

# Juniper Road Rezoning

Pima County, Arizona

July 2020



THE PLANNING CENTER  
*a division of TPC Group, Inc.*

# **Juniper Road Rezoning**

**Pima County, Arizona  
7250 & 7320 North Juniper Road  
Tucson, Arizona**

*Submitted to:*

**Pima County  
Development Services Department**  
201 North Stone Avenue, Second Floor  
Tucson, Arizona 85701

*Prepared for:*

**Mike and Gerry Rage**  
7320 North Jupiter Road  
Tucson, Arizona 85741  
mrage@comcast.net | gerryrage@icloud.com

*Prepared by:*

**The Planning Center**  
2 East Congress Suite 600  
Tucson, Arizona 85701  
Telephone: (520) 623-6146  
bunderwood@azplanningcenter.com

&

**Perry Engineering**  
501 West Wetmore Road  
Tucson, Arizona 85705  
Telephone: (520) 620-9870  
kperry@perryengineering.net

July 2020  
Case No. P20RZ00007

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## Introduction

This document has been prepared per Pima County site analysis rezoning requirements for a proposal of twenty-three (23) single-family residences on two parcels. The two contiguous parcels are identified by Pima County Assessor's Parcel Numbers 225-36-0250 and 225-36-0350 and are within Township 12 South, Range 13 East, Section 31. The combined land area totals approximately 5.37 acres and is zoned SR (Suburban Ranch) on the northern parcel and CR-1 (Single Residence) on the southern parcel.

The site has two existing single-family dwellings and onsite accessory structures. The home on the southern parcel will be demolished to accommodate the proposed development whereas the larger home on the north parcel will remain. Pima County's comprehensive plan, *Pima Prospers*, designates the area as Medium Low Intensity Urban (MLIU), which calls for 2.5-5 residences per acre (RAC). The purpose of this study is to identify factors directly or indirectly influencing the rezoning of the subject parcels from SR (Suburban Ranch) and CR-1 (Single Residence) to CR-4 (Mixed Dwelling Type) for the development of a small infill community with a proposed density of 4.47 residences per acre (including the existing home on the north parcel).

The project site is located north of Ina Road and west of Thornydale Road within Pima County, Arizona. Ina Road and the Ina/Thornydale intersection are burgeoning commercial areas with a wide range of new and longstanding businesses. The commercial success of the surrounding area and recent pedestrian improvements along Ina Road make the subject property desirable for infill development. New residents will have convenient access to a plethora of restaurants, retail opportunities and services within walking and biking distance to help reduce automobile dependency and promote healthy living.

The Preliminary Development Plan (PDP) and Proposed Hydrology Concept were directly influenced by the opportunities and constraints identified in this Site Analysis. This Site Inventory and Land Use Proposal will enable the developer to produce thoughtful design concepts derived from the analysis of the site's physical characteristics. It also presents sensitive design and mitigation solutions that respond to the unique characteristics of the site while complementing the surrounding area.



A photograph of a desert landscape. In the foreground on the right, a large saguaro cactus is partially visible. Below it, there are yellow wildflowers and green desert shrubs. In the background, there are mountains under a blue sky with some clouds. A semi-transparent white banner is overlaid across the middle of the image.

# Section I: Site Inventory

## A. Existing Land Uses

### 1. Location and Regional Context

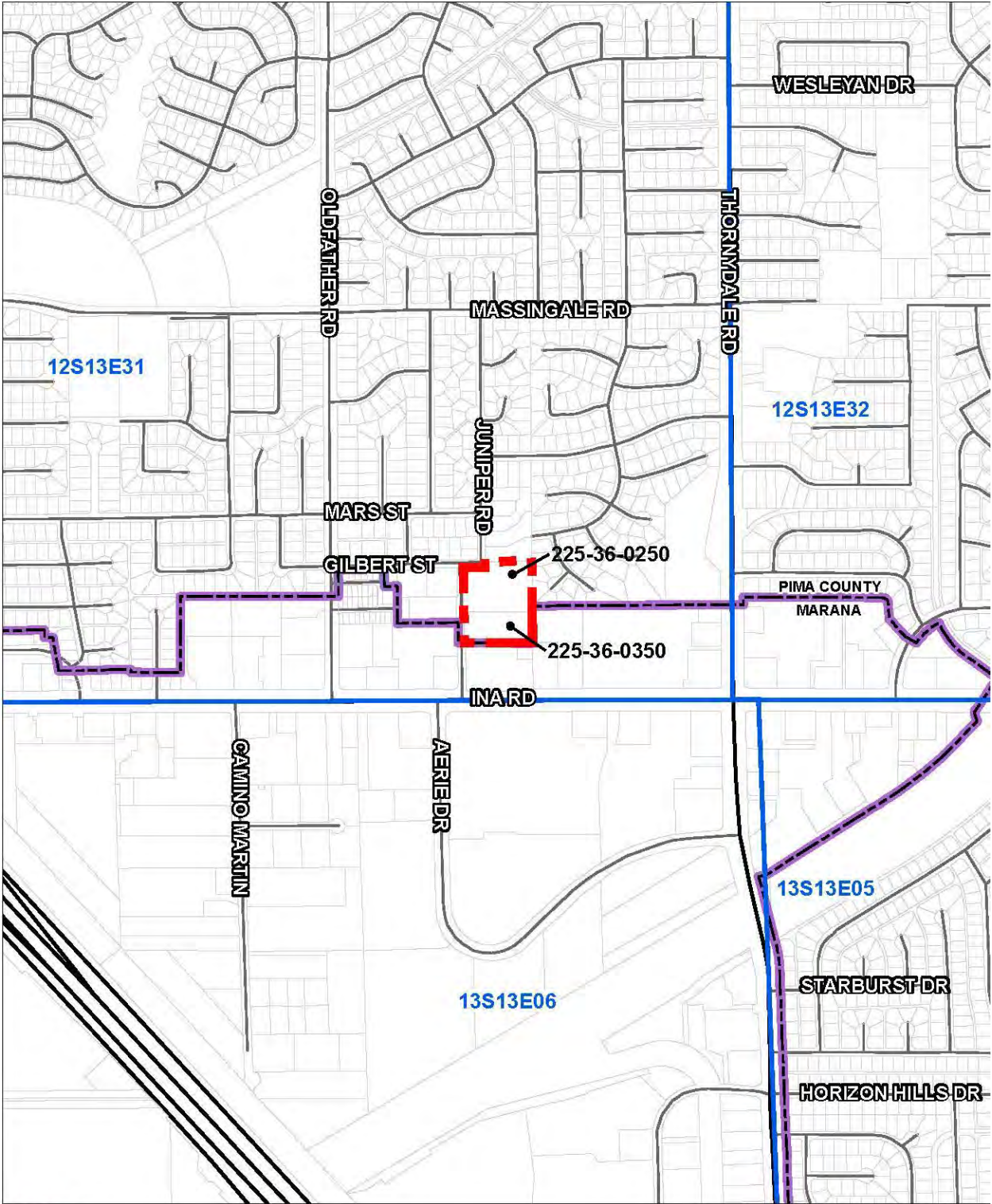
This application is for the rezoning of two parcels identified by Pima County Assessor's parcel numbers 225-36-0250 and 225-36-0350. The area of the site is 5.37 acres. The site is on Juniper Road, approximately 370 feet north of the Ina Road commercial corridor and one-quarter mile west of Thornydale Road within Township 12 South, Range 13 East, Section 31 in Pima County, Arizona. The site borders the jurisdictional boundary of the Town of Marana (see *Exhibit I.A.1: Location and Vicinity*).

The property is currently situated between areas of existing single-family residences and newer commercial developments along Ina Road. Ina Road is considered a major east-west corridor within the Tucson-Metro Region and has recently experienced a great deal of growth in the vicinity of the subject property. Recent roadway improvements on Ina Road have introduced additional medians, curbs, striped shoulders and sidewalks to the area. Likewise, Thornydale Road is a major north-south thoroughfare in western Tucson. South of Orange Grove Road, Thornydale Road turns into River Road, providing east-west access throughout the city. Interstate 10 is located approximately 4,500 feet west of the site and can be directly accessed via Ina Road.



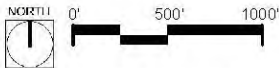


Exhibit I.A.1: Location and Vicinity



LEGEND

- |   |                         |   |                           |
|---|-------------------------|---|---------------------------|
|  | Site Boundary           |  | Township, Range & Section |
|  | Jurisdictional Boundary |  | Parcels                   |
|  | Roads                   |   |                           |



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SOURCE: Pima County GIS, 2019



## 2. Existing Land Uses

The two parcels that make up the project site each contain a single-family residence. The home on the southern parcel (APN #225-36-0350) is approximately 1,400 square feet and of brick construction. The home on the northern parcel (APN #225-36-0250) is one and two stories in height, has approximately 2,600 square feet of living space and stucco exteriors in a southwestern architectural style. The home on the northern parcel has a swimming pool, carport, a pool/guest house and accessory structure that may be used for storage or household utilities (see *Exhibit I.A.2: Existing On-Site Uses*).

## 3. Existing On-Site Easements

Existing on-site easements are currently unknown and will be determined at the time of development.

## 4. Comprehensive Plan Designations On-Site and Surrounding

The existing Pima Prospects land use designations on the site and for areas surrounding the site within a one-quarter mile radius are as follows:

- Site: MLIU (Medium Low Intensity Urban)
- North: MLIU (Medium Low Intensity Urban)
- South: Town of Marana Commercial
- East: MLIU (Medium Low Intensity Urban)
- West: MLIU (Medium Low Intensity Urban)

See *Exhibit I.A.3: Pima Prospects Comprehensive Plan Designations*.

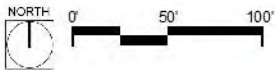


Exhibit I.A.2: Existing On-Site Uses



LEGEND

- Site Boundary
- Jurisdictional Boundary
- Roads

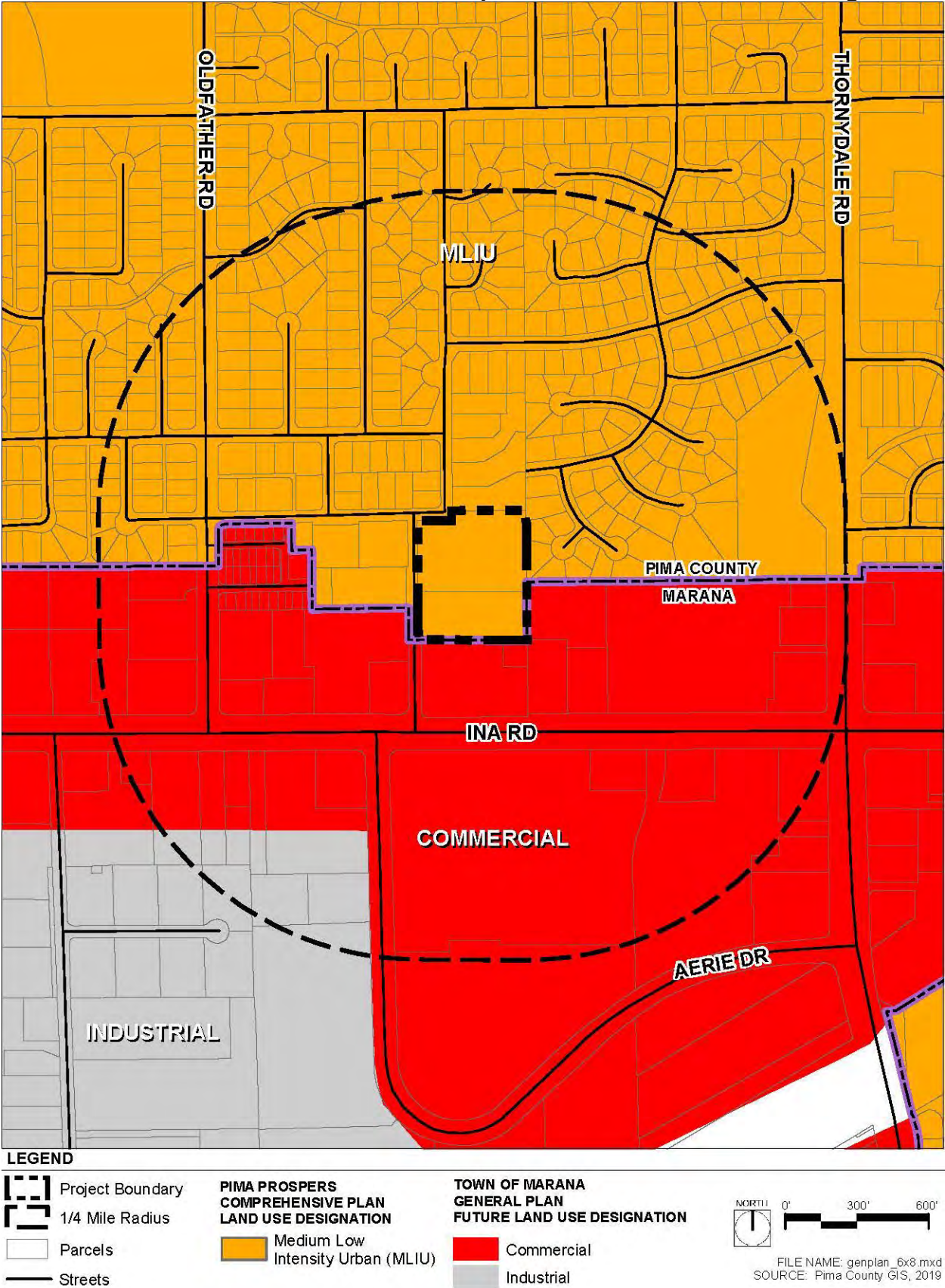


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SOURCE: Pima County GIS, 2019





Exhibit I.A.3: Comprehensive & General Plan Designations



## 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.

a. *Existing On-site and Off-site Zoning within a One-Quarter Mile Radius:*

**Table I.A.5.a: Existing Zoning**

<b>Project Site</b>	SR (Suburban Ranch – Pima County), CR-1 (Single Residence – Pima County)
<b>North</b>	SH (Suburban Homestead – Pima County), CR-3 (Single Residence – Pima County)
<b>South</b>	VC (Village Commercial – Marana)
<b>East</b>	CR-3 (Single Residence – Pima County), VC (Village Commercial – Marana)
<b>West</b>	SR (Suburban Ranch – Pima County), CR-2 (Single Residence – Pima County)

(See *Exhibit I.A.5.a: Existing Zoning.*)

b. *Existing Off-site Land Uses within One-Quarter Mile Radius*

**Table I.A.5.b: Existing Off-Site Land Uses**

<b>North</b>	Vacant, Sunny Hills Estates (Single-Family Residential (SFR))
<b>South</b>	U-Haul Moving & Storage, Discount Tire, Pet Club, etc. (Commercial)
<b>East</b>	Sunny Hills Estates, Embassy Plaza (Commercial)
<b>West</b>	SFR, Vacant, Old Pueblo Plaza, A Family Discount Storage, Ina KinderCare, etc. (Commercial)

(See *Exhibit I.A.5.b: Existing Land Uses.*)

c. *Number of Stories of Off-site Existing Structures*

**Table I.A.5.c: Number of Stories of Off-site Existing Structures**

<b>North</b>	1- & 2-Story Single-Family Residential (SFR)
<b>South</b>	1-Story Commercial
<b>East</b>	1-Story SFR, 1-Story Commercial
<b>West</b>	1-Story SFR, 1-Story Commercial

(See *Exhibit I.A.5.b: Existing Land Uses.*)

## 6. Pending Rezoning, Plats, or Development Plans

There are no pending rezonings, plats or development plans in proximity to the subject property.





