

# PECOS 114 REZONING SITE ANALYSIS

(P24RZ00003)



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IN COLLABORATION WITH:



NOVEMBER 2024

PARADIGM LAND DESIGN



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## INTRODUCTION

### A. PROJECT OVERVIEW

Pulte Homes proposes development of a single-family neighborhood occupying 20% of approximately 114 acres (the "Property") along Pecos Way between Lambert Lane and Thornydale Road in unincorporated Pima County. The remaining 80% of the Property will be preserved as onsite open space in accordance with the Maveen Behan Conservation Lands System.

This document has been prepared in support of a request to rezone the Property from SR (Suburban Ranch) to CR-1 (Single Residence Zone). This will allow for construction of approximately 101 homes, which equates to a gross density of under one home per acre in accordance with the density range permitted by the Pima Prospers Comprehensive Plan's Low-Intensity Urban 0.3 land use designation when more than two-thirds of a site is preserved as open space.

The size of the Property allows the proposed neighborhood of homes to be situated centrally within the Property, at least 300 feet from the nearest neighboring residential properties. The size of the property also allows the proposed neighborhood to be clustered entirely away from mapped Important Riparian Areas and areas impacted by sheet flooding, thus minimizing potential impacts to wildlife and nearby property owners.

The Pima County Tax Assessor designates the Property as parcel numbers 224-44-050A, 224-44-051A/B/C, and 224-44-052A/B/C. See Exhibit I-A-1: Site Location Map.

### B. PRIMARY OBJECTIVES

- Provide high-quality, single-family homes for families wishing to live in the northwest Tucson metropolitan area, in response to continuing strong demand.
- Construct an infill residential neighborhood that is sensitive to surrounding neighbors and wildlife.

### C. CONSISTENCY WITH SDCP MAEVEEN MARIE BEHAN CONSERVATION LANDS SYSTEM

This proposed rezoning is compliant with the open space goals of the MMBCLS.

# I. SITE INVENTORY

The purpose of the Site Inventory section of this document is to catalog the various developmental opportunities and constraints impacting the property in order to provide a meaningful and relevant context for the development proposal detailed in Section II of this document. Through careful consideration of these existing conditions a design can be deemed compatible with its surroundings and appropriate for the area.

## A. EXISTING LAND USES

### 1. Site Location & Regional Context

The Property subject to this rezoning request consists of seven parcels totaling 114± acres located in Pima County, Arizona, Township 12 south, Range 13 east, Section 17. The site is located along Pecos Way between Lambert Lane and Thornydale Road. The Pima County Tax Assessor designates the Property as parcel numbers 224-44-050A, 224-44-051A/B/C, and 224-44-052A/B/C. See Exhibit I-A-1: Site Location Map.

### 2. Existing Land Uses Onsite

The Property is currently undeveloped and vacant. Some historical dumping has occurred onsite, and the property may have once included a home that was removed many years ago. See Exhibit I-A-2: Existing Land Uses.

### 3. Existing Easements Onsite

Six easements exist onsite:

- A 60’ ingress-egress easement (Docket 328 Page 381) in the central portion of the site.
- A 60’ electric utility easement (Docket 1106 Page 281) in the central portion of the site.
- A 15’x200’ utility easement (Docket 1067 Page 279) in the central portion of the site.
- A 15’x50’ water utility easement (Docket 7413 Page 1061) in the central portion of the site.
- A 20’x20’ water utility easement (Docket 7719 Page 1837) in the central portion of the site.
- A 60’ ingress-egress easement (Seq. 20223000362) in the central portion of the site.

Easements will be abandoned or reconfigured as needed to accommodate the proposed development. See Exhibit I-A-3: Existing Easements.

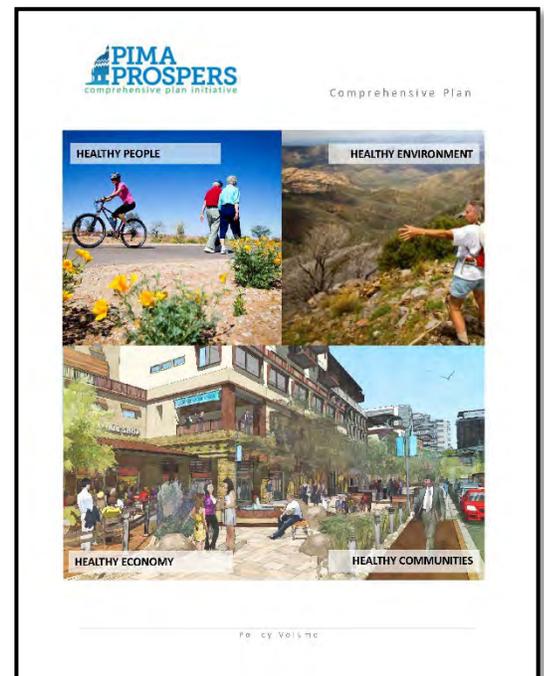
### 4. Comprehensive Plan Onsite & Surrounding

