Carson City Planning Division
108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180 – Hearing Impaired: 711
planning@carson.org
www.carson.org/planning

Date: April 12, 2018

Karen Downs
Manhard Consulting
9850 Double R Blvd, Suite 101
Reno, NV 89521

SITE INFORMATION:

Location:	South of Astro Drive
APN:	008-521-54, -55, -89, 90, 008-522-16, -18, 008-531-59, -60
Master Plan Designation:	Mixed Use Residential
Zoning:	General Industrial (GI)
Parcel size:	112.69 acres
Subject:	CSM-18-035: Plateau

PROJECT DESCRIPTION: A Conceptual Subdivision Map for 339 single family lots on 81 acres, an 11 acre multi-family development, 3 acres of General Commercial, and 17 acres of open space.

The following is a summary of the comments you received at the Conceptual Review meeting held on March 20, 2018 regarding Plateau.

PLANNING DIVISION – Contact Hope Sullivan, Planning Manager

1. It is understood that a re-zoning will be pursued at the time of tentative map submittal. If that does not occur, a Special Use Permit for a residential use in a non-residential zone will be required.

2. As part of the tentative map application, please complete Appendix C: Interim Mixed-Use Evaluation Criteria from the Master Plan.

3. Complementary uses such as retail/office should be ten to thirty percent of the land area.

4. The plans should demonstrate residential and non-residential use intergration.

5. The development should contain a mix of housing types that is appropriate to its scale, location, and land use.

6. Vehicular and pedestrian ways should provide logical and convenient connections between proposed uses and to adjacent existing and proposed uses.

7. Public spaces must be easily accessible to pedestrians and the surrounding community.

PARKS AND RECREATION- Contact Vern Krahn, Park Planner, 887-2262 ext 1006

1. This project area was not included in the adopted 2006 Carson City Parks and Recreation Master Plan's (PRMP) Neighborhood Park Analysis (Appendix 9.3) because the property was zoned industrial. The Park and Recreation Master Plan analysis was only completed within residential or mixed use zoning throughout the City. If the Board of Supervisors approves the proposed change of zoning (land use) from industrial to mixed-use residential, the Parks and Recreation Commission should review the project and provide an opportunity for public input regarding recreational needs, opportunities, and use characteristics for any parks and recreation components and maintenance responsibilities within the proposed development.

2. The plan identifies APN 010-691-04 & 008-531-03 to the east and south of the development as Bureau of Land Management Property, but they are actually owned by Carson City. The land to the east is the future site for a disc golf course complex with anticipated construction in the spring of 2018. Plans should be revised to reflect the proper land ownership.

3. The development will be subject to Residential Construction Tax (RCT), compliant with Nevada Revised Statutes and Carson City Municipal Code.

4. All open space and common area landscaping within the development shall be owned and maintained by a Homeowners/Maintenance Association or similar instrument in perpetuity.

5. The applicant will be required to incorporate "Best Management Practices" into their construction documents and specifications to reduce the spread of noxious weeds. The Parks, Recreation & Open Space Department is willing to assist the applicant with this aspect of their project.

6. The applicant will provide a disclosure in sale documents or similar instruments acknowledging the pre-existence of the City's Land Fill and the Rifle and Pistol Range.

7. The design layout for the subdivision shall provide pedestrian access points to the adjacent City property. Due to the undulating topography and steep slopes, pedestrian access points shall be reviewed and approved by the Parks, Recreation and Open Space Department.

8. The applicant needs to address incorporating bike lanes into the development's street

system network that connects to U.S Highway 50 (East) and Deer Run Road.

9. The applicant will be required to maintain adequate defensible space for fire prevention on the subject property. Compliance with this condition shall be determined by the Carson City Fire Department.

10. All drainage facilities on site will be the applicant's responsibility to maintain into perpetuity.

11. All site clearing/grubbing, grading, and construction activities, including construction worker's parking must occur on the applicants' property, unless permissible to private property owners. No construction activities shall occur on City property. The applicant shall provide protective fencing along the property line to delineate public lands from private property during construction.

12. If it is determined that the development's water system is required to connect to existing water tanks on the City's land, the applicant shall be required to revegetate the disturbed area to its previous condition. Plant material, application method including temporary irrigation, weed control and fencing shall be reviewed and approved by the Parks, Recreation and Open Space Department.

ENGINEERING AND UTILITIES - Contact Stephen Pottey, Project Manager

1. 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. This project is near a zone split, so the analysis must look at receiving water from both zones. One of the zones has low pressure, 40 psi, which meets minimum pressure requirements, but may not be sufficient for this size project when due to head losses, so head losses must be analyzed. Please contact Tom Grundy, P.E. at (775) 283-7081 for fire flow test data.
    - There may not be sufficient water pressures to feed the entire project from the 4880 zone. A connection from the east tank may be necessary.
    - The water main extension proposed from Centennial Park Dr. needs to be on the south side of Highway 50, not the 12" main on the north side of Highway 50.
    - There appears to be potential that the water main in Morgan Mill Road will have to be upsized.
    - Please supply a copy of the 2015 Integrated Water Supply and Facility Plan referenced.
2. A wet stamped sewer analysis must be submitted that includes addressing the effect of flows on the existing City system. See section 15.3.2 of CCDS.
    - The sewer main analysis for this subdivision must analyze the remaining capacity of the Morgan Mill Lift Station against the demand imposed by the subdivision.

- The main at Hwy50 and Airport Road heading south down Airport is at capacity. This main will need to be upsized prior to this project connecting to the sewer system.

3. Storm drain infrastructure must be installed with this subdivision and extended to the Carson River.
4. Natural drainages that enter the subdivision need to be tied into the underground storm drain system at the subdivision, and access must be provided for maintenance.
5. Streets that enter the subdivision and streets that have commercial and/or multifamily development frontages must have sidewalk on both sides of the street. However, because the subdivision is remotely situated with little developable land around it, sidewalks may not be required on both sides of the street, mainly for internal streets. Applicant will need to ensure ADA requirements are met.
6. Detention basins must have metered outlets at the bottom and must have overflows that are protected from erosion. Basins and storm drains must be accessible for private/public maintenance.
7. The detention basin location must be analyzed by a geotechnical engineer.
8. A base flood elevation study has not been completed for the area. A study must be done to determine the base flood elevation(s).
9. Please gain NDOT approval of the HWY 50 intersection concept and spacing prior to the tentative map if practicable, applicant is encouraged to include City staff in discussions.
10. Provisions must be made to allow trucks to access Drako Wy from Hwy 50 without a long detour and without routing them through the neighborhood and access to existing properties along HWY 50 needs to be noted in traffic impact study.
11. Driveways must be able to accommodate minimum required parking without tandem parking, and each "space" must be at least 18'-6" long.
12. The project impact memo calls for low impact development. Carson City promotes the use of low impact development practices.
13. With the tentative map, the applicant must provide data for the current available capacity of sewer and water mains compared to the proposed demand imposed by the development.
14. Water mains must be extended to and through the subdivision. These mains must be looped such that no dead end line has more than 15 services.
15. The scope of the traffic impact study must meet the requirements of Title 18, Chapter 12.13, and be approved by the Carson City Transportation Department for the tentative map. Please contact Dirk Goering, Senior Transportation Planner for scoping, (775) 283-7431.
16. Some areas along the perimeter of the subdivision may have slopes higher than 15%. Please provide a slope map with the tentative map to determine if any of the proposed lots have an average slope greater than 15%.
17. The tentative map must meet the requests made in the NDEP Limited Phase II Environmental Site Assessment Report and Remedial Action Plan memo dated

November 30, 2017. If a revised RAP is submitted to NDEP and used for the development, the tentative map must meet any applicable requests by NDEP for that RAP.

18. Additionally, the developer must hire a certified environmental manager to supervise the remediation required by the RAP including excavation in landfill areas and disposal.

19. 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.

20. All construction work must be to Carson City Development Standards (CCDS) and meet the requirements of the Carson City Standard Details.

21. Addresses for units will be provided during the building permit review process. Please provide a list of desired street names with the tentative map.

22. Fresh water must be used for Dust control. Contact Rit Palmer at Public Works at 283-7382 for more information.

23. 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.

24. An erosion control plan meeting section 13 of CCDS will be required in the plan set.

25. New electrical service must be underground.

26. Any work performed in the street right of way will require a traffic control plan and a time line 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.

27. Please show all easements on the construction drawings.

28. A Technical Drainage Study meeting the requirements of section 14 of the Carson City Development Standards must be submitted with the permit and plans.

29. A Construction Stormwater Permit from the Nevada Division of Environmental Protection (NDEP) will be required.

30. A Dust Control Permit from NDEP will be required.

31. A wet stamped traffic study must be included with the first submittal. See section 12 of CCDS.

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.

FIRE DEPARTMENT - Contact Dave Ruben, 775-283-7153

1. Project must comply with the 2012 IFC and northern Nevada fire code amendments as adopted by Carson City.

2. The project is in the identified wildland urban interface area of Carson City and must comply with the 2012 IWUIC.

3. Hydrants must be provided per Appendix B and Appendix C of the 2012 IFC.

4. The 17 acre open space plot must be maintained by the HOA and recorded.

5. The project will require a vegetation management plan be submitted for review.

6. Per Title 18 Development Standards, Division 12.6, unobstructed fire protection equipment access easements not less than twenty feet (20') wide will be dedicated from the public street to the subdivision or development boundary as determined by the fire chief. Permanent emergency access will be designed and constructed to comply with the requirements of Section 12.12.13 Emergency Access Streets.

7. The access easement points will be the end of the cul-de-sac between lots 281-282, and the drainage easement access road between lots 305-306.

If the proposed Subdivision is anticipating having model homes and or temporary sales office on site, a Special Use Permit will be required.

Comments presented in this letter may not include all the requirements or conditions which may be placed on the project at the time of final review by the Planning Commission and Board of Supervisors.

You may also note comments provided by various city staff at the conceptual review meeting that may not have been included in any written comments. If you have any questions, please feel free to contact me at 775-283-7922.

I look forward to continuing to work with you on your project.

Sincerely,

Hope Sullivan
Planning Manager

cc: CSM-18-035
Conceptual Review Committee

CARSON CITY
Capital of Nevada

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Secured Tax Inquiry Detail for Parcel # 008-521-54

Property Location: CARABOU DR & UNICORN DR
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017521
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year					
08/20/18	23.75		23.75	23.75	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0
Abatement Amount			.21	.26	1.07

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Secured Tax Inquiry Detail for Parcel # 008-521-55

Property Location: UNICORN DR
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017522
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
08/20/18	35.00		35.00	35.00	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0
Abatement Amount			.24	.31	1.51

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Secured Tax Inquiry Detail for Parcel # 008-521-89

Property Location: DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017523
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
08/20/18	23.03		23.03	23.03	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0
Abatement Amount	1.07	1.91	2.11	2.16	2.91

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Secured Tax Inquiry Detail for Parcel # 008-521-90

Property Location: DRAKO WY / CARABOU DR
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017524
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
Current Year					**No Taxes Owing**
08/20/18	13.91		13.91	13.91	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0
Abatement Amount	9.84	10.35	10.37	10.38	10.86

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Secured Tax Inquiry Detail for Parcel # 008-522-16

Property Location: DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017525
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
08/20/18	18.50		18.50	18.50	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0

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Secured Tax Inquiry Detail for Parcel # 008-522-17

Property Location: DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017526
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
08/20/18	18.50		18.50	18.50	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0

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Secured Tax Inquiry Detail for Parcel # 008-522-18

Property Location: DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017527
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

Current Year					**No Taxes Owing**
08/20/18	18.15		18.15	18.15	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0

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Secured Tax Inquiry Detail for Parcel # 008-531-59

Property Location: MORGAN MILL RD / DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017528
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

No Taxes Owing

Current Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due
08/20/18	16.25		16.25	16.25	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0

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Secured Tax Inquiry Detail for Parcel # 008-531-60

Property Location: MORGAN MILL RD / DRAKO WY
Billed to: TAHOE IV LLC
P O BOX 1724
CARSON CITY, NV 89702-0000

Tax Year: 2018-19
Roll #: 017529
District: 2.1
Tax Service:
Land Use Code: 150

Code Table

Outstanding Taxes:

Prior Year	Tax	Penalty/Interest	Total	Amount Paid	Total Due

Current Year					**No Taxes Owing**
08/20/18	16.25		16.25	16.25	.00
10/01/18					
01/07/19					
03/04/19					

Payment Cart | History

Additional Information

	2018-19	2017-18	2016-17	2015-16	2014-15
Tax Rate	3.5700	3.5700	3.5200	3.5200	3.5400
Tax Cap Percent	4.2	2.6	.2	3.2	3.0

PLATEAU Hwy 50 LOTS

PRELIMINARY REPORT

Assessor's Parcel No.:	008-521-54, 55, 89, 90 008-522-16, 17, 18 008-531-59, 60	Order No.:	094712-DVS
Property Address:	Vacant Land Carson City NV, 89701	Escrow Officer Office Location:	Dana Von Stetina Western Title Company, LLC Carson Office 2310 S. Carson St, Suite 5A Carson City NV
Buyers/Borrowers:	DGD Development GP	Reference No.:	

In response to the above referenced application for a Policy of Title Insurance, **Westcor Land Title Insurance Company** hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein, hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms. The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth on the attached cover. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth on the attached cover. Copies of the Policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of 01/24/2018 at 07:30 am

Western Title Company, an authorized agent

By:

Bonnie Graybill

Bonnie Graybill

The form of Policy of Title Insurance contemplated by this report is:

Report Only

The estate or interest in the land hereinafter described or referred to covered by this Report is:

Fee Simple

Title to said estate or interest at the date hereof is vested in: **Tahoe IV, LLC, a Nevada limited liability company**

Initial Initial Initial Initial

Please read the exceptions shown or referred to below and the Exceptions and Exclusions set forth on the attached cover of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered. It is important to note that this Preliminary Report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

Order No. **094712-DVS**

EXCEPTIONS

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. The lien, if any, of supplemental taxes, assessed pursuant to the provision of the Nevada Revised Statutes.

2. Any additional liens which may be levied by reason of said premises being within the**Carson City Water and Sewer District.**

3. Rights of way for any existing roads, trails, canals, streams, ditches, drain ditches, pipe, pole or transmission lines traversing said premises.

4. Water rights, claims or title to water, whether or not recorded.

5. Easement to construct, operate and maintain electric facilities, and incidental purposes, granted to **Sierra Pacific Power Company**, by **an instrument**, recorded on **February 14, 1962, in Book 97, Page 44** as Document No. **47617**, Miscellaneous Records of Carson City, Nevada.

6. Easement to construct, operate and maintain electric facilities, and incidental purposes, granted to **Sierra Pacific Power Company**, by **an instrument**, recorded on **September 6, 1966, in Book 55, Page 127** as Document No. **10560**, Official Records of Carson City, Nevada.

7. Easement to construct, operate and maintain electric facilities, and incidental purposes, granted to **Sierra Pacific Power Company**, by **an instrument**, recorded on **December 16, 1966, in Book 58, Page 306** as Document No. **15134**, Official Records of Carson City, Nevada.

8. Reservations and Rights-of-Way as contained in the Patent from the **United States of America**, recorded on **January 2, 1969, in Book 82, Page 69** as Document No. **47046**, Official Records of Carson City, Nevada.

9. An easement as set forth in an instrument, and incidental purposes, recorded on **November 12, 1974, in Book 165, Page 260** as Document No. **4399**, Official Records of Carson City, Nevada.

10. Matters as disclosed on Record of Survey filed in the office of the County Recorder of Carson City, State of Nevada on **October 22, 1980**, as Document No. **99675**. Survey Map No. **849**.

11. Easements, dedications, reservations, provisions, recitals, building set back lines, and any other matters as provided for or delineated on Parcel Map No. **880**, filed in the office of the County Recorder of Carson City, State of Nevada, on **March 27, 1981**, as Document No. **3079**. Reference is hereby made to said map for particulars. If one is not included herewith, one will be furnished upon request.

12. Easements, dedications, reservations, provisions, recitals, building set back lines, and any other matters as provided for or delineated on Parcel Map No. **1824**, filed in the office of the County Recorder of Carson City, State of Nevada, on **August 28, 1990**, as Document No. **104795**. Reference is hereby made to said map for particulars. If one is not included herewith, one will be furnished upon request.

Initial **Initial** **Initial** **Initial**

13. A Deed of Trust to secure an indebtedness in the amount of **$2,000,000.00**, dated **August 1, 1996**, executed by **J. S Development Company, a Nevada general partnership, as to Parcel 1; John C. Serpa, John C. Serpa, an unmarried man, as to Parcel 2; John C. Serpa, a married man as his sole and separate property, as to Parcels 3, 4, 5 and 6; and John Serpa, as to Parcel 7**, as Trustor, to **First American Title Company of Nevada**, as Trustee, in favor of **Pioneer Citizens Bank of Nevada**, as Beneficiary, recorded on **August 19, 1996**, as Document No. **192868**, Official Records of Carson City, Nevada. Loan No.: **110000045**

Said Deed of Trust was re-recorded by an instrument, recorded on **October 6, 2000**, as Document No. **253574**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **John C. Serpa; J. S. Development Company, a Nevada General Partnership; and Pioneer Citizens Bank of Nevada**, recorded on **March 12, 1998**, as Document No. **214686**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **John C. Serpa; J. S. Development Company, a Nevada General Partnership; and Pioneer Citizens Bank of Nevada**, recorded on **October 25, 1999**, as Document No. **241620**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **John C. Serpa; and Nevada State Bank**, recorded on **October 16, 2000**, as Document No. **253866**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **John C. Serpa; and Nevada State Bank**, recorded on **July 12, 2005**, as Document No. **339456**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **John C. Serpa; and Nevada State Bank**, recorded on **May 31, 2007**, as Document No. **368311**, Official Records of Carson City, Nevada.

A Substitution of Trustee under said Deed of Trust which names **Western Title Company, Inc.**, as substituted Trustee, recorded on **November 10, 2008**, as Document No. **384219**, Official Records of Carson City, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **J.S. Devco Limited Patnership, a Nevada limited partnership, John C. Serpa and Nevada State Bank**, recorded on **March 10, 2010**, as Document No. **398650**, Official Records of Carson City County, Nevada.

Said document was re-recorded on **March 11, 2010**, as Document No. **398659**, Official Records of Carson City County, Nevada.

An agreement to modify the terms and provisions of said Deed of Trust as therein provided, executed by **J.S. Devco Limited Partnership, a Nevada limited partnership, John C. Serpa and Nevada State Bank**, recorded on **March 29, 2012**, as Document No. **420813**, Official Records of Carson City County, Nevada.

An Assignment of the beneficial interest under said Deed of Trust which names **Horse Creek, LLC**, as Assignee, recorded on **March 29, 2012**, as Document No. **420814**, Official Records of Carson City County, Nevada.

A Substitution of Trustee under said Deed of Trust which names **Stewart Title Company**, as substituted Trustee, recorded on **April 1, 2013**, as Document No. **432781**, Official Records of Carson City County, Nevada.

A Notice of Default and Election to Sell under the terms of said Deed of Trust, executed by **Horse Creek, LLC**, recorded on **April 1, 2013**, as Document No. **432782**, Official Records of Carson City County, Nevada.

A Notice of Trustee's Sale under said Deed of Trust, executed by **Stewart Title Company**, recorded on **July 10, 2013**, as Document No. **436221**, Official Records of Carson City County, Nevada. Date of Sale: **August 1, 2013**.

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14. A Hazardous Substances Certificate and Indemnity Agreement executed by and between the parties named therein, subject to the terms, covenants and conditions therein provided, dated **August 1, 1996**, by and between **John C. Serpa; J.S. Development Company, a Nevada general partnership; and Pioneer Citizens Bank of Nevada,** recorded on **August 19, 1996**, as Document No. **192869**, Official Records of Carson City, Nevada.

15. Covenants, conditions and restrictions as set forth in an instrument, recorded on **April 24, 1998**, as Document No. **216548**, Official Records of Carson City, Nevada; but omitting any covenants or restrictions, if any, including, but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law.

16. The effect of a Right-of-Way Grant, dated **December 9, 2004**, by **United States Department of the Interior Bureau of Land Management**, to **Nevada Commission for the Reconstruction of the V & T Railway**, recorded on **January 10, 2005**, as Document No. **330468**, Official Records of Carson City, Nevada.

17. A certified copy of a Judgment in the amount of **$866,165.33** plus interest, costs, attorney fees and any other amounts due from **Chase Millennium, LLC, a Nevada limited liability company, et al**, as Debtor, in favor of **First Financial Bank, National Association**, as Creditor, in Carson City County of the **In the Second Judicial District Court of the State of Nevada in and for the County of Washoe**, as Case No. **CV09-01516**, recorded on **April 11, 2011**, as Document No. **410913**, Official Records of Carson City County, Nevada.

18. A certified copy of a Judgment in the amount of **$1,203,183.72** plus interest, costs, attorney fees and any other amounts due from **John C. Serpa, individually and as Trustee of the John C. Serpa Trust, et al**, as Debtor, in favor of **First Financial Bank, N.A.**, as Creditor, in Carson City County of the **In the Second Judicial District Court of the State of Nevada in and for the County of Washoe**, as Case No. **CV11-01205**, recorded on **December 31, 2016**, as Document No. **460770**, Official Records of Carson City County, Nevada.

    A Satisfaction of Judgment as to Lane Defendants Only issued out of said action was recorded on **July 31, 2017**, as Document No. **477298**, Official Records of Carson City County, Nevada.

19. Rights of parties in possession.

20. The requirement that an Owner's Declaration/Affidavit be completed, and supplied for review prior to the issuance of a policy of title insurance.

21. Prior to the issuance of any policy of title insurance, the following must be furnished to the Company with respect to Tahoe IV, LLC, a Nevada limited liability company:

    This Company will require a copy of the articles of organization for Tahoe IV, LLC, a Nevada limited liability company, and any certificates of amendments filed with the Secretary of State, together with copies of any management agreements or operating agreements, together with a current list of all members of said limited liability company.

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$23.76** have been paid in full. **(APN 008-521-54)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$35.01** have been paid in full. **(APN 008-521-55)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$22.20** have been paid in full. **(APN 008-521-89)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$13.41** have been paid in full. **(APN 008-521- 90)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$18.51** have been paid in full. **(APN 008-522-16)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$18.51** have been paid in full. **(APN 008-522-17)**

    NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$18.16** have been paid in full. **(APN 008-522-18)**

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NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$16.26** have been paid in full. **(APN 008-531-59)**

NOTE: Taxes for the fiscal year **2017-2018**, in the amount of **$16.26** have been paid in full. **(APN 008-531-60)**

THE FOLLOWING NOTES ARE FOR INFORMATION PURPOSES ONLY:

WESTERN TITLE COMPANY RESERVES THE RIGHT TO AMEND THIS PRELIMINARY TITLE REPORT AT ANY TIME.

******ATTENTION LENDERS******

THE 100 ENDORSEMENT IS NO LONGER BEING OFFERED. THE REPLACEMENT ALTERNATIVE IS THE ALTA 9.10-06 AND IS NOW REFLECTED IN THE ALTA SUPPLEMENT IN THE PRELIMINARY TITLE REPORT.

NOTE: A search of the Official Records for the county referenced in the above order number, for the **24** months immediately preceding the date above discloses the following instruments purporting to convey the title to said land: **None**

NOTE:

If any current work of improvements have been made on the herein described real property (within the last 90 days) and this Report is issued in contemplation of a Policy of Title Insurance which affords mechanic lien priority coverage (i.e. ALTA POLICY); the following information must be supplied for review and approval prior to the closing and issuance of said Policy: (a) Copy of Indemnity Agreement; (b) Financial Statements; (c) Construction Loan Agreement; (d) If any current work of improvements have been made on the herein described real property Building Construction Contract between borrower and contractor; (e) Cost breakdown of construction; (f) Appraisal; (g) Copy of Voucher or Disbursement Control Statement (if project is complete).

NOTE: This report makes no representations as to water, water rights, minerals or mineral rights and no reliance can be made upon this report or a resulting title policy for such rights or ownership.

NOTE: Notwithstanding anything to the contrary in this Report, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06) or ALTA Loan Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Report. If the policy does contain an arbitration clause, and the Amount of Insurance is less than the amount, if any, set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

NOTE: The map, if any, attached hereto is subject to the following disclaimer:

> WESTERN TITLE COMPANY does not represent this plat as a survey of the land indicated hereon, although believed to be correct, no liability is assumed as to the accuracy thereof.

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Legal Description

All that certain real property situate in Carson City, State of Nevada, described as follows:

PARCEL 1:

The North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 12, Township 15 North, Range 20 East, M.D.B.&M., Carson City, Nevada.

EXCEPTING THEREFROM those portions as described in instruments recorded June 5, 1981 in Book 301, Page 379 as Document No. 4610, and November 8, 2002 as Document No. 286658, Official Records of Carson City, Nevada.

FURTHER EXCEPTING THEREFROM that portion lying northerly of Morgan Mill Road and westerly of Drako Way as described in instrument recorded June 5, 1981 in Book 301, Page 379 as Document No. 4610, Official Records of Carson City.

PARCEL 1A:

All those certain parcels as described in the Abandonment recorded October 18, 2002 as Document No. 285463, Official Records of Carson City, Nevada.

Reference is further made to the hereinabove described property on Record of Survey filed for record in the office of the Carson City Recorder on October 22, 1980 in Book 4 of Maps, Page 849 as Document No. 99675.

PARCEL 2:

The North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 12, Township 15 North, Range 20 East, M.D.B.&M., Carson City, Nevada.

EXCEPTING THEREFROM those portions as described in instruments recorded June 5, 1981 in Book 301, Page 379 as Document No. 4610, and November 8, 2002 as Document No. 286658, Official Records of Carson City, Nevada.

FURTHER EXCEPTING THEREFROM that portion lying southerly of Morgan Mill Road and easterly of Drako Way as described in instrument recorded June 5, 1981 in Book 301, Page 379 as Document 4610, Official Records of Carson City.

Reference is further made to the hereinabove described property on Record of Survey filed for record in the office of the Carson City Recorder on October 22, 1980 in Book 4 of Maps, Page 849 as Document No. 99675.

PARCEL 3:

Parcels A and B as shown on Map of Division into Large Parcels for JOHN C. SERPA, filed for record in the office of the Carson City Recorder on March 27, 1981 in Book 4 of Maps, Page 880 as Document No. 3079, Official Records of Carson City, State of Nevada.

EXCEPTING THEREFROM those portions as described in instruments recorded November 8, 2002 as Document No. 286659 and November 8, 2002 as Document No. 286660, Official Records of Carson City, Nevada.

PARCEL 4:

Parcels B, C and D as shown on the Parcel Map for JOHN C. SERPA, filed in the office of the Carson City Recorder on August 28, 1990 in Book 6, Page 1824 as Document No. 104795, Official Records of Carson City, State of Nevada.

Assessor's Parcel Number(s):
008-521-54, 55, 89, 90

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008-522-16, 17, 18
008-531-59, 60

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Exhibit A (Revised 02-07-14)

CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

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

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.

   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.

2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.

3. Defects, liens, encumbrances, adverse claims or other matters:

   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;

   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;

   (c) resulting in no loss or damage to the insured claimant;

   (d) attaching or created subsequent to Date of Policy; or

   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.

4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.

5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.

6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

_____ Initial _____ Initial _____ Initial _____ Initial

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

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

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.

3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.

5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.

6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

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

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:

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

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.

3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.

4. Risks:

   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.

5. Failure to pay value for Your Title.

6. Lack of a right:

_____ Initial _____ Initial _____ Initial _____ Initial

a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
b. in streets, alleys, or waterways that touch the Land.

This Exclusion does not limit the coverage described in Covered Risk 11 or 21.

7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.

8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.

9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

· For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	**$ 10,000.00**
Covered Risk 18:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	**$25,000.00**
Covered Risk 19:	1.00 % of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	**$25,000.00**
Covered Risk 21:	1.00 % of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	**$ 5,000.00**

2006 ALTA LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

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

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

(i) the occupancy, use, or enjoyment of the Land;
(ii) the character, dimensions, or location of any improvement erected on the Land;
(iii) the subdivision of land; or
(iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

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(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.

3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.

5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.

6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is

   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.

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

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

Except as provided in Schedule B - Part II, This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

PART I

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

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

2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.

_____ Initial _____ Initial _____ Initial _____ Initial

5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

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

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;

   (ii) the character, dimensions, or location of any improvement erected on the Land;

   (iii) the subdivision of land; or

   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.

3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

   (c) resulting in no loss or damage to the Insured Claimant;

   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or

   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.

4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is

   (a) a fraudulent conveyance or fraudulent transfer; or

   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.

5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

_____ Initial _____ Initial _____ Initial _____ Initial

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

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

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

2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.

5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

7. Variable exceptions such as taxes, easements, CC&R's, etc. shown here.

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (12-02-13)

EXCLUSIONS FROM COVERAGE

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

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;

   (ii) the character, dimensions, or location of any improvement erected on the Land;

   (iii) the subdivision of land; or

   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.

3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

   (c) resulting in no loss or damage to the Insured Claimant;

   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or

Initial _____ Initial _____ Initial _____ Initial _____

(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.

5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.

6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.

7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.

8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is

   (a) a fraudulent conveyance or fraudulent transfer, or

   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.

10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.

11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

PRIVACY POLICY

The Financial Services Modernization Act recently enacted by Congress has brought many changes to the financial services industry, which includes insurance companies and their agents. One of the changes requires Western Title Company, LLC, a Nevada limited liability company, to explain to you how we collect and use customer information.

Western Title Company has always and will continue to adhere to strict standards of confidentiality when it comes to protecting the privacy, accuracy and security of customer information provided to us.

PERSONAL INFORMATION WE MAY COLLECT:

Western Title collects information about you (for instance, your name, address and telephone number), and information about your transaction, including the identity of the real property you are buying or refinancing. We obtain copies of deeds, notes or mortgages that may be involved in the transaction. We may obtain this information directly from you or from the lender, attorney, or real estate broker or agent that you have chosen. When we provide escrow, or settlement services, or mortgage loan servicing, we may obtain your social security number, along with other information from third parties including appraisals, credit reports, land surveys, loan account balances, and sometimes your bank account information in order to facilitate your transaction.

HOW WE USE THIS INFORMATION:

_____ Initial _____ Initial _____ Initial _____ Initial

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Western Title Company, LLC, a Nevada limited liability company
Attention: Operations Manager
P.O. Box 3059
Reno, NV 89505

Western Title Company, LLC, is an agent for Chicago Title Insurance, Westcor Land Title Insurance Company, Fidelity National Title Insurance Company, Old Republic National Title Insurance Company, Commonwealth Land Title, and Stewart Title Guaranty Company. You may receive additional Privacy Policy information from these companies.

_____ Initial _____ Initial _____ Initial _____ Initial

PORTION SECTION 1 & SECTION 2
T.15 N., R.20 E., M.D.B. & M.

BLOCK 521

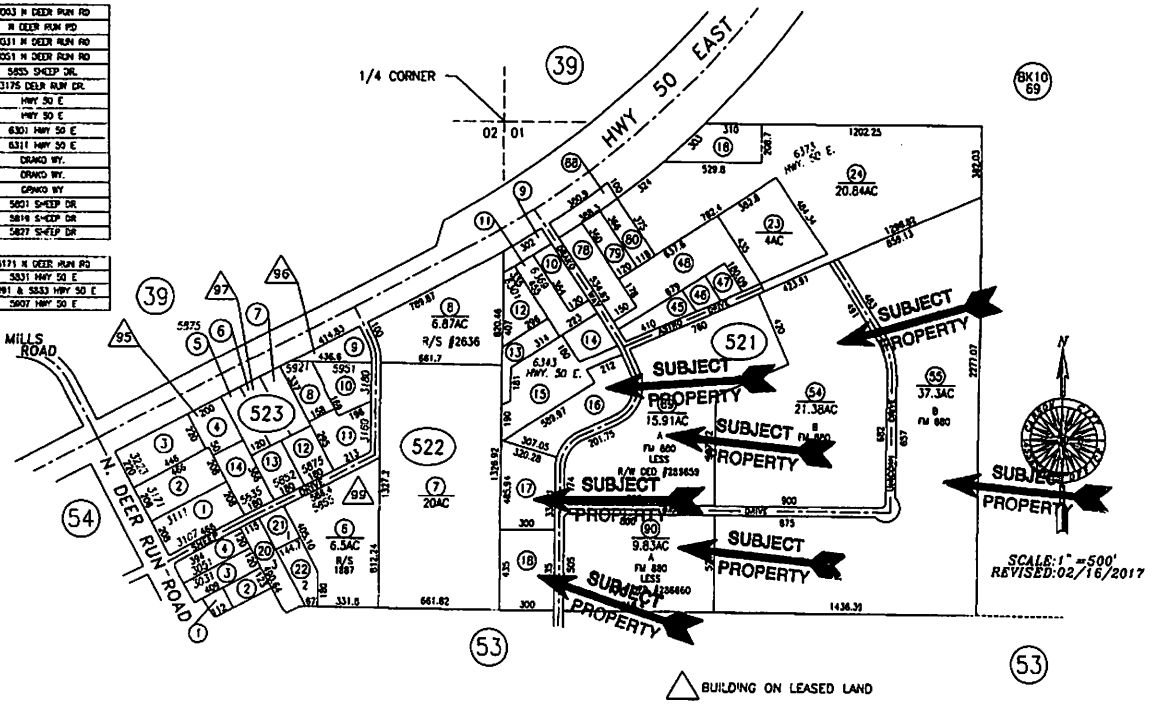
APN	RECORD	ADDRESS
008-521-45	A PM859	ASTRO DR
008-521-46	B PM859	ASTRO DR
008-521-47	C PM859	6569 ASTRO DR
008-521-48	D PM859	6311 & 6321 HWY 50 E
008-521-78	R/S 2097 LESS /154446	HWY 50 E
008-521-79	R/S 2097 LESS /154446	6433 HWY 50 E
008-521-80	R/S 2097 LESS /154446	6441 HWY 50 E
008-521-85	R/W ABAN /154446	HWY 50 E

BLOCK 522

008-522-01	A PM756	3093 N DEER RUN RD
008-522-02	B PM756	N DEER RUN RD
008-522-03	R/W ABAN 229443	3031 N DEER RUN RD
008-522-04	R/W ABAN 229443	3051 N DEER RUN RD
008-522-06	LL ADJ /116004	5833 SHEEP DR.
008-522-07	PM756	3175 DEER RUN DR.
008-522-08	R/S 2636	HWY 50 E
008-522-09	R/W ABAN /154446, R/S 2636	HWY 50 E
008-522-12	A PM686	6301 HWY 50 E
008-522-13	B PM686	6311 HWY 50 E
008-522-16	B PM1824	DRAKO WY.
008-522-17	C PM1824	DRAKO WY.
008-522-18	D PM1824	DRAKO WY
008-522-20	3 PM2629	5801 SHEEP DR
008-522-21	1 PM2326	5819 SHEEP DR
008-522-22	2 PM2629	5827 SHEEP DR

BLOCK 523

008-523-02	A PM540	3171 N DEER RUN RD
008-523-04	LEASE /484071 008-523-95	5831 HWY 50 E
008-523-08	LEASE /422491 008-523-97	5691 & 5833 HWY 50 E
008-523-07	DEED /648036	5807 HWY 50 E
008-523-09	LEASE /433454 008-523-96	
008-523-12	3 PM579	
008-523-13	2 PM579	
008-523-14	1 PM579	

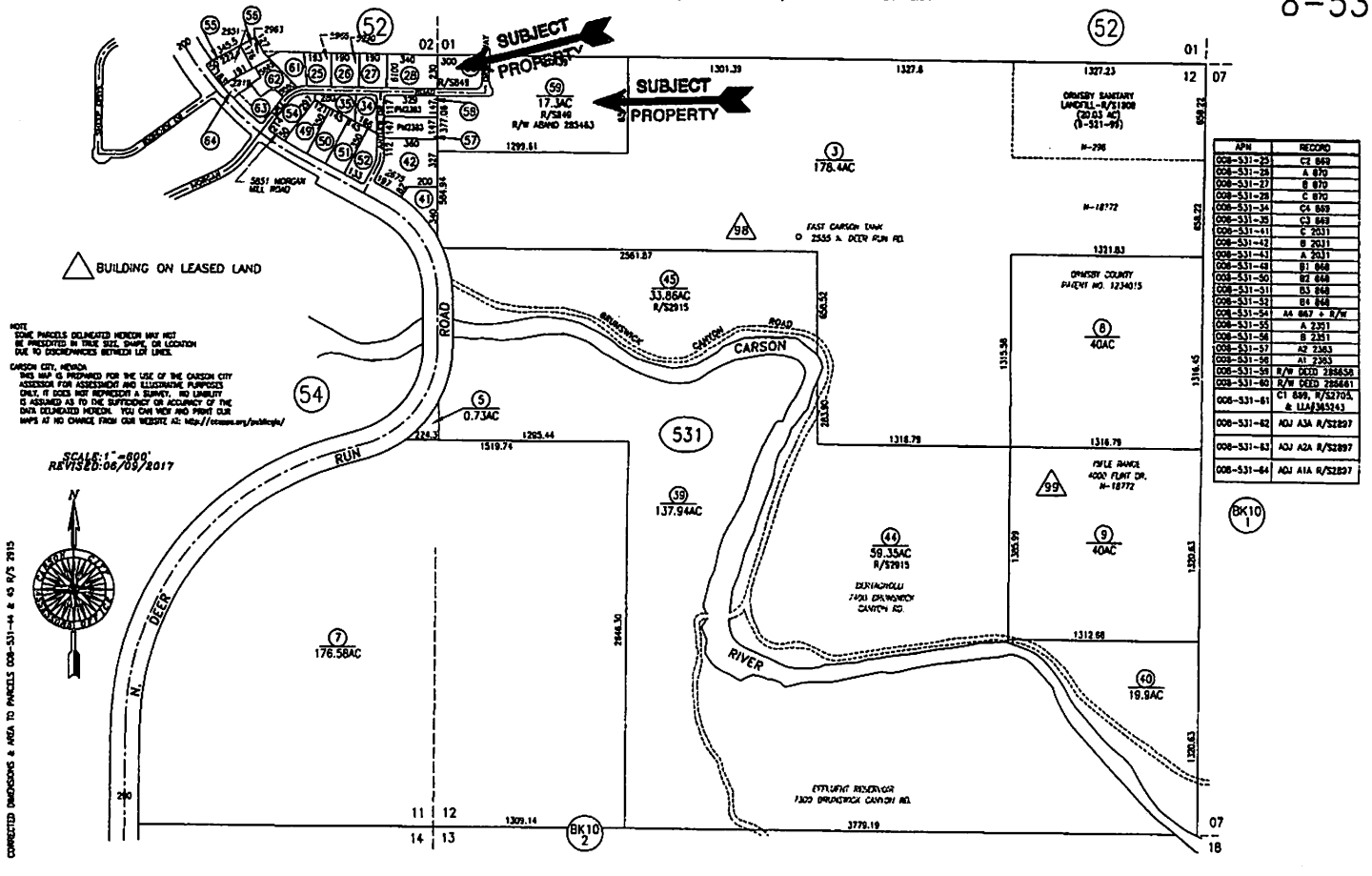


NOTE:
SOME PARCELS DELINEATED HEREON MAY NOT BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION DUE TO DISCREPANCIES BETWEEN LOT LINES.

CARSON CITY, NEVADA
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSES ONLY. IT DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DELINEATED HEREON. YOU CAN VIEW AND PRINT OUR MAPS AT NO CHARGE FROM OUR WEBSITE AT: HTTP://CCAPPS.ORG/PUBLICGIS/

CORRECTED DOCUMENT WITH ID PARCELS 008-521-54,58,59 & 80

SECTION 12, T.15 N., R.20 E., M.D.B. & M.



APN	RECORD
008-531-25	C2 869
008-531-26	A 870
008-531-27	B 870
008-531-28	C 870
008-531-34	C4 869
008-531-35	C3 869
008-531-41	C 2031
008-531-42	B 2031
008-531-43	A 2031
008-531-48	B1 868
008-531-50	B2 868
008-531-51	B3 868
008-531-52	B4 868
008-531-54	A4 867 + R/W
008-531-55	A 2351
008-531-56	B 2351
008-531-57	A2 2363
008-531-58	A1 2363
008-531-59	R/W DEED 288458
008-531-60	R/W DEED 288461
008-531-61	C1 869, R/S2705, & LLA#365143
008-531-62	ADJ A3A R/S2897
008-531-63	ADJ A2A R/S2897
008-531-64	ADJ A1A R/S2897

Master Plan Policy Checklist

Conceptual & Tentative Subdivisions, PUD's & Parcel Maps

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 subdivisions of property. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: Plateau

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 development 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 development:

- ☒ Consistent with the Master Plan Land Use Map in location and density?
- ☒ Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- ☒ Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- N/A ☐ Located in a priority infill development area (1.2a)?
- ☒ Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

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

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

☒ 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)?

