

AGENDA MATERIAL
DATE 9/17/19 ITEM NO. RA 23

Old Vail Rezoning

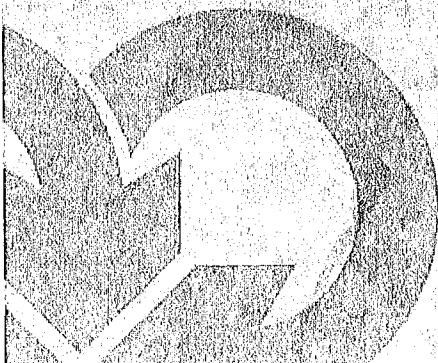
REZONING DOCUMENT

PIMA COUNTY

May 2019

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Old Vail Rezoning

Pima County, Arizona

Submitted to:

**Pima County
Development Services Department**
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May 2019

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Old Vail Rezoning

Introduction

REZONING DOCUMENT

PIMA COUNTY



Introduction

This study has been prepared per Pima County's Site Analysis requirements for the proposal of 140 single-family residences located along Old Vail Road, approximately one-half mile south of Mary Ann Cleveland Way in Township 16 South, 16 East, Section 5 and 6 in Pima County, Arizona. The subject property, herein referred to as the "Property" consists of an assemblage of three contiguous parcels defined by Assessor Parcel Numbers (APNs): 305-07-001F (approximately 24.16 acres), 305-07-001G (approximately 1.35 acres) and 305-09-012E (approximately 8.27), which total approximately 33.78 acres. The Property is currently zoned RH (Rural Homestead Zone) and GR-1 (Rural Residential Zone) and is vacant with some disturbances largely associated with informal trails. Pima County's comprehensive plan, *Pima Prospers*, designates the Property as Medium Low Intensity Urban (approximately 24.16 acres) and Medium Intensity Urban (approximately 9.62 acres). The purpose of this site analysis is to identify factors directly or indirectly influencing the rezoning of the Property from RH and GR-1 to CR-4 (Mixed-Dwelling Type Zone) for the development of a residential subdivision.

In addition to site reconnaissance, the Site Analysis was compiled utilizing topographic and hydrologic analyses, aerial photography, responses from appropriate governmental agencies, and additional background information. The Preliminary Development Plan (PDP) contained herein responds to the Property's opportunities and constraints, while addressing sound engineering and planning principles. The PDP will enable the developer to produce thoughtful design concepts derived from the analysis of the Property's physical characteristics that are sensitive and complementary to the surrounding area.



Old Vail Rezoning

Section 1: Site Inventory

REZONING DOCUMENT

PIMA COUNTY



A. Existing Land Uses

1. Location and Regional Context

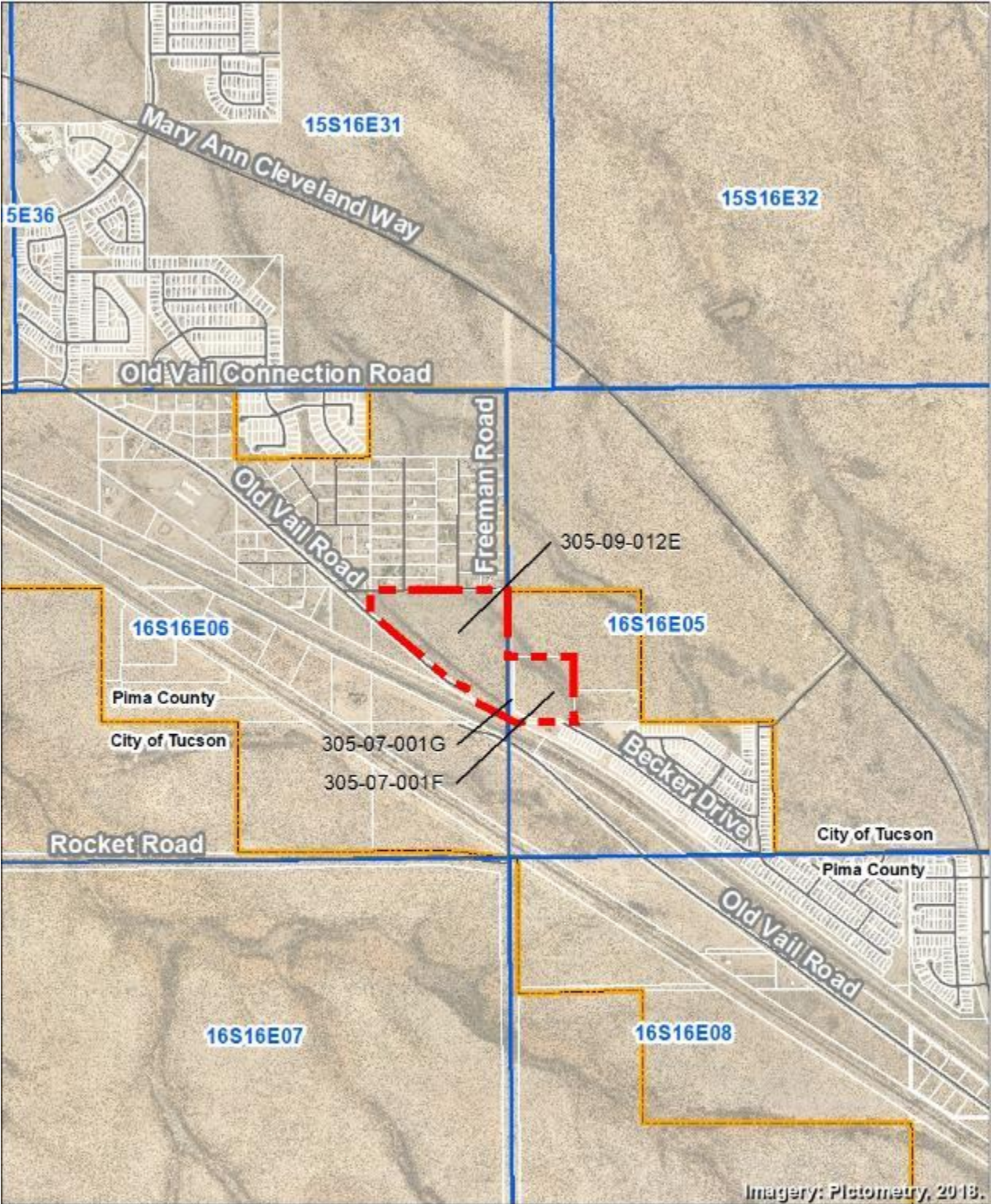
The 33.78-acre site being evaluated in this rezoning application is located within Township 16 South, Range 16 East and Sections 5 and 6 of Pima County, Arizona. More specifically, the Property is located along Old Vail Road, approximately one-half mile south of Mary Ann Cleveland Way. Interstate 10 is located approximately one and one-half mile south of the Property and can be accessed via Houghton Road by way of Mary Ann Cleveland Way or Old Vail Road.