#### i. Comprehensive Plan Designation(s)

The Pima Prospers Comprehensive Plan designates the Property as Low Intensity Urban 0.3 (LIU-0.3). Properties to the east and west are also designated LIU-0.3. Properties to the north are designated Low Intensity Urban 1.2 (LIU-1.2). Properties to the south are within the 885-lot North Ranch subdivision and are designated Medium Intensity Urban (MIU). See Exhibit I-A-4: Existing Comprehensive Plan Land Use Designations.

#### ii. Rezoning or Special Area Policies

No rezoning or special area policies apply to the Property.



5. Surrounding Land Uses

*i. Surrounding Zoning & Land Uses*

The Property is surrounded by properties featuring the following zoning designations and land uses. See Exhibit I-A-2: Existing Land Uses and Exhibit I-A-5: Existing Zoning.

- N: Zoning: Mix of CR-1 (Single Residence Zone) and SR (Suburban Ranch)  
Land Use: Mix of developed and vacant unplanned residential parcels
- NE: Zoning: SR (Suburban Ranch)  
Land Use: Mix of developed and vacant unplanned residential parcels
- E: Zoning: Mix of CR-1 (Single Residence Zone) and SR (Suburban Ranch)  
Land Use: Mix of developed and vacant unplanned residential parcels
- SE: Zoning: CR-4 (Mixed-Dwelling Type Zone)  
Land Use: North Ranch Subdivision
- S: Zoning: Mix of CR-4 (Mixed-Dwelling Type Zone), CR-5 (Multiple Residence Zone), SP (Specific Plan), CR-1 (Single Residence Zone), and SR (Suburban Ranch)  
Land Use: North Ranch Subdivision



- SW: Zoning: Mix of SR (Suburban Ranch) and CR-5 (Multiple Residence Zone)  
Land Use: Tucson Water Facility, Unplanned Residential, North Ranch Subdivision
- W: Zoning: SR (Suburban Ranch)  
Land Use: Mix of developed and vacant unplanned residential parcels
- NW: Zoning: Mix of CR-1 (Single Residence Zone) and SR (Suburban Ranch)  
Land Use: Mix of developed and vacant unplanned residential parcels

*ii. Surrounding Types of Businesses*

A neighborhood shopping center is located at the northwest corner of Thornydale Road and Linda Vista Boulevard, approximately one-third of a mile to the southwest of the Property. An equine boarding facility exists at the northeast corner of Thornydale Road and Lambert Lane, directly north of the Property. However, it is roughly a quarter mile from the proposed neighborhood, which is proposed entirely to the south of Pecos Way.

## 6. Nearby Pending Rezoning, Plats, &amp; Development Plans

*i. Nearby Pending Rezoning*

There are no pending rezonings within one-quarter mile of the Property.