☒ 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)?

☒ 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)?

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

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

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

☒ 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)?

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

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 development:

N/A ☐ Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b, c)?

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

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 proposed development:

- ☒ Incorporating public facilities and amenities that will improve residents' quality of life (5.5e)?
- N/A ☐ Promote revitalization of the Downtown core (5.6a)?
- N/A ☐ Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

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 development:

- ☒ Promote variety and visual interest through the incorporation of varied lot sizes, building styles and colors, garage orientation and other features (6.1b)?
- ☒ 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)?
- ☒ 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)?
- ☒ 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)?
- N/A ☐ If located Downtown:
  - Integrate an appropriate mix and density of uses (8.1a, e)?
  - Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
  - Incorporate appropriate public spaces, plazas and other amenities (8.1d)?

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 proposed development:

- ☒ Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?
- ☒ Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- ☒ Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?

Appendix C: Interim Mixed-Use Evaluation Criteria

PURPOSE:

The implementation of numerous policies contained within the Master Plan hinges on the creation of three mixed-use zoning districts to align with the Mixed-Use Commercial (MUC), Mixed-Use Employment (MUE), and Mixed-Use Residential (MUR) land use categories. Recognizing that mixed-use development proposals have already been and will continue to be submitted within these areas prior to the completion and adoption of the future mixed-use zoning districts, a set of Interim Mixed-Use Evaluation Criteria have been developed to:

- Facilitate higher intensity, mixed-use development in locations designated on the Land Use Plan for mixed-use development, but where mixed-use zoning is not currently in place;
- Encourage the incremental transition of existing uses in locations designated on the Land Use Plan for mixed-use development, recognizing that in some locations, mixed-use development may be perceived as incompatible with existing adjacent uses in the short term;
- Establish a consistent method for reviewing mixed-use development projects until mixed-use zone districts can be established; and
- Ensure that mixed-use development is consistent with the General Mixed-Use policies contained in the Master Plan, as well as with specific MUC, MUE, and MUR policies, as applicable.

The Interim Mixed-Use Evaluation Criteria will continue to be used as a tool to review mixed-use development proposals until mixed-use zone districts can be established.

MIXED-USE EVALUATION CRITERIA:

APPLICABILITY

The following Interim Mixed-Use Evaluation Criteria shall apply to all development proposed within the Mixed-Use Residential (MUR), Mixed-Use Commercial (MUC), and Mixed-Use Employment (MUE) land use categories. The application of these Criteria shall be triggered in one of the following ways:

- *Existing Zoning/Special Use Permit*—Development is proposed within a mixed-use land use category where the underlying zoning may permit the types and mix of uses proposed using

the Special Use Permit process as outlined in Section 18.02.80 of the City's Municipal Code. The Interim Mixed-Use Evaluation Criteria are applied in addition to the standard list of Findings outlined in the Code.

Example: If a mixed-use project (commercial/residential) were proposed within the Mixed-Use Commercial land use category on a property that is currently zoned for General Commercial, the residential portion of the project would be considered using the Special Use Permit process under the existing Code. Once the Master Plan is adopted, the project would also be subject to the Interim Mixed-Use Evaluation Criteria as part of the Special Use Permit Process.

- *Re-Zoning/Special Use Permit*—Development is proposed within a mixed-use land use category where the underlying zoning does not permit the types and mix of uses proposed. In this instance, the subject property would need to be re-zoned to the most appropriate zoning district and then followed for the project and combined with a Special Use Permit or Planned Unit Development request to allow the mix of uses desired and to trigger the application of the Interim Mixed-Use Evaluation Criteria.

Example: If a mixed-use project (commercial/residential) were proposed within the Mixed-Use Commercial land use category on a property that is currently zoned for Light Industrial, the residential portion of the project would not be eligible for consideration using the Special Use Permit process under the existing Code. Therefore, the subject property would need to be rezoned to General Commercial prior to beginning the Special Use Permit Process that would allow the residential portion of the project to be considered under the Interim Mixed-Use Evaluation Criteria.

- *Planned Unit Development (PUD)*—Development is proposed within a mixed-use land use category where the underlying zoning does not permit the types and mix of uses proposed. As an alternative to the Re-Zoning/Special Use Permit process outlined above, a Planned Unit Development request could be submitted for the subject property, within which it could be re-zoned to the most appropriate zoning district(s) for the project. As part of the PUD process, the Interim Mixed-Use Evaluation Criteria would be applicable all other conditions of approval outlined in the City's Municipal Code.

GENERAL INTENT

The Mixed-Use Evaluation Criteria provide an overview of key mixed-use development features that should be addressed by proposed mixed-use developments occurring to ensure they are consistent with Master Plan policies. They are intended to be used in conjunction with the land use specific review criteria that follow this section based on the applicable mixed-use land use designation.

MIX OF USES

Background and Intent:

Mixed-use developments should incorporate a variety of uses in a compact, pedestrian-friendly environment. Uses are encouraged to be mixed vertically ("stacked"), but may also be integrated horizontally. Recommended types and proportions of uses vary by mixed-use land use category and will also vary according to a project's location, size, and the surrounding development context. For example, a MUC development located on an individual parcel away from a primary street frontage may reasonably contain a higher percentage of residential development than one that is located with direct access and visibility from the primary street frontage. On some smaller parcels, integrating multiple uses may not be feasible at all, therefore, the consolidation of properties to create larger, mixed-use activity centers is encouraged. These factors should be considered and weighed in conjunction with the evaluation criteria listed below.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
1. Are the types of uses and percentages of different uses consistent with the relevant Master Plan policies listed below? (MUC 1.6, MUR 1.5, MUE 1.5)	Yes ☒ No ☐	The percentage of different uses is consistent with MUR1.5. The percentages are as follows: SF6 +/- 53% MFA +/- 15% GC +/- 11%
2. Are activity generating uses (e.g., retail/commercial) concentrated along primary street frontages and in other locations where they may be easily accessed and may be readily served by transit in the future?	Yes ☒ No ☐ N/A ☐	Access is proided to commercial uses from Drako Way & Morgan Mill Rd, approximately .2 miles south of Highway 50. The area can be readily served by transit of needed.
3. Are large activity generating uses (e.g., retail/commercial) located so as to minimize impacts of loading areas and other facilities on existing neighborhoods?	Yes ☐ No ☐ N/A ☒	Any development will meet the mixed-use criteria. There are no commercial development plans associated with this application.
4. Are residential uses well-integrated with non-residential uses (either horizontally or vertically) and the surrounding development context?	Yes ☒ No ☐	The proposed ZMA provides for well-integrated uses with Genreal Commercial adjacent to existing industrial, MFA adjacent to GC, and SF6 adjacent to MFA and Open Space.

5. Do the proposed housing types and densities promote activity and support non-residential uses in the development or in close proximity to the development, as applicable?	Yes ☒ No ☐	The proposed development provides access to recreational trails, as well as general commercial zoning in close proximity to the single family and multifamily zoning.

Relevant Master Plan Policies:

- Chapter 3: 2.1b, 2.3b, GMU 1.1, GMU 1.2, MUC 1.56, MUR 1.5, MUE 1.5
- Chapter 6: 7.2a, 7.2b

MIX OF HOUSING TYPES

Background and Intent:

Each of the mixed-use land use categories allow for the incorporation of a variety of housing as a part of a broader mix of uses. Although a mix of housing types and densities is encouraged within each category, the scale, size, type, and location of each development should play a significant role in determining what makes sense. For example, a 200 acre MUR development on a vacant parcel should generally contain a broader mix of housing types and densities than a 10 acre MUR development working within an established development context. However, the MUR development will likely have higher average densities due to its proximity to a primary street frontage and it's more urban context. Given the range of scenarios that may emerge, the evaluation criteria listed below are intentionally broad to allow for maximum flexibility.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
6. Does the development contain a mix of housing types that is compatible with the surrounding neighborhood and planned land use in terms of its scale and intensity?	Yes ☒ No ☐	In terms of scale and intensity, the proposed development contains a mix of housing types that is compatible with a mixed-use residential neighborhood. The policy states that no one housing type sould occupy more than 60% of the total land area. The proposed percentages are as follows: SF6 +/- 53% MFA +/- 15%
7. Does the development contain a mix of housing types that is appropriate to its scale, location, and land use category?	Yes ☒ No ☐ N/A ☐	The proposed development provides a mix of single-family and muli-family housing types which are appropriate for the scale, location and land use of the area. The proposed percentages are as follows: SF6 +/- 53% MFA +/- 15%

Relevant Master Plan Policies:

- Chapter 3: 2.2a, 2.2b
- Chapter 6: 8.1a

DENSITY RANGE

Background and Intent:

Average densities within mixed-use developments are generally expected to be higher than those typically found within the City today. Recognizing the many factors that influence the ultimate density of a mixed-use development (e.g., location, type), the Master Plan provides a suggested range of floor area ratios (FAR) and dwelling units/acre for each of the mixed-use land use categories. For the purposes of the evaluation criteria listed below, densities that fall below the low end of a density range for a particular land use category will be strongly discouraged in order to promote the Plan's objective of creating a more compact pattern of development. The Plan also acknowledges that there may be instances where densities that exceed the suggested range are appropriate in some locations, such as within a mixed-use activity center, provided other land use policies are followed. These instances will be evaluated on a project-by-project basis.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
8. Does the development achieve at least the minimum density range for the applicable land use category?	Yes ☒ No ☐	For the SF portion, the minimum density required is per MUR 1.3 is 3 dwelling units per acre, and the proposed density is 3.97 du/acre. For the MFA portion, the minimum density required is 3 dwelling units per acre, and the conceptual density is 14.1 du/acre.
9. Does the development exceed the maximum density range for the applicable land use category?	Yes ☐ No ☒	For the SF portion, the maximum permitted density per MUR 1.3 is 36 dwelling units per acre, and the proposed density is 3.97 du/acre. For the MFA portion, the maximum permitted density per MUR 1.3 is 36 dwelling units per acre, and the proposed density is 14.1 du/acre. Maximum permitted density in SF6 is 7.26 dwelling units per acre, and the proposed density is 3.97 du/acre. Maximum permitted density in MFA is 36 dwelling units per acre, and the proposed density is 3.97 dwelling units per acre.
10. If yes to #9 above, is the development located within a designated mixed-use activity center?	Yes ☐ No ☐ N/A ☒	
11. If yes to #9 above, is the largest concentration of density concentrated away from primary street frontages and surrounding neighborhoods?	Yes ☐ No ☐ N/A ☒	

Relevant Master Plan Policies:

- Chapter 3: MUC 1.3, MUR1.3, MUE 1.3

CIRCULATION AND ACCESS

Background and Intent:

Mixed-use developments should be designed using an interconnected network of streets to provide efficient connections between uses and to accommodate vehicular, bicycle, and pedestrian circulation, as well as existing or future transit service. Direct vehicular and pedestrian connections to adjacent neighborhoods, commercial, and civic uses should be provided, as should linkages to existing and planned trail systems.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
12. Do vehicular and pedestrian ways provide logical and convenient connections between proposed uses and to adjacent existing or proposed uses?	Yes ☒ No ☐	The street network has been designed to provide pedestrian connectivity between the proposed single family residential development and the commercial and multi-family areas. Sidewalks, recreation trails, and open space will be easily accessible from all areas of the development.
13. Does the hierarchy of perimeter and internal streets disperse development generated vehicular traffic to a variety of access points, discourage through traffic in adjacent residential neighborhoods and provide neighborhood access to on site uses?	Yes ☒ No ☐	Access is provided from Drako Way, Morgan Mill Rd. and new local roads that are proposed with the development.
14. If the development is located along a primary street frontage, have existing or proposed transit routes and stops been incorporated?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.

Relevant Master Plan Policies:

Chapter 3: GMU 1.3, MUC 1.8

Chapter 7: 10.2b, 11.1a, 11.1c

PARKING LOCATION AND DESIGN

Background and Intent:

The visual and physical barriers created by surface parking areas should be minimized within mixed-use developments. To promote a more compact, pedestrian-friendly environment, off-street parking for mixed-use developments should be located behind buildings and away from primary street frontages. The use of on-street parking or shared parking to provide a portion of the required parking for mixed-use developments is strongly encouraged, where feasible, to make the most efficient use of each development site. In addition, structured parking is encouraged where viable, provided it is integrated into the design of the overall development.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
15. Is surface parking distributed between the side and rear of primary buildings and away from primary street frontages?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.
16. Are larger parking lots organized as a series of smaller lots with clear pedestrian connections and landscape buffers as dividers?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.
17. Is surface parking screened from surrounding neighborhoods and pedestrian walkways?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.
18. Is structured parking integrated with adjacent structures in terms of its design and architectural character?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.
19. Are structured parking facilities "wrapped" with retail or residential uses at the street level to provide a more inviting pedestrian environment?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.

Relevant Master Plan Policies:

- Chapter 3: GMU 1.4, MUC 1.8

RELATIONSHIP TO SURROUNDING DEVELOPMENT

Background and Intent:

Many of the areas designated for mixed-use development are located within established areas of the City. As a result, much of the mixed-use development that occurs will occur through a combination of infill and redevelopment. Therefore, establishing a strong physical and visual relationship to adjacent neighborhoods and the community will be an important consideration.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
20. Are transitions in building massing and height provided to relate to surrounding development patterns?	Yes ☐ No ☐ N/A ☒	No development is proposed relevant to this criteria.
21. Is the new development well-integrated into the surrounding neighborhood, rather than "walled off", consistent with the mixed-use policies contained in the Master Plan?	Yes ☒ No ☐	Individual pods of development are not walled off, and the proposed development is integreated through the proposed circulation and access to adjacent undevelped land. The proposed development includes appropriate zoning designations between uses by providing well-integrated uses with Genreal Commercial adjacent to existing industrial, MFA adjacent to GC, and SF6 adjacent to MFA and Open Space.
22. If applicable, are lower intensity uses (e.g., residential) located along the periphery of the site were it adjoins an existing residential neighborhood to provide a more gradual transition in scale and mass and to minimize potential impacts of non-residential uses (e.g., loading areas, surface parking)?	Yes ☐ No ☐ N/A ☒	The proposed development is not adjacent to or ajoining an existing residential neighborhood.

Relevant Master Plan Policies:

- Chapter 3: MUC 1.7, MUR 1.7, MUE 1.6
- Chapter 6: 8.3b

PUBLIC SPACES, PARKS, OPEN SPACE, AND PATHWAYS

Background and Intent:

Mixed-use developments should be organized around a central gathering space or series of spaces, such as small urban plazas, pocket parks, or active open space areas. These types of public spaces

serve as urban recreational amenities for residents that may not have access to larger community parks or recreational amenities without getting in their cars and generally promote increased levels of pedestrian activity. Larger mixed-use developments, particularly within the MUR and MUE categories, may also need to incorporate more traditional recreational features, such as parks and trails, depending upon their size and location.

Evaluation Criteria:

CRITERIA	CRITERIA SATISFIED?	COMMENTS
23. Does the development provide public spaces to serve residents and the larger community?	Yes☒ No☐	Public spaces to serve residents are incorporated with the undisturbed open spaceaccesible by residents. Development of the GC and MFA portions will be in conformance with the mixed use policies.
24. Are public spaces appropriate in terms of their size and active vs. passive features provided given the scale and location of the proposed development?	Yes ☒ No ☐	Public spaces to serve residents are incorporated with the undisturbed open spaceaccesible by residents. Development of the GC and MFA portions will be in conformance with the mixed use policies.
25. Are public spaces easily accessible to pedestrians and the surrounding community, if applicable?	Yes ☒ No ☐ N/A ☐	Public spaces to serve residents are incorporated with the undisturbed open spaceaccesible by residents. Development of the GC and MFA portions will be in conformance with the mixed use policies.
26. Are parks and trails provided consistent with the Parks, Recreation, and Unified Pathways Master Plan?	Yes ☐ No ☐ N/A ☐	The project area was not included in the 2006 Carson City Parks and Recreation master plan's Neighborhood Park Analysis because the property was zoned insudtrial at the time.The Parks and Recreation Commission plans to review the project and provide an opportunity for public input regarding recreational needs, opportunities, and use characteristics for any parks and recreation components.

Relevant Master Plan Policies:

- Chapter 3: MUC 1.6, MUR 1.8, MUE 1.7

TENTATIVE MAP
FOR
PLATEAU DEVELOPMENT
CARSON CITY NEVADA

OWNER

TAHOE IV LLC (MR. KEITH SERPA)
P.O. BOX 1724
CARSON CITY, NEVADA 89702
VOICE: (775) 267-9510 EXT. 204

BASIS OF BEARINGS

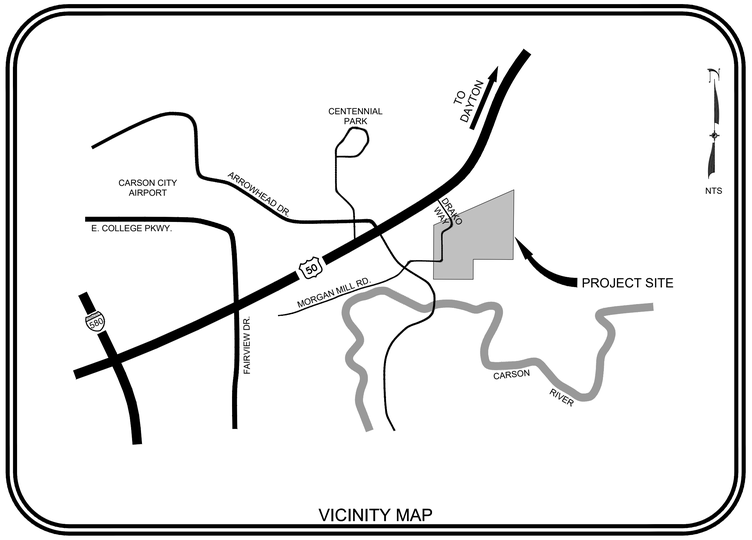
MODIFIED NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994 (NAD 83/94) DETERMINED USING REAL TIME KINEMATIC GPS (RTK GPS) OBSERVATIONS OF CARSON CITY CONTROL MONUMENTS CC045 AND X357 AS SHOWN ON RECORD OF SURVEY MAP No. 2749 RECORDED AUGUST 11, 2010 IN THE OFFICIAL RECORDS OF CARSON CITY, NEVADA, AS FILE No. 403425. COMBINED GRID TO GROUND FACTOR = 1.0002. ALL DISTANCES SHOWN HEREIN ARE GROUND VALUES.

BASIS OF ELEVATION

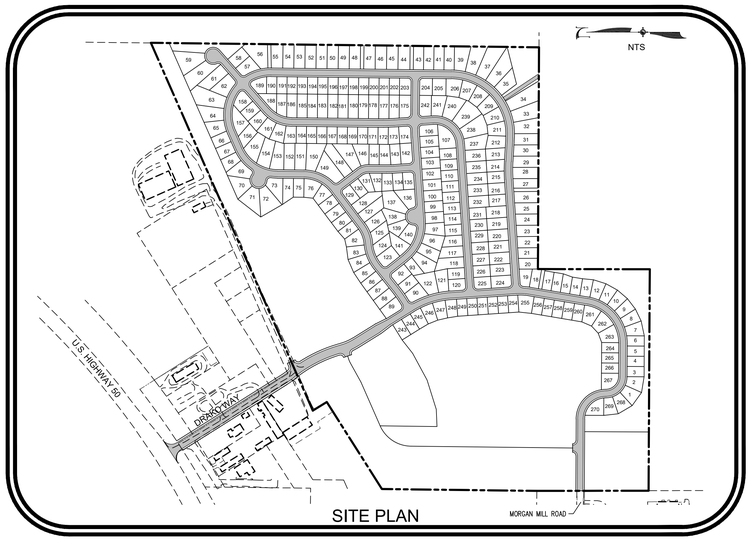
NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), AS TAKEN FROM NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENT X357, HAVING A PUBLISHED ELEVATION OF 4817.67 FEET. X357 IS DESCRIBED AS A FOUND USC AND GS BENCH MARK DISK, IN A ROCK OUTCROP, STAMPED "X 357 1953". LOCATED 4.8 MILES NORTHEAST ALONG U.S. HIGHWAY 50 FROM CARSON CITY, ON THE SOUTHWEST SLOPE OF A ROCK COVERED HILL, IN THE TOP OF THE APPROXIMATE CENTER OF A 3 FOOT BY 3 FOOT BLACK VOLCANIC ROCK, 129 FEET NORTHEAST OF THE SOUTHWEST END OF A CUT, ABOUT 14.8 FEET HIGHER THAN THE HIGHWAY.

ABBREVIATIONS

±	APPROXIMATE
AC	ASPHALTIC CONCRETE
AP	ANGLE POINT
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN CURVE
BW	BACK OF WALK
BVC	BEGIN VERTICAL CURVE
CAP	CAPACITY
CB	CATCH BASIN
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CMU	CONCRETE MASONARY UNIT
CONST.	CONSTRUCT
CP	CONCRETE PIPE
CR	CURB RETURN
DET	DETAIL
Δ	CURVE DELTA
Ø	DIAMETER
DI	DROP INLET
DWY	DRIVEWAY
DR	DIAMETER RATIO
E	ELECTRICAL
EC	END OF CURVE
EG	EXISTING GRADE
ELEV	ELEVATION
EVC	END OF VERTICAL CURVE
(e)	EXISTING
EXIST	EXISTING
FES	FLARED END SECTION
FF	FINISHED FLOOR
FDC	FIRE DEPARTMENT CONNECTION
FFC	FRONT FACE OF CURB
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FT	FEET
G	GAS
GB	GRADE BREAK
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HOUSE SERVICE
IE	INVERT ELEVATION
INT	INTERSECTION
L	LENGTH
LF	LINEAL FEET
LP	LOW POINT
LT	LEFT
MH	MANHOLE
MDD	MAX DRY DENSITY
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PCC	PORTLAND CEMENT CONCRETE
PF	PUBLIC FACILITY
PL	PROPERTY LINE
PM	PARCEL MAP
POT	POINT OF TANGENT
PR	PRESSURE RATING
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
Q	VOLUME FLOW RATE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
RET	CURB RETURN
REQ	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SUB	SUBDRAIN
SW	SIDEWALK
T	TRANSFORMER
t	TELEPHONE
TBC	TOP BACK OF CURB
TC	TOP OF CURB
TOP	TOP OF STEP
TP	TEST PIT
TW	TOP OF WALL
TYP	TYPICAL
VC	VERTICAL CURVE
VG	VALLEY GUTTER
VERT	VERTICAL
VPI	VERTICAL POINT OF INTERSECTION
W	WATER
WM	WATER MAIN



VICINITY MAP



SITE PLAN

SHEET INDEX

UTILITY PROVIDERS

CABLE TV:	CHARTER SPECTRUM
ELECTRIC:	NV ENERGY
GAS:	SOUTHWEST GAS
SEWER:	CARSON CITY PUBLIC WORKS
SOLID WASTE:	CAPITOL SANITATION
TELEPHONE:	A.T.&T.
WATER:	CARSON CITY PUBLIC WORKS

PROJECT DATA

TOTAL PROJECT AREA:	119.1 ACRES
LOT AREA:	50.7 ACRES
RIGHT-OF-WAY AREA:	14.3 ACRES
REMAINDER PARCELS:	31.1 ACRES
COMMON AREA:	23.0 ACRES
TOTAL LOTS:	270
MIN. LOT SIZE:	6,000 S.F.
MAX. LOT SIZE:	17,950 S.F.
AVERAGE LOT SIZE:	8,180 S.F.
EXISTING ZONING:	GENERAL INDUSTRIAL

ENGINEER'S STATEMENT

I, KEVIN C. KOSSOL, DO HEREBY CERTIFY THAT THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, COUNTY ORDINANCES, AND CODES. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND COUNTY CODES, THE COUNTY CODES SHALL PREVAIL.

KEVIN C. KOSSOL — P.E. #11509

PROFESSIONAL ENGINEER - STATE OF NEVADA — KEVIN C. KOSSOL — Exp: 6/30/19 — CIVIL — No. 11509

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

NO.	REVISIONS	DRAWN BY	CHECKED BY
	DATE		

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PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
TITLE SHEET

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	

SHEET T1 OF 14
TIVCCNV01

TENTATIVE MAP

PROPERTY MANAGEMENT, CARSON CITY
APN 010-691-04

COMMON AREA PARCEL C
0.48 ACRES

COMMON AREA PARCEL D
0.06 ACRES

COMMON AREA PARCEL E
0.06 ACRES

COMMON AREA PARCEL F
0.06 ACRES

COMMON AREA
PARCEL G
0.95 ACRES

S 00°39'42" W 2278

PROPERTY LINE

STREET "A"
(PROPOSED/PUBLIC)

STREET "B"
(PROPOSED/PUBLIC)

STREET "C"
(PROPOSED/PUBLIC)

STREET "D"
(PROPOSED/PUBLIC)

STREET "E"
(PROPOSED/PUBLIC)

PHASE 1

PHASE 2

PHASE 3

PHASE 4

PHASE 5

PROPOSED 20' WIDE WILDLAND
FIRE ACCESS ROAD

CARSON CITY
APN 008-531-03

S 89°45'31" E 1305

COMMON AREA PARCEL H
0.066 ACRES

RIDL
APN 008-521-24

RIDL
APN 008-521-23

RIDL
APN 008-521-48

RIDL
APN 008-521-47

RIDL
APN 008-521-46

RIDL
APN 008-521-45

ASTRO DRIVE

N 68°13'01" E 2358

COMMON AREA PARCEL B
13.8 ACRES

COMMON AREA PARCEL I
0.054 ACRES

S 00°05'48" W 657

COMMON AREA PARCEL J
3.0 ACRES

DRAKO WAY
(PROPOSED/PUBLIC)

MORGAN MILL ROAD
(PROPOSED/PUBLIC)

BEGIN 75' TAPER FROM 65'
TO 50' RIGHT-OF-WAY

EXISTING 50'-RIGHT-OF-WAY

PROPOSED 65' RIGHT-OF-WAY
INDUSTRIAL-COLLECTOR
(REF. SHEET C3 FOR SECTION)

DRAKO WAY
(EXIST/PUBLIC)

U.S. HIGHWAY 50
(EXIST/PUBLIC)

S 37°34'17" E 46'

N 32°27'21" E 605

HIGH SIERRA PROP
HOLDINGS LLC
APN 008-522-15

COMMON AREA PARCEL A
4.4 ACRES

REMAINDER PARCEL 1
17.7 ACRES

REMAINDER PARCEL 2
10.3 ACRES

REMAINDER PARCEL 3
3.0 ACRES

CARSON CITY
APN 008-531-03

S 89°41'06" E 1300

S 00°41'18" W 909

SIERRA PACIFIC POWER CO
APN 008-522-07

MADDOX, CB FAMILY
TRUST
APN 008-531-28

MORGAN MILL ROAD
(EXIST/PUBLIC)

B&M GRAY
INVESTMENTS LLC
APN 008-531-58

S 00°04'58" E 656

TAIYO AMERICA INC
APN 008-531-57

TAIYO AMERICA INC
APN 008-531-42

APN 008-521-55

APN 008-521-54

APN 008-521-89

APN 008-521-90

APN 008-531-59

APN 008-522-16

APN 008-522-17

APN008-522-18

APN
008-531-60

EXISTING PARCEL LINES DISPLAY
NTS

LEGEND

PROJECT BOUNDARY

PROPOSED PHASING LINE

148 LOT NUMBER

NOTE:
ALL STREETS WITHIN THE TENTATIVE MAP ARE PROPOSED PUBLIC.

0 50 100 200 300

1"=100'

NO.	REVISIONS	DRAWN BY	CHECK BY	DATE

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PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
OVERALL SITE PLAN

PROFESSIONAL ENGINEER, STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=100'

SHEET
S0 OF 14
TIVCCNV01

PROPERTY MANAGEMENT, CARSON CITY
APN 010-691-04

PROPERTY LINE

COMMON AREA PARCEL C
0.48 ACRES

COMMON AREA PARCEL D
0.06 ACRES

COMMON AREA PARCEL E
0.06 ACRES

S 00°39'42" W 2278

COURT "B"
(PROPOSED/PUBLIC)

STREET "A"
(PROPOSED/PUBLIC)

STREET "B"
(PROPOSED/PUBLIC)

STREET "C"
(PROPOSED/PUBLIC)

STREET "D"
(PROPOSED/PUBLIC)

STREET "E"
(PROPOSED/PUBLIC)

MATCH LINE
(REF. SHEET S2)

MATCH LINE
(REF. SHEET S3)

MATCH LINE
(REF. SHEET S2)

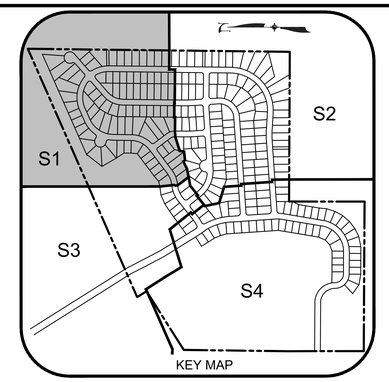
RIDL
APN 008-521-24

RIDL
APN 008-521-23

COMMON AREA PARCEL B
13.8 ACRES

ASTRO DRIVE

56 [14,700]	55 [9,709]	54 [9,100]	53 [9,100]	52 [9,100]	51 [9,100]	50 [9,100]	49 [9,100]	48 [9,100]	57 [8,734]	58 [7,700]	59 [16,416]
60 [15,972]	61 [11,790]	62 [10,775]	63 [17,950]	64 [11,812]	65 [8,745]	66 [6,803]	67 [7,022]	68 [7,205]	69 [9,608]	70 [10,715]	71 [12,782]
72 [13,835]	73 [9,941]	74 [8,147]	75 [6,820]	76 [8,791]	77 [7,172]	78 [6,720]	79 [6,720]	80 [6,720]	81 [6,263]	82 [7,693]	
179 [8,400]	180 [8,400]	181 [8,400]	182 [8,400]	183 [8,400]	184 [8,400]	185 [8,400]	186 [8,373]	187 [7,694]	188 [6,993]	189 [7,155]	
190 [6,000]	191 [6,000]	192 [6,000]	193 [6,000]	194 [6,000]	195 [6,000]	196 [6,000]	197 [6,000]	198 [6,000]	199 [6,000]		
125 [8,022]	126 [8,214]	127 [10,334]	128 [9,757]	129 [6,512]	130 [6,090]	131 [6,550]	146 [9,234]	147 [13,542]	148 [12,741]	149 [15,024]	
150 [14,028]	151 [10,401]	152 [9,945]	153 [10,969]	154 [12,093]	155 [12,026]	156 [7,963]	157 [9,547]	158 [7,906]	159 [7,000]	160 [6,902]	161 [7,599]
162 [7,599]	163 [6,852]	164 [6,000]	165 [6,000]	166 [6,000]	167 [6,000]	168 [6,000]	169 [6,000]	170 [6,000]			



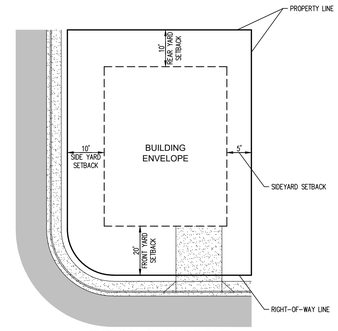
KEY MAP

0 30 60 120 180

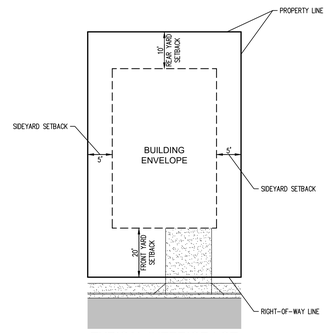
1"=60'

LEGEND

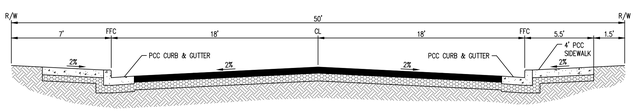
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- PROJECT BOUNDARY
- 148 LOT NUMBER
- [6,100] LOT AREA IN SQUARE FEET



TYPICAL CORNER LOT SETBACKS



TYPICAL INTERIOR LOT SETBACKS



50' RIGHT-OF-WAY STREET

REVISIONS	DATE	DRAWN BY	CHECKED BY

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PLATEAU DEVELOPMENT

CARSON CITY, NEVADA

PRELIMINARY SITE PLAN

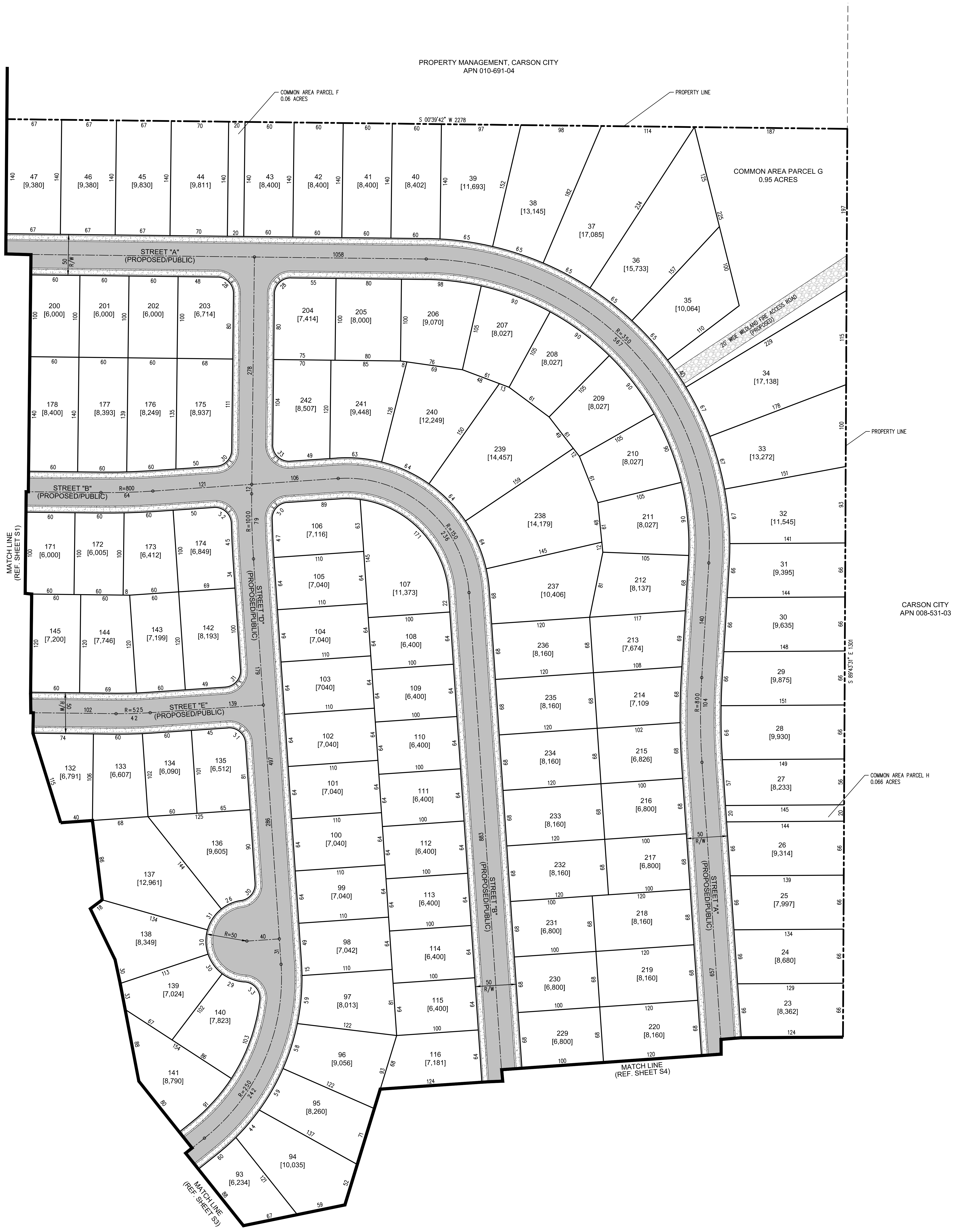
PROFESSIONAL ENGINEER, STATE OF NEVADA
KEVIN C KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

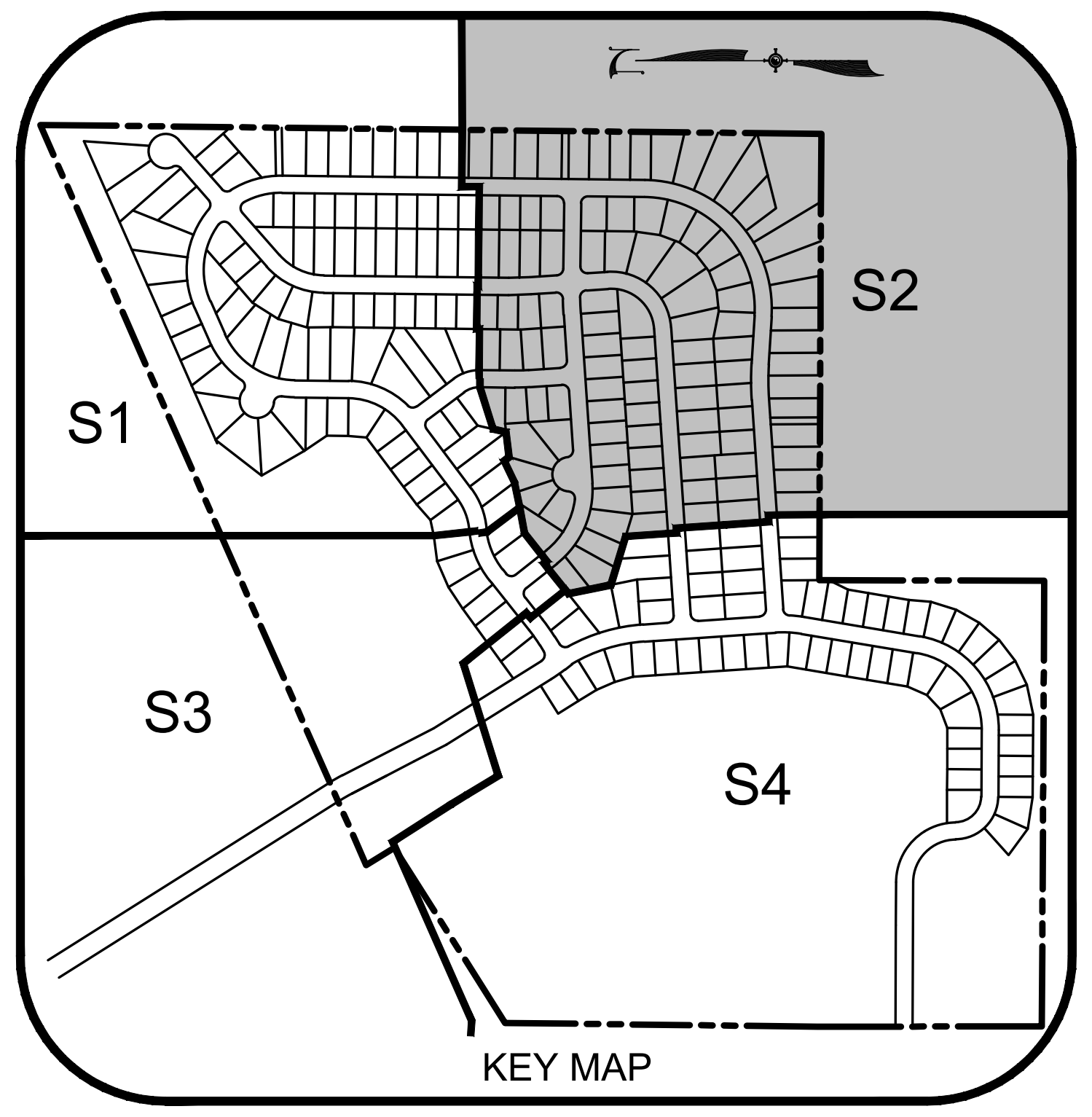
PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET
S1 OF 14
TIVCCNV01

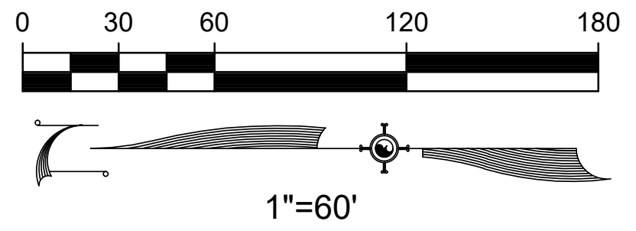
TENTATIVE MAP

October 19, 2018 - 09:53 Plot Name: \\Manhard.com\Projects-CCV\Tahoe\Visa\Visa Preliminary\Visa\Visa_Map\Visa_Tent Map_Alt.dwg Updated By: akrause