As a result of being located in the well-respected Vail Unified School District, the general area surrounding the Property is rapidly urbanizing with medium density residential uses similar to that being proposed.

See Exhibit I.A.1: Location and Vicinity Map.



Exhibit I.A.1: Location and Vicinity Map



LEGEND

- Rezoning Boundary
- Township, Range & Section
- Jurisdiction Boundary
- Parcels

Project Site is Located at
Township 16S, Range 16E, Section 5 & 6
Assessor's Parcel #: 305-09-012E,
305-07-001G, 305-07-001F

Zoning Boundary is approximately 33.78 Acres

FILE NAME: LHV-01_location and vicinity_6x8.mxd
SOURCE: Pima County GIS, 2018



2. Existing Land Uses On-site

Information gathered from a site visit on January 3, 2019 indicated that the Property is entirely vacant with some disturbances associated with sewer improvements and informal trails that traverse the site. The Freeman Road alignment, which contains a public sewer line and consists of an unimproved dirt surface with no public right-of-way, also bisects the Property along the eastern edge of parcel 305-09-012E. There are no plans to construct or dedicate Freeman Road.

3. Existing On-Site Easements

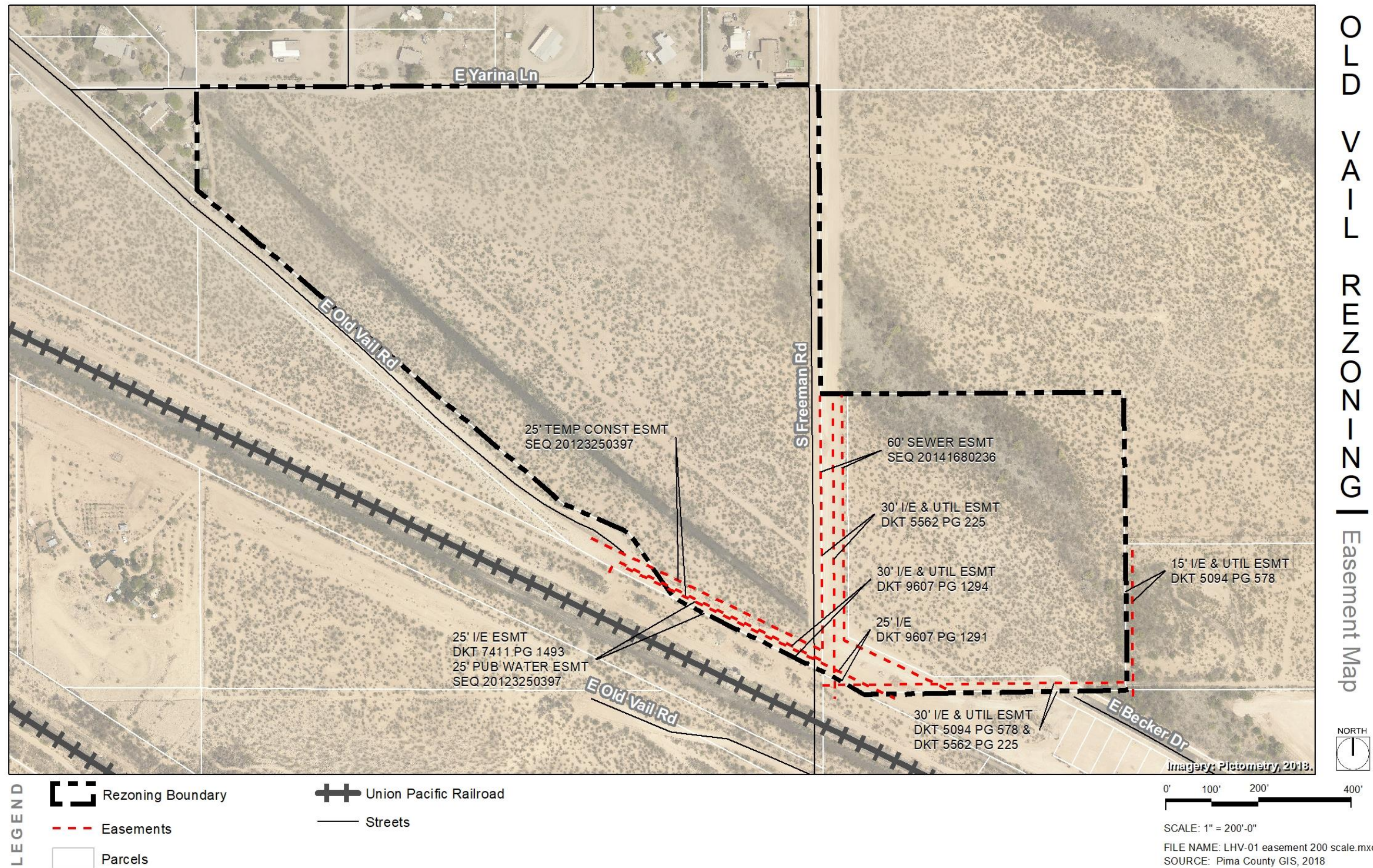
There are seven existing easements pertaining to the subject site based on an ALTA survey and title commitment for the subject property.

1. 25-foot ingress/egress easement and a 25-foot public water easement located along the southern boundary of APN: 305-09-012E per Docket 7411 Page 1493 and Sequence 20123250397, respectively
2. 25-foot temporary construction easement located along the southern boundary of APN: 305-09-012E per Sequence 20123250397
3. 30-foot ingress/egress and utility easement located along the southern boundary of APN: 305-09-012E per Docket 9607 Page 1294
4. 25-foot ingress/egress easement located along the southwestern boundary of APN: 305-07-001G per Docket 9607 Page 1291
5. 30-foot ingress/egress and utility easement located along the west and southern boundaries of APN 305-07-001G and along the southernmost boundary of APN 305-07-001F (area adjacent to southeastern corner of APN 305-07-001G) per Docket 5094 Page 578 and Docket 5562 Page 225
6. 15-foot ingress/egress easement on APN: 305-07-001C (offsite) adjacent to the eastern boundary of APN: 305-07-001F
7. 60-foot sewer easement along the western and southern boundary of APN 305-07-001F and within APN 305-07-001G per Sequence 20141680236.

Refer to *Exhibit I.A.3: Existing Easements*.



Exhibit I.A.3: Existing Easements



4. Comprehensive Plan Designations On-Site and Surrounding

As shown in *Table I.A.4: Comprehensive Plan Designations*, the existing Pima Prospects land use designations on the Property and for areas surrounding the Property are as follows:

Table I.A.4: Comprehensive Plan Designations

Site	MLIU (Medium Low Intensity Urban) and MIU (Medium Intensity Urban)
North	MIR (Medium Intensity Rural) and MIU (Medium Intensity Urban)
South	MA (Military Airport), MIU and LIR (Low Intensity Rural)
East	MIU, Plan Tucson Existing Neigh. & Houghton Corridor Area designations
West	MA

5. Surrounding Land Uses

As indicated below, *Table I.A.5.a* through *Table I.A.5.c* provide the existing zoning, land uses and number of stories for the site and surrounding properties.

