Washoe County Development Application

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

Project Information	**Staff Assigned Case No.:** _____
Project Name: Pleasant Valley Estates	
Project Description: Residential Common Open Space Subdivision per Article 408. 58 single-Family Residences on 42.40 acres.	
Project Address: 16100 Rocky Vista Rd, 15995 Rocky Vista Rd, & 1221 Chance Lane	
Project Area (acres or square feet): 42.40	
Project Location (with point of reference to major cross streets **AND** area locator): Eastern end of Chance Ln; approx 950 ft east of Rhodes Rd. S Valleys Area Plan	

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
017-410-39	19.67	017-200-30	2
017-410-38	19.67		

Indicate any previous Washoe County approvals associated with this application:
Case No.(s). WTM16-001

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: Pleasant Valley Estates, LLC		Name: TEC Civil Engineering Consultants	
Address: 701 Flint St		Address: 9437 Double Diamond Pkwy	
Reno, NV	Zip: 89501	Ste 17. Reno, NV	Zip: 89521
Phone: 775-846-9200	Fax:	Phone: 775-352-7800	Fax:
Email: hcf2008@live.com		Email: jgilles@tecreno.com	
Cell:	Other:	Cell:	Other:
Contact Person: Harry Fry		Contact Person: Jason Gilles	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name: Same as Owner		Name: Rubicon Design Group	
Address:		Address: 1610 Montclair Ave, Suite B	
	Zip:	Reno, NV	Zip: 89509
Phone:	Fax:	Phone: 775-425-4800	Fax:
Email:		Email: swright@rubicondesigngroup.com	
Cell:	Other:	Cell: N/A	Other:
Contact Person:		Contact Person: Scott Wright	

For Office Use Only

Date Received:	Initial:	Planning Area:
County Commission District:		Master Plan Designation(s):
CAB(s):		Regulatory Zoning(s):

Tentative Subdivision Map Application
Supplemental Information

(All required information may be separately attached)

1. What is the location (address or distance and direction from nearest intersection)?

Approximately 1000ft east of the Chance Lane and Rhodes Road intersection

2. What is the subdivision name (proposed name must not duplicate the name of any existing subdivision)?

Pleasant Valley Estates

3. Density and lot design:

a. Acreage of project site	42.40 ac
b. Total number of lots	58
c. Dwelling units per acre	1.40 du/ac
d. Minimum and maximum area of proposed lots	12,020 sf & 74,591 sf
e. Minimum width of proposed lots	120ft
f. Average lot size	26, 496

4. What utility company or organization will provide services to the development:

a. Sewer Service	Reno Sparks Joint Wastewater Plant
b. Electrical Service	NV Energy
c. Telephone Service	AT&T
d. LPG or Natural Gas Service	NV Energy
e. Solid Waste Disposal Service	Waste Management
f. Cable Television Service	Charter Communications
g. Water Service	Truckee Meadows Water Authority

5. For common open space subdivisions (Article 408), please answer the following:

   a. Acreage of common open space:

   4.69

   b. What development constraints are within the development and how many acres are designated slope, wetlands, faults, springs, and/or ridgelines:

   Steep slopes are main purpose for Open Space, as well as Drainage.

   c. Range of lot sizes (include minimum and maximum lot size):

   12,020 sf & 74,591 sf

d. Proposed yard setbacks if different from standard:

N/A

e. Justification for setback reduction or increase, if requested:

N/A

f. Identify all proposed non-residential uses:

Detention Basin and Pump Station

g. Improvements proposed for the common open space:

Open Trail Access on the Northern and Eastern sides of the subdivision

h. Describe or show on the tentative map any public or private trail systems within common open space of the development:

Southern,Eastern and Northern Property lines are common area for connectivity

i. Describe the connectivity of the proposed trail system with existing trails or open space adjacent to or near the property:

Southern, Eastern and Northern Property lines are open to connect to BLM land

j. If there are ridgelines on the property, how are they protected from development?

All steep slopes are within the common area designation

k. Will fencing be allowed on lot lines or restricted? If so, how?

Yes, no lots block access to Open Space, thus fencing will not block OS access

l. Identify the party responsible for maintenance of the common open space:

The Landscape Maintenance Association of the Subdivision will be responsible.

6. Is the project adjacent to public lands or impacted by "Presumed Public Roads" as shown on the adopted April 27, 1999 Presumed Public Roads (see Washoe County Engineering website at http://www.washoecounty.us/pubworks/engineering.htm). If so, how is access to those features provided?

N/A

7. Is the parcel within the Truckee Meadows Service Area?

■ Yes	☐ No

8. Is the parcel within the Cooperative Planning Area as defined by the Regional Plan?

☐ Yes	■ No	If yes, within what city?

9. Has an archeological survey been reviewed and approved by SHPO on the property? If yes, what were the findings?

No

10. Indicate the type and quantity of water rights the application has or proposes to have available:

a. Permit #	TBD	acre-feet per year	TBD
b. Certificate #	TBD	acre-feet per year	TBD
c. Surface Claim #	TBD	acre-feet per year	TBD
d. Other #	TBD	acre-feet per year	TBD

a. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

TBD

11. Describe the aspects of the tentative subdivision that contribute to energy conservation:

Majority of houses will have east/west driveways and south facing houses

12. Is the subject property in an area identified by Planning and Building as potentially containing rare or endangered plants and/or animals, critical breeding habitat, migration routes or winter range? If so, please list the species and describe what mitigation measures will be taken to prevent adverse impacts to the species:

No

13. If private roads are proposed, will the community be gated? If so, is a public trail system easement provided through the subdivision?

All roads will be public, however there is a shared private driveway access

14. Are there any applicable policies of the adopted area plan in which the project is located that require compliance? If so, which policies and how does the project comply?

Complies with area plan policies, specifically SV.1.2, SV.1.4, see report for more

15. Are there any applicable area plan modifiers in the Development Code in which the project is located that require compliance? If so, which modifiers and how does the project comply?

Project is within the Steamboat Valley Rural Transitiona CMA, see attached report

16. Will the project be completed in one phase or is phasing planned? If so, please provide that phasing plan:

One Phase

17. Is the project subject to Article 424, Hillside Development? If yes, please address all requirements of the Hillside Ordinance in a separate set of attachments and maps.

■ Yes	☐ No	If yes, include a separate set of attachments and maps.

18. Is the project subject to Article 418, Significant Hydrologic Resources? If yes, please address Special Review Considerations within Section 110.418.30 in a separate attachment.

☐ Yes	■ No	If yes, include separate attachments.

Grading

Please complete the following additional questions if the project anticipates grading that involves: (1) Disturbed area exceeding twenty-five thousand (25,000) square feet not covered by streets, buildings and landscaping; (2) More than one thousand (1,000) cubic yards of earth to be imported and placed as fill in a special flood hazard area; (3) More than five thousand (5,000) cubic yards of earth to be imported and placed as fill; (4) More than one thousand (1,000) cubic yards to be excavated, whether or not the earth will be exported from the property; or (5) If a permanent earthen structure will be established over four and one-half (4.5) feet high:

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

230,922 CUYDS of Earthwork Quantities

20. How many cubic yards of material are you exporting or importing? If exporting of material is anticipated, where will the material be sent? If the disposal site is within unincorporated Washoe County, what measures will be taken for erosion control and revegetation at the site? If none, how are you balancing the work on-site?

All material will be transfered within the project boundary

21. Can the disturbed area be seen from off-site? If yes, from which directions, and which properties or roadways? What measures will be taken to mitigate their impacts?

Majority of the work will be screened by the hill on the northeast section of the site

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

Cut and fill slopes will be 3:1. Temporary irrigation will be provided until revegetation

23. Are you planning any berms and, if so, how tall is the berm at its highest? How will it be stabilized and/or revegetated?

N/A

24. Are retaining walls going to be required? If so, how high will the walls be, will there be multiple walls with intervening terracing, and what is the wall construction (i.e. rockery, concrete, timber, manufactured block)? How will the visual impacts be mitigated?

Yes, See Site and Grading Plans in relation to Chance Lane

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

No removal of trees are being proposed

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

A native seed mix will be broadcast at a rate of 32lbs/ac

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

Temporary irrigation will be provided for slopes

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

n/a

Request to Reserve New Street Name(s)

The Applicant is responsible for all sign costs.

Applicant Information

Name: Pleasant Valley Estates, LLC

Address: 701 Flint St

Approximately 1000ft east of the Chance Lane and Rhodes Road interse

Phone : 775-846-9200 Fax: _____

x Private Citizen ‰ Agency/Organization

Street Name Requests

(No more than 14 letters or 15 if there is an "i" in the name. Attach extra sheet if necessary.)

Vista Sierra	Bunkhouse
Big View	Horseback
Westward View	Horse Corral

If final recordation has not occurred within one (1) year, it is necessary to submit a written request for extension to the coordinator prior to the expiration date of the original

Location

Project Name: Pleasant Valley Estates

‰ Reno ‰ Sparks x Washoe County

Parcel Numbers: 041-410-38 , 041-410-39, 017-200-30

x Subdivision ‰ Parcelization ‰ Private Street

Please attach maps, petitions and supplementary information.

Approved: _____ Date: _____

Regional Street Naming Coordinator

‰ Except where noted

Denied: _____ Date: _____

Regional Street Naming Coordinator

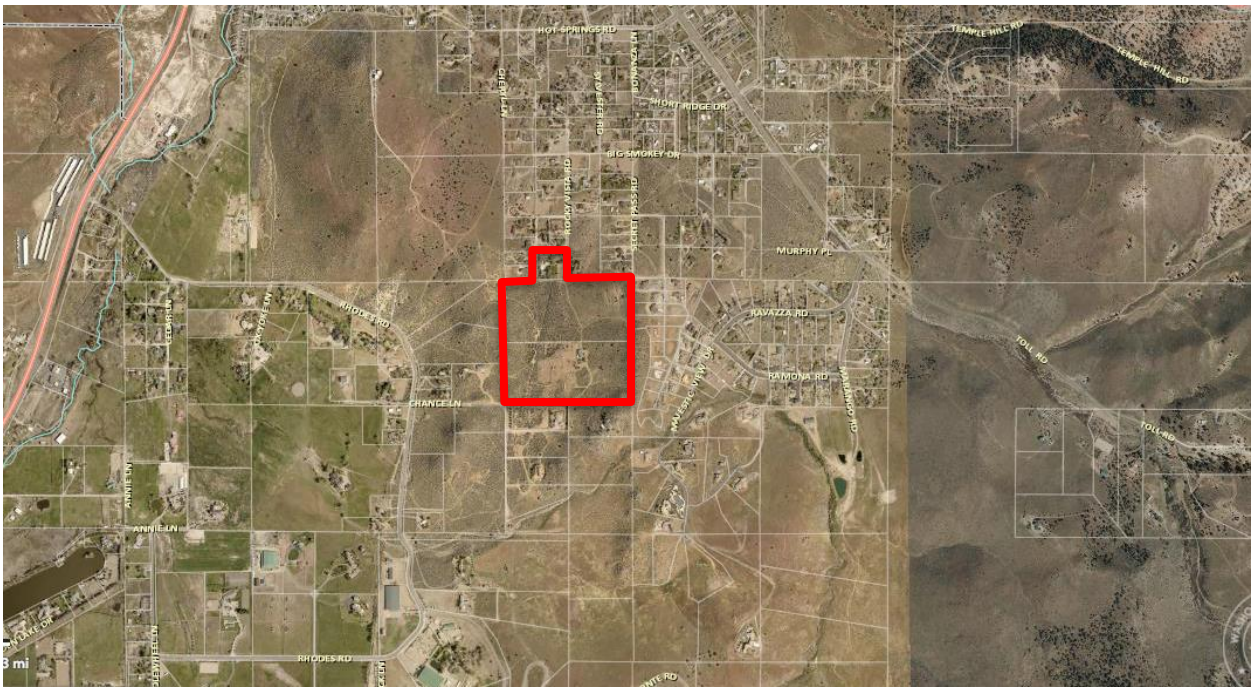
Washoe County Geographic Information Services

1001 E. Ninth Street

Reno, NV 89512-2845

Phone: (775) 328-2325 - Fax: (775) 328-6133

PLEASANT VALLEY ESTATES TENTATIVE SUBDIVISION MAP APPLICATION



Prepared by:

RUBICON Design Group

July 15, 2019

PLEASANT VALLEY ESTATES TENTATIVE SUBDIVISION MAP

Prepared for:

Harry Fry
Manager
Pleasant Valley Estates, LLC
761 Greenbrae Drive
Sparks, NV 89431

Prepared by:

Rubicon Design Group, LLC
1610 Montclair Ave, Suite B
Reno, NV 89509
(775) 425-4800

July 15, 2019

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Introduction

This application includes the following request:

- A **Tentative Subdivision Map with Common Open Space** to create 58 single-family lots on approximately 42.40 acres within the South Valleys Area Plan.

Project Location

The Pleasant Valley Estates site (APNs 017-410-38, 017-410-39, and 017-200-30) consists of approximately 42.40 acres and is located north of Chance Lane, east of Rhodes Road, south of Big Smokey Drive, and west of Toll Road.

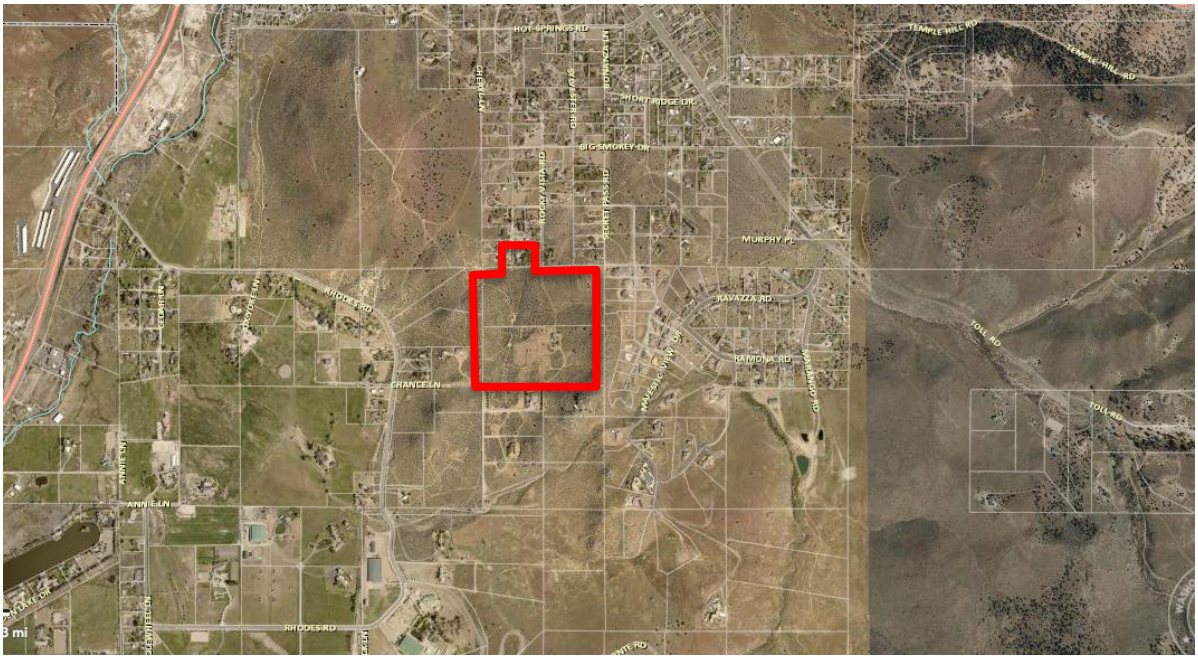

Figure 1 – Vicinity Map

The proposed property consists of several different zoning designations, including MDS (Medium Density Suburban), LDS (Low Density Suburban, MDR (Medium Density Rural), and GR (General Rural). The property is currently vacant except for two single-family residential units, one in the center of the site, and one in the northern most part of the parcels. Adjacent zoning designations consist of MDS to the north, a combination of MDS and LDS to the west, a combination of MDR and HDR (High Density Residential) to the south, and LDS to the east.

Figure 2 (below) depicts the existing site conditions.

Looking North Across Site

Looking East Across Site

Looking South Across Site

Looking West Across Site

Figure 2 – Existing Conditions

Project Summary

As noted previously, this application includes a tentative Subdivision Map request to create 58 single-family lots at the project site. It is planned to develop Pleasant Valley Estates utilizing a Common Open Space Development approach, per the standards contained in Article 408 of the Washoe County Development Code.

The plan developed for Pleasant Valley Estates includes 58 lots for an overall density of 1.40 units per acre. Included within the project are 4.69 acres of open space. As seen on the site plan, Common Area A will serve as a Detention Pond, whereas Common Area B within it will be the lift station. This also includes a common area (Common Area C) on the east side that will protect steep terrain while providing a buffer to the south-eastern corner. This area will also connect closely with Common Areas D and E to provide property edge buffers to connect walking paths to public land. It is also noteworthy that no motorized vehicles will be allowed in this area. In addition, a .21-acre common area lot (Common Area F) has been provided near the western property line to protect a large boulder with historical markings on it, shown in Figure 3 (below).

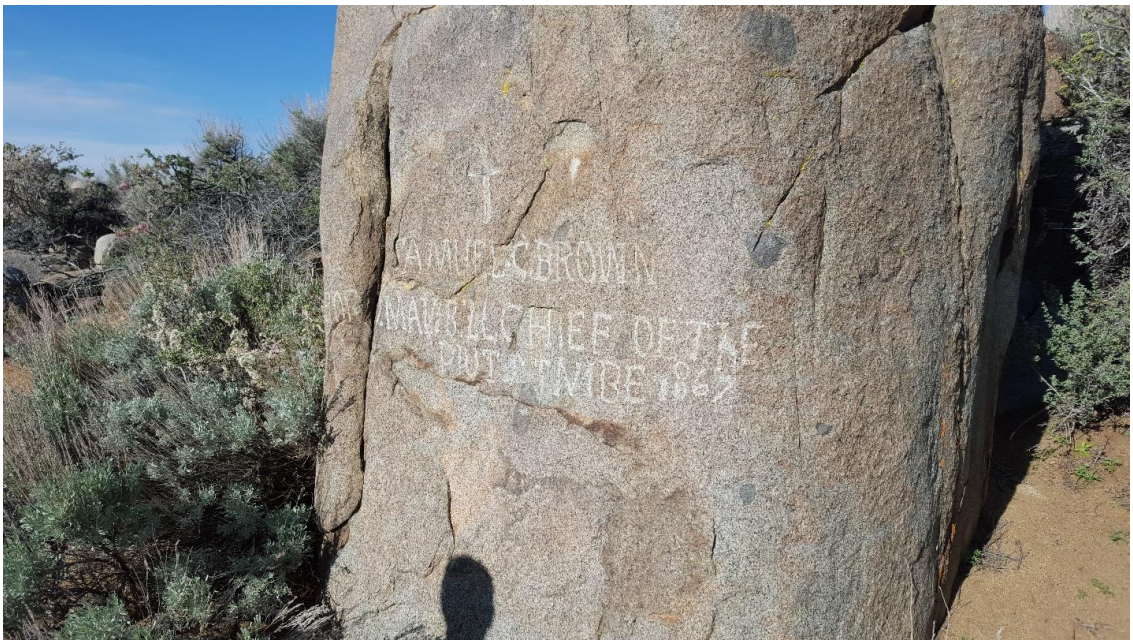

Figure 3 – Existing Historical/Cultural Resource

Although the open space areas within Pleasant Valley Estates will be private and maintained by a planned LMA (Landscape Maintenance Association), a public use easement will be dedicated to allow all residents access.