*ii. Nearby Conditionally Approved Rezoning*

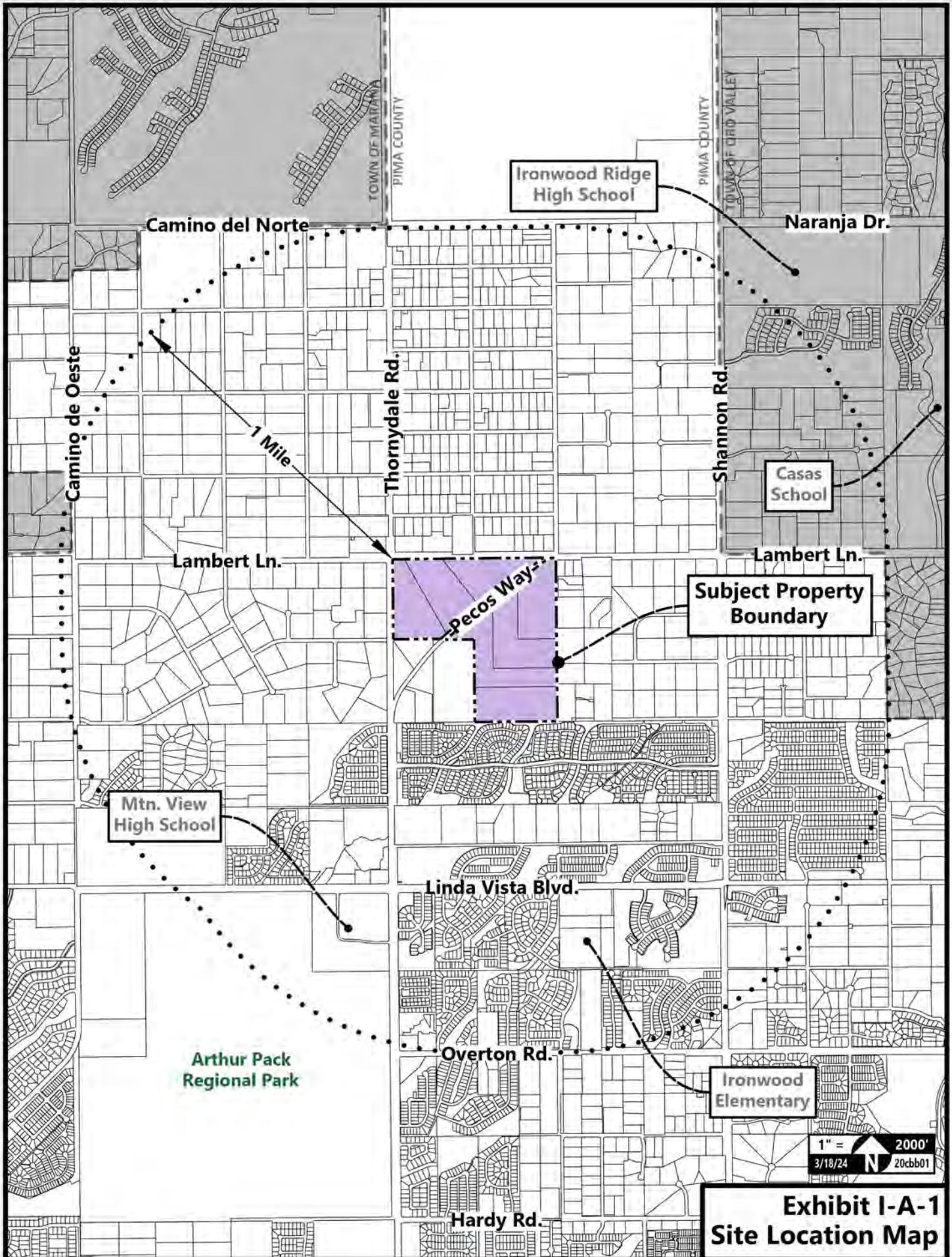
There are no conditionally approved rezonings within one-quarter mile of the Property.

*iii. Nearby Pending Plats*

There are no pending plats within one-quarter mile of the Property.

*iv. Nearby Pending Development Plans*

There are no pending development plans within one-quarter mile of the Property.