Exhibit I.A.5.a: Existing Zoning

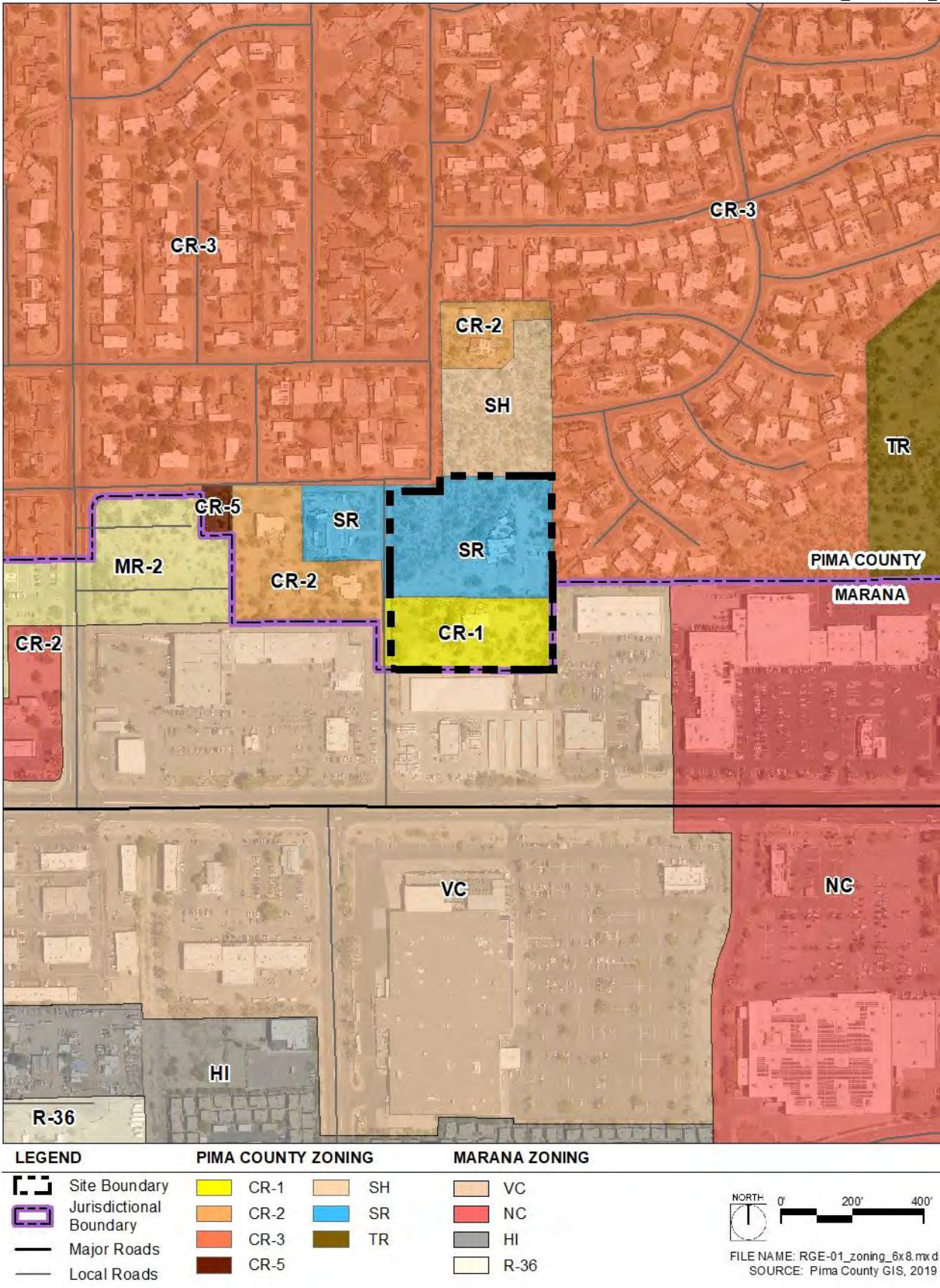
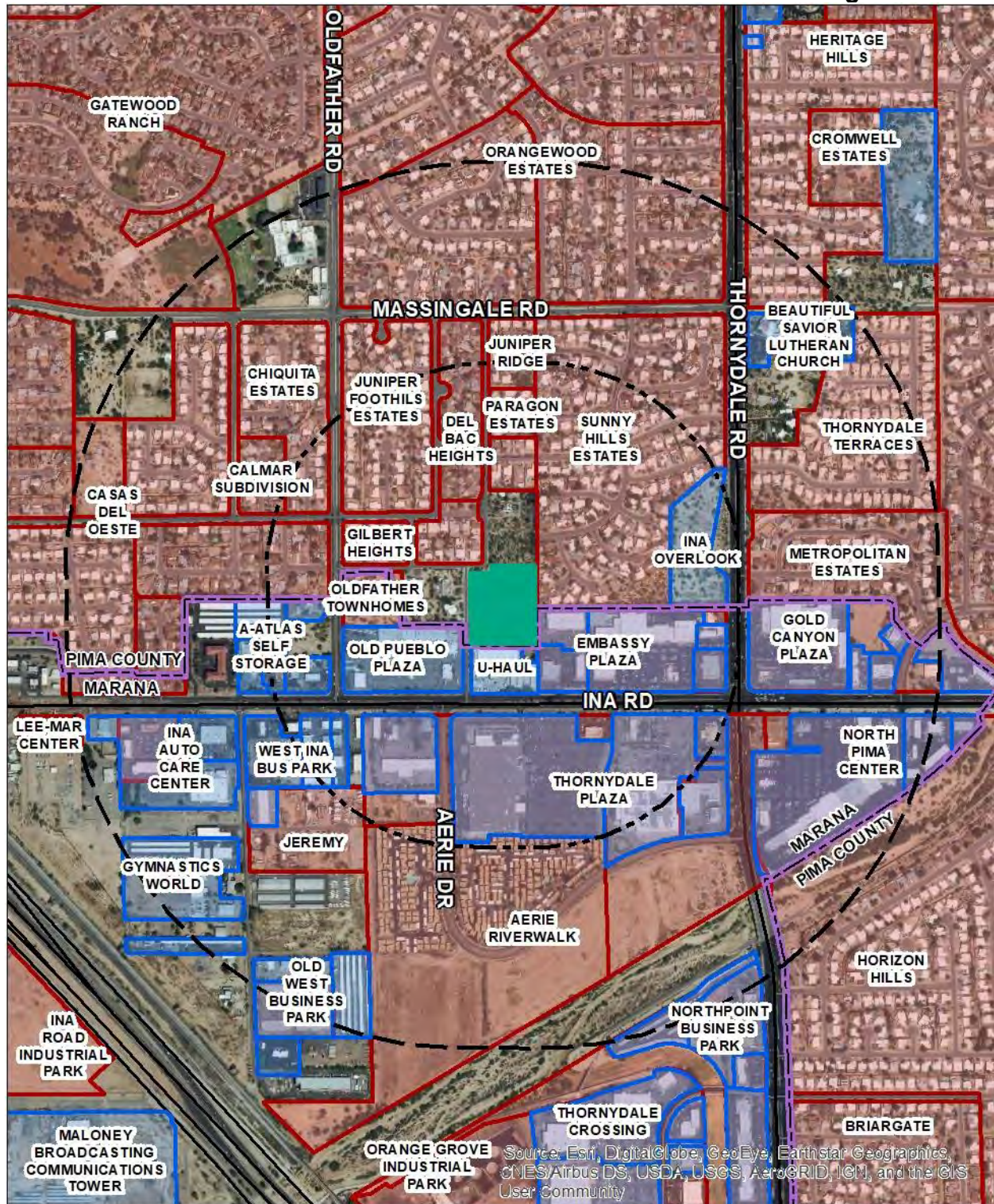




Exhibit I.A.5.b: Existing Land Uses



LEGEND

- |  |                         |  |                     |
|--|-------------------------|--|---------------------|
|  | Site Boundary           |  | Quarter-Mile Radius |
|  | Jurisdictional Boundary |  | Half-Mile Radius    |
|  | Major Roads             |  | Subdivisions        |
|  | Local Roads             |  | Development Plans   |



FILE NAME: RGE-01\_existing\_landuses\_6x8.mxd  
SOURCE: Pima County GIS, 2019



## B. Topography and Grading

### 1. Topographic Characteristics

Elevation ranges from 2,236 feet above mean sea level at the southwestern edge of the property to 2,274 feet at the northeastern edge of the property. The topography on the western portion of the site is relatively flat with steeper slopes located near the northern boundary and surrounding the existing residences on-site (see *Exhibit I.B.1: Topography*).

*a. Restricted Peaks and Ridges*

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

*b. Rock Outcrops*

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

*c. Slopes of 15% to 25% and Slopes Greater Than 25%*

There are slopes ranging between 15% and 25% as well as slopes of greater than 25% across the northern portion of the site as well as in the central portion of the site surrounding the existing residence.

*d. Other Significant Topographic Features*

There are no other significant topographical features on the site.

*e. Existing Grading and Ground Disturbance*

The graded and disturbed portions of the property include all existing structures, roads, and cleared areas across the site resulting from years of residential occupancy.

### 2. Average Cross Slope

The pre-development average cross-slope of the subject parcels is 8.88%, calculated using the following formula in accordance with the Pima County Zoning Code:

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

Interval (I) = 2'

Total length of contours in feet (L) = 10,370'

Area in acres (A) = 5.37

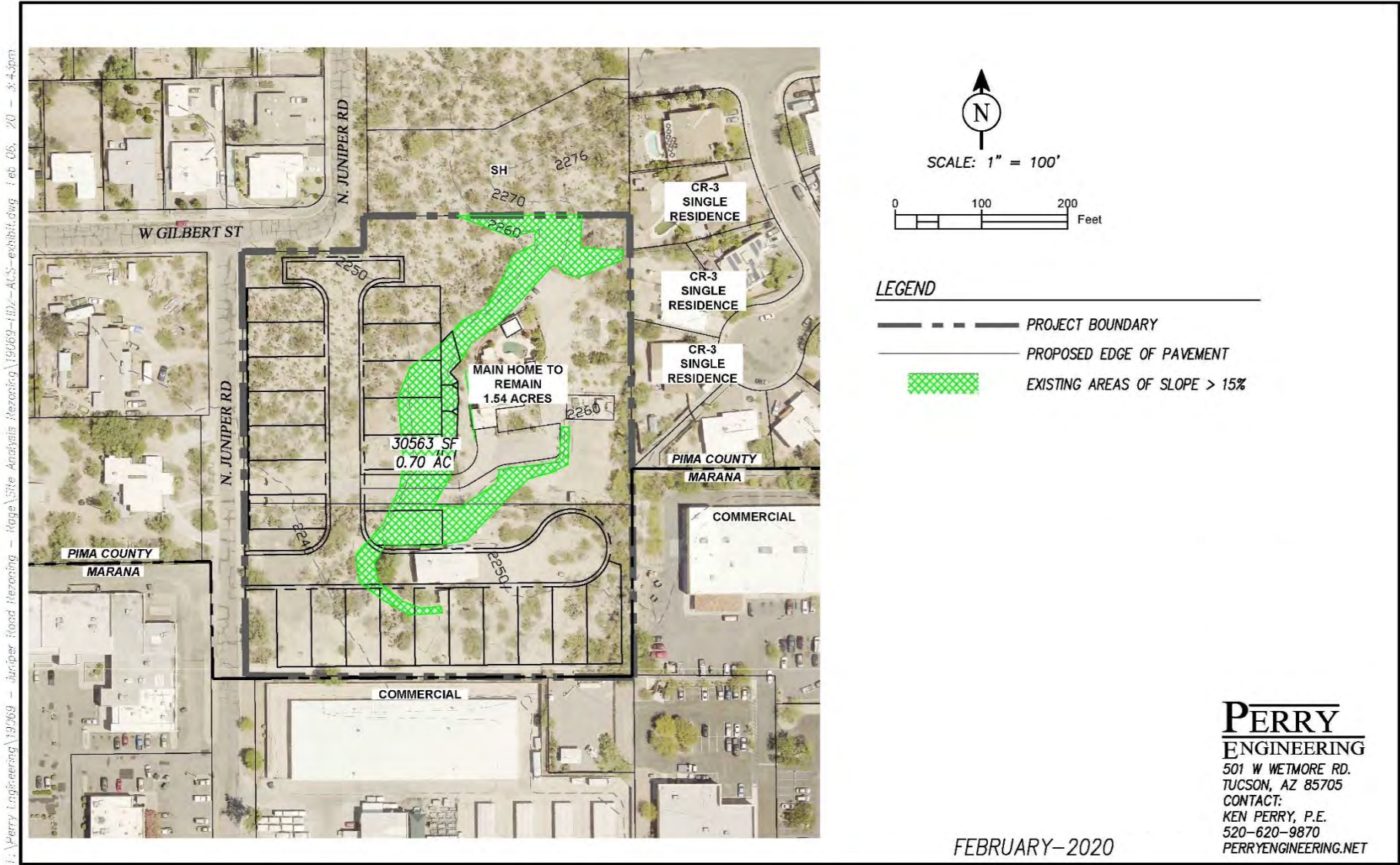
$$ACS = \frac{2' \times 10,370 \times 0.0023}{5.37}$$

ACS = 8.88%





Exhibit I.B.1: Topography



## C. Hydrology

### 1. Off-Site Hydrology

The project site is marginally impacted by storm water run-on to the project site from one off-site area. There is a small area to the north of the project site that contributes storm water on to the subject property. During a 1% annual chance (100-year) event, the peak discharge might be 1 cfs. When the parcel to the north of the project site is developed, it is possible that the storm water that currently enters the rezoning site will instead be conveyed west to N. Juniper Road. See *Exhibit I.C: Existing Hydrology*.

### 2. On-Site Hydrology

Exhibit I.C.4 depicts the relevant conditions of on-site hydrology. Below is a list of the pertinent items:

a. *Flood Control Resource Areas*

There are no Flood Control Resources, including floodplains, regulatory watercourses, or riparian areas, within or adjacent to the subject property. Along the southeast boundary of the project site, there is a non-jurisdictional channel, which conveys some magnitude of storm water from the adjacent Sunny Hills Estates Subdivision.

b. *Concentration Points and 100-Year Peak Discharges*

Peak discharges were estimated based on the assumption that one acre of land area at this site, in the existing condition, will generally produce about 5 cubic feet per second (cfs) as a 1% annual chance event (100-Year) peak discharge. This was based on previous experience with similar land and soil conditions. These discharges were rounded to the nearest whole integer for the purposes of this Site Analysis. During the site design and permitting process, the most recent version of the Pima County Regional Flood Control District Hydrology Procedures, PC-Hydro, will be utilized to determine peak discharges and hydrograph volumes for sizing detention/retention and/or water harvesting basins. Please see *Exhibit I.C: Existing Hydrology*.

c. *FEMA-Designated and Locally Identified Floodplains*

There are no federally mapped floodplains on the project site per the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 04019C1660L. That FIRM panel has an effective date of June 16, 2011 and remains effective as of this date. There are also no locally identified floodplains per the Pima County Regional Flood Control District. Please see *Exhibit I.C: Existing Hydrology*.





- d. *Floodplain Delineation*  
As stated in Item c, there are no established federal or local floodplains. There are also no regulatory watercourses from which to establish any previously undefined floodplains. Further, the project site is located along a local drainage divide. As such, the nature of the drainage from the site is that storm water tends to flow off the site en route to larger conveyance areas such as the nearby Cañada del Oro Wash.
- e. *Regulatory Sheet Flood Areas*  
There are no regulated sheet flood areas within or adjacent to the project area. As previously stated, because this development is situated along a topographic divide, no regulatory conveyance corridors or sheet flood areas have been identified.
- f. *Sources of Perennial Surface Water*  
There are no sources of perennial surface water at or near the project site. This would include lakes, ponds, wetlands, springs, or any other possible sources of perennial surface water.
- g. *Erosion Hazard Setbacks*  
There are no erosion hazard setbacks impacting the project site. This includes both on- and off-site watercourses.
- h. *Regulated Riparian Habitat*  
There is no identified riparian habitat upon the project site, nor upon areas surrounding the project site.
- i. *Flow Arrows for Non-Regulatory Flows*  
Flow arrows for all discharges flowing off the project site are indicated on *Exhibit I.C: Existing Hydrology*.
- j. *Easements*  
There are no established drainage easements on the project site. There is, however, an offsite drainage easement within the Sunny Hills Estates subdivision through which storm water will be delivered to an existing channel along the east boundary of the project site within the Embassy Plaza commercial subdivision. It does not appear that there is any drainage easement within the Embassy Plaza commercial subdivision.
- k. *Existing Drainage Infrastructure*  
There is no existing constructed drainage infrastructure on the project site. Along the southeast border of the project site, there is a constructed channel on the Embassy Plaza Development Site to convey the storm water received from the Sunny Hills Estates Subdivision. This channel terminates in a storm drainpipe inlet where storm water will enter the storm drain system in Ina Road.