Lot sizes within Pleasant Valley Estates are consistent with the MDS zoning and are complementary to the existing subdivision to the north. Lots within Pleasant Valley Estates range in size from 12,020 square feet (0.28 acres) to 74,591 square feet (1.71 acres) with an overall average lot size of 26,496± square feet (0.61 acres).

The project also advances Goal Six of the Toll Road Character Management area by helping to establish a connection between Rhodes Road and Toll Road.

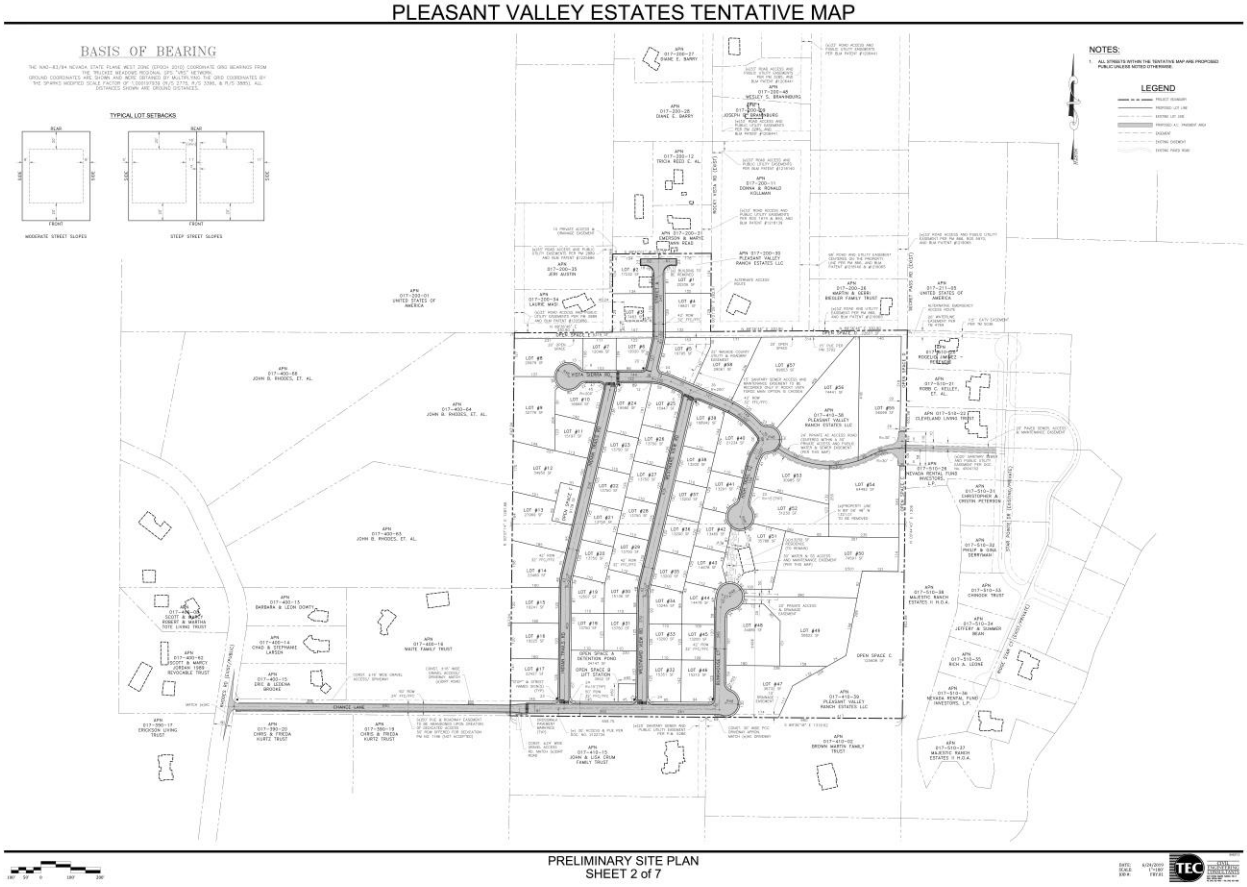

Figure 4 – Proposed Subdivision Map

Primary access will be provided from Chance Lane with secondary access connecting through to Star Pointe Dr to the east through a newly acquired easement, as well as future easement access to Rocky Vista Road to the north. This will ensure multiple connections to the property as well as proper emergency access and meets all applicable Washoe County requirements. As a relatively small single-family development, the AM and PM peak trips are below the threshold of 80 peak hour trips for requiring a traffic study. To accommodate the small amount of increased traffic, existing roads around the site will

be improved to Washoe County standards. Roadways within Pleasant Valley Estates will also be constructed to Washoe County standards and will be dedicated as public rights-of-way. Roads will include 42-foot right of way with curb, gutter, and sidewalk.

Home plans for Pleasant Valley Estates are still being developed and are envisioned to complement surrounding development. Larger lots included within Pleasant Valley Estates are conducive to larger single-story floor plans although two-story homes are allowed. Consistent with Washoe County policy, final home plans and elevations will be subject to the review and approval of the Washoe County Design Review Committee for compliance with development code and Area Plan standards.

Site Analysis

Common Open Space:

Article 408 of the Washoe County Development Code establishes regulations related to Common Open Space Developments (COSD). Specifically, Section 110.408.30 requires a site analysis be conducted. This site analysis criteria is listed below and addressed in **bold face** type.

Section 110.408.30 Site Analysis to Determine Common Open Space and Lot Size Variations. A site analysis showing development opportunities and constraints shall be prepared as a key consideration, along with the project design objectives, to determine the total area covered by lots and roads, lot areas, and the total area to be designated as common open space. The site analysis shall include information and maps, including a site opportunities and constraints map, describing all significant physical and contextual features or factors which may affect the development of the property. The elements of the site analysis shall include, as a minimum, the following information:

(a) Location Map. A general location map providing the context of location and vicinity of the site.

Figure 1 included in this report provides an overall location/vicinity map for Pleasant Valley Estates. Additionally, a vicinity map is also included on the Tentative Map Title Sheet in the attached map pocket.

(b) Land Use. Current and planned land use on the site and adjacent current, planned and approved, but unbuilt land uses.

As depicted in Figures 1 and 2 of this report, the project site is currently vacant except for one single-family residence. Surrounding parcels consist of scattered single-family residences or vacant lots as shown in Figure 1. The surrounding lots are complementary to the proposed lot sizes within Pleasant Valley Estates.

(c) Existing Structures. A description of the location, physical characteristics, condition and proposed use of any existing structures.

The existing single-family residence is located near the center of the two properties included in this proposal. The residence is in fairly good condition and will continue to function as a single-family residence. The proposed tentative map has created a separate lot for this residence.

(d) Existing Vegetation. A description of existing vegetation, including limits of coverage, and major tree sizes and types. In the instance of heavily wooded sites, typical tree sizes, types and limits of tree coverage may be substituted.

The Pleasant Valley Estates site is characterized by natural vegetation consisting mostly of sagebrush, rabbit brush, and patches of cheat grass. There are no existing trees on the property, except for a couple of small evergreens on the northern parcel located on Rocky Vista which will stay intact. There are also no known foreign species, etc.

(e) Prevailing Winds. An analysis of prevailing winds.

Prevailing winds in the area are from west to east with occasional northerly winds during storm events. The proposed project layout should not be negatively impacted by the prevailing winds in the area.

(f) Topography. An analysis of slopes on the site using contour interval of five (5) feet, or at a contour interval appropriate for the site and agreed to by the Director of Community Development.

The project site qualifies as a hillside development and contains slopes greater than 30 percent on approximately 4.5 percent of the site. A slope analysis has been performed by the project engineer (see Figure 5 below) showing the amount of the subject parcels that contain slopes. The engineering plans included with this application provide for grading and drainage plans that clearly depict the site topography. The portion of hillside area that cannot reasonably be graded will be included in the common open space area.

(a) Soil. An analysis of the soil characteristics of the site using Soil Conservation Service (SCS) information.

The site characteristics are comparable to surrounding developed areas, which have shown no soil or geologic conditions that would preclude residential development at the densities proposed.

(b) Natural Drainageways. Identification of natural drainageways on and adjacent to the site.

Natural drainage that occurs within the site will be retained and is incorporated into the provided open space. A detailed hydrology study is also included as an appendix to this report.

(c) Wetlands and Water Bodies. Identification of existing or potential wetlands and water bodies on the site.

Not applicable. No wetlands or water bodies exist onsite.

(d) Flood Hazards. Identification of existing and potential flood hazards using Federal Emergency Management Agency (FEMA) information.

There are no flood hazard areas within the Pleasant Valley Estates site.

(e) Seismic Hazards. Identification of seismic hazards on or near the site, including location of Halocene faults.

The site characteristics are comparable to surrounding developed areas, which have shown no geologic conditions that would preclude residential development at the densities proposed.

(f) Avalanche Hazards. An analysis of avalanche and other landslide hazards.

The site characteristics are comparable to surrounding developed areas, which have shown no avalanche hazards that would preclude residential development at the densities proposed.

(g) Sensitive Habitat and Migration Routes. An analysis of sensitive habitat areas and migration routes.

Not applicable. There are no known or identified sensitive habitats or migration routes onsite.

(h) Significant Views. A description and analysis of all on and off site significant views.

Views across the property are previously depicted in Figure 2. In general, houses in the area enjoy views of surrounding mountains, including Slide Mountain and Mt. Rose to the west. Housing lots in this tentative map will be able to take advantage of these views without impacting the views from existing houses. This is due to the continuously variable terrain of the area and substantial southern and southwestern exposure of the area.

(i) Easements. A description of the type and location of any easements on the site.

All existing and proposed easements are clearly depicted on the engineering plans included with this report. Additionally, a preliminary title report is being submitted with the original report that identifies and describes all existing easements.

(j) Utilities. A description of existing or available utilities, and an analysis of appropriate locations for water, power, sanitary sewer and storm water sewer services.

The attached engineering plans and drawings depict all existing utilities/infrastructure and proposed extensions, etc. The project will connect to all municipal services including sewer, water, natural gas,

cable television, etc.

(k) Appropriate Access Points. An analysis of appropriate access points based upon existing and proposed streets and highways and site opportunities and constraints.

Primary access will be provided from Chance Lane with secondary access connecting through to Star Pointe Dr to the east through a newly acquired easement, as well as future easement access to Rocky Vista Road to the north. This will ensure multiple connections to the property as well as proper emergency access and meets all applicable Washoe County requirements.

(l) Other Information. All other information deemed appropriate and necessary by the Director of Community Development.

This report provides for all pertinent and required details. Additional information and analysis can be provided on an as-needed basis as it may arise during the public review process.

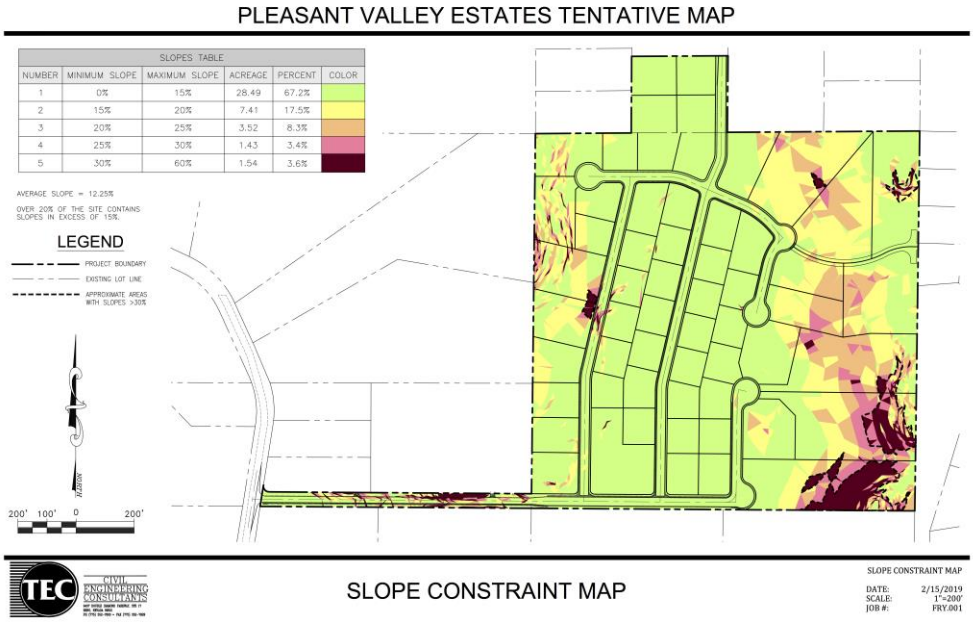

Figure 5 – Slope Constraint Map

Hillside Ordinance:

Article 424 of the Washoe County Development Code establishes regulations related to Hillside Development. Specifically, Section 110.424.15(a) requires a site analysis be conducted. This site analysis criteria is listed below and addressed in **bold face** type.

Section 110.424.15(a) Site Analysis. A site analysis, prepared by a qualified engineer, planner, landscape

architect, or architect shall be submitted. This analysis shall provide the basis for assessing the opportunities and constraints of the site for development and shall be in the form of a design standards handbook incorporating both textual and graphical representations of the requested action. At a minimum, a site analysis shall include:

(1) Major topographic conditions including ridgelines, ravines, canyons, and knolls.

The site does contain significant topographic features with part of it being considered a hillside. The engineering plans included with this application provide for grading and drainage plans that clearly depict the site topography.

(2) Preliminary geological conditions including major rock outcroppings, slide areas, and areas underlain with faults that have been active during the Halocene epoch of geological time.

The site characteristics are comparable to surrounding developed areas, which have shown no geologic conditions that would preclude residential development at the densities proposed. A large boulder is located near the western edge of the site, which is being left in place due to some culturally significant markings. All significant rock outcroppings are being put into the Common Area.

(3) Preliminary soil conditions including soil type, expansiveness, slumping, erodibility, and permeability.

The site characteristics are comparable to surrounding developed areas, which have shown no soil or geologic conditions that would preclude residential development at the densities proposed. Foundation requirements for each individual unit will be determined as part of the Final Map.

(4) Significant surface hydrological conditions including natural drainage courses, perennial streams, floodplains, wetlands, and ponding areas.

Natural drainage that occurs within the site will be retained and is incorporated into the Stormwater Detention Pond located in Common Area A. Hydrology information is shown on the grading/drainage plan.

(5) The location and types of significant vegetation including known rare and endangered plant species and general plant communities.

Initial examination indicates that the site vegetation is typical brush-type plants found throughout the area. No known rare and/or endangered plant species are found onsite.

(6) Habitat areas for rare or endangered animal species.

Initial examination indicates that there are no known rare or endangered animal species on the site.

Typical animals such as rabbits, mice, and coyotes are the only known fauna in the immediate vicinity.

(7) Preliminary viewshed analysis including cross sections of views to and from the development site from all major roadways within one (1) mile of the project site, and from major focal points on the project site.

Views across the property are previously depicted in Figure 2. In general, houses in the area enjoy views of surrounding mountains, including Slide Mountain and Mt. Rose to the west. Housing lots in this tentative map will be able to take advantage of these views without impacting the views from existing houses. This is due to the continuously variable terrain of the area and substantial southern and southwestern exposure of the area.

(8) How the development responds to the unique conditions of the hillside.

The tentative subdivision map responds to the unique conditions of the hillside by keeping the largest lots along the eastern end of the property where the hillside is located. The open space designated areas also make sure that all lots are out of the steepest areas.

(9) A slope analysis, submitted on a topographic map with contour intervals of a least five (5) feet for planning purposes. This analysis shall indicate the location and amount of land included with the following slope categories, tabulated in acres: 0-15 percent, 15-20 percent, 20-25 percent, 25-30 percent, greater than 30 percent.

A slope analysis (see Figure 5 above) has been prepared by the project engineer showing the amount of land following the indicated slope categories.

Potential Impacts

This section aims to provide a cursory impact analysis based on the conceptual plan developed for the project, as presented in Figure 3.

- **Schools**

As part of this Tentative Map process, the Washoe County School District was consulted as to the capacities of schools that serve the project area. It was determined that the project site is zoned for the following schools:

- Pleasant Valley Elementary School
- Depoali Middle School
- Damonte Ranch High School

Washoe County School District provided the School District's accepted student generation formulas.

Assuming a total of 58 lots, the table on the following page summarizes potential school impacts..

It is important to note that this analysis does not consider the potential for children to attend charter schools, private institutions, or home schooling and is therefore a worst-case scenario in terms of student generation projections. In addition, school impacts will now be addressed regionally with the recent passing of WC-1, which is intended to provide funding for new schools throughout Washoe County.

School	Generation Rate[1]	Number of New Students
Pleasant Valley Elem. School	**0.277/unit**	**16 students**
Depoali Middle School	**0.064/unit**	**4 students**
Damonte Ranch High School	**0.136/unit**	**8 students**

1 – provided by the Washoe County School District.

- **Public Facilities/Infrastructure**

The project site is located in an area of existing infrastructure. All municipal services (i.e. water, sewer, storm drain, etc.) are either in place or can easily be extended (at the developer's expense) to serve Pleasant Valley Estates. All new lots within Pleasant Valley Estates will be served by municipal water and sewer. Power, natural gas, cable television, and high speed internet service all exist at or adjacent to the project site.

Preliminary utility plans are included with the engineering plans located in the map pocket of this report.

- **Public Services**

The project has been reviewed by/commented on by the Truckee Meadows Fire Protection District, which has indicated that the property is within an acceptable response time of the Truckee Meadows Fire Protection District station number 237 located on 395-A at Pagni Lane. Also, the Washoe County Sherriff's Office has existing patrols within the project area.

Planning Policy Analysis

The proposed request must be reviewed for consistency with the goals and policies of the Washoe County Master Plan and South Valleys Area Plan. Each of these planning documents is addressed below:

- **Washoe County Master Plan/South Valleys Area Plan**

The South Valleys Area Plan is an element of the Washoe County Master Plan that establishes the overall theme and vision that the community has in terms of how they wish to see the area develop over the next 20 years. Last updated in 2010, there has been little change within the plan area in the last decade. However, as the region's economy continues to grow, there is now opportunity to implement change within the plan area, consistent with the goals and policies of the Area Plan.