Table I.A.5.a: Existing Zoning

Site	RH (Rural Homestead Zone) and GR-1 (Rural Residential Zone)
North	GR-1, CR-5 (Multiple Residence Zone) and City of Tucson MH-1 (Mobile Home Zone)
South	RH and CR-5
East	CR-5, RH and City of Tucson MH-1
West	GR-1

Table I.A.5.b: Existing Land Uses

Site	Vacant
North	Manufactured Homes and Vacant Land
South	Old Vail Road right-of-way, Vacant Land, Union Pacific Railroad and Single-Family Residences
East	Single-Family Residences and Vacant Land
West	Vacant Land and Manufactured Homes

Table I.A.5.c: Number of Stories of Existing Structures

Site	None
North	One-Story
South	One- and Two-Stories
East	One- and Two-Stories
West	One-Story



6. Pending Rezoning, Plats and Development Plans

a. Pending or Conditionally Approved Rezoning

There is one (1) conditionally approved and no pending rezonings within one-quarter mile of the Property. The conditionally approved rezoning is for a 25-acre property located immediately east of the Property identified by APN 305-07-001. Refer to Pima County rezoning case number Co9-13-15 for the approval from RH to CR-5 in 2015. The proposal allows for approximately 100 single-family residences and minimum lot dimensions of 45 feet by 115 feet.

b. Plats and Development Plans

There is one approved subdivision plat within one-quarter mile of the Property. Vista Del Lago Norte (VDLN), approved in 2014, is a 43.90-acre subdivision consisting of 198 lots at an overall density of 4.53 residences per acre. Vista Del Lago Norte is located immediately south of parcels 305-07-001F and -001G and is currently under construction. It is intended that the street network for the proposed subdivision as part of this rezoning application will tie into the Vista Del Lago Norte street network at the northwest corner of VDLN near lot #159.

B. Topography

1. Topographic Characteristics

The topographic relief onsite gently slopes from south to north with elevations ranging from 3,124 feet at the riparian area along the northern boundary to 3,144 feet along the southern boundary. The former Esmond Station Railroad alignment which runs parallel to the boundary edge adjacent to Old Vail Road is elevated with small side slopes on either side.

a. **Restricted Peaks and Ridges**

There are no restricted peaks or ridges located on-site.

b. **Rock Outcrops/Talus Slopes**

There are no rock outcrops or talus slopes located on-site.

c. **Slopes of 15% or greater**

There are no 15% or greater slopes located on-site.

d. **Significant Topographic Features**

There are no significant topographical features located on-site.

e. **Existing grading**

The site is vacant, and therefore, no ground disturbance has occurred on the subject property except for that associated with ingress/egress and utility easements as shown on *Exhibit I.B.1: Topographic Characteristics Map*.

2. Pre-Development Average Cross Slope

The average cross slope of the parcel is 2.2%, as calculated by performing the following calculation:

$$ACS (\%) = \frac{I \times L \times 0.0023}{A}$$

Interval (I) = 2'

Total length of contours (L) = 15,890'

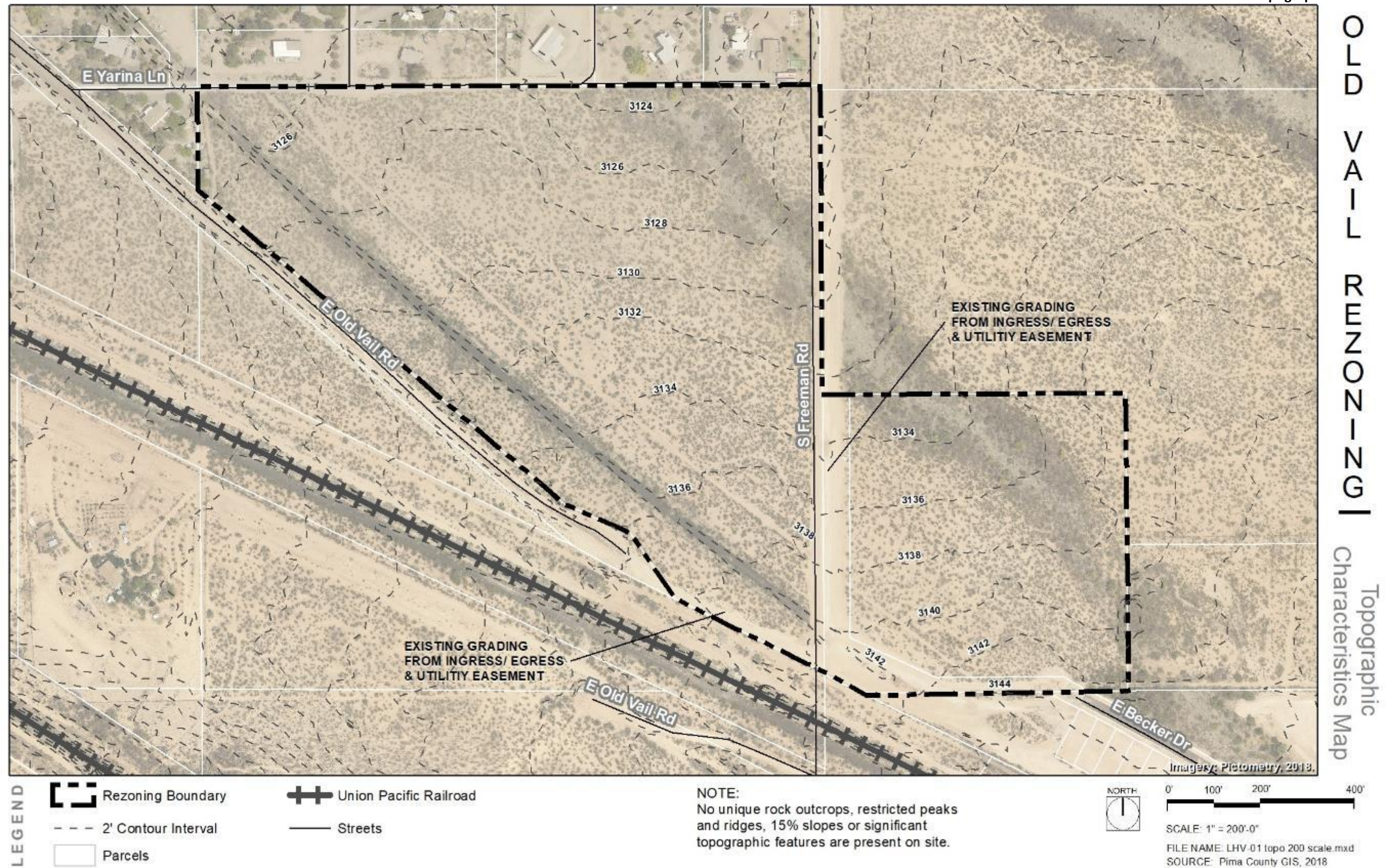
Area (A) = 33.78 acres

$$ACS = \frac{2 \times 15,890 \times 0.0023}{33.78}$$

ACS = 2.2



Exhibit I.B.1: Topographic Characteristics Map



C. Hydrology

1. Off-Site Hydrology/Watersheds

PAG topographical survey information was used to determine that there is one offsite watershed that affects the project site. This wash has a drainage area of 95.4 acres that extends almost two miles to the southeast on the north side of the UPRR. This wash enters at the southeast corner of the property (CP-1 on *Exhibit I.C.1*) as a broad shallow swale.