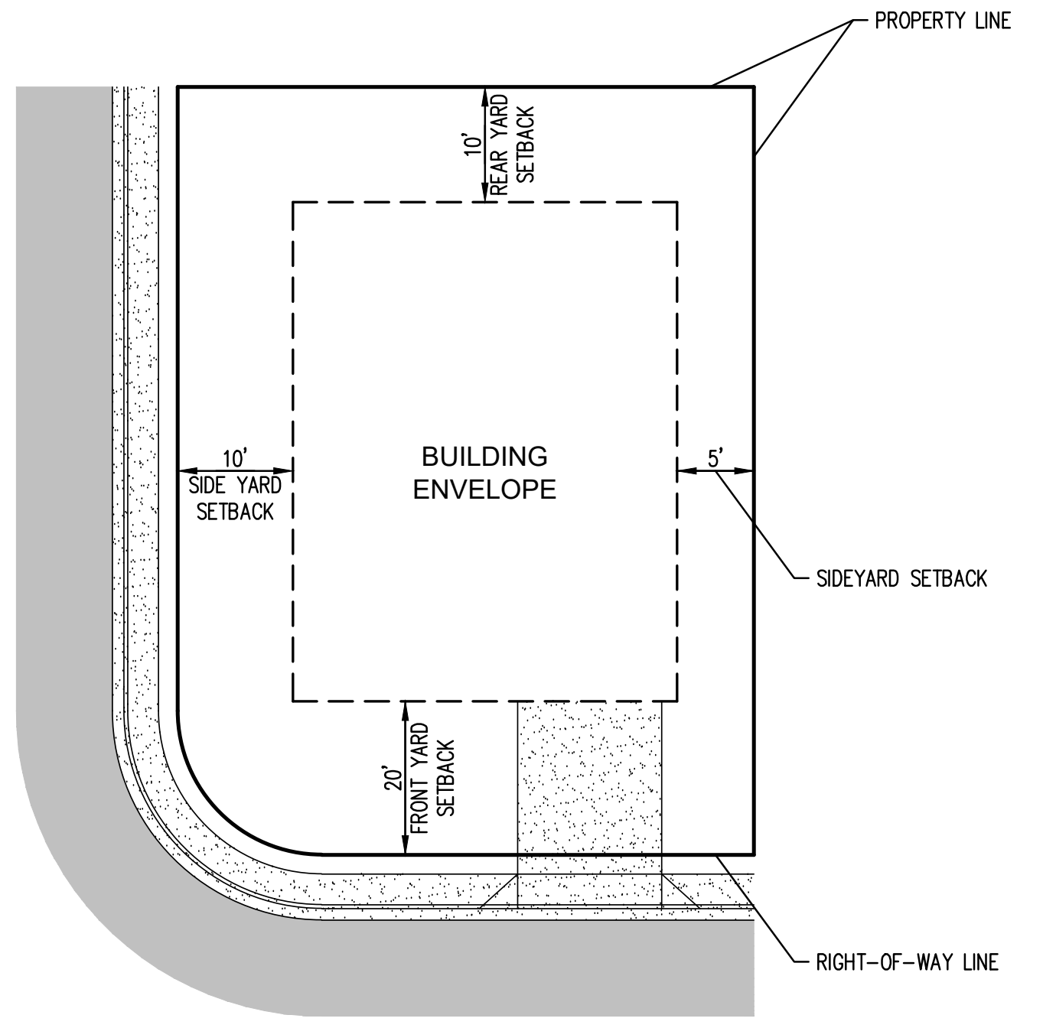
KEY MAP



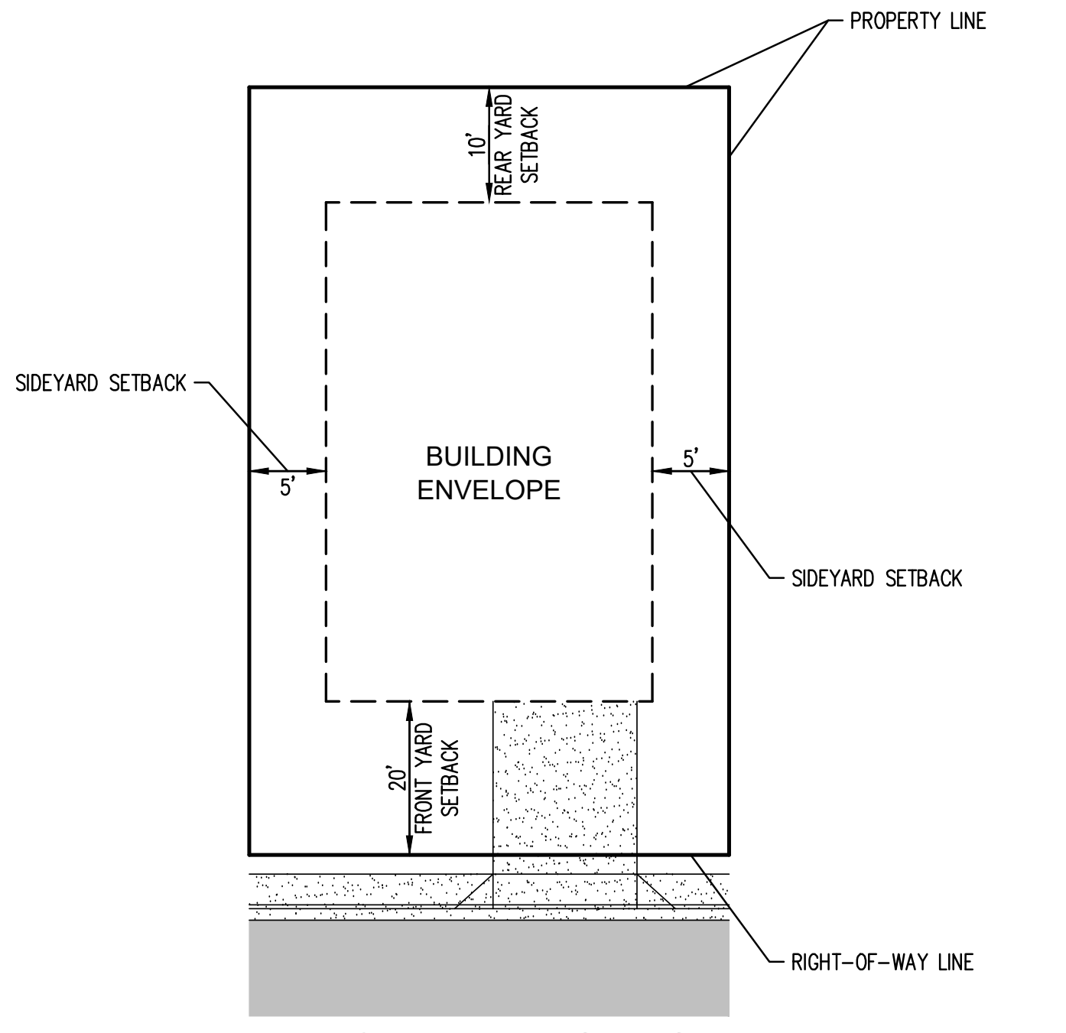
1"=60'

LEGEND

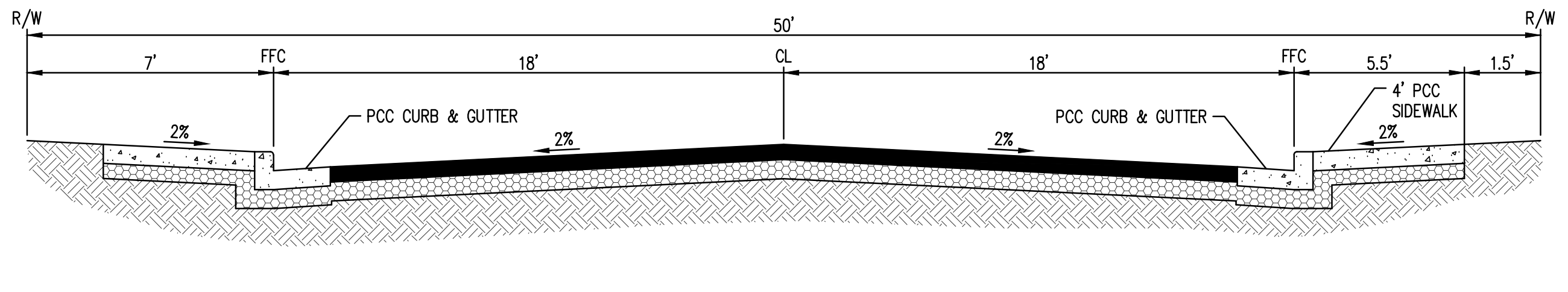
▨	PROPOSED A.C. PAVEMENT AREA
░	PROPOSED CONCRETE AREA
— — —	PROJECT BOUNDARY
148	LOT NUMBER
[6,100]	LOT AREA IN SQUARE FEET



TYPICAL CORNER LOT
SETBACKS



TYPICAL INTERIOR LOT
SETBACKS



50' RIGHT-OF-WAY STREET

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DATE | REVISIONS | DRAWN BY | CHECK BY

PLATEAU DEVELOPMENT

CARSON CITY, NEVADA

PRELIMINARY SITE PLAN

KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.: KCK
PROJ. ASSOC.: SDF
DRAWN BY: KCK
DATE: OCT. 2018
SCALE: 1"=60'

SHEET
S2 OF 14
TIVCCNV01

TENTATIVE MAP

0 30 60 120 180

1"=60'

LEGEND

- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- PROJECT BOUNDARY
- 148 LOT NUMBER
- [6,100] LOT AREA IN SQUARE FEET

MATCH LINE (REF. SHEET S1)

RIDL APN 008-521-23

RIDL APN 008-521-48

RIDL APN 008-521-47

RIDL APN 008-521-46

RIDL APN 008-521-45

PROPERTY LINE

N 40°04'13" E 1,322.79'

ASTRO DRIVE

COMMON AREA PARCEL B
13.8 ACRES

REMAINDER PARCEL 2
10.3 ACRES

HIGH SIERRA PROP HOLDINGS LLC
APN 008-522-15

MATCH LINE (REF. SHEET S2)

MATCH LINE (REF. SHEET S4)

MATCH LINE (REF. SHEET S3)

STREET "C" (PROPOSED PUBLIC)

STREET "D" (PROPOSED PUBLIC)

83 [6,875]
84 [7,573]
85 [7,550]
86 [7,130]
87 [7,428]
92 [7,789]
123 [9,170]
124 [7,961]

DRAKO WAY (EXIST PUBLIC)

U.S. HIGHWAY 50 (EXIST PUBLIC)

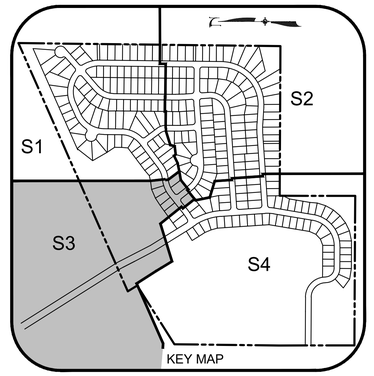
PROPOSED 65' INDUSTRIAL COLLECTOR WITH BIKE LANES (REF. SECTION THIS SHEET)

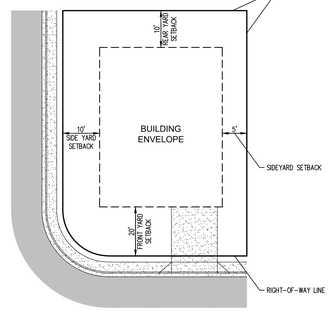
EXISTING 50' RIGHT-OF-WAY

EXISTING EDGE OF PAVEMENT

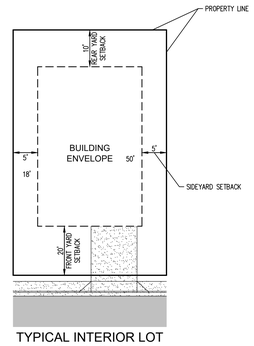
PROPOSED DRIVEWAY APRON

S 15°57'47" E 85.71'

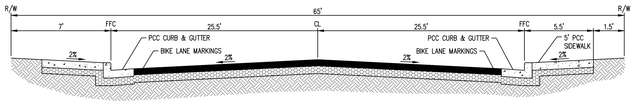




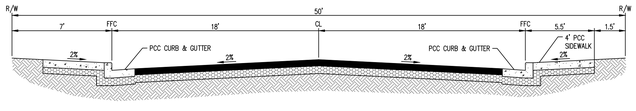
TYPICAL CORNER LOT SETBACKS



TYPICAL INTERIOR LOT SETBACKS



65' RIGHT-OF-WAY (INDUSTRIAL COLLECTOR WITH BIKE LANES)



50' RIGHT-OF-WAY STREET

DRAWN BY:	
CHECKED BY:	
REVISIONS	
DATE	

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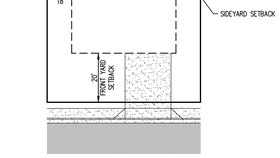
PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY SITE PLAN

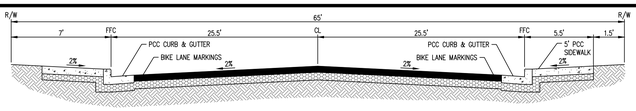


PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

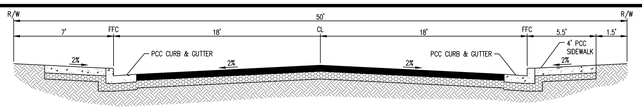
SHEET
S3 OF 14
TTVCCNV01

TENTATIVE MAP

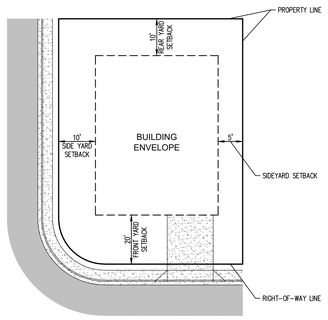
October 18, 2018 - 08:53 File Name: \\manhard.local\Projects\CA-CC\Vacant\Land Use\Tent\Planning\Tentative Map\Plateau_Tent Map_Kit.dwg Updated By: KKassol



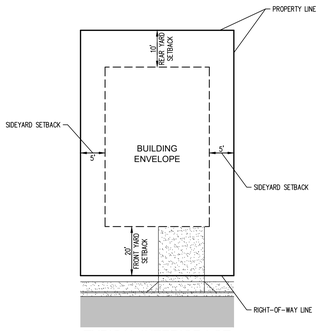
65' RIGHT-OF-WAY (INDUSTRIAL COLLECTOR WITH BIKE LANES)



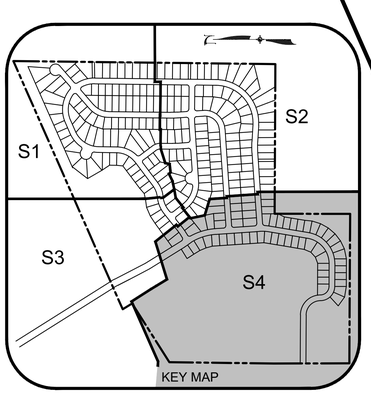
50' RIGHT-OF-WAY STREET

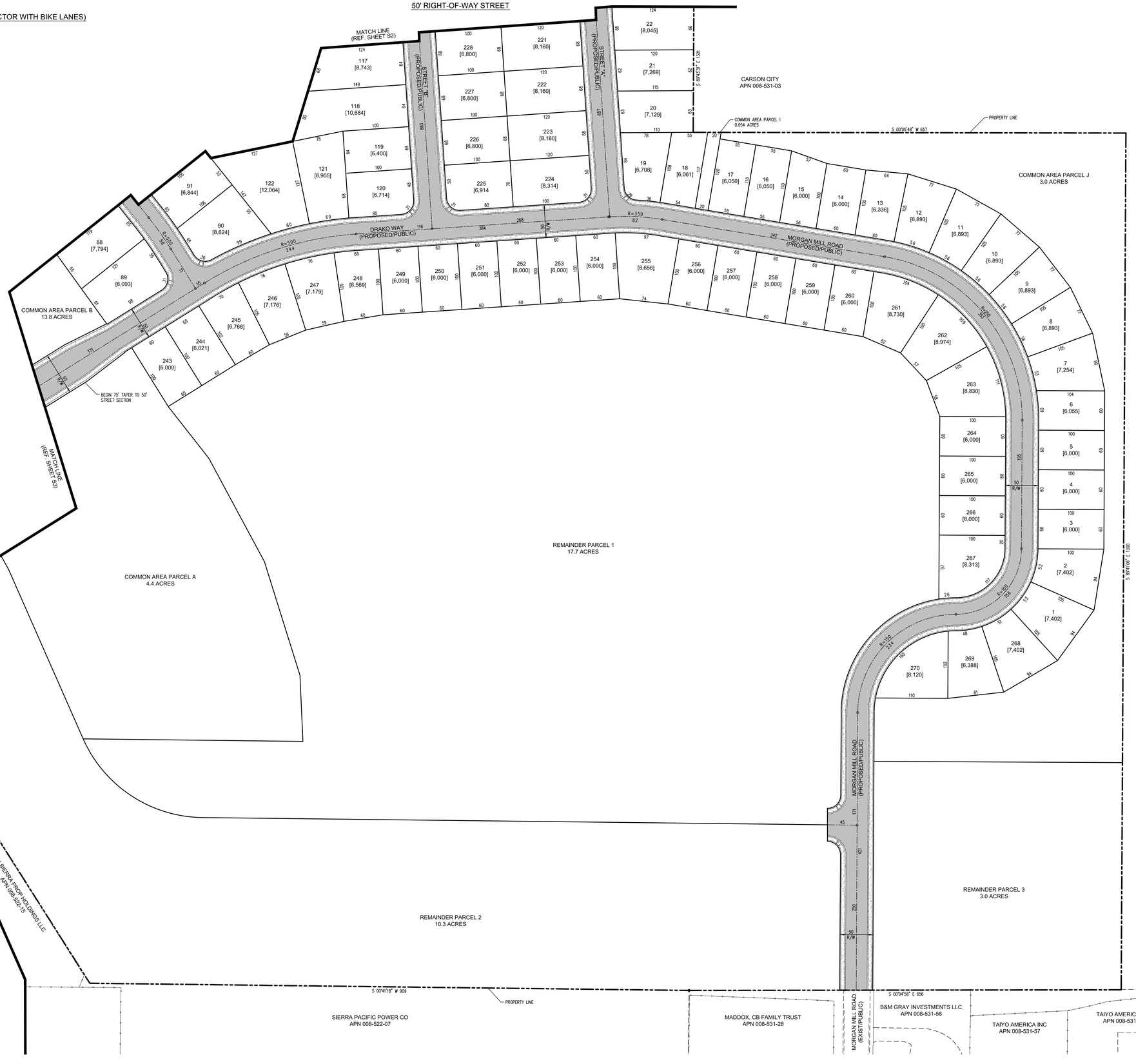


TYPICAL CORNER LOT SETBACKS



TYPICAL INTERIOR LOT SETBACKS





LEGEND

- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- PROJECT BOUNDARY
- 148 LOT NUMBER
- [6,100] LOT AREA IN SQUARE FEET

0 30 60 120 180

1"=60'

DRAWN BY CHECKED BY

REVISIONS

DATE

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PLATEAU DEVELOPMENT

CARSON CITY, NEVADA

PRELIMINARY SITE PLAN

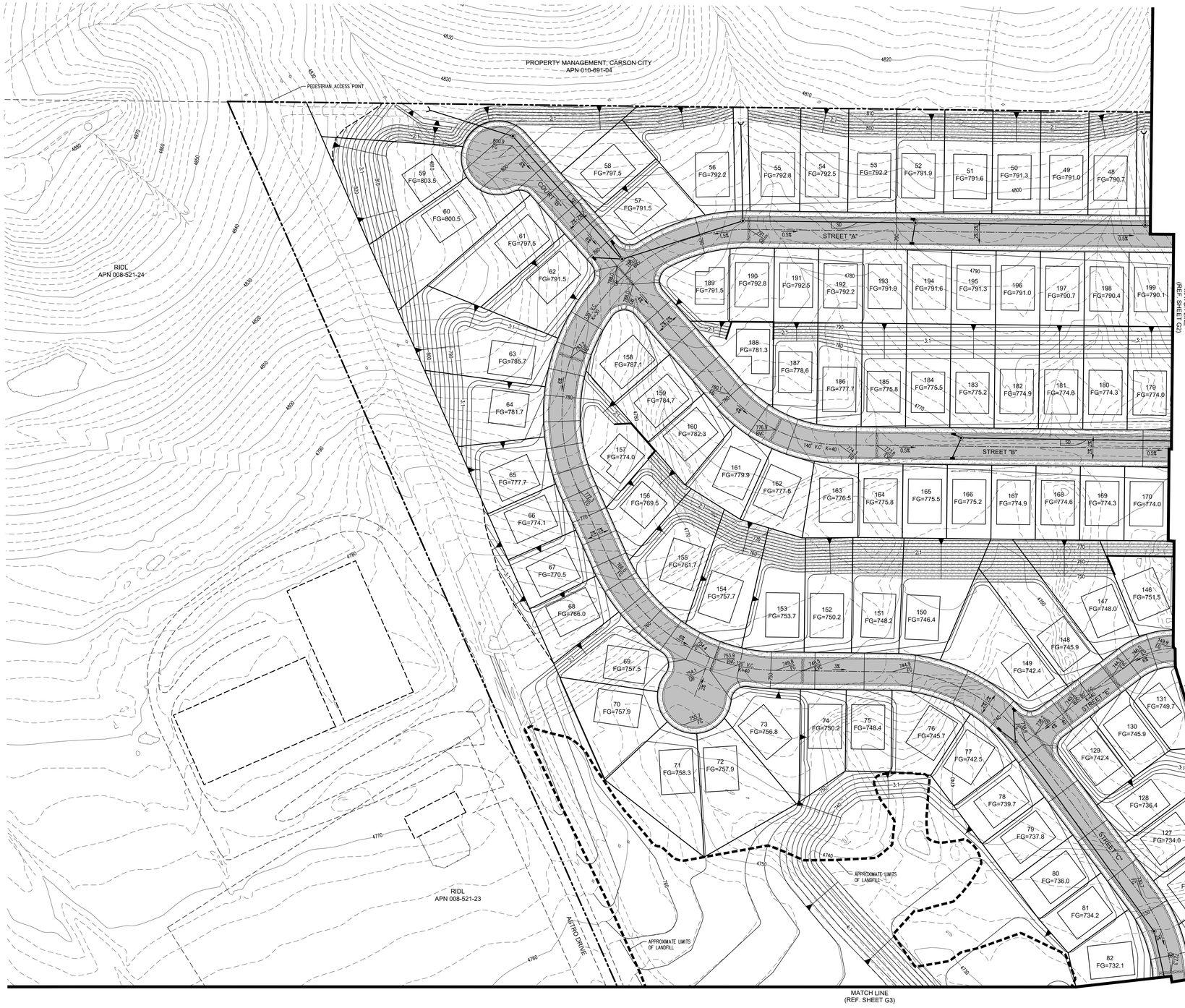
PROFESSIONAL ENGINEER STATE OF NEVADA KEVIN C. KOSSOL Exp: 6/30/19 CIVIL No. 11510

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET S4 OF 14

TIVCCNV01

TENTATIVE MAP



LEGEND

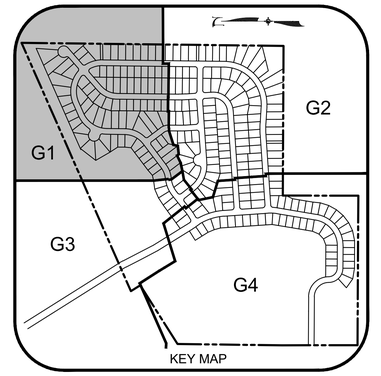
- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- GRADE BREAK
- RETAINING WALL
- PROPOSED ELEV. @ GRADE BREAK
- PROPOSED ELEV. @ HIGH POINT
- PROPOSED ELEV. @ LOW POINT
- PROPOSED ELEV. @ FLOW LINE
- PROPOSED ELEV. @ FINISHED GRADE
- PROPOSED ELEV. @ TOP OF WALL
- 4900 EXISTING CONTOUR LINE
- 4900 PROPOSED CONTOUR LINE
- DRAINAGE SWALE FLOW LINE
- FG=65.00 PROPOSED EXTERIOR FINISHED GRADE OF HOUSE
- 105 PROPOSED LOT NUMBER
- CUT OR FILL SLOPE
- ROCK RIPRAP AREA

0 30 60 120 180

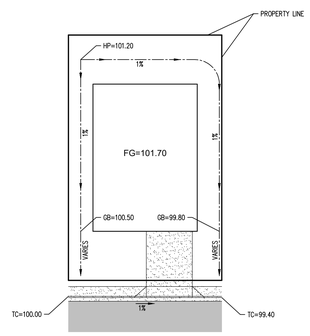
1"=60'

NOTE:
ADD 4000 FEET TO ALL SPOT ELEVATIONS.

PRELIMINARY EARTHWORK VOLUMES
502,900 CUBIC YARDS EXCAVATION
538,700 CUBIC YARDS EMBANKMENT



KEY MAP



TYPICAL LOT GRADING

NO.	REVISIONS	DRAWN BY	CHECK BY	DATE

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PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY GRADING PLAN

PROFESSIONAL ENGINEER, STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET
G1 OF 14
TIVCCNV01

TENTATIVE MAP

LEGEND

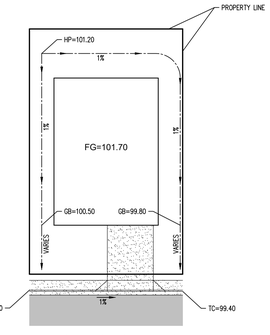
- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- GRADE BREAK
- RETAINING WALL
- 54.17 GB — PROPOSED ELEV. @ GRADE BREAK
- 53.92 HP — PROPOSED ELEV. @ HIGH POINT
- 54.29 LP — PROPOSED ELEV. @ LOW POINT
- 54.19 FL — PROPOSED ELEV. @ FLOW LINE
- 54.29 FG — PROPOSED ELEV. @ FINISHED GRADE
- 53.99 TW — PROPOSED ELEV. @ TOP OF WALL
- 4900 — EXISTING CONTOUR LINE
- 4900 — PROPOSED CONTOUR LINE
- DRAINAGE SWALE FLOW LINE
- FG=65.00 — PROPOSED EXTERIOR FINISHED GRADE OF HOUSE
- 105 — PROPOSED LOT NUMBER
- CUT OR FILL SLOPE
- ROCK RIPRAP AREA

0 30 60 120 180

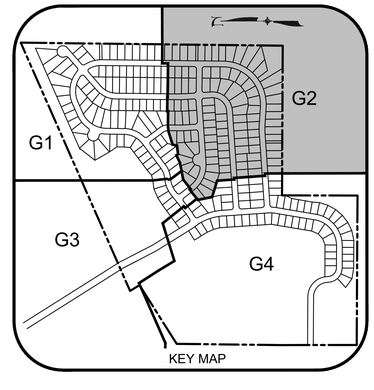
1"=60'

NOTE:
ADD 4000 FEET TO ALL SPOT ELEVATIONS.

PRELIMINARY EARTHWORK VOLUMES
502,900 CUBIC YARDS EXCAVATION
538,700 CUBIC YARDS EMBANKMENT



TYPICAL LOT GRADING



KEY MAP

DRAWN BY:	CHECK BY:
REVISIONS	
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PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY GRADING PLAN

PROFESSIONAL ENGINEER STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET G2 OF 14
TIVCCNV01

TENTATIVE MAP

LEGEND

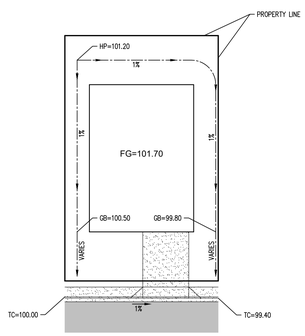
- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- GRADE BREAK
- RETAINING WALL
- 54.17 GB — PROPOSED ELEV. @ GRADE BREAK
- 54.95 HP — PROPOSED ELEV. @ HIGH POINT
- 54.29 LP — PROPOSED ELEV. @ LOW POINT
- 54.19 FL — PROPOSED ELEV. @ FLOW LINE
- 54.69 FG — PROPOSED ELEV. @ FINISHED GRADE
- 53.99 TW — PROPOSED ELEV. @ TOP OF WALL
- 4900 — EXISTING CONTOUR LINE
- 4900 — PROPOSED CONTOUR LINE
- DRAINAGE SWALE FLOW LINE
- FG=65.00 — PROPOSED EXTERIOR FINISHED GRADE OF HOUSE
- 105 — PROPOSED LOT NUMBER
- CUT OR FILL SLOPE
- ROCK RIPRAP AREA

0 30 60 120 180

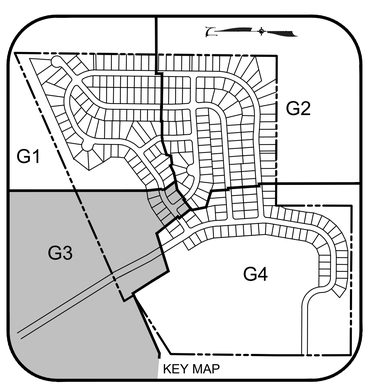
1"=60'

NOTE:
ADD 4000 FEET TO ALL SPOT ELEVATIONS.

PRELIMINARY EARTHWORK VOLUMES
502,900 CUBIC YARDS EXCAVATION
538,700 CUBIC YARDS EMBANKMENT



TYPICAL LOT GRADING



NO.	REVISIONS	DRAWN BY	CHECK BY
	DATE		

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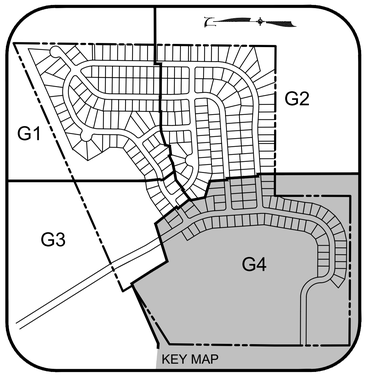
PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY GRADING PLAN

PROFESSIONAL ENGINEER, STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET
G3 OF 14
TIVCCNV01

TENTATIVE MAP



LEGEND

- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- GRADE BREAK
- RETAINING WALL
- 51.17 GB — PROPOSED ELEV. @ GRADE BREAK
- 53.93 HP — PROPOSED ELEV. @ HIGH POINT
- 51.29 LP — PROPOSED ELEV. @ LOW POINT
- 52.19 FL — PROPOSED ELEV. @ FLOW LINE
- 54.28 FG — PROPOSED ELEV. @ FINISHED GRADE
- 53.69 TW — PROPOSED ELEV. @ TOP OF WALL
- 4900 — EXISTING CONTOUR LINE
- 4900 — PROPOSED CONTOUR LINE
- DRAINAGE SWALE FLOW LINE
- FG=65.00 — PROPOSED EXTERIOR FINISHED GRADE OF HOUSE
- 105 — PROPOSED LOT NUMBER
- CUT OR FILL SLOPE
- ROCK RIPRAP AREA

0 30 60 120 180

1"=60'

NOTE:
ADD 4000 FEET TO ALL SPOT ELEVATIONS.

PRELIMINARY EARTHWORK VOLUMES
502,900 CUBIC YARDS EXCAVATION
538,700 CUBIC YARDS EMBANKMENT

MATCH LINE (REF. SHEET G2)

MATCH LINE (REF. SHEET G3)

STREET 'B'

DRAKO WAY

MORGAN MILL ROAD

CARSON CITY APN 008-531-03

2' OF FILL TO BE PLACED OVER EXISTING GRADE AT LANDFILL AREA.

APPROXIMATE LIMITS OF LANDFILL

REMAINDER PARCEL 1
17.7 ACRES

REMAINDER PARCEL 2
10.3 ACRES

REMAINDER PARCEL 3
3.0 ACRES

PEDESTRIAN ACCESS POINT

STORM DRAIN CULVERT FOR FUTURE DETENTION POND FLOWS FROM MULTI-FAMILY SITE

PROPOSED DETENTION POND

STORM DRAIN CULVERT FOR FUTURE DETENTION POND FLOWS FROM COMMERCIAL SITE

HIGH SIERRA PROPERTY HOLDINGS LLC
APN 008-522-15

SIERRA PACIFIC POWER CO
APN 008-522-07

MADDOX, CB FAMILY TRUST
APN 008-531-28

B&M GRAY INVESTMENTS LLC
APN 008-531-08

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PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY GRADING PLAN

PROFESSIONAL ENGINEER — STATE OF NEVADA — KEVIN C. KOSSOL — Exp: 6/30/19 CIVIL — No. 11510

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET G4 OF 14
TIVCCNV01

TENTATIVE MAP

PROPERTY MANAGEMENT, CARSON CITY
APN 010-691-04

RIDL
APN 008-521-24

RIDL
APN 008-521-23

REFERENCE WATER REPORT EXHIBIT 3 FOR WATER MAIN CONTINUATION

PROPOSED FLARED END SECTION

EXISTING POWER POLE

PROPOSED STORM DRAIN MANHOLE

PROPOSED SANITARY SEWER MANHOLE

PROPOSED PRESSURE REDUCING VALVE

PROPOSED WATER MAIN

PROPOSED CATCH BASIN

PROPOSED STORM DRAIN MANHOLE

PROPOSED WATER MAIN

PROPOSED SANITARY SEWER MANHOLE

PROPOSED WATER MAIN

PROPOSED SANITARY SEWER MANHOLE

PROPOSED CATCH BASIN

PROPOSED WATER MAIN

COURT "B"

STREET "A"

STREET "B"

STREET "C"

STREET "D"

STREET "E"

ASTRO DRIVE

SS POWER LINE EASEMENT

MATCH LINE (REF. SHEET U2)

MATCH LINE (REF. SHEET U2)

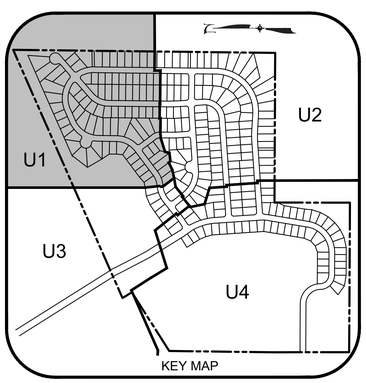
MATCH LINE (REF. SHEET U3)

LEGEND

- SD — STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- SS — SANITARY SEWER WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- SANITARY SEWER MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- W — WATERMAIN (DASHED IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- 105 — PROPOSED LOT NUMBER
- PROPOSED FLARED END SECTION/ HEADWALL
- EXISTING POWER POLE

0 30 60 120 180

1"=60'



KEY MAP

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT., 2018
SCALE:	1"=60'

SHEET U1 OF 14

TTVCCNV01

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REVISIONS

DATE

PLATEAU DEVELOPMENT

CARSON CITY, NEVADA

PRELIMINARY UTILITY PLAN

PROFESSIONAL ENGINEER STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

TENTATIVE MAP

October 16, 2018 - 08:04 File Name: \\manhard-corp\Projects\Carson City\Carson City\Plan\Entitlement\Tentative Map\Plateau Tent Map_Kk.dwg Updated By: KKossol

LEGEND

- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- SANITARY SEWER WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- SANITARY SEWER MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- WATERMAIN (DASHED IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- 105 PROPOSED LOT NUMBER
- PROPOSED FLARED END SECTION/ HEADWALL
- EXISTING POWER POLE

0 30 60 120 180

1"=60'

PROPERTY MANAGEMENT, CARSON CITY
APN 010-691-04

PROPOSED FLARED END SECTION

EXISTING POWER POLE

PROPOSED STORM DRAIN MANHOLE

PROPOSED SANITARY SEWER MANHOLE

PROPOSED WATER MAIN

PROPOSED STORM DRAIN MANHOLE

PROPOSED STORM DRAIN MANHOLE

PROPOSED CATCH BASIN

PROPOSED STORM DRAIN MANHOLE

PROPOSED SANITARY SEWER MANHOLE

PROPOSED CATCH BASIN

PROPOSED SANITARY SEWER MANHOLE

PROPOSED SANITARY SEWER MANHOLE

PROPOSED WATER MAIN

PROPOSED STORM DRAIN MANHOLE

PROPOSED FLARED END SECTION

PROPOSED WATER MAIN

PROPOSED SANITARY SEWER MANHOLE

PROPOSED PRESSURE REDUCING VALVE

REFERENCE WATER REPORT EXHIBIT J FOR WATER MAIN CONTINUATION

20' WIDE WILD AND FIRE ACCESS ROAD (PROPOSED)

STREET "A"

STREET "B"

STREET "C"

STREET "D"

STREET "E"

STREET "A"

STREET "B"

47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23

200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220

178 177 176 175 242 241 240 239 238 237 236 235 234 233 232 231 230 229

171 172 173 174 106 105 104 103 102 101 100 99 98 97 96 95 94 93

145 144 143 142 107 108 109 110 111 112 113 114 115 116

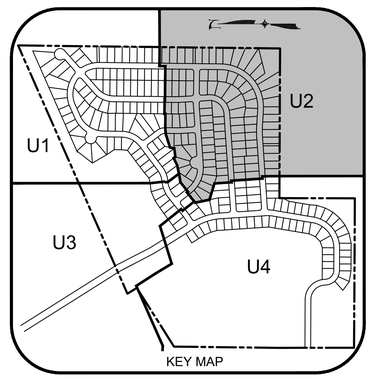
132 133 134 135 136 137 138 139 140 141

CARSON CITY
APN 008-531-03

MATCH LINE
(REF. SHEET U1)

MATCH LINE
(REF. SHEET U4)

MATCH LINE
(REF. SHEET U5)



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REVISIONS
DATE

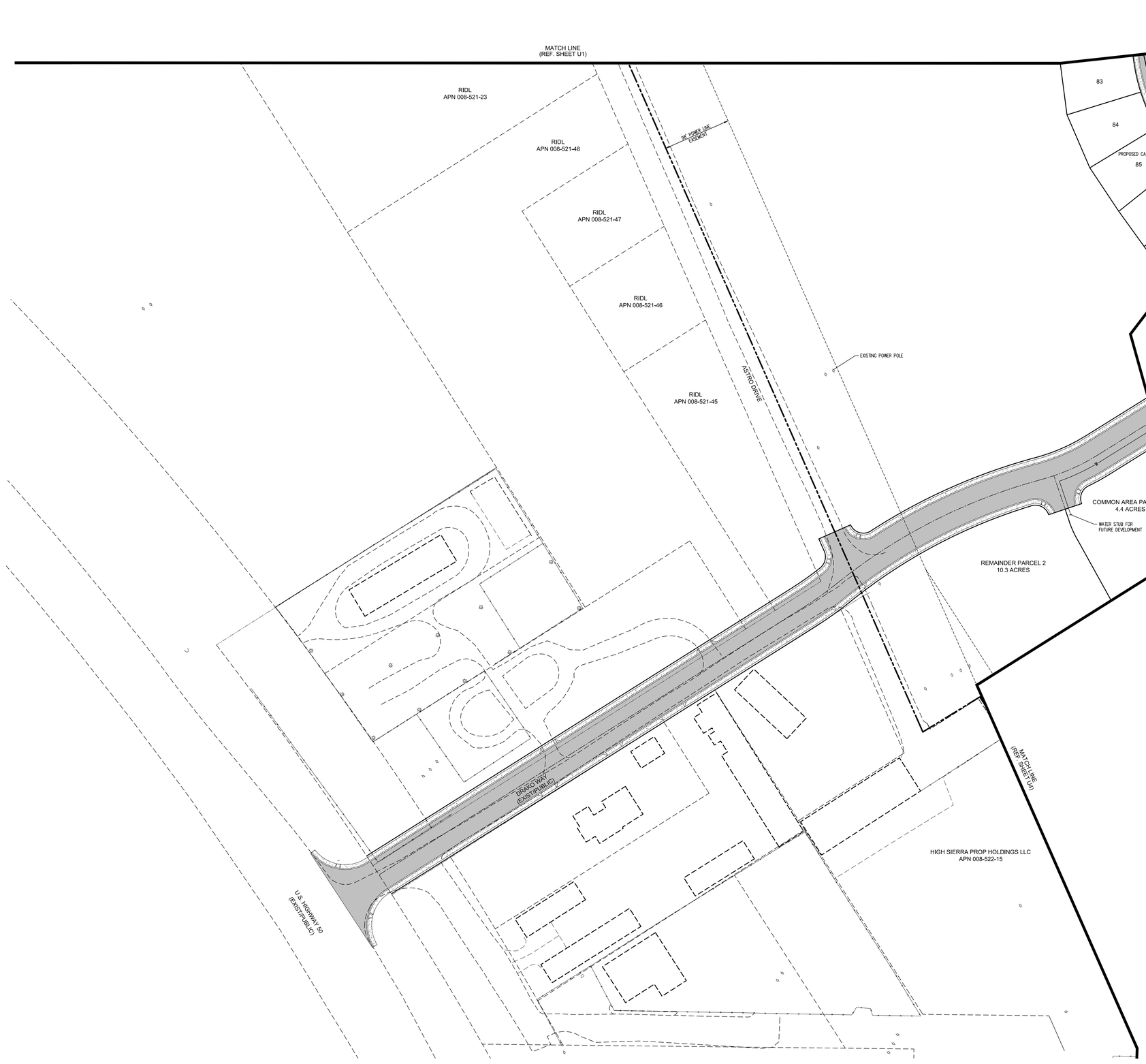
PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY UTILITY PLAN

PROFESSIONAL ENGINEER STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.: KCK
PROJ. ASSOC.: SDF
DRAWN BY: KCK
DATE: OCT. 2018
SCALE: 1"=60'

SHEET
U2 OF 14
TIVCCNV01

TENTATIVE MAP

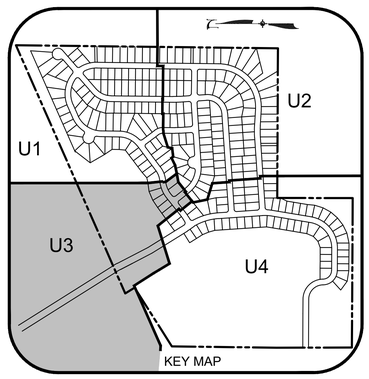


LEGEND

- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- SANITARY SEWER WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- SANITARY SEWER MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- WATERMAIN (DASHED IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- 105 PROPOSED LOT NUMBER
- PROPOSED FLARED END SECTION/ HEADWALL
- EXISTING POWER POLE

0 30 60 120 180

1"=60'



NO.	DATE	REVISIONS	DRAWN BY	CHECK BY

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PLATEAU DEVELOPMENT

CARSON CITY, NEVADA

PRELIMINARY UTILITY PLAN

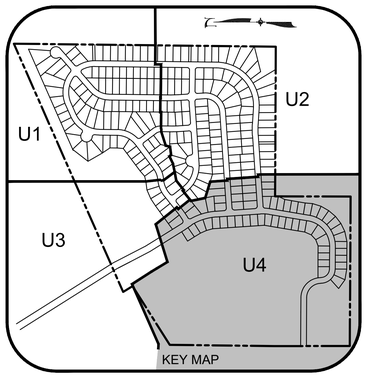
PROFESSIONAL ENGINEER STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET
U3 OF 14
TIVCCNV01

TENTATIVE MAP

October 18, 2018 - 08:54 Dwg Name: \\nvcivil-corp\Projects\CCV\Carson\Vesta\TM\Maintenance\Tentative Map\Plateau Tent Map MK.dwg Updated By: KKossol



LEGEND

- STORM DRAIN WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- SANITARY SEWER WITH DIRECTION INDICATOR (DASHED IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- SANITARY SEWER MANHOLE (HOLLOW IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- WATERMAIN (DASHED IF EXISTING)
- PROPOSED A.C. PAVEMENT AREA
- PROPOSED CONCRETE AREA
- 105 PROPOSED LOT NUMBER
- PROPOSED FLARED END SECTION/ HEADWALL
- EXISTING POWER POLE

0 30 60 120 180

1"=60'

MATCH LINE (REF. SHEET U2)

STREET 'B'

STREET 'A'

DRAKO WAY

MORGAN MILL ROAD

STREET 'C'

CARSON CITY
APN 008-531-03

PROPOSED WATER MAIN

PROPOSED FLARED END SECTION

PROPOSED CATCH BASIN

PROPOSED STORM DRAIN MANHOLE

PROPOSED PRESSURE REDUCING VALVE

PROPOSED SANITARY SEWER MANHOLE

MATCH LINE (REF. SHEET U3)

REMAINDER PARCEL 1
17.7 ACRES

REMAINDER PARCEL 2
10.3 ACRES

REMAINDER PARCEL 3
3.0 ACRES

PROPOSED DETENTION POND

STORM DRAIN CULVERT FOR FUTURE DETENTION POND FLOWS FROM MULTI-FAMILY SITE

SANITARY SEWER STUB FOR FUTURE DEVELOPMENT

WATER STUB FOR FUTURE DEVELOPMENT

STORM DRAIN CULVERT FOR FUTURE DETENTION POND FLOWS FROM COMMERCIAL SITE

CONNECT TO EXISTING SANITARY SEWER MANHOLE

POINT OF CONNECTION FOR WATER MAIN

90' POWER LINE EASEMENT

HIGH SIERRA PROP HOLDINGS LLC
APN 008-522-16

SIERRA PACIFIC POWER CO
APN 008-522-07

MADDOX, CB FAMILY TRUST
APN 008-531-28

B&M GRAY INVESTMENTS LLC
APN 008-531-58

TAIYO AMERICA INC
APN 008-531-57

TAIYO AMERICA INC
APN 008-531-42

CARSON CITY
APN 008-531-03

DRAWN BY:	CHECK BY:
REVISIONS	
DATE	

Manhard CONSULTING LTD
9441 Double Peak Parkway, Suite 350, Reno, NV 89521 (775) 746-3500 www.manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

PLATEAU DEVELOPMENT
CARSON CITY, NEVADA
PRELIMINARY UTILITY PLAN

PROFESSIONAL ENGINEER, STATE OF NEVADA
KEVIN C. KOSSOL
Exp: 6/30/19
CIVIL
No. 11509

PROJ. MGR.:	KCK
PROJ. ASSOC.:	SDF
DRAWN BY:	KCK
DATE:	OCT. 2018
SCALE:	1"=60'

SHEET
U4 OF 14
TIVCCNV01

TENTATIVE MAP

October 18, 2018 08:04 Dwg Name: N:\Projects\Plateau - CCV Vacant\Maps\Civil\Preliminary\Tentative Map Plans\ Tent Map_KK.dwg Created By: kkossol

TRAFFIC IMPACT STUDY

FOR

Plateau Development

October 19, 2018

PREPARED FOR:

Manhard Consulting, Ltd.