### 3. Hydrology

a. *Watershed Features*

The on-site drainage patterns will change with the construction of the proposed development at the site, although the final discharge location in the southwest corner will remain the same. This final discharge location will remain the same, as the topographical layout of the site is such that the ultimate discharge location from the site will remain static regardless of internal changes to the project site. Therefore, the distribution and magnitudes of outflows coming from the site will be kept intact. Conceptual drainage patterns internal to the proposed conditions site can be seen on *Exhibit II.D: Proposed Hydrology*. The location of the project site is considered a critical basin by Pima County, and therefore outflows from the site will be made with the goal of reducing the existing peak discharges by 10%. Flow conditions at points downstream of the project site will change very little as a result of the proposed development at the site.

b. *Acreage and 100-Year Peak Discharge of Upstream Watersheds*

There is a small portion of contributing watershed area upstream (north side) of the project site that will contribute storm water run-on to the project site. This portion of contributing area is the same one mentioned in Section I.C.1. The drainage area of this upstream contributing area is about 0.25 acres, which would deliver approximately 1 cfs during a 1% annual chance (100-year) event. At such time that the parcel to the north of the project site is developed, this contributing area may be redirected west to Juniper Road. The project site is located on a local drainage divide, and storm water falling as rain will travel off the site to points south and west. There are no flow-through watercourses present at the project site.

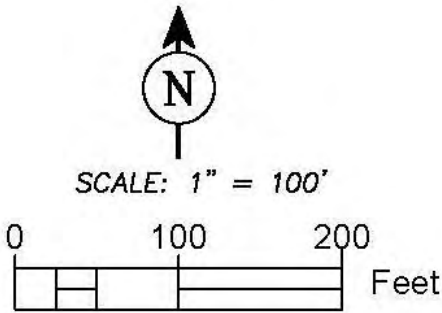
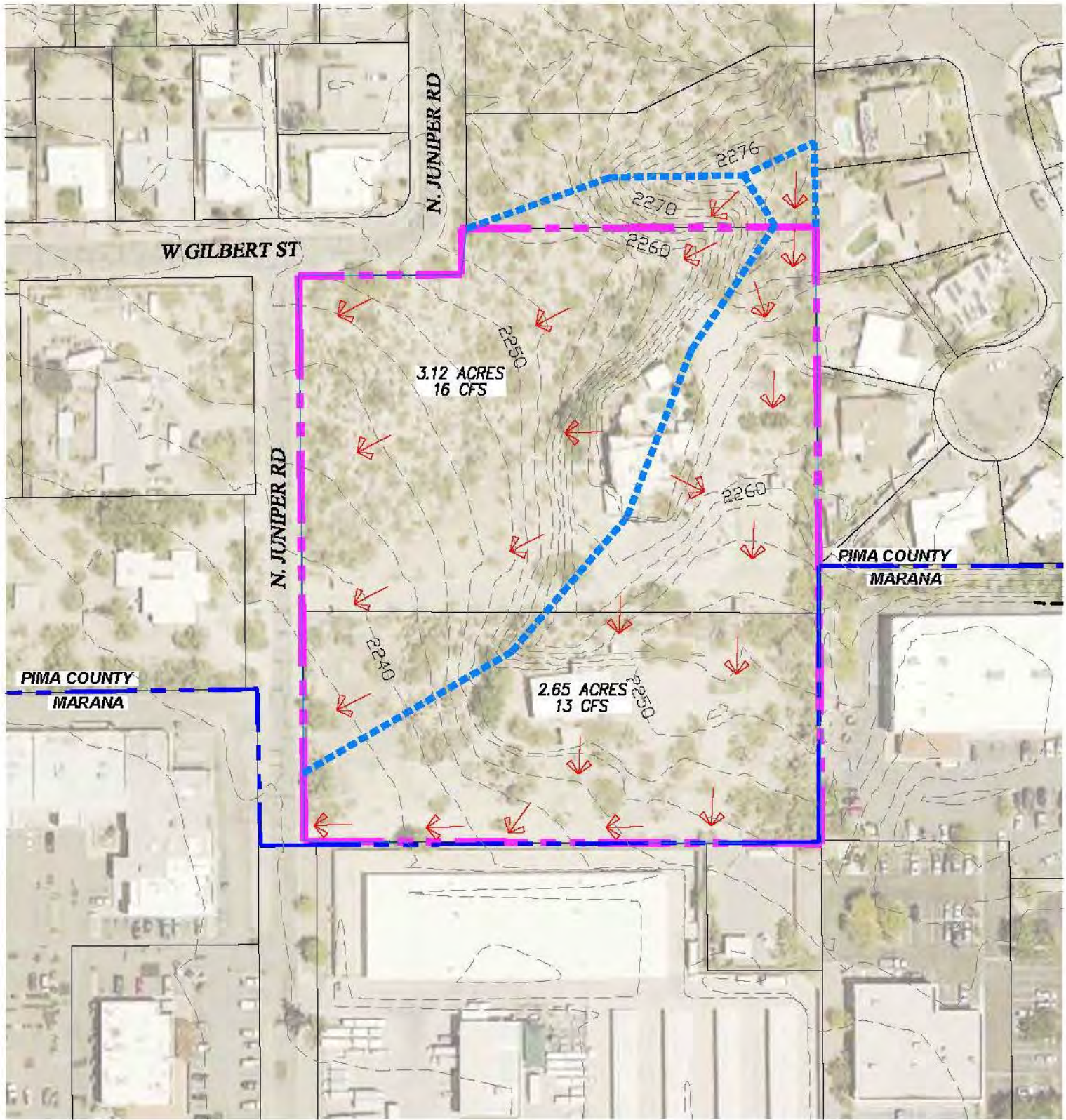
c. *Methodology to Determine Erosion Hazard Setbacks*

As there are no jurisdictional watercourses on any portion of the project site, there are no erosion hazard setbacks to determine. There are also no erosion hazard setback areas adjacent to any portion of the project site, as the constructed channel along the southeast border is not jurisdictional.

d. *Methodology to Determine 100-Year Floodplains*

As there are no jurisdictional watercourses on any portion of the project site, there are no 100-year floodplains to determine. There are also no jurisdictional watercourses or 100-year floodplains adjacent to any portion of the project site.

Exhibit I.C.4: Existing Hydrology



LEGEND

- ← FLOW DIRECTION
- PROJECT BOUNDARY
- WATERSHED BOUNDARY
- PIMA COUNTY/MARANA LIMITS

**PERRY**  
**ENGINEERING**  
501 W WETMORE RD.  
TUCSON, AZ 85705  
CONTACT:  
KEN PERRY, P.E.  
520-620-9870  
PERRYENGINEERING.NET

EXISTING HYDROLOGY  
JANUARY-2020



## D. Biological Resources

### 1. Conservation Lands System

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

### 2. Priority Conservation Area (PCA)

#### a. *Pima Pineapple Cactus*

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

#### b. *Needle-Spined Pineapple Cactus*

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

#### c. *Cactus Ferruginous Pygmy Owl*

The site is not located within a Priority Conservation Area for the cactus ferruginous pygmy-owl.

#### d. *Western Burrowing Owl*

The site is not located within a Priority Conservation Area for the western burrowing owl.

### 3. Saguaros and Ironwood Trees

A site visit conducted March 13, 2020 led to the inventory of five Saguaro. The Saguaro are all in good health and range in size from approximately 1.5 feet to 9 feet in height. Two Saguaro are greater than 6 feet in height. The Saguaro are widespread throughout the property and no signs of regeneration are evident.

No Ironwoods were found on-site.

### 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. *Rights-of-Way*

The site is located in Pima County, approximately 1,300 feet west of Thornydale Road and 370 feet north of Ina Road. Characteristics of arterial streets within one mile of the subject property are in *Table I.E. 1.a: Roadway Inventory*. The closest major intersection is at the junction of Ina Road and Thornydale Road, approximately 1,350 feet southeast of the project site.



**Table I.E.1.a: Roadway Inventory**

Roadway Segment	Existing Right-of-Way*	Number of Travel Lanes	Capacity***	Posted Speed Limit****
Ina Road	150 feet	4	35,820	45
Thornydale Road	150 feet	4	35,820	40
Orange Grove Road	150 feet	4	35,820	45
Shannon Road	150 feet	4	35,820	40
Magee Road	60-90 feet	2	10,360	35
Camino de Oeste	80 feet	2	10,360	35

Source: \*Pima County Mapguide (2019), \*\*Pima County Major Streets and Scenic Routes Plan (2015), \*\*\*Florida Department of Transportation (2020), \*\*\*\*Google Earth (2019)

### **Ina Road**

Ina Road is shown on Pima County Mapguide to have an existing right-of way width of 150 feet and a posted speed limit of 45 mph. It is also listed by the Bicycle and Pedestrian Program as a bike route with striped shoulder and by the Pima County Major Streets and Scenic Routes Plan (MSSRP) as a major scenic route. The MSSRP identifies Ina Road as a high-volume arterial.

### **Thornydale Road**

Thornydale Road is shown on Pima County Mapguide to have an existing right-of-way width of 150 feet and has a posted speed limit of 40 mph. Thornydale Road is identified as a bike route with striped shoulder by the Pima County Bicycle and Pedestrian Program and a major local road by the Pima County MSSRP.

### **Orange Grove Road**

Orange Grove Road is shown on Pima County Mapguide to have an existing right-of-way width of 150 feet and has a posted speed limit of 45 mph. The Pima County MSSRP identifies the road as a medium volume arterial. Orange Grove Road is identified as a bike route with a striped shoulder by the Pima County Bicycle and Pedestrian Program.

### **Shannon Road**

Shannon Road is shown on Pima County Mapguide with an existing right-of way width of 90-150 feet and a posted speed limit of 35 mph. It is also listed by the Bicycle and Pedestrian Program as a bike route with a striped shoulder. Shannon Road is identified by the MSSRP as a medium-volume arterial north of Ina Road, and as a low-volume arterial south of Ina Road.





### Magee Road

Magee Road is shown on Pima County Mapguide to have an existing right-of-way width of 150-170 feet and a posted speed limit of 45 mph. The Pima County MSSRP identifies Magee Road as a medium volume arterial. The road is also listed as a bike route with a striped shoulder by the Pima County Bicycle and Pedestrian Program, and as a major scenic route by the MSSRP.

*b. Present Average Daily Trips (ADT) for Existing Streets*

Table I.E.1.b Average Daily Trips identifies traffic counts on roadways within one mile of the project site, generated by Pima Association of Governments (PAG) Roadway Segment Traffic Counts.

**Table I.E.1.b: Average Daily Trips**

Road	Average Daily Trips (Year Taken)
Ina Road (I-10 Westbound Frontage Road to Thornydale Road)	33,164 (2019)
Ina Road (Thornydale Road to Shannon Road)	32,147 (2018)
Thornydale Road (Ina Road to Massingale Road)	30,758 (2019)
Thornydale Road (Ina Road to Orange Grove Road)	35,117 (2018)
Oldfather Drive (Ina Road to Magee Road)	7,656 (2018)
Camino de Oeste (Ina Road to Pima Farms Road)	3,346 (2018)
Camino de Oeste (Cortaro Farms Road to Ina Road)	3,591 (2018)
Camino de la Tierra (Orange Grove Road to Ina Road)	5,749 (2019)
Shannon Road (Orange Grove Road to Ina Road)	7,726 (2018)

Source: Pima Association of Governments Traffic Count Records, 2018.

*c. Existing Bicycle and Pedestrian Ways*

According to Pima County GIS and the Pima County Regional Bike Map, there are existing bicycle routes with striped shoulders on Ina Road, Thornydale Road, Orange Grove Road, River Road, Magee Road, and Cortaro Farms Road. The Canada del Oro River Park is a shared-use path that is located along the Canada del Oro wash in the vicinity of the project site. The recently completed Arizona Department of Transportation (ADOT) Ina Road Interchange Project created a bicycle path near Interstate-10 that connects to the Loop shared-use path.

*d. Scheduled Roadway Improvements*

A major roadway improvement project was completed on Cortaro Farms Road between Camino de Oeste and Thornydale Road in 2019. The improvements included: installation of a storm drain system, retaining walls, and public art; road widening from two to four lanes; rubberized



asphalt; traffic signal; revegetation of native plant landscaping; and signage and pavement markings. The PAG 2045 Regional Mobility and Accessibility Plan indicates bike lane improvements are planned in the vicinity of the project site on La Cholla Boulevard, Thornydale Road, and Shannon Road.

**2. Distances to Existing Drives/Intersections**

*Exhibit I.E.2: Distance to Existing Driveways/Intersections* has been provided to give more detailed information on existing rights-of-way adjacent to the site and the distance from the site to the nearest existing curb cuts.



Exhibit I.E.2: Distance to Existing Driveways/Intersections



LEGEND



Site Boundary



Jurisdiction Boundary



Distances to Existing Intersections



Adjacent Driveways



0' 100' 200'

FILE NAME: RGE-01\_drivewaysl\_6x8.mxd  
SOURCE: Pima County GIS, 2019



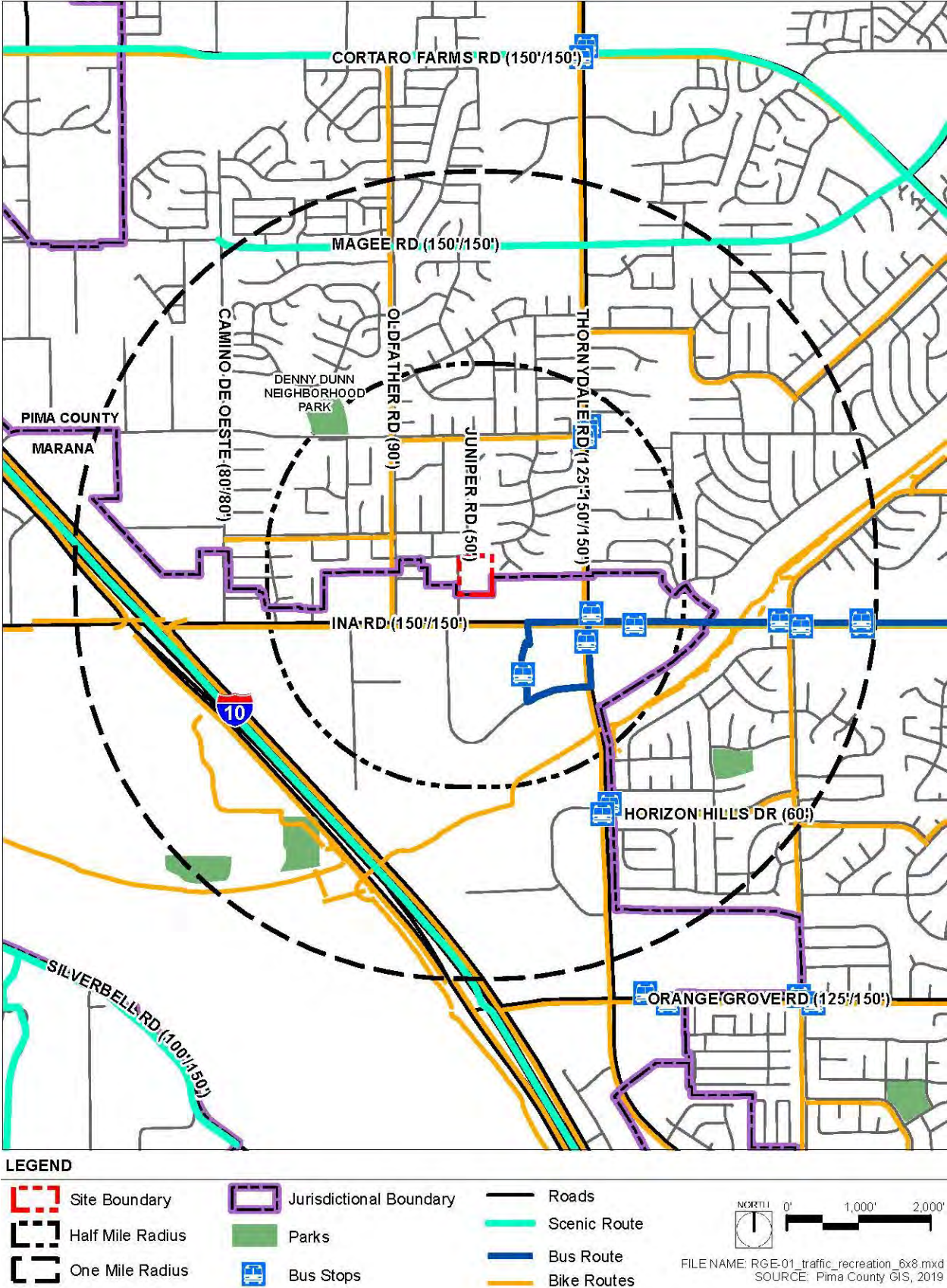
### 3. **Bus Routes**

According to the Regional Transportation Authority, Sun Tran Bus Route #16 is located within a ½-mile of the project site location. Bus stops are located along Ina Road within a ½-mile of the subject property (see *Exhibit I.E.3: Traffic*). Additional bus stops are located on Thornydale Road to the north and Orange Grove Road to the south, providing service to Sun Shuttle route 412.