There are three locations where storm water flows exit the project site along the north boundary; one of which being the exit point for the offsite wash entering at CP-1, the other two being discharge points for onsite watersheds. These concentration points are identified on *Exhibit I.C.1* as CP-2, CP-3 and CP-4.

At present, the majority of the offsite watershed remains in a natural condition with only about 10% of the area being occupied by a residential subdivision. Surface drainage within the upstream watershed collects within an ill-defined swale which conveys flow northwesterly toward the project site (CP-1). However, available information indicates that most of the land area within the watershed has been platted for future development.

There is one wash where the 100-year event discharge is greater than 100 cfs; located between CP-1 and CP-2. The 100-year discharge at CP-1 was calculated by the PC-Hydro method to be 328 cubic feet per second (cfs). The exit discharge at CP-2 was calculated by the same method to be 374 cfs; with a drainage area of 127.2 acres.

2. On-Site Hydrology

Exhibit I.C.1 depicts the relevant conditions of on-site hydrology.

There is one wash where the 100-year event discharge is greater than 100 cfs; located between CP-1 and CP-2. The 100-year floodplain associated with this wash is described as a shallow sheet flow area. The 100-year floodplain limits generally conform to the riparian area limits shown on *Exhibit II.B.1: Preliminary Development Plan*.

Flow conditions within the wash between CP-1 and CP-2 occur as sheet flow with depths ranging between 0.5 and 1.5 feet.

According to the Federal Emergency Management Agency Flood Insurance Rate Map Panel No. 04019C2930L, dated June 16, 2011, the project area is located in un-shaded Zone X, which is an area determined to be outside the 500-year floodplain.

The 100-year discharge at CP-1 was calculated by the PC-Hydro method to be 328 cubic feet per second (cfs). The exit discharge at CP-2 was calculated by the same method to be 374 cfs; with a drainage area of 127.2 acres. The stormwater discharges exiting the site at CP-3 (34 cfs) and at CP-4 (31 cfs) are non-regulatory.



A portion of the site is within a mapped regulated riparian habitat classified area as adopted by the 2005 Floodplain and Erosion Hazard Management Ordinance amendment.

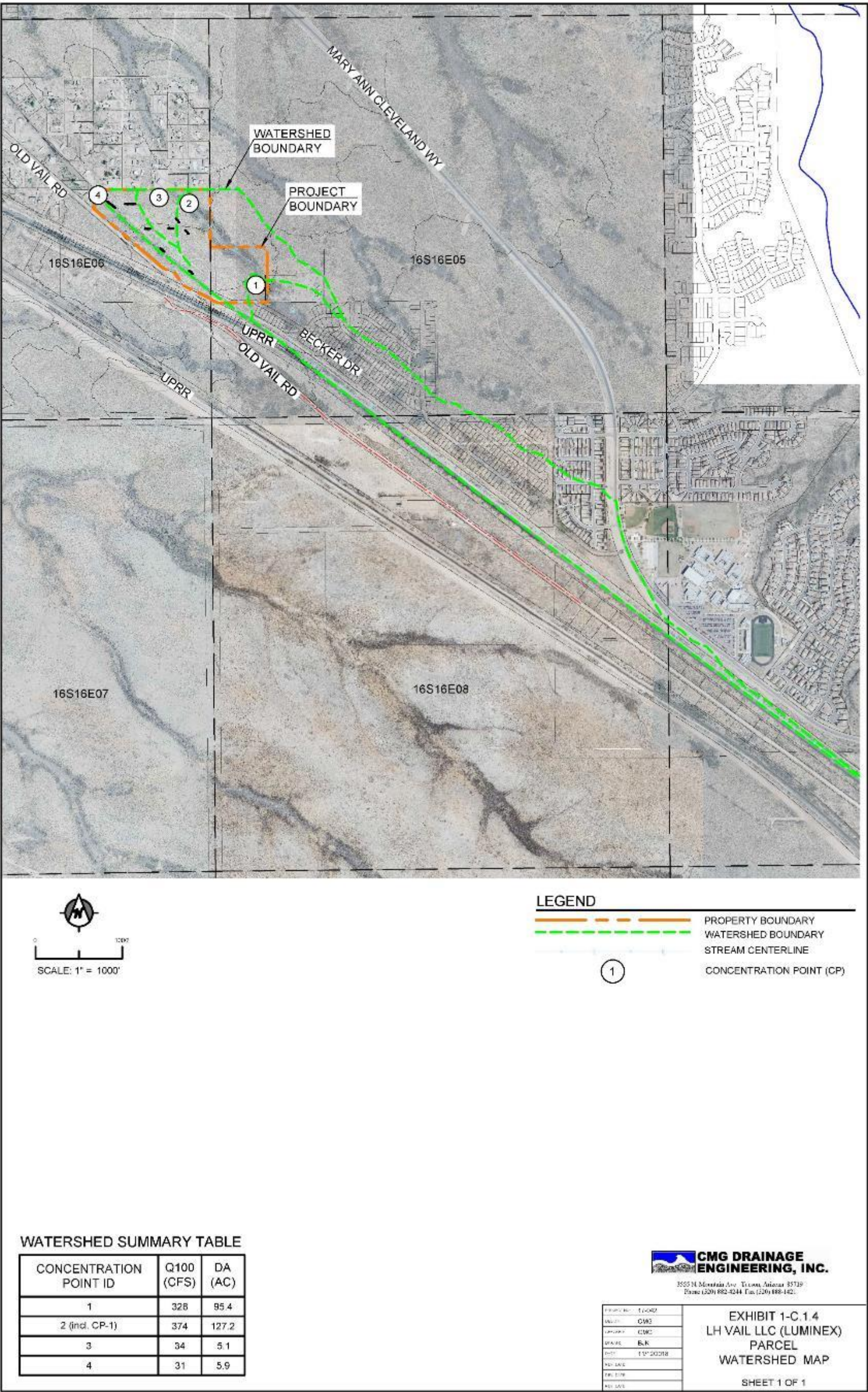
There are no onsite drainage conveying structures or basins under existing conditions.

There are no lakes, ponds wetland, springs or other sources of perennial surface water.

Erosion Hazard setbacks do not exist onsite because the regulatory wash between CP-1 and CP-2 is a sheet flow area which does not have defined banks. Flow velocities are low (2 feet per second or less) and field observations did not find any locations where erosion has occurred.