PREPARED BY:

TRAFFIC WORKS LLC

TRAFFIC WORKS, LLC
5482 Longley Lane, Suite B, Reno, Nevada 89511
775.322.4300
www.Traffic-Works.com

YOUR QUESTIONS ANSWERED QUICKLY

Why did you perform this study?

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed Plateau Development in Carson City, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to determine what traffic controls or other mitigations may be needed to reduce potential impacts, if any are identified.

What does the project consist of?

The project consists of 270 single family residential units, 250 multifamily residential units, 12,000 square feet of office space, 12,000 square feet of retail space, and 300 self-storage units. The project site is located on approximately 100 acres south of US 50 and east of Deer Run Road, near Drako Way and Morgan Mill Road.

How much traffic will the project generate?

The project is anticipated to generate 5,003 Daily, 344 AM peak hour, and 473 PM peak hour trips.

Are there any traffic impacts?

The US 50/Drako Way intersection is anticipated to operate at LOS F under Existing Plus Project and Cumulative Plus Project conditions unless improvements are made.

Are any improvements recommended?

A traffic signal at the US 50/Drako Way intersection would improve operations to acceptable levels of service during the AM and PM peak hours. The intersection is expected to meet Four-Hour and Peak Hour signal warrant criteria based on Existing Plus Project and Cumulative Plus Project traffic volumes. Additionally, NDOT signal spacing requirements would be met based on the distance to Deer Run Road (the closest existing traffic signal). A traffic signal, funded by the applicant, should be advanced to the design stage with specific details to be addressed in coordination with the Nevada Department of Transportation (NDOT).

LIST OF FIGURES

LIST OF APPENDICES

INTRODUCTION

This report summarizes the results of a Traffic Impact Analysis completed to assess the potential impacts to the local roadway network associated with the Plateau Development project in Carson City, Nevada. This Traffic Impact Study has been prepared to describe existing traffic conditions, identify potential transportation related impacts, document findings, and make recommendations to mitigate impacts, if any are found.

Study Area and Evaluated Scenarios

The proposed project is located south of US 50 and east of Deer Run Road, near Drako Way and Morgan Mill Road in Carson City, Nevada. The project location is shown on **Figure 1** and the project site plan is shown on **Figure 2**.

The following intersections are included in the analysis:

- US 50 / Drako Way
- US 50 / Deer Run Road / Arrowhead Drive
- Deer Run Road / Morgan Mill Road

The existing study intersection lane configurations and traffic controls are shown on **Figure 3**, attached.

This study includes analysis of the weekday AM and PM peak hours as these are the periods of time in which the project is expected to generate the most traffic. The evaluated development scenarios are:

- Existing Conditions (no project)
- Existing Plus Project Conditions
- Cumulative No Project Conditions
- Cumulative Plus Project Conditions

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of delay per vehicle at intersections to letter grades “A” through “F” with “A” representing optimum conditions and “F” representing breakdown or over capacity flows.

Intersections

Intersection level of service methodology is established in the *Highway Capacity Manual (HCM) 2010*, published by the Transportation Research Board. The methodology for signalized intersections determines the level of service by comparing the average control delay for the overall intersection to the delay thresholds in **Table 1**. Level of service at unsignalized (side-street stop controlled) intersections is

determined by comparing the average control delay for the worst movement/approach to the delay thresholds in **Table 1.**

Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 20	10 to 15
C	Stable conditions with significant affect from other vehicles.	20 to 35	15 to 25
D	High density traffic conditions still with stable flow.	35 to 55	25 to 35
E	At or near capacity flows.	55 to 80	35 to 50
F	Over capacity conditions.	> 80	> 50

Source: Highway Capacity Manual (2010), Chapters 18 and 19

Level of service calculations were performed using the Synchro 9 software package with results reported in accordance with the current *HCM 2010* methodology.

Level of Service Policies

Carson City

Carson City Municipal Code states:

A traffic LOS D or better…shall be maintained through mitigation of impacts from all conditions on all city maintained arterial and collector roads and at city road intersections, except as noted in the Carson City master plan.[1]

Nevada Department of Transportation

The Nevada Department of Transportation (NDOT) *Traffic Impact Study Requirements* publication states:

Level of Service "C" will be the design objective for capacity and under no circumstances will less than Level of Service "D" be accepted for site and non-site traffic.

Hence, LOS "D" has been used as the criteria for the study intersections.

[1] Carson City Municipal Code 12.13.3.3.5.a accessed on August 27, 2018 at library.municode.com/nv/carson_city/codes

EXISTING CONDITIONS

Roadway Facilities

A brief description of the key roadways in the study area is provided below.

US Highway 50 (US 50) is a four-lane highway with a two-way left-turn lane near the project site. In the project area, US 50 connects Lake Tahoe to the west and Fallon to the east. The posted speed limit on US 50 adjacent to the project site is 55 mph.

Deer Run Road is a two-lane roadway with a two-way left-turn lane south of US 50. The roadway serves primarily commercial and industrial uses and has a posted speed limit of 25 mph. North of US 50, the opposing roadway is called Arrowhead Drive.

Drako Way is an unstriped, low volume, local roadway that extends south of US 50. South of Astro Drive, Drako Way is a dirt road.

Traffic Volumes

Existing AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak hour turning movement volumes were collected at the study intersections on a mid-week day in August 2018. **Figure 3** shows the existing intersection turning movement volumes at the study intersections.

Intersection Level of Service Analysis

Existing conditions intersection level of service analysis was performed using Synchro 9 software, with reports based on *HCM 2010* methodology. The peak hour factors (PHF) and heavy vehicle percentages from the existing counts were used in the analysis. The level of service results are presented in **Table 2** and the calculation sheets are provided in **Appendix A**, attached.

Table 2: Intersection Level of Service – Existing Conditions

Intersection	Control	Approach/ Movement	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
US 50/Drako Way	Side Street Stop	Northbound Approach	26.2	D	**45.7**	**E**
		Westbound Left	10.0	A	21.1	C
US 50/Deer Run Rd	Signal	Overall	14.2	B	27.4	C
Deer Run Rd/ Morgan Mill Rd	Side Street Stop	Eastbound Approach	9.2	A	9.5	A
		Westbound Approach	8.7	A	8.9	A
		Northbound Left	7.3	A	7.3	A
		Southbound Left	7.3	A	7.3	A

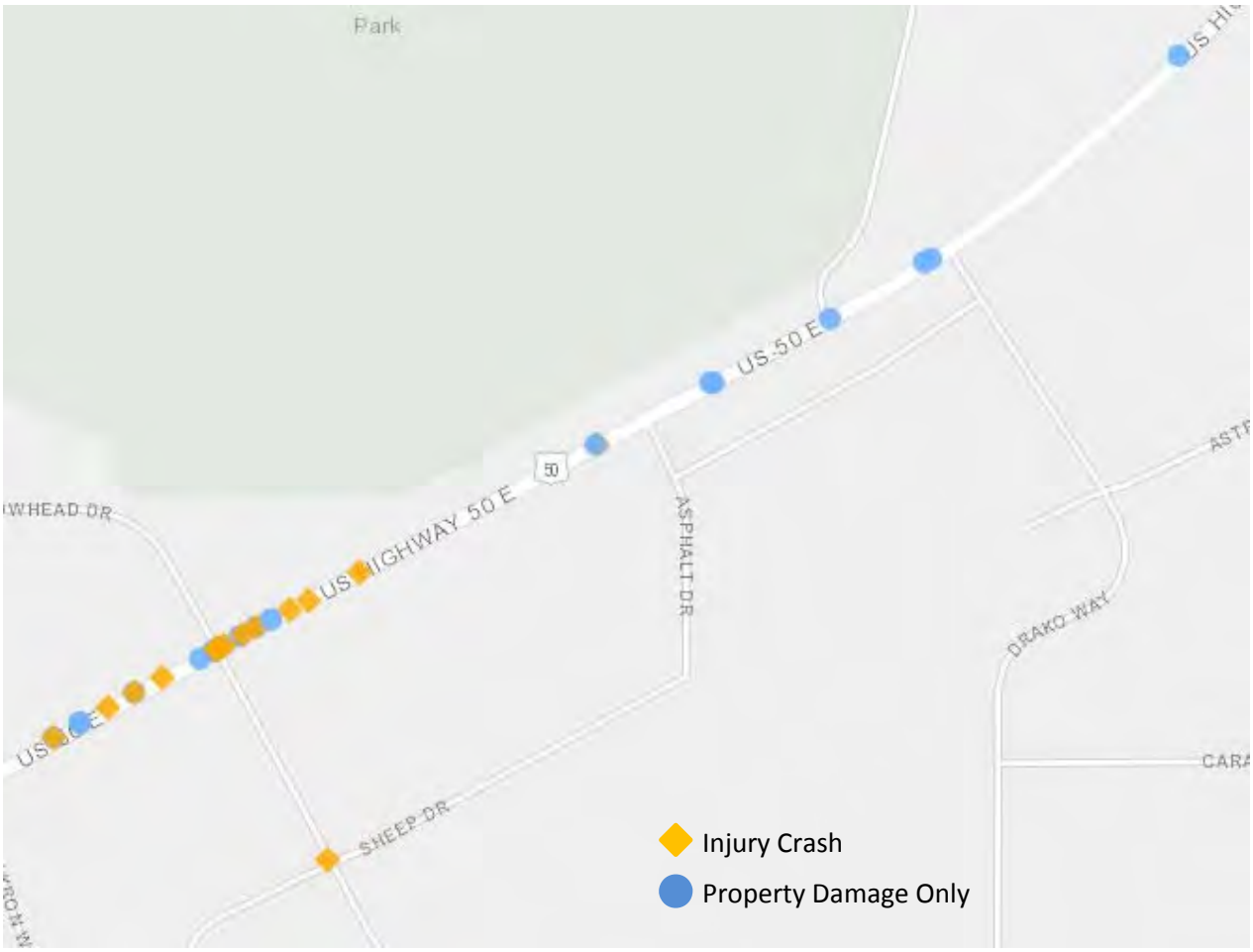
Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst movement/approach for unsignalized intersections.
Source: Traffic Works, 2018

As shown in the table, the northbound movement of the US 50/Drako Way intersection currently operates at LOS E (worse than the policy LOS D) during the PM peak hour. The other study intersections operate at acceptable levels of service.

Crash Analysis

The Nevada Department of Transportation's online Traffic Safety App was utilized to access crash data for the study area during 2015, 2016, and 2017 (the most recent three-year period available). Thirty-six (36) crashes were identified on US 50 in the vicinity of the study intersections, shown on **Exhibit 1** below. Of these, 17 resulted in at least one injury and 19 resulted in property damage only. Twenty-two (22) crashes were rear-end collisions on US-50 and six (6) were angle crashes. Other than a high occurrence of rear-end collisions, there does not appear to be a discernible pattern for these crashes.

Exhibit 1: Crash Data (2015 – 2017)



Source: https://ndot.maps.arcgis.com

PROJECT CONDITIONS

Project Description

The proposed Plateau Development project is anticipated to include 270 single family residential units, 250 multifamily residential units, 12,000 square feet of office space, 12,000 square feet of retail space, and 300 self-storage units. The project site is located on approximately 100 acres south of US 50 and east of Deer Run Road, near Drako Way and Morgan Mill Road.

Project Access

Two access locations are proposed with the project, as shown on **Figure 2**. The primary access would be located at the US 50/Drako Way intersection. A second project access would be provided via a connection to Morgan Mill Road to Deer Run Road.

Trip Generation

Trip generation estimates for the proposed project were calculated based on average trip rates presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition*. Given the mix of land uses (residential, retail, and office) it is likely that a small amount of internal capture (i.e. trips between project land uses that do not access the outside roadway network) will occur; however, it is expected to be a small amount. Therefore, to present a conservative analysis, internal capture and pass-by reductions were not included. **Table 3** provides the Daily, AM, and PM peak hour trip generation estimates for the proposed project. As shown in the table, the project is anticipated to generate 5,003 Daily, 344 AM peak hour, and 473 PM peak hour trips.

Table 3: Project Trip Generation Estimates

Land Use (ITE Land Use Code)	Size[1]	Trips[2]				
		Daily	AM	AM In/Out	PM	PM In/Out
Single Family Housing (210)	270 du	2,549	200	50 / 150	267	168 / 99
Multifamily Housing (220)	250 du	1,830	115	26 / 89	140	88 / 52
General Office Building (710)	12 ksf	117	14	12 / 2	14	2 / 12
Shopping Center (820)	12 ksf	453	11	7 / 4	46	22 / 24
Mini-Warehouse (151)	300 units	54	4	2 / 2	6	3 / 3
Total Trips		***5,003***	***344***	***97 / 247***	***473***	***283 / 190***

Notes: 1. du = dwelling units; ksf = 1,000 square feet
2. Trips calculated based on the following rates:
- Single Family Residential: Daily – 9.44 trips per du; AM – 0.74 trips per du (25% in/75% out); PM – 0.99 trips per du (63% in/37% out)
- Multifamily Residential: Daily – 7.32 trips per du; AM – 0.46 trips per du (23% in/77% out); PM – 0.56 trips per du (63% in/37% out)
- Office: Daily – 9.74 trips per ksf; AM – 1.16 trips per ksf (86% in/14% out); PM – 1.15 trips per du (16% in/84% out)
- Shopping Center: Daily – 37.75 trips per ksf; AM – 0.94 trips per ksf (62% in/38% out); PM – 3.81 trips per ksf (48% in/52% out)
- Mini-Warehouse: Daily – 17.96 trips per 100 units; AM – 1.39 trips per 100 units (51% in/49% out); PM – 1.95 trips per 100 units (50% in/50% out)

Source: Traffic Works, 2018

Trip Distribution

Project generated traffic was distributed to the surrounding roadway network based on the location of the project in relation to complimentary land uses, major activity centers, and local roadway connections. The following trip distribution percentages were used:

- 75% to/from west on US 50 toward Carson City
- 5% to/from north on Arrowhead Drive
- 20% to/from east on US 50 toward Dayton and USA Parkway (TRIC Industrial Park)

The project trip distribution and assignment are shown on **Figure 4**.

EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

Existing Plus Project traffic volumes were developed by adding the project generated trips (**Figure 4**) to the existing traffic volumes (**Figure 3**) and are shown on **Figure 5**, attached.

Intersection Level of Service

Existing Plus Project intersection level of service analysis was performed using Synchro 9 software. The Existing Plus Project traffic volumes shown on **Figure 5**, as well as the existing peak hour factors and heavy vehicle percentages were used in the analysis. **Table 4** shows the level of service results and the calculation sheets are provided in **Appendix A**.

Table 4: Intersection Level of Service – Existing Plus Project Conditions

Intersection	Control	Approach/ Movement	Existing				Existing Plus Project			
			AM		PM		AM		PM	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
US 50/Drako Way	Side Street Stop	Northbound Approach	26.2	D	**45.7**	**E**	**143.0**	**F**	**405.9**	**F**
		Westbound Left	10.0	A	21.1	C	10.2	B	25.5	D
US 50/Deer Run Rd	Signal	Overall	14.2	B	27.4	C	21.9	C	33.4	C
Deer Run Rd/ Morgan Mill Rd	Side Street Stop	Eastbound Approach	9.2	A	9.5	A	10.3	B	12.8	B
		Westbound Approach	8.7	A	8.9	A	8.9	A	9.2	A
		Northbound Left	7.3	A	7.3	A	7.3	A	7.3	A
		Southbound Left	7.3	A	7.3	A	7.4	A	7.5	A

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst movement/approach for unsignalized intersections.
Source: Traffic Works, 2018

As shown in Table 4, the northbound approach of the US 50/Drako Way intersection is expected to operate at LOS F during the AM and PM peak hours. The existing volumes on US 50 are high enough to effectively prohibit northbound left-turns from the project unless improvements are made. The remaining study intersections are expected to operate at acceptable levels of service with the project.

Recommended Improvements

The US 50/Drako Way intersection is expected to operate at LOS F with the proposed project. A traffic signal at this intersection would improve operations to acceptable levels (LOS A) during the AM and PM peak hours.

The *Manual on Uniform Traffic Control* Devices (MUTCD) published by the Federal Highway Administration (FHWA) presents signal warrant analysis methodology to assist in determining if a traffic signal is warranted at an intersection. The *MUTCD* includes two versions of the Four-Hour Warrant criteria. The 70% Factor Warrant is to be used for communities with a population of less than 10,000 or a speed limit above 40 mph on the major street. The US 50/Drako Way intersection meets this criteria with a speed limit of 55 mph on US 50.

Table 5 shows the results of the Four-Hour Signal Warrant analysis (70% Factor) at the US 50/Drako Way intersection based on Existing Plus Project traffic volumes. "Hour 2" of the AM and PM peak hours was determined based on the existing traffic count data (which is collected for two hours during the morning and two hours during the evening). The project trips during "Hour 2" were calculated assuming 75 percent of the "Hour 1" peak hour volumes.

Table 5: Four-Hour Traffic Signal Warrant Analysis – Existing Plus Project Conditions

Intersection	# of Lanes (Major Street/ Minor Street)	AM Peak Hour						PM Peak Hour					
		Hour 1			Hour 2[1]			Hour 1			Hour 2[1]		
		Major Street Volume	Minor Street Volume	Warrant Met?	Major Street Volume	Minor Street Volume	Warrant Met?	Major Street Volume	Minor Street Volume	Warrant Met?	Major Street Volume	Minor Street Volume	Warrant Met?
US 50/ Drako Way	2 / 1	2,481	170	**Yes**	1,814	134	**Yes**	2,945	139	**Yes**	2,660	106	**Yes**

Notes: 1. The project trip generation during the second AM and PM peak hours was calculated assuming 75 percent of the first peak hour volumes.
Source: Traffic Works, 2018

As shown in the table, the signal warrant criteria are easily met during four hours of the day. Note that the threshold volume on the minor street approach must exceed 60 vehicle per hour on a single-lane approach or 80 vehicles per hour on a two-lane approach. The Four-Hour volume signal warrant is met.

CUMULATIVE CONDITIONS

Traffic Volumes

Future year (2040) traffic volumes were developed based on projected growth in the area. Population projections for the year 2040 show a growth of approximately 0.54 percent per year. This rate was applied to the existing traffic volumes for a period of 22 years (2018 to 2040) to develop future year traffic volume forecasts. The 2040 traffic volumes at the study intersections are shown on **Figure 6**.

Intersection Level of Service

Cumulative No Project conditions intersection level of service analysis was performed using Synchro 9 software, with reports based on *HCM 2010* methodology. The peak hour factors (PHF) and heavy vehicle percentages from the existing counts were used in the analysis. The level of service results are presented in **Table 6** and the calculation sheets are provided in **Appendix A**, attached.

Table 6: Intersection Level of Service – Cumulative Conditions

Intersection	Control	Approach/ Movement	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
US 50/Drako Way	Side Street Stop	Northbound Approach	30.4	D	**61.7**	**F**
		Westbound Left	10.5	B	25.2	C
US 50/Deer Run Rd	Signal	Overall	20.5	C	36.6	D
Deer Run Rd/ Morgan Mill Rd	Side Street Stop	Eastbound Approach	9.3	A	9.7	A
		Westbound Approach	8.7	A	8.9	A
		Northbound Left	7.3	A	7.3	A
		Southbound Left	7.4	A	7.3	A

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst movement/approach for unsignalized intersections.
Source: Traffic Works, 2018

As shown in the table, the northbound approach of the US 50/Drako Way intersection is expected to operate at LOS F during the PM peak hour without the project. The remaining study intersections are expected to operate at acceptable levels of service.

CUMULATIVE PLUS PROJECT CONDITIONS

Traffic Volumes

Cumulative Plus Project traffic volumes were developed by adding the project generated trips (**Figure 4**) to the Cumulative No Project traffic volumes (**Figure 6**) and are shown on **Figure 7**, attached.

Intersection Level of Service

Cumulative Plus Project intersection level of service analysis was performed using Synchro 9 software. The Cumulative Plus Project traffic volumes shown on **Figure 7**, as well as the existing peak hour factors and heavy vehicle percentages were used in the analysis. **Table 7** shows the level of service results and the calculations sheets are provided in **Appendix A**.

Table 7: Intersection Level of Service – Cumulative Plus Project Conditions

Intersection	Control	Approach/ Movement	Cumulative				Cumulative Plus Project			
			AM		PM		AM		PM	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
US 50/Drako Way	Side Street Stop	Northbound Approach	30.4	D	**61.7**	**F**	**221.4**	**F**	**662.3**	**F**
		Westbound Left	10.5	B	25.2	C	10.7	B	32.5	D
US 50/Deer Run Rd	Signal	Overall	20.5	C	36.6	D	36.5	D	49.4	D
Deer Run Rd/ Morgan Mill Rd	Side Street Stop	Eastbound Approach	9.3	A	9.7	A	10.5	B	13.2	B
		Westbound Approach	8.7	A	8.9	A	8.9	A	9.2	A
		Northbound Left	7.3	A	7.3	A	7.3	A	7.3	A
		Southbound Left	7.4	A	7.3	A	7.4	A	7.5	A

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst movement/approach for unsignalized intersections.
Source: Traffic Works, 2018

As shown in **Table 7**, the northbound approach of the US 50/Drako Way intersection is expected to operate at LOS F during the AM and PM peak hours. The remaining study intersections are expected to operate at acceptable levels of service with the project.

Recommended Improvements

The US 50/Drako Way intersection is expected to operate at LOS F with the proposed project. A traffic signal at this intersection would improve operations to acceptable levels during the AM and PM peak hours. **Table 8** shows the level of service results.

Table 8: Intersection Level of Service – Cumulative Plus Project Conditions with Mitigation

Intersection	Control	Approach/ Movement	AM		PM	
			Delay[1]	LOS	Delay[1]	LOS
US 50/Drako Way	Signal	Overall	9.7	A	10.5	B

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the worst movement/approach for unsignalized intersections.
Source: Traffic Works, 2018

As previously discussed, the US 50/Drako Way intersection is expected to meet the Four-Hour signal warrant criteria established in the *MUTCD* based on Existing Plus Project traffic volumes. Cumulative Plus Project traffic volumes are higher than Existing Plus Project traffic volumes and therefore would meet the signal warrant criteria as well.

It should be noted that a traffic signal at this location would need to be approved by NDOT. Prior to approval, specific design details would need to be formalized in coordination with NDOT.

NDOT Signal Spacing Requirements

The Nevada Department of Transportation's *Access Management System and Standards*, 2017 Edition includes traffic signal spacing standards for state roadways based on roadway classification and posted speed limit. US 50 is classified as an "Other Principal Arterial" with a posted speed limit of 55 mph adjacent to the project site. The required spacing between signalized intersections is 2,640 feet. The closest signal

to Drako Way is at the US 50/Deer Run Road intersection which is approximately 2,690 feet away. Therefore, a traffic signal at Drako Way would meet NDOT's minimum signal spacing requirements.

CONCLUSIONS AND RECOMMENDATIONS

The following is a list of key findings and recommendations:

- The proposed project includes 270 single family houses, 250 apartments, 12,000 SF of offices, 12,000 SF of shopping, and 300 storage units.
- The proposed project is expected to generate approximately 5,003 Daily, 344 AM peak hour, and 473 PM peak hour trips.
- The US 50/Drako Way intersection is expected to operate at LOS E under existing conditions, and LOS F under Existing Plus Project conditions. The remaining study intersections would operate at acceptable levels of service during the AM and PM peak hours.
- A traffic signal at the US 50/Drako Way intersection would improve operations to acceptable levels (LOS A). The criteria for the Four-Hour signal warrant would be met based on Existing Plus Project conditions traffic volumes.
- The US 50/Drako Way intersection is expected to operate at LOS F under Cumulative and Cumulative Plus Project conditions. A traffic signal would improve operations to acceptable levels (LOS A and B) during the AM and PM peak hours.
- Drako Way is approximately 2,690 feet from the US 50/Deer Run Road intersection, which would meet NDOT signal spacing requirements.
- The proposed traffic signal, to be funded by the applicant, will be reviewed and constructed through the NDOT Occupancy Permit process with specific details established through that process.

TRAFFIC WORKS

NO SCALE

Figure 1

Plateau Development in Carson City, NV
TRAFFIC IMPACT STUDY
Project Location

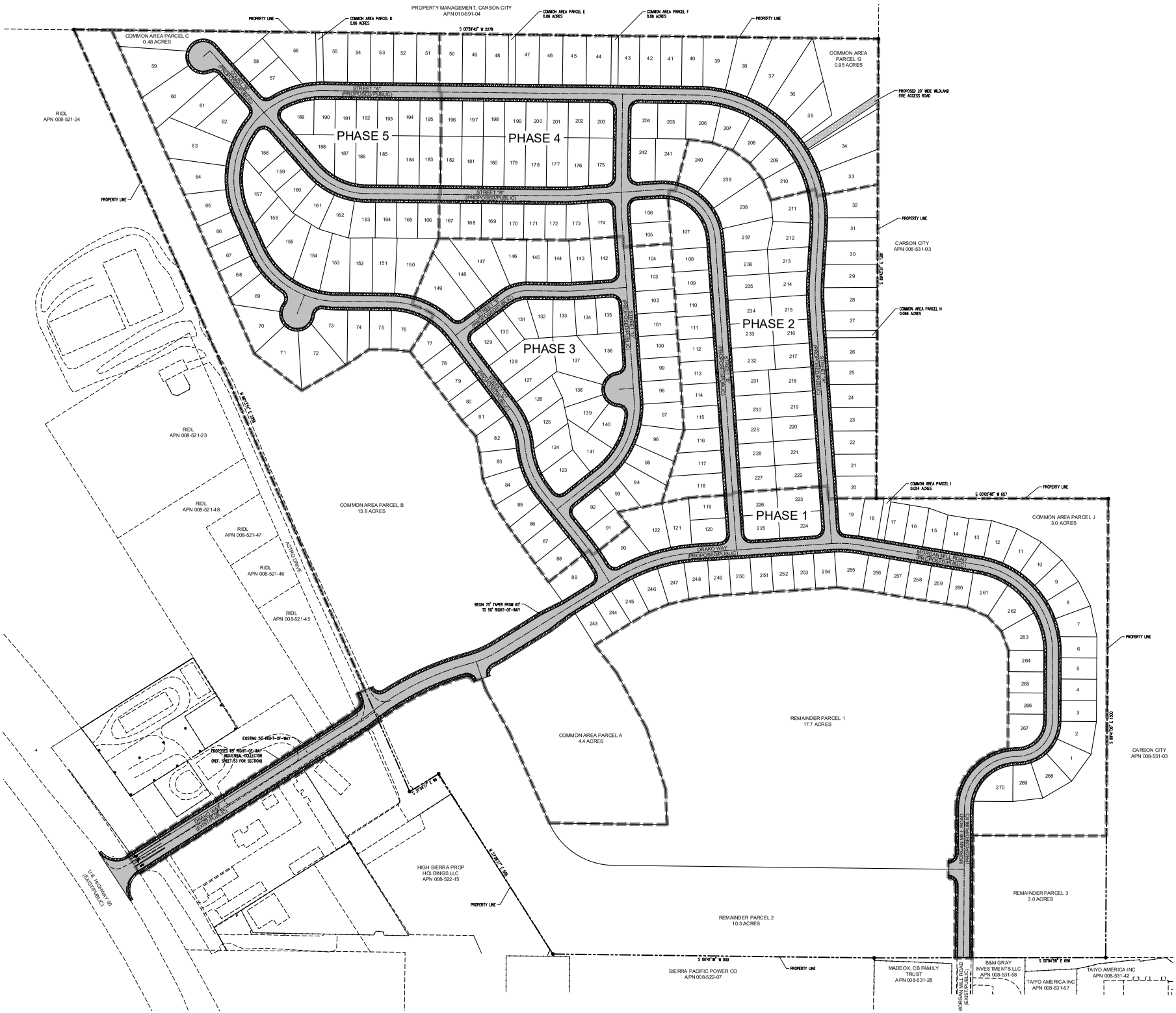
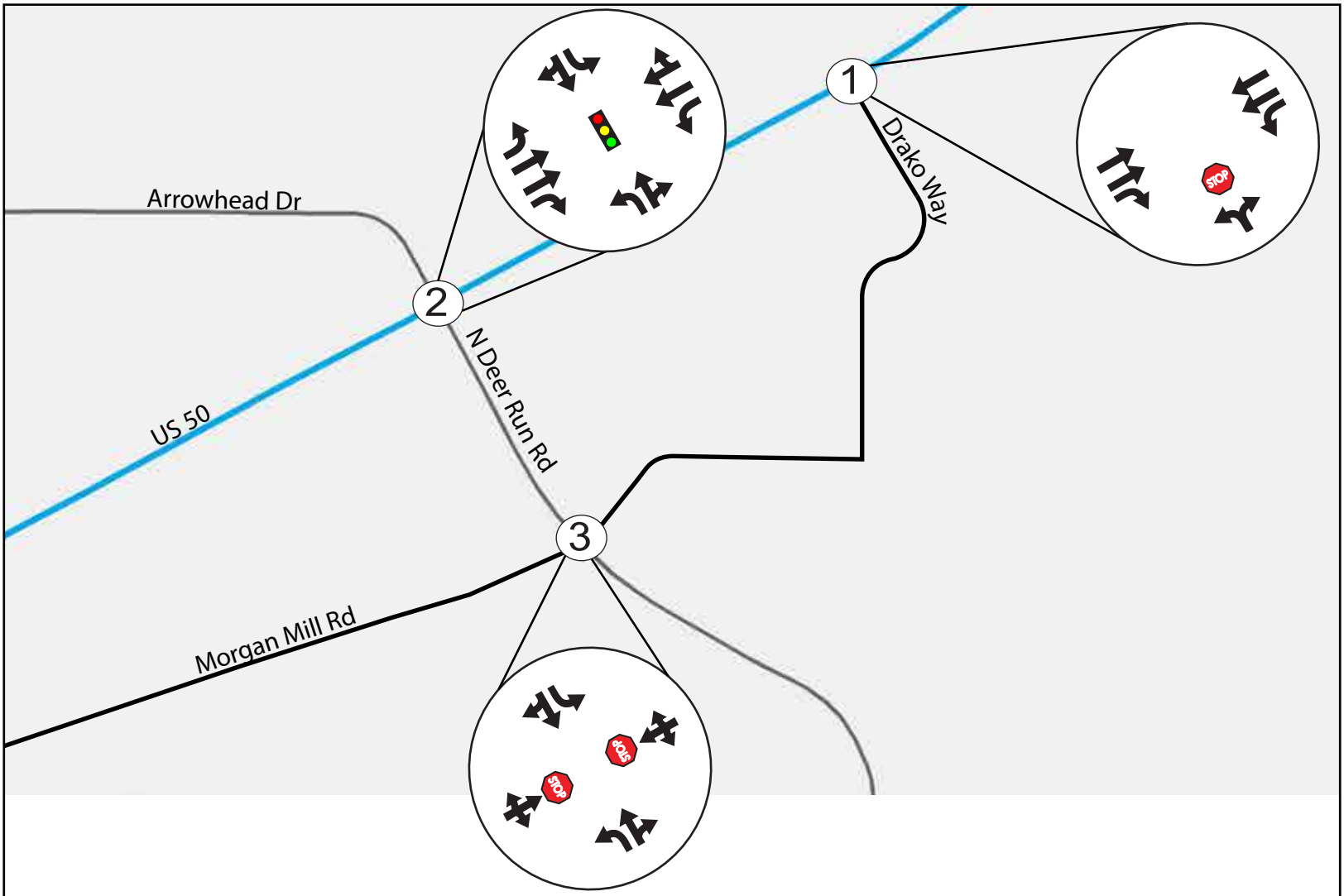


Figure 2

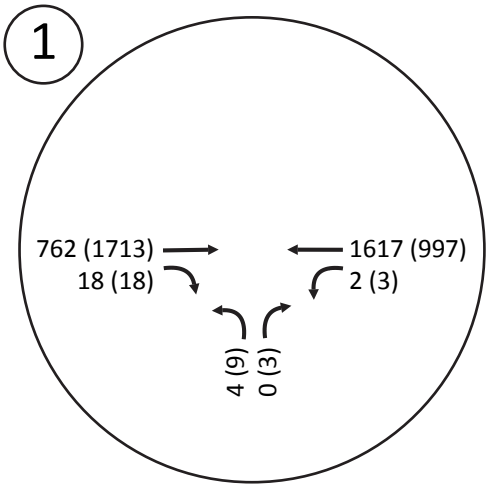
Plateau Development in Carson City, NV
TRAFFIC IMPACT STUDY
Site Plan