**Exhibit I-A-1  
Site Location Map**

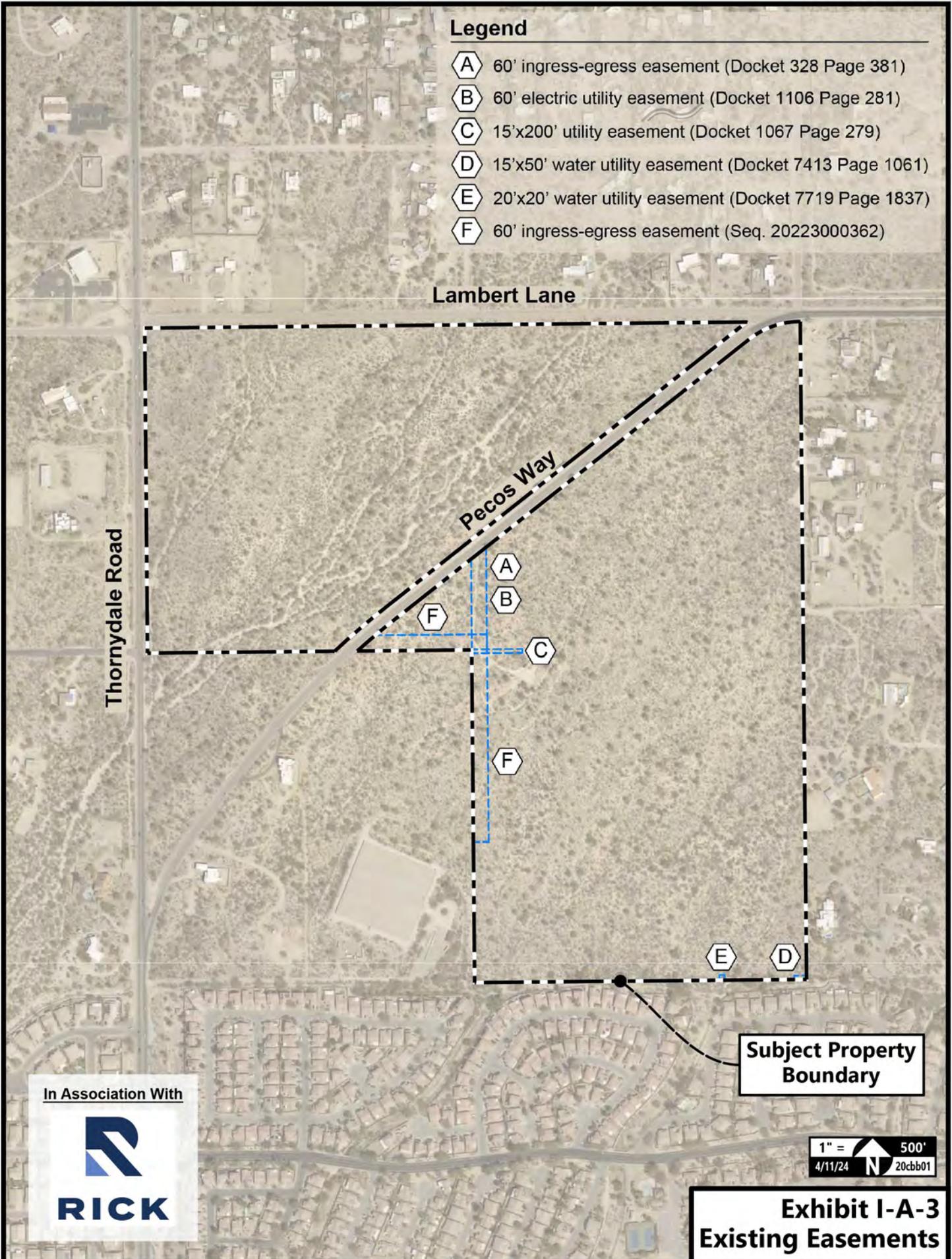


**Exhibit I-A-2  
Existing Land Uses**

\*G:\Projects\20cb Thornydale & Lambert SEC\001\0230\Site Analysis\Exhibits\Exh 1-A-2 X Land Uses.dwg

**Legend**

- A** 60' ingress-egress easement (Docket 328 Page 381)
- B** 60' electric utility easement (Docket 1106 Page 281)
- C** 15'x200' utility easement (Docket 1067 Page 279)
- D** 15'x50' water utility easement (Docket 7413 Page 1061)
- E** 20'x20' water utility easement (Docket 7719 Page 1837)
- F** 60' ingress-egress easement (Seq. 20223000362)