The Introduction section of the Area Plan states that the "*South Valleys community will maintain and apply objective standards and criteria that serve to manage growth and development in South Valleys in a manner that:*

- *Respects the scenic and rural heritage of the area by encouraging architectural and site design standards that are responsive to this heritage;*
- *Maintains a rural agricultural character in the landscape between the urban areas of Reno and Carson City;*
- *Respects private property rights;*
- *Provides a limited range of housing opportunities complementary to the area's rural and historic character;*
- *Encourages the development of commercial opportunities in a manner that helps define the community, provide needed services, and otherwise highlight the character of the community as defined by the Lane Use Table in Appendix A:*
- *Provides ample open space and recreational opportunities;*
- *Promotes the educational and scientific opportunities inherent in the area's natural history and rural character;*
- *Addresses the conservation of natural, scenic, and cultural resources;*
- *Ensures that infrastructure in coincident with development and appropriate in scale and character to the community character articulated below; and*
- *Coordinates resource availability with the construction of infrastructure through the implementation of facilities and resources plans.*

This Tentative Map request is entirely consistent with this intent of the Area Plan. Pleasant Valley Estates will provide residential uses that will complement existing development patterns in the area as well as provide a desired connection between Rhodes Road and Toll Road. The existing cultural resources and rock formations on the site will be protected through deed restrictions. Infrastructure including streets and utilities will be improved and/or provided in the appropriate scale for the development, while complying with Washoe County standards.

The project site is located within the Steamboat Valley Rural Transition Character Management Area defined in the Area Plan. This "transition zone" as discussed in the area plan specifies that in the areas

"{t}o the north and east of Rhodes Road, the densities and land use patterns should provide a transition to the urban land use patterns likely to be implemented in the incorporated areas north of Rhodes Road." The density proposed with Pleasant Valley Estates is consistent with the MDS zoning maximum of 3 du/ac (1.38 du/ac proposed) identified in the plan and provides for an appropriate transition to adjoining properties and City of Reno development to the north.

The Area Plan also contains goals and policies which are applicable to this proposed tentative map. These policies are listed below and are addressed in **bold face** type.

Goal One: The pattern of land use designations in the South Valleys Area Plan will implement and preserve the community character described in the Character Statement.

As described in the previous section, Pleasant Valley Estates conforms to the Character Statement in terms of location within the Steamboat Valley Rural Transition Character Management Area, allowable suburban densities, preservation of natural resources, and informal trail connections.

Goal Two: Common Development Standards in the South Valleys planning area. Establish development guidelines that will implement and preserve the community character commonly found within the South Valleys planning area.

As described earlier, Pleasant Valley Estates has been designed to be complementary to surrounding uses and properties, keeping the community character intact.

SV.2.2: Whenever possible, grading for residential purposes after the date of final adoption of this plan will: a) minimize disruption to natural topography; b) utilize natural contours and slopes; c) complement the natural characteristics of the landscape; d) preserve existing vegetation and ground coverage to minimize erosion; and e) minimize cuts and fills.

Pleasant Valley Estates has been designed to minimize disruption to the natural topography, utilize natural contours, and minimize cuts and fills by deed restricting development on the portion of the site with the steepest slopes. This area will also serve to preserve natural characteristics and existing vegetation.

SV.2.14: Development activities should be designed to support the efficient use of infrastructure and the conservation of recharge areas, habitat, and open vistas.

Access to the site from both Chance Lane and Star Pointe are located along existing roadways within the area, making an efficient use of existing infrastructure. Future utility infrastructure will tie into existing lines already in place in the surrounding area. No recharge areas or significant habitat are located on the site.

SV.3.5: Potential historic and cultural resources exist throughout the Steamboat Valley Community.

Development should be preceded by efforts to identify cultural and historical resources and provide for their conservation.

A large boulder with historical markings is located within the project site. To preserve this cultural/historic resource, an open space designation will be made surrounding the engraved outcropping.

SV.3.6: Emergency or secondary access from the Toll Road area to U.S. 395 via Rhodes Road or other feasible location is desired. Development proposals in this general area should be examined for their ability to provide this access. New development should not be permitted to prevent this access from being established.

The design of Pleasant Valley Estates is in line to create the desired connection between Rhodes Road and Toll Road via Chance Lane. As seen on the site plan, Chance Lane will be extended into the property in which a turn eastward onto Star Pointe will lead into the subdivision to the east which connects to Toll Rd. A future easement connection onto Rocky Vista Road will also allow for a separate connection that makes its way to Toll Road should future development occur and that access is desired. This connection is extremely important to the safety of the area and completion of the desires within the Area Plan.

Tentative Map Findings

Section 110.608.20 of the Washoe County Development Code establishes legal findings that must be made by the Planning Commission or Board of County Commissioners in order to approve a Tentative Map request. These findings are listed below and are addressed in **bold face** type.

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

Pleasant Valley Estates will be served by municipal water and sewer service, ensuring full compliance with this finding. Additionally, solid waste disposal service will be provided through Waste Management which currently operates routes in Pleasant Valley and the surrounding areas.

(b) Availability of Water. The availability of water which meets applicable health standards as well as requirements for water rights, quality or will-serve commitments;

The project site is within the service boundary of the Truckee Meadows Water Authority and has completed a Discovery process through TMWA. Water rights will be dedicated to TMWA to serve the project, ensuring full compliance with this finding. Water rights can be purchased directly from TMWA or on the open market (with full TMWA acceptance).

(c) Utilities. The availability and accessibility of utilities;

The project will be served by all municipal utilities, infrastructure, and services as detailed within this report and on the attached engineering plans.

(d) Public Services. The availability and accessibility of public services such as schools, police and fire protection, transportation, recreation and parks;

The project is within an acceptable response time of the Truckee Meadows Fire Protection District's Station 237 located on Highway 395-A at Pagni Lane and is in an area of existing Sherriff patrols. Schools that will serve the project along with the anticipated number of new students are detailed within this report. It is further recognized that it will be disclosed to all new residents (at time of purchase) that school zoning is subject to change based on current enrollments, capacities, etc.

(e) Plan Consistency. General conformance with the Development Code and Master Plan;

Pleasant Valley Estates will provide residential uses that will complement existing development patterns in the area as well as provide significant open space and linkages to informal trails in the area. The existing cultural resource on the site will be kept in place within an accessible open space area for residents and the public to enjoy. Infrastructure including streets and utilities will be improved and/or provided in the appropriate scale for the development, while complying with Washoe County standards.

(f) Impact on Existing Streets. The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision;

As part of this project, Chance Lane will be improved to conform with Washoe County standards. The amount of AM and PM peak trips created by this subdivision does not warrant the need for a traffic study to examine any impacts to other existing roads such as Rhodes Road or Highway 395-A.

(g) Physical Characteristics. Physical characteristics of the land such as flood plain, slope and soil;

The site is well suited for the type and intensity of development proposed. The site contains no slope or soil conditions that would preclude development nor does it contain any significant wildlife habitats, etc. Drainage will be directed into a detention basin so as not to impact downstream parcels. The hillside area is incorporated into the open space areas and will not impact individual lots within the project.

(h) Agency Review. The recommendations and comments of the entities reviewing the tentative map; and

Copies of this report and the included plans will be circulated to all applicable reviewing agencies for

review and comment. Specific requirements and relevant comments can be included as conditions tied to this request and implemented with final map(s).

(i) Impact on Existing Drainage System. The effect of the proposed subdivision on the existing natural and man-made drainage system.

The project will provide for onsite detention to ensure that no additional flows over what currently exist will occur from the site with development of Pleasant Valley Estates. A highly detailed hydrology study is also included in the appendices of this report demonstrating compliance with all applicable Washoe County requirements related to drainage.

PRELIMINARY HYDROLOGY REPORT

TO SUPPORT THE

PLEASANT VALLEY ESTATES
TENTATIVE MAP

PREPARED FOR:

PLEASANT VALLEY ESTATES, LLC
301 FLINT ST
RENO NV 89501

PREPARED BY:

TEC
CIVIL
ENGINEERING
CONSULTANTS

JOB #: FRY001
DATE: FEBRUARY 15TH, 2019

Table of Contents

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List of Appendices

1. Introduction

1.1. Project Site

The proposed ±41.32-acre subdivision will be located east of Rhodes Road in Washoe County. The project is located in the NW ¼ of Section 3, Township 17N, Range 20E, and SW ¼ of Section 34, Township 18N, Range 20E, in Assessor's Parcel Numbers (APNs) 017-200-30, 017-410-38, and 017-410-39. The exact location of the site is indicated in Figure 1 (Vicinity Map).

1.2. Flood Zone

The project is located in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) 32031C3263G and 32031C3351G. The Panel is listed in the FEMA FIRM Index Map as being entirely within an Unshaded Flood Zone X (areas determined to be outside the 500-year flood plain) according to the FEMA National Flood Insurance Program. The maps are provided in the appendix.

1.3. Methodology

Due to the limited size of the contributing runoff areas, the Rational Method was utilized in determining the existing and proposed peak runoff rates. The following elements are required in utilizing the Rational Method:

$$Q = C*i*A$$

- C = Rational Method Runoff Coefficient obtained from the City of Reno Design Manual *(unitless)*
- i = Average Rainfall Intensity obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas *(inches/ hour)*
- A = Watershed area *(Acres)*
- Q = Peak runoff flow *(cubic feet/ second)*

The City of Reno Design Manual was utilized to determine C-values due to the separation The Truck Meadows Regional Design Manual (TMRDM) not separating the 5 and 100-year C-Values.

The detention pond was sized using the Rational Method.

1.3.1. Time of Concentration (Tc)

A maximum time of concentration was determined by utilizing the longest drainage flow path in the particular hydrologic basin. The time of concentration was calculated using the time travel figure in the appendix.

Overland flow, ditch, and gutter travel time were calculated using the following equation:

$$t_t = \frac{D}{V}\left(\frac{1}{60}\right)$$

Where:
t_t = ditch and gutter flow time (*minutes*)
D = distance of travel *(feet)*
V = velocity (*feet per second*) (From Travel Time Velocity Figure in the Appendix)

Rainfall intensities were derived from the National Oceanic and Atmospheric Administration (NOAA) Atlas. The rainfall data point was utilized to derive point precipitation frequency estimates. Time of concentration values were calculated using the Truckee Meadows Regional Drainage Manual and the City of Reno Time Travel Velocity Figure. According to the Washoe County's Standards, the minimum time of concentration to be used in calculations is 10 minutes. These values were applied to the Rational Method to estimate peak flows for both the proposed development and the parcel as it exists currently. A copy of the NOAA Atlas Point Precipitation Frequency Estimate and Time Travel Velocity Figure is provided in the Appendix.

2. Existing Conditions

2.1. Offsite Runoff

Approximately 21.14 acres of offsite area drains through the existing site. To the northwest, there is a portion of a hill that is conveyed to and through the site. To the north, a saddle separates most of the drainage from the aforementioned hill. However, this saddle contributes approximately 11.88 acres of runoff to the site. To the west, several peaks separate the site from Rhodes Road. These peaks contribute approximately 0.47 acres of runoff to the site. There is no contributing runoff from the south of the site to the proposed project. The east property line runs along a ridge; as such, very little contributing offsite flows are anticipated from the east. Reference Figure 2 for existing basin delineation.

2.2. Onsite Runoff

The offsite flows contributing from the north, northwest, and west all flow to the middle of the site and are channelized. The channel then flows south to an existing 24" Corrugated Metal Pipe (CMP). The CMP 24" pipe crosses under an existing dirt driveway that runs east to west along the southern boundary, draining offsite to adjacent properties. Reference Figure 2 for existing basin delineation.

2.3. Calculations

The time of concentration was calculated to be 20.80-minutes. Interpolating between the 15 and 30-minute rainfall intensities, 1.10 and 2.66-inches/hour were calculated for the rainfall intensities for the 5 and 100-year storm event.

Table 1: Existing Drainage Basins Hydrology

AREA	RUNOFF COEFFICIENT (C)		RAINFALL INTENSITY (i)		AREA *(A)*	PEAK RUNOFF RATE (Q)=CiA	
	(UNITLESS)	(UNITLESS)	*(INCHES/HR)*		*(ACRES)*	*(FT^3/SEC)*	
	5-YEAR	100-YEAR	*5-YEAR*	*100-YEAR*		*5-YEAR*	*100-YEAR*
EX-1	0.40	0.50	1.10	2.66	63.54	27.97	84.61
				TOTAL=	**63.54**	**27.97**	**84.61**
C=0.40 (5-YEAR STORM, OPEN SPACE, 5-15% GRADE) C= 0.50 (100-YEAR STORM, OPEN SPACE, 5-15% GRADE)							

As indicated in Table 1, approximately 27.97-cfs and 84.61-cfs of peak runoff are currently generated by the 5 and 100-year storm events, respectively.

3. Proposed Runoff Conditions

3.1. Offsite Runoff

Flow from the north will be captured via storm drain and curb and gutter. The flow from the northwest will be captured with an eight-foot V-ditch that runs along the northern boundary of the property. This V-ditch will then direct the offsite runoff to a storm drain inlet. The storm drain inlet will be connected to the site's storm drain infrastructure. Reference Figure 3 for the proposed basin delineation.

3.2. Onsite Runoff

Storm drain will be located throughout the site to maintain proper drive-isles and prevent flooding. The storm drain infrastructure will convey the runoff to a detention pond on the south side of the site. With final design, a detention pond outlet structure will be designed to meter flows out at existing rates. The metered flows will be conveyed to historic locations. Reference Figure 3 for the proposed basin delineation.

3.3. Calculations

The proposed conditions were analyzed similarly to the existing conditions. The same drainage basin was utilized, but with a different time of concentration, rainfall intensity, and roughness coefficient. The time of concentration was shortened to 11.28 minutes. This changed the rainfall intensities to 1.45 and 3.53-inches/hour for the 5 and 100-year storm event, respectively. The C-values were altered by creating a weighted average of 5-15% open space, 1/3 acre lots, and impervious concrete and asphalt (values were utilized from the City of Reno.

Table 2: Proposed Drainage Basins Hydrology

AREA	RUNOFF COEFFICIENT (C)		RAINFALL INTENSITY (i)		AREA *(A)*	PEAK RUNOFF RATE (Q)=CiA	
	(UNITLESS)	(UNITLESS)	*(INCHES/HR)*		*(ACRES)*	*(FT^3/SEC)*	
	5-YEAR	100-YEAR	*5-YEAR*	*100-YEAR*		*5-YEAR*	*100-YEAR*
BASIN 1	0.43	0.56	1.45	3.53	63.54	39.71	125.47
				TOTAL=	**63.54**	**39.71**	**125.47**
C=0.43 (5-YEAR STORM, WEIGHTED C-VALUE) C= 0.56 (100-YEAR STORM, WEIGHTED C-VALUE)							

As indicated in Table 2, approximately 39.71 and 125.47-cfs of peak runoff are generated onsite during the 5 and 100-year storm events, respectively.

3.4. Detention Pond Volume and Discharge

As shown in Table 3, the increase in peak runoff rates are estimated to be 11.74 and 40.86-cfs for the 5 and 100-year storm events, respectively. Detention volume is calculated by multiplying the time of concentration by the peak flows of the proposed and existing conditions, and then finding the difference between the two. The detention volume required has been calculated to be approximately 20,690-cubic feet. The provided detention volume allotted is approximately 28,760-cubic feet. The volume provided has a factor of safety of 1.40. Detention summary calculations can be seen in Table 3. The excess runoff volume will be captured via a detention pond located on the south side of the site. Runoff from the site will be

restricted through the use of a detention structure that will be sized with final design. The existing 24" CMP culvert will then be utilized to convey the restricted flow as existing conditions did previously.

Table 3: Detention Summary

AREA	RUNOFF COEFFICIENT (C)		RAINFALL INTENSITY (i)		AREA *(A)*	PEAK RUNOFF RATE (Q)=CiA	
	(UNITLESS)	(UNITLESS)	*(INCHES/HR)*		*(ACRES)*	*(FT^3/SEC)*	
	5-YEAR	100-YEAR	*5-YEAR*	*100-YEAR*		*5-YEAR*	*100-YEAR*
ENTIRE-EX	0.40	0.50	1.10	2.66	63.54	27.97	84.61
ENTIRE-PRO	0.43	0.56	1.45	3.53	63.54	39.71	125.47
TOTAL AREA/DIFFERENCE=					**63.54**	**11.74**	**40.86**

4. Discussion/ Conclusions

The Pleasant Valley Estates Tentative map is a ±41.32-acre subdivision located east of Rhodes Road in Washoe County. Currently, runoff through the site flows from north to south and is captured and carried offsite via a 24" CMP pipe. The proposed site will utilize storm drain pipes, inlets, manholes, V-ditches, drainage swales, and a detention pond at 24" CMP to convey and manage the predicted stormwater. The subdivision is anticipated to increase stormwater runoff and volume. The increase in runoff will be captured, detained, and metered out at historic rates with the use of a detention pond and outlet structure, which will be appropriately sized with final design. As such, no adverse hydrologic effects are anticipated due to the development of this project site.