NO SCALE

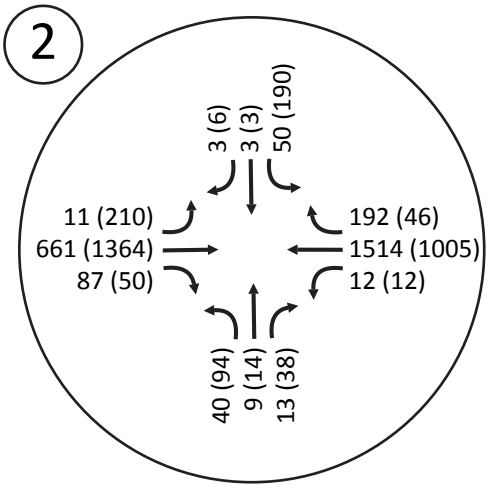
TRAFFIC WORKS



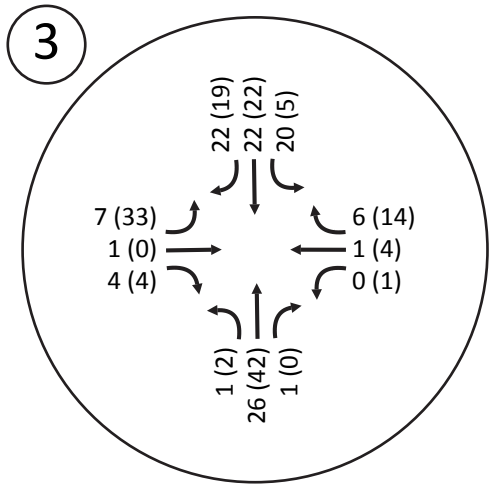
US 50 / Drako Way



US 50 / N Deer Run Rd



N Deer Run Rd / Morgan Mill Rd



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

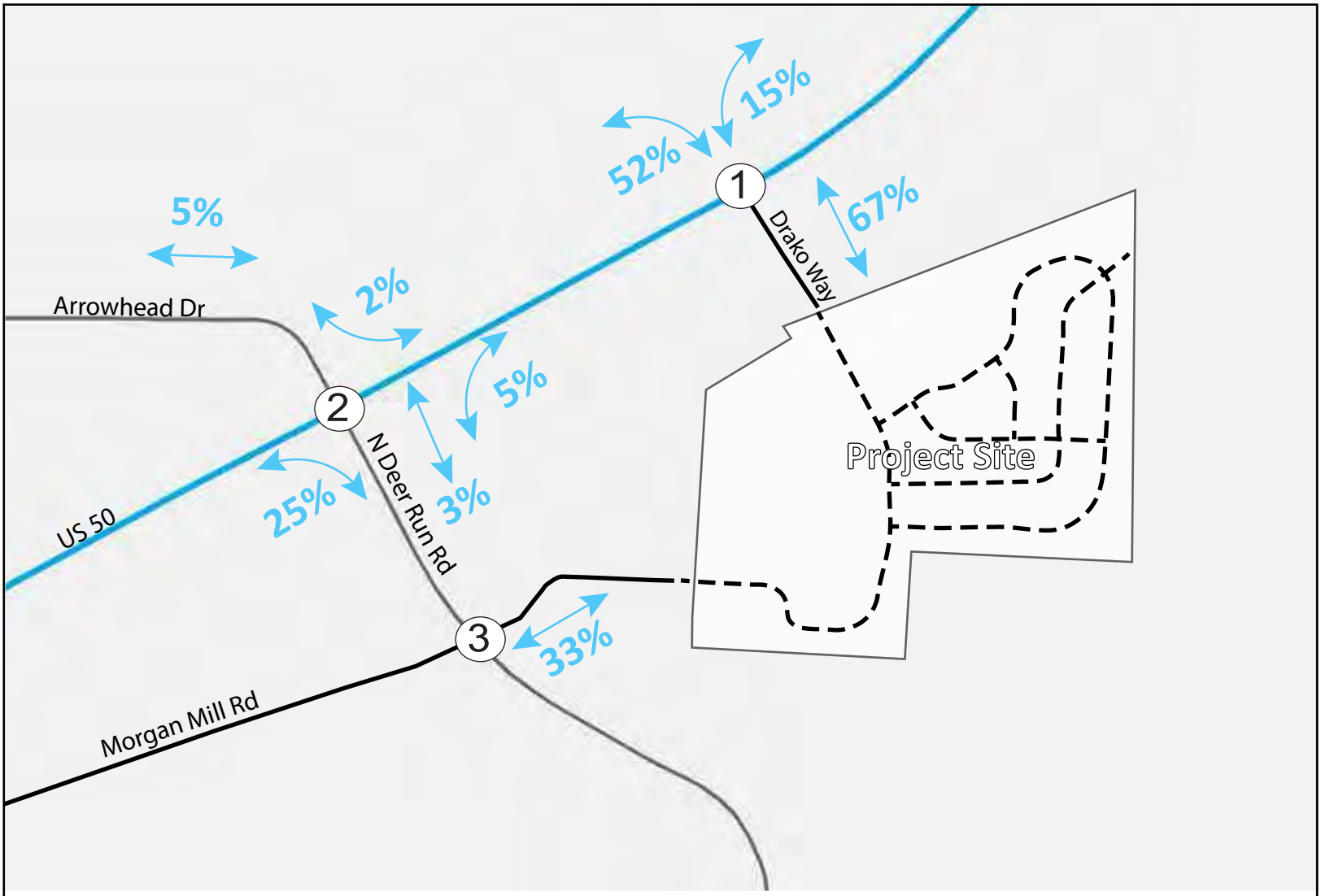
NO SCALE

Figure 3

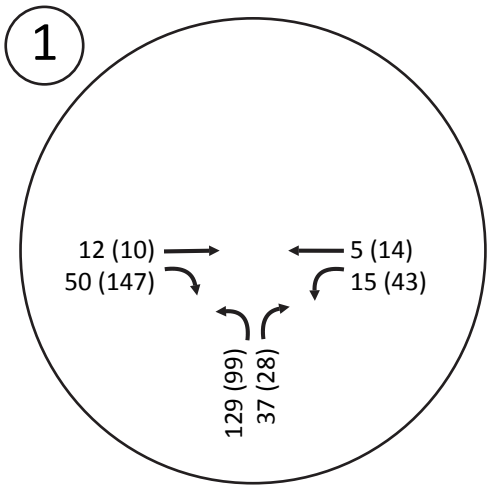
Plateau Development in Carson City, NV

TRAFFIC IMPACT STUDY

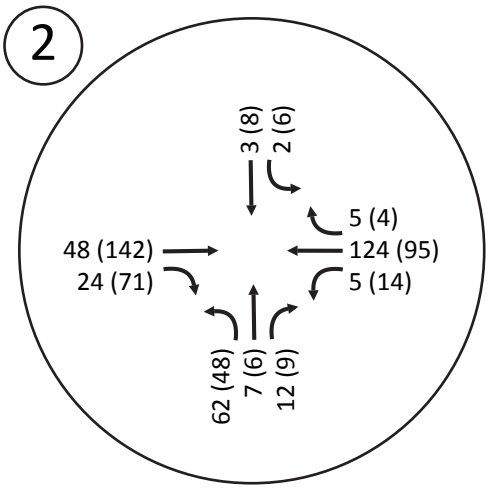
Existing Lane Configurations, Controls, and Traffic Volumes



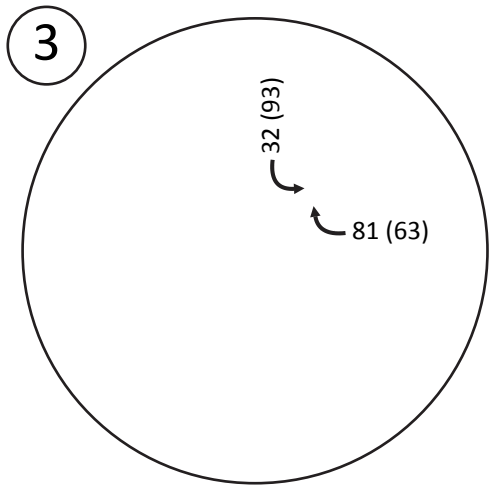
US 50 / Drako Way



US 50 / N Deer Run Rd



N Deer Run Rd / Morgan Mill Rd

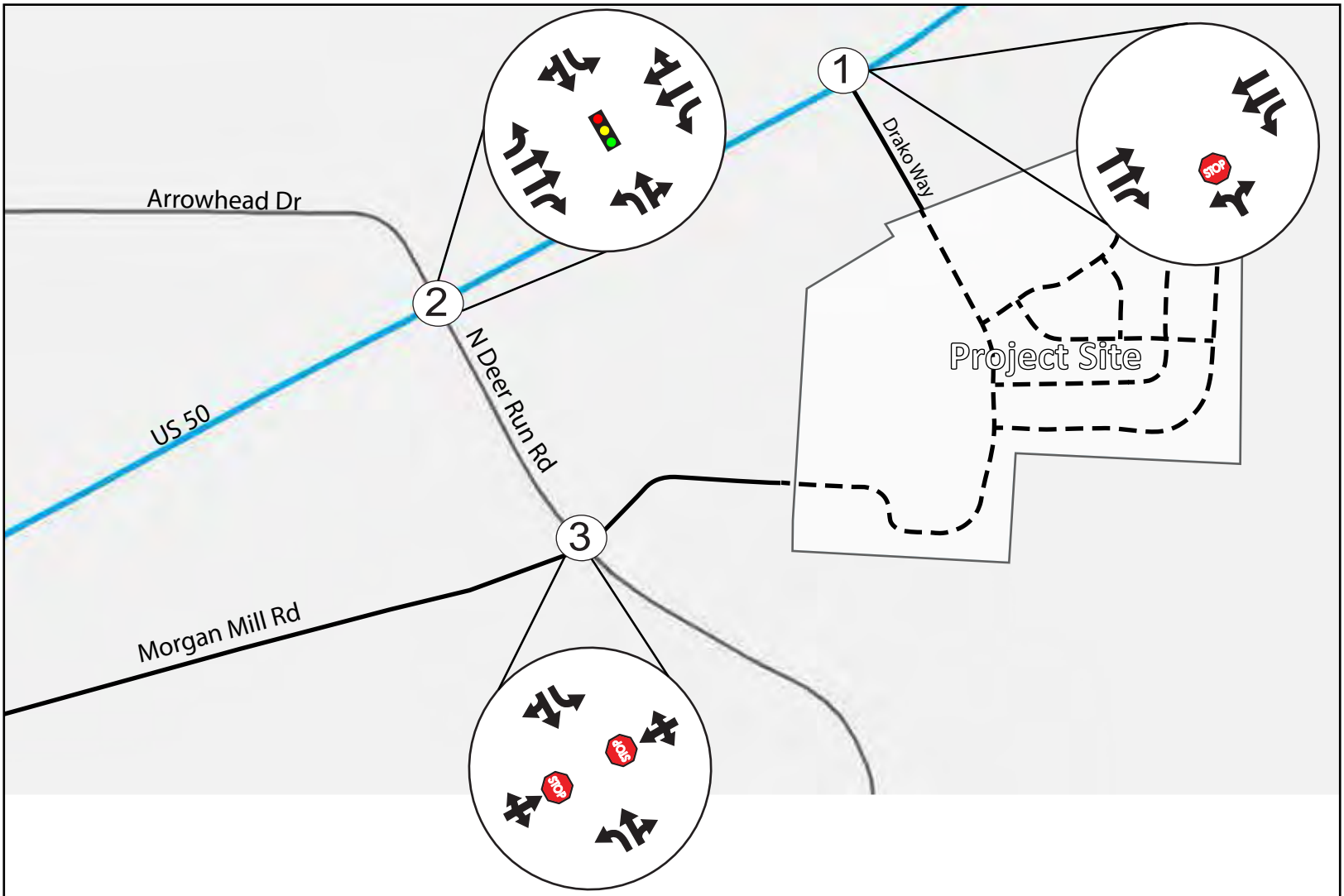


AM Peak Hour Volume (PM Peak Hour Volume)

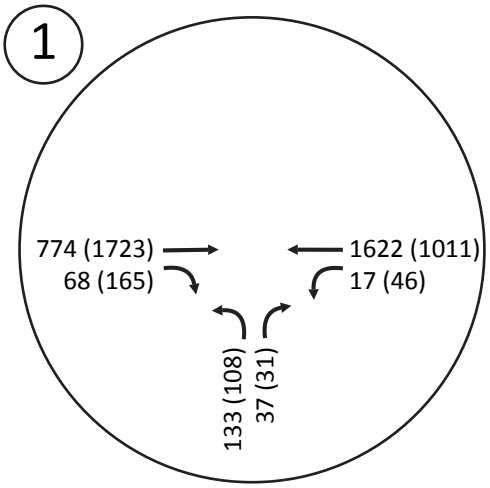
TRAFFIC WORKS

NO SCALE

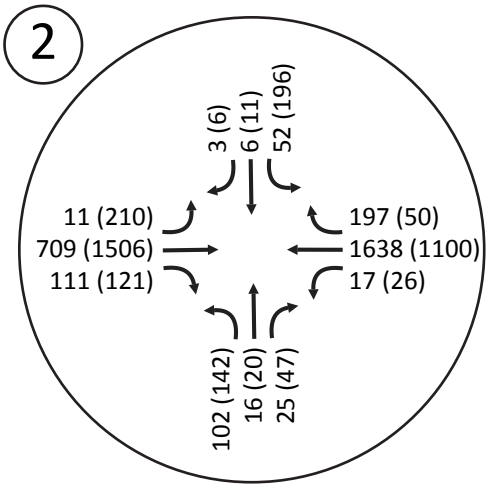
Figure 4
Plateau Development in Carson City, NV
TRAFFIC IMPACT STUDY
Project Trip Distribution



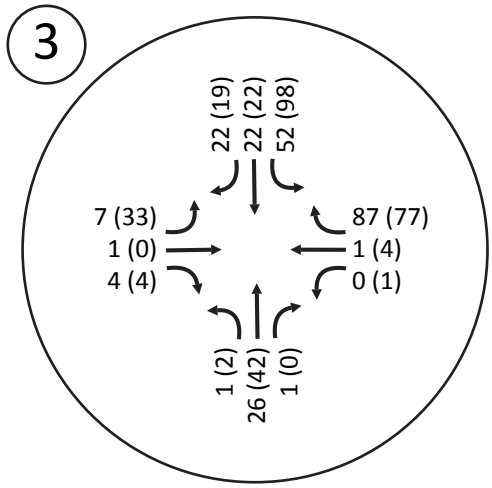
US 50 / Drako Way



US 50 / N Deer Run Rd



N Deer Run Rd / Morgan Mill Rd



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

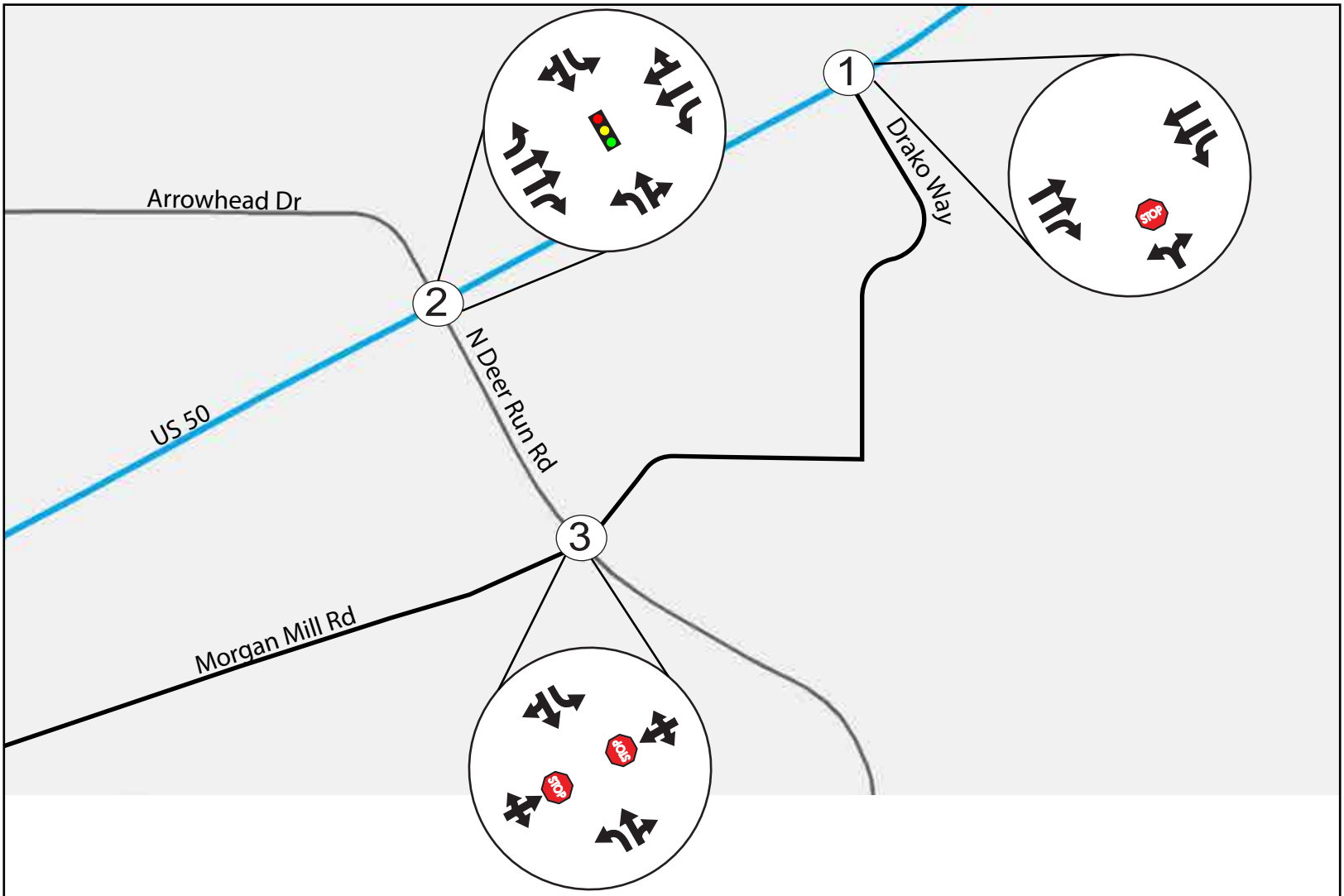
NO SCALE

Figure 5

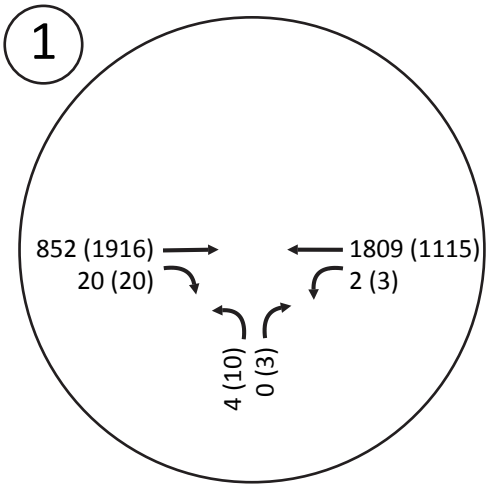
Plateau Development in Carson City, NV

TRAFFIC IMPACT STUDY

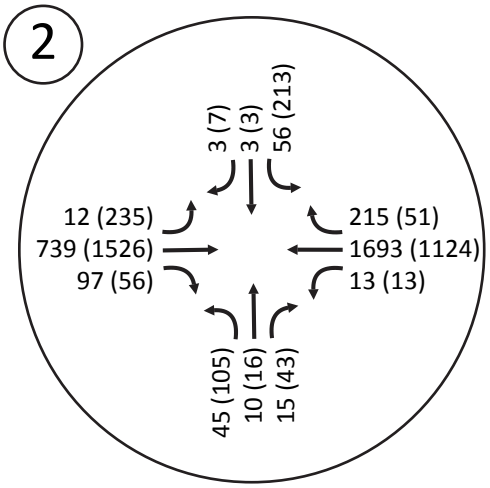
Existing Plus Project Lane Configurations, Controls, and Traffic Volumes



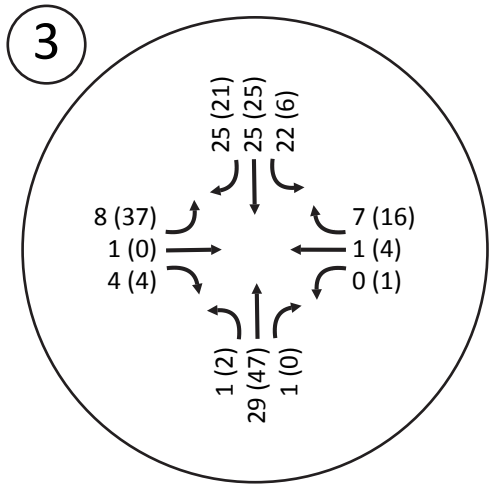
US 50 / Drako Way



US 50 / N Deer Run Rd



N Deer Run Rd / Morgan Mill Rd



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

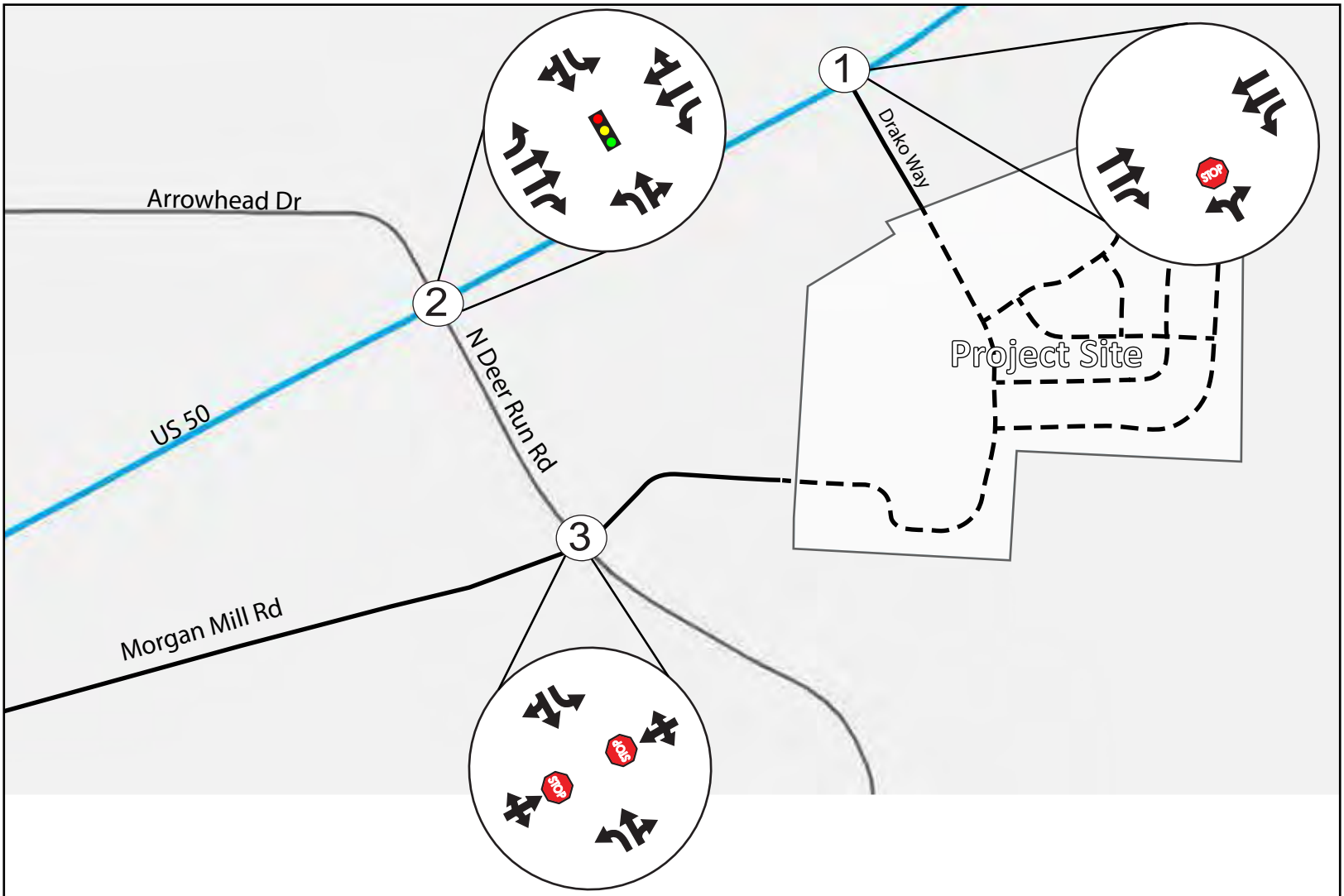
NO SCALE

Figure 6

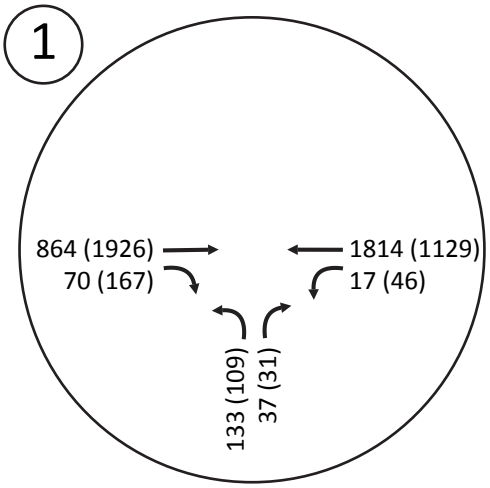
Plateau Development in Carson City, NV

TRAFFIC IMPACT STUDY

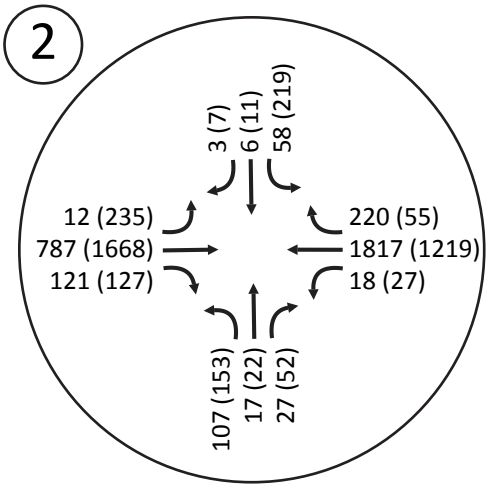
Cumulative No Project Lane Configurations, Controls, and Traffic Volumes



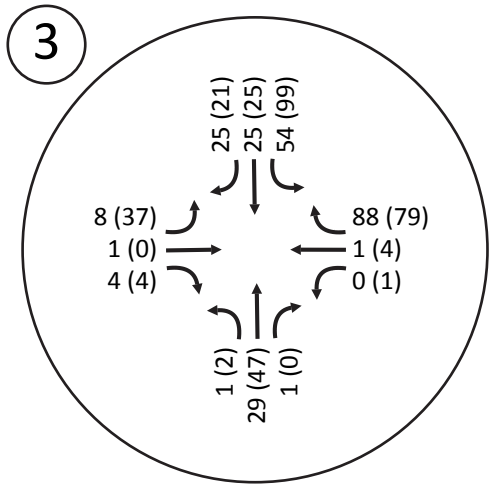
US 50 / Drako Way



US 50 / N Deer Run Rd



N Deer Run Rd / Morgan Mill Rd



AM Peak Hour Volume (PM Peak Hour Volume)

TRAFFIC WORKS

NO SCALE

Figure 7

Plateau Development in Carson City, NV

TRAFFIC IMPACT STUDY

Cumulative Plus Project Lane Configurations, Controls, and Traffic Volumes

Appendix A
Level of Service Calculations

TRAFFIC WORKS LLC

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	762	18	2	1617	4	0
Future Vol, veh/h	762	18	2	1617	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	8	6	0	4	0	0
Mvmt Flow	953	23	3	2021	5	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	953	0	1969	476
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	1016	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	729	-	56	541
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	315	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	729	-	56	541
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	314	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	-	-	729	-
HCM Lane V/C Ratio	0.029	-	-	0.003	-
HCM Control Delay (s)	26.2	-	-	10	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	661	87	12	1514	192	40	9	13	50	3	3
Future Volume (veh/h)	11	661	87	12	1514	192	40	9	13	50	3	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1727	1727	1624	1811	1900	1583	1675	1900	1508	1631	1900
Adj Flow Rate, veh/h	12	726	96	13	1664	211	44	10	14	55	3	3
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	10	10	17	5	5	20	0	0	26	0	0
Cap, veh/h	27	2041	913	24	1959	244	191	55	77	173	65	65
Arrive On Green	0.01	0.62	0.62	0.02	0.64	0.64	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3282	1468	1547	3081	384	1194	633	886	1118	749	749
Grp Volume(v), veh/h	12	726	96	13	916	959	44	0	24	55	0	6
Grp Sat Flow(s),veh/h/ln	1810	1641	1468	1547	1721	1744	1194	0	1519	1118	0	1499
Q Serve(g_s), s	0.5	8.4	2.1	0.7	32.5	34.9	2.8	0.0	1.1	3.8	0.0	0.3
Cycle Q Clear(g_c), s	0.5	8.4	2.1	0.7	32.5	34.9	3.0	0.0	1.1	4.9	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.58	1.00		0.50
Lane Grp Cap(c), veh/h	27	2041	913	24	1094	1108	191	0	132	173	0	130
V/C Ratio(X)	0.45	0.36	0.11	0.53	0.84	0.87	0.23	0.00	0.18	0.32	0.00	0.05
Avail Cap(c_a), veh/h	462	2513	1124	296	1318	1335	773	0	872	718	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	7.2	6.0	38.3	11.1	11.6	34.2	0.0	33.2	35.5	0.0	32.8
Incr Delay (d2), s/veh	4.4	0.0	0.0	6.6	3.5	4.7	0.2	0.0	0.2	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.7	0.8	0.3	16.3	18.0	0.9	0.0	0.5	1.2	0.0	0.1
LnGrp Delay(d),s/veh	42.7	7.2	6.0	44.9	14.7	16.2	34.4	0.0	33.4	35.9	0.0	32.9
LnGrp LOS	D	A	A	D	B	B	C		C	D		C
Approach Vol, veh/h		834			1888			68			61	
Approach Delay, s/veh		7.6			15.7			34.1			35.6	
Approach LOS		A			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		13.6	9.7	55.0		13.6	8.6	56.1
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		5.0	2.7	10.4		6.9	2.5	36.9
Green Ext Time (p_c), s		0.3	0.0	17.7		0.3	0.0	12.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	7	1	4	0	1	6	1	26	1	20	22	22
Future Vol, veh/h	7	1	4	0	1	6	1	26	1	20	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	5	9	0
Mvmt Flow	9	1	5	0	1	8	1	33	1	25	28	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	134	130	43	132	143	34	57	0	0	34	0	0
Stage 1	93	93	-	36	36	-	-	-	-	-	-	-
Stage 2	41	37	-	96	107	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.245	-	-
Pot Cap-1 Maneuver	842	764	1033	845	752	1045	1560	-	-	1558	-	-
Stage 1	919	822	-	985	869	-	-	-	-	-	-	-
Stage 2	979	868	-	916	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	823	751	1032	829	739	1045	1560	-	-	1558	-	-
Mov Cap-2 Maneuver	823	751	-	829	739	-	-	-	-	-	-	-
Stage 1	918	808	-	984	868	-	-	-	-	-	-	-
Stage 2	970	867	-	895	797	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	8.7	0.3	2.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	875	987	1558	-	-
HCM Lane V/C Ratio	0.001	-	-	0.017	0.009	0.016	-	-
HCM Control Delay (s)	7.3	-	-	9.2	8.7	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1713	18	3	997	9	3
Future Vol, veh/h	1713	18	3	997	9	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	0	33	4	11	33
Mvmt Flow	1822	19	3	1061	10	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1822	0	2359	911
Stage 1	-	-	-	-	1822	-
Stage 2	-	-	-	-	537	-
Critical Hdwy	-	-	4.76	-	7.02	7.56
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.53	-	3.61	3.63
Pot Cap-1 Maneuver	-	-	227	-	26	224
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	227	-	26	224
Mov Cap-2 Maneuver	-	-	-	-	85	-
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	518	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	45.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	101	-	-	227	-
HCM Lane V/C Ratio	0.126	-	-	0.014	-
HCM Control Delay (s)	45.7	-	-	21.1	-
HCM Lane LOS	E	-	-	C	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1364	50	12	1005	46	94	14	38	190	3	6
Future Volume (veh/h)	210	1364	50	12	1005	46	94	14	38	190	3	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1759	1624	1804	1900	1881	1800	1900	1863	1729	1900
Adj Flow Rate, veh/h	239	1550	57	14	1142	52	107	16	43	216	3	7
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	3	8	17	5	5	1	7	7	2	33	33
Cap, veh/h	270	1988	848	25	1480	67	362	92	248	313	97	227
Arrive On Green	0.15	0.57	0.57	0.02	0.44	0.44	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1810	3505	1495	1547	3338	152	1413	433	1163	1338	457	1067
Grp Volume(v), veh/h	239	1550	57	14	586	608	107	0	59	216	0	10
Grp Sat Flow(s),veh/h/ln	1810	1752	1495	1547	1713	1777	1413	0	1595	1338	0	1524
Q Serve(g_s), s	13.7	36.4	1.8	1.0	30.7	30.7	6.9	0.0	3.2	16.7	0.0	0.6
Cycle Q Clear(g_c), s	13.7	36.4	1.8	1.0	30.7	30.7	7.4	0.0	3.2	19.9	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.73	1.00		0.70
Lane Grp Cap(c), veh/h	270	1988	848	25	759	788	362	0	340	313	0	325
V/C Ratio(X)	0.88	0.78	0.07	0.57	0.77	0.77	0.30	0.00	0.17	0.69	0.00	0.03
Avail Cap(c_a), veh/h	341	1988	848	219	969	1005	660	0	677	595	0	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.2	17.8	10.3	51.8	25.0	25.0	36.0	0.0	34.1	42.2	0.0	33.1
Incr Delay (d2), s/veh	17.2	1.9	0.0	7.4	2.1	2.1	0.2	0.0	0.1	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	18.0	0.7	0.5	14.9	15.5	2.7	0.0	1.4	6.3	0.0	0.2
LnGrp Delay(d),s/veh	61.4	19.7	10.3	59.2	27.1	27.1	36.2	0.0	34.2	43.2	0.0	33.1
LnGrp LOS	E	B	B	E	C	C	D		C	D		C
Approach Vol, veh/h		1846			1208			166			226	
Approach Delay, s/veh		24.8			27.5			35.5			42.8	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.4	10.2	66.5		29.4	23.3	53.3
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		9.4	3.0	38.4		21.9	15.7	32.7
Green Ext Time (p_c), s		0.7	0.0	12.8		0.7	0.1	14.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	33	0	4	1	4	14	2	42	0	5	22	19
Future Vol, veh/h	33	0	4	1	4	14	2	42	0	5	22	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	25	0	0	0	0	2	0	0	9	5
Mvmt Flow	42	0	5	1	5	18	3	53	0	6	28	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	123	111	40	113	123	53	52	0	0	53	0	0
Stage 1	53	53	-	58	58	-	-	-	-	-	-	-
Stage 2	70	58	-	55	65	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.45	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.525	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	856	783	969	869	771	1020	1567	-	-	1566	-	-
Stage 1	965	855	-	959	851	-	-	-	-	-	-	-
Stage 2	945	851	-	962	845	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	833	779	969	861	767	1020	1567	-	-	1566	-	-
Mov Cap-2 Maneuver	833	779	-	861	767	-	-	-	-	-	-	-
Stage 1	963	852	-	957	849	-	-	-	-	-	-	-
Stage 2	921	849	-	953	842	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	8.9	0.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1567	-	-	846	945	1566	-	-
HCM Lane V/C Ratio	0.002	-	-	0.055	0.025	0.004	-	-
HCM Control Delay (s)	7.3	-	-	9.5	8.9	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	9.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	774	68	17	1622	133	37
Future Vol, veh/h	774	68	17	1622	133	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	8	6	0	4	0	0
Mvmt Flow	968	85	21	2028	166	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	968	0	2024	484
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	1056	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	720	-	~ 51	534
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	300	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	720	-	~ 50	534
Mov Cap-2 Maneuver	-	-	-	-	~ 165	-
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	291	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	143
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	194	-	-	720	-
HCM Lane V/C Ratio	1.095	-	-	0.03	-
HCM Control Delay (s)	143	-	-	10.2	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	10.2	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	709	111	17	1638	197	102	16	25	52	6	3
Future Volume (veh/h)	11	709	111	17	1638	197	102	16	25	52	6	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1727	1727	1624	1811	1900	1583	1670	1900	1508	1729	1900
Adj Flow Rate, veh/h	12	779	122	19	1800	216	112	18	27	57	7	3
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	10	10	17	5	5	20	0	0	26	0	0
Cap, veh/h	26	2026	906	32	1970	232	221	75	113	187	144	62
Arrive On Green	0.01	0.62	0.62	0.02	0.63	0.63	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1810	3282	1468	1547	3103	365	1189	604	906	1097	1149	493
Grp Volume(v), veh/h	12	779	122	19	982	1034	112	0	45	57	0	10
Grp Sat Flow(s),veh/h/ln	1810	1641	1468	1547	1721	1747	1189	0	1510	1097	0	1642
Q Serve(g_s), s	0.6	10.9	3.2	1.1	44.3	48.3	8.3	0.0	2.5	4.5	0.0	0.5
Cycle Q Clear(g_c), s	0.6	10.9	3.2	1.1	44.3	48.3	8.8	0.0	2.5	7.0	0.0	0.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.60	1.00		0.30
Lane Grp Cap(c), veh/h	26	2026	906	32	1092	1109	221	0	189	187	0	205
V/C Ratio(X)	0.46	0.38	0.13	0.59	0.90	0.93	0.51	0.00	0.24	0.31	0.00	0.05
Avail Cap(c_a), veh/h	397	2160	966	254	1133	1150	660	0	745	591	0	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	8.8	7.3	44.2	14.2	14.9	39.0	0.0	36.0	39.1	0.0	35.1
Incr Delay (d2), s/veh	4.7	0.0	0.0	6.1	9.2	12.8	0.7	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.9	1.3	0.5	23.5	26.9	2.8	0.0	1.0	1.4	0.0	0.2
LnGrp Delay(d),s/veh	49.2	8.8	7.3	50.4	23.4	27.7	39.7	0.0	36.2	39.5	0.0	35.2
LnGrp LOS	D	A	A	D	C	C	D		D	D		D
Approach Vol, veh/h		913			2035			157			67	
Approach Delay, s/veh		9.1			25.8			38.7			38.8	
Approach LOS		A			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.2	10.4	62.6		18.2	8.8	64.2
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		10.8	3.1	12.9		9.0	2.6	50.3
Green Ext Time (p_c), s		0.6	0.0	20.6		0.6	0.0	7.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	7	1	4	0	1	87	1	26	1	52	22	22
Future Vol, veh/h	7	1	4	0	1	87	1	26	1	52	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	5	9	0
Mvmt Flow	9	1	5	0	1	110	1	33	1	66	28	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	266	211	43	213	224	34	57	0	0	34	0	0
Stage 1	174	174	-	36	36	-	-	-	-	-	-	-
Stage 2	92	37	-	177	188	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.245	-	-
Pot Cap-1 Maneuver	691	690	1033	748	678	1045	1560	-	-	1558	-	-
Stage 1	833	759	-	985	869	-	-	-	-	-	-	-
Stage 2	920	868	-	829	748	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	596	660	1032	719	648	1045	1560	-	-	1558	-	-
Mov Cap-2 Maneuver	596	660	-	719	648	-	-	-	-	-	-	-
Stage 1	832	726	-	984	868	-	-	-	-	-	-	-
Stage 2	821	867	-	789	716	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	8.9	0.3	4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	700	1038	1558	-	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.107	0.042	-	-
HCM Control Delay (s)	7.3	-	-	10.3	8.9	7.4	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	18.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1723	165	46	1011	108	31
Future Vol, veh/h	1723	165	46	1011	108	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	0	33	4	11	33
Mvmt Flow	1833	176	49	1076	115	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1833	0	2469	916
Stage 1	-	-	-	-	1833	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	-	-	4.76	-	7.02	7.56
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.53	-	3.61	3.63
Pot Cap-1 Maneuver	-	-	224	-	~ 22	222
Stage 1	-	-	-	-	~ 102	-
Stage 2	-	-	-	-	466	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	224	-	~ 17	222
Mov Cap-2 Maneuver	-	-	-	-	~ 78	-
Stage 1	-	-	-	-	~ 102	-
Stage 2	-	-	-	-	364	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	$ 405.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	91	-	-	224	-
HCM Lane V/C Ratio	1.625	-	-	0.218	-
HCM Control Delay (s)	$ 405.9	-	-	25.5	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	11.8	-	-	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1506	121	26	1100	50	142	20	47	196	11	6
Future Volume (veh/h)	210	1506	121	26	1100	50	142	20	47	196	11	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1759	1624	1804	1900	1881	1799	1900	1863	1564	1900
Adj Flow Rate, veh/h	239	1711	138	30	1250	57	161	23	53	223	12	7
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	3	8	17	5	5	1	7	7	2	33	33
Cap, veh/h	268	1940	828	42	1472	67	370	111	256	315	211	123
Arrive On Green	0.15	0.55	0.55	0.03	0.44	0.44	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1810	3505	1495	1547	3338	152	1401	485	1117	1318	923	538
Grp Volume(v), veh/h	239	1711	138	30	641	666	161	0	76	223	0	19
Grp Sat Flow(s),veh/h/ln	1810	1752	1495	1547	1713	1777	1401	0	1602	1318	0	1461
Q Serve(g_s), s	14.7	48.3	5.1	2.2	37.9	38.0	11.5	0.0	4.3	18.7	0.0	1.2
Cycle Q Clear(g_c), s	14.7	48.3	5.1	2.2	37.9	38.0	12.6	0.0	4.3	23.0	0.0	1.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.70	1.00		0.37
Lane Grp Cap(c), veh/h	268	1940	828	42	756	784	370	0	367	315	0	335
V/C Ratio(X)	0.89	0.88	0.17	0.72	0.85	0.85	0.43	0.00	0.21	0.71	0.00	0.06
Avail Cap(c_a), veh/h	319	1940	828	205	908	941	606	0	636	537	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	22.1	12.4	54.7	28.3	28.3	39.1	0.0	35.3	44.7	0.0	34.1
Incr Delay (d2), s/veh	20.8	5.0	0.0	8.3	5.7	5.6	0.3	0.0	0.1	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	24.4	2.1	1.0	19.0	19.7	4.5	0.0	1.9	6.9	0.0	0.5
LnGrp Delay(d),s/veh	68.1	27.0	12.5	63.0	33.9	33.9	39.4	0.0	35.5	45.8	0.0	34.1
LnGrp LOS	E	C	B	E	C	C	D		D	D		C
Approach Vol, veh/h		2088			1337			237			242	
Approach Delay, s/veh		30.8			34.5			38.1			44.9	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.7	11.6	69.0		32.7	24.3	56.3
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		14.6	4.2	50.3		25.0	16.7	40.0
Green Ext Time (p_c), s		0.9	0.0	7.8		0.9	0.1	10.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	33	0	4	1	4	77	2	42	0	98	22	19
Future Vol, veh/h	33	0	4	1	4	77	2	42	0	98	22	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	25	0	0	0	0	2	0	0	9	5
Mvmt Flow	42	0	5	1	5	97	3	53	0	124	28	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	397	346	40	349	358	53	52	0	0	53	0	0
Stage 1	288	288	-	58	58	-	-	-	-	-	-	-
Stage 2	109	58	-	291	300	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.45	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.525	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	567	580	969	609	572	1020	1567	-	-	1566	-	-
Stage 1	724	677	-	959	851	-	-	-	-	-	-	-
Stage 2	901	851	-	721	669	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	478	533	969	568	526	1020	1567	-	-	1566	-	-
Mov Cap-2 Maneuver	478	533	-	568	526	-	-	-	-	-	-	-
Stage 1	723	623	-	957	849	-	-	-	-	-	-	-
Stage 2	808	849	-	660	616	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	9.2	0.3	5.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1567	-	-	506	966	1566	-	-
HCM Lane V/C Ratio	0.002	-	-	0.093	0.107	0.079	-	-
HCM Control Delay (s)	7.3	-	-	12.8	9.2	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0.3	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	774	68	17	1622	133	37
Future Volume (veh/h)	774	68	17	1622	133	37
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1792	1900	1827	1900	1900
Adj Flow Rate, veh/h	968	85	21	2028	166	46
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	8	6	0	4	0	0
Cap, veh/h	2253	1027	43	2633	217	194
Arrive On Green	0.67	0.67	0.02	0.76	0.12	0.12
Sat Flow, veh/h	3431	1524	1810	3563	1810	1615
Grp Volume(v), veh/h	968	85	21	2028	166	46
Grp Sat Flow(s),veh/h/ln	1671	1524	1810	1736	1810	1615
Q Serve(g_s), s	9.8	1.4	0.8	25.1	6.6	1.9
Cycle Q Clear(g_c), s	9.8	1.4	0.8	25.1	6.6	1.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2253	1027	43	2633	217	194
V/C Ratio(X)	0.43	0.08	0.49	0.77	0.76	0.24
Avail Cap(c_a), veh/h	2385	1087	127	2932	452	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.5	4.2	35.7	5.2	31.5	29.5
Incr Delay (d2), s/veh	0.1	0.0	8.4	1.2	5.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.6	0.5	12.0	3.6	0.9
LnGrp Delay(d),s/veh	5.7	4.2	44.1	6.4	37.1	30.1
LnGrp LOS	A	A	D	A	D	C
Approach Vol, veh/h	1053			2049	212	
Approach Delay, s/veh	5.5			6.8	35.6	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.4	6.3	54.4				60.6
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		18.5	5.2	52.8				62.5
Max Q Clear Time (g_c+I1), s		8.6	2.8	11.8				27.1
Green Ext Time (p_c), s		0.4	0.0	32.7				29.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.2
HCM 2010 LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1723	165	46	1011	108	31
Future Volume (veh/h)	1723	165	46	1011	108	31
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1429	1827	1712	1429
Adj Flow Rate, veh/h	1833	176	49	1076	115	33
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	0	33	4	11	33
Cap, veh/h	2365	1090	59	2709	155	116
Arrive On Green	0.67	0.67	0.04	0.78	0.10	0.10
Sat Flow, veh/h	3597	1615	1361	3563	1630	1214
Grp Volume(v), veh/h	1833	176	49	1076	115	33
Grp Sat Flow(s),veh/h/ln	1752	1615	1361	1736	1630	1214
Q Serve(g_s), s	25.8	2.9	2.6	7.1	5.0	1.8
Cycle Q Clear(g_c), s	25.8	2.9	2.6	7.1	5.0	1.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2365	1090	59	2709	155	116
V/C Ratio(X)	0.78	0.16	0.83	0.40	0.74	0.29
Avail Cap(c_a), veh/h	2545	1173	109	3016	410	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.0	4.3	34.3	2.5	31.8	30.4
Incr Delay (d2), s/veh	1.5	0.1	24.6	0.1	6.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	1.3	1.4	3.3	2.5	0.7
LnGrp Delay(d),s/veh	9.5	4.4	58.9	2.6	38.6	31.8
LnGrp LOS	A	A	E	A	D	C
Approach Vol, veh/h	2009			1125	148	
Approach Delay, s/veh	9.0			5.1	37.1	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.4	7.6	53.3				60.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		18.2	5.8	52.5				62.8
Max Q Clear Time (g_c+I1), s		7.0	4.6	27.8				9.1
Green Ext Time (p_c), s		0.3	0.0	21.0				38.9