Thornydale Road

Lambert Lane

Pecos Way

**Subject Property Boundary**

In Association With



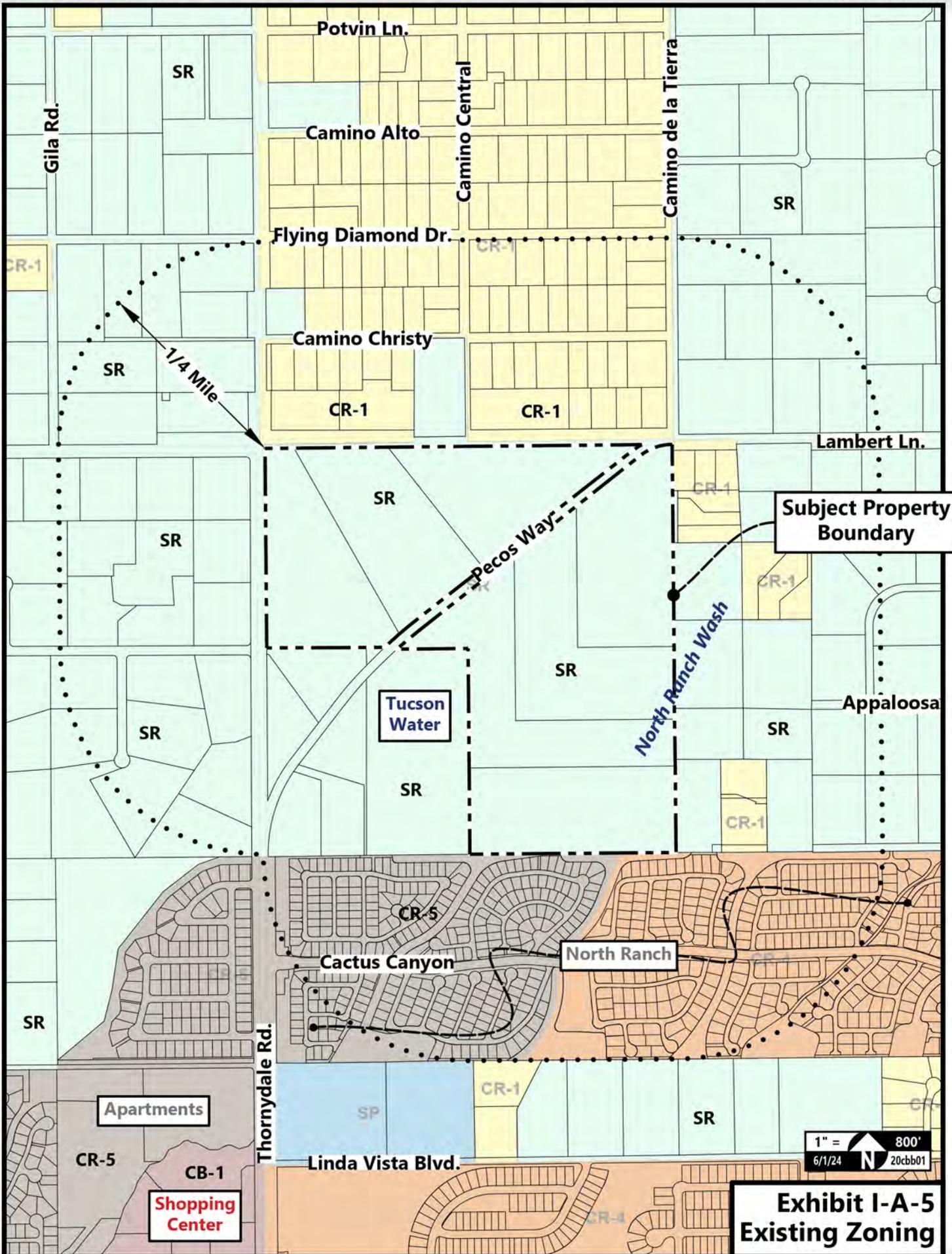
**RICK**

1" = 500'  
4/11/24 N 20cbb01

**Exhibit I-A-3  
Existing Easements**







**Exhibit I-A-5  
Existing Zoning**

**B. TOPOGRAPHY & GRADING**

1. Topographic Characteristics

The Property’s topography is typical of the Tortolita Fan area, sloping evenly at approximately 2% from northeast to southwest and featuring alluvial wash braids of various sizes. Elevations range from 2,554 feet above sea level at the northeast corner along Lambert Lane to 2,496 feet above sea level at the southwest corner adjacent to the North Ranch subdivision. The Property does not contain any hillside conservation areas, rock outcrops, or other significant topographic features. The Property’s grades are generally conducive to development. See Exhibit I-B-1: Topography.

*i. Restricted Peaks and Ridges*

The Property does not contain any restricted peaks or ridges.

*ii. Rock Outcrops & Talus Slopes*

The Property does not contain any rock outcrops or talus slopes.

*iii. Slopes of 15% to 25% & Slopes greater than 25%*

The Property does not contain any natural slopes of 15%, 25%, or greater than 25%.

*iv. Other Significant Topographic Features*

No areas of the site are subject to the Hillside Development Zone.

*v. Existing Grading and Ground Disturbance on the Site*

A small amount of historic grading has occurred onsite near the center of the Property. The grading appears to have been associated with a structure that has since been removed.