The traffic map addresses the right-of-way requirements as outlined for the Transportation section of the Pima County Site Analysis Requirements (October 2017) for major roads within a one-mile radius of the project (see *Exhibit I.E.3: Traffic*). It also addresses roads adjacent to the site. Existing right-of-way information was obtained from Pima County Mapguide. Future right-of-way information was obtained from the Pima County MSSRP.



Exhibit I.E.3: Traffic





## **F. Sewers**

### **1. Existing Public Sewer**

The site is within the Pima County Regional Wastewater Reclamation Department (RWRD) service area and tributary to the Tres Rios Water Reclamation Facility via the Cañada Del Oro Interceptor (see *Exhibit I.F.1.a: Wastewater Letter*). Capacity is currently available for this project in the public sewer I-79-072 downstream from manhole 9395-04 (see *Exhibit I.F.1.b: Existing Sewer Network*).

### **2. Site Constraints for Extension of the Existing Sewer Network**

Extension of the existing sewer network is not necessary to provide public sewer to the site.



**Exhibit I.F.1.a: Wastewater Letter**

**JACKSON JENKINS**  
DIRECTOR



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

December 26, 2019

Brian Underwood  
The Planning Center  
2 E Congress Suite 600  
Tucson, Arizona 85701

**Sewerage Capacity Investigation No. 2019-301 Type I**

**RE: 7250 & 7320 N Juniper Road Rezoning, Parcel 225360250, 225560350**  
**Estimated Flow 4,968 gpd (ADWF).**  
**P19WC00301**

Greetings:

The above referenced project is tributary to the Tres Rios Water Reclamation Facility via the Cañada Del Oro Interceptor.

Capacity is currently available for a project this size in the public sewer I-79-072, downstream from manhole 9395-04.

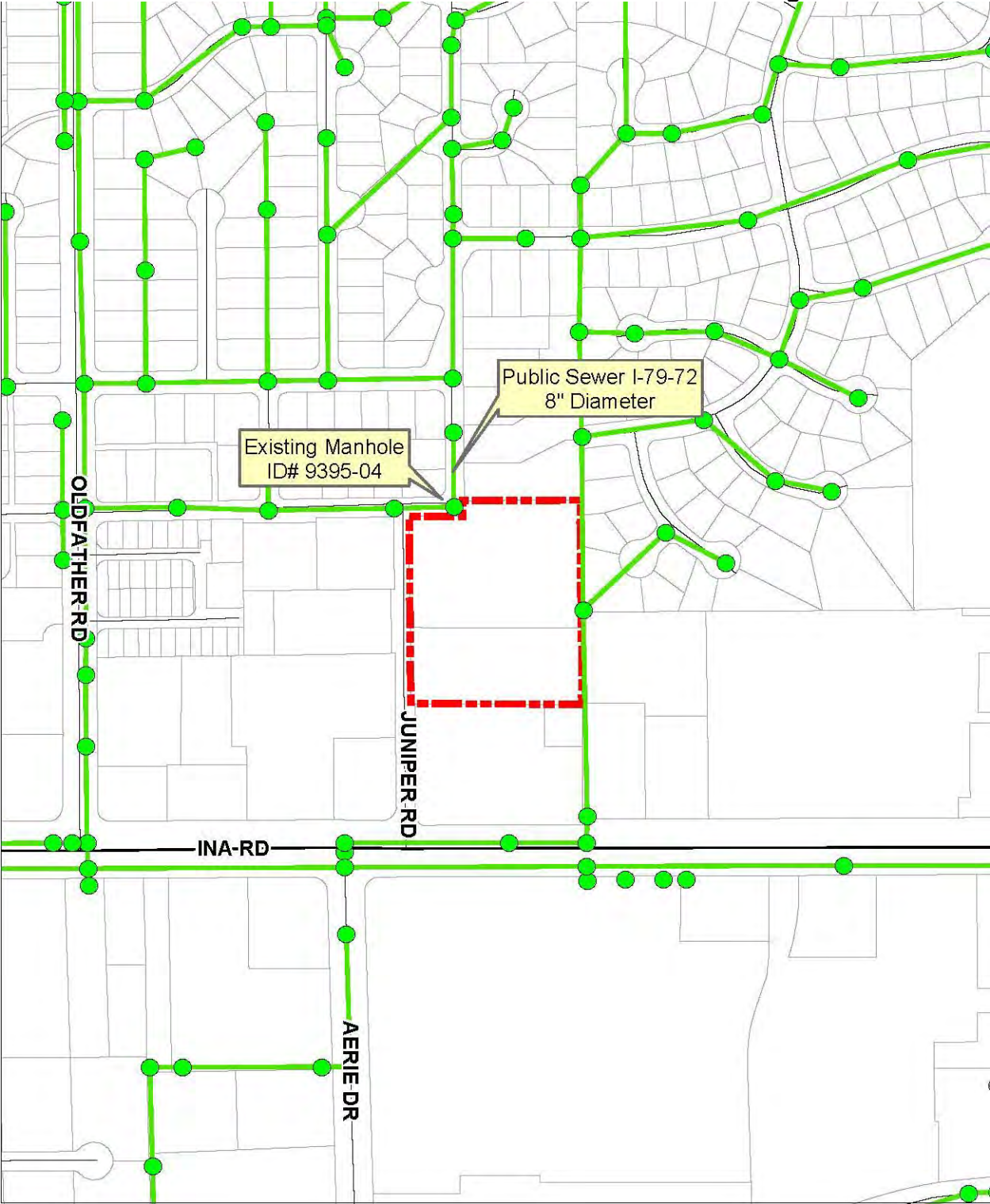
This letter is not a reservation or commitment of treatment or conveyance capacity for this project. It is not an approval of point and method of connection. It is an analysis of the system as of this date. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6607.

Reviewed by: Kurt Stemm, CEA Sr.

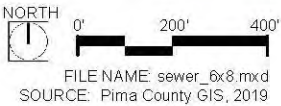


Exhibit I.F.1.b: Existing Sewer Network



LEGEND

- Site Boundary
- Existing Sewer Network
- Parcels
- Existing Sewer Manhole



## G. Recreation

### 1. Existing Recreational Facilities On-Site and Within One Mile of the Site

The Ted Walker Regional Park, the Denny Dunn Neighborhood Park, the Richardson Neighborhood Park, and the Canada del Oro River Park are located within one mile of the project site (see *Exhibit I.G. 1: Parks, Recreation and Trails*). The south side of the Canada del Oro River Path is constructed and within one mile of the subject site.

River parks are described in the Pima Regional Trail System Master Plan (PRTSMP) as green corridors with paths and trails located along the metropolitan area's major watercourses. River parks are designed to accommodate a variety of users, including runners, walkers, equestrians, and cyclists. These parks provide many benefits, including opportunities for alternative modes of transportation and connectivity with trails, workplaces, shopping, residential areas, and more. They also provide urban wildlife habitat, shade, and help to mitigate the urban heat island effect.

### 2. Trails

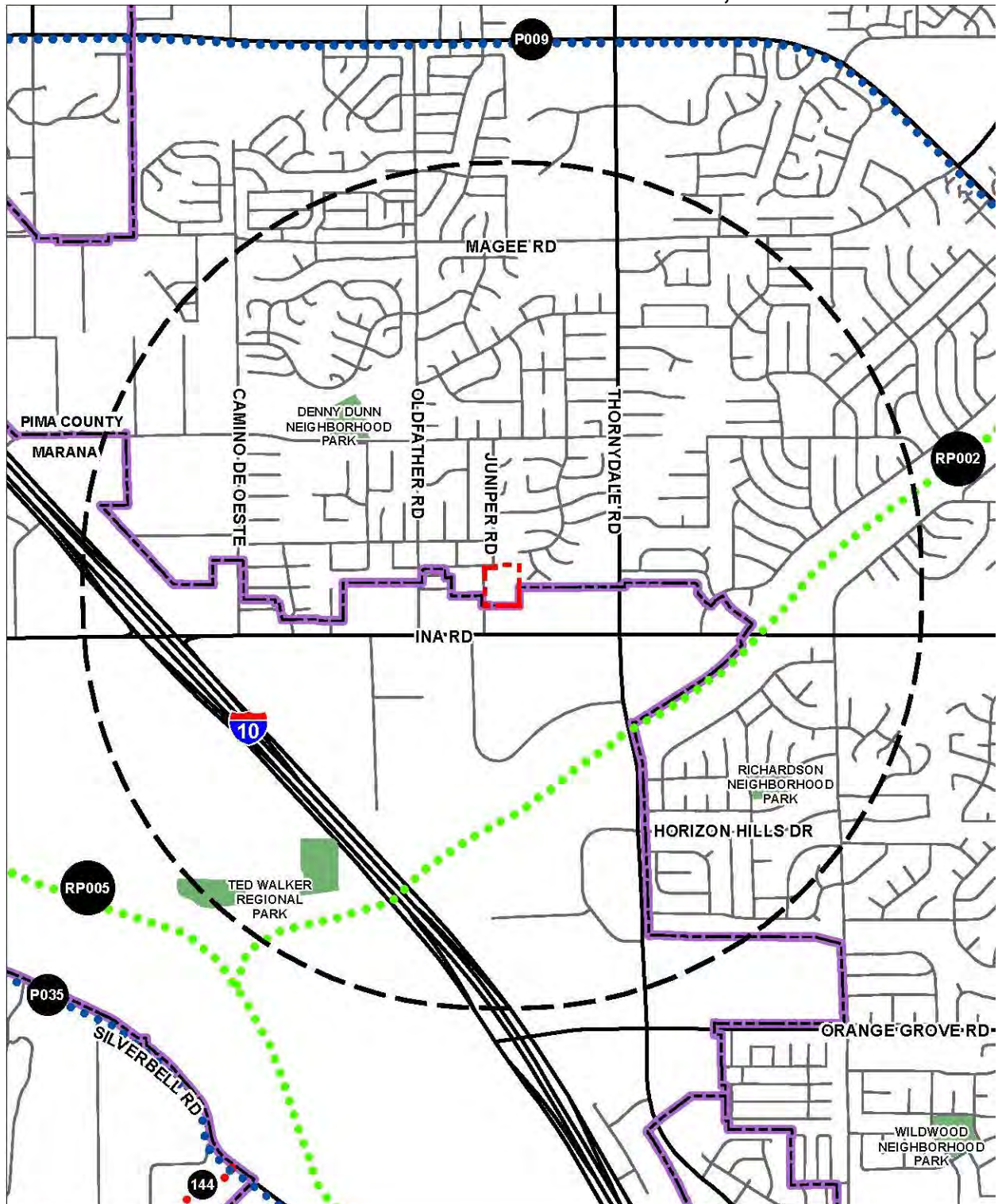
According to the PRTSMP, the Cortaro Farms Road Path is located just outside the one-mile boundary of the site. The path is nearly seven (7) miles in length and connects the Silverbell Road Path to the La Canada Drive Trail (see *Exhibit I.G. 1: Parks, Recreation and Trails*).

The Silverbell Road path is located southwest of the one-mile boundary of the project site. In total, the Silverbell Road Path is over sixteen (16) miles in length.

The Santa Cruz River Park connects to the Canada del Oro River Park on the west side of Interstate 10 and makes up a sixty-(60) mile portion of the Loop path, which consists of 131 miles of car-free shared use paths throughout the Tucson Metro region.





Exhibit I.G.1: Parks, Recreation and Trails



LEGEND

- |  |   |   |
|--|---|---|
| <span style="border: 2px dashed red; padding: 2px;"> </span> Site Boundary             | <span style="background-color: #92d050; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Parks | <span style="color: green;">.....</span> River Park   |
| <span style="border: 2px dashed black; padding: 2px;"> </span> One-mile Radius         | <span style="border-bottom: 2px solid black; width: 20px; display: inline-block;"></span> Major Roads                             | <span style="color: blue;">.....</span> Path  |
| <span style="border: 2px solid purple; padding: 2px;"> </span> Jurisdictional Boundary | <span style="border-bottom: 1px solid black; width: 20px; display: inline-block;"></span> Local Roads                             | <span style="color: red;">.....</span> Singletrack Trail  |
|  |   | <span style="background-color: black; color: white; border-radius: 50%; padding: 2px 5px;">P009</span> Trail ID |



  
 FILE NAME: RGE-01\_trailsparks\_6x8.mxd  
 SOURCE: Pima County GIS, 2019



## H. Cultural Resources: Archaeological and Historic Sites

### 1. Records Check: Arizona State Museum Letter

#### a. *Cultural Resources Field Survey*

A search of the archaeological site records from the Arizona State Museum (ASM) found that the proposed project area has not been previously inspected for cultural resources (see *Exhibit I.H.1: Arizona State Museum Letter*).

#### b. *Previously Recorded Archaeological or Historic Resources*

Since a cultural resources survey has not been performed; there are no known archaeological or historic resources found on the site.

#### c. *Probability of Buried Archaeological Resources*

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

#### d. *Archaeological Survey Recommendations*

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

### 2. Map and Description of Archaeological or Historic Sites

The Arizona State Museum records check indicated that no cultural resource surveys have been performed on the property. A potential future cultural resources survey will determine whether there are any cultural or historic sites on the subject property.

### 3. Field Survey Requirements or Results

ASM defers to Pima County regarding recommendations concerning the need for meeting cultural resources requirements prior to any ground modification activities. Based on the results of the ASM site record check, the Pima County Cultural Resources and Historic Preservation Office may recommend that an on-the-ground survey be conducted by a qualified archaeologist prior to any ground modification activities.



**Exhibit I.H.1: Arizona State Museum Letter**



THE UNIVERSITY OF ARIZONA  
**ARIZONA  
STATE MUSEUM**

Arizona State Museum  
PO Box 210026  
Tucson AZ 85721-0026  
(520) 621-6281  
[www.statemuseum.arizona.edu](http://www.statemuseum.arizona.edu)

March 25, 2020

Lexy Wellott  
The Planning Center  
2 East Congress, Suite 600  
Tucson, AZ 85701

**RE:** RGE-01  
Parcels 225-36-0350 and 225-36-0250

Dear Lexy,

Arizona State Museum (ASM) has reviewed archaeological project and site records in support of project: RGE-01 (Figure 1). Correspondence indicates this project will involve the rezoning of privately-owned land with the intent of developing 24 residential units. The project area is located at 7250 and 7320 North Juniper Road in the city of Tucson, Pima County, and encompasses parcels 225-36-0350 and 225-36-0250 within Township 12 South, Range 13 East, Section 31. Below are the results of ASM's research.

**Search Results:**

According to a search of the archaeological site files and records retained at ASM, 84 archaeological survey projects were conducted within a one-mile radius of the project area between 1955 and 2015. Previous survey work was conducted in support of water pollution and flood control; residential and commercial development; parks construction; equestrian facility staging; road improvements; CAP Pressure Regulating Valve Stations; a gravel pit; and the installation of sewer, fiber-optic, and well transmission main and collector lines. Although there were no surveys within the project area there have been several surveys conducted in the immediate vicinity.