5. References

- *Truckee Meadows Regional Drainage Manual* dated April, 2009
- *City of Reno Design Manual, Chapter II Storm Drainage*, January, 2009

APPENDIX A

National Flood Hazard Layer FIRMette

FEMA

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/31/2019 at 11:52:50 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NOAA Atlas 14, Volume 1, Version 5
Location name: Reno, Nevada, USA*
Latitude: 39.3726°, Longitude: -119.7271°
Elevation: 4738.69 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.20 (1.03-1.42)	1.50 (1.28-1.78)	2.00 (1.70-2.39)	2.48 (2.10-2.95)	3.28 (2.69-3.91)	4.00 (3.18-4.84)	4.85 (3.73-5.95)	5.89 (4.36-7.38)	7.55 (5.26-9.74)	9.06 (6.01-12.0)
10-min	0.918 (0.786-1.08)	1.14 (0.978-1.36)	1.52 (1.30-1.81)	1.89 (1.60-2.24)	2.49 (2.05-2.98)	3.04 (2.42-3.68)	3.69 (2.84-4.53)	4.48 (3.31-5.61)	5.74 (4.00-7.41)	6.89 (4.58-9.10)
15-min	0.756 (0.648-0.892)	0.944 (0.808-1.12)	1.26 (1.07-1.50)	1.56 (1.32-1.86)	2.06 (1.69-2.46)	2.51 (2.00-3.04)	3.05 (2.35-3.74)	3.70 (2.74-4.64)	4.74 (3.30-6.12)	5.70 (3.78-7.52)
30-min	0.510 (0.438-0.602)	0.636 (0.544-0.754)	0.848 (0.722-1.01)	1.05 (0.890-1.25)	1.39 (1.14-1.66)	1.69 (1.35-2.05)	2.05 (1.58-2.52)	2.49 (1.84-3.12)	3.19 (2.22-4.12)	3.84 (2.55-5.06)
60-min	0.315 (0.271-0.372)	0.393 (0.337-0.466)	0.525 (0.447-0.624)	0.650 (0.551-0.773)	0.857 (0.705-1.03)	1.05 (0.834-1.27)	1.27 (0.979-1.56)	1.54 (1.14-1.93)	1.98 (1.38-2.55)	2.38 (1.58-3.13)
2-hr	0.209 (0.184-0.242)	0.260 (0.230-0.300)	0.333 (0.290-0.384)	0.396 (0.341-0.456)	0.491 (0.412-0.570)	0.576 (0.472-0.676)	0.674 (0.538-0.804)	0.798 (0.615-0.974)	1.01 (0.748-1.29)	1.22 (0.864-1.58)
3-hr	0.167 (0.149-0.190)	0.208 (0.187-0.238)	0.261 (0.231-0.297)	0.304 (0.267-0.346)	0.363 (0.314-0.416)	0.415 (0.353-0.480)	0.475 (0.396-0.557)	0.556 (0.453-0.661)	0.694 (0.548-0.867)	0.822 (0.633-1.06)
6-hr	0.118 (0.105-0.132)	0.147 (0.131-0.166)	0.182 (0.161-0.206)	0.210 (0.184-0.237)	0.245 (0.213-0.280)	0.273 (0.234-0.313)	0.301 (0.254-0.349)	0.334 (0.276-0.393)	0.387 (0.312-0.462)	0.439 (0.347-0.538)
12-hr	0.077 (0.068-0.087)	0.097 (0.086-0.109)	0.122 (0.108-0.138)	0.141 (0.124-0.160)	0.167 (0.145-0.190)	0.187 (0.160-0.215)	0.207 (0.175-0.241)	0.228 (0.189-0.268)	0.255 (0.205-0.306)	0.277 (0.219-0.338)
24-hr	0.047 (0.043-0.053)	0.059 (0.054-0.066)	0.075 (0.068-0.084)	0.088 (0.079-0.098)	0.105 (0.094-0.117)	0.119 (0.106-0.133)	0.134 (0.117-0.150)	0.149 (0.129-0.169)	0.169 (0.145-0.194)	0.186 (0.156-0.215)
2-day	0.028 (0.025-0.032)	0.035 (0.032-0.040)	0.045 (0.040-0.051)	0.053 (0.047-0.059)	0.063 (0.056-0.072)	0.072 (0.063-0.082)	0.081 (0.070-0.093)	0.090 (0.077-0.104)	0.103 (0.086-0.121)	0.113 (0.093-0.135)
3-day	0.021 (0.019-0.023)	0.026 (0.023-0.029)	0.033 (0.030-0.037)	0.039 (0.035-0.044)	0.048 (0.042-0.054)	0.054 (0.048-0.062)	0.062 (0.053-0.070)	0.069 (0.059-0.079)	0.080 (0.067-0.093)	0.088 (0.073-0.104)
4-day	0.017 (0.015-0.019)	0.021 (0.019-0.024)	0.028 (0.025-0.031)	0.033 (0.029-0.037)	0.040 (0.035-0.045)	0.046 (0.040-0.051)	0.052 (0.045-0.059)	0.059 (0.050-0.067)	0.068 (0.057-0.079)	0.076 (0.063-0.089)
7-day	0.011 (0.010-0.013)	0.014 (0.013-0.016)	0.019 (0.017-0.021)	0.022 (0.020-0.025)	0.027 (0.024-0.031)	0.031 (0.027-0.035)	0.035 (0.030-0.040)	0.039 (0.034-0.045)	0.045 (0.038-0.053)	0.050 (0.042-0.059)
10-day	0.009 (0.008-0.010)	0.011 (0.010-0.013)	0.015 (0.013-0.017)	0.017 (0.015-0.020)	0.021 (0.019-0.024)	0.024 (0.021-0.027)	0.027 (0.023-0.031)	0.030 (0.026-0.035)	0.035 (0.029-0.040)	0.038 (0.032-0.044)
20-day	0.005 (0.005-0.006)	0.007 (0.006-0.008)	0.009 (0.008-0.010)	0.011 (0.009-0.012)	0.013 (0.011-0.014)	0.014 (0.013-0.016)	0.016 (0.014-0.018)	0.018 (0.015-0.020)	0.020 (0.017-0.023)	0.022 (0.018-0.025)
30-day	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.011 (0.010-0.012)	0.012 (0.011-0.014)	0.013 (0.012-0.015)	0.015 (0.013-0.017)	0.016 (0.014-0.019)
45-day	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.006-0.007)	0.007 (0.007-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.010-0.012)	0.012 (0.010-0.013)
60-day	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.008-0.011)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

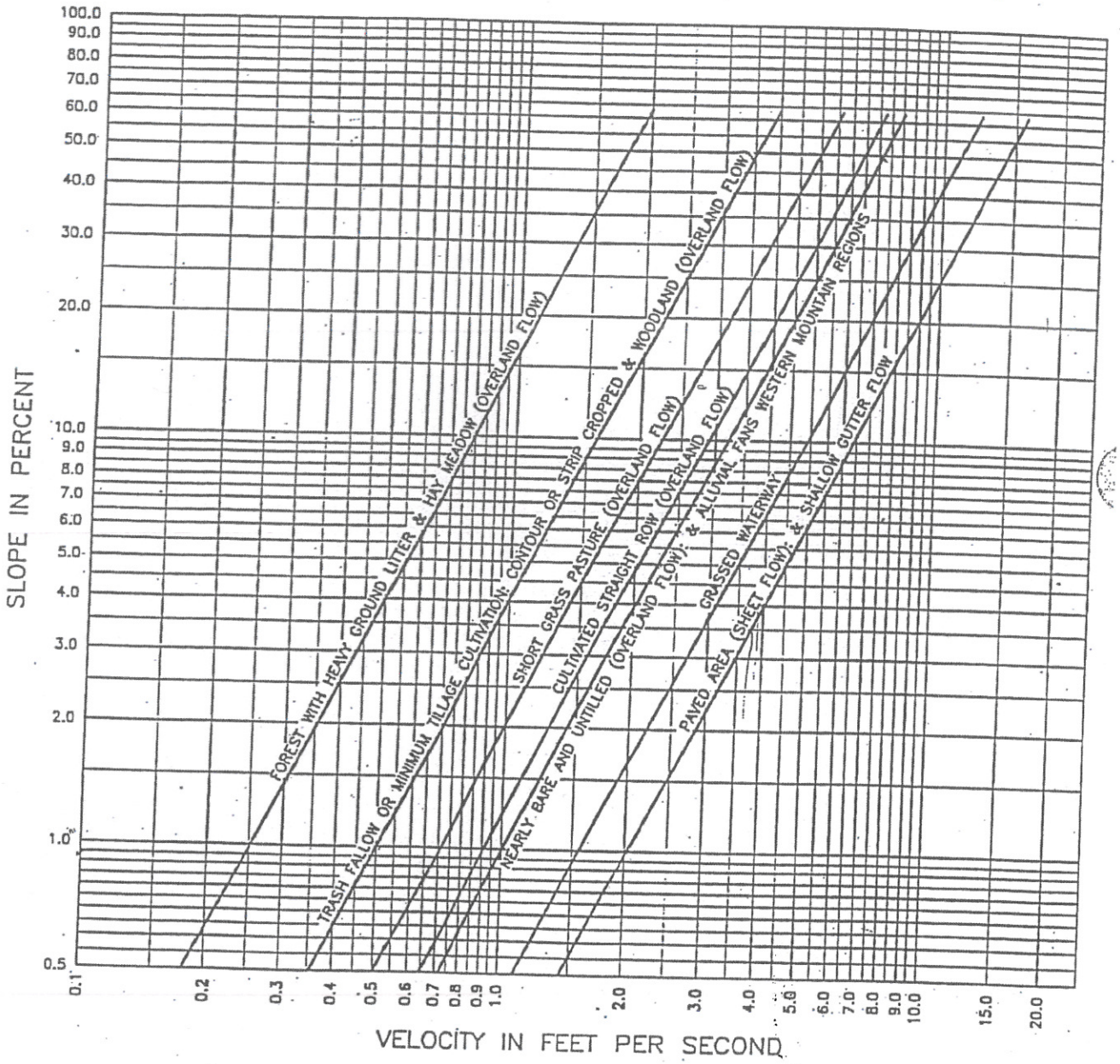
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

TRAVEL TIME VELOCITY



APPENDIX B

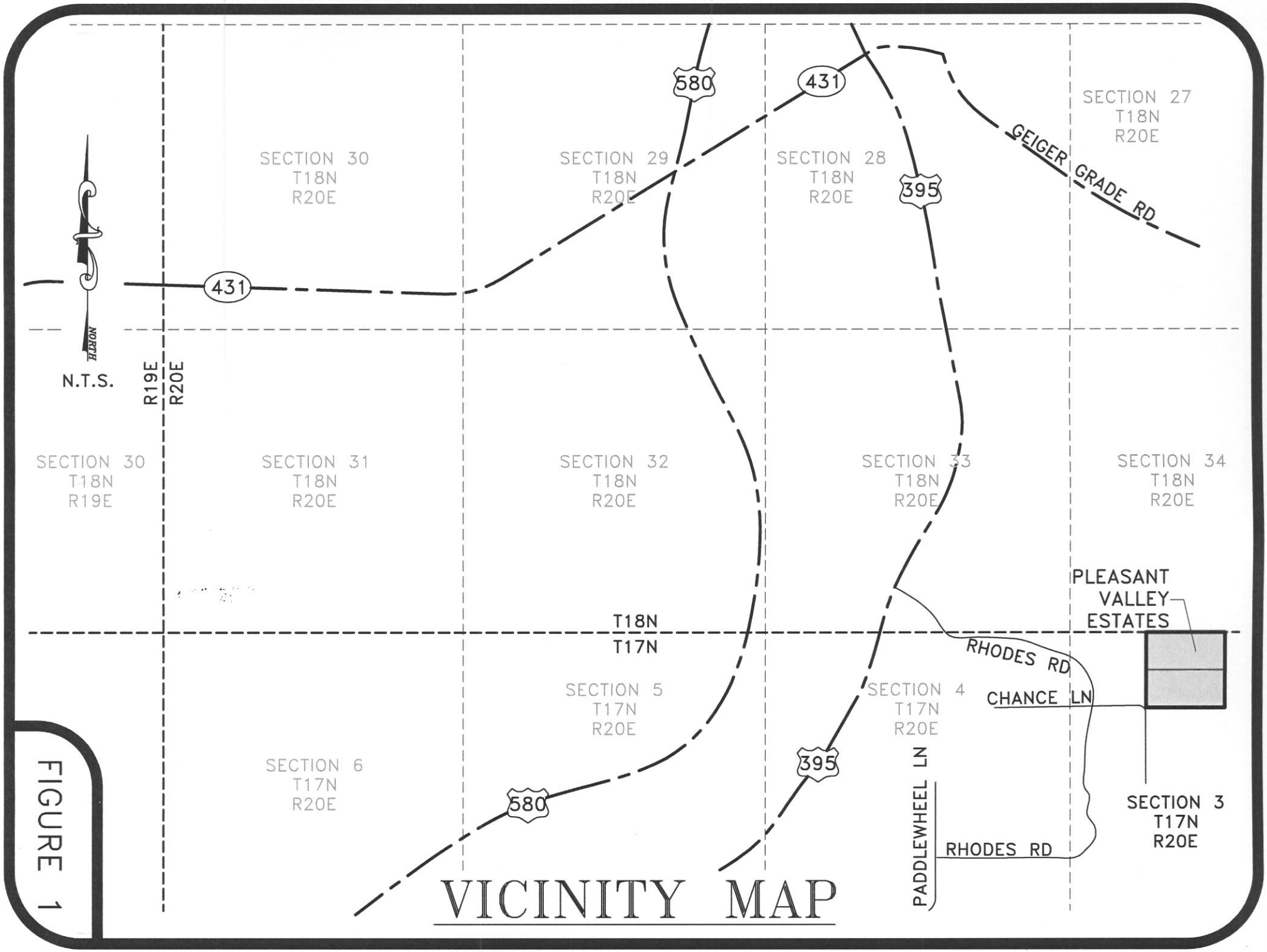
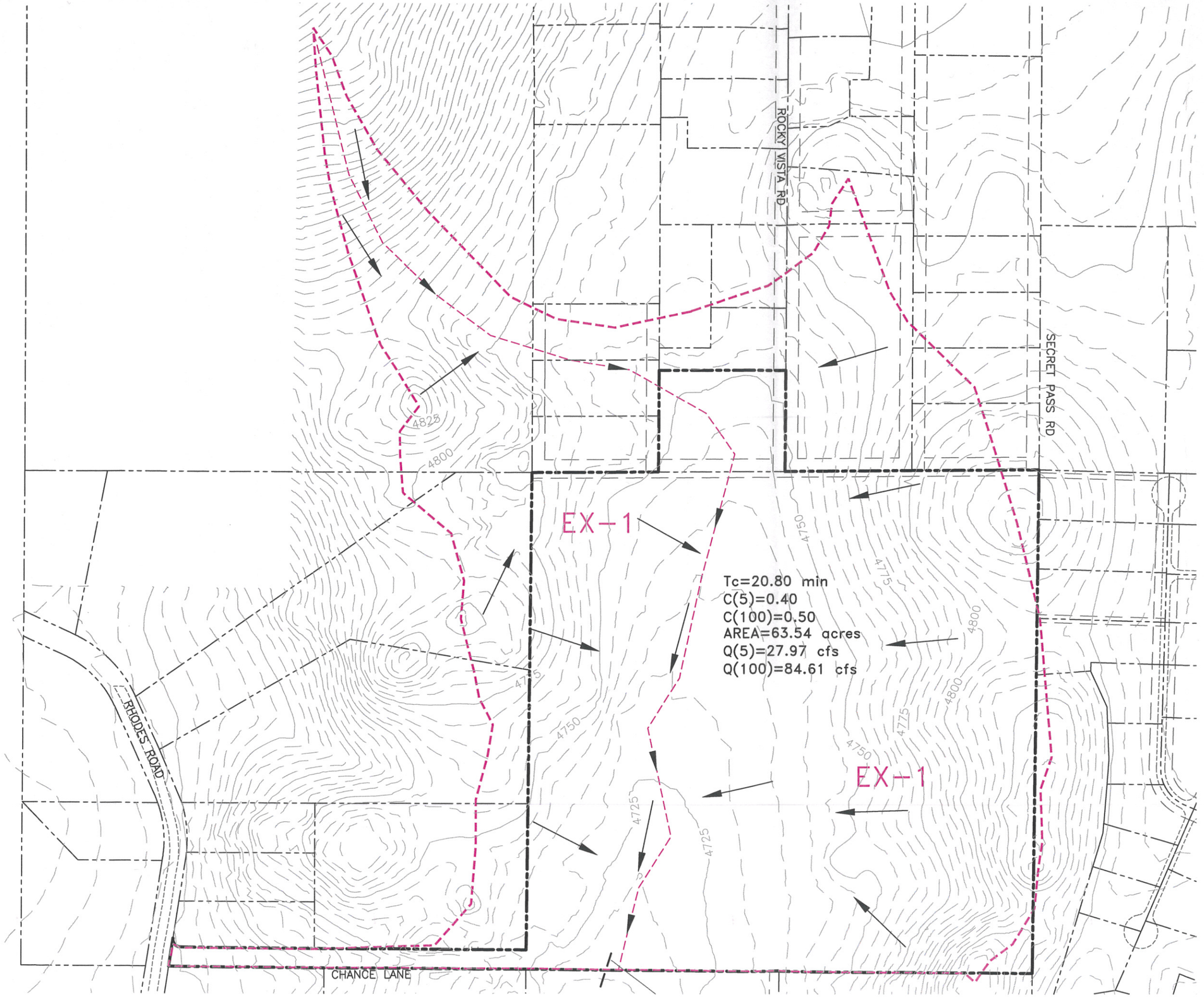


FIGURE 1

VICINITY MAP



LEGEND

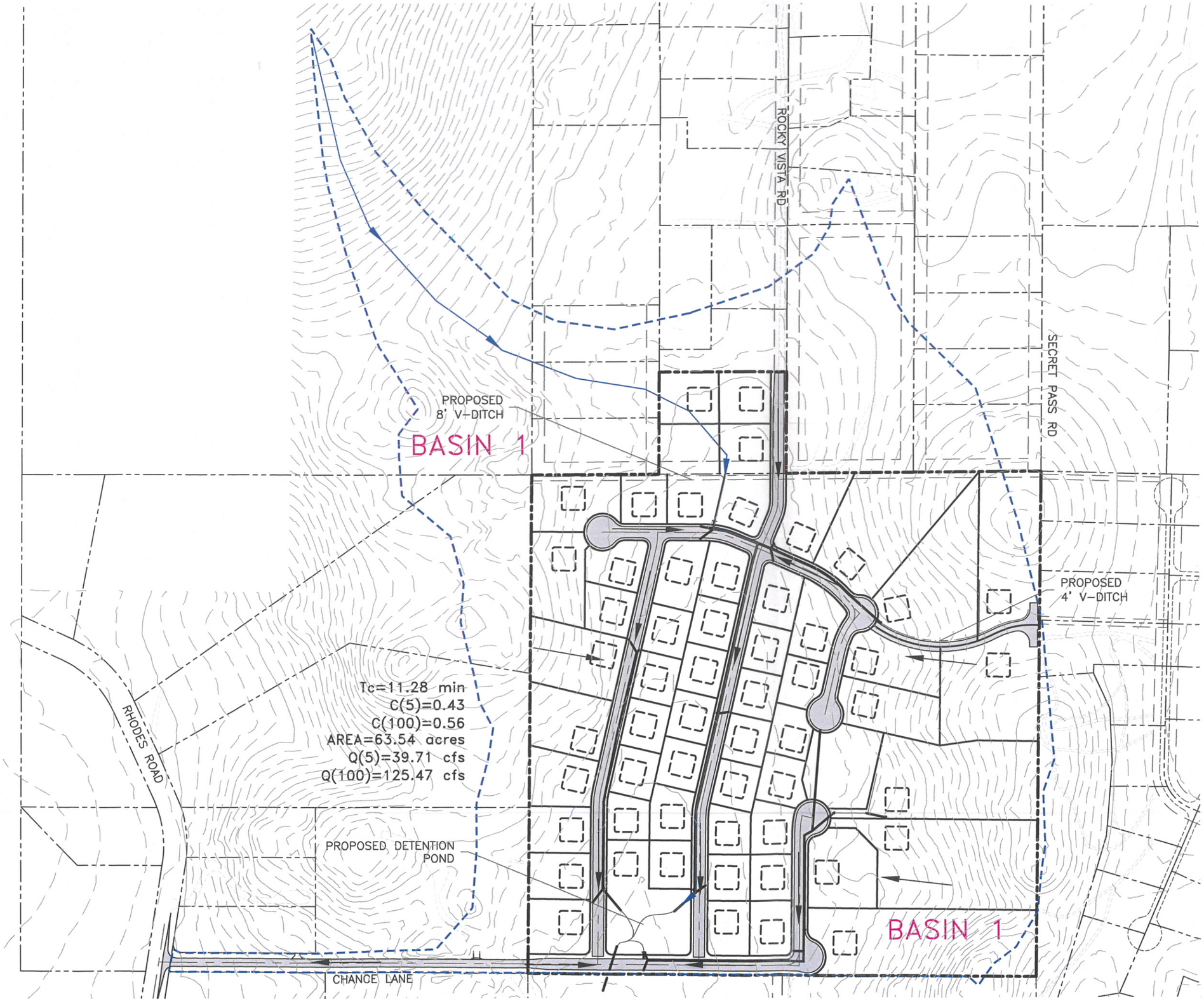
- PROJECT BOUNDARY
- 4600 (e)CONTOURS
- EXISTING HYDROLOGIC BASINS
- EXISTING RUNOFF DIRECTION
- TIME OF CONCENTRATION PATH