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	852	20	2	1809	4	0
Future Vol, veh/h	852	20	2	1809	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	8	6	0	4	0	0
Mvmt Flow	1065	25	3	2261	5	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1065	0	2201	533
Stage 1	-	-	-	-	1065	-
Stage 2	-	-	-	-	1136	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	662	-	39	496
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	662	-	39	496
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	30.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	147	-	-	662	-
HCM Lane V/C Ratio	0.034	-	-	0.004	-
HCM Control Delay (s)	30.4	-	-	10.5	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	739	97	13	1693	215	45	10	15	56	3	3
Future Volume (veh/h)	12	739	97	13	1693	215	45	10	15	56	3	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1727	1727	1624	1811	1900	1583	1672	1900	1508	1631	1900
Adj Flow Rate, veh/h	13	812	107	14	1860	236	49	11	16	62	3	3
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	10	10	17	5	5	20	0	0	26	0	0
Cap, veh/h	28	2117	947	25	2026	252	190	58	85	168	71	71
Arrive On Green	0.02	0.65	0.65	0.02	0.66	0.66	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3282	1468	1547	3082	383	1194	617	897	1115	749	749
Grp Volume(v), veh/h	13	812	107	14	1021	1075	49	0	27	62	0	6
Grp Sat Flow(s),veh/h/ln	1810	1641	1468	1547	1721	1744	1194	0	1514	1115	0	1499
Q Serve(g_s), s	0.6	10.3	2.5	0.8	44.3	48.8	3.4	0.0	1.5	4.8	0.0	0.3
Cycle Q Clear(g_c), s	0.6	10.3	2.5	0.8	44.3	48.8	3.8	0.0	1.5	6.3	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.59	1.00		0.50
Lane Grp Cap(c), veh/h	28	2117	947	25	1131	1147	190	0	143	168	0	142
V/C Ratio(X)	0.46	0.38	0.11	0.55	0.90	0.94	0.26	0.00	0.19	0.37	0.00	0.04
Avail Cap(c_a), veh/h	408	2222	994	262	1165	1181	683	0	769	629	0	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.3	7.4	6.0	43.2	12.8	13.6	38.2	0.0	37.0	39.9	0.0	36.5
Incr Delay (d2), s/veh	4.4	0.0	0.0	6.7	9.4	13.3	0.3	0.0	0.2	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.6	1.0	0.4	23.7	27.2	1.2	0.0	0.6	1.5	0.0	0.1
LnGrp Delay(d),s/veh	47.7	7.5	6.0	50.0	22.2	26.9	38.4	0.0	37.2	40.4	0.0	36.5
LnGrp LOS	D	A	A	D	C	C	D		D	D		D
Approach Vol, veh/h		932			2110			76			68	
Approach Delay, s/veh		7.9			24.8			38.0			40.0	
Approach LOS		A			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.2	10.0	63.5		15.2	8.9	64.5
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		5.8	2.8	12.3		8.3	2.6	50.8
Green Ext Time (p_c), s		0.4	0.0	22.5		0.4	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑		↰	↑	
Traffic Vol, veh/h	8	1	4	0	1	7	1	29	1	22	25	25
Future Vol, veh/h	8	1	4	0	1	7	1	29	1	22	25	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	5	9	0
Mvmt Flow	10	1	5	0	1	9	1	37	1	28	32	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	149	145	48	146	160	37	64	0	0	38	0	0
Stage 1	104	104	-	40	40	-	-	-	-	-	-	-
Stage 2	45	41	-	106	120	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.245	-	-
Pot Cap-1 Maneuver	824	750	1027	827	736	1041	1551	-	-	1553	-	-
Stage 1	907	813	-	980	866	-	-	-	-	-	-	-
Stage 2	974	865	-	905	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	804	735	1026	810	722	1041	1551	-	-	1553	-	-
Mov Cap-2 Maneuver	804	735	-	810	722	-	-	-	-	-	-	-
Stage 1	906	798	-	979	865	-	-	-	-	-	-	-
Stage 2	964	864	-	883	785	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	8.7	0.2	2.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1551	-	-	855	987	1553	-	-
HCM Lane V/C Ratio	0.001	-	-	0.019	0.01	0.018	-	-
HCM Control Delay (s)	7.3	-	-	9.3	8.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1916	20	3	1115	10	3
Future Vol, veh/h	1916	20	3	1115	10	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	0	33	4	11	33
Mvmt Flow	2038	21	3	1186	11	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2038	0	2637	1019
Stage 1	-	-	-	-	2038	-
Stage 2	-	-	-	-	599	-
Critical Hdwy	-	-	4.76	-	7.02	7.56
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.53	-	3.61	3.63
Pot Cap-1 Maneuver	-	-	181	-	17	187
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	487	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	181	-	17	187
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	479	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	61.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	77	-	-	181	-
HCM Lane V/C Ratio	0.18	-	-	0.018	-
HCM Control Delay (s)	61.7	-	-	25.2	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	1526	56	13	1124	51	105	16	43	213	3	7
Future Volume (veh/h)	235	1526	56	13	1124	51	105	16	43	213	3	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1759	1624	1804	1900	1881	1800	1900	1863	1743	1900
Adj Flow Rate, veh/h	267	1734	64	15	1277	58	119	18	49	242	3	8
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	3	8	17	5	5	1	7	7	2	33	33
Cap, veh/h	294	1967	839	26	1414	64	387	101	275	331	98	262
Arrive On Green	0.16	0.56	0.56	0.02	0.42	0.42	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1810	3505	1495	1547	3339	151	1412	428	1166	1329	417	1112
Grp Volume(v), veh/h	267	1734	64	15	655	680	119	0	67	242	0	11
Grp Sat Flow(s),veh/h/ln	1810	1752	1495	1547	1713	1777	1412	0	1595	1329	0	1530
Q Serve(g_s), s	16.8	49.7	2.3	1.1	41.2	41.3	8.2	0.0	3.9	20.5	0.0	0.6
Cycle Q Clear(g_c), s	16.8	49.7	2.3	1.1	41.2	41.3	8.8	0.0	3.9	24.4	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.73	1.00		0.73
Lane Grp Cap(c), veh/h	294	1967	839	26	726	753	387	0	375	331	0	360
V/C Ratio(X)	0.91	0.88	0.08	0.59	0.90	0.90	0.31	0.00	0.18	0.73	0.00	0.03
Avail Cap(c_a), veh/h	313	1967	839	201	889	922	604	0	621	535	0	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.5	22.0	11.6	56.4	31.1	31.1	37.4	0.0	35.3	45.0	0.0	34.0
Incr Delay (d2), s/veh	26.6	4.9	0.0	7.7	9.6	9.5	0.2	0.0	0.1	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	25.2	0.9	0.5	21.4	22.2	3.2	0.0	1.7	7.6	0.0	0.3
LnGrp Delay(d),s/veh	74.1	26.9	11.6	64.1	40.7	40.6	37.6	0.0	35.3	46.2	0.0	34.0
LnGrp LOS	E	C	B	E	D	D	D		D	D		C
Approach Vol, veh/h		2065			1350			186			253	
Approach Delay, s/veh		32.5			40.9			36.8			45.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.0	10.4	71.2		34.0	26.3	55.3
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		10.8	3.1	51.7		26.4	18.8	43.3
Green Ext Time (p_c), s		0.8	0.0	6.9		0.8	0.1	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑			↑	
Traffic Vol, veh/h	37	0	4	1	4	16	2	47	0	6	25	21
Future Vol, veh/h	37	0	4	1	4	16	2	47	0	6	25	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	25	0	0	0	0	2	0	0	9	5
Mvmt Flow	47	0	5	1	5	20	3	59	0	8	32	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	137	125	45	128	138	59	58	0	0	59	0	0
Stage 1	60	60	-	65	65	-	-	-	-	-	-	-
Stage 2	77	65	-	63	73	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.45	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.525	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	838	769	963	850	757	1012	1559	-	-	1558	-	-
Stage 1	957	849	-	951	845	-	-	-	-	-	-	-
Stage 2	937	845	-	953	838	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	813	764	963	841	752	1012	1559	-	-	1558	-	-
Mov Cap-2 Maneuver	813	764	-	841	752	-	-	-	-	-	-	-
Stage 1	955	845	-	949	843	-	-	-	-	-	-	-
Stage 2	911	843	-	943	834	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	8.9	0.3	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1559	-	-	826	941	1558	-	-
HCM Lane V/C Ratio	0.002	-	-	0.063	0.028	0.005	-	-
HCM Control Delay (s)	7.3	-	-	9.7	8.9	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	12.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	864	70	17	1814	133	37
Future Vol, veh/h	864	70	17	1814	133	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	8	6	0	4	0	0
Mvmt Flow	1080	88	21	2268	166	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1080	0	2256	540
Stage 1	-	-	-	-	1080	-
Stage 2	-	-	-	-	1176	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	653	-	~ 36	491
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	260	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	653	-	~ 35	491
Mov Cap-2 Maneuver	-	-	-	-	~ 139	-
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	252	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	221.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	165	-	-	653	-
HCM Lane V/C Ratio	1.288	-	-	0.033	-
HCM Control Delay (s)	221.4	-	-	10.7	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	12.4	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	787	121	18	1817	220	107	17	27	58	6	3
Future Volume (veh/h)	12	787	121	18	1817	220	107	17	27	58	6	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1727	1727	1624	1811	1900	1583	1665	1900	1508	1729	1900
Adj Flow Rate, veh/h	13	865	133	20	1997	242	118	19	30	64	7	3
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	10	10	17	5	5	20	0	0	26	0	0
Cap, veh/h	28	2034	910	33	1973	234	224	76	119	186	149	64
Arrive On Green	0.02	0.62	0.62	0.02	0.64	0.64	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1810	3282	1468	1547	3099	368	1189	583	920	1093	1149	493
Grp Volume(v), veh/h	13	865	133	20	1091	1148	118	0	49	64	0	10
Grp Sat Flow(s),veh/h/ln	1810	1641	1468	1547	1721	1746	1189	0	1503	1093	0	1642
Q Serve(g_s), s	0.7	12.8	3.6	1.2	59.3	60.0	9.1	0.0	2.8	5.3	0.0	0.5
Cycle Q Clear(g_c), s	0.7	12.8	3.6	1.2	59.3	60.0	9.6	0.0	2.8	8.0	0.0	0.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.61	1.00		0.30
Lane Grp Cap(c), veh/h	28	2034	910	33	1095	1112	224	0	195	186	0	213
V/C Ratio(X)	0.47	0.43	0.15	0.60	1.00	1.03	0.53	0.00	0.25	0.34	0.00	0.05
Avail Cap(c_a), veh/h	384	2089	935	246	1095	1112	638	0	718	566	0	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.0	9.3	7.5	45.7	17.0	17.1	40.1	0.0	36.9	40.5	0.0	35.9
Incr Delay (d2), s/veh	4.5	0.1	0.0	6.2	26.1	35.8	0.7	0.0	0.2	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.8	1.4	0.6	35.5	39.5	3.0	0.0	1.2	1.6	0.0	0.2
LnGrp Delay(d),s/veh	50.6	9.3	7.5	51.9	43.1	52.9	40.8	0.0	37.2	40.9	0.0	36.0
LnGrp LOS	D	A	A	D	D	F	D		D	D		D
Approach Vol, veh/h		1011			2259			167			74	
Approach Delay, s/veh		9.6			48.2			39.8			40.3	
Approach LOS		A			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		19.0	10.5	64.7		19.0	8.9	66.3
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		11.6	3.2	14.8		10.0	2.7	62.0
Green Ext Time (p_c), s		0.6	0.0	25.3		0.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑		↰	↑	
Traffic Vol, veh/h	8	1	4	0	1	88	1	29	1	54	25	25
Future Vol, veh/h	8	1	4	0	1	88	1	29	1	54	25	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	8	0	5	9	0
Mvmt Flow	10	1	5	0	1	111	1	37	1	68	32	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	281	226	48	227	241	37	64	0	0	38	0	0
Stage 1	185	185	-	40	40	-	-	-	-	-	-	-
Stage 2	96	41	-	187	201	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.15	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.245	-	-
Pot Cap-1 Maneuver	675	677	1027	733	664	1041	1551	-	-	1553	-	-
Stage 1	821	751	-	980	866	-	-	-	-	-	-	-
Stage 2	916	865	-	819	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	581	646	1026	704	634	1041	1551	-	-	1553	-	-
Mov Cap-2 Maneuver	581	646	-	704	634	-	-	-	-	-	-	-
Stage 1	820	717	-	979	865	-	-	-	-	-	-	-
Stage 2	816	864	-	778	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	8.9	0.2	3.9
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1551	-	-	677	1034	1553	-	-
HCM Lane V/C Ratio	0.001	-	-	0.024	0.109	0.044	-	-
HCM Control Delay (s)	7.3	-	-	10.5	8.9	7.4	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	27.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1926	167	46	1129	109	31
Future Vol, veh/h	1926	167	46	1129	109	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	345	265	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	0	33	4	11	33
Mvmt Flow	2049	178	49	1201	116	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2049	0	2747	1024
Stage 1	-	-	-	-	2049	-
Stage 2	-	-	-	-	698	-
Critical Hdwy	-	-	4.76	-	7.02	7.56
Critical Hdwy Stg 1	-	-	-	-	6.02	-
Critical Hdwy Stg 2	-	-	-	-	6.02	-
Follow-up Hdwy	-	-	2.53	-	3.61	3.63
Pot Cap-1 Maneuver	-	-	179	-	~ 14	185
Stage 1	-	-	-	-	~ 76	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	179	-	~ 10	185
Mov Cap-2 Maneuver	-	-	-	-	~ 59	-
Stage 1	-	-	-	-	~ 76	-
Stage 2	-	-	-	-	314	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	$ 662.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	69	-	-	179	-
HCM Lane V/C Ratio	2.158	-	-	0.273	-
HCM Control Delay (s)	$ 662.3	-	-	32.5	-
HCM Lane LOS	F	-	-	D	-
HCM 95th %tile Q(veh)	14	-	-	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	1668	127	27	1219	55	153	22	52	219	11	7
Future Volume (veh/h)	235	1668	127	27	1219	55	153	22	52	219	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1759	1624	1804	1900	1881	1799	1900	1863	1578	1900
Adj Flow Rate, veh/h	267	1895	144	31	1385	62	174	25	59	249	12	8
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	3	8	17	5	5	1	7	7	2	33	33
Cap, veh/h	281	1949	832	40	1453	65	392	119	281	329	220	147
Arrive On Green	0.16	0.56	0.56	0.03	0.43	0.43	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1810	3505	1495	1547	3341	149	1400	476	1124	1308	879	586
Grp Volume(v), veh/h	267	1895	144	31	709	738	174	0	84	249	0	20
Grp Sat Flow(s),veh/h/ln	1810	1752	1495	1547	1713	1777	1400	0	1601	1308	0	1465
Q Serve(g_s), s	18.9	67.4	6.1	2.6	51.5	51.8	13.9	0.0	5.4	24.0	0.0	1.3
Cycle Q Clear(g_c), s	18.9	67.4	6.1	2.6	51.5	51.8	15.2	0.0	5.4	29.3	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.70	1.00		0.40
Lane Grp Cap(c), veh/h	281	1949	832	40	745	773	392	0	401	329	0	367
V/C Ratio(X)	0.95	0.97	0.17	0.77	0.95	0.95	0.44	0.00	0.21	0.76	0.00	0.05
Avail Cap(c_a), veh/h	281	1949	832	180	797	827	530	0	559	458	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.0	27.7	14.1	62.4	35.1	35.2	42.5	0.0	38.3	49.9	0.0	36.7
Incr Delay (d2), s/veh	40.3	14.3	0.0	10.9	19.8	19.9	0.3	0.0	0.1	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	36.2	2.5	1.2	28.3	29.5	5.4	0.0	2.4	8.9	0.0	0.5
LnGrp Delay(d),s/veh	94.3	41.9	14.1	73.4	54.9	55.2	42.8	0.0	38.3	52.5	0.0	36.8
LnGrp LOS	F	D	B	E	D	E	D		D	D		D
Approach Vol, veh/h		2306			1478			258			269	
Approach Delay, s/veh		46.3			55.4			41.4			51.4	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.1	11.9	78.0		39.1	27.5	62.4
Change Period (Y+Rc), s		* 6.8	* 8.5	* 6.3		* 6.8	* 7.5	* 6.3
Max Green Setting (Gmax), s		* 45	* 15	* 60		* 45	* 20	* 60
Max Q Clear Time (g_c+I1), s		17.2	4.6	69.4		31.3	20.9	53.8
Green Ext Time (p_c), s		1.0	0.0	0.0		0.9	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	37	0	4	1	4	79	2	47	0	99	25	21
Future Vol, veh/h	37	0	4	1	4	79	2	47	0	99	25	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	25	0	0	0	0	2	0	0	9	5
Mvmt Flow	47	0	5	1	5	100	3	59	0	125	32	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	413	361	45	363	374	59	58	0	0	59	0	0
Stage 1	296	296	-	65	65	-	-	-	-	-	-	-
Stage 2	117	65	-	298	309	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.45	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.525	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	553	569	963	597	560	1012	1559	-	-	1558	-	-
Stage 1	717	672	-	951	845	-	-	-	-	-	-	-
Stage 2	892	845	-	715	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	464	522	963	557	514	1012	1559	-	-	1558	-	-
Mov Cap-2 Maneuver	464	522	-	557	514	-	-	-	-	-	-	-
Stage 1	716	618	-	949	843	-	-	-	-	-	-	-
Stage 2	797	843	-	654	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	9.2	0.3	5.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1559	-	-	489	958	1558	-	-
HCM Lane V/C Ratio	0.002	-	-	0.106	0.111	0.08	-	-
HCM Control Delay (s)	7.3	-	-	13.2	9.2	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0.3	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	864	70	17	1814	133	37
Future Volume (veh/h)	864	70	17	1814	133	37
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1792	1900	1827	1900	1900
Adj Flow Rate, veh/h	1080	88	21	2268	166	46
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	8	6	0	4	0	0
Cap, veh/h	2291	1044	42	2660	215	191
Arrive On Green	0.69	0.69	0.02	0.77	0.12	0.12
Sat Flow, veh/h	3431	1524	1810	3563	1810	1615
Grp Volume(v), veh/h	1080	88	21	2268	166	46
Grp Sat Flow(s),veh/h/ln	1671	1524	1810	1736	1810	1615
Q Serve(g_s), s	11.7	1.5	0.9	34.4	7.0	2.0
Cycle Q Clear(g_c), s	11.7	1.5	0.9	34.4	7.0	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2291	1044	42	2660	215	191
V/C Ratio(X)	0.47	0.08	0.50	0.85	0.77	0.24
Avail Cap(c_a), veh/h	2291	1044	120	2775	428	382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	4.1	37.7	6.2	33.4	31.3
Incr Delay (d2), s/veh	0.2	0.0	8.7	2.7	5.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.6	0.6	16.7	3.8	0.9
LnGrp Delay(d),s/veh	5.9	4.1	46.4	8.8	39.3	31.9
LnGrp LOS	A	A	D	A	D	C
Approach Vol, veh/h	1168			2289	212	
Approach Delay, s/veh	5.7			9.2	37.7	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.8	6.3	58.1				64.4
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		18.5	5.2	52.8				62.5
Max Q Clear Time (g_c+I1), s		9.0	2.9	13.7				36.4
Green Ext Time (p_c), s		0.4	0.0	34.3				23.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1926	167	46	1129	109	31
Future Volume (veh/h)	1926	167	46	1129	109	31
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1429	1827	1712	1429
Adj Flow Rate, veh/h	2049	178	49	1201	116	33
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	0	33	4	11	33
Cap, veh/h	2402	1107	58	2731	155	115
Arrive On Green	0.69	0.69	0.04	0.79	0.09	0.09
Sat Flow, veh/h	3597	1615	1361	3563	1630	1214
Grp Volume(v), veh/h	2049	178	49	1201	116	33
Grp Sat Flow(s),veh/h/ln	1752	1615	1361	1736	1630	1214
Q Serve(g_s), s	33.7	3.0	2.7	8.6	5.3	1.9
Cycle Q Clear(g_c), s	33.7	3.0	2.7	8.6	5.3	1.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2402	1107	58	2731	155	115
V/C Ratio(X)	0.85	0.16	0.85	0.44	0.75	0.29
Avail Cap(c_a), veh/h	2462	1134	89	2871	385	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	4.2	36.2	2.6	33.6	32.1
Incr Delay (d2), s/veh	3.1	0.1	34.3	0.1	7.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	1.3	1.6	4.0	2.7	0.7
LnGrp Delay(d),s/veh	12.1	4.3	70.5	2.8	40.6	33.4
LnGrp LOS	B	A	E	A	D	C
Approach Vol, veh/h	2227			1250	149	
Approach Delay, s/veh	11.5			5.4	39.0	
Approach LOS	B			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.7	7.7	56.7				64.4
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		18.0	5.0	53.5				63.0
Max Q Clear Time (g_c+I1), s		7.3	4.7	35.7				10.6
Green Ext Time (p_c), s		0.3	0.0	16.5				43.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

PRELIMINARY GEOTECHNICAL REVIEW FOR

DESTINATION NEVADA
CARSON CITY, NEVADA

PREPARED FOR:

RIDL, LTD.
1250 N. SANTA BARBARA
MINDEN, NEVADA 89423

PREPARED BY:

GEOCON CONSULTANTS, INC.
1167 ANNIE COURT, SUITE B
MINDEN, NEVADA 89423

GEOCON

GEOCON PROJECT NO. R8259-06-02

FEBRUARY 2006

GEOCON
CONSULTANTS, INC.
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS

Project No. R8259-06-02
February 10, 2006

RIDL, Ltd.
Mr. Andy Hettrick
1250 N. Santa Barbara
Minden, NV. 89423

Subject: DESTINATION NEVADA
CARSON CITY, NEVADA
PRELIMINARY GEOTECHNICAL REVIEW

Dear Mr. Hettrick:

In accordance with your authorization of our proposal; we are submitting the results of our preliminary geotechnical engineering review for the subject site. The accompanying report presents the findings and conclusions from our study.

We identified three adverse conditions on the site that will impact the planned development. The first is the presence of the old Ormsby County Landfill on approximately 13 acres of the site. The volume of landfill material is estimated at 200,000 cubic yards. Complete removal, partial removal or encapsulation of the landfill material are possible mitigations that will be required to develop the affected area. If the landfill material is left in place, appropriate uses would be open space or parking areas. If these types of use are contemplated, an impermeable engineered landfill cap is recommended. However, if the landfill material is left onsite some inherent liability will remain a risk to the owner. An attorney specializing in environmental law should be consulted to put these risks into perspective and to discuss alternatives.

The second adverse condition is the presence of uncontrolled fill derived from alluvium on approximately one third of the site. Mitigation of the uncontrolled fill by one of the following four alternatives should be considered during site planning activities. The uncontrolled fill should be removed and then replaced as structural fill with appropriate testing and observation as recommended herein. Alternatively, deep foundations could be used that would penetrate into firm native soils for support. A third alternative would be to remove and replace a portion of the uncontrolled fill and to design for settlements that exceed normal parameters. If this alternative is chosen, a risk based analysis should be performed. A fourth mitigation alternative would be to revise site plans so as to place parking, lightly loaded structures or open spaces in the areas of most concern.

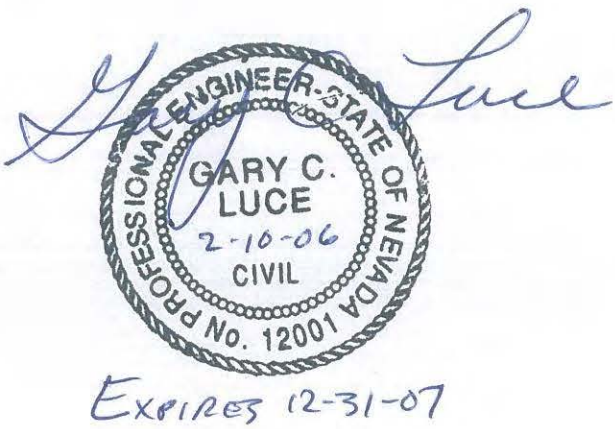
The third adverse condition identified is the presence of large cut and uncontrolled fill slopes with existing slopes on the order of 1:1 (Horizontal to Vertical) or steeper. These slopes are not considered to be unstable under static conditions but are susceptible to slumping and rock fall especially during seismic shaking. Re-grading of the slopes (2:1) or mechanical stabilization with retaining walls or with rip-rap is likely to be required when site specific geotechnical investigations are conducted. Left in their current configurations, building setbacks from slope crests and toes should be required at a minimum.

The remainder of the site appears to be generally suitable for the proposed development utilizing conventional spread footings or drilled shaft foundations for the larger multistory structures.

Please contact me should you have any questions regarding this report, or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.



Gary Luce, PE
Senior Project Engineer

GL:jk

(5) Addressee

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PRELIMINARY GEOTECHNICAL REVIEW

1.0 PURPOSE AND SCOPE

This report presents the results of our Preliminary Geotechnical Review for the proposed Destination Nevada project. Multiple uses are proposed for the site including: a hotel/ casino, commercial/ office tower, shopping mall, condominium/ retail mixed use, and a cinema complex. The approximate site location and boundaries are depicted on the attached Site Vicinity Map and Site Plan, presented as Figures 1 and 2, respectively.

This review is a condition of escrow for RIDL, Ltd who is the potential buyer of the subject site. The project site is an approximately 135 acre area located in the southwest quarter of Section 1, Township 15 North, Range 20 East in Carson City. The property is bounded by Highway 50 and undeveloped land to the north, undeveloped land to the east and south, and light industrial/commercial business to the west (Figure 1).

The purpose of our site review was to generally characterize the soil and geologic conditions, identify any geologic or adverse soil conditions that might impact the development of the site, provide preliminary conclusions regarding liquefaction potential, site grading, seismic design, and to assess the site for the suitability of conventional foundations. During our site review we reviewed geological and soil reports, fault study maps, aerial photographs and performed limited drilling and trenching. The report is considered a Preliminary Geotechnical Review in that no grading plans were available, structure locations and interior roadway layouts were at a conceptual stage, only limited exploration excavations were performed and laboratory testing consisted predominantly of classification and index tests. We recommend that a more thorough design-level geotechnical investigation be completed for the entire site and for each of the larger structures prior to construction.

Prior to conducting our review, the client indicated that there was a pre-existing municipal landfill on the project site and that a substantial area of the project site had been rough graded. The grading included the placement of a substantial amount of uncontrolled fill. The grading was a large scale cut and fills operation intended to create nearly level pads for future light industrial use. The purpose of our subsurface exploration was to evaluate the limits of both the landfill and uncontrolled fill as well as to generally characterize the native soil conditions on the site. The environmental issues related to the dump site will be addressed under a separate cover. In October of 2005, we had completed a Phase 1 environmental assessment of the site. In addition, the results of our screening level environmental sampling and testing of the landfill debris has been submitted in a separate report.

To aid in preparing this report, we discussed the project with the client and reviewed the following documents:

Conceptual Site Layout, Art Hanafin Architect., September, 2005

Earthquake Hazards Map-New Empire Quadrangle, Nevada Bureau of Mines and Geology, Bell and Trexler, 1979

Soil Survey of Carson City Area, Nevada, United States Department of Agrgriculture, Soil Conservation Service and Forest Service, 1979

Geocon performed the following scope of geotechnical services:

- Reviewed conceptual site plans to determine exploratory excavation locations.
- Performed a site reconnaissance and marked the proposed exploratory boring locations in the field with stakes and white flagging for subsequent underground utility location purposes.
- As required by law, notified local utility subscribers via Underground Service Alert (USA) at least 48 hours prior to performing subsurface excavations.
- Observed the excavation of 6 exploratory test borings (BH-1 through BH-6) at the site. The borings were advanced with a truck-mounted CME 55 drill rig equipped with hollow-stem augers to depths of approximately 10 to 22 feet below the ground surface (bgs). The approximate locations of the exploratory test borings are depicted on the Site Plan, Figure 2.
- Observed 72 test pits (trenches) (T-01-T-72) at the site. The exploratory test pits were excavated with a Cat 200 Excavator, Cat 310 backhoe, and a Case 580 backhoe.
- Logged the soil test borings under the direction of a Nevada-licensed Civil Engineer in accordance with the Unified Soil Classification System (USCS).
- Obtained debris and soil samples in the old landfill area under the supervision of a Nevada-licensed Certified Environmental Manager. Submitted samples to an outside environmental testing laboratory for chemical analyses. Results and analysis are presented under separate cover.
- Obtained bulk samples and relatively undisturbed soil samples from the test pits and exploratory borings. Logs of the exploratory test excavations and other details of the field investigation are included in Appendix A. Submitted selected soil samples to geotechnical laboratory for testing. Details of the laboratory testing program including test results are included in Appendix B.

2.0 SITE AND PROJECT DESCRIPTION

The project site is an approximately 135-acre area located approximately 5 miles east of downtown Carson City on the south side of Highway 50 (Figure 3). Current access to the site is from US Highway 50 and Drako Way. The terrain is flat to rolling with elevations ranging from 4,825 feet in the northeast corner of the parcel to 4,720 feet in the flat lying southwest portion. The site is currently vacant except for two warehouse structures (Computer Corp, Inc.) and a single family residence located on the northeast parcels (8-521-23 and 24). The southern half of the site was previously rough graded in the early 1980s for proposed commercial development. An abandoned landfill is located in the west central portion of the site. This landfill is identified as the former Ormsby County Landfill on the previous owners' deed. Several topographic "breaks" are present across the site and represent the edges of cut or fill slopes. The most prominent of these breaks is the northeast-southwest trending fill slope along the southerly portion of the old Landfill. The eastern boundary of the site has two large cut slopes constructed during the previous grading operations. The parcel is generally covered with native vegetation primarily consisting of sagebrush, native grasses and other shrubs. Several stockpiles consisting of soil, rock and landscape debris (vegetation clippings, etc.) were observed on the easterly and central portion of the site.

Examination of historic aerial photography indicates the site was formerly crossed by an incised drainage that traversed from northeast to southwest. In addition, a second incised drainage bounded the southwesterly edge of the property (Figure 4).

Approximately 20 acres of the site is underlain by uncontrolled fill (not including the old landfill). The uncontrolled fill area is generally located on the southerly portion of the site.

There are numerous graded dirt roads on the site of which some are related to previous development plans. Power lines cross the site northeasterly along Astro Drive and northerly along both east and west property lines. There is a gas line located on the northwest part of the property. The adjacent properties to the west have improvements that include commercial / light industrial buildings.

At the time of this report, only a conceptual layout for the Destination Nevada Project was available. Multiple proposed uses for the site including: a hotel/casino, commercial/office tower, shopping mall, condominium/retail mixed use, and a cinema complex all with associated landscaping and parking areas (Figure 5).

Preliminary plans by others indicate the proposed depot for the Virginia and Truckee Railroad rconstrucction project may be constructed directly west of the site. Additional planned developments adjacent to the site on the south include two museums proposed to be constructed on BLM land.

3.0 SOIL AND GROUNDWATER CONDITIONS

The soil conditions observed in our exploratory borings and test pits were relatively consistent across the site (except for the landfill area). The following soil descriptions include the Unified Soil Classification System (USCS) symbol where applicable. Please refer to the exploratory excavation logs included in Appendix A for vertical extents of the materials encountered at each exploratory location.

3.1 Geology and Soil Conditions

Geologic mapping of the site is published on the Geologic Map of Lyon, Douglas and Ormsby Counties, Nevada, Nevada Bureau of Mines and Geology, Bulletin 75, 1969. This geologic map shows the site to be located on the western flanks of the Pinenut Mountains. The geology of the site is predominately older (early Pleistocene and Pliocene) alluvial fan deposits, locally referred to as Alluvial-fan deposits of Morgan Mill. South and East of the site are middle Jurassic volcanic and metavolcanic rocks. The alluvial fan sediments are derived from intermediate volcanic rocks with lesser metamorphic rocks, and minor granitic rocks. A mixture of moderately thick deposits (60 to 300 feet) of poorly to moderately sorted fluvial gravel, sand, and silt typically characterizes these sediments. The sediments are typically highly dissected by deep channels, but original low-relief depositional surfaces are preserved locally. The volcanic and metavolcanic rocks found near the site consist of andesite, dacite, breccias and conglomerates. A Geologic Map of the surface of the site (1" to 600') was developed within our scope of work (Figure 6). The map was developed from both field observations and interpretation of the aerial photographs of the site.

The Soil Conservation Service (SCS) generally characterizes soils within the site as the Reno gravelly clay loam. This alluvial material formed from basaltic rock parent material. The surface layer is typically grayish brown gravelly clay loam about 3 inches in thickness. The subsoil is light gray, sandy clay about 17 inches thick. The next layer is a highly cemented hardpan about 9 inches thick. Below this to a depth of 60 inches is light brownish gray, stratified gravelly and very gravelly loamy sand. Permeability of this material is moderately slow. Available water capacity is very low. The Soil Conservation Service Maps and selected SCS data for the project site are presented in Appendix C for use as a reference to the following discussion.

Native soils encountered on the site generally consist of medium dense to dense, moist to dry, Silty Sand (SM) to Sandy Gravel (GM) with small amounts of Silt (ML), Clayey Sand (SC) and Lean Clay (CL). Native soils were only encountered in an undisturbed state in limited areas, particularly north of Astro Way and along cut slopes on the east side of the site.

The soils underlying the site including the uncontrolled fill were generally consistent with the map descriptions of the alluvial fan deposits. Soils encountered over and within the debris associated with the old landfill were also consistent with alluvial fan deposits. The uncontrolled fill was up estimated to be as deep as 110 feet near the southwest boundary of the site. In order to evaluate the character of the uncontrolled fill, exploration was conducted both at the crest and toe of the large fill slopes. The fill material was found to be relatively consistent alluvial materials from top to bottom. Attempts to drill through the fill failed due to refusal at shallow depths on cobble materials. The uncontrolled fill generally decreased in thickness to the northeast. The current owner reported to us that some organic debris was deposited in the extreme edge of the uncontrolled fill along the south and west boundaries of the property. The risk of settlement during dynamic shaking or under construction loads in the areas of uncontrolled fill (including the landfill) is considered to be moderate to high.

The landfill area is located near the center of the site just south of Astro Way. Our exploration indicated that the debris increases in thickness from north to south ranging from less than a foot to as much as 22 feet. Typical soil cover over the debris ranged from less than one foot to six feet below the existing surface. The average thickness of debris was approximately 8 feet based on all of our test pits in the landfill area. The debris encountered was consistent with household refuse and general construction debris. Debris types included glass, wire, fabricated metal, wood, plastic, concrete, asphalt and other similar materials all within a silty sand soil matrix with ash which is consistent with a "burn dump". It is noted that refusal on concrete was encountered at a few test pit locations and the lone borehole attempted in the landfill area. Therefore the volume estimate (200,000 cy) should be viewed as a minimum.

3.2 Groundwater

Groundwater was not encountered in any of the exploratory excavations during the field investigation conducted in October and November, 2005. It is inferred that the depth to groundwater is greater than 100 feet below the existing ground surface on the majority of the site where construction is planned. The site ranges form about 4,640 to 4,760 feet above mean sea level. The permanent groundwater table should be at an elevation near the level of the Carson River (approximate elevation 4,590) located approximately one-quarter mile south of the site. It is possible that seasonal perched groundwater may occur at higher elevations in some areas of the site.

4.0 GEOLOGIC HAZARDS

4.1 Faulting

Carson City is located near active faults which are considered capable of producing significant ground motions due to seismic events. Based on the results of the site investigation and review of geologic maps and reports, the site is not located on any known active or potentially active fault traces.

The nearest potentially active faults are located approximately one and one-half mile west of the site near the intersection of US 50 with Edmonds Drive. These faults are relatively small and not considered to govern design at the site. Ground shaking intensities for design considerations should be governed by seismic events occurring on the larger regional faults at the base of the Carson Range located approximately four miles west of the site (i.e. the Carson City Fault). Faulting along the Carson Ranges has been evaluated by the Nevada Bureau of Mines and Geology to be capable of producing earthquake Richter Magnitudes on the order of 7.4 with peak ground accelerations as high as 0.7g. These values are equivalent to Modified Mercalli Intensities of X or greater.