Thirty archaeological sites have been identified within a one-mile radius of the project area, one of which is immediately adjacent to the current project area (AZ AA:12:899[ASM]).

**Recommendations and Responsibilities:**

1. Because the project area has not been previously surveyed, 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: <https://statemuseum.arizona.edu/crm>
2. Pursuant to Arizona Revised Statute §41-865, if any human remains or funerary objects are discovered during project work, all work must 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 feel free to contact me [twilling@email.arizona.edu](mailto:twilling@email.arizona.edu) or 520-621-4795.

Sincerely,



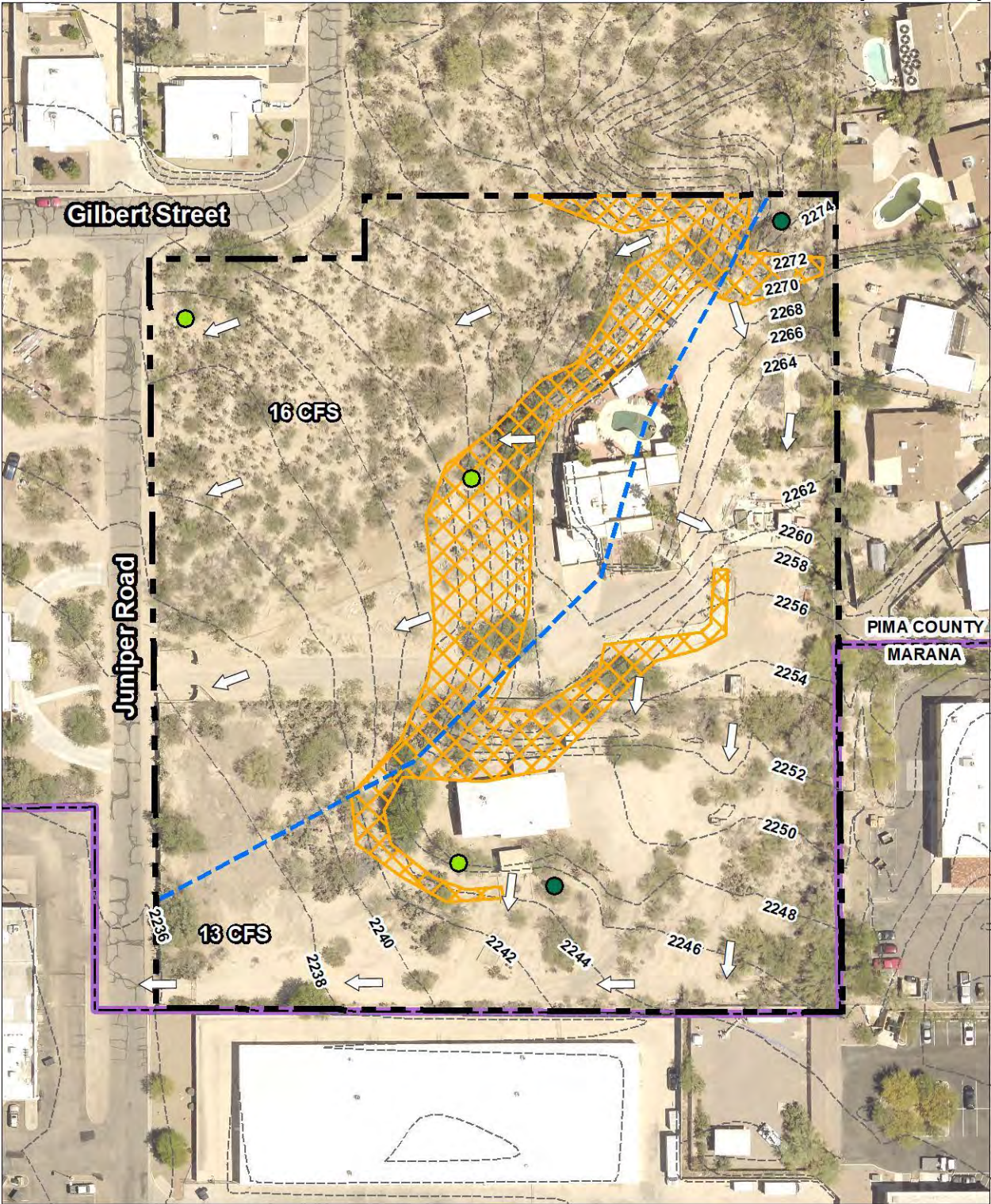
Shannon Twilling, M.A.  
Arizona Antiquities Act Administrator  
Arizona State Museum

## **I. Composite Map**

The composite map graphically illustrates the summation of topographic, hydrologic and biological opportunities and constraints identified during the inventory and analysis process (see *Exhibit I.I: Composite Map*).



Exhibit I.I: Composite Map



**LEGEND**

	Site Boundary		2' Elevation Contours		Saguaro Less Than 6'
	Jurisdictional Boundary		Watershed Boundary		Saguaro Greater Than 6'
	Slopes Greater than 15%		Flow Direction		

NORTH

0' 50' 100'

FILE NAME: RGE-01\_composite\_6x8.mxd  
SOURCE: Pima County GIS, 2019







## Section II: Land Use Proposal

## A. Project Overview

### 1. Proposed Zoning Boundaries

This is a request to rezone an approximately 5.37-acre property from SR (Suburban Ranch) and CR-1 (Single Residence Zone) to CR-4 (Mixed-Dwelling Type Zone). Proposed zoning boundaries are shown in *Exhibit II.B: Preliminary Development Plan*.

### 2. Project Description

#### a. *Proposed Development Use and Type*

The project will feature 23 detached one- and two-story single-family residences and will preserve the existing home on the north parcel. The overall density of the proposed project is 4.47 residences per acre (see *Exhibit II.B: Preliminary Development Plan*). Architectural style and colors will be compatible with homes in the surrounding area. The target market is homebuyers who wish to live in a neighborhood within close proximity to many commercial amenities without the responsibilities of maintaining a larger lot. The proposed community will feature:

- A six-foot decorative masonry wall in the northwest corner of the site adjacent to the intersection of Gilbert Street and Juniper Road;
- Six-foot decorative masonry walls along backyards of lots adjacent to Juniper Road;
- Open space provided on the north and east portions of the site;
- Preservation of the existing residence on the north parcel and using complementary architectural styles and desert color palettes for new development; and
- Perimeter landscape bufferyards featuring native, drought-tolerant plant species.

The following is a list of development characteristics that will benefit the community. The preliminary development plan will:

- Provide a transition from the existing commercial development on Ina Road to the existing single-family residences north and immediately east of the site;
- Provide alternative housing opportunities compatible with the existing subdivisions in the area and close to a wealth of retail and entertainment options;
- Create a walkable community with access to nearby amenities in commercial centers at the intersection of Ina Road and Thornydale Road. The proximity of the residences to retail and services in the neighboring commercial center will benefit business owners while promoting healthy community principles and decreased automobile dependence; and



- Allow for an attractive landscape screen between the adjacent *U-Haul Moving & Storage at Ina Road* and *Harbor Freight Tools* to the south and east, respectively.

*b. Project Response to Site Opportunities and Constraints*

The proposed development responds to site opportunities and constraints through the placement of homes along the southern boundary and western portion of the site. These segments of the site are relatively flat in comparison to the east side of the site and are suitable for development. Natural open space surrounding the existing residence will be preserved in the northern portion of the site, and previously disturbed areas will be revegetated providing visual interest and increased buffering between new and existing homes. Homes along Juniper Road will feature an attractive landscape bufferyard along the back of their properties. A landscape bufferyard is not required along the south boundary or commercial portion of the east boundary, but this project presents an opportunity to screen these commercial uses from the view of existing and future residences. Healthy, viable, mature trees adjacent to existing commercial uses will be preserved to the greatest extent feasible.

*c. Proposed Project Conformance to Pima Prospers and Applicable Regional, Special Area and Rezoning Policies*

The density of the proposed project is 4.47 RAC. Pima County's Comprehensive Plan, *Pima Prospers*, designates the property as Medium Low Intensity Urban (MLIU), which requires a minimum of 2.5 RAC and a maximum of 5 RAC. The proposed project is on the upper end of the required MLIU density range to effectively screen the individual roll-up doors that face north on the U-Haul self-storage building. The proposed rows of homes along the south and west boundaries also create a medium-low density residential land use transition from the intense mix of existing commercial development along Ina Road.

*d. How Proposed Project Addresses Surrounding Property Owners Needs*

The proposed project locates the development of the twenty-three residential units in areas of the site that will help buffer surrounding residences from existing commercial development to the south and east. The placement of lots 1-10 along the southern boundary of the site will serve as a buffer from the intense commercial development on the north side of Ina Road. The existing residence to be preserved onsite and surrounded by open space will provide a significant buffer between the newly proposed homes and existing residences east of the site. Lots 11-23 are situated on the western border adjacent to Juniper Road and will also help provide a land use transition and screen between existing homes and commercial development along Ina. Additionally, the proposed entry/exit road is located away from existing residential driveways toward the backside of the Old Pueblo Plaza commercial shopping center on the northwest corner of Juniper Road and Ina.





e. *Impact to Existing Land Uses and Surrounding Land Uses*

The proposed project is near Ina Road and Thornydale Road in a heavily developed area. Ina Road is designated a County Scenic Route in the Pima County Major Streets and Scenic Routes Plan and Thornydale Road is designated a County Major Route. The property is bordered on the east by Sunny Hills Estates and the Embassy Plaza commercial shopping center. Sunny Hills Estates also extends north of the site. Three single-family residences, the Old Pueblo Plaza shopping center and the undeveloped Oldfather Townhomes are located west of Juniper Road across from the site. The proposed development provides an alternative housing option in an area with a great deal of amenities nearby. The CR-4 zoning requested in this application will provide a transition between the lower-density single family homes to the north, east and west and the commercial development located south of the site. The proposed development will have minimal impact on existing land uses on- and off-site given the following:

- Neighboring homes to the east sit approximately 25 to 30 feet higher than those proposed;
- Ample setbacks, screening and vegetative buffering will be provided along the project boundaries between the project site and adjacent properties to mitigate any visibility, privacy and noise impacts;
- All traffic will enter and exit through a single road, internalizing the new neighborhood circulation and minimizing impacts to existing residential streets (Juniper Road and Gilbert Street); and
- Landscape buffers will feature native, drought tolerant plant species similar to those in the area.

f. *Project Contribution to Smart Growth Principles*

The following are the main goals of smart growth and how the project meets those goals.

- Compact Building Design: Compact building design is necessary to support multimodal transportation options and provide infrastructure cost savings for jurisdictions. Communities seeking to encourage transit use to reduce air pollution and traffic congestion recognize that density is required to make public transit networks viable. Local governments find that on a per-unit basis, it is less expensive to provide and maintain services like water, sewer, electricity, phone service and other utilities in more compact neighborhoods than in dispersed communities.

The site design of the subject property provides compact building design in close proximity to a major route where alternative transit services are available including bus and bike routes. SunTran Bus Routes are available along Ina Road, with bus stops located at Ina Road and Thornydale Road, in the Thornydale Plaza, and at



Thornydale Road and Massingale Road. The project will provide easy access to several bike routes in the surrounding area located on Oldfather Road, Massingale Road, Thornydale Road and Ina Road. There is a shared-use path along the Canada Del Oro wash south of Ina Road, which provides connections to the Chuck Huckleberry Loop shared-use path and amenities throughout the Tucson Metro area. The proposed site design also avoids steeply sloping terrain on the north and central portions of the site to create a natural open space area.

- Range of Housing Opportunities and Choices: Providing quality housing for a range of income levels is an integral component of smart growth strategies. Housing is an important part of community growth, as it constitutes a significant share of new development. Additionally, the location of new housing developments affects access to transportation, commuting patterns, access to services and education, and consumption of energy and natural resources.

The proposed rezoning is for one- and two-story detached single-family residences located in an infill area immediately surrounded by existing residential and commercial development. The proposed homes provide a greater mix of housing options in an area primarily developed with similarly dense residential development (Sunny Hill Estates and Del Bac Heights are 3.6 and 3.8 RAC, respectively). Quality homes with the affordability that can be offered on a smaller lot creates a housing choice that is in high demand. It also provides for additional housing choices near employment centers and commercial service areas including the Foothills Mall, Thornydale Crossing, Costco, Pima Community College – Northwest Campus and Omni Tucson National Resort.

*g. Sustainability Features*

The following is a list of standards that will be implemented to ensure energy efficiency in the proposed homes:

- Low-e insulated windows that increase efficiency;
- Low-flow toilets and showerheads; and
- Landscape designed with drought tolerant plants with low water demand and trees to maximize shade.

Sustainability features contribute to improved home quality and homeowner comfort, as well as lower energy demand and reduced air pollution. The following is a list of features that may be used to improve energy efficiency:

- Effective Insulation: Properly installed and inspected insulation in floors, walls, and attics ensures even temperatures throughout the house, reduced energy use, and increased comfort.



- High Performance Windows: Energy-efficient windows employ advanced technologies, such as protective coatings, to help keep heat in during the winter and out during the summer. These windows also block damaging ultraviolet sunlight that can discolor carpets and furnishings.
- Tight construction and Ducts: Sealing holes and cracks in the home's "envelope" and the heating and cooling duct system helps reduce drafts, moisture, dust, pollen, and noise. A tightly sealed home improves comfort and indoor air quality while reducing utility costs and maintenance.
- Efficient Heating and Cooling: In addition to using less energy to operate, energy-efficient heating and cooling systems can be quieter, reduce indoor humidity, and improve the overall comfort of the home. When properly installed into a tightly sealed home, this equipment won't have to work so hard to heat and cool the home.
- Efficient Products: including but not limited to lighting fixtures, compact fluorescent bulbs, ventilation fans, and appliances, such as refrigerators, dishwashers, and washing machines
- Third Party Verification: With the help of independent Home Energy Raters, builder partners choose the most appropriate energy-saving features for their homes. Additionally, raters conduct on-site testing and inspections to verify the energy efficiency measures, as well as insulation, air tightness, and duct sealing details.

### **3. Compliance with Zoning Code**

The proposed zoning does not interfere with any sections or chapters of the Pima County Code, but is subject to the following land use regulations found therein:

*a. Hillside Development Zone*

The site contains 15% and greater slopes in the northeast corner of the property that stretch down into the center of the site surrounding the existing residences. The presence of these slopes require grading and site development to be in compliance with the Hillside Development Zone (HDZ) regulations listed in Sections 18.61.050 and 18.61.060.B of the Pima County Code. In accordance with the HDZ regulations, the site is subject to a maximum residential grading disturbance of 70%. As shown in *Exhibit II.B.1*, there are approximately 0.8 acres of undisturbed area and 0.81 acres of disturbed/revegetated area, which satisfies the HDZ requirements.

*b. Cluster Development Option*

The cluster development option is not requested as part of this rezoning.





c. *Native Plant Preservation Ordinance (NPPO)*

The site is required to comply with the NPPO as outlined in 18.72.090 of the Pima County Code of Ordinances. The Selective Plant Preservation Method will be utilized for this property. This methodology requires that all viable native plants and safeguarded species meeting the minimum size requirement be inventoried for health and transplantability. Those that meet the codes requirement will be either transplanted on-site, preserved in place or mitigated for.

d. *Historic Zone*

The project site is not within a Pima County historic zone.

e. *Airport Environs Zone*

The project site is not within an Airport Environs Zone.



## **B. Preliminary Development Plan**

### **1. PDP Overlay**

An 11x17 exhibit of the Preliminary Development Plan (*Exhibit II.B.1*) is included with this Site Inventory and Land Use Proposal. *Exhibit II.B.1* includes all applicable information required by items a-p of this subsection as per the Pima County Rezoning Application Packet most recently amended October 17, 2017.

### **2. Support Data**

*a. Estimated Commercial and Industrial Floor Area*

No commercial or industrial is proposed.