The sheet flow conditions between CP-1 and CP-2 continue along the downstream boundary through a low density (one house per acre or less) unregulated residential subdivision. There are no constructed drainageways through this subdivision, so the sheet flooding extends across portions of the residential lots.

Exhibit I.C.1: Existing Hydrology



Z:\PROJECTS\2017\17-042_LH_Vail_Parcel\property\CADD\17-042-cmgbase.dwg (Wshd) Plotted Dec 05, 2018 at 8:56am by Brenda



D. Biological Resources

1. Conservation Lands System (CLS)

According to the Pima County Conservation Lands System (CLS) Map, the entire site is outside of the CLS.

2. Priority Conservation Areas (PCA)

a. Pima Pineapple Cactus Priority Conservation Area

The site is not located within the Pima Pineapple Cactus Priority Conservation Area (PCA).

b. Needle-Spined Pineapple Cactus Priority Conservation Area

The site is not located within the Needle-Spined Pineapple Cactus PCA.

c. Cactus Ferruginous Pygmy Owl and Western Burrowing Owl

The site is located within a Priority Conservation Area for the cactus ferruginous pygmy-owl and the Western Burrowing Owl. A site visit was conducted in January 2019 and no owls were present on the site. A survey will be conducted during the platting process to determine appropriate habitat mitigation measures if deemed necessary by survey results.

3. Saguaros and Ironwood Trees

A site visit was conducted on January 3, 2019 and a preliminary plant inventory identified that there were no saguaros or ironwood trees present on the property. Further plant inventories will be completed in accordance with the Native Plant Preservation Ordinance during the platting process and appropriate mitigation will be provided if deemed necessary.

4. Habitat Protection/Community Open Space

Per the Sonoran Desert Conservation Plan, the site is not identified for habitat protection or community open space.

E. Transportation

1. Existing and Planned Off-Site Streets

a. Existing Rights-of-Way

The site is bisected by the southernmost segment of the Freeman Road alignment, which terminates at the Union Pacific Railroad tracks immediately south of the southern property boundary. Freeman Road has no public right-of-way similar to Yarina Lane bordering the north of the Property. Old Vail Road borders most of the southern boundary of the Property west of the Freeman Road alignment. Becker Drive serves the Vista Del Lago Norte subdivision to the



south and ends near the southeast corner of the Property. Characteristics of these streets are located in *Table II.E.1* and *Table II.E.1.b*.

There are no scenic routes adjacent to the project site.

The closest major intersections with a traffic signal are approximately 2.5 miles west at Houghton Road and Mary Ann Cleveland Way and east at Colossal Cave Road and Mary Ann Cleveland Way.

Old Vail Road

Old Vail Road is a 35-mph minor local road with an unimproved dirt surface and an existing right-of-way width of 60-feet. The road terminates at the Union Pacific Railroad (UPRR) and then continues south of the UPRR parallel to the tracks until it reaches Colossal Cave Road.

Mary Ann Cleveland Way

Mary Ann Cleveland Way is identified by Pima County as a Scenic, Major Route (Low Volume Arterial) with a right-of-way width of 150-feet and a posted speed limit of 45-mph. The City of Tucson also classifies Mary Ann Cleveland Way as a Scenic Arterial Street. See *Exhibit I.E.1: Traffic*.

Freeman Road

Freeman Road is a minor local road with no public right-of-way. The public roadway alignment is shown within private residential lots.

Becker Drive

Becker Drive serves the Vista Del Lago Norte subdivision and is considered a minor local road with a 45-foot right-of-way width. Its southern terminus is the T-intersection with Keegan Ave/Calle Riobamba. Keegan Avenue travels north to Steve Street which connects to Mary Ann Cleveland Way. Calle Riobamba gives way to Vista Del Lago via other residential streets as a slightly further south connection to Mary Ann Cleveland.

Table II.E.1 below addresses the right-of-way requirements as outlined for the Transportation section in the Pima County Site Analysis requirements for major roads within a one-mile radius of the project. It also addresses those roads which are adjacent to the site. Existing right-of-way information was obtained from assessor record maps. Future right-of-way information was obtained from the Pima County Major Streets and Routes Plan.



Table I.E.1: Roadway Inventory

Roadway Segment	Existing Right-of-Way*	No. Lanes	Conforms to Width Standards**	Continuous ROW*	Curb/Gutter****	Capacity***	Paving****	Posted Speed Limit****
Old Vail Road	60 feet	2	No	No	No	15,600	No	35
Mary Ann Cleveland Way	150 feet	2	No	No	No	15,600	Yes	45
Freeman Road	none	0	No	No	No	n/a	No	n/a
Becker Drive	45 feet	2	Yes	Yes	Yes	15,600	Yes	25

Source: *Pima County Mapguide (2019), **Pima County Major Streets and Scenic Routes Plan (2017), ***Florida Department of Transportation (2007), ****Google Earth (2019)

b. **Number of Travel Lanes, Capacity and Speed Limits**

Characteristics of streets within one mile of the subject property are depicted in *Table I.E.1: Roadway Inventory*.

c. **Present Average Daily Trips (ADT)**

Table II.E.1.b Average Daily Trips identifies traffic counts generated by Traffic Engineering of the Pima County Department of Transportation (PCDOT) and Pima Association of Governments Roadway Segment Traffic Counts for roadways within one mile of the project site. Traffic counts for Freeman Road and Becker Drive are not available as they are both minor local roads.

Table II.E.1.b: Average Daily Trips

Road	Average Daily Trips (Year Taken)
Mary Ann Cleveland Way (Houghton Road to Colossal Cave Road)*	8,966 (2013)
Mary Ann Cleveland Way (0.1-mile west of Red Iron Trail to Colossal Cave Road)**	10,985 (2016)
Houghton Road (Valencia Road to Mary Ann Cleveland Way)*	16,253 (2013)
Houghton Road (Mary Ann Cleveland Way to I-10)*	12,887 (2011)
Houghton Road (I-10 to Sahuarita Road)*	10,963 (2013)
Old Vail Road (Houghton Road to Colossal Cave Road)*	354 (2014)
Old Vail Road (Rita Road to Houghton Road)*	5,531 (2014)
Interstate 10 Eastbound (Houghton Road to Wentworth Road)*	10,000 (2008)
Interstate 10 Westbound (Houghton Road to Rita Road)*	20,500 (2009)
Interstate 10 Westbound (Houghton Road to Colossal Cave Road)*	10,000 (2009)

Sources:

*Pima Association of Governments (PAG) Traffic Count Records, 2017

**Pima County Department of Transportation, Traffic Engineering, 2017



d. **Existing Bicycle and Pedestrian Ways**

There is one bike route within a one-mile radius of the project site along Mary Ann Cleveland Way. Designated bike lanes can be seen on *Exhibit II.E.1: Major Roads within a One-Mile Context*.

e. **Scheduled Roadway Improvements**

According to PCDOT and the PAG 2045 Regional Transportation Plan (RTP), Mary Ann Cleveland Way/Colossal Cave Road is scheduled to be widened to 4 lanes with bike lanes and sidewalks from the Tucson city limits (about 200 feet north of Red Iron Trail) to Camino Loma Alta. The estimated project cost and time frame are \$3.9 million and 2036-2045, respectively.