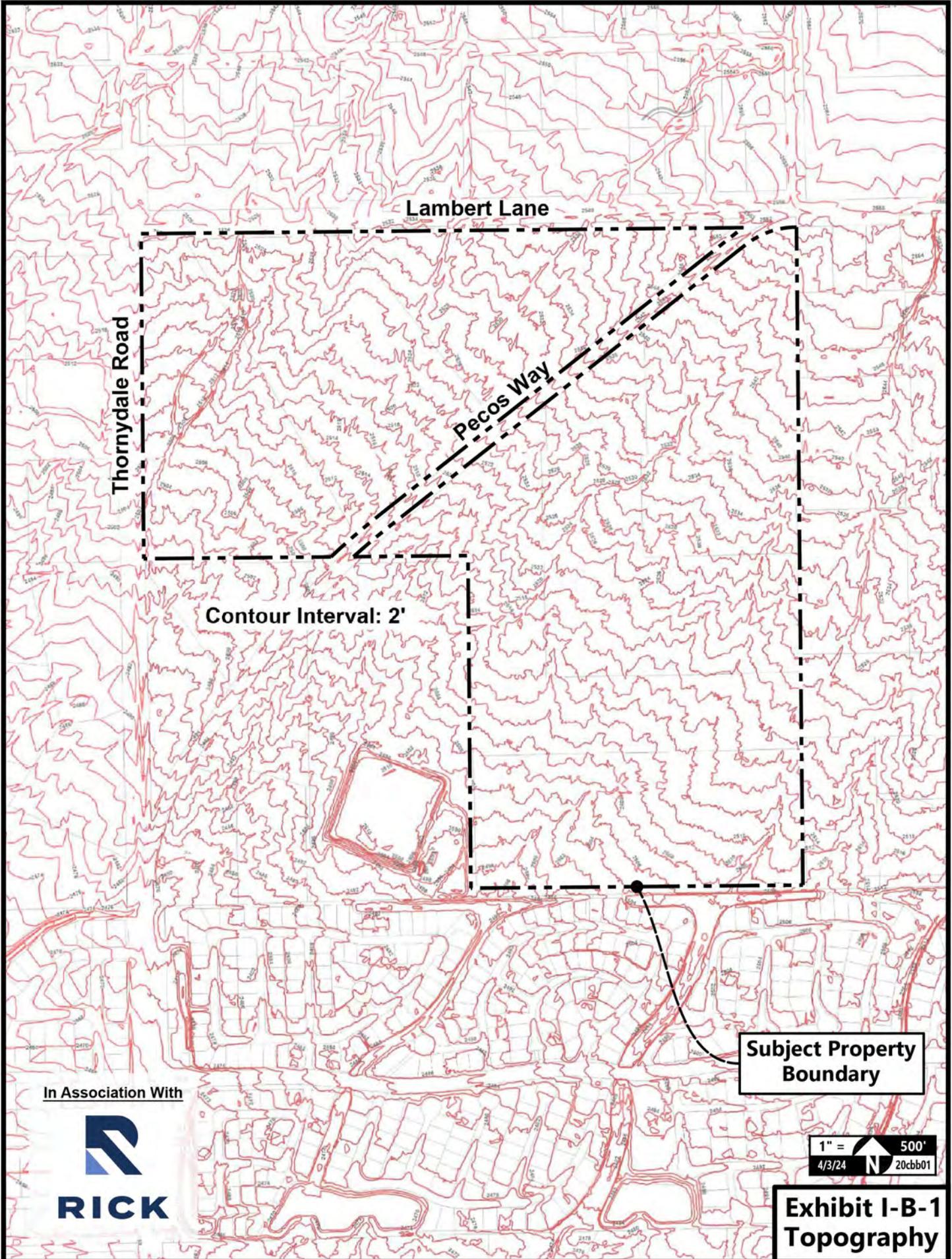
2. Pre-Development Average Cross Slope

The average cross slope of the site is 4.75%. The following equation, as per Pima County Zoning Code Section 18.61.051, was used to determine the average cross slope utilizing 1-foot contours:

$$\text{Average Cross Slope} = \frac{L \times L \times 0.0023}{A}$$

$$\text{Average Cross Slope} = \frac{1 \times 48,048 \times 0.0023}{23.28}$$

$$\text{Average Cross Slope} = 4.75 \%$$



## C. HYDROLOGY

This section of the site analysis describes pre-development onsite and offsite hydrologic and hydraulic characteristics and is based on information provided by Rick Engineering.

### 1. Offsite Hydrology

The Property is impacted by both local and regulatory offsite flows. Regulatory flow is conveyed through the Property by North Ranch Wash and an Unnamed Wash. North Ranch Wash flows through the southeast portion of the Property and splits into two braids onsite while the Unnamed Wash and its tributaries flow through the western portion of the Property from northeast to southwest. The peak flow conveyed by the North Ranch Wash within the site was obtained from Floodplain Study FP-098 (dated March 2019) prepared by Arroyo Engineering, LLC, and SCE Engineering for Pima County Regional Flood Control District (RFCD). The combined 100-year peak flow conveyed by the North Ranch Wash estimated at the south property line is 834 cubic feet per second ("cfs"). Per Pima County GIS Map (PimaMaps), the peak flow conveyed by the Unnamed Wash within the site ranges from 500-1000 cfs. No new hydrologic analysis was performed to determine the peak flow within the Unnamed Wash. RFCD's PC-HYDRO V7.3 was used to estimate local offsite flows impacting the Property from northeast. The local 100-year flow is estimated to be 18.9 cfs. Please see Exhibit I-C.1: Existing Offsite and Onsite Hydrology Map.

### 2. Onsite Hydrology

#### *i. Flood Control Resource Areas*

All peak discharges entering and exiting the Property, as well as their contributing drainage areas, have been shown on Exhibit I-C-1.

#### *ii. Concentration Points & 100-Year Peak Discharges for all Onsite Watersheds*

The onsite drainage areas are delineated into seven sub-watersheds with only stormwater runoff from sub-watershed 6E exceeding 100 cfs for the 1% chance flood. All regulatory offsite flows entering the property exit the site to the south and southwest corner of the property.

