	22.6		8		7.4- 10.0 CLAYEY SAND - Medium Dense, Moist to Saturated, Dark Greenish Gray Gley 1 4/1	SC
			/16.5	35.1		10		w/ Thin Silty Sandy Lenses	
						12			

Notes:



TEST PIT NO. 14

Location of Test Pit: See Figure 3

Project No: 16-174.1	Client: Blackstone Development Group	Location: Carson City, NV
Project Name: Lompa Ranch	Coordinates:	Started Time: 11:40 Date: 9/23/2016
Elevation: Total Depth: 10.0	GWL: NA Depth:	Completed Time: 12:00 Date: 9/23/2016
Engineer/Geologist: J. Koch	Date/Time:	Backfilled Time: 12:05 Date: 9/23/2016
Drill Rig Type: Cat 590	Excavation Contractor: ARMAC	Operator: Jay

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	R-value	DEPTH	SAMPLE GRAPHIC LOG	DESCRIPTION	USCS
								0.0-0.5 SOD	
		27/8	/5.9	28.2		2		0.5-3.4 CLAYEY SAND - Dense, Dry, Brown 10YR 5/3	SC
			/15.8	51.8		4		3.4-4.9 SANDY LEAN CLAY -Hard, Dry, Yellowish Brown 10YR 5/4	CL
			/8.6	21.7		6		4.9-10.0 SILTY SAND - Medium Dense, Moist to Wet w/Clay	SM
						8			
						10			
						12			

Notes:

Project No: 16-174.1	Project Name: Lompa Ranch	Location: Carson City, NV
Boring No: BH-01	Coordinates:	Started Time: 9:00 am Date: 9/27/16
Elevation: Total Depth: 15.0'	GWL: Depth: 4.5'	Completed Time: 9:40 am Date: 9/27/16
Engineer/Geologist: J Koch	Date/Time:	Backfilled Time: 9:50 am Date:9/27/16
Drill Rig Type: CME 55	Drilling Contractor: Andreson	Driller: Jose

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD%/M	-200	DEPTH	SAMPLE GRAPHIC LOG	BLOWS	N	RECOVERY	DESCRIPTION	USCS
										0.0-0.5 SOD	
							12			0.5-7.5 CLAYEY SAND - Medium Dense, Dry to Saturated, Brown 10YR 5/3	CL
3.5	MC		/14.9				14	25			
							11				
5.0	SPT		105/24.9	19.8	5		2				
			/22.1	24.9			3	8			
							5				
8.5	MC						4				
							9	20		7.5-15.0 SILTY SAND - Medium Dense to Very Dense, Saturated, Very Dark Grayish Brown 10YR 3/2	SM
					10		11				
							11				
13.5	SPT		104/12.8	29.9			24	51			
							27				
					15						
					20						
					25						
					30						
					35						
					40						

Project No: 16-174.1	Project Name: Lompa Ranch	Location: Carson City, NV
Boring No: BH-04	Coordinates:	Started Time: 9:00 am Date: 9/27/16
Elevation: Total Depth: 41.0'	GWL: Depth: 13.0'	Completed Time: 9:40 am Date: 9/27/16
Engineer/Geologist: J Koch	Date/Time:	Backfilled Time: 9:50 am Date: 9/27/16
Drill Rig Type: CME 55	Drilling Contractor: Andreson	Driller: Jose