NORTH

PRELIMINARY HYDROLOGY REPORT
TO SUPPORT THE
PLEASANT VALLEY
EXISTING DRAINAGE BASIN

FIGURE 2

250' 125' 0 250'



LEGEND

- PROJECT BOUNDARY
- PROPOSED LOT LINES
- 4600 (e)CONTOURS
- HYDROLOGIC BASIN
- PROPOSED RUNOFF DIRECTION SUBBASINS
- PROPOSED AC AREA
- TIME OF CONCENTRATION PATH
- PROPOSED PADS

HAYDEN

PRELIMINARY HYDROLOGY REPORT
TO SUPPORT THE
PLEASANT VALLEY
PROPOSED DRAINAGE BASIN

FIGURE 3

250' 125' 0 250'

PRELIMINARY SANITARY SEWER REPORT

TO SUPPORT THE

TENTATIVE MAP FOR THE
PLEASANT VALLEY ESTATES
RESIDENTIAL SUBIDIVISON

PREPARED FOR:

PLEASANT VALLEY RANCH ESTATES LLC
301 FLINT STREET RENO, NV 89501

PREPARED BY:

TEC
CIVIL
ENGINEERING
CONSULTANTS

JOB #: FRY001
DATE: FEBRUARY 15TH, 2019

Table of Contents

1. Introduction

This Preliminary Sanitary Sewer Analysis was prepared to support the Tentative Map for the Pleasant Valley Estates Residential Subdivision. Pleasant Valley Estates spans across three existing parcels of land with a cumulative area of approximately 41.34 acres (Assessor's Parcel Numbers (APNs): 017-200-30, 017-410-38 and 39). APN 017-200-30 is located in the southeastern ¼ of the southwestern ¼ of Section 34, Township 18 North, Range 20 East. APNs 017-410-38 & 39 are located in the northeastern ¼ of the northwestern ¼ of Section 3, Township 17 North, Range 20 East. Pleasant Valley Estates is a 58-lot residential subdivision which has a surrounding area that consists primarily for single family residential homes. The location of the project is depicted in Figure 1 (Vicinity Map).

2. Project Area

The site generally slopes from north to south at an approximate grade of 2.2%. The onsite sewer infrastructure will not convey any offsite sanitary sewer flows. No special areas or large flow commercial uses are located on or adjacent to the project site. All sewage to be generated is domestic use.

3. Methodology

Sanitary sewer flows were estimated utilizing the design criteria in Chapter 2 (Gravity Sewer Collection Design Standards) of the Washoe County Department of Water Resources, Engineering Design Standards. Peak flows for the mains were estimated at 270-gallons per day (GPD) per capita with 3-capita per dwelling unit (±810-gallons/day/dwelling unit). The Manning's equation was utilized to determine the capacities of the sanitary sewer mains, and a roughness (*n*) of 0.012 for the PVC pipes to determine the capacities and velocities of the sanitary sewer mains.

Manning's Equation

$$Q = \frac{1.49}{n} * \mathrm{A} * R^{\frac{2}{3}} * S^{\frac{1}{2}}$$

- Q = Capacity of pipe (ft^3/s)
- n = Manning's runoff coefficient (unitless)- n = 0.012 for all proposed pipes
- A = Cross-sectional area of the pipe (ft^2)
- R = Hydraulic radius of the pipe (ft)
- S = Slope of pipe (ft/ft)

4. Existing Sanitary Sewer System

4.1. Layout

As indicated in Figure 2, the nearest existing sanitary sewer main is located to the east of the site in Star Pointe Drive. This sanitary sewer main conveys sewage north along Star Pointe Drive to

Secret Pass Drive. The sanitary sewer main then extends north along Secret Pass Drive to Big Smokey Drive. The sanitary sewer main then extends westerly along Big Smokey Drive to Sylvester Road. The sanitary sewer main flows northerly along Big Smokey Drive away from the project. Per the Washoe County Regional Mapping System Website, the 8-inch diameter sanitary sewer mains convey the sewage northwesterly towards the crossing of Geiger Grade Road prior to upsizing to a 12-inch diameter trunk main. (Figure 4)

4.2. Capacity

The existing sanitary sewer mains are listed in the Washoe County Regional Mapping System Website as 8-inch diameter sanitary sewer mains. The existing sanitary sewer main slopes were also obtained from this website. The existing sanitary sewer main capacities varied with a minimum capacity (slope=0.25%) of 0.212-million gallons per day (MGD). This 0.25% slope is less than that currently required by Washoe County (0.5%) for an 8-inch diameter sanitary sewer main.

5. Proposed Sanitary Sewer System

5.1. Layout

The proposed sanitary sewer system will consist of 8-inch diameter PVC sanitary sewer mains and 4-inch diameter PVC sanitary sewer laterals. The proposed sanitary sewer mains will convey sewage to the southern end of the property to a future lift station located in Lot #18. The proposed lift station will pump the sewage north along Westward View Road to 1 of 3 potential routes.

5.1.1. Route #1

The first potential route is to pump the sewage north along Westward View Road along Rocky Vista Road to Node A (Figure 2). From this point the sewage would gravity flow via a proposed 8-inch diameter sanitary sewer system northerly to Big Smokey Drive then easterly to the existing sanitary sewer manhole located at the intersection of Big Smokey Drive and Sylvester Road.

5.1.2. Route #2

The second potential route is to pump the sewage north along Westward View Road to the proposed Vista Sierra Road then easterly along Vista Sierra Road to the eastern boundary of the project (Node B, Figure 2). From this point, the sewage would then flow via a proposed 8-inch diameter sanitary sewer main easterly into the existing sanitary sewer main located in Star Pointe Drive.

5.1.3. Route #3

The third potential route is to pump sewage similar to Route #2. However, the force main is further extended north along the easterly boundary of the site to the northeast corner of the

subject property. At this point the force main extends easterly towards Star Pointe Drive where it terminates at a proposed sanitary sewer manhole (Node C, Figure 2). An 8-inch diameter sanitary sewer main will extend from this proposed manhole easterly and connect to the existing sanitary sewer main located in Star Pointe Drive.

An overview of the proposed site layout and sanitary sewer system is presented in Figure 3. The approximate Node locations for each sewer route are further identified in Figure 2.

5.2. Proposed Sewage Demands

The proposed 58-lot subdivision is anticipated to generate 46,980 gallons per day (0.047 million gallons per day (MGD)) peak flow. The project site consists of homes, as such estimated peak flows are assumed to be that of single family residential dwelling units.

The following assumptions were made:

- 58-lot subdivision
- 1 home = 1 dwelling unit
- Single Family Residential assumption per Chapter 2 = 3.0 capita/dwelling unit
- 270 gallons per capita per day (peak flow) * 3.0 = ±810 gallons/day per dwelling unit (peak flow)

$$58\ Dwelling\ Units * 3\ \frac{Capita}{Dwelling\ Unit} * 270\ \frac{gpd}{Capita} = 46{,}980\ gpd\ (0.047 - MGD)$$

5.1. Capacity

The future sanitary sewer mains were assumed to have slopes approximately equal to their respective street grades with a minimum slope of 0.5%. Assuming a sanitary sewer main was constructed with PVC pipe at a minimal slope of 0.5%, it would have a minimum capacity of 0.299 million gallons per day (MGD) while flowing 50% full.

6. Discussion

All of the proposed sanitary sewer mains will be sized to convey the proposed peak sewage demand of approximately 0.047-MGD. The proposed sanitary sewer lift station and associated force mains will also be sized to convey the proposed sewage flows. Regardless of which sanitary sewer route is ultimately constructed, all of the sewage generated will be added to the existing sanitary sewer main located in Sylvester Road and all of its downstream mains.

As previously discussed, the sanitary sewer mains in Sylvester Road and downstream are 8-inch diameter until the main diameter increases to a 12-inch diameter trunk main. The approximate location of the existing downstream sanitary sewer system and the location of the trunk main are indicated in Figure 4.

The flattest sanitary sewer main affected by the development of Pleasant Valley is listed on the Washoe Regional Mapping Website as 0.25%. As indicated in Figure 4, this sanitary sewer main is located upstream of the 12-inch diameter sanitary sewer trunk main. An 8-inch diameter sanitary sewer main with a slope of 0.25% has a half full capacity of approximately 0.212-MGD. This pipe is estimated to be approximately 64% full under existing conditions. The peak sewage rate (including Pleasant Valley) at this sanitary sewer main is estimated at 0.357-MGD which equates to the main being approximately 71% full.

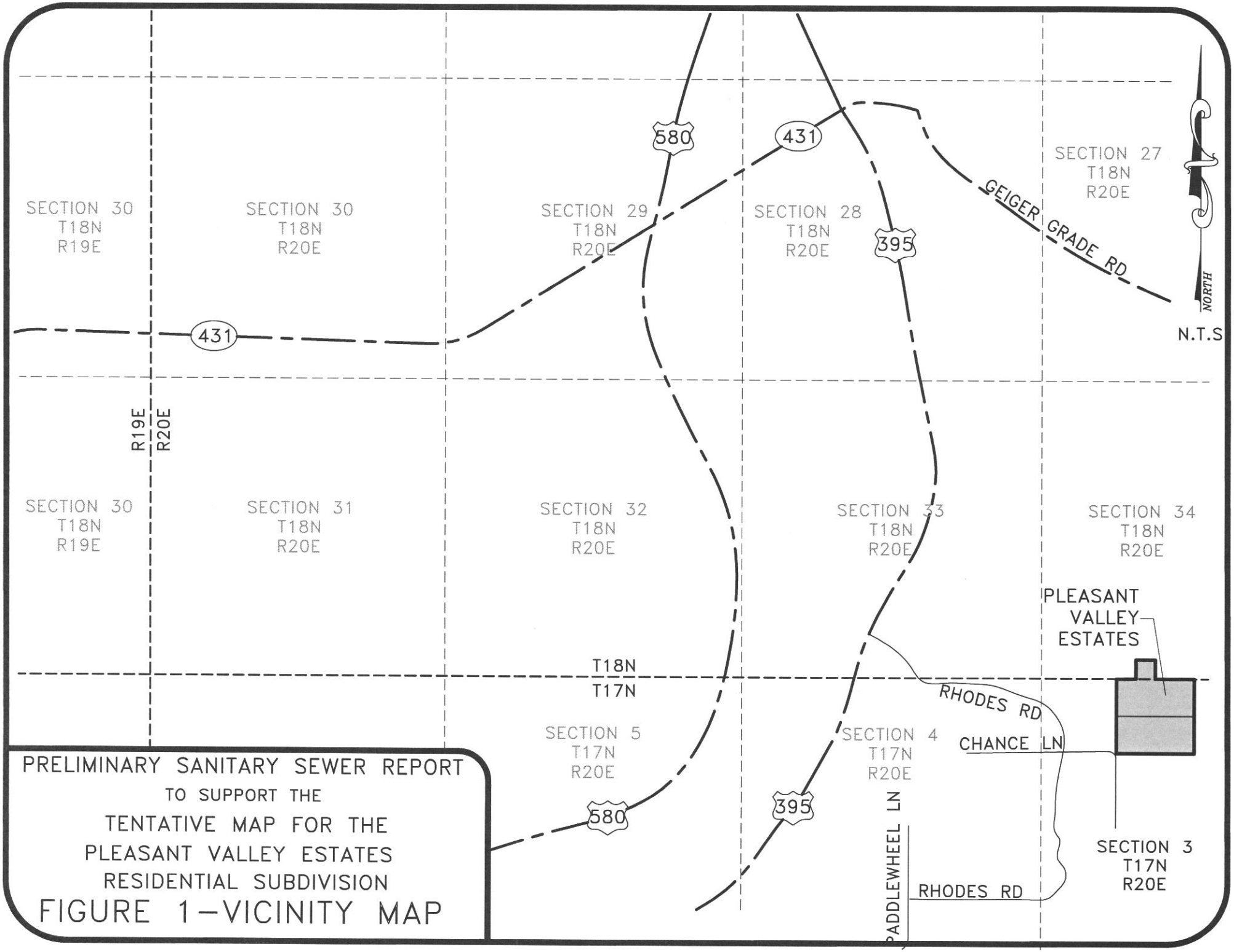
This pipe is flatter than that required by Washoe County and appears to be incorrectly listed in the website. This length of the sanitary sewer main is most likely either steeper than what is listed or more likely this pipe is also 12-inches in diameter similar to the adjacent trunk main which would result in a half full capacity of approximately 0.624-MGD. In either case, this pipe will need to be surveyed with final design of this project to determine if the information listed in the website is accurate. If the information is accurately listed, upsizing of this sanitary sewer main may be required. Based upon the estimated peak flow rates and the information provided in the Washoe Regional Mapping Website, all of the other affected sanitary sewer mains will convey the proposed sewage while remaining less than half full.

7. Summary/Conclusion

The Pleasant Valley Tentative Map is a proposed 58-lot subdivision. The proposed sanitary sewer system will convey all of the generated sewage to a sanitary sewer lift station. The proposed lift station will convey the sewage to one of three potential locations where it will tie into the existing sanitary sewer system. All 3 points of connection are conveyed via the same portion of the existing sanitary sewer system. One existing sanitary sewer main may be undersized to accommodate the flows from either the existing or the future peak demands while remaining less than half full. This pipe will be surveyed to determine its existing diameter and slope to verify its capacity. Upsizing of this pipe may be required depending the results of this survey. Therefore, with the proposed development of this subdivision and the potential upsizing of the previously discussed offsite sanitary sewer main, no adverse effects are anticipated to the proposed or existing sanitary sewer systems.

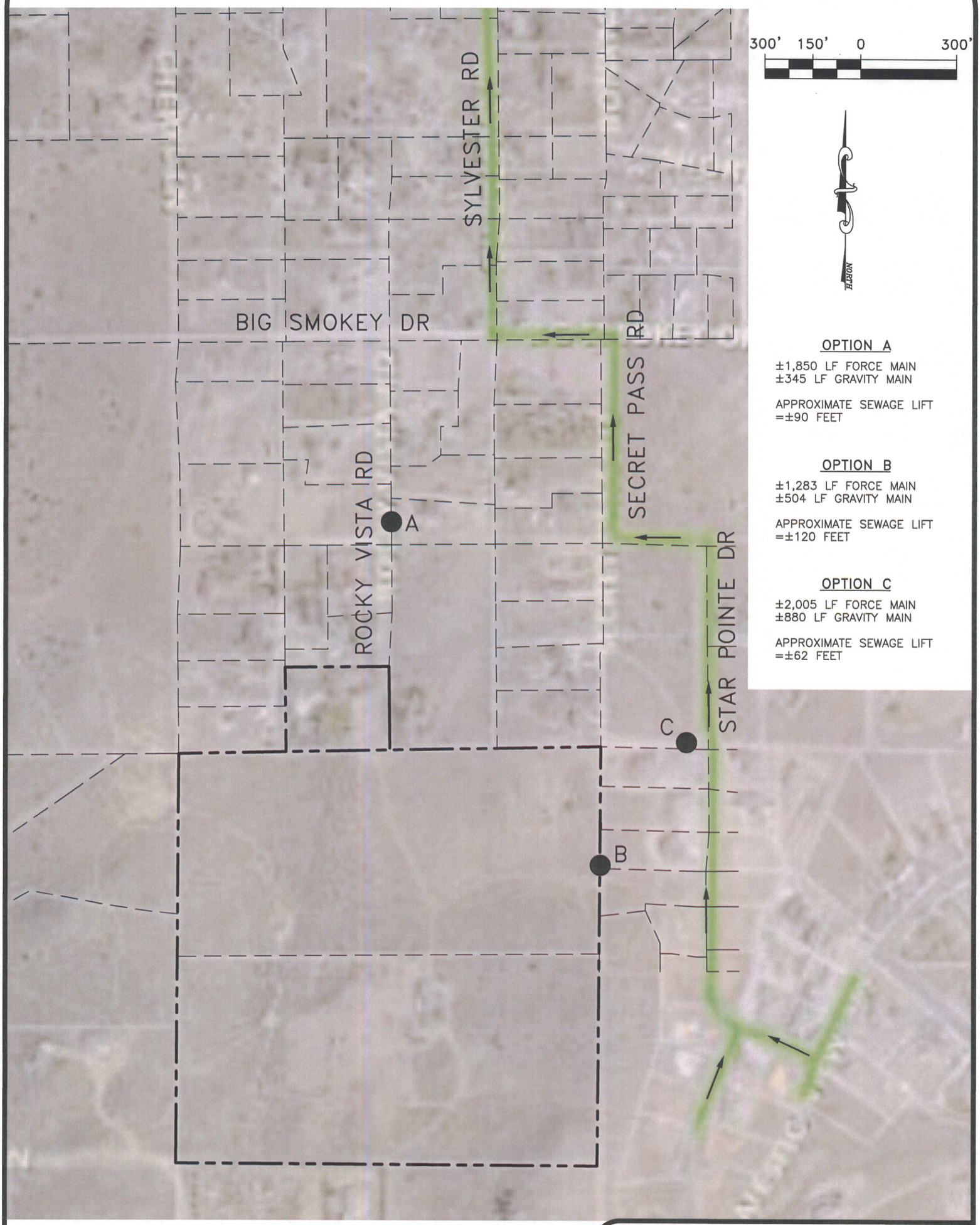
References

- Washoe County Engineering Design Standards, Chapter 2- Gravity Sewer Collection Design Standards, March, 2016.