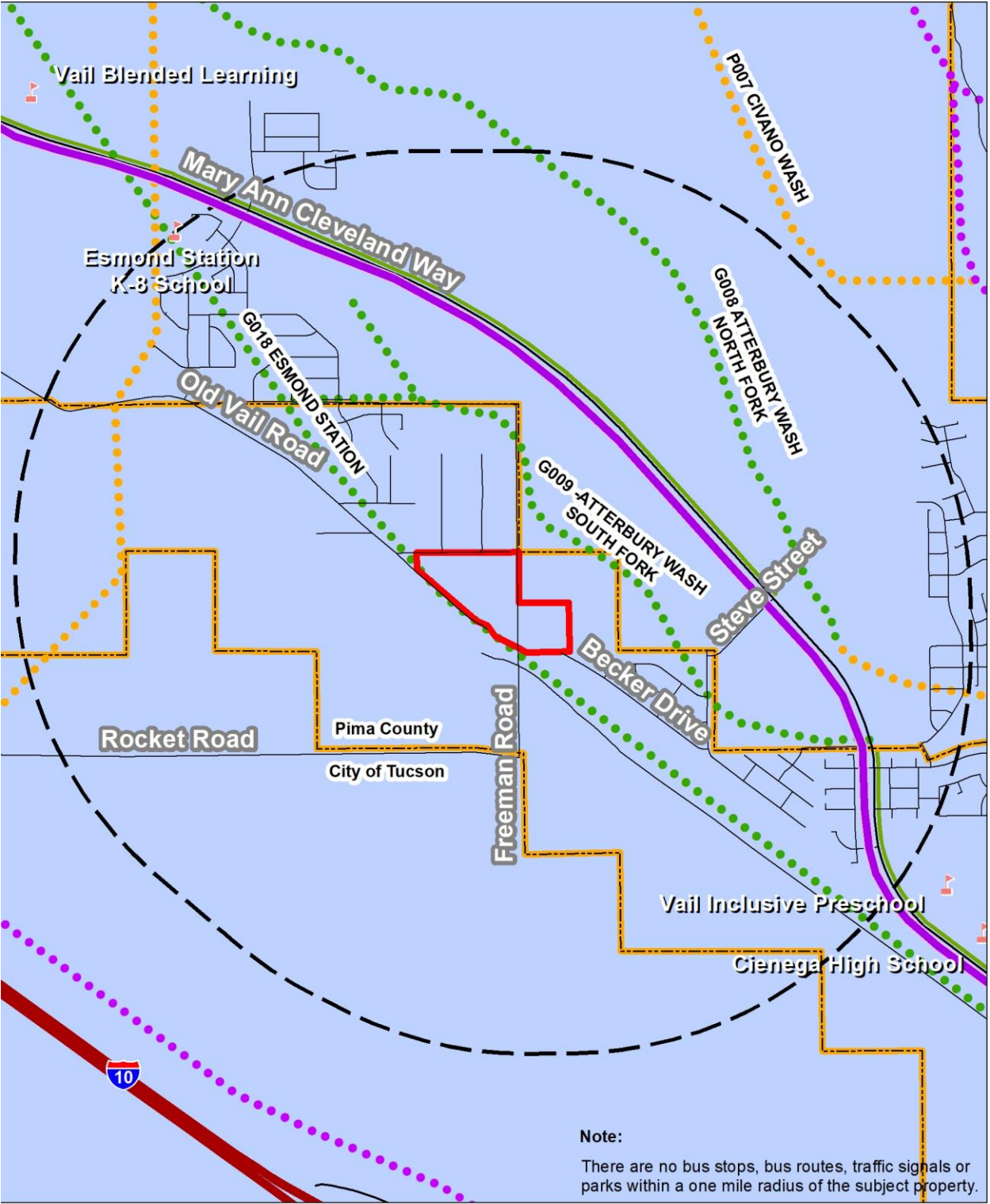
2. Distances to Existing Drives/Intersections

Exhibit I.E.2: Distance to Existing Driveways shows detailed information on existing rights-of-way adjacent to the site and the distance from the site to the nearest existing driveways. There are two intersections (Yarina Lane/Dailey Ranch Road and Yarina Lane/High Desert Drive) along the north boundary with several residential driveway cuts in between; however, no access will be provided to the north. Becker Drive is stubbed out to the south boundary, with residential driveways along the south side of the road only until Becker Drive reaches Domnitch Drive.

3. Public Transit

The nearest public transit route and stop are nearly 3 miles to the northwest at Houghton and Rita roads.

Exhibit I.E.1: Traffic



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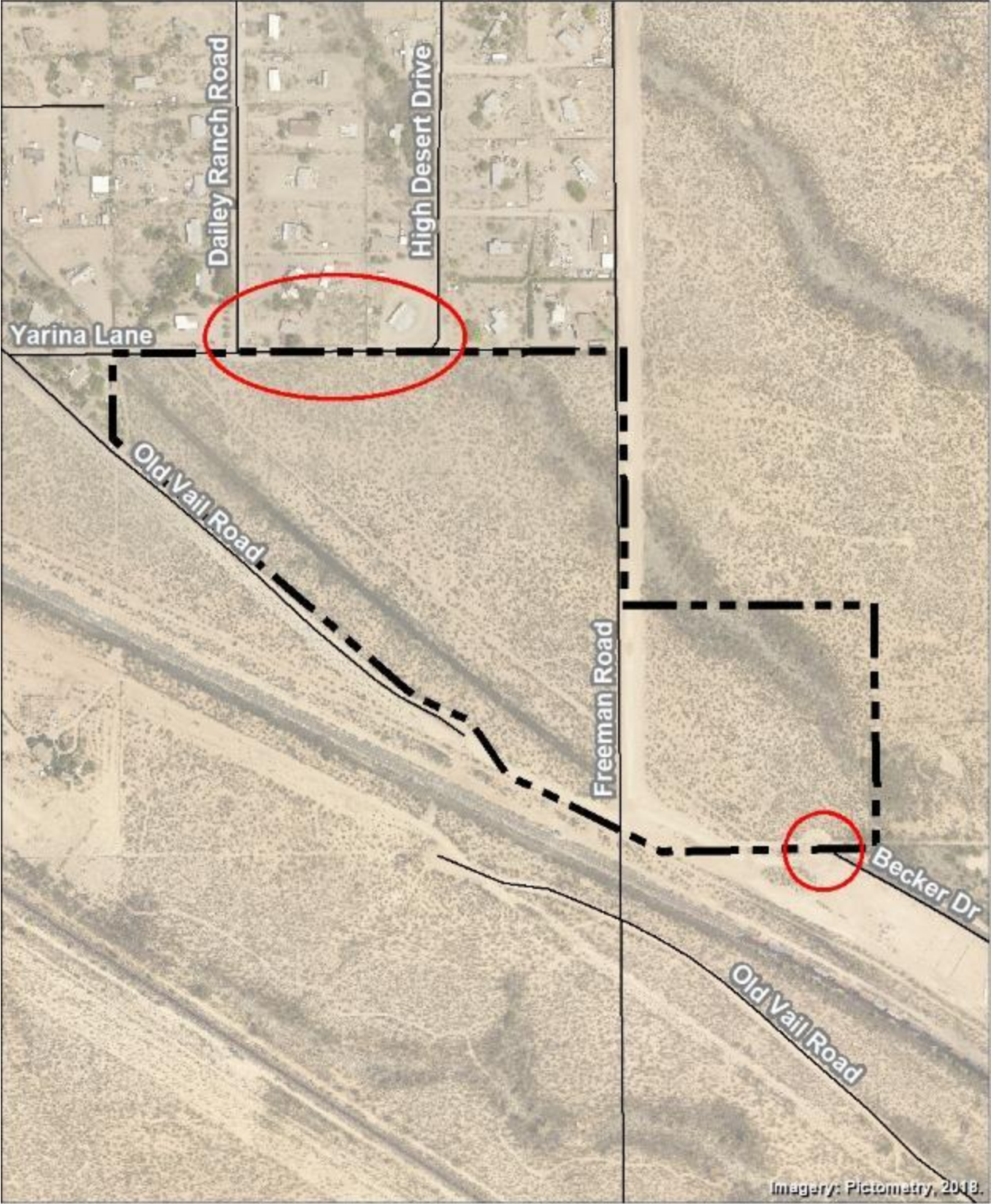
Site Boundary	MS&R Scenic Routes	Pima Regional Trails Map, 2012
One-Mile Radius	Bicycle Routes	
Jurisdictional Boundary	Public Schools	
Vail Unified School District	Proposed Greenways	
	Proposed Trails	
	Proposed Paths	