SAMPLE DEPTH	SAMPLER TYPE	LL/PI	DD/%M	-200	DEPTH	SAMPLE GRAPHIC LOG	BLOWS	N	RECOVERY	DESCRIPTION	USCS
1.0	BAG	23/13	/5.4	22.2						0.0-0.5 SOD	
										0.5-4.5 CLAYEY SAND -Medium Dense, Dry, Pale Brown 10YR 6/3	SC
3.5	SPT				5		5	25			
							9			4.5-9.5 CLAYEY SAND -Medium Dense, Dark Grayish Brown 10YR 4/2	SC
							16				
8.5	MC				10		2	11		9.5-10.8 CLAYEY SAND -Medium Dense, Moist to Wet, Olive Brown 2.5YR 4/4	SC
							7				
							4				
10.0	MC		/16.8	18.7	10		6	26		10.8-13.0 SILTY SAND - Medium Dense, Moist to Wet, Brown 10YR 4/3	SM
			101/14.7	11.6			11				
							15			13.0-15.0 POORLY GRADED SAND - Dense, Saturated, Dark Greenish Gray Gley 1 4/1	SP
15.0	SPT				15		8	23		15.0-23.0 CLAYEY SAND - Medium Dense, Saturated, Light Olive Brown 2.5 YR 5/4	CL
							9				
							14				
20.0	MC				20		5	23			
							9				
							14				
										23.0-27.0 CLAYEY SILT - Medium Dense, Sturated, Dark Grayish Brown 2.5YR 4/2	ML
25.0	SPT	NP	/24.5	71.2	25		5	14			
							7				
							7			27.0-40.5 SILTY SAND - Dense, Saturated, Olive Brown 2.5YR 4/3 w/ Clay	SM
30.0	SPT	NP	/17.4	13.1	30		20	45			
							24				
							21				
35.0	SPT				35		16	44			
							16				
							28				
40.0	SPT		129/27.1		40		15	100		40.5-41.0 POORLY GRADED SAND - Very Dense, Saturated, Dk Grayish Brown 2.5YR 4/2	SP
							50				

Project No: 16-174.1	Project Name: Lompa Ranch	Location: Carson City, NV
Boring No: BH-05	Coordinates: 11 @ 10:35	Started Time: 9:02 am Date: 9/28/16
Elevation: Total Depth: 31.5'	GWL: I Depth: 11.7'	Completed Time: 10:30 am Date: 9/28/16
Engineer/Geologist: G. Luce	Date/Time:	Backfilled Time: 10:40 am Date:9/28/16
Drill Rig Type: CME 55	Drilling Contractor: Andreson	Driller: Jose

SAMPLE DEPTH	SAMPLER TYPE	DRILLING RATE	LL/PI	DD/%M	-200	DEPTH	SAMPLE GRAPHIC LOG	BLOWS	N	RECOVERY	DESCRIPTION	USCS
											0.0-0.4 SOD	
2.5	SPT			96/8.1	41.1			4	12		0.4-4.0 CLAYEY SAND - Medium Dense, Dry, Grayish Brown 10YR 5/2 w/ rootlets	SC
								6				
5.0	MC			128/8.4	72.6	5		2	7		4.0-6.0 SANDY LEAN CLAY - Medium Stiff, Moist, Olive Brown 2.5 YR 4/3	CL
								2				
7.5	SPT			/29.2	59.1			5			6.0-9.0 CLAYEY SILT - Medium Dense, Moist, Grayish Brown 2.5 YR 5/2	ML
								11	15		9.0-14.5 CLAYEY SAND - Medium Dense, Moist to Saturated, Dark Gray 2.5 YR4/1	CL-SC
10.0	MC			127/10.0	50.3	10		4				
								3				
								5	21			
								16				
15.0	SPT			/30.1	55.9	15		4			14.5-17.0 SANDY SILT -Dense, Saturated, Dark Gray 2.5 YR 4/1 w/ FeOx Mottling	ML
								10	32			
								22				
20.0	SPT			96/11.4		20		19	50		17.0-23.0 SILTY SAND -Very Dense, Saturated, Grayish Brown 2.5YR 5/2 w/Fine Gravel	SM
								25				
								25				
25.0	SPT			/22.4	56.0	25		4			23.0-28.0 SANDY LEAN CLAY - Stiff, Saturated, V. Dk. Greenish Gray Gley 1 3/1	CL
								6	13			
								7				
30.0	SPT			/15.0	3.1	30		6	50		28.0-31.5 POORLY GRADED SAND - Dense, Saturated, Dark Greenish Gray Gley 1 4/1 w/ Fine Gravel	SP
								23				
								27				
						35						
						40						

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures.