#### *iii. FEMA-Designated Floodplains*

Per the Flood Insurance Rate Map (FIRM) for Pima County Arizona, and Incorporated Areas, Map Number 04019C1070L dated June 16, 2011, as published by the Federal Emergency Management Agency (FEMA) shows the property lies within Unshaded Zone X, Zone A and Zone AE as shown on Exhibit I-C.2: FEMA FIRM Map. The average flow depth of North Ranch Wash within the site is approximately 2-ft.

#### *iv. Locally Identified Special Study Floodplains & Administrative Floodways or Flow Corridors*

The project site is impacted by local regulatory flows that is conveyed through the property by North Ranch Wash and an Unnamed Wash. The floodplain limits of both washes have been mapped as detailed in the follow studies:

- North Ranch Wash Floodplain Study, FP Study #98, prepared for RFCD by SCE Engineering and Arroyo Engineering, LLC dated March 14, 2019. This study documents both hydrology and hydraulics of North Ranch Wash.
- Sheet Flood Mapping for Unincorporated Pima County, FP Study #46, prepared by RFCD effective August 8, 2007. This study shows limits of sheet flow areas within the subject property largely due to the Unnamed Wash.
- Tortolita Area Basin Management Plan Phase IIB, FP Study #24, prepared for RFCD by Cella Barr Associates, effective August 3, 1993. This study contains development requirements for projects within the FP#24 study limits.

#### *v. Floodplain Delineation of any Previously Unmapped Regulatory Floodplain*

There are no previously unmapped regulatory floodplains on the subject property.

vi. *Regulatory Sheet Flood Areas and Depths as Mapped by Pima County*

A portion of the site is located within a FEMA Zone A designated area (FIRM Map Number 04019C1070L, effective June 16, 2011), as shown on Exhibit I-C.2: FEMA FIRM Map. The 100-year flow is contained within the wash’s approximate inundation limits.

vii. *Lakes, Ponds, Wetlands, Springs, or Other Source(s) of Perennial Surface Water*

There are no lakes, ponds, wetlands, springs, or other sources of perennial surface water on the Property.

viii. *Erosion Hazard Setbacks for all Onsite Watercourse*

The erosion hazard setback (EHS) of the Unnamed Wash and North Ranch Wash is assumed to be 50’ measured from the 100-year inundation limits. However, the EHS of west split flow of North Ranch Wash is assumed to be 25’ measured from the 100-year inundation limits. Please See Exhibit I-C.1: Existing Offsite and Onsite Hydrology Map.

ix. *Pima County Regulated Riparian Habitat Limits & Classifications*

A mapped riparian area exists onsite. Approximately 22.2 acres of IRA-Xeroriparian Area C is located in the north, northwestern, and southwestern portions of the site, outside of the area proposed for development.

x. *Flow Arrows for Non-Regulatory Flows*

Flow arrows for non-regulatory storm water runoff areas of the development are shown on Exhibit I-C-1.

xi. *Existing Drainage Easement(s) or Other Relevant Easements*

There are no exiting drainage easements onsite.

xii. *Existing Drainage Infrastructure On or Adjacent to the Site*

No drainage infrastructure exists onsite. However, directly downstream the North Ranch subdivision features extensive channelization of natural flows. Examples are shown below.



OFFSITE PEAK FLOWS								
WATERSHED CPs	AREA (ac)	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)	CUMULATIVE CPs	CUMULATIVE Q2 (cfs)	CUMULATIVE Q10 (cfs)	CUMULATIVE Q100 (cfs)
10S	3.45	3.1	8.2	18.9	-	-	-	-
20S*	-	-	-	303**	-	-	-	-
30S*	-	-	-	531**	-	-	-	-

\*Per North Ranch Wash Floodplain Study dated 3/14/19 by Arroyo Engineering, LLC & SCE Engineering.

\*\*Includes runoff from onsite watersheds 5E and 6E using a 3-hr storm with SCS Type II distribution.