*b. Building Heights*

The maximum building height for the proposed homes is 34 feet, two-stories in accordance with the CR-4 zone.

*c. Number of Homes*

The total number of homes for the proposed development is 23 plus the existing residence on the north parcel for a total of 24 homes.

*d. Minimum and Maximum Residential Density*

Minimum density for the *Pima Prospers* Medium Low Intensity Urban (MLIU) land use designation is 2.5 residences per acre ( $2.5 \times 5.37\text{ac} = 13$  residences). Maximum density for the MLIU designation is 5 residences per acre ( $5 \times 5.37\text{ac} = 26$  residences). The proposed residential density is 4.47 residences per acre ( $4.47 \times 5.37\text{ac} = 24$  residences).

*e. Landscaping*

The proposed development will feature native and near-native low water use plant species, as well as permeable ground covers that reflect the natural environment of the surrounding desert. The landscape will feature passive rainwater harvesting systems to mitigate rainwater runoff and supplement landscape irrigation. Any revegetation will consist of transplanted vegetation including the saguaros located on-site. Additional drought-tolerant plant species may be used to enhance landscape buffers and will be chosen to mirror existing species of the area.

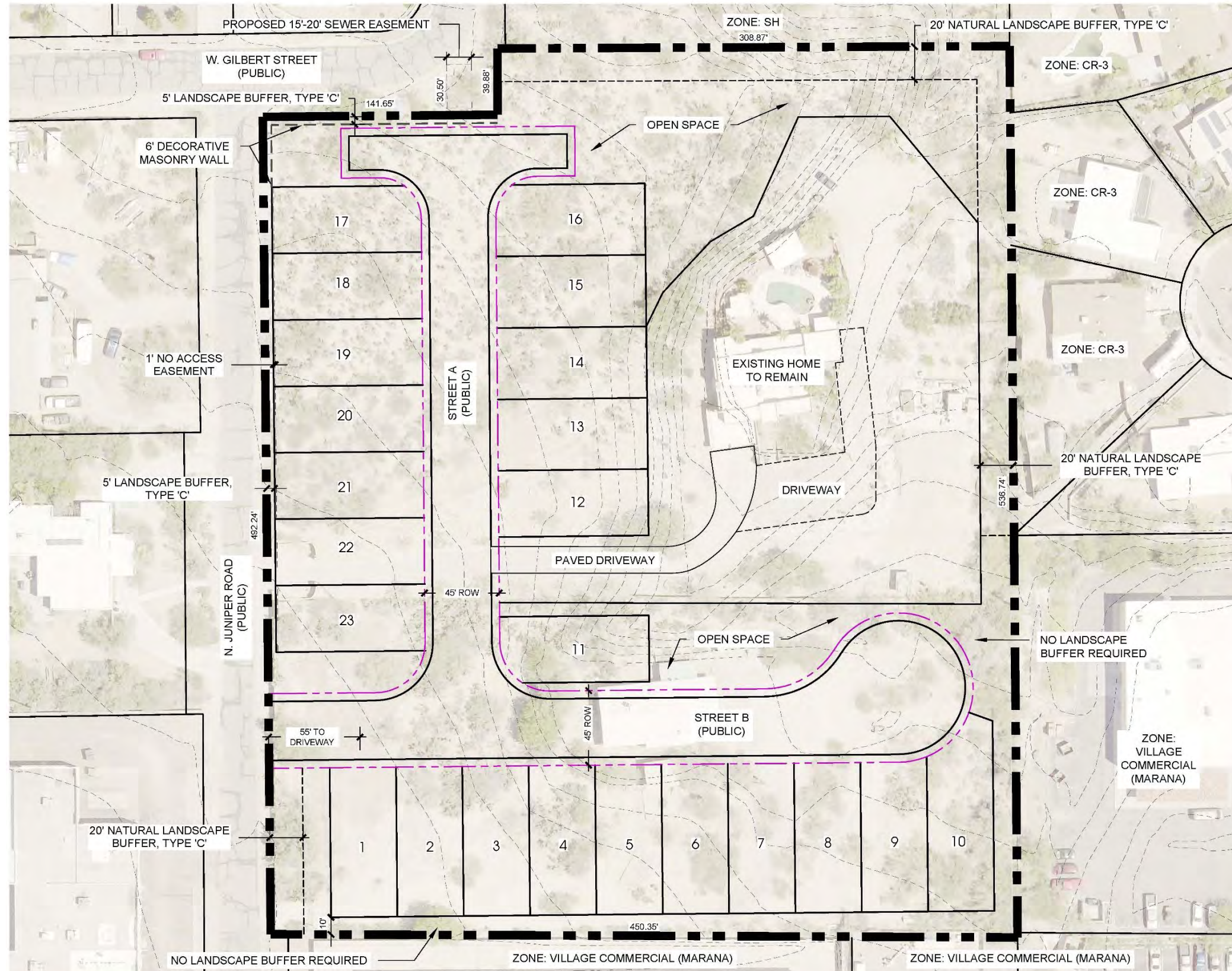
*f. Open Space*

As shown on *Exhibit II.B.1: Preliminary Development Plan*, a large portion of the site surrounding the existing residence will be preserved as open space, including much of the slopes greater than 15%.





**Exhibit II.B.1: Preliminary Development Plan**



NOTES:  
 PARCEL APNs: 225-36-0250 & 225-36-0350  
 SITE ACREAGE: 5.37 ACRES  
 EXISTING ZONING: CR-1, SR  
 PROPOSED ZONING: CR-4

PROPOSED LOTS (3,600 SF) = 18  
 PROPOSED LOTS (3,870 SF) = 5  
 PROPOSED DENSITY: 23+1 LOTS = 4.44 RAC

RECREATION AREA REQUIRED: IN LIEU FEE  
 RECREATION AREA PROVIDED: IN LIEU FEE

OPEN SPACE REQUIRED: MIN. 30%  
 OPEN SPACE PROVIDED: 30% (70,178 SF)

SCALE: 1"=60'-0"  
 PROJECT: RGE-01 DATE: 09/05/19  
 FILE NAME: RGE-01\_PDP.DWG





## C. Topography and Grading

### 1. Development on Slopes of 15% or Greater

There is a significant portion of the site that exists on slopes greater than 15%. The existing single-family residence that will remain is located on top of an elevated area in the northeastern portion of the project site. The western and southern areas of the site are where the active development will take place. In between these two areas, there are significant slopes. The layout of the development area will likely require significant cuts into portions of those slopes, and the establishment of constructed slopes to replace them. The existing slope areas can be seen on *Exhibit I.B.1: Topography*.

### 2. Natural Areas Under HDZ

The areas that are to be left natural are indicated on *Exhibit II.C.2: Open Space and Revegetation*. The total area is measured at 0.8 acres. The average cross slope of the site is calculated at 8.8%, which was calculated from the surface created within the Civil3d drafting program, and using the equation  $ACS = I * L * 0.023 / A$ .

### 3. Disturbed, Revegetated, Natural Areas

Areas proposed to be disturbed, open space, and revegetated areas were determined, and illustrated on *Exhibit II.C.2: Open Space and Revegetation*.

#### a. Retained as Open Space

0.8 acres is to be retained as Natural Open Space. This represents 15% of the entire project site.

#### b. Revegetated

0.81 acres is to be revegetated as part of the project. These revegetated areas represent 15% of the entire project site. Areas of the site disturbed by development will be revegetated with native and drought tolerant plant species. Revegetation will reflect the character, habitat value, and visual interest of the Sonoran Desert. Revegetated areas may include trees, cacti, shrubs, and accents.

#### c. Graded or Disturbed

3.76 acres is to be graded/disturbed as part of the project, although some of this area is already disturbed. This graded/disturbed area represents 70% of the entire project site and will be graded as shown on *Exhibit II.C.4: Changes to Natural Grade*.



#### **4. Changes to Natural Grade**

Areas where the natural grade will be changed more than 5 feet by cut or fill include two areas of cut. One of these areas is located along the slope between the main home, above, and the group of four lots directly to the west, below. The second area is located at the corner of that ridge/slope within the lot located at the northeast corner of the proposed roadway intersection within the project area. The roadways are not named as of this time. The anticipated maximum change in natural elevation is about seven feet of cut within the two areas just identified, and about 3 feet of fill along the southern and western boundaries of the site. Please see *Exhibit II.C.4: Changes to Natural Grade*.



Exhibit II.C: Open Space and Revegetation

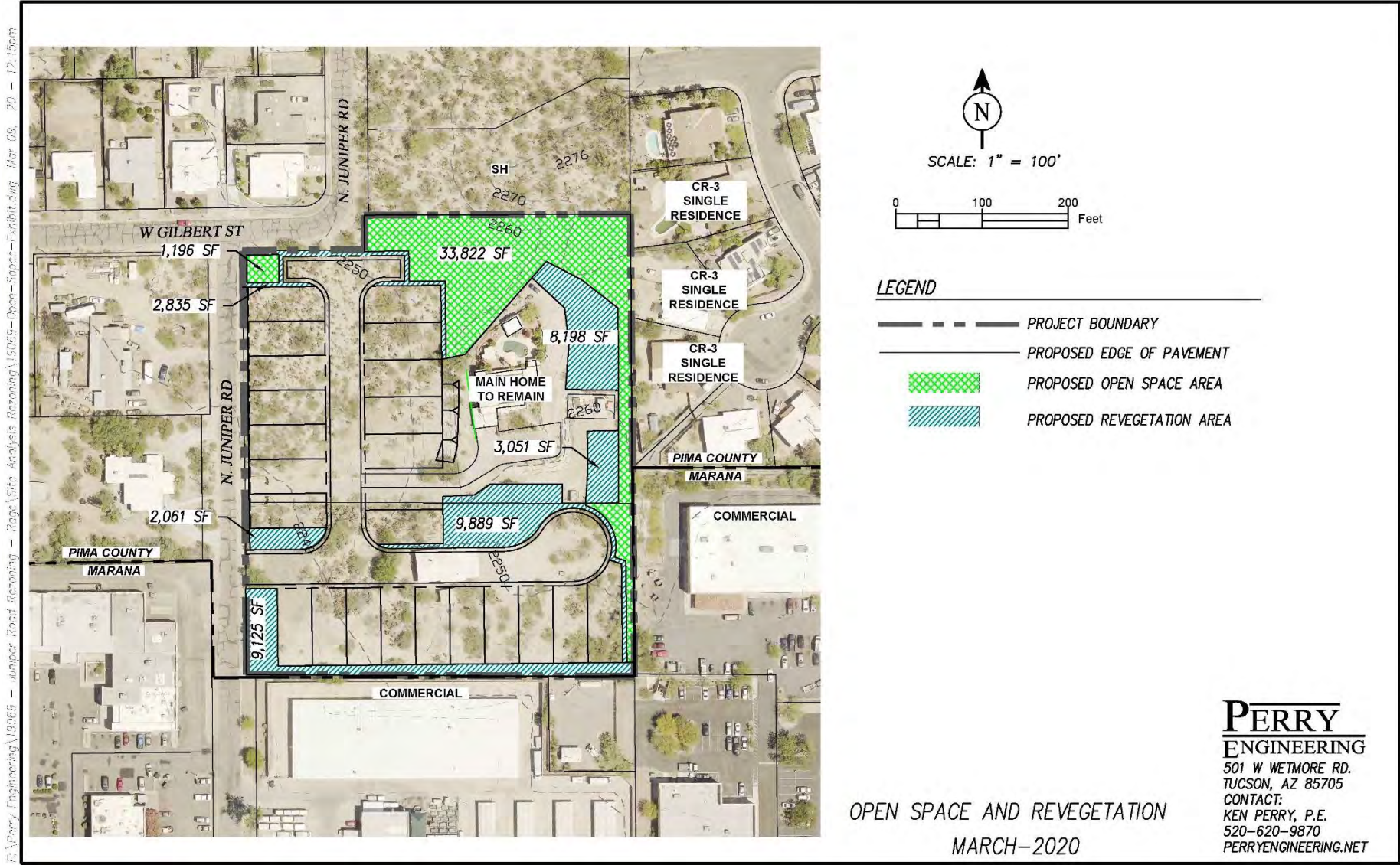
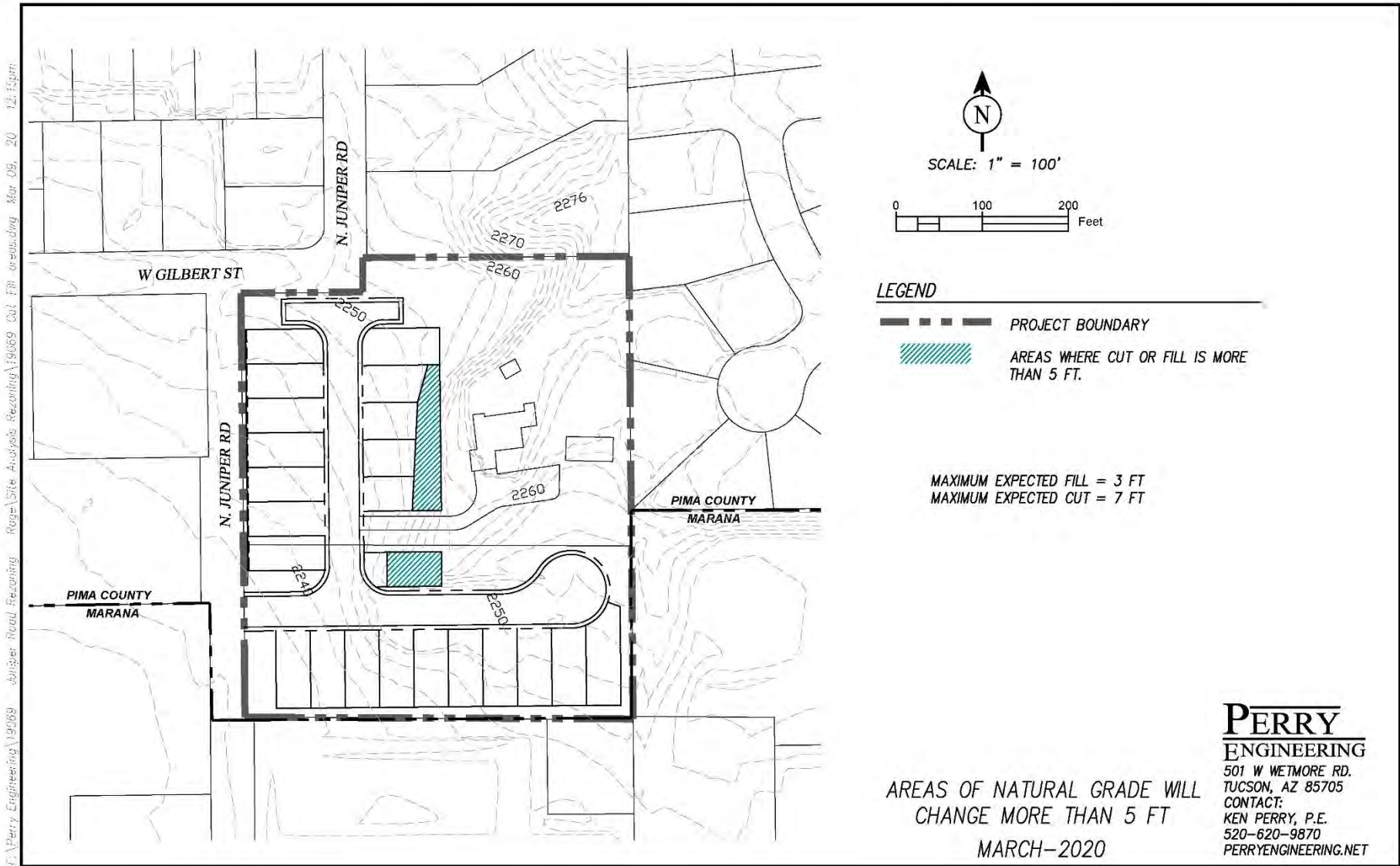




Exhibit II.C: Changes to Natural Grade



## D. Hydrology

### 1. Post-Development On-Site Hydrology

a. *Washes to Be Left Natural*

In the post-development condition, there will be no washes left natural within the portion of the project site that is actively developed. In this area, there are no readily discernable washes even in the existing condition. In the northern and eastern portion of the project, which is not included in the active development area, conveyance areas will be left natural to the extent that they currently exist.

b. *Regulatory Floodplains*

Just as in the existing condition, there will be no regulatory floodplains on or adjacent to the project site in the post-development condition.

c. *Erosion Hazard Setbacks*

Just as in the existing condition, there will be no erosion hazard setbacks associated with any storm water flow paths on or adjacent to the project site.

d. *Pima County Regulated Riparian Habitat*

There will be no regulated riparian habitat on or adjacent to the project site in the post-development condition. There is also no regulated riparian habitat on or adjacent to the project site in the existing condition.

e. *Proposed Drainage Structures*

Storm water conveyance will be handled within the proposed street cross sections. Detention basins will be placed in several locations around the site with the intent to maintain outflows from the project site per the aforementioned critical basin designation, and to maintain the existing distribution of outflows as much as possible. Any detention basins constructed with the project will feature low flow pipe and/or weir outlet structures. Please see *Exhibit II.D: Proposed Hydrology*.

f. *Cross Drainage Structures*

There are no cross-drainage structures currently proposed in the physical layout of the project site.

g. *Floodplain Encroachment and Erosion Protection*

There will be no floodplain encroachment on or adjacent to the project site. Therefore, no erosion protection associated with floodplain encroachment is proposed.