PRELIMINARY SANITARY SEWER REPORT
TO SUPPORT THE
TENTATIVE MAP FOR THE
PLEASANT VALLEY ESTATES
RESIDENTIAL SUBDIVISION

FIGURE 1—VICINITY MAP



PRELIMINARY SANITARY SEWER REPORT
TO SUPPORT THE
TENTATIVE MAP FOR THE
PLEASANT VALLEY ESTATES
RESIDENTIAL SUBDIVISION

FIGURE 2
EXISTING SEWER SYSTEM

ROUTE OPTION #1
FORCE MAIN TO
NODE A, FIGURE 2

ROUTE OPTION #3
FORCE MAIN TO
NODE C, FIGURE 2

ROUTE OPTION #2
FORCE MAIN TO
NODE B, FIGURE 2

ROCKY VISTA RD

VISTA SIERRA RD

STAR POINTE DR

WESTWARD VIEW RD

LIFT STATION

LOT #1
LOT #2
LOT #3
LOT #4
LOT #5
LOT #6
LOT #7
LOT #8
LOT #9
LOT #10
LOT #11
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LOT #47
LOT #48
LOT #49
LOT #50
LOT #51
LOT #52
LOT #53
LOT #54
LOT #55
LOT #56
LOT #57
LOT #58

NORTH

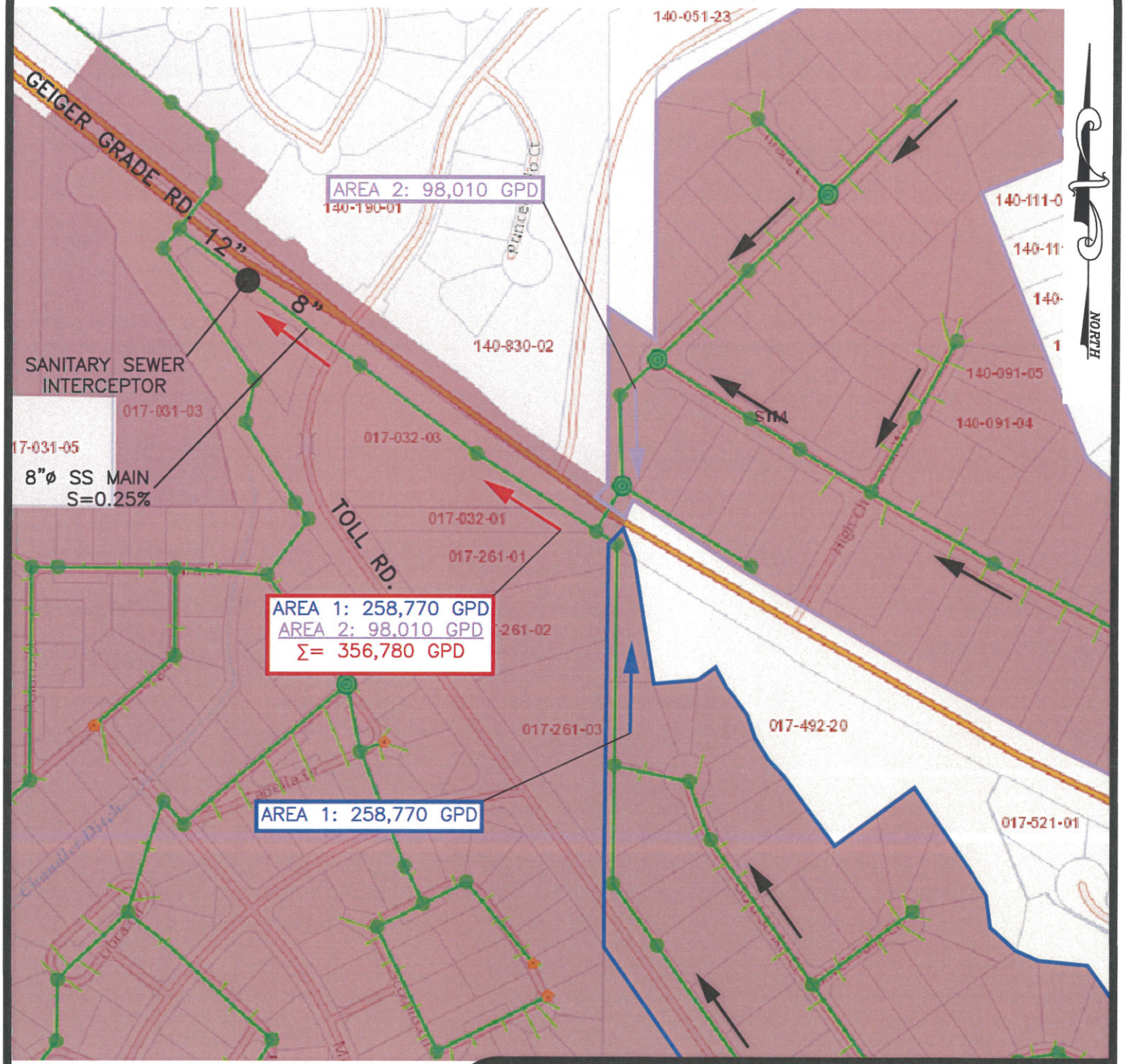
N.T.S.

LEGEND

- FORCE MAIN
- PROPOSED (GRAVITY) SANITARY SEWER MAIN
- PROPOSED BOUNDARY LINE
- BOUNDARY
- PROPOSED MANHOLE
- GRAVITY MAIN DIRECTION OF FLOW

PRELIMINARY SANITARY SEWER REPORT
TO SUPPORT THE
TENTATIVE MAP FOR THE
PLEASANT VALLEY ESTATES
RESIDENTIAL SUBDIVISION

FIGURE 3
PROPOSED SEWER SYSTEM



LEGEND

- AREA 1
- AREA 2
- FLOW DIRECTION

PRELIMINARY SANITARY SEWER REPORT

TO SUPPORT THE

TENTATIVE MAP FOR THE

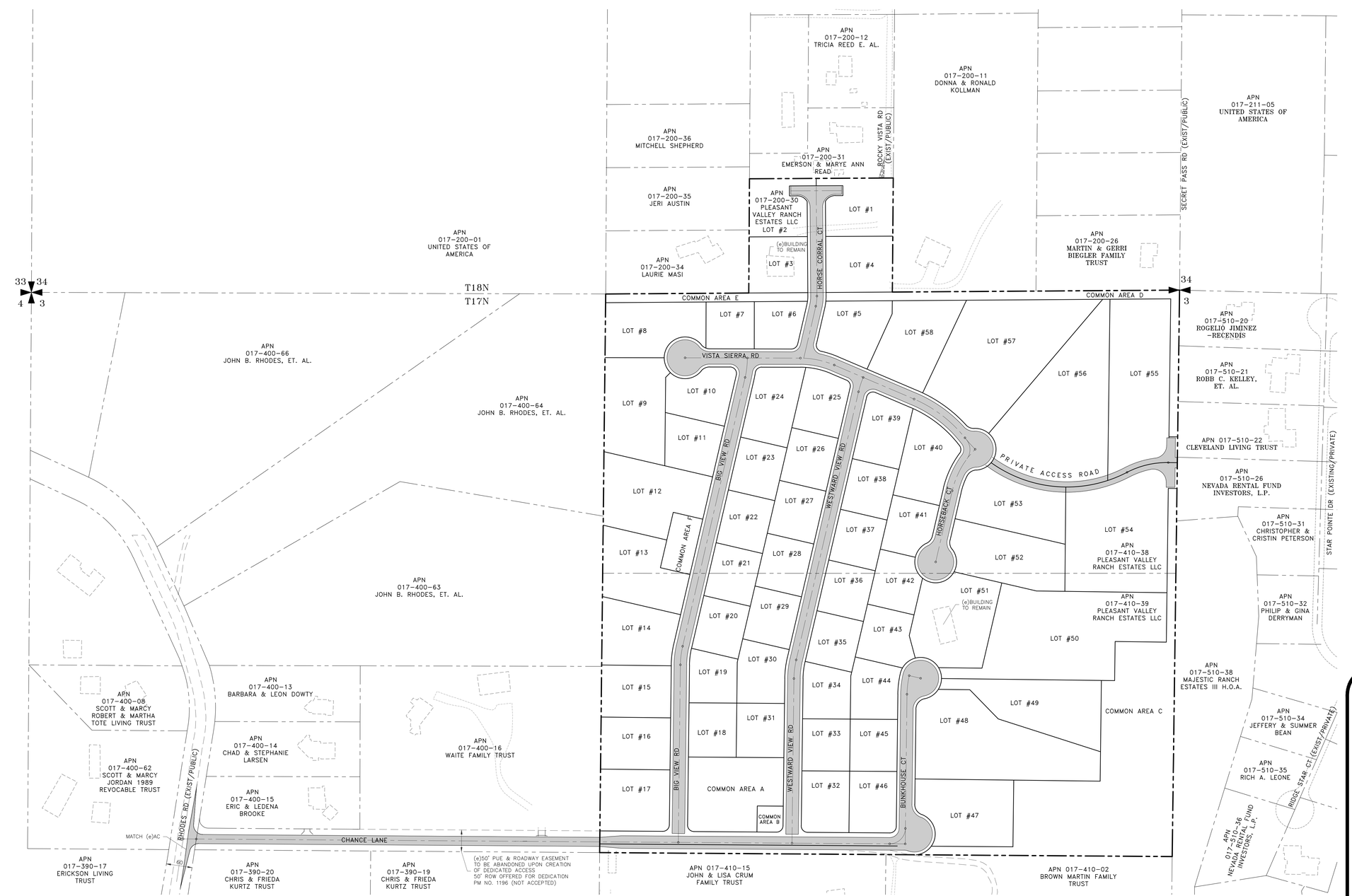
PLEASANT VALLEY ESTATES

RESIDENTIAL SUBDIVISION

FIGURE 4

CONTRIBUTING AREAS

PLEASANT VALLEY ESTATES TENTATIVE MAP



HARDIN

OWNER / APPLICANT

PLEASANT VALLEY RANCH ESTATES, LLC
301 FLINT ST
SPARKS, NEVADA 89501

ENGINEER

TEC CIVIL ENGINEERING CONSULTANTS
9437 DOUBLE DIAMOND PARKWAY, SUITE 17
RENO, NEVADA 89521

TEC CIVIL ENGINEERING CONSULTANTS
9437 DOUBLE DIAMOND PARKWAY, STE 17
RENO, NEVADA 89521
PH (775) 352-7900 – FAX (775) 352-7929

SHEET INDEX

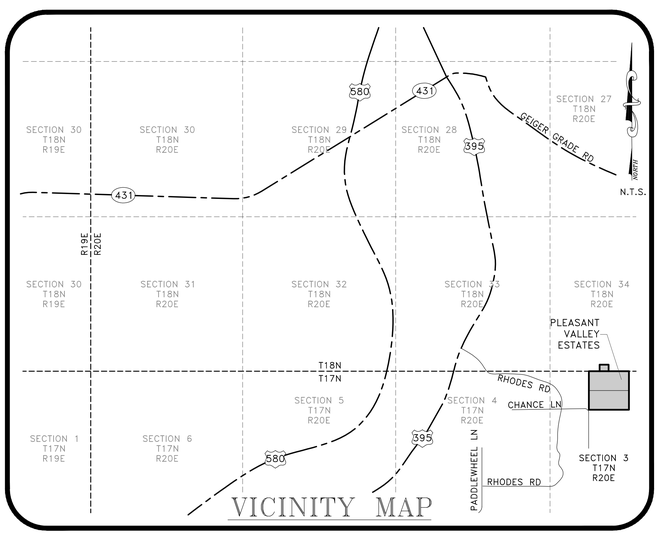
PROJECT DATA

RESIDENTIAL LOTS	58
RESIDENTIAL LOT AREA	31.47 ACRES
STREET AREA (TO BE DEDICATED)	5.17 ACRES
COMMON AREA	4.69 ACRES
ONSITE APNS 017-410-38, 39 AND APN 017-200-30	41.33 ACRES
CHANCE LANE ROW AREA	1.07 ACRES
TOTAL PROJECT AREA	42.40 ACRES
AVERAGE RESIDENTIAL LOT SIZE	26,496 SQ FT
SMALLEST RESIDENTIAL LOT	12,507 SQ FT
LARGEST RESIDENTIAL LOT	75,597 SQ FT
GROSS DENSITY	1.40 UNITS/ACRE

LEGEND

- PROJECT BOUNDARY
- PROPOSED PROPERTY LINE/ RIGHT OF WAY
- EXISTING LOT LINE
- CENTERLINE
- EXISTING DIRT ROAD
- EXISTING PAVED ROAD
- PROPOSED ASPHALT ROADS

THIS TENTATIVE SUBDIVISION MAP HAS BEEN CREATED AND IS IN COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF THE WASHOE COUNTY DEVELOPMENT CODE:



100' 50' 0 100' 200'

PRELIMINARY COVER SHEET
SHEET 1 of 7

SHEET 1

DATE: 6/26/2019
SCALE: 1"=100'
JOB #: FRY.01

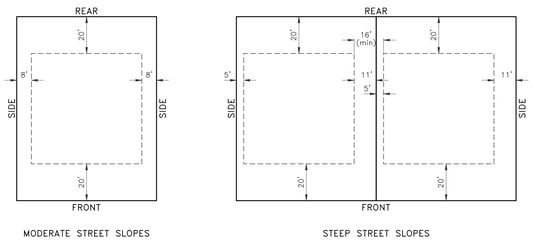
CIVIL ENGINEERING CONSULTANTS
9437 DOUBLE DIAMOND PARKWAY, STE 17
RENO, NEVADA 89521
PH (775) 352-7900 – FAX (775) 352-7929

PLEASANT VALLEY ESTATES TENTATIVE MAP

BASIS OF BEARING

THE NAD-83/94 NEVADA STATE PLANE WEST ZONE (EPOCH 2010) COORDINATE GRID BEARINGS FROM THE TRUCKEE MEADOWS REGIONAL GPS "VRS" NETWORK. GROUND COORDINATES ARE SHOWN AND WERE OBTAINED BY MULTIPLYING THE GRID COORDINATES BY THE SPARKS MODIFIED SCALE FACTOR OF 1.000197939 (R/S 2775, R/S 3396, & R/S 3885). ALL DISTANCES SHOWN ARE GROUND DISTANCES.

TYPICAL LOT SETBACKS



MODERATE STREET SLOPES

STEEP STREET SLOPES

NOTES:

1. ALL STREETS WITHIN THE TENTATIVE MAP ARE PROPOSED PUBLIC UNLESS NOTED OTHERWISE.

LEGEND

- PROJECT BOUNDARY
- PROPOSED LOT LINE
- EXISTING LOT LINE
- PROPOSED A.C. PAVEMENT AREA
- EASEMENT
- EXISTING EASEMENT
- EXISTING PAVED ROAD

NORTH

APN 017-200-27 DIANE E. BARRY

APN 017-200-28 DIANE E. BARRY

APN 017-200-48 WESLEY S. BRANINBURG

APN 017-200-09 JOSEPH R. BRANINBURG

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENTS PER BLM PATENT #1206441

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENTS PER PM 3285, AND BLM PATENT #1206441

APN 017-200-12 TRICIA REED E. AL.

APN 017-200-11 DONNA & RONALD KOLLMAN

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENTS PER BLM PATENT #1218140

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENTS PER ROS 1674 & 893, AND BLM PATENT #1218139

ROCKY VISTA RD (EXIST)

APN 017-200-31 EMERSON & MARYE ANN READ

10 PRIVATE ACCESS & DRAINAGE EASEMENT

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENTS PER PM 2889 AND BLM PATENT #1225686

APN 017-200-35 JERI AUSTIN

APN 017-200-34 LAURIE MASI

APN 017-200-30 PLEASANT VALLEY RANCH ESTATES LLC

ALTERNATE ACCESS ROUTE

66' ROAD AND UTILITY EASEMENT CENTERED ON THE PROPERTY LINE PER PM 866, AND BLM PATENT #1218140 & #1219065

APN 017-200-26 MARTIN & GERRI BIEGLER FAMILY TRUST

(e)33' ROAD AND UTILITY EASEMENT PER PM 866, AND BLM PATENT #1219065

(e)33' ROAD ACCESS AND PUBLIC UTILITY EASEMENT PER PM 866, ROS 5970, AND BLM PATENT #1219065

SECRET PASS RD (EXIST)

APN 017-211-05 UNITED STATES OF AMERICA

APN 017-211-07 UNITED STATES OF AMERICA

ALTERNATIVE EMERGENCY ACCESS ROUTE

PROPOSED 30' UTILITY ACCESS & MAINTENANCE EASEMENT

20' WATERLINE EASEMENT PER TM 4769

7.5' CATV EASEMENT PER TM 5036

APN 017-400-66 JOHN B. RHODES, ET. AL.

APN 017-400-64 JOHN B. RHODES, ET. AL.

APN 017-400-63 JOHN B. RHODES, ET. AL.

APN 017-400-01 UNITED STATES OF AMERICA

COMMON AREA 9319 SF

COMMON AREA 22657 SF

LOT #1 20206 SF

LOT #2 17232 SF

LOT #3 17483 SF

LOT #4 19831 SF

(e) BUILDING TO BE REMOVED

HORSE CORRAL CT

42' ROW 32' FFC/FFC

LOT #5 19795 SF

LOT #6 12020 SF

LOT #7 12049 SF

LOT #8 25979 SF

VISTA SIERRA RD

LOT #9 32776 SF

LOT #10 16666 SF

LOT #11 15197 SF

LOT #12 34950 SF

LOT #13 27969 SF

LOT #14 23469 SF

LOT #15 19241 SF

LOT #16 19225 SF

LOT #17 22427 SF

LOT #20 13750 SF

LOT #21 13750 SF

LOT #22 13750 SF

LOT #23 13750 SF

LOT #24 19580 SF

LOT #25 15447 SF

LOT #26 13750 SF

LOT #27 13750 SF

LOT #28 13750 SF

LOT #29 13750 SF

LOT #30 15136 SF

LOT #31 13750 SF

LOT #32 15351 SF

LOT #33 13200 SF

LOT #34 13245 SF

LOT #35 13200 SF

LOT #36 13200 SF

LOT #37 13200 SF

LOT #38 13200 SF

LOT #39 168942 SF

LOT #40 21234 SF

LOT #41 13291 SF

LOT #42 13465 SF

LOT #43 14678 SF

LOT #44 14478 SF

LOT #45 13200 SF

LOT #46 15212 SF

LOT #47 31955 SF

LOT #48 60791 SF

LOT #49 35836 SF

LOT #50 75597 SF

LOT #51 35788 SF

LOT #52 31230 SF

LOT #53 30985 SF

LOT #54 64492 SF

LOT #55 56099 SF

LOT #56 74441 SF

LOT #57 69653 SF

LOT #58 29061 SF

BIG VIEW RD

WESTWARD VIEW RD

HORSEBACK CT

BUNKHOUSE CT

COMMON AREA A 9176 SF

COMMON AREA C 126062 SF

COMMON AREA

DETENTION POND 34147 SF

LIFT STATION 3552 SF

(e)±3250 SF RESIDENCE (TO REMAIN)

(e)PROPERTY LINE N 89° 59' 48" W 1321.01 TO BE REMOVED

30' WATER & SS ACCESS AND MAINTENANCE EASEMENT (PER THIS MAP)

20' PRIVATE ACCESS & DRAINAGE EASEMENT

24' PRIVATE AC ACCESS ROAD CENTERED WITHIN A 30' PRIVATE ACCESS AND PUBLIC WATER & SEWER EASEMENT (PER THIS MAP)

PROPOSED 42' WASHOE COUNTY UTILITY & ROADWAY MAINTENANCE EASEMENT CENTERED ON THE PROPERTY LINE

42' ROW 32' FFC/FFC

15' PUE PER PM 3702

PROPOSED 30' UTILITY ACCESS & MAINTENANCE EASEMENT

APN 017-510-20 ROGELIO JIMINEZ - RECENDIS

APN 017-510-21 ROBB C. KELLEY, ET. AL.