NORTH

0' 1000' 2000'

FILE NAME: LHV-01 topo 200 scale.mxd
SOURCE: Pima County GIS, 2018

Exhibit I.E.2: Distance to Existing Driveways



LEGEND

- [---] Rezoning Boundary
- Nearest Driveways



FILE NAME: LHV-01_driveways_5x8.mxd
SOURCE: Pima County GIS, 2018



F. Sewers

1. Existing Public Sewer

The Pima County Regional Wastewater Reclamation Department (RWRD) was consulted to determine sewerage capacity for the project. The site is tributary to the Agua Nueva Water Reclamation Facility via the Southeast Interceptor. Capacity is currently available for this project in the public sewer G-2016-065 downstream from manhole 2506-09. (See *Exhibit I.F.1: Wastewater Letter*). The existing sewer network, and the location of the proposed connection are displayed on *Exhibit I.F.2 Existing Sewer Network*.

2. Site Constraints for Extension of the Existing Sewer Network

The site will connect to an existing sewer network served by Pima County Regional Wastewater Reclamation Department thus no site constraints are anticipated for the extension of the existing sewer to serve the proposed development.

Exhibit I.F.1: Wastewater Letter

JACKSON JENKINS
DIRECTOR



PH: (520) 724-6500
FAX: (520) 724-9635

January 17, 2019

Lexy Wellott
The Planning Center
2 E Congress Street, Suite 600
Tucson, Arizona 85701

Sewerage Capacity Investigation No. 2019-7 Type I

RE: Luminex LLC Rezoning, Parcels 30509012E, 30507001G, 30507001F
Estimated Flow 31,320 gpd (ADWF).
P19WC00007

Greetings:

The above referenced project is tributary to the Agua Nueva Water Reclamation Facility via the Southeast Interceptor.

Capacity is currently available for a project this size in the public sewer G-2016-065, downstream from manhole 2506-09. This is not an approval of point and method of connection. Be aware that a lot of interest is being shown in this area and conditions can change quickly.

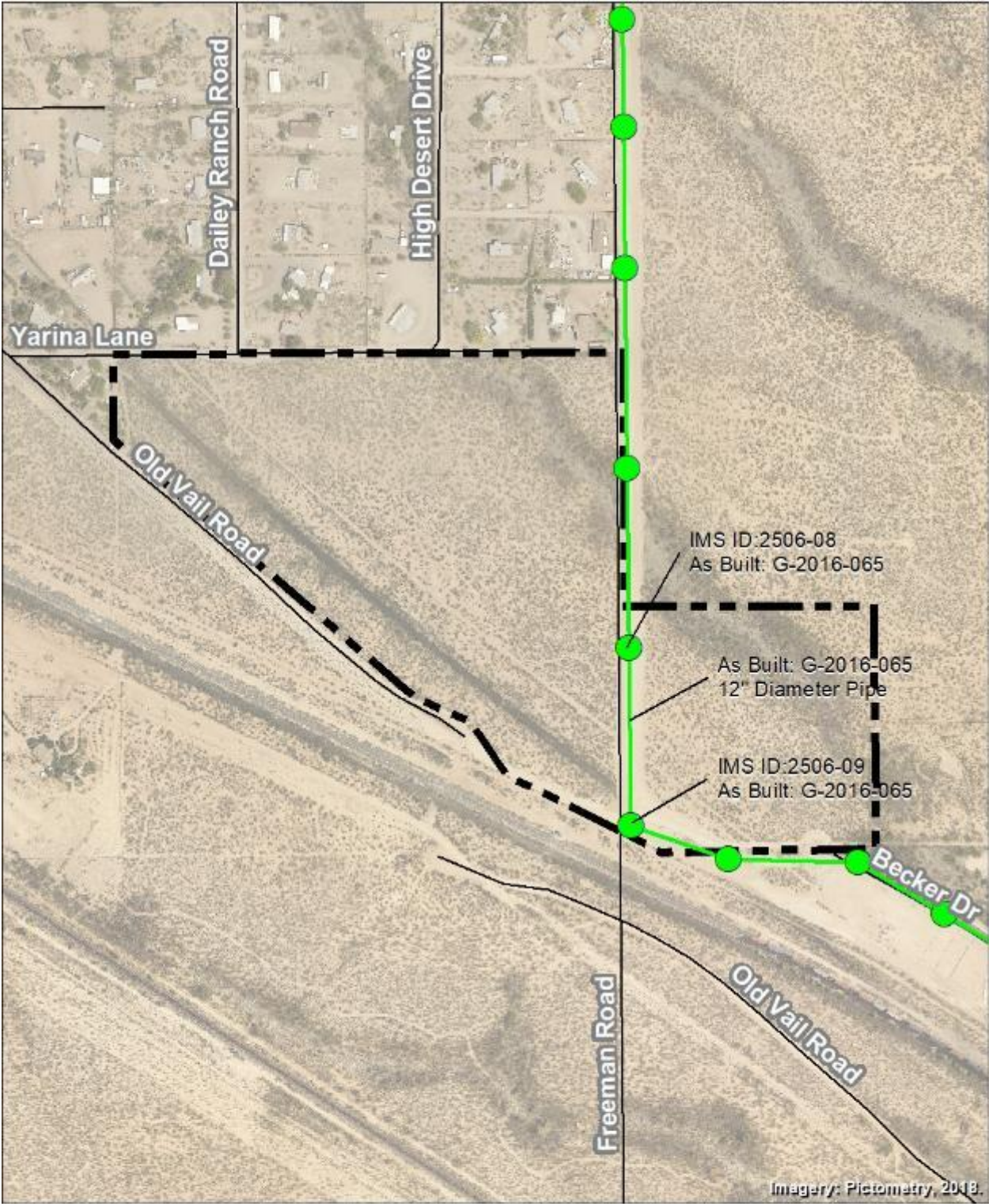
This letter is not a reservation or commitment of treatment or conveyance capacity for this project. It is not an approval of point and method of connection. It is an analysis of the system as of this date. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6642.