*h. Storm Drains*

Storm drains are not proposed as a means of storm water conveyance at the project site. Instead, conveyance will be achieved within the proposed street sections. Accordingly, there will be no inlets, outlets, or pipe alignments included in the forthcoming project site design.

*i. Easements Conflicting with Drainage Design*

Because it appears that there are no existing easements within the project site, there will be no conflicts with drainage design due to the presence of easements.

*j. Streets, Lots, and Building Pads*

Please see *Exhibit II.D: Proposed Hydrology* for conceptual post-development hydrology. The streets, lots, and building pads shown thereon will be accounted for in the determination of the post-development hydrology.

## **2. Proposed Hydrology**

*a. Response to Constraints and Opportunities*

The detention/retention basin locations proposed on *Exhibit II.D: Proposed Hydrology* are placed in the approximate location where the largest magnitude of flow currently exits the project site at the southwest corner. The basin location on the east side of the site is proposed to be placed there as a matter of availability of that area for meaningful detention.

*b. Encroachment into Flood Control Resource Areas*

There is no encroachment into Flood Control Resource Areas as a result of this project.

*c. Discharges Leaving the Site*

Please see *Exhibit I.C* and *Exhibit II.D* to compare the discharges leaving the site in the existing and the post-development conditions. The proposed conditions discharge was reduced 10% from the estimated existing conditions discharge.

*d. Mitigation of Drainage and Erosion Problems*

There are no known drainage or erosion problems existing at the project site. There are also no such known problems adjacent to the project site.

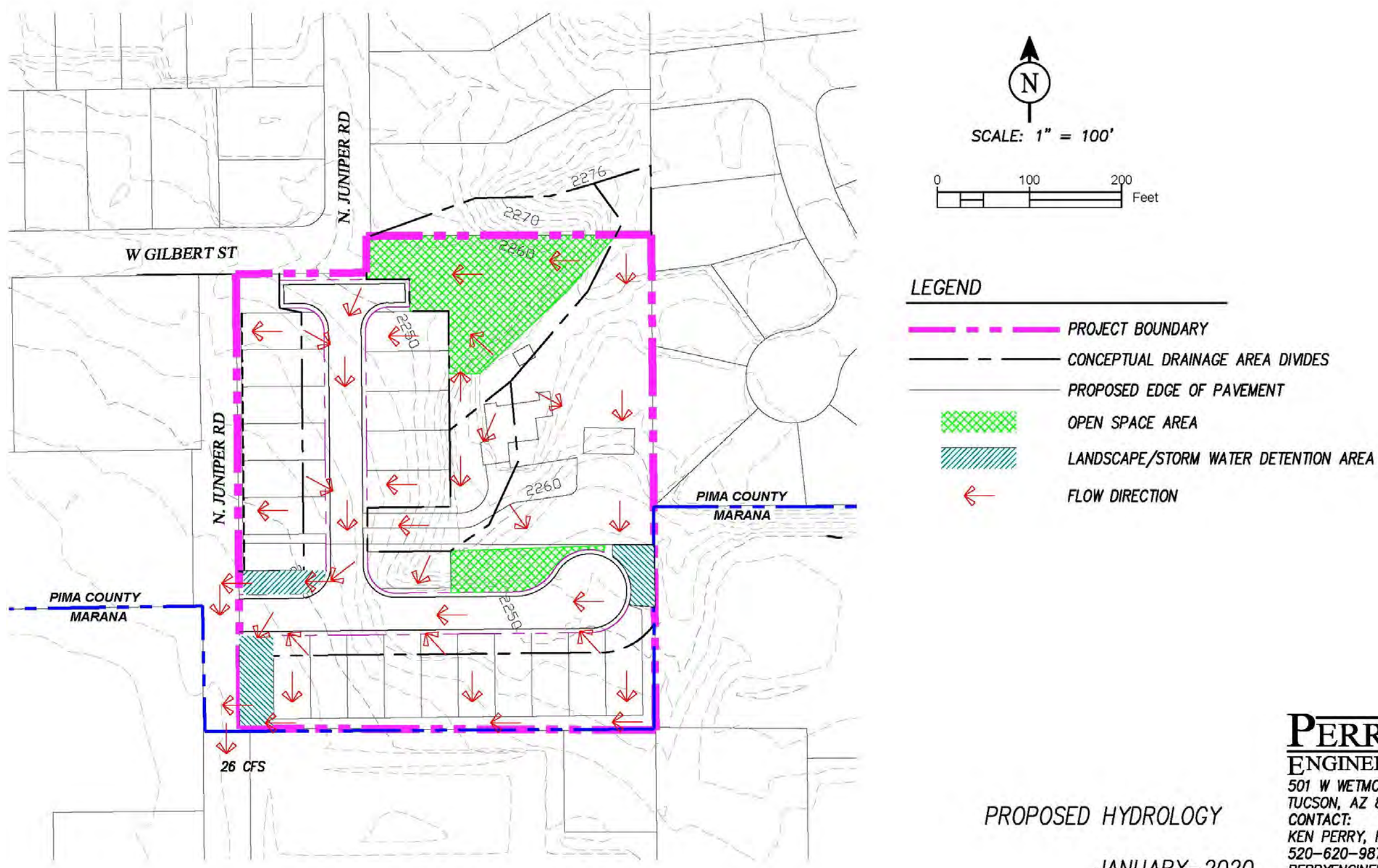
*e. Overall Effect on Drainage Pattern of the Site*

The proposed development at the project site will not fundamentally change the drainage patterns in the area. This includes both magnitudes and locations of discharges. Although there will be some minor changes interior to the project site, the general drainage scheme already existing at the project site will be maintained.





Exhibit II.D: Proposed Hydrology



PROPOSED HYDROLOGY

JANUARY-2020

**PERRY**  
ENGINEERING  
501 W WETMORE RD.  
TUCSON, AZ 85705  
CONTACT:  
KEN PERRY, P.E.  
520-620-9870  
PERRYENGINEERING.NET

## E. Biological Resources

### 1. Anticipated Impacts to Biological Resources

- a. *Conservation Lands System*  
The site is not within the Conservation Lands System Overlay.
- b. *Saguaros*  
The preliminary site visit conducted on March 13, 2020 revealed that there are five saguaros present on the site.
- c. *Ironwood Trees*  
A preliminary site survey conducted on March 13, 2020 indicated that no ironwood trees were present on the site.
- d. *Pima Pineapple Cactus*  
A preliminary site survey conducted on March 13, 2020 indicated that no Pima Pineapple Cacti were present on the site.
- e. *Needle-Spined Pineapple Cactus*  
A preliminary site survey conducted on March 13, 2020 indicated that no needle-spined pineapple cacti were present on the site.

## F. Landscape, Bufferyards, and Visual Mitigation

### 1. Landscape Bufferyard Plan

Table II.F.1 displays the proposed bufferyard requirements identified in the Pima County Code of Ordinances Chapter 18.73.040 as it pertains to this project (see Exhibit II.B.1: Preliminary Development Plan).

**Table II.F.1: Bufferyard and Screening Plan**

Parcel Boundaries (adjacent zone)	Required Bufferyard	Provided Bufferyard	Provided Screening
<b>North (CR-3 &amp; SH Zone)</b>	Bufferyard C adjacent to CR-3 and SH zoning	5-foot Landscape Bufferyard C adjacent to CR-3 zoning, 20-foot Natural Desert Bufferyard C adjacent to SH zoning	6-foot decorative masonry wall adjacent to CR-3 zone
<b>South (Marana VC Zone)</b>	None	None	Existing 5-foot screen wall



<b>East (CR-3 &amp; Marana VC Zone)</b>	None required adjacent to VC zone, Bufferyard C required adjacent to CR-3 zone	20-foot Bufferyard C	Existing fencing/screen wall
<b>West (SR &amp; CR-2 Zone)</b>	Bufferyard C	5-foot Bufferyard C, 20-foot Natural Desert Bufferyard C south of Proposed Street B	6-foot decorative masonry wall

## 2. Landscape Bufferyard Conflicts

There are no known landscape bufferyard conflicts.

## 3. Vegetation Transplanted On-Site

The site will adhere to Chapter 18.72: Native Plant Preservation Ordinance of the Pima County Code. The existing native plants and native plant communities will be preserved by the following methods:

- The preservation-in-place of existing native plants and native plant communities;
- The transplanting of native plants existing on-site to a new location on-site or the transplanting of existing native plants from an adjacent lot to a location on-site; and
- The mitigation of plants destroyed or removed from the site.

Some areas where revegetation will be required may be revegetated with plants collected on-site as from the native plant preservation plan. Any new nursery grown stock shall be of the same genus and species as those found locally on-site. The purpose of the landscaping is to soften and blend features between sites to create visual corridors and connections.

## 4. Visual Impacts and Mitigation Measures

### a. *Views and Vistas from Off-Site Locations*

Views from the properties near the subject site include portions of the Tucson Mountains to the west and southwest. Existing natural vegetation on the subject property and neighboring parcels combined with the varying elevation of surrounding homes, obscures far off views from the perimeter of the site. Adjacent homes to the east in Sunny Hills Estates see further west as they sit approximately 25-30 feet higher than the subject property and other existing homes in the area. Due to the natural topography of the site, residences on the west side of Juniper Road currently have obstructed views of the Santa Catalina mountains. These views will remain obstructed upon development of the site, as the existing residence on the northern parcel will remain in place and the site topography will not be significantly altered.





*b. Areas of High and Medium Visibility*

Due to the existing topography and vegetation in the area and onsite as well as the planned landscape buffers and screening walls, there will be minimal visual impact from neighboring properties onto or across the subject property. The existing residence located in the highest area of the site will have high visibility of the proposed development but will help screen the proposed homes from Sunny Hills Estates.

*c. Measures to Minimize Visual Impacts from Development*

Additional features to minimize visual impacts include thoughtful location of homes and natural areas, the use of landscaping, downlighting, and restrictions on the light reflectance rating of structures. The homes will be finished using natural, non-reflective colors that blend with the natural environment of the surrounding desert. The site will consist of downward-facing external lighting in compliance with the Outdoor Lighting Code, Chapter 15.12 of the Pima County Code of Ordinances.

The preliminary development plan shows the developed portion of the site on the flatter areas while the natural open space is in the area with steeper slopes surrounding the existing residence. A twenty-foot bufferyard featuring natural vegetation, along with the five-foot planted landscape bufferyard and six-foot decorative masonry wall in the northwest corner of the site will reduce the visual impact of the development from Gilbert Street and from neighboring residences. The distance from the nearest residential home across Juniper Road to the yard walls of the proposed homes is approximately 100 feet.

**5. Significant Vegetation**

There are no areas on the site containing significant vegetation to be protected. However, healthy, viable vegetation will be preserved, especially along the perimeter, to the greatest extent feasible.

**G. Transportation**

**1. Ingress/Egress**

As shown on *Exhibit II.B.1: Preliminary Development Plan*, ingress/egress is provided via a 45-foot wide subdivision street off Juniper Road. The roadway extends east/west within the site adjacent to lots 1-10. A roadway segment branches off the main driveway and extends north to lots 11-23. The access is situated near the southern portion of the site, away from the nearest residential driveway on the west side of Juniper Road.

**2. Distances to Access Points**


See Exhibit II.G.2.





Exhibit II.G.2: Distances to Access Points





**LEGEND**

 Site Boundary

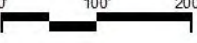
 Proposed Access Point

 Existing Driveway/Intersection

 Distances to Existing Driveways/Intersections



NORTH



0' 100' 200'

FILE NAME: RGE-01\_drivewaysl\_6x8.mxd  
SOURCE: Pima County GIS, 2020



**3. Future Road Improvements**

There are no anticipated future road improvements adjacent to or in the vicinity of the site.

**4. Changes to Average Daily Trips**

The proposed development will generate approximately 217 trips per day in accordance with the Institute of Transportation Engineers Trip Generation Manual, 10<sup>th</sup> Edition. The average rate for single-family detached homes is 9.43 trips per day multiplied by the number of homes (23). The 217 trips expected from this proposed development will cause a negligible increase in the number of average daily trips on project area roadways and are not anticipated to increase traffic delays resulting in a reduction in LOS.

**5. Transportation Concurrency**

The site meets transportation concurrency for all major roads in the area.

**6. Bicycle and Pedestrian Pathways**

The proposed internal street cross-section can accommodate sidewalks on both sides, but there is no existing sidewalk to connect to along Juniper Road. Riverpark paths exist along the Canada del Oro Wash as well as the Santa Cruz River. Additional pedestrian walkways exist in the area, particularly along Ina Road where recent sidewalk, crosswalk and other pedestrian improvements allow for a safe and convenient walk to area businesses. Pima County MapGuide designates the following roads within one mile of the subject site as bicycle routes: Mars Street, Thornydale Road, Oldfather Road, and Massingale Road.

As shown on *Exhibit II.B.1: Preliminary Development Plan*, a compact building design along a major route is proposed, where alternative transit services are available, including bus and bike routes. SunTran bus routes are available along Ina Road and bus stops are located within approximately 1,000 feet of the subject property. Bike routes surround the site in all directions as it is located near the Canada Del Oro shared-use path, which provides connections throughout the Tucson Metro area.

**7. On-site Street System**

The internal public streets will utilize a 45-foot local street standard detail for an urban residential subdivision per the *2016 Pima County Subdivision and Development Street Standards*.

**8. Traffic Impact Analysis**

The amount of average daily traffic does not require a traffic impact analysis for the rezoning application.



## **H. On-Site Wastewater Treatment and Disposal**

### **1. On-Site Wastewater Treatment/Disposal Facilities**

No on-site wastewater treatment/disposal will be provided. The site will be served by Pima County Regional Wastewater Reclamation Department (RWRD).

## **I. Sewer**

### **1. Capacity Response Letter**

See RWRD capacity response letter in Section 1: Site Inventory, *Exhibit II.G.1: Wastewater Letter*.

### **2. Method of Sewer Service**

The site will connect to the existing sewer network via an 8-inch public sewer (I-79-72) north of the subject property at manhole 9395-04 (see *Exhibit II.G.1: Wastewater Letter*).

### **3. Sewer Easements**

Sewers within this development will connect through a new 15 to 20-foot sewer easement between the T-turnaround and the existing manhole (9395-04) in Gilbert Street. See *Exhibit II.B.1: Preliminary Development Plan*.

### **4. Mitigation of site constraints**

There are no site constraints to gravity sewer.

## **J. Water**

Refer to *Appendix A: Preliminary Integrated Water Management Plan*.

## **K. Schools**

### **1. Access to Adjacent Schools**

There are no schools located immediately adjacent to the subject property.

### **2. School Capacity**

As shown in *Exhibit II.L.2: Existing Schools and Libraries*, the site is located within the Marana Unified School District (MUSD). There are three schools located within one mile of the project site: Richardson Elementary School, Butterfield Elementary School and Sentinel Peak High School. See *Table II.L.2* for all K-12 public and charter schools serving the site.