APN 017-510-22 CLEVELAND LIVING TRUST

APN 017-510-26 NEVADA RENTAL FUND INVESTORS, L.P.

(e)20' SANITARY SEWER AND PUBLIC UTILITY EASEMENT PER DOC. No. 4504152

PROPOSED 20' PAVED SEWER, ACCESS & MAINTENANCE EASEMENT

STAR POINTE DR (EXISTING/PRIVATE)

APN 017-510-31 CHRISTOPHER & CRISTIN PETERSON

APN 017-510-32 PHILIP & GINA DERRYMAN

APN 017-510-33 CHINOOK TRUST

APN 017-510-34 JEFFERY & SUMMER BEAN

APN 017-510-35 RICH A. LEONE

APN 017-510-36 NEVADA RENTAL FUND INVESTORS, L.P.

APN 017-510-37 MAJESTIC RANCH ESTATES II H.O.A.

APN 017-510-38 MAJESTIC RANCH ESTATES II H.O.A.

RIDGE STAR CT (EXIST/PRIVATE)

APN 017-410-38 PLEASANT VALLEY RANCH ESTATES LLC

APN 017-410-39 PLEASANT VALLEY RANCH ESTATES LLC

APN 017-410-02 BROWN MARTIN FAMILY TRUST

APN 017-410-15 JOHN & LISA CRUM FAMILY TRUST

APN 017-400-08 SCOTT & MARCY ROBERT & MARTHA TOTE LIVING TRUST

APN 017-400-62 SCOTT & MARCY JORDAN 1989 REVOCABLE TRUST

APN 017-400-13 BARBARA & LEON DOWTY

APN 017-400-14 CHAD & STEPHANIE LARSEN

APN 017-400-15 ERIC & LEDENA BROOKE

APN 017-400-16 WAITE FAMILY TRUST

APN 017-390-17 ERICKSON LIVING TRUST

APN 017-390-20 CHRIS & FRIEDA KURTZ TRUST

APN 017-390-19 CHRIS & FRIEDA KURTZ TRUST

RHODES RD (EXIST/PUBLIC)

CHANCE LANE

MATCH (e)AC

CONST. ±16' WIDE GRAVEL ACCESS/ DRIVEWAY

CONST. ±16' WIDE GRAVEL ACCESS/ DRIVEWAY, MATCH (e)DIRT ROAD

50' ROW 24' FFC/FFC

"STOP" & STREET NAMES SIGN(S) (TYP)

CROSSWALK PAVEMENT MARKINGS (TYP)

CONST. ±24' WIDE GRAVEL ACCESS RD, MATCH (e)DIRT ROAD

(e) 30' ACCESS & PUE PER DOC. NO. 2122734

(e)50' PUE & ROADWAY EASEMENT TO BE ABANDONED UPON CREATION OF DEDICATED ACCESS 50' ROW OFFERED FOR DEDICATION PM NO. 1196 (NOT ACCEPTED)

(e)25' SANITARY SEWER AND PUBLIC UTILITY EASEMENT PER P.M. 5286

CONST. 30' WIDE PCC DRIVEWAY APRON. MATCH (e)AC DRIVEWAY

S 89°36'18" E 1319.52

N 89°36'46" E 330.90

S 89°42'01" W 331.17

N 00°21'06" W 1287.88

N 00°37'14" E 1287.88

N 00°44'43" E 1306

100' 50' 0 100' 200'

PRELIMINARY SITE PLAN
SHEET 2 of 7

SHEET 2

DATE: 6/26/2019
SCALE: 1"=100'
JOB #: FRY.01

TEC CIVIL ENGINEERING CONSULTANTS

PLEASANT VALLEY ESTATES TENTATIVE MAP

LEGEND

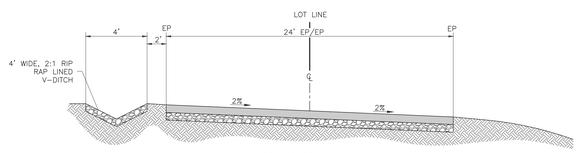
- PROJECT BOUNDARY
- STORM DRAIN (SEE DESCRIPTION) (DASHED IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- A.C. PAVEMENT AREA
- CONCRETE AREA
- ROCKERY RETAINING WALL (6' max)
- STORM DRAIN MAIN (DASHED IF EXISTING)
- GRADE BREAK
- 90.00 FL — PROPOSED GRADE @ FLOWLINE
- 80.00 FG — PROPOSED GRADE @ FINISH GRADE
- 90.00 GB — PROPOSED GRADE @ GRADEBREAK
- 80.00 HP — PROPOSED GRADE @ HIGHPOINT
- 90.00 LP — PROPOSED GRADE @ LOWPOINT
- 80.00 TW — PROPOSED GRADE @ TOP OF WALL
- 90.00 BW — PROPOSED GRADE @ BOTTOM OF WALL
- 80.00 TC — PROPOSED GRADE @ TOP OF CURB
- 4700 — EXISTING CONTOUR LINE
- 75 — PROPOSED CONTOUR LINE
- EXISTING LOT LINE
- LOT #3 — LOT NUMBERS
- SLOPE INDICATOR
- EXTENTS OF GRADING
- APPROXIMATE AREAS WITH SLOPES >30%

NOTES:

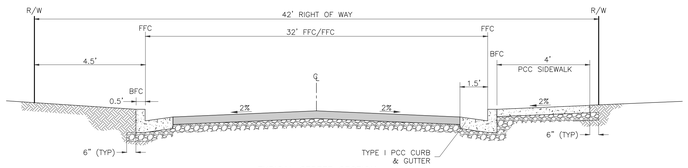
1) ADD 4600 FEET TO ALL SPOT ELEVATIONS.
2) ENTIRE PROJECT LOCATED WITHIN FEMA UNSHADED ZONE X.
3) ALL 2:1 SLOPES ALONG CHANCE LANE TO BE COVERED WITH 56"-12" RIP RAP PER GEOTECHNICAL ENGINEER'S AND/OR LANDSCAPE ARCHITECT'S RECOMENDATIONS WITH FINAL DESIGN.
4) ALL 3:1 SLOPES TO BE TREATED WITH EITHER DG MULCH, 4" ROCK MULCH OR REVEG SEEDING MIX PER LANDSCAPE ARCHITECT'S RECOMENDATIONS WITH FINAL DESIGN.
5) DUST PALLIATIVE AND SILT FENCES TO BE UTILIZED ON ALL DISTURBED AREAS UNDEVELOPED FOR OVER 30 DAYS. ADDITIONAL BMPS TO BE PROVIDED AS REQUIRED.

EARTHWORK QUANTITIES

TOTAL PROJECT AREA	42.40 ACRES
TOTAL DISTURBED AREA	29.22 ACRES
TOTAL AREA >30%	1.70 ACRES
EARTHWORK QUANTITY	230,922 CUYDS
NET EXPORT	0 CUYDS



PRIVATE ACCESS ROAD STREET SECTION
N.T.S.



TYPICAL STREET SECTION
N.T.S.

BASIS OF ELEVATION

BASIS OF ELEVATIONS IS THE RENO DATUM, NAVD 1988

40' 20' 0 40' 80'

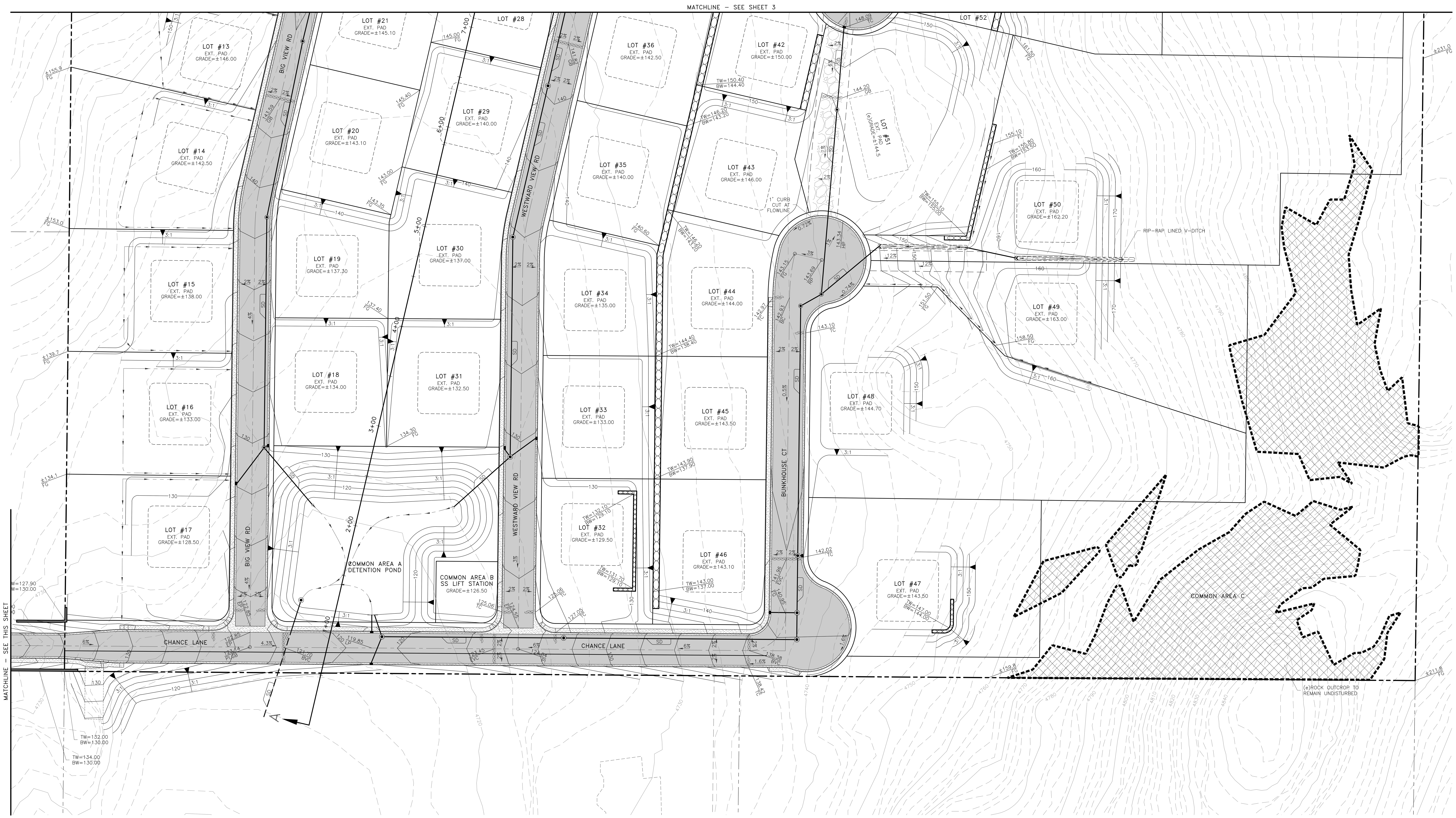
PRELIMINARY GRADING PLAN
SHEET 3 of 7

SHEET 3

DATE: 6/26/2019
SCALE: 1"=40'
JOB #: FRY.01

TEC CIVIL ENGINEERING CONSULTANTS

PLEASANT VALLEY ESTATES TENTATIVE MAP



LEGEND

- PROJECT BOUNDARY
- STORM DRAIN (SEE DESCRIPTION) (DASHED IF EXISTING)
- CATCH BASIN (HOLLOW IF EXISTING)
- STORM DRAIN MANHOLE (HOLLOW IF EXISTING)
- A.C. PAVEMENT AREA
- CONCRETE AREA
- RETAINING WALL
- ROCKERY RETAINING WALL (6' max)
- SD — STORM DRAIN MAIN (DASHED IF EXISTING)
- GRADE BREAK
- 90.00 FL — PROPOSED GRADE @ FLOWLINE
- 80.00 FG — PROPOSED GRADE @ FINISH GRADE
- 90.00 GB — PROPOSED GRADE @ GRADEBREAK
- 80.00 HP — PROPOSED GRADE @ HIGHPOINT
- 90.00 LP — PROPOSED GRADE @ LOWPOINT
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- 4700 — EXISTING CONTOUR LINE
- 75 — PROPOSED CONTOUR LINE
- EXISTING LOT LINE
- LOT #3 — LOT NUMBERS
- SLOPE INDICATOR
- EXTENTS OF GRADING
- APPROXIMATE AREAS WITH SLOPES >30%

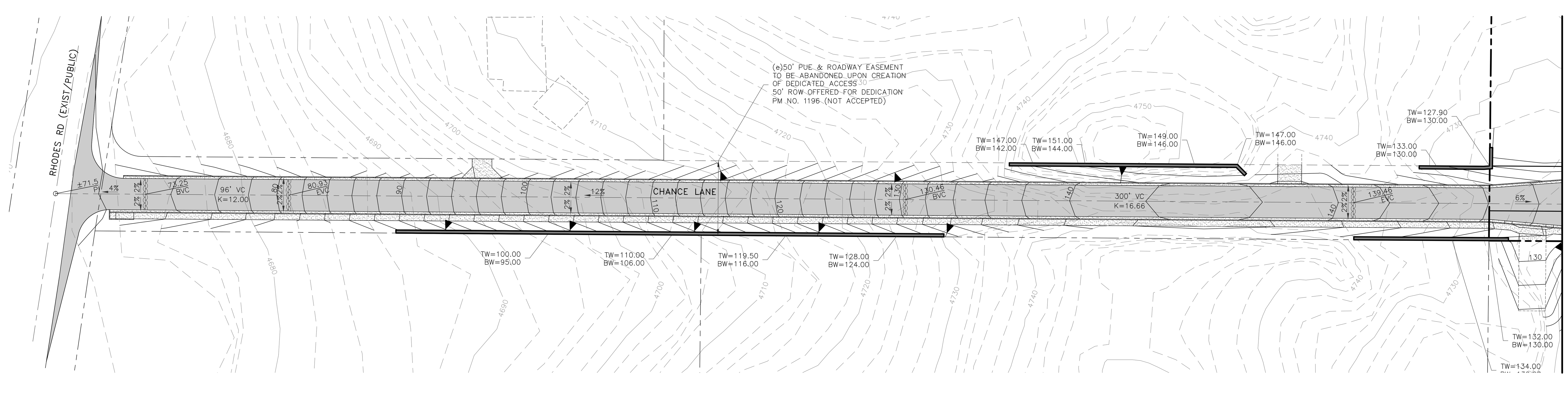
NOTES:

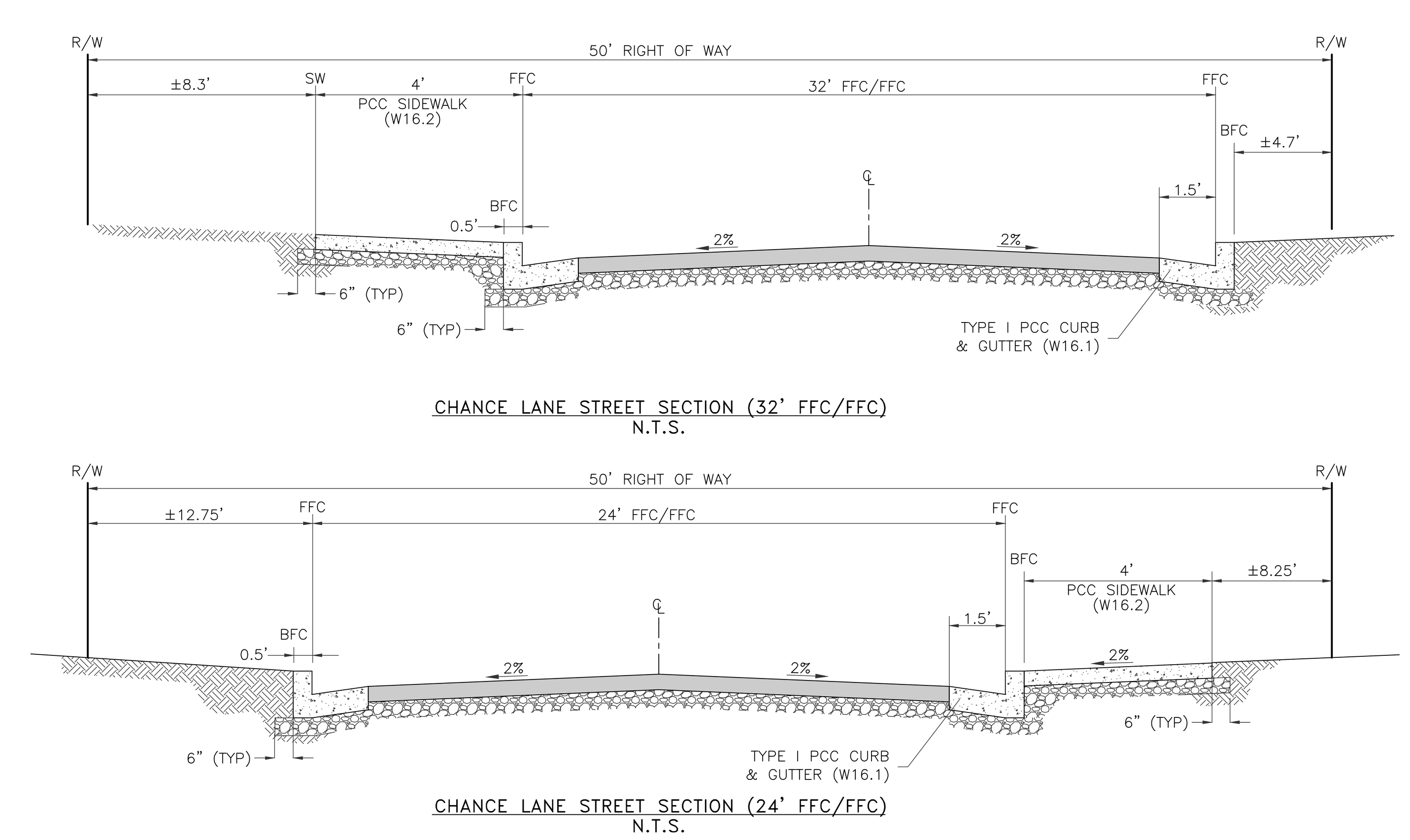
1) ADD 4600 FEET TO ALL SPOT ELEVATIONS.
2) ENTIRE PROJECT LOCATED WITHIN FEMA UNSHADED ZONE X.
3) PROPER BMP'S TO BE DECIDED UPON WITH FINAL DESIGN.