The seismic risk at the site is not considered significantly greater than that of the surrounding developments and the Carson City area in general. Seismic design of the structures should be performed in accordance with the latest version of the International Building Code (IBC).

4.2 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. The liquefaction of soils causes surface distress, loss of bearing capacity, and settlement of structures that are founded on the soils. Based on review of soil types, relatively high in place soil density, depth to groundwater, and the seismic accelerations anticipated at the site, it is our opinion that the potential for seismic related ground movement resulting from liquefaction is very low.

4.3 Slope Stability and Landslide Hazards

No significant landslide hazards or slope stability issues are known to exist on the site except as noted below. Relatively large cut and fill slopes are present along the southeasterly and south property boundaries. These slopes are constructed at slopes of approximately 1:1 (Horizontal to Vertical). Additional smaller slopes throughout the site are in similar configurations. The recommended unstabilized slope angle for the native soils encountered on the site would be 2:1. While the steeper slopes are not believed to be prone to landsliding, they are believed to be capable to raveling (rock fall) and slumping especially if subjected to seismic shaking. These slopes should be regarded to 2:1 or be mechanically stabilized using large rip-rap or retaining walls. If left in their current configurations,

building setbacks from both toes and crests should be developed during site specific design level geotechnical investigations. The interior slopes are likely to be removed or modified during site development and may be mitigated during this process.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 General

Based upon the results of our geotechnical review the site is generally suitable for the proposed development provided that the identified adverse conditions are mitigated properly. The conclusions and recommendations presented in this report are provided for forward planning, and should be considered preliminary. Grading and utility installations should proceed with only ordinary effort for sandy to gravelly soils. No other geologic hazards related to high ground water, expansive or collapsible soils, landslides or faulting are believed to exist on the site.

Environmental risks and mitigations are not specifically addressed herein. A separate report by Geocon to the client addressing environmental issues related to the old landfill on the site should be reviewed in conjunction with consultation with legal counsel.

Specific geotechnical mitigation measures will need to be developed by site specific investigations when final site layouts, grading plans and structural details are available. A brief summary of our findings is listed below:

- Our field investigation indicates that the undisturbed portions of the site are primarily underlain by alluvial fan deposits comprised interbedded layers of sandy gravels, silty to clayey sand and poorly graded sand with scattered thin clay lenses.
- Uncontrolled alluvial fill covers approximately 20 acres of the site. Construction in these areas will require some form of mitigation or removal. Site specific design level geotechnical investigations will be required.
- Approximately 13 acres of the site is underlain by up to 22 feet of debris laden landfill materials with an estimated volume of 200,000 cubic yards. The landfill materials will need to be removed or mitigated in some fashion prior to construction over them. Alternatively, the site could be planned around the landfill with appropriate construction or open space placed in the landfill area. These issues need to be addressed in consultation with environmental counsel and the permitting issues explored with the appropriate governing agencies including Carson City and NDEP.
- Groundwater was not encountered during our exploration and is believed to be well below any potential construction depths. It is possible that perched groundwater could be may occur at potential construction depths on a seasonal basis. Exploration of the site should further address this issue and pot holing of the site would be recommended prior to bidding grading and again at the time equipment is mobilized to the site.
- There are no known surface expressions of active faults underlying the site. Potential seismic hazards at the site will likely be associated with possible moderate to strong ground shaking

from an event along regional active faults. Structures should be designed in accordance with the most current version of the IBC as adopted by Carson City.

- Soil corrosion potential data and our local experience indicates that soils are not aggressive for either Type II or Type IP concrete.
- The proposed structures should be able to be supported on conventional shallow foundations in native undisturbed soils or where the uncontrolled fill has been removed and replaced or on deep foundations as determined by site specific design level geotechnical investigations.

5.2 General Soil and Excavation Characteristics

Prior to the commencement of mass grading, the structures that are to be removed should be demolished. Demolition should be monitored by Geocon to confirm the complete removal of foundation elements. Utilities should be removed or abandoned in place as appropriate to the planned construction and as permitted by the specific regulatory agency. If the debris in the landfill area is to be removed from the site, the process should be completed prior to the commencement of general grading.

Clearing and grubbing should require minimal depths over most of the site. In areas of the site where native sagebrush and other vegetation is present, clearing and grubbing will typically require from 2 to 4 inches of removal. Removed materials should be disposed of off site or placed in landscape areas only.

In our opinion, grading and excavations within the alluvial materials (excluding the landfill area) may be accomplished with light to moderate effort with conventional heavy-duty grading/excavation equipment. Excavations are not anticipated to generate significant quantities oversized material (greater than six inches in dimension) that would require special handling or exporting from the site. Some of the native materials will probably require "proof rolling" (NDOT Specifications) rather than conventional nuclear densometer testing due to the amount of gravel.

Excavated soils generated from cut operations at the site including native undisturbed and uncontrolled fill materials are generally suitable for use as engineered fill in structural areas after removal of oversize materials or any organic debris

Fills placed on slopes greater than 10% will require "keying" into the native materials. This will be necessary if the uncontrolled fill is removed and replaced.

Temporary excavations, such as utility trench sidewalls excavated within undisturbed alluvium should remain near-vertical to depths of at least five feet. Some minor sloughing should be expected within some of the cleaner sand lenses. Excavation support per OSHA Standards will need to be strictly enforced.

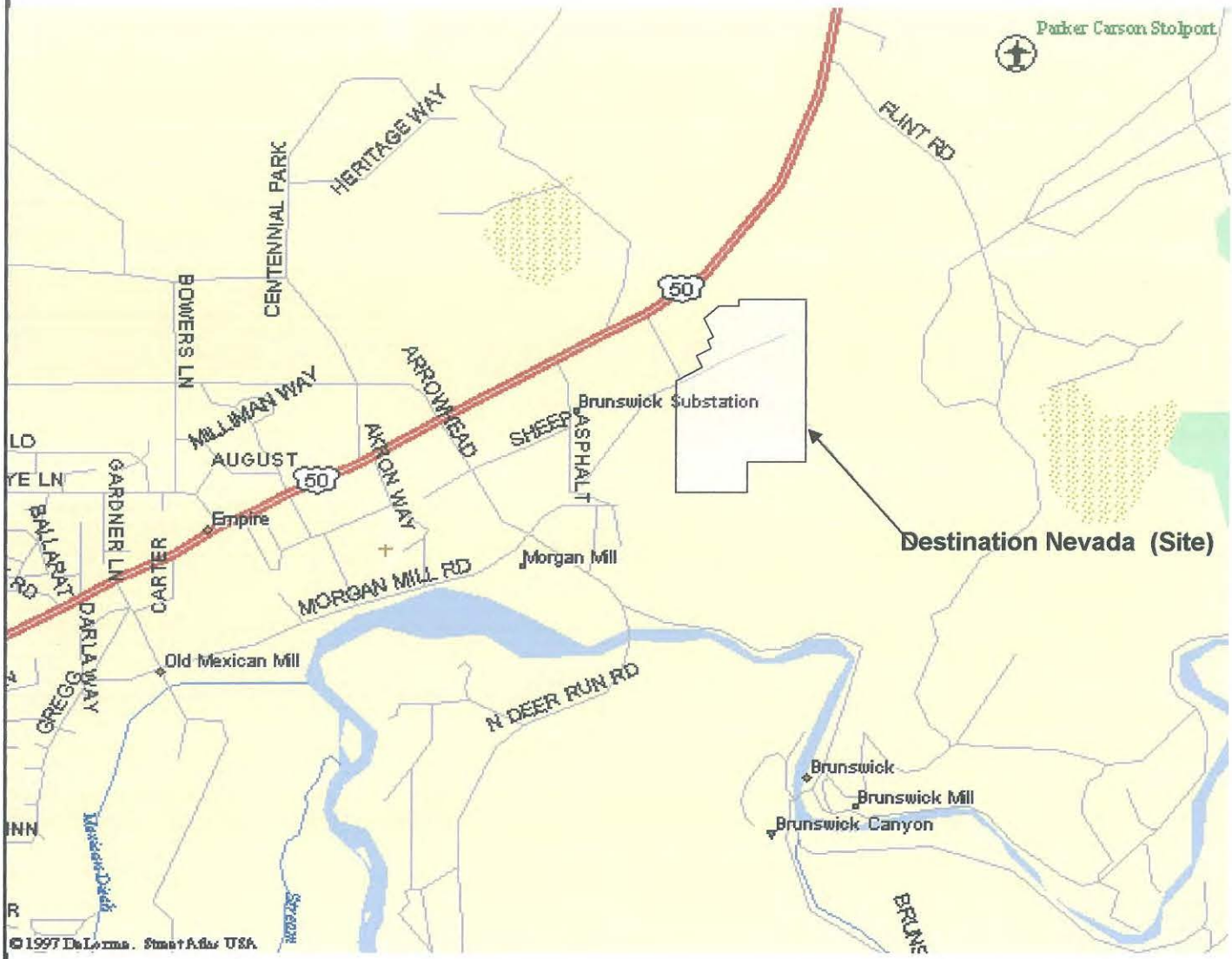
5.3 LIMITATIONS AND UNIFORMITY OF CONDITIONS

The preliminary recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. This review is written with the explicit understanding that site specific design level geotechnical investigations will be conducted prior to the construction of any of the planned structures.

This report is issued with the understanding that it is the responsibility of the owner or their representative to ensure that the information and recommendations contained herein are brought to the attention of the design team for the project and incorporated into future project plans.

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 they be 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 two years.

Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices used in Carson City, Nevada in February 2006. No warranty is either expressed or implied.



SITE VICINITY MAP

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT - SUITE B - MINDEN, NV 89423
PHONE 775 267-0566 -- FAX 775 267-0728

Destination Nevada		
Carson City, Nevada		
R8259-06-02	Feb-06	Figure 1

LEGEND

- T44 APPROXIMATE EXPLORATORY TRENCH LOCATION
- BH-6 HOLLOW-STEM AUGER BORING LOCATION
- APPROXIMATE DEPTH OF LANDFILL DEBRIS
- Q_{AF} FILL
- Q_{LD} LANDFILL DEBRIS
- Q_{AL} ALLUVIUM

GRAPHIC SCALE

100 0 50 100 200 400

CONTOUR INTERVAL: ONE FOOT

NO.	DATE	BY	APVD

REVISIONS

DESTINATION NEVADA
CARSON CITY, NEVADA

February 10, 2006

Project No. R8259-06-02

GEOCON CONSULTANTS, INC
1137 JANES COURT, UNIT B, MINDEN, NEVADA 89423
PHONE 775.267.6864 / FAX 775.267.6278

DESIGNED BY: G.L.
DRAWN BY: J.K.
CHECKED BY: G.L.
DATE: 12/20/2005

FIGURE 2

Air Photo-2006

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT - SUITE B - MINDEN, NV 89423
PHONE 775 267-0566 -- FAX 775 267-0728

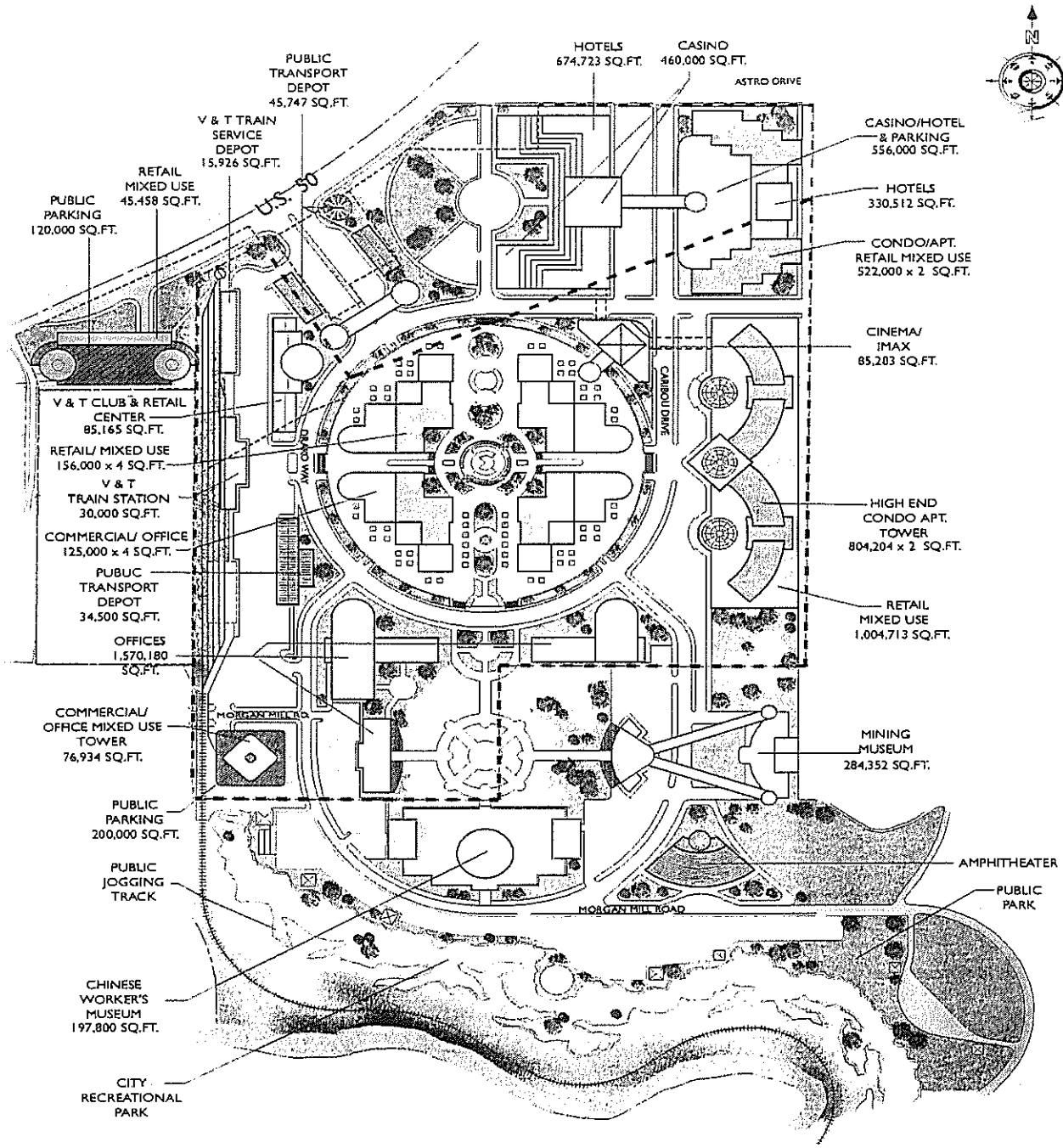
Destination Nevada		
Carson City, Nevada		
R8259-06-02	Feb-06	Figure 3

Jun-72 1:15,000

Air Photo-1972

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT - SUITE B - MINDEN, NV 89423
PHONE 775 267-0566 -- FAX 775 267-0728

Destination Nevada		
Carson City, Nevada		
R8259-06-02	Feb-06	Figure 4



RETAIL MIXED USE	1,628,713 SQ.FT.	HOTELS	1,025,235 SQ.FT.
CASINO	1,016,000 SQ.FT.	MUSEUM (PUBLIC USE)	482,152 SQ.FT.
RAILROAD STATION & FACILITIES	160,000 SQ.FT.	CONDOMINIUMS	2,652,408 SQ.FT.
COMMERCIAL OFFICE/ MIXED USE BLDGS.	2,070,180 SQ.FT.	PUBLIC FACILITY	364,893 SQ.FT.
CINEMA & IMAX	85,283 SQ.FT.	PUBLIC PARKING STRUCTURE	359,861 SQ.FT.

EST. TOTAL SQUARE FOOTAGE: 9,844,725 SQ FT.

EST. PUBLIC PARKING 10,500 SPACES

FIGURE 5

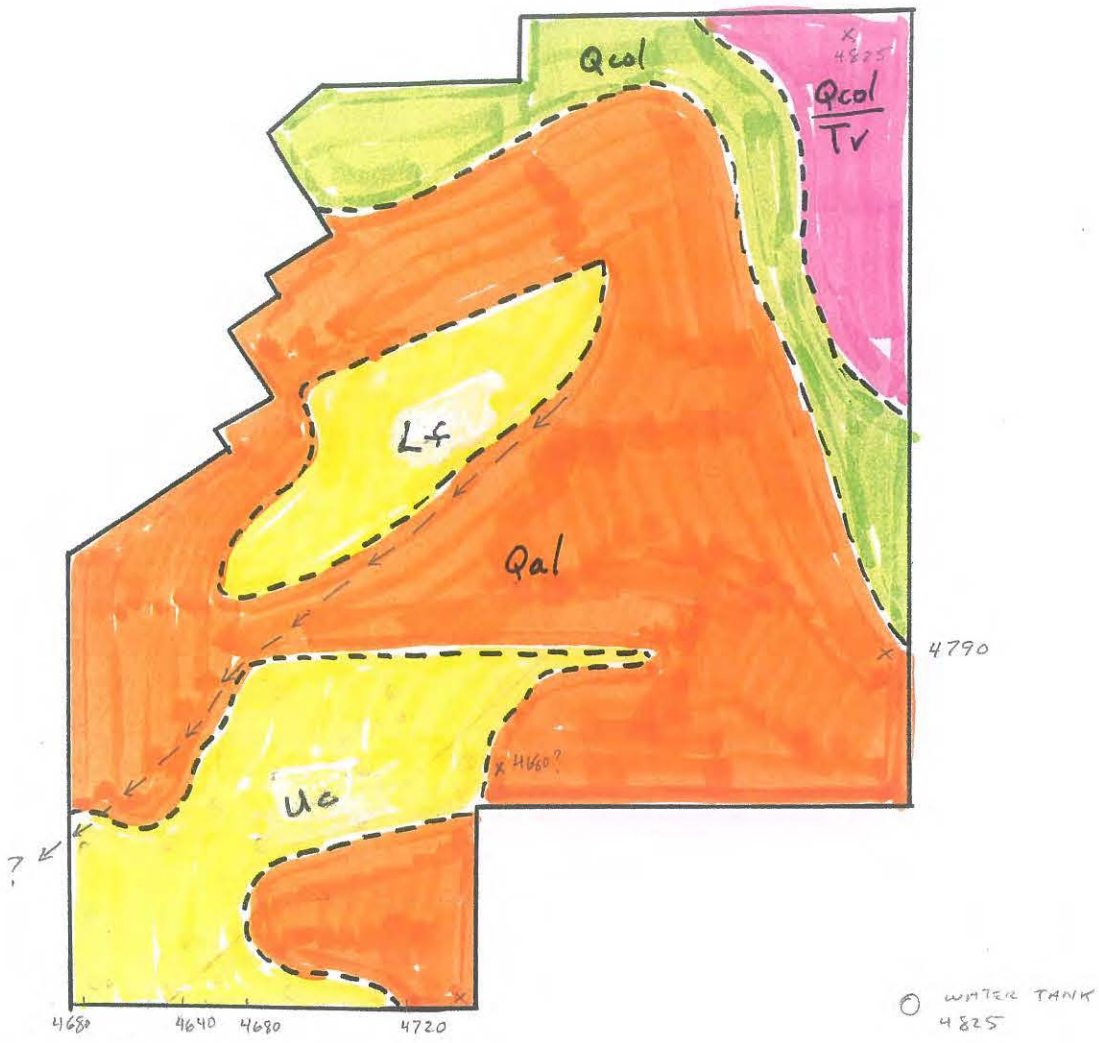
PROJECT

DESTINATION NEVADA

AT CARSON CITY

OVERALL SITE PLAN

HANNAFIN DESIGN ASSOCIATES
Design Development Planning
318 N. CARSON STREET, SUITE 202 CARSON CITY, NV 89701
PHONE: (775)882-6455 FAX: 882-1444
E-MAIL: ahannafin@hdarchitects.com



LEGEND

Uc	Uncontrolled Fill	Qcol	Silty Sand with Cobbles, Gravel and Boulders
Lf	Landfill Area	Qcol/Tv	Silty Sand with Cobbles, Gravel and Boulders over Shallow Andesitic Bedrock
Qal	Sand, Silt, gravel		

Geologic Map

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT - SUITE B - MINDEN, NV 89423
PHONE 775 267-0566 -- FAX 775 267-0728

Destination Nevada		
Carson City, Nevada		
R8259-06-02	Feb-06	Figure 6

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The field investigation was performed in October and November of 2005. The field investigation consisted of the excavation of six exploratory borings (BH-1 through BH-6) and seventy-three exploration test pits (T-1 through T-73) at the approximate locations shown on the Site Plan, Figure 2.

The borings were excavated using a truck-mounted CME 55 drill rig equipped with 8-inch outside diameter (OD) hollow-stem augers. Sampling was accomplished using a 140-pound hammer with a 30-inch drop. Samples were obtained with both a "Standard Penetration Sampler" (1.4 inch ID) and a 2.5-inch OD, split spoon California sampler. The number of blows required to drive the sampler the last 12 inches of the 18-inch sampling interval were recorded on the boring logs. Upon completion, the borings were backfilled with native cuttings in accordance with State of Nevada standards.

The exploratory test pits were excavated by the use of trackhoes and rubber tired backhoes. The specific equipment is noted on the exploratory logs. Approximately fifty of the test trenches were intended to define the limits of the old "Ormsby County Landfill" and to allow for both geotechnical and environmental sampling. Samples for both environmental and geotechnical purposes were recovered by bulk sampling techniques. Geotechnical test data is included in Appendix B. Environmental test data has been transmitted to the client under separate cover.

The soil conditions encountered in the borings and test pits were visually examined, classified, and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual – Manual Procedure D2488-90). The logs of the exploratory excavations are presented herein.

COMMENTS:

LOG OF BORING No. BH-1

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 3.0 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4720.0	
										Silty Sand: loose, dry, yel brn, w/ grav, trash & debris FILL	
											4717.0 3.0

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-1

COMMENTS:

LOG OF BORING No. BH-2

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 16.0 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4720.0	
										Silty SAND: med dense, moist, yel brn- drk brn w/ grav FILL	
							5				4715.0 5.0
										SILT: v stiff, moist, gy brn, w/ sparse gravel probably Alluvium	
											4711.0 9.0
										Silty CLAY: consistency uncertain, moist, yel brn, ALLUVIUM	4710.5 9.5
							10			Silty SAND: dense, - v dense, moist, orange-yel brn, w/ gravel, ALLUVIUM	
											4707.0 13.0
										Sandy SILT: stiff- v stiff, moist, gy, w/ black spots, sparse grav, w/ clay, ALLUVIUM	
							15				4704.0 16.0

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-2

COMMENTS:

LOG OF BORING No. BH-3

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 7.8 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4720.0	
										SILT: stiff, moist, gy, w/ gravel, COLLUVIUM/ EOLIAN	4718.8
										Silty SAND: dense, moist, yel brn, w/ gravel, ALLUVIUM	1.2
							5				4715.0
										Sandy SILT: stiff, moist, gy, w/ black spots, w/ gravel, ALLUVIUM	5.0
											4712.7
										Silty SAND: v dense, moist, orange- yel brn, / gravel, oxid, ALLUVIUM	7.3 4712.2 7.8

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-3

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

COMMENTS:

LOG OF BORING No. BH-4

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 5.8 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4760.0	
										Silty SAND: loose -dense, dry - moist, red brn, w/ grav and cob, COLLUVIUM	
											4756.5 3.5
							5			Silty GRAVEL: v dense, dry - sli moist, lt red brn, w/ sand, refusal at 5.8 ft, COLLUVIUM	4754.2 5.8

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-4

COMMENTS:

LOG OF BORING No. BH-5

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 1.6 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4730.0	
										Silty SAND: loose- very dense, dry - moist, gy brn - red brn, w/ gravel, hammer bounce/ refusal at 1.6 ft COLLUVIUM	4728.4 1.6

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-5

COMMENTS:

LOG OF BORING No. BH-6

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 5.9 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4750.0	
										Silty SAND: loose- med dense, dry - moist, lt yel brn, w/ gravel, cob ALLUVIUM	
											4747.0
										SILT: v stiff, dry- sli moist, gy, w/ oxid, sparse fn gravel, ALLUVIUM	3.0
							5				
											4744.1
											5.9

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-6

COMMENTS:

LOG OF BORING No. BH-7

LOGGED BY: J. HARRIS DATE: 11/3/05

EQUIPMENT: CME 55

TOTAL DEPTH: 10.9 WATER DEPTH:

MISC. TESTS	R VALUE	UNIT DRY WEIGHT, PCF	WATER CONTENT, %	LIQUID LIMIT, %	PLASTICITY INDEX, %	PASSING NO. 200 SIEVE, %	DEPTH, FT	SYMBOL	SAMPLE	DESCRIPTION / CLASSIFICATION	LAYER ELEV./ DEPTH
										SURFACE ELEVATION: 4740.0	
										Silty SAND: loose, dry, lt brn, w/ gravel, w/ debris, FILL	4739.9 0.1
										Silty SAND: med dense, moist, drk brn, w/ gravel, ALLUVIUM	
											4737.5 2.5
										Sandy GRAVEL: dense - v dense, moist, brn - yel brn- gy, w/ silt, ALLUVIUM	
							5				
											4734.3 5.7
										Silty SAND: med dense, moist, yel brn, ALLUVIUM	
							10				
											4729.6 10.4
										Sandy SILT: v dense, dry - sli moist, lt brn w/ black spots ALLUVIUM	4729.1 10.9

LOG OF BORING DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/8/06

GEOCON CONSULTANTS, INC

PROJECT:

Destination Nevada
Carson City

JOB NO.: R8259-06-01 DATE: 11/7/05

Figure-7

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T1 ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				GW	**ALLUVIUM** Very dense to cemented, slightly moist, brown, well-graded Silty SAND and sub-angular gravel			
2								
					TRENCH TERMINATED AT 3 FEET			

Figure 1, Log of Trench T1, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◣ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T2 ELEV. (MSL.)_____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				ML	**ALLUVIUM** Loose to firm, dry to damp, brown, fine Sandy SILT with some sub-angular gravel			
				ML	Very firm to hard, damp, brown, very fine Sandy SILT, with some clay and pebble-sized rock			
2								
					TRENCH TERMINATED AT 3.5 FEET			

Figure 2, Log of Trench T2, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T3

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				ML	**ALLUVIUM** Loose to firm, dry to damp, fine Sandy SILT			
				ML	Hard, damp, brown, fine Sandy SILT, with trace clay and pebble-sized rock			
2				SW/GW	Very dense, damp, moist, Clayey fine to medium SAND, with pebble-sized rock			
					TRENCH TERMINATED AT 3.5 FEET			

Figure 3, Log of Trench T3, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T4 ELEV. (MSL.)_____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM GW	**ALLUVIUM** Loose to firm, dry to damp, Silty fine SAND, with clay and some gravel Hard, damp, light brown, Clayey fine SAND and GRAVEL			
2								
					TRENCH TERMINATED AT 3.5 FEET			

Figure 4, Log of Trench T4, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T5 ELEV. (MSL.)_____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, dry, brown, Silty fine SAND			
				CL	Hard, damp to slightly moist, brown, fine Sandy CLAY, with minor caliche			
2				GW	Very dense, damp, brown, Clayey fine to medium SAND, with gravel			
					TRENCH TERMINATED AT 3.5 FEET			

Figure 5, Log of Trench T5, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T6

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**ALLUVIUM** Loose, dry, brown, Silty fine SAND			
				GC	Stiff to hard, damp, brown, Sandy CLAY and GRAVEL			
2				GW	Dense, damp, brown, Clayey fine SAND and GRAVEL, caliche lenses			
					TRENCH TERMINATED AT 3 FEET			

Figure 6, Log of Trench T6, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T7 ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, dry, brown, Silty fine SAND			
				CL	Firm to stiff, damp, brown, fine Sandy CLAY, with gravel and caliche lenses			
2				SM	Dense, damp, brown, Silty fine SAND, with calich stringers and gravel			
4					TRENCH TERMINATED AT 4.5 FEET			

Figure 7, Log of Trench T7, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T8

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				ML	**FILL** Loose, dry, light tan, Silty fine SAND, with some gravel			
2				SM	**ALLUVIUM** Medium dense, dry, brown, Silty very fine SAND			
				CL	Stiff to hard, slightly moist, brown, fine Sandy CLAY, with claiche stringers			
4					TRENCH TERMINATED AT 4.5 FEET			

Figure 8, Log of Trench T8, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ▩ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T9 ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				ML	**FILL** Loose, dry, light tan, Silty fine SAND, with some gravel			
2				SM/SC	**ALLUVIUM** Very dense, slightly moist, brown, Silty to Clayey fine SAND			
4					- gravel to small boulder-sized rock			
					TRENCH TERMINATED AT 5.5 FEET			

Figure 9, Log of Trench T9, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T10 ELEV. (MSL.) _____ DATE COMPLETED 10/18/2005 EQUIPMENT JD 310G BACKHOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, dry, light tan, Silty fine SAND, with gravel			
				CL	Firm to stiff, slightly moist, brown, fine Sandy CLAY, with caliche stringers			
2								
4					TRENCH TERMINATED AT 5.5 FEET			

Figure 10, Log of Trench T10, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T11 ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SC/GW	**FILL** Loose to firm, SAND, CLAY and GRAVEL mixture			
2				CL	**ALLUVIUM** Firm to medium dense, moist, brown, fine Sandy CLAY			
				CL	Hard, slightly moist, light brown, fine Sandy CLAY, with caliche			
4					TRENCH TERMINATED AT 4.5 FEET			

Figure 11, Log of Trench T11, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T12

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COVER FILL**			
2	T12-1 1610 PID = 0			ML	**LANDFILL DEBRIS** Loose, dark brown, fine Sandy SILT with glass and metal debris			
4	T12-3 1620 PID = 0			GW	**ALLUVIUM** Very dense, damp, brown, Clayey SAND and GRAVEL			
					TRENCH TERMINATED AT 4.5 FEET			

Figure 12, Log of Trench T12, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/06/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T13

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COVER FILL**			
2				ML	**LANDFILL DEBRIS** Loose, dark brown, fine Sandy SILT with glass and metal debris			
4	T13-3 1625 PID = 0 T13-4 1630d PID = 0			SC	**ALLUVIUM** Firm, moist, brown, Sandy CLAY, with gravel			
					TRENCH TERMINATED AT 5 FEET			

Figure 13, Log of Trench T13, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T14

ELEV. (MSL.) _____ DATE COMPLETED **10/18/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					COVER FILL			
2				ML	**LANDFILL DEBRIS** Loose, damp, dark brown, fine Sandy SILT, - glass fragments, bottles, metal, plastic, wood, concrete			
4	T14-4 1645 PID = 0							
6	T14-6 1650 PID = 32			SC	**ALLUVIUM** Stiff, moist, brown grayish/green, fine Sandy CLAY, with strong petroleum hydrocarbon odor			
8				ML	Very stiff, damp, light brown, very fine Sandy SILT			
10	T14-9 0730 PID = 0							
12				GW	Very dense, damp, brown, Silty fine SAND and GRAVEL			
14	T14-14 0745 PID = 0				TRENCH TERMINATED AT 14.5 FEET			

Figure 14, Log of Trench T14, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T15

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					COVER FILL			
2	T15-2 0805 PID = 0			SM/ML	**LANDFILL DEBRIS** Loose, damp, dark brown to black, Silty SAND and fine Sandy SILT, with glass fragments, metal and burnt wood			
4	T15-4 0810 PID = 0							
6					landfill debris with abundant glass, bottles, metal debris			
8								
10	T15-9 0815 PID = 0							
12				CL	**ALLUVIUM** Firm, moist, brown, fine Sandy CLAY			
14	T15-14 0830 PID = 0			ML	- grades to: Hard, damp, tan, fine Sandy SILT			
					TRENCH TERMINATED AT 15 FEET			

Figure 15, Log of Trench T15, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T16

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				ML	**LANDFILL DEBRIS** Abundant concrete rubble and one tire near surface Loose, dry to damp, dark brown, fine Sandy SILT with abundant glass fragments, bottles, metal brick, and wood debris			
2	T16-2 0840 PID = 0							
4								
6								
				GW	**ALLUVIUM** Firm to hard, damp, brown, fine Sandy SILT and CLAY, with gravel and claiche stringers			
	T16-7 0850 PID = 0							
8								
10								
					TRENCH TERMINATED AT 11 FEET			

Figure 16, Log of Trench T16, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T17

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				ML	**LANDFILL DEBRIS** - car frame near surface			
2								
4	T17-3 0920 PID = 0				Loose, dry to damp, dark brown, fine Sandy SILT and Silty fine SAND, with abundant glass fragments, bottles, metal, brick			
6								
8								
10								
12	T17-12 0930 PID = 0							
14								
16	T17-16 0940 PID = 0			ML	**ALLUVIUM** Stiff to hard, damp, brown, fine Sandy SILT			
					TRENCH TERMINATED AT 16.5 FEET			

Figure 17, Log of Trench T17, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T18

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					COVER FILL			
				ML	**LANDFILL DEBRIS**			
2								
					Loose, dry to damp, dark brown, fine Sandy SILT and Silty fine SAND, with abundant glass fragments, bottles, metal, brick			
4								
	T18-COMP 0945 PID = 0							
6								
8								
10								
				ML	**ALLUVIUM**			
12					Hard, damp, tan, fine Sandy SILT			
14	T18-14 0950 PID = 0							
					TRENCH TERMINATED AT 14.5 FEET			

Figure 18, Log of Trench T18, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T19

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	T19-0-3 1010 PID = 0				**LANDFILL DEBRIS** - with abundant brick and glass fragments			
2								
4				GW	**ALLUVIUM** Firm to hard, damp, brown, fine Sandy CLAY and GRAVEL, clayey sand			
6					TRENCH TERMINATED AT 6 FEET			

Figure 19, Log of Trench T19, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◺ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T20 ELEV. (MSL.)_____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM/CL	**ALLUVIUM** Loose, dry, dark brown, Silty SAND and firm, moist, Sandy CLAY			
2				GW	Dense to hard, damp, brown, Clayey SAND/Sandy CLAY with gravel			
4					TRENCH TERMINATED AT 4 FEET			

Figure 20, Log of Trench T20, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T21

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				ML/SM	**LANDFILL DEBRIS** Loose, dry, brown, fine Sandy SILT/Silty SAND with gravel, concrete/asphalt slabs, plastic, and metals debris			
2								
4	T21-3 1220 PID = 0				no burn ash			
6								
8				SM	Loose, dry, brown, fine Silty SAND			
10					- Note: at 30' from top of slope, fill contains ash and debris (car frame) to 16'			
12								
14								
16								
18					TRENCH TERMINATED AT 18 FEET			

Figure 21, Log of Trench T21, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T22

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**FILL** Loose, dry, brown, Silty SAND with gravel 10 ml visqueen			
2	T22-2 1250 PID = 0			SM/ML	**ALLUVIUM** Medium dense to dense, dry, Silty SAND/Sandy SILT			
4					TRENCH TERMINATED AT 5.5 FEET			

Figure 22, Log of Trench T22, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

▨ ... DISTURBED OR BAG SAMPLE ◣ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T23 ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**COVER FILL**			
2				SM	**LANDFILL DEBRIS** - glass, metal, concrete debris, tire, wire, cable Loose, dry to damp, dark brown, Silty fine SAND			
4	T23-COMP 1350 PID = 0							
6								
8								
10								
12								
14								
16								
					TRENCH TERMINATED AT 17 FEET			

Figure 23, Log of Trench T23, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
▨ ... DISTURBED OR BAG SAMPLE
◧ ... STANDARD PENETRATION TEST
◹ ... CHUNK SAMPLE
■ ... DRIVE SAMPLE (UNDISTURBED)
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T24 ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**COVER FILL**			
2				SM	**LANDFILL DEBRIS** - ash, brick, glass, and metal debris Loose, dry to damp, dark brown, Silty fine SAND			
4								
6								
8								
10								
12				ML	**ALLUVIUM** Slightly cemented, damp, brown, fine Sandy SILT			
					TRENCH TERMINATED AT 13 FEET			

Figure 24, Log of Trench T24, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T25

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COVER FILL**			
2								
4				SM	**LANDFILL DEBRIS**			
6					Loose, damp to moist, dark brown, Silty fine SAND, with ash, concrete blocks, timber, glass, metals, pipe, tires, plastic wrapping			
8								
10								
12					- some grayish green Sandy CLAY (sludge), with organic odor			
14								
16								
18	T25-18 1430 PID = 4.0				TRENCH TERMINATED AT 18 FEET			

Figure 25, Log of Trench T25, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/01/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T26

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				CL	**LANDFILL DEBRIS**			
2	T26-3 1515 PID = 0				Firm, damp, grayish green, Silty fine Sandy CLAY (sludge), with roots, branches, and organic odor			
4								
6								
8								
10								
				ML	**ALLUVIUM**			
12					Firm to stiff, damp, brown, fine Sandy SILT			
14								
					TRENCH TERMINATED AT 15.5 FEET			

Figure 26, Log of Trench T26, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/06/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T27

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310G BACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**COVER FILL** Loose, dry, light gray, Silty fine SAND			
10					TRENCH TERMINATED AT 10 FEET TRENCH COLLAPSED			

Figure 27, Log of Trench T27, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T28 ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310G BACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COVER FILL** Loose, dry, light gray, Silty fine SAND			
2								
4								
6								
8								
10					TRENCH TERMINATED AT 10 FEET TRENCH COLLAPSED			

Figure 28, Log of Trench T28, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 01/31/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

▨ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T29

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**LANDFILL DEBRIS** Loose, dry, dark yellowish brown, Silty SAND with gravel and occasional debris			
				GC				
2				SM	**ALLUVIUM** Dense, dry, dark brown, Clayey GRAVEL			
					Dense, dry, dark yellowish brown, Silty SAND with gravel and cobbles			
					TRENCH TERMINATED AT 3 FEET			

Figure 29, Log of Trench T29, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T30 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COVER FILL** Loose, dry, dark yellowish brown, Silty SAND			
					LANDFILL DEBRIS - tires, glass wood ash, fabricated metal, wire, plastic			
2					TRENCH TERMINATED AT 2.5 FEET			

Figure 30, Log of Trench T30, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T31

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**ALLUVIUM** Loose, dry, dark yellowish brown, Silty SAND with gravel and cobbles			
				SC/CL	Dense, slightly moist, dark brown to yellowish brown, Sandy Gravelly CLAY/Clayey SAND			
2					TRENCH TERMINATED AT 2.5 FEET			

Figure 31, Log of Trench T31, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T32 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**LANDFILL DEBRIS** - Concrete slab 10-12" thick, CMU, red brick, rebar, trace glass, wire			
2								
4				GM	**ALLUVIUM** Dense, slightly moist, dark yellowish brown, Silty Sandy GRAVEL with cobbles			
					TRENCH TERMINATED AT 5 FEET			

Figure 32, Log of Trench T32, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T34 ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**LANDFILL DEBRIS** - glass, plastic, bags, wire, fabricated metals, wood and ash			
2								
4				SC	**ALLUVIUM** Dense, moist, dark yellowish brown, Clayey SAND with caliche at 4'			
					TRENCH TERMINATED AT 4 FEET			

Figure 33, Log of Trench T34, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T33

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					LANDFILL DEBRIS			
2								
				SC	**ALLUVIUM**			
4					TRENCH TERMINATED AT 4 FEET			

Figure 34, Log of Trench T33, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T35

ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005

EQUIPMENT JD 310

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**COVER FILL** Loose, dry, dark yellowish brown, Silty SAND			
2					**LANDFILL DEBRIS** Debris laden fill: Sheet metal, Chain, wire, trace glass and plastic			
4								
				CL	**ALLUVIUM** Stiff, moist, yellowish brown, Sandy CLAY			
6				SM	Medium dense, dry, dark yellowish brown, Silty SAND			
					TRENCH TERMINATED AT 7 FEET			

Figure 35, Log of Trench T35, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T36 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**LANDFILL DEBRIS** Loose, dry, yellow, Silty SAND 1" ash layer			
2				SC/CL	- box spring, lumber **ALLUVIUM** Dense, slightly moist, dark brown, Clayey SAND/Sandy CLAY with fine gravel, silt lense			
					TRENCH TERMINATED AT 3 FEET			

Figure 36, Log of Trench T36, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T37 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				CL	**ALLUVIUM** Stiff, dry, dark brown, Sandy CLAY			
				GM	Dense, dry, dark yellowish brown, Sandy GRAVEL with claiche and cobbles			
2					TRENCH TERMINATED AT 2.5 FEET			

Figure 37, Log of Trench T37, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T38 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				CL	**ALLUVIUM** Hard, dry, dark brown, Silty CLAY with gravel			
				SM	Very dense, dry, yellowish brown, caliche cemented, Silty SAND			
					REFUSAL - TRENCH TERMINATED AT 1.5 FEET			