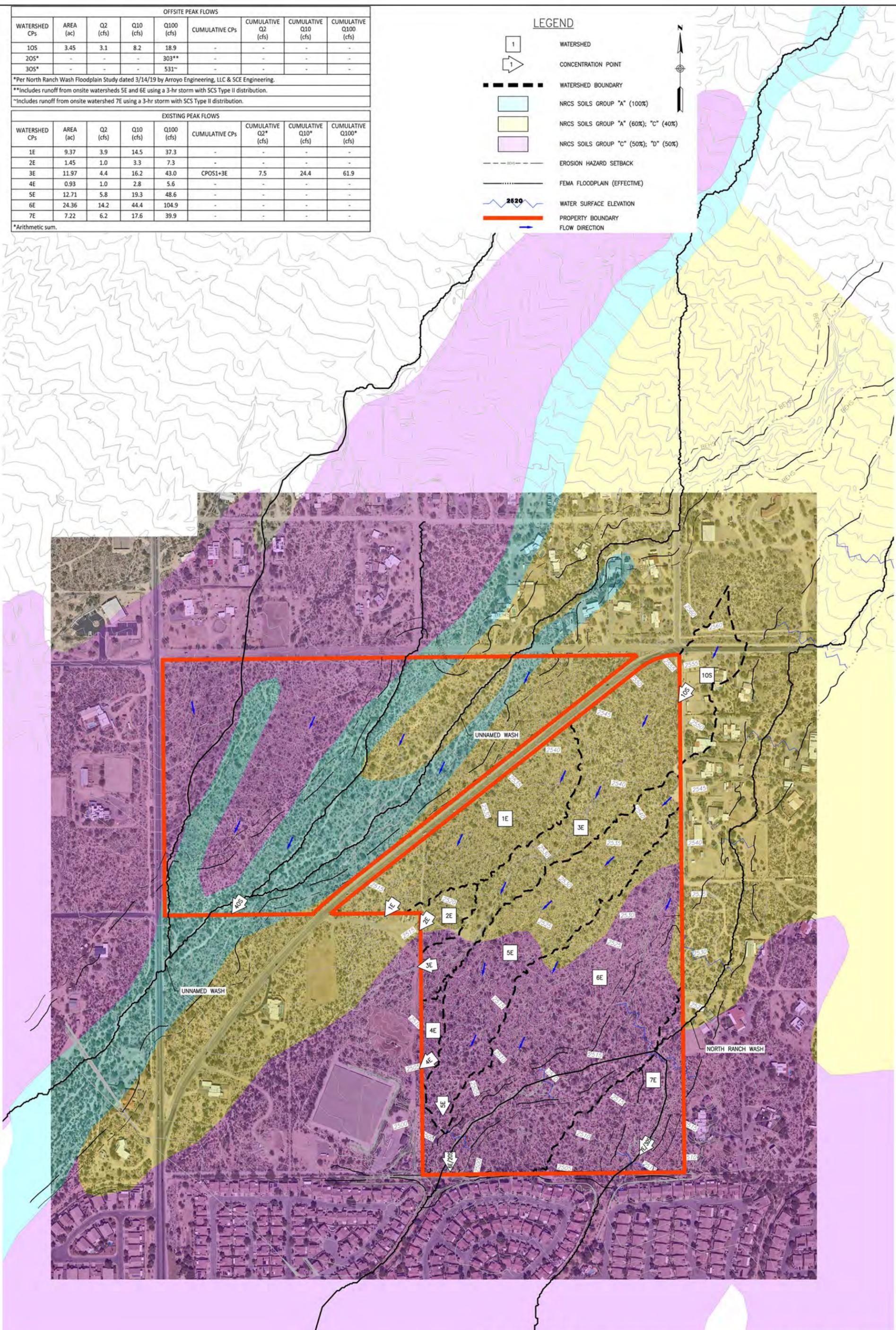
\*\*Includes runoff from onsite watershed 7E using a 3-hr storm with SCS Type II distribution.

EXISTING PEAK FLOWS								
WATERSHED CPs	AREA (ac)	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)	CUMULATIVE CPs	CUMULATIVE Q2* (cfs)	CUMULATIVE Q10* (cfs)	CUMULATIVE Q100* (cfs)
1E	9.37	3.9	14.5	37.3	-	-	-	-
2E	1.45	1.0	3.3	7.3	-	-	-	-
3E	11.97	4.4	16.2	43.0	CPOS1+3E	7.5	24.4	61.9
4E	0.93	1.0	2.8	5.6	-	-	-	-
5E	12.71	5.8	19.3	48.6	-	-	-	-
6E	24.36	14.2	44.4	104.9	-	-	-	-
7E	7.22	6.2	17.6	39.9	-	-	-	-

\*Arithmetic sum.

**LEGEND**

- 1 WATERSHED
- 1 CONCENTRATION POINT
- WATERSHED BOUNDARY
- NRCS SOILS GROUP "A" (100%)
- NRCS SOILS GROUP "A" (60%); "C" (40%)
- NRCS SOILS GROUP "C" (50%); "D" (50%)
- EROSION HAZARD SETBACK
- FEMA FLOODPLAIN (EFFECTIVE)
- 2820 WATER SURFACE ELEVATION
- PROPERTY BOUNDARY
- FLOW DIRECTION



**RICK** ENGINEERING COMPANY  
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