Reviewed by: Kurt Stemm, CEA Sr.



Exhibit I.F.2: Existing Sewer Network



LEGEND

- [---] Rezoning Boundary
- Existing Sewer Network
- Existing Sewer Manhole



FILE NAME: LHV-01_sewer_6x8.mxd
SOURCE: Pima County GIS, 2018



G. Recreation and Trails

1. Parks and Public Recreation Areas within One-Mile of the Site

As shown in *Exhibit II.E.1: Traffic*, there are no parks or recreation areas within one-mile radius of the site; however, there are three proposed greenway trails.

2. Trails

According to the Pima Regional Trail Master Plan, there are three proposed greenway trails within a one-mile vicinity of the site. The Esmond Station Greenway proposed Greenway runs adjacent to the southwestern property boundary. The other trails within a one-mile radius include two greenways associated with the Atterbury Wash North Fork Greenway and the Atterbury Wash South Fork Greenway (see *Exhibit II.E.1: Traffic*).

There is trail right-of-way located in the subdivisions, Vista Del Lago and Vista Del Lago Norte southeast of the rezoning area. These subdivisions feature a 50-foot drainage/trail easement that includes a drainage channel, landscaping and an 8-foot decomposed granite path.

H. Cultural Resources: Archaeological and Historic Sites

1. Arizona State Museum Letter

1. Cultural Resources Field Survey

A search of the archaeological site records from the Arizona State Museum (ASM) found that no portion of the proposed project area has been previously surveyed for cultural resources (see *Exhibit I.H.1: Arizona State Museum Letter*).

2. Previously Recorded Archaeological or Historic Resources

According to ASM, no archaeological surveys have been conducted on the property. Four archaeological sites have been identified within a one-mile radius of the project area, one of which crosses the current project area. However, all of them are in-use linear historical features that are no longer recognized as archaeological site.

3. Probability of Buried Archaeological Resources

The probability of buried archaeological resources located under the surface of the property is unknown.

4. Archaeological Survey Recommendations

ASM recommends that an archaeological contractor be consulted before any ground-disturbance begins.



2. Field Survey Requirements or Results

The ASM defers to Pima County regarding recommendations concerning the need for meeting cultural resources requirements prior to any ground modification activities.



Exhibit I.H.1: Arizona State Museum Letter



THE UNIVERSITY OF ARIZONA
**ARIZONA
STATE MUSEUM**

23 Arizona State Museum
PO Box 210026
Tucson AZ 85721-0026
(520) 621-6281
www.statemuseum.arizona.edu

23 January 2019

Lexy Wellitt
The Planning Center
2 E. Congress, Ste. 600
Tucson, AZ 85701

RE: Archaeological Summary Letter in support of rezoning along Old Vail Rd. (LITV-01)

This project DOES NOT occur within or close to the boundary of a known cultural resource.

Dear Lexy:

Arizona State Museum (ASM) has reviewed archaeological project and site records in support of The Planning Center's LITV-01 project (Figure 1). Correspondence indicates this project will involve rezoning in support of a proposed residential neighborhood on privately-owned land along Old Vail Road in Pima County, Arizona. The project area encompasses all of parcels 305-07-001F, 305-07-001G, 305-09-012E within T16S R16E S05 and T16S R16E S06. Below are the results of ASM's research.

Search Results:

According to a search of the archaeological site files and records retained at ASM, 23 archaeological survey projects were conducted within a one-mile radius of the project area between 1955 and 2013. Previous survey work was conducted in support of road construction and improvements; residential and commercial development; railroad line improvements; groundwater recharging; and the installation and maintenance of water, electric, sewer, natural gas, and fiber optic lines. No portion of the current project area has been subject to previous archaeological survey.

Four archaeological sites have been identified within a one-mile radius of the project area, one of which crosses the current project area. However, all of them are in-use linear historical features that are no longer recognized as archaeological sites (Arizona State Museum 2016).

Recommendations and Responsibilities:

1. No portion of the project area has not been surveyed; therefore, ASM recommends, but it is not required by ASM, that a qualified archaeological contractor be consulted before any ground-disturbance begins. A list of archaeological contractors is available on the ASM website at: <http://www.statemuseum.arizona.edu/services/cultural-resources-services>.
2. Pursuant to Arizona Revised Statutes §41-865, if any human remains or funerary objects are discovered during project work, all work will stop within the area of the remains and Dr. Claire Barker, ASM repatriation coordinator, will be contacted at 520-626-0320.
3. City, county, or municipal governments may have requirements, therefore ASM recommends that the relevant jurisdiction(s) be consulted.

If you have any questions about the results of this records search, please contact me at twilling@email.arizona.edu or 520-621-2096.

Sincerely,

Shamon Twilling, M.A.
Research Specialist
Arizona Antiquities Act Permits Office



I. Composite Map

The composite map graphically illustrates the summation of opportunities and constraints identified during the inventory and analysis process. (See *Exhibit I.I.1: Composite Map*). Exhibit I.K addresses the following requirements as applicable to the site.

1. Topography

- a. Restricted Peaks and Ridges - None.
- b. Rock Outcrops and Talus Slopes - None.
- c. Slopes 15% or Greater - None.

2. Hydrology

- a. Regulatory Floodplains - None
- b. Erosion Hazard Setback - None
- c. Concentration Points and 100-Year Flood Rates Entering and Leaving Site – See *Exhibit I.I.1: Composite Map*.
- d. Sheet Flooding Areas - None
- e. Regulated Riparian Habitat – contained within 20-foot eastern bufferyard, see *Exhibit I.I.1: Composite Map*
- f. Lakes, Ponds, Springs, Wetlands or Other Perennial Surface Water - None

3. Biological Resources

- a. Saguaros - None
- b. Iron Wood Trees - None
- c. Pima Pineapple Cactus - None
- d. Needle Spined Pineapple Cactus - None
- e. Areas Where Disturbance is Prohibited by Any Adopted Pima County Ordinance or Policy - None