Figure 38, Log of Trench T38, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ▩ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T39 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COVER FILL** Loose, dry, dark yellowish brown, Silty SAND			
2								
4					**LANDFILL DEBRIS** - glass, lots of ash			
					TRENCH TERMINATED AT 5 FEET			

Figure 41, Log of Trench T39, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T40

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				ML	**ALLUVIUM** Loose, dry, yellowish brown, fine Sandy SILT			
2				CL/ML	Dense, dry, Silty CLAY to cemented SILT			
					TRENCH TERMINATED AT 3.75 FEET			

Figure 42, Log of Trench T40, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T41 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COVER FILL** Loose, dry, dark yellowish brown, Silty SAND			
2								
4				SM	**LANDFILL DEBRIS** - Silty SAND with 1-3' concrete slab, 4-6" thick			
6								
8					TRENCH TERMINATED AT 8 FEET			

Figure 43, Log of Trench T41, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▣ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T42 ELEV. (MSL.)_____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM/GM	**ALLUVIUM** Loose to medium dense, dry, dark yellowish brown, Silty SAND with sandy gravel			
2								
4					12-inch cobbles			
6					TRENCH TERMINATED AT 6 FEET			

Figure 44, Log of Trench T42, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ▩ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T43

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				GM	**COVER FILL** Sandy GRAVEL			
2				SM	Loose, dry, dark brown, Silty SAND			
4				GM	**LANDFILL DEBRIS** Medium dense, moist, dark brown, Silty Sandy GRAVEL, trace debris asphalt and concrete			
6				SC	**ALLUVIUM** Dense, dry, brown, Clayey SAND with gravel			
					TRENCH TERMINATED AT 6 FEET			

Figure 45, Log of Trench T43, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T44

ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005**

EQUIPMENT **JD 310**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**ALLUVIUM** Loose, dry, brown, Silty SAND			
2				SM/SC	Medium dense, slightly moist, dark yellowish brown, Clayey Silty SAND			
4					TRENCH TERMINATED AT 4 FEET			

Figure 46, Log of Trench T44, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BDRING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T45 ELEV. (MSL.) _____ DATE COMPLETED 10/19/2005 EQUIPMENT JD 310	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose to medium dense, reddish brown, Silty SAND			
2								
4								
					TRENCH TERMINATED AT 5.5 FEET			

Figure 47, Log of Trench T45, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◺ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T46 ELEV. (MSL.) _____ DATE COMPLETED **10/19/2005** EQUIPMENT **JD 310**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, dry, dark yellowish brown, Silty SAND			
2				SM	Medium dense, moist, grayish brown, Silty SAND with caliche			
4								
					TRENCH TERMINATED AT 5 FEET			

Figure 48, Log of Trench T46, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/02/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T47 ELEV. (MSL.)_____ DATE COMPLETED 11/26/05 EQUIPMENT CASE 580	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COVER FILL** Medium dense, dark yellowish brown, Silty SAND			
2					**LANDFILL DEBRIS**			
4								
6					TRENCH TERMINATED AT 6 FEET			

Figure 49, Log of Trench T47, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T48 ELEV. (MSL.)_____ DATE COMPLETED 11/26/2005 EQUIPMENT CASE 580	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Medium dense, dry, dark yellowish brown, Silty SAND			
2								
4								
					TRENCH TERMINATED AT 5 FEET			

Log of Trench T48, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T49

ELEV. (MSL.)_____ DATE COMPLETED **11/26/2005**

EQUIPMENT **CASE 580**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**ALLUVIUM** Loose to medium dense, moist, dark brown, Silty SAND			
2								
4								
6								
					TRENCH TERMINATED AT 7 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T50

ELEV. (MSL.)_____ DATE COMPLETED **11/26/2005**

EQUIPMENT **CASE 580**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					LANDFILL DEBRIS - asphalt, concrete, rubble			
2				SM	**ALLUVIUM** Medium dense, dark yellowish brown, Silty SAND			
4								
6					TRENCH TERMINATED AT 6 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T51 ELEV. (MSL.)_____ DATE COMPLETED 11/26/2005 EQUIPMENT CASE 580	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**LANDFILL DEBRIS** - abundant asphalt concrete			
2				SM	**ALLUVIUM** Medium dense, moist, dark brown, Silty SAND			
4								
6								
					TRENCH TERMINATED AT 7 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T52 ELEV. (MSL.)_____ DATE COMPLETED 11/26/2005 EQUIPMENT CASE 580	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Medium dense, dark brown, Silty SAND			
2								
					TRENCH TERMINATED AT 3 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◣ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T53

ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COVER FILL**			
2					**LANDFILL DEBRIS** Loose, damp, dark brown, Silty SAND, with glass fragments, metal and ash			
22				SP	**ALLUVIUM** Very dense, brown, SAND and gravel TRENCH TERMINATED AT 23 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◹ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T54

ELEV. (MSL.)_____ DATE COMPLETED 11/22/2005

EQUIPMENT TRACKHOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COVER FILL**			
2					**LANDFILL DEBRIS** Loose, damp, dark brown, Silty SAND, with gravel, with glass fragments, metal, and ash			
4								
6								
8								
10				SP	**ALLUVIUM** Dense to very dense, brown, Gravelly SAND TRENCH TERMINATED AT 11 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
▨ ... DISTURBED OR BAG SAMPLE
◧ ... STANDARD PENETRATION TEST
◥ ... CHUNK SAMPLE
■ ... DRIVE SAMPLE (UNDISTURBED)
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T55

ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SM	**UNCONTROLLED FILL** Medium dense to dense, Silty SAND with gravel			
2								
4								
6								
8								
10								
12								
					- gravel clasts			
14								
					TRENCH TERMINATED AT 14.5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ▩ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T56

ELEV. (MSL.)_____ DATE COMPLETED 11/22/2005

EQUIPMENT TRACKHOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**UNCONTROLLED FILL** Medium dense to dense, brown, Silty SAND with gravel and cobbles			
2								
4								
6								
8								
10								
12								
14								
16								
18								
					TRENCH TERMINATED AT 19 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T57 ELEV. (MSL.)_____ DATE COMPLETED 11/22/2005 EQUIPMENT TRACKHOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**UNCONTROLLED FILL** Medium dense to dense, Silty SAND, with gravel, and cobbles <12			
2								
4								
6								
8								
10								
12								
14								
16								
18								
					TRENCH TERMINATED AT 18.5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T58

ELEV. (MSL.) _____ DATE COMPLETED **11/22/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				GM	**UNCONTROLLED FILL** Loose to medium dense, Silty Sandy GRAVEL			
2					Medium, dense to moist, dark yellowish brown, Silty SAND with gravel, dips Southwest 10-20 degrees			
4								
6								
8								
10								
12				SM	**ALLUVIUM** Medium dense, moist, dark yellowish brown, Silty SAND with gravel			
14					TRENCH TERMINATED AT 14 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**TRENCH T59** ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**UNCONTROLLED FILL** Loose, Silty to Clayey SAND, with gravel, and gravel seams - dense to medium dense			
2								
4								
6				SM	**ALLUVIUM** Medium dense to dense, moist, dark yellowish brown, Silty SAND, with gravel			
8					TRENCH TERMINATED AT 8 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T60

ELEV. (MSL.)_____ DATE COMPLETED 11/22/2005

EQUIPMENT TRACKHOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2				GM	**UNCONTROLLED FILL** Loose, dry, dark yellowish brown, Silty Sandy GRAVEL			
4								
6				GM	**ALLUVIUM** Medium dense to dense, pale yellowish brown, Silty Sandy GRAVEL			
8								
					TRENCH TERMINATED AT 8.5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**TRENCH T61** ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				GP	**UNCONTROLLED FILL** Medium dense, pale yellowish brown, Silty Sandy GRAVEL			
2				CL	**ALLUVUIM** Hard, slightly moist, yellowish brown, Sandy CLAY			
4								
					TRENCH TERMINATED AT 5 FEET			

Log of Trench T61, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
▯ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
⊠ ... DISTURBED OR BAG SAMPLE
◣ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T62

ELEV. (MSL.) _____ DATE COMPLETED 11/22/2005

EQUIPMENT TRACKHOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SP	**UNCONTROLLED FILL** Medium dense to dense, Silty SAND/Gravelly SAND with occasional debris and asphalt			
2								
4								
6								
8								
10								
12								
14								
16					TRENCH TERMINATED AT 16 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ▮ ... STANDARD PENETRATION TEST
- ◣ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**TRENCH T63** ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				ML	**ALLUVIUM** Hard, moist, grayish brown, Clayey SILT			
2								
4				GP	Medium dense, moist, gray, Sandy GRAVEL with ferrous oxide stains			
					TRENCH TERMINATED AT 5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◣ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**TRENCH T64** ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				ML	**ALLUVIUM** Soft, dry, gray, Sandy SILT			
2				ML	Firm, moist, yellowish brown to reddish brown, Clayey Sandy SILT			
4					TRENCH TERMINATED AT 4.5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T65 ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				GM	**UNCONTROLLED FILL** Loose, dry, dark yellowish brown, Silty Sandy GRAVEL			
2				GM	**ALLUVIUM** Medium dense, moist, ferrous oxide stained, Silty Sandy GRAVEL, with sand lenses			
4								
					TRENCH TERMINATED AT 5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
☐ ... SAMPLING UNSUCCESSFUL
▯ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
⊠ ... DISTURBED OR BAG SAMPLE
◹ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

PROJECT NO. R8259-06-03

TRENCH T66

ELEV. (MSL.)_____ DATE COMPLETED **11/22/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				GP	**UNCONTROLLED FILL** Medium dense, yellowish brown to ferrous oxide stained, Sandy GRAVEL			
2								
4								
6								
				SM	**ALLUVIUM** Medium dense to loose, dark brown, Silty SAND with gravel			
8					TRENCH TERMINATED AT 8 FEET			

Log of Trench T66, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◹ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T67

ELEV. (MSL.)_____ DATE COMPLETED **11/29/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
					UNCONTROLLED FILL			
				GM	**ALLUVIUM** Silty Sandy GRAVEL			
2				SM	Medium dense to dense, moist, orange brown ferrous oxide, Silty SAND with gravel			
4								
6					TRENCH TERMINATED AT 6 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T68

ELEV. (MSL.)_____ DATE COMPLETED **11/29/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SM	**UNCONTROLLED FILL** Medium dense to dense, Silty SAND and Sandy GRAVEL			
2								
4								
				SM/ML	**ALLUVIUM** Dense, moist, orange brown mottled, Silty SAND and Sandy SILT			
6								
8								
					TRENCH TERMINATED AT 8.5 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**TRENCH T69** ELEV. (MSL.)_____ DATE COMPLETED **11/29/2005** EQUIPMENT **TRACKHOE**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**UNCONTROLLED FILL** Medium dense, moist, Silty SAND, with trace gravel			
2								
4								
6								
8								
10				SM	**ALLUVIUM** Dense, moist, grayish green, Silty SAND, with caliche veins			
12					TRENCH TERMINATED AT 12 FEET			

Log of Trench T69, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T70

ELEV. (MSL.)_____ DATE COMPLETED **11/29/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**UNCONTROLLED FILL** Medium dense, moist, Silty SAND/Sandy GRAVEL			
2								
4								
6								
8								
10								
12				SM	**ALLUVIUM** Dense, moist, dark brown, Silty SAND, dips north 10 degrees			
					TRENCH TERMINATED AT 13.5 FEET			

Log of Trench T70, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
▥ ... DISTURBED OR BAG SAMPLE
◧ ... STANDARD PENETRATION TEST
◥ ... CHUNK SAMPLE
■ ... DRIVE SAMPLE (UNDISTURBED)
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

TRENCH T71

ELEV. (MSL.) _____ DATE COMPLETED **11/29/2005**

EQUIPMENT **TRACKHOE**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**UNCONTROLLED FILL** Medium dense, dry to moist, Silty SAND, with gravel			
16				GC	Medium dense, moist, dark brown, Clayey GRAVEL			
					TRENCH TERMINATED AT 17 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T72 ELEV. (MSL.)_____ DATE COMPLETED 11/22/2005 EQUIPMENT TRACKHOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM/ML	**ALLUVIUM** Medium dense, slightly moist, dark yellowish brown, Silty SAND/Sandy SILT			
2					TRENCH TERMINATED AT 2 FEET			

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. R8259-06-03

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T73 ELEV. (MSL.)_____ DATE COMPLETED 11/29/2005 EQUIPMENT TRACKHOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM-SP	**UNCONTROLLED FILL** Medium dense, moist, dark yellowish brown to gray (glazed), Silty SAND/Gravelly SAND			
2								
4								
6								
8								
10					TRENCH TERMINATED AT 10 FEET			

Log of Trench T73, page 1 of 1

TRENCH LOG DESTINATION TRENCHES.GPJ 02/13/06

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

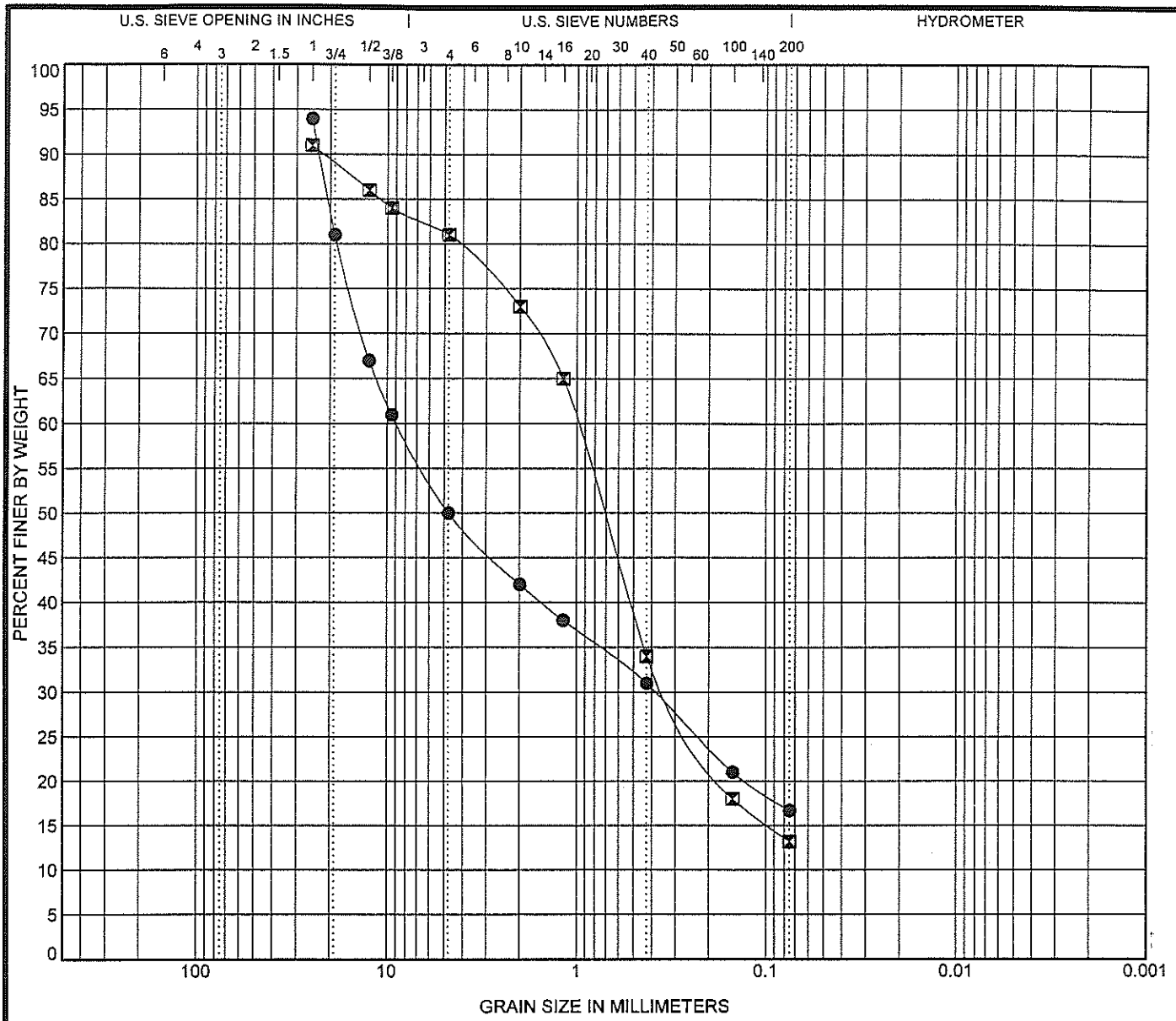
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B

APPENDIX B

LABORATORY TESTING PROGRAM

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. Selected soil samples were tested for their in-place dry density and moisture content, grain-size distribution, and plasticity characteristics. The results of the laboratory tests are presented on the following pages. In-place dry density, fines (-200) content and moisture content of selected samples are also presented on the exploratory logs in Appendix A.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification	LL	PL	PI	Cc	Cu
● BH-2	10.7	Silty Sand w/Gravel					
⊠ BH-3	3.0	Silty Sand w/Gravel					

Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● BH-2	10.7	25	8.92	0.383		44.0	33.3	16.7	
⊠ BH-3	3.0	25	1.001	0.328		10.0	67.8	13.2	

Geocon Consultants, Inc.
1167 Annie Court, Suite B
Minden, Nevada 89423
Telephone: 775.267.0566
Fax: 775.267.0728

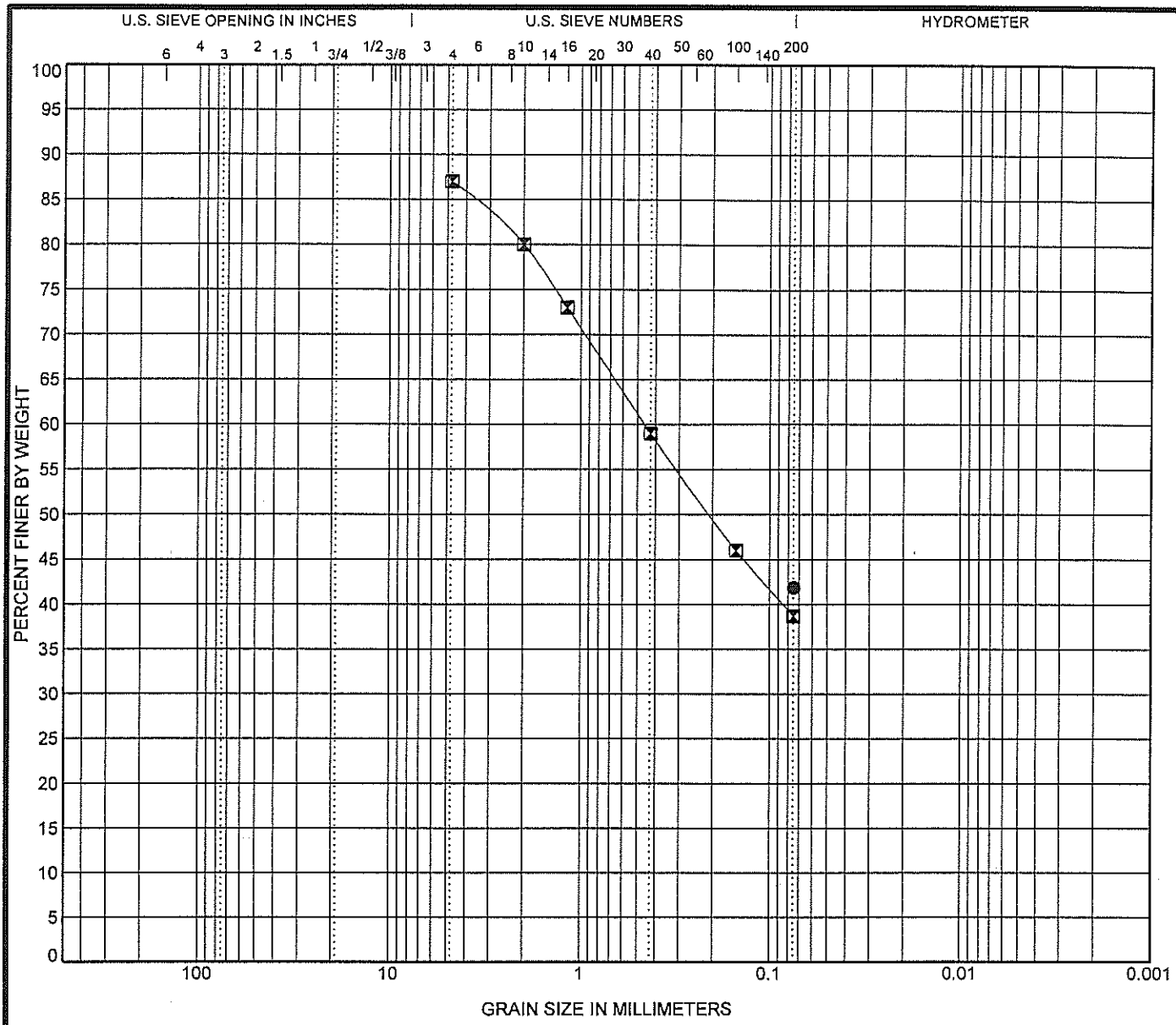
GRAIN SIZE DISTRIBUTION

Project: Destination Nevada

Location: Carson City

Number: R8259-06-01

US GRAIN SIZE DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/14/06



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification	LL	PL	PI	Cc	Cu
● BH-6	5.9	**Sandy Silt/Silty Sand**					
⊠ BH-7	5.7	**Clayey Silty Sand**					

Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● BH-6	5.9	0.075						41.9	
⊠ BH-7	5.7	75	0.457			0.0	48.3	38.7	

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GRAIN SIZE DISTRIBUTION

Project: Destination Nevada

Location: Carson City

Number: R8259-06-01

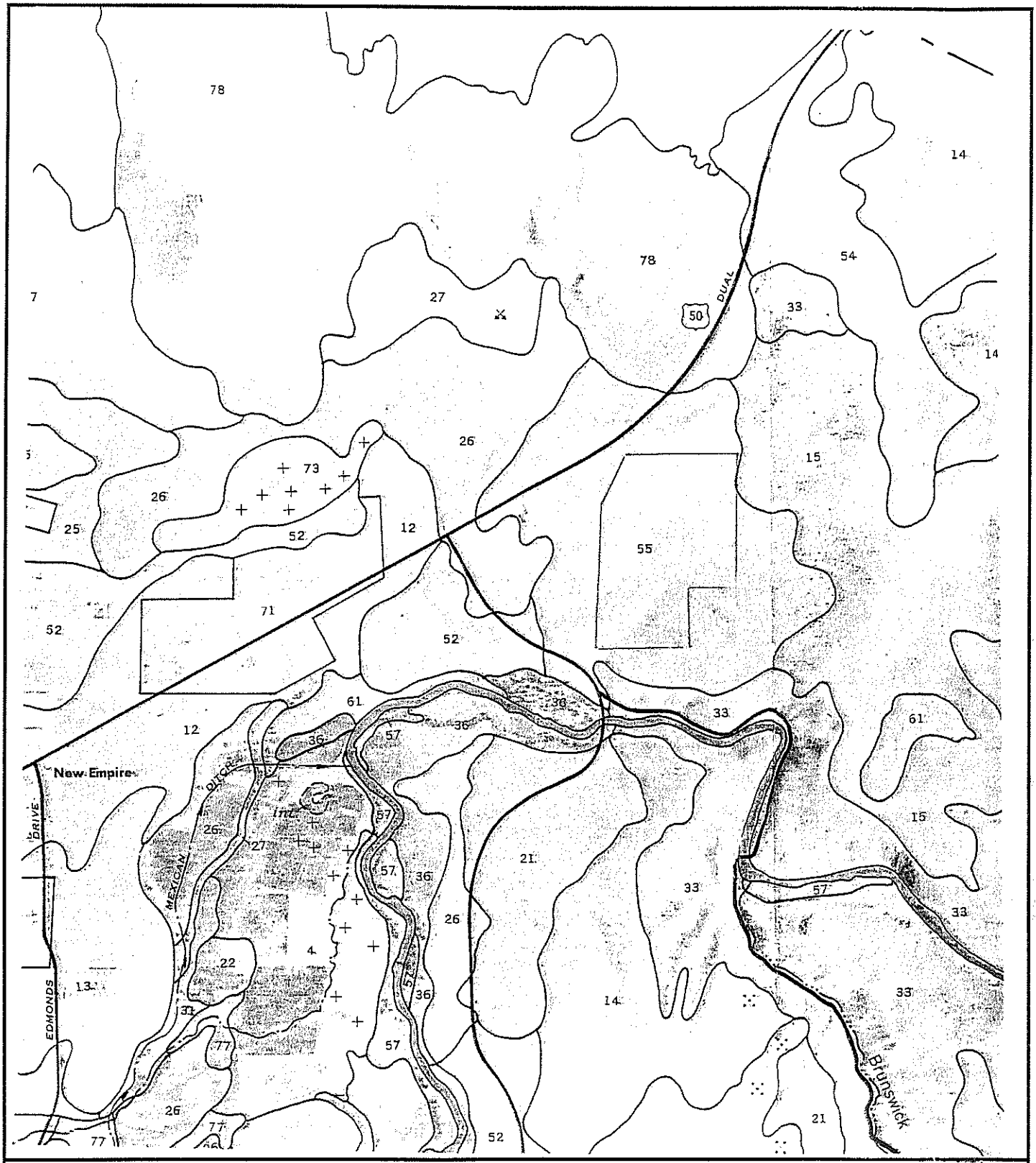
US GRAIN SIZE DESTINATION NEVADA.GPJ GEOCON NV.GDT 2/14/06

APPENDIX C

APPENDIX C

SOIL CONSERVATION SERVICE DATA

The information contained herein is taken from the Soil Survey of the Carson City Area, Nevada, 1979. The information is limited to the top five feet of soil and was compiled prior before the mass grading that was performed on the site during the 1980's. This data is relevant to the undisturbed portions of the site and indicates to a lesser extent the type of materials that are found in the uncontrolled fills.



SCS Map

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT · SUITE B · MINDEN, NV 89423
PHONE 775 267-0566 – FAX 775 267-0728

Destination Nevada		
Carson City, Nevada		
R8259-06-02	Feb-06	FIGURE-C1

TABLE 13.--ENGINEERING PROPERTIES AND CLASSIFICATIONS--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Reno:											
54	0-3	Cobbly fine sandy loam.	SM	A-1, A-2	15-30	65-85	60-80	50-65	20-35	15-25	NP-5
	3-24	Clay, sandy clay	SC, CH, CL	A-7	0-5	80-100	75-95	60-85	45-75	45-55	25-35
	24-29	Cemented	---	---	---	---	---	---	---	---	---
	29-60	Very gravelly loamy sand.	GP-GM, GM	A-1	5-10	30-55	20-50	15-30	5-15	---	NP
55	0-3	Gravelly clay loam.	GC, CL	A-6	0	65-75	60-75	55-70	45-55	35-40	15-20
	3-20	Clay, sandy clay	SC, CH, CL	A-7	0-5	80-100	75-95	60-85	45-75	45-55	25-35
	20-29	Cemented	---	---	---	---	---	---	---	---	---
	29-60	Very gravelly loamy sand.	GP-GM, GM	A-1	5-10	30-55	20-50	15-30	5-15	---	NP

TABLE 14.--PHYSICAL AND CHEMICAL PROPERTIES OF SOILS--Continued

Soil name and map symbol	Depth	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Risk of corrosion		Erosion factors		Wind erodibility group
							Uncoated steel	Concrete	K	T	
	In	In/hr	In/in	pH	Mmhos/cm						
Reno:											
54	0-3	2.0-6.0	0.08-0.12	6.1-7.3	<2	Low	Moderate	Low	0.17	2	4
	3-24	<0.06	0.14-0.16	6.1-7.8	<2	High	High	Low	0.24		
	24-29	---	---	---	---	---	---	---	---		
	29-60	>6.0	0.05-0.07	7.4-8.4	<4	Low	High	Low	0.15		
55	0-3	0.2-0.6	0.16-0.18	6.1-7.3	<2	Moderate	Moderate	Low	0.32	2	7
	3-20	<0.06	0.14-0.16	6.1-7.8	<2	High	High	Low	0.24		
	20-29	---	---	---	---	---	---	---	---		
	29-60	>6.0	0.05-0.07	7.4-8.4	<4	Low	High	Low	0.15		

SCS SOIL DATA

GEOCON
CONSULTANTS, INC.
1167 ANNIE COURT - SUITE B - MINDEN, NV 89423
PHONE 775 267-0566 - FAX 775 267-0728

Destination Nevada

Carson City,
Nevada

R8259-06-02	Feb-06	FIGURE-C2

Carson City Planning Division

108 E. Proctor Street
Carson City, Nevada 89701
(775) 887-2180 – Hearing Impaired: 711
planning@carson.org
www.carson.org/planning

MEMORANDUM

Planning Commission Meeting of November 28, 2018

TO: Planning Commission **Item E-6**

FROM: Heather Ferris
Associate Planner

DATE: November 27, 2018

SUBJECT: **TSM-18-154** For Possible Action: To make a recommendation to the Board of Supervisors regarding a Tentative Subdivision Map application to create 270 single family residential lots, 9 common area parcels, 3 remainder parcels, and approximately 13.36 acres of right-of-way within a 119.1 acre project area; located southeast of US Highway 50 and north east of Deer Run Road, within the V&T Specific Plan Area, APN's 008-521-54, -55, 89, 90, 008-522-16, -17, -18, 008-531-59, and -60.

Since the release of the packet, the staff has been in discussions with the applicant. In these discussions, we have identified opportunities to make changes to some of the recommended Conditions of Approval to help improve clarity.

The proposed modifications to the conditions are as follows. New wording appears bolded and underlined. Proposed deleted language appears with a strikethrough.

19. The developer shall enter into an agreement with the City to address the following:
    a. **Developer to contribute at a pro-rata share to upsizing** the sewer main in Airport Road from US 50 to Douglas Drive, which is at capacity; and
    b. **Developer to contribute at a pro-rata share for the construction** of an appropriate roadway treatment to maintain the pavement performance of Airport Road between US 50 and Woodside Drive where the sewer main must be upgraded.

21. The water main and storm drain must be stubbed to the north **at Court "B"** as shown. The sewer main **at Court "B"** must also be stubbed to the north **property line. The water and sewer mains must extend along Drako Way to the north property line near Astro Drive.**

37. A Homeowners Association/Maintenance Association or similar entity must be established for the following:
    a. Ownership and maintenance, in perpetuity, of all open space, common areas, landscaping, **off-site roadway landscaping,** and off-street trails within the development; and

b. Maintenance of all on-site drainage basins and any Low Impact Design, in perpetuity.

Staff recommends the following motion:

"I move to recommend to the Board of Supervisors approval of TSM-18-154, a Tentative Subdivision Map known as the Plateau Development, consisting of 270 single family residential lots, 9 common area parcels, 3 remainder parcels, and approximately 13.36 acres of right-of-way within a 119.1 acre project area; located southeast of US Highway 50 and northeast of Deer Run Road, within the V&T Specific Plan Area, subject to the condition of approval included in the staff report and amended in staff's memo dated November 27, 2018 and based on the findings as stated in the staff report."

TAIYO AMERICA®
The Solder Mask Experts

Always on your side.

Date: November 20, 2018

RE: Master Plan Amendment – File No. TSM-18-154

Carson City Planning Commission:
This letter is to officially log Taiyo America, Inc.'s opposition to the residential portion of this planned development in the vicinity of Drako Way and Morgan Mill.

Please reference our letter dated February 23, 2018. We are still opposed to this development.

Taiyo America, Inc. operates a chemical mixing factory, similar to a paint factory. Occasionally, one of the byproducts of our manufacturing process is a strong, but harmless odor. Average prevailing winds blow from the Southwest toward the Northeast and will carry this odor from our facility directly to the planned residential area to Northeast.

If this development goes forward, we would urge the Carson City Planning Commission and Board of Supervisors to require the Developer to implement additional measures to mitigate the potential conflicts between future residents/property owners/patrons and Taiyo America, Inc. due to the odors blowing into the parcels closest to our property. Possible mitigation measures could be one or more of the following: leaving the immediate adjacent parcel undeveloped, designating the parcel as open space, decreasing housing density or planting trees along the property line. We understand there will be a notification document required in sales agreements/contracts which identifies the land area to the west as being a "heavy industrial zone". We agree with the Planning Commission that such disclosure be required for all real estate transactions related to this future development.

Best Regards,

Phillip Harrison
Facility/EH&S Manager
Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701
775-885-9959 X122

CC: T. Hanada, B. White, R. Carlson

Zoning Letter Gen Indust 112018

From: Ken Dorr <ken.dorr@gmail.com>
Sent: Monday, November 26, 2018 1:56 PM
To: Heather Ferris; Stephen Pottey
Cc: Dan Stucky; Darren Schulz; Steven Ryckebosch; Ken Dorr; Mark Rotter; Elaine Barkdull-Spencer (vandtrailway@gmail.com)
Subject: Plateau Tentative Subdivision Map: Comments Regarding Proposed Utility Facilities
Attachments: Sewer Exhibit Figure ES-3 -East Highway 50 Sewer and Water Feasibility Study August 2006 BHC.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Heather and Steve,

After Reviewing the utility concept for the proposed Plateau Tentative Map in North East Carson City, in conjunction with the "East Highway 50 Sewer and Water Preliminary Feasibility Study" prepared by BHC Consultants for Carson City in 2006 (Study), I would like to take this opportunity to provide some comments for consideration during your review of the project.

As indicated on Figure ES-3 from the referenced Study, several Sanitary Sewer Routing Alternatives were considered to provide service for properties located within the the "Northeast Service Area" as identified in that Study. Please also note that in addition to the private parcels located in that "North East Service Area," the proposed VTRW Eastgate Station Expansion is also located within this area. All of these properties will ultimately require Sanitary Sewer and Water service to accommodate future development.

In order to maximize the flexibility of providing Sanitary Sewer service to the "Northeast Service Area," I would like to present the following for your consideration in reviewing the Plateau Tentative Map Application:

1. Consider requiring that a sanitary sewer "stub out" to the Plateau Property Line be provided across Common Area Parcel "C" from Court "B" located in the North East corner of the Plateau Project. This stub out would be located roughly in the same corridor as the offsite Water Line and Storm Sewer line which are planned for this project. Since this option may require multiple Sanitary Sewer "drop-manholes," the City, may want to initially limit the requirement to simply requiring an easement across this Common Area from a Sanitary Sewer Line stubbed out behind the proposed cul-de-sac pavement.
2. Consider requiring that the proposed Sanitary Sewer Line located within Drako Way be extended to the Northerly Property Line of the Plateau Project at Astro Way. The City may also want to consider requiring extension of the the Water Main proposed for Drako Way to the project boundary.
3. Review the capacity of the Sanitary Sewer Lines being installed within the Plateau Project to ensure that potential flows generated by future development from the "Northeast Service Area" properties included in the Study can be accommodated through the Plateau project.

In closing, I do not believe that these requests are unreasonable considering the Carson City normally requires main extensions along the full frontage of properties being developed when

Carson City Utilities are required.

Thanks you for your time and consideration in this matter.
--
Kenneth L. Dorr, P.E.
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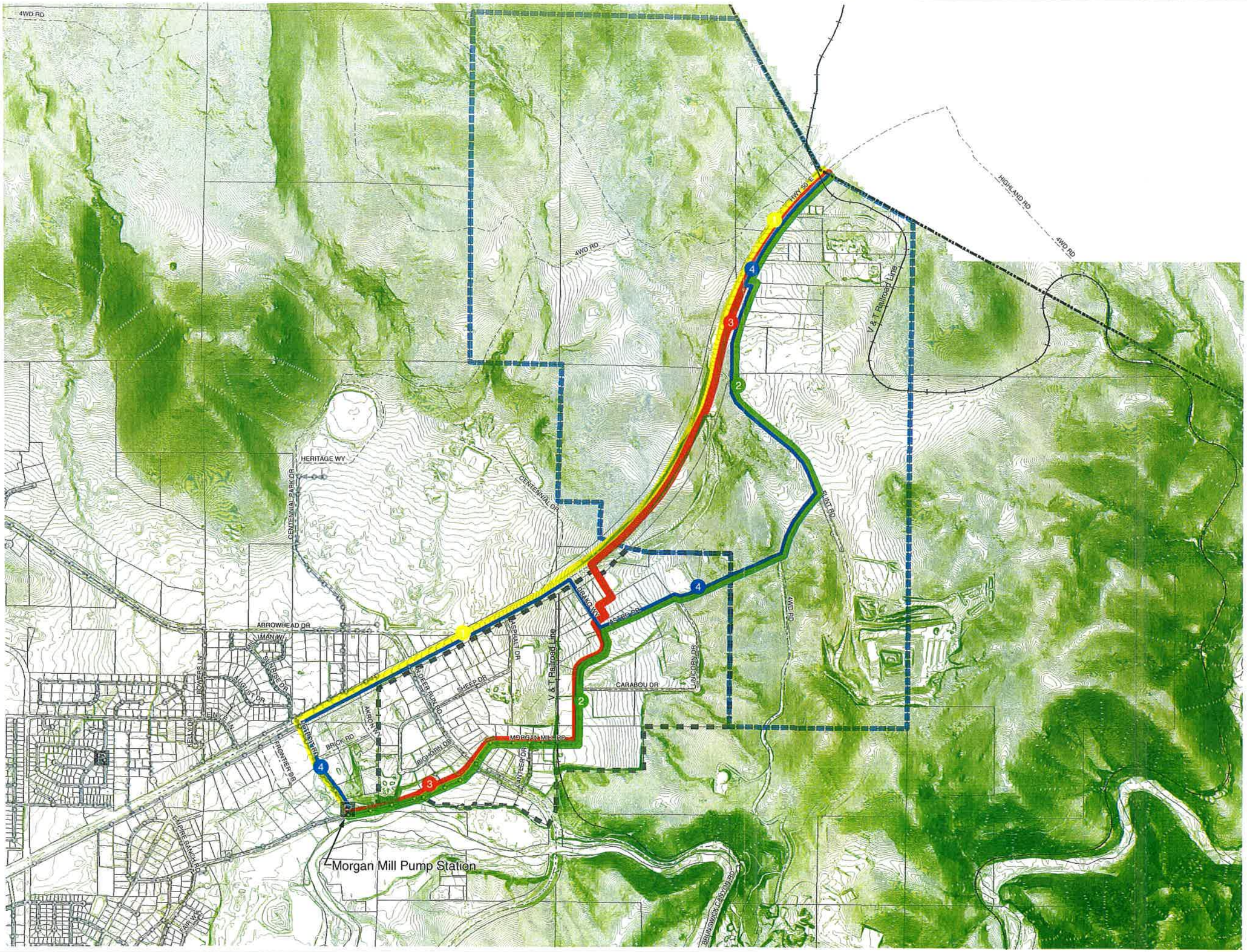
P.O. Box 20112
Carson City, Nevada 89721
775-721-2020
ken.dorr@gmail.com



CARSON CITY

NEVADA

East HWY 50 Sewer & Water Systems

Existing Sewer System

- Manholes
- Pump Station
- Gravity Main
- Force Main

Alternate Sewer Routes

- Route 1
- Route 2
- Route 3
- Route 4

Base Layers

- Eastern Portal Study Basin
- Hwy 50 East Study Basin
- Carson City Limits
- Parcels
- Proposed V & T Railroad Line
- Street Centerlines
- Contours 2ft

N

0 500 1,000 2,000 Feet

Existing Sewer System: Carson City - January 2006

All other data layers obtained from Carson City 2005. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

MAP DATE: AUGUST 2006

BHC Consultants, LLC

720 Third Avenue, Suite 1200
Seattle, WA 98104-1820

P 206.505.3400
F 206.505.3406

Preliminary Feasibility Study

ALTERNATIVE SEWER ALIGNMENTS

Fig ES-3

P:\Mapping\Maps_Generated\Carson City\projects\16028.07.003_16028.08.003\maps\August2006\ES-3 Alternative Sewer Alignments.mxd

Heather Ferris

From: Chris Pattison <pattisonchris@ymail.com>
Sent: Wednesday, November 28, 2018 8:17 AM
To: Heather Ferris
Subject: RE: Proposed developments near deer run rd

Thank you,

I wasn't aware of that portion of the law. Please know that nearly the entire population of carson is against this development.

Sent from Yahoo Mail on Android

On Wed, Nov 28, 2018 at 8:06 AM, Heather Ferris <HFerris@carson.org> wrote:

Mr. Pattison-

I would point you to Carson City Municipal Code Section 8.12.010.3. This section provides and exception from the 5,000 foot distance for lawfully authorized and licensed rifle ranges, gun clubs, etc. Below is the link to the full code section. I hope this helps to answer your question.

https://library.municode.com/nv/carson_city/codes/code_of_ordinances?nodeId=TIT8PUPESAMO_CH8.12FI_8.12.010DIFIUN

Heather Ferris

Associate Planner

Carson City, NV 89701

775-283-7080

From: Chris Pattison [mailto:pattisonchris@ymail.com]
Sent: Tuesday, November 27, 2018 11:06 PM