**Table II.L.2: K-12 Public Schools Serving the Site**

School Name	Location
Butterfield Elementary School	3400 W. Massingale Rd.
Richardson Elementary School	6901 N. Camino de la Tierra
Hendricks Elementary School	3400 W. Orange Grove Rd.
Tortolita Middle School	4101 W. Hardy Rd.
Mountain View High School	3901 W. Linda Vista Blvd.
Sentinel Peak High School (Flowing Wells)	4125 N. Aerie Dr.

Source: Pima County GIS, 2020.

a. *Present and Projected Enrollments*

MUSD was consulted for the current enrollment and capacity numbers for the public schools that will serve the site. *Table II.L.2.a: Enrollment Numbers* shows the most recent available enrollment numbers for the affected schools and the number of spaces available within each school.

**Table II.L.2.a: Enrollment Numbers**

School Name	Enrollment	Spaces Available
Butterfield Elementary School	522	125
Tortolita Middle School	658	576
Mountain View High School	1,778	479

Source: Marana Unified School District, 2020.

b. *Projected Increase to Enrollment*

The Marana Unified School District utilizes census multipliers to obtain school projections. The multipliers include 0.25 elementary and middle school students per household and 0.1 high school students per household. *Table II.L.2.b* shows the number of students anticipated as a result of the 23 proposed homes.

**Table II.L.2.b: Projected Number of Students**

Student Type	Multiplier	Number of Students
Elementary/Middle School	0.25	6
High School	0.1	2

Source: Marana Unified School District, 2020.

c. *Under (Over) School Capacity*

All three MUSD schools serving the site are under capacity and will remain under capacity as a result of this development as shown within Table II.L.2.c: Under (Over) School Capacity



**Table II.L.2.c: Under (Over) School Capacity**

School Name	School Capacity	Spaces Available	Number of Projected Students	Under (Over) Capacity by percentage
Butterfield Elementary School	647	125	6	18%
Tortolita Middle School	1,234	576		46%
Mountain View High School	2,257	479	2	21%

*Source: Marana Unified School District, 2020.*

*d. Projected Enrollment and Under (Over) Capacity*

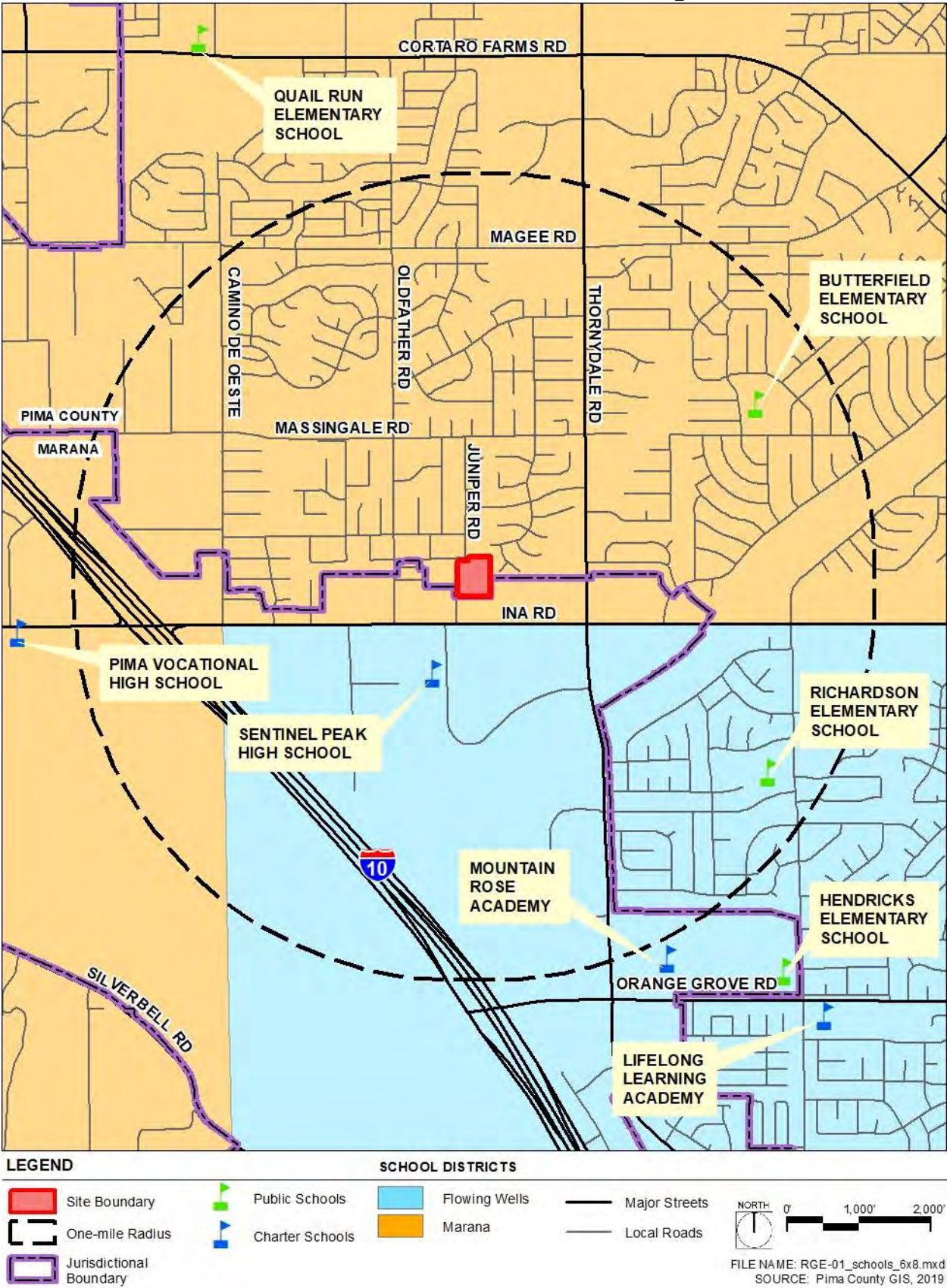
The school district does not provide this information as shown on *Exhibit II.L.3*. However, each school serving the site has capacity for additional students from other residentially zoned land within its service area, see Table II.L.2.c.

*e. School Facilities Improvements*

No recent improvements to schools serving the site are known.



Exhibit II.L.2: Existing Schools and Libraries



## Exhibit II.L.3: School Capacity Letter

### GOVERNING BOARD

Dan Post, President  
John Lewandowski, Vice President  
Tom Carlson, Member  
Suzanne Hopkins, Member  
Maribel Lopez, Ed.D., Member

### ADMINISTRATION

Doug Wilson, Ed.D., Superintendent  
Carolyn Dumler, Ed.D., Assistant Superintendent  
Kristin Reidy, Assistant Superintendent  
Dan Contorno, Chief Financial Officer



February 6, 2020

Brian Underwood  
The Planning Center

### RE: Rezoning of 5.37 acres north of Ina Rd. west of Thornydale Rd. within Marana Unified Schools

Dear Mr. Underwood,

Thank you for informing us of the 5.37-acre property north of Ina Rd. and west of Thornydale Rd. that you're working to rezone. Based upon your letter of 1-3-2020, we understand that the site could be developed into 23 single-family detached homes. Marana Unified School District currently uses a factor of .25 students per home for elementary and .1 students per home for secondary. Your conceptual build out of 23 homes could generate about 6 elementary and 2 secondary students. These proposed changes are acceptable to our schools and we can meet the needs of this development for quality education.

These students can be supported by the following schools with their current enrollment/capacity numbers shown; Butterfield Elementary K-6 (522/647), Tortolita Middle School (658/1234), and Mountain View High School (1778/2257). All schools have capacity for the impact this proposed development may have on our student population under current conditions.

Thank you for developing homes and businesses in our community. Marana Unified School District knows that one of the keys to the continued success of our wonderful community is the quality of our children's education. This belief is held so strongly that we have multiple developers providing the school district with rooftop impact development fees as they increase the number of properties being built in our community. The district uses these funds to ensure the necessary infrastructure is in place to support this growth and maintain an inspiring education for every child. Your voluntary participation in this process is an invaluable investment in our community. Please contact the Marana Schools Finance Office at 520-682-4756 to learn more about participation.

Please contact Dan Contorno at 520-682-4756, or myself at 520-616-4521 if you have any further questions.

Sincerely,

Russell Federico, M.Ed.  
Executive Director of Bond and Capital Projects  
Marana Unified School District

*Inspiring students to learn today and lead tomorrow.*

11279 W. Grier Road • Marana, Arizona 85653 • (520) 682-3243 • [www.maranausd.org](http://www.maranausd.org)





## **L. Recreation and Trails**

### **1. Recreation Areas to be Provided**

The proposed single-family development has less than sixty-five (65) lots and access to public parks located within one mile of the site. Per the Pima County Recreation Area Design Manual, the developer can provide the required recreation area, opt to pay an in-lieu fee, or a combination of both. In this case, the developer has opted to pay the full in-lieu fee for such a small infill project but may provide a fractional amount of recreation area during platting.

In accordance with Pima County Code, single-family development requires a minimum of 871 square feet of recreation area per unit. The proposed development will feature twenty-three (23) single family homes, and therefore; must provide approximately 20,000 square feet of recreation space to meet Pima County requirements. The recreational amenities provided will be decided during the platting process. Minor encroachments on preserved open space may occur to accommodate recreational amenities, in which case these areas will be revegetated.

### **2. Proposed Ownership of Open Space**

The open space and common areas present on the site will be maintained by an established homeowner's association and/or the owners of lots within the development.

### **3. Proposed Trails in Compliance with E. Pima Co. Trails System Master Plan**

According to the Pima County Bicycle and Pedestrian Program, the property is not located adjacent to any proposed trails.

## **M. Cultural Resources: Archaeological and Historic Sites**

### **1. Mitigation Measures for Protection of Resources**

Based on an Arizona State Museum check of archaeological survey records, no archaeological or historic resources are known to exist on the property. However, no cultural resources surveys have been conducted on the property.

### **2. Archaeological Survey Measures**

Based on the results of the ASM site records check, Pima County will determine whether survey is necessary for the currently proposed development. If a survey is recommended, it will be conducted prior to any ground modifying activities and submitted to Pima County for review. A cultural resources mitigation plan for any identified archaeological or historic sites on the subject property shall be submitted to Pima County at the time of, or prior to, the submittal of any tentative plat or development plan. All work shall be conducted by an archaeologist permitted by



the Arizona State Museum or a registered architect, as appropriate. Following rezoning approval, any subsequent development requiring a Type II grading permit will be reviewed for compliance with Pima County's cultural resources requirements under Chapter 18.81 of the Pima County Zoning code.

### **3. Cultural Resources Mitigation Plan**

If cultural resources are revealed during ground-disturbing activities, all construction shall cease, and consultation shall be initiated with ASM to assess potential significance of any unearthed materials (ARS 41-841.) If human skeletal remains or funerary objects are discovered, ASM will be contacted immediately (ARS 41-865 & 41-844).

## **N. Environmental Quality**

### **1. Control of Dust Pollution**

Watering trucks will be on hand during construction to control dust pollution. In addition, all streets will be paved.

### **2. Control of Emissions Greater than 100 tons per Year**

#### *a. Air Quality Code*

The site is planned for residential development. These standards do not apply.

## **O. Agreements**

### **1. Agreements with Neighboring Properties**

There are currently no agreements with neighboring property owners.



## **Bibliography**

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Desert Plants. David E. Brown (ed.). University of Arizona, Tucson, Arizona. 1982.

Flood Insurance Rate Maps. Federal Emergency Management Agency, Baltimore, Maryland.

Floodplain Management Ordinance No. 1988-FCI for Pima County Arizona, adopted by the Board of Directors, Pima County Flood Control District, April 26, 1988. Pima County Department of Transportation and Flood Control District, Pima County, Arizona.

Hydrology Manual for Engineering Design and Floodplain Management within Pima County, Arizona. Pima County Department of Transportation and Flood Control District, Pima County, Arizona. September, 1979.

Major Streets and Routes Plan (Co14-79-2). Pima County, Arizona. Amended May 6, 1986.

Mapguide. Pima County Department of Transportation. 2020.

Mapguide. Sonoran Desert Conservation Plan. 2020.

Regional Transportation Plan, 2045. Pima Association of Governments, Pima County, Arizona. 2016.

Regional Trail System Master Plan, Pima County, Arizona, 2010.

Stormwater Detention/Retention Manual. Pima County Department of Transportation and Flood Control District, City of Tucson, Arizona. 1987.

Zoning Code Pima County, Arizona. Pima County Development Services. Pima County, Arizona. October, 1986.



A photograph of a desert landscape. In the foreground on the right, a large saguaro cactus is partially visible. The middle ground is filled with dense desert vegetation, including several bright yellow wildflowers. In the background, a range of mountains is visible under a sky with scattered clouds. The overall lighting suggests a late afternoon or early morning setting.

# Appendices



## **Appendix A: Preliminary Integrated Water Management Plan**



**Exhibit A.1: Water Supply Letter**



CITY OF  
TUCSON

TUCSON WATER  
DEPARTMENT

March 03, 2020

The Planning Center  
2 E. Congress #600  
Tucson, AZ 85701

Attn: Brian Underwood

**SUBJECT: Water Availability for Project: 7250 & 7320 N. Juniper Rd, APN: 225360250, 225360350, Case #: WA3060, T-12 R-13 S-31, Lots: 9999, Location Code: UNI, Total Area: 5.39, Zoning: SR**

**WATER SUPPLY**

*Tucson Water will provide water service to this project based on the subject zoning of the above parcels. Tucson Water has an assured water supply (AWS) designated from the State of Arizona Department of Water Resources (ADWR). An AWS designation means Tucson Water has met the criteria established by ADWR for demonstration of a 100-year water supply - it does not mean that water service is currently available to the subject project.*

**WATER SERVICE**

The approval of water meter applications is subject to the current availability of water service at the time an application is received. The developer shall be required to submit a water master plan identifying, but not limited to: 1) Water Use; 2) Fire Flow Requirements; 3) Offsite/Onsite Water Facilities; 4) Loops and Proposed Connection Points to Existing Water System; and 5) Easements/Common Areas.

*Any specific area plan fees, protected main/facility fees and/or other needed facilities' cost, are to be paid by the developer. If the existing water system is not capable of meeting the requirements of the proposed development, the developer shall be financially responsible for modifying or enhancing the existing water system to meet those needs.*

***This letter shall be null and void two years from the date of issuance.***

**Issuance of this letter is not to be construed as agency approval of a water plan or as containing construction review comments relative to conflicts with existing water lines and the proposed development.**

If you have any questions, please call New Development at 791-4718.

Sincerely,

Michael Mourreale, P.E.  
Engineering Manager  
Tucson Water Department

MM:ka  
CC:225360250,350.docx



NEW DEVELOPMENT • P.O. BOX 27210 • TUCSON, AZ 85726-7210  
(520) 791-4718 • FAX (520) 791-2501 • TDD (520) 791-2639 • [www.tucsonaz.gov/water](http://www.tucsonaz.gov/water)



## **2. Water Conservation Measures**

- a. Water conservation measures listed in Table B – Water Conservation Measures in the Pima County Site Analysis requirements to be included as part of the proposed project are as follows:
- O-6b, Install an irrigation system with water conservation components, as specified in Table B – 2.5 points
  - O-3b, Only native and/or drought-tolerant, low-water use landscaping for 50% of Landscape Area\* – 3 points
  - O-4a CC&Rs that restrict the use of non-native plants and turf grasses in front yards of lots – 0.5 pts
  - I-3d, Low-flow faucets and showerheads – 3 points
  - I-3a, Low-flow toilets – 3 points
  - I-6, Low-water use kitchen sink and dishwasher– 3 points

\*Landscape Area = Bufferyards and Common Area

The ultimate mix of water conservation measures used in the proposed subdivision will be determined during the platting process.

## **3. Proximity to Renewable and Potable Water Supplies**

Not Applicable. The site estimated baseline water demand is less than 0.50-acre feet per year and the proposed project has legal, physical, or planned access to renewable and potable supplies