EARTHWORK QUANTITIES

TOTAL PROJECT AREA .... 41.33 ACRES
TOTAL DISTURBED AREA .... 29.22 ACRES
TOTAL AREA >30% .... 1.70 ACRES

EARTHWORK QUANTITY...................... 230,922 CUYDS
NET EXPORT .... 0 CUYDS





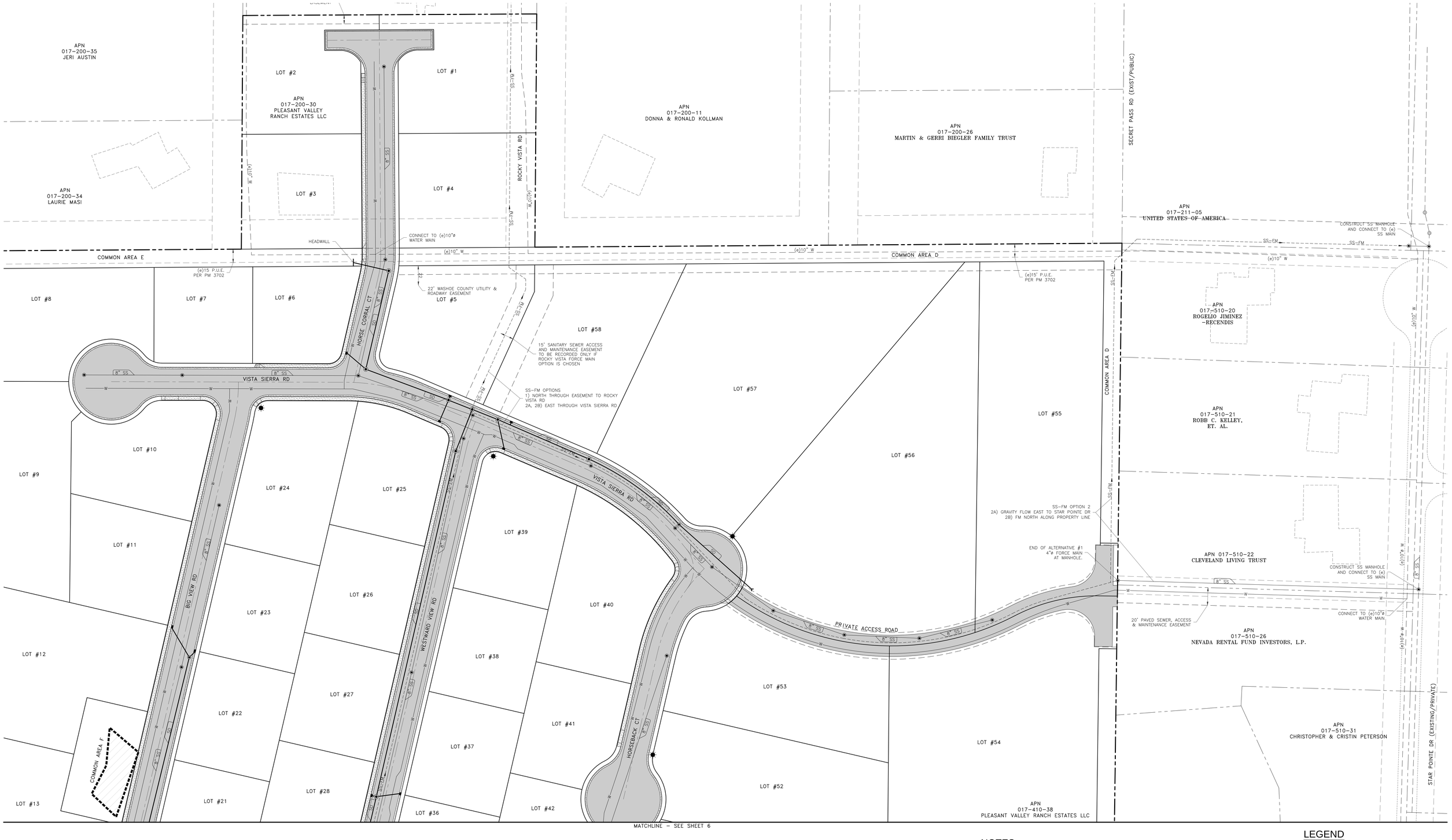
PRELIMINARY GRADING PLAN
SHEET 4 of 7

DATE: 6/26/2019
SCALE: 1"=40'
JOB #: FRY.01

SHEET 4

TEC CIVIL ENGINEERING CONSULTANTS
9437 DOUBLE DIAMOND PARKWAY, STE 17
RENO, NEVADA 89521
PH (775) 352-7800 ~ FAX (775) 352-7929

PLEASANT VALLEY ESTATES TENTATIVE MAP



CABLE ..... CHARTER COMMUNICATIONS
ELECTRIC ..... NV ENERGY
GAS ..... NV ENERGY
SANITARY SEWER ..... RENO SPARKS JOINT WASTEWATER PLANT
SOLID WASTE ..... WASTE MANAGEMENT
TELEPHONE ..... AT&T
WATER ..... TRUCKEE MEADOWS WATER AUTHORITY

NOTES:

1) ALL PROPOSED WATER TO BE OWNED AND MAINTAINED BY TRUCKEE MEADOWS WATER AUTHORITY.
2) ALL PROPOSED SEWER TO BE PUBLICLY OWNED AND MAINTAINED.
3) ALL PROPOSED STORM DRAIN TO BE PUBLICLY OWNED AND MAINTAINED. (UNLESS OTHERWISE NOTED)

LEGEND

- PROJECT BOUNDARY
- PROPOSED PROPERTY LINE/ RIGHT OF WAY
- EXISTING LOT LINE
- 8" SS — PROPOSED SANITARY SEWER (DASHED IF EXISTING)
- 12" SD — PROPOSED STORM DRAIN (DASHED IF EXISTING)
- W — PROPOSED WATER MAIN (DASHED IF EXISTING)
- MANHOLES (HOLLOW IF EXISTING)
- CATCH BASIN
- CENTERLINE
- PROPOSED ASPHALT ROADS
- PROPOSED GRAVEL AREAS
- PROPOSED STREET LAMP

40' 20' 0 40' 80'

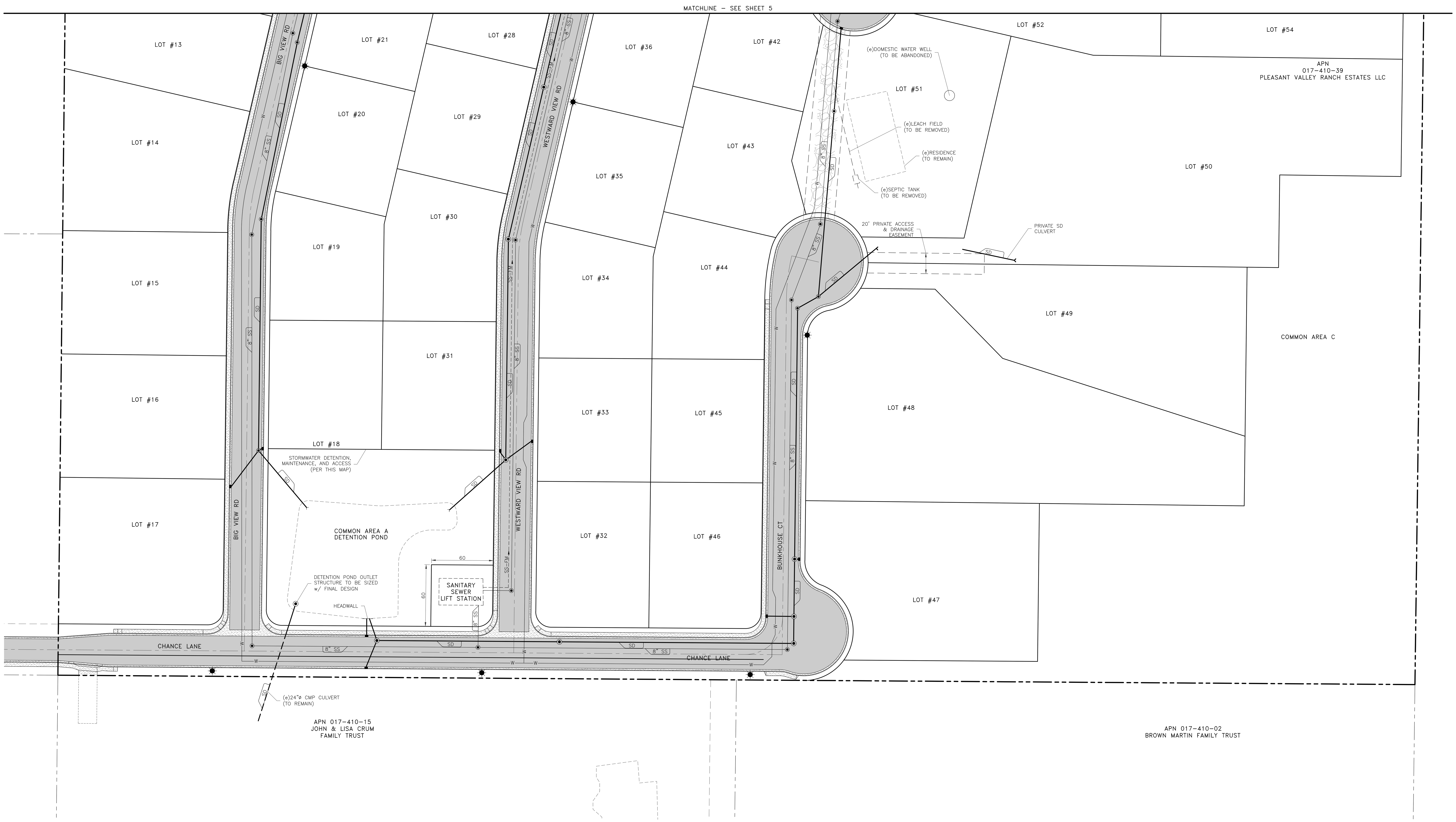
PRELIMINARY UTILITY PLAN
SHEET 5 of 7

SHEET 5

DATE: 6/26/2019
SCALE: 1"=40'
JOB #: FRY.01

TEC
CIVIL ENGINEERING CONSULTANTS
5441 KIETZKE DIAMOND PARKWAY, STE 17
RENO, NEVADA 89511
PH (775) 850-7888 • FAX (775) 850-7889

PLEASANT VALLEY ESTATES TENTATIVE MAP



NOTES:

1) ALL PROPOSED WATER TO BE OWNED AND MAINTAINED BY TRUCKEE MEADOWS WATER AUTHORITY.
2) ALL PROPOSED SEWER TO BE PUBLICLY OWNED AND MAINTAINED.
3) ALL PROPOSED STORM DRAIN TO BE PUBLICLY OWNED AND MAINTAINED. (UNLESS OTHERWISE NOTED)

LEGEND

- PROJECT BOUNDARY
- PROPOSED PROPERTY LINE/ RIGHT OF WAY
- EXISTING LOT LINE
- 8" SS — PROPOSED SANITARY SEWER (DASHED IF EXISTING)
- 12" SD — PROPOSED STORM DRAIN (DASHED IF EXISTING)
- W — PROPOSED WATER MAIN (DASHED IF EXISTING)
- MANHOLES (HOLLOW IF EXISTING)
- CATCH BASIN
- CENTERLINE
- PROPOSED ASPHALT ROADS
- PROPOSED GRAVEL AREAS
- PROPOSED STREET LAMP

40' 20' 0 40' 80'

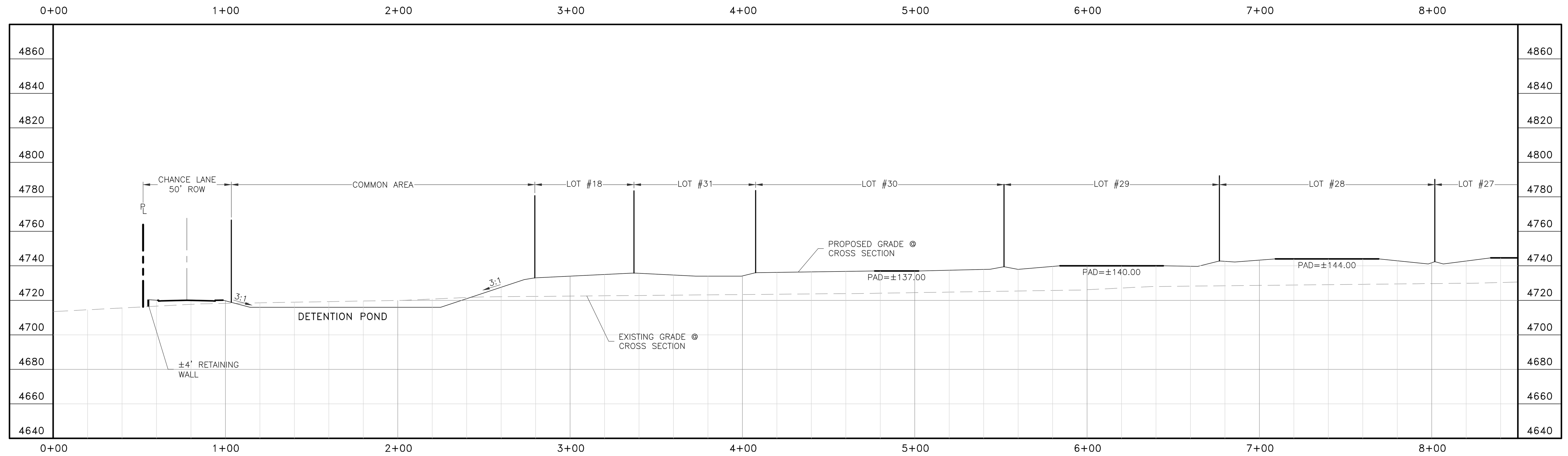
PRELIMINARY UTILITY PLAN

DATE: 6/26/2019
SCALE: 1"=40'
JOB #: FRY.01

CIVIL ENGINEERING CONSULTANTS
9437 DOUBLE DIAMOND PARKWAY, STE 17
RENO, NEVADA 89521
PH (775) 352-7800 ~ FAX (775) 352-7929

PLEASANT VALLEY ESTATES TENTATIVE MAP

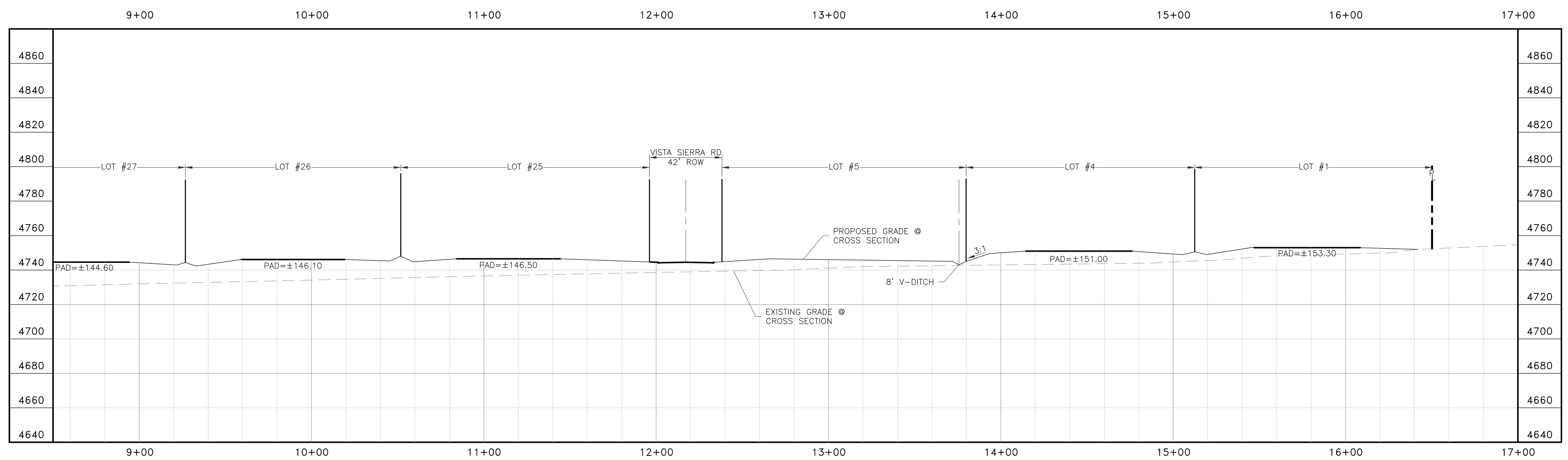
SECTION A-A



HORIZONTAL SCALE
1"=40'

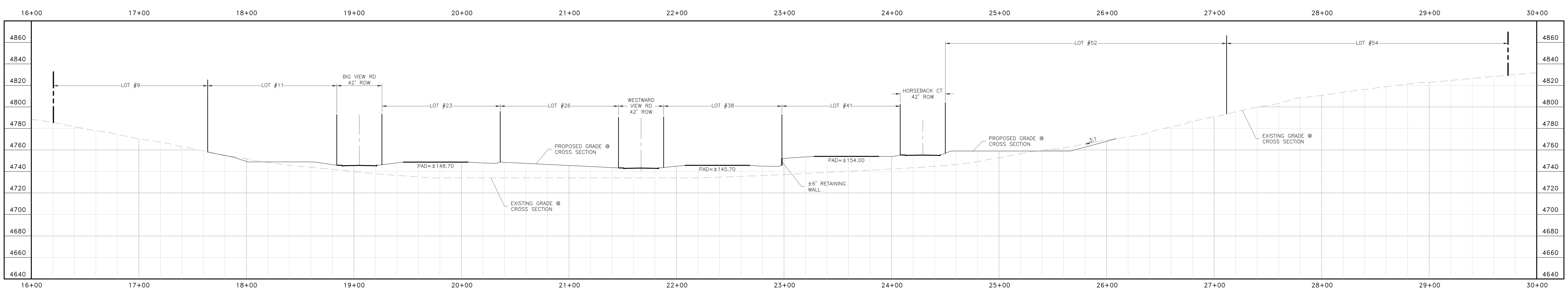
VERTICAL SCALE
1"=40'

SECTION A-A



LEGEND
PROJECT BOUNDARY
LOT LINES
EXISTING GROUND

SECTION B-B



40' 20' 0 40' 80'

DATE: 6/26/2019
SCALE: 1"=40'
JOB #: FRY.01

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