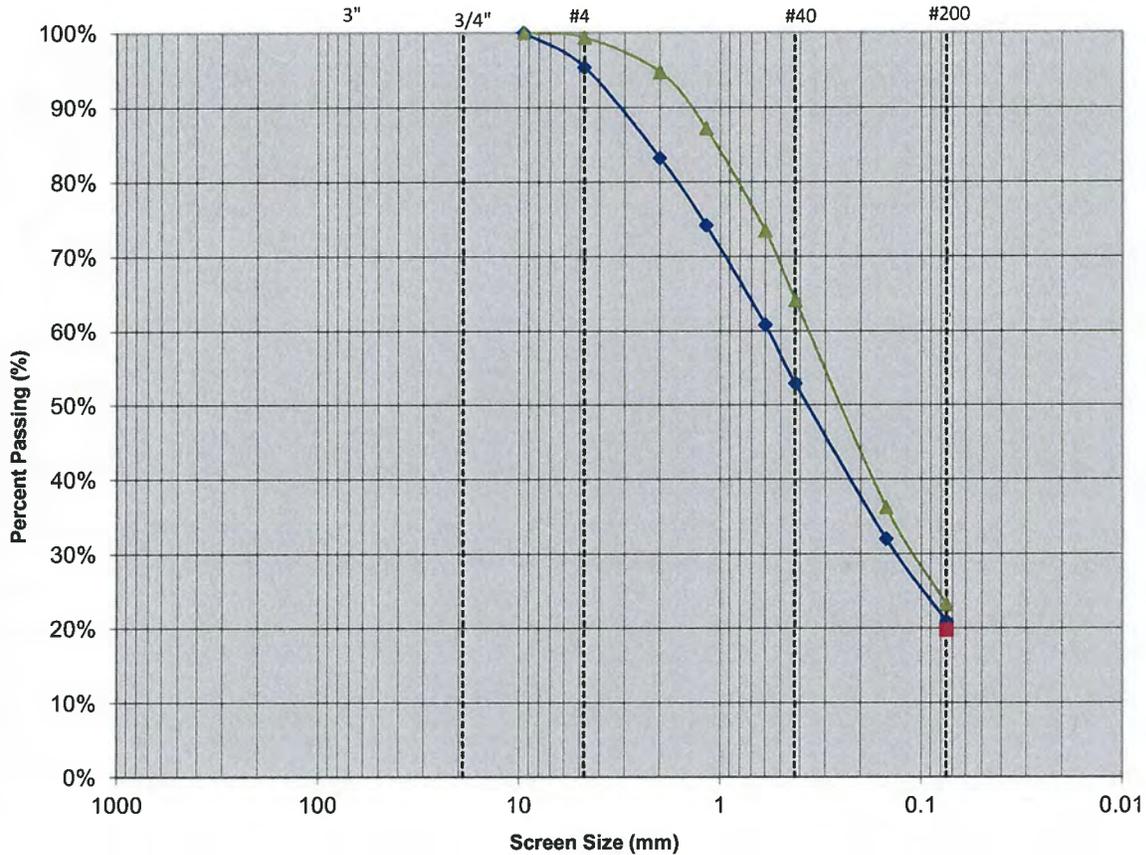
The remaining soil samples are stored in our laboratory for future reference and analysis if needed. Unless notified to the contrary, all samples will be disposed of 60 days from the date of this report.



4010 Technology, Unit D, Carson City, NV 89703
 Office: 775-883-1600 Fax: 775-888-9904

Project: Lompa Ranch Project
 Project No: 16-174.1
 Location: Lompa Ranch, Carson City NV
 Date Sampled: 9/27/2016

GRAIN SIZE DISTRIBUTION



Sample Number	USCS Classification	LL	PL	Cc	Cu
—●— BH2 6.0-6.5	Silty Sand, SM	NP	NP		
—■— BH2 8.8-9.8	Clayey Sand, SC	24	15		
—▲— BH2 @ 14-14.5	Silty Sand SM				

Sample Number	D100	D60	D30	D10	% Moisture	% Gravel	% Sand	% Silt/Clay
BH2 6.0-6.5					8.4%	4.6%	74.5%	20.9%
BH2 8.8-9.8					15.3%	0.0%	80.2%	19.8%
BH2 @ 14-14.5					13.5%	0.6%	76.2%	23.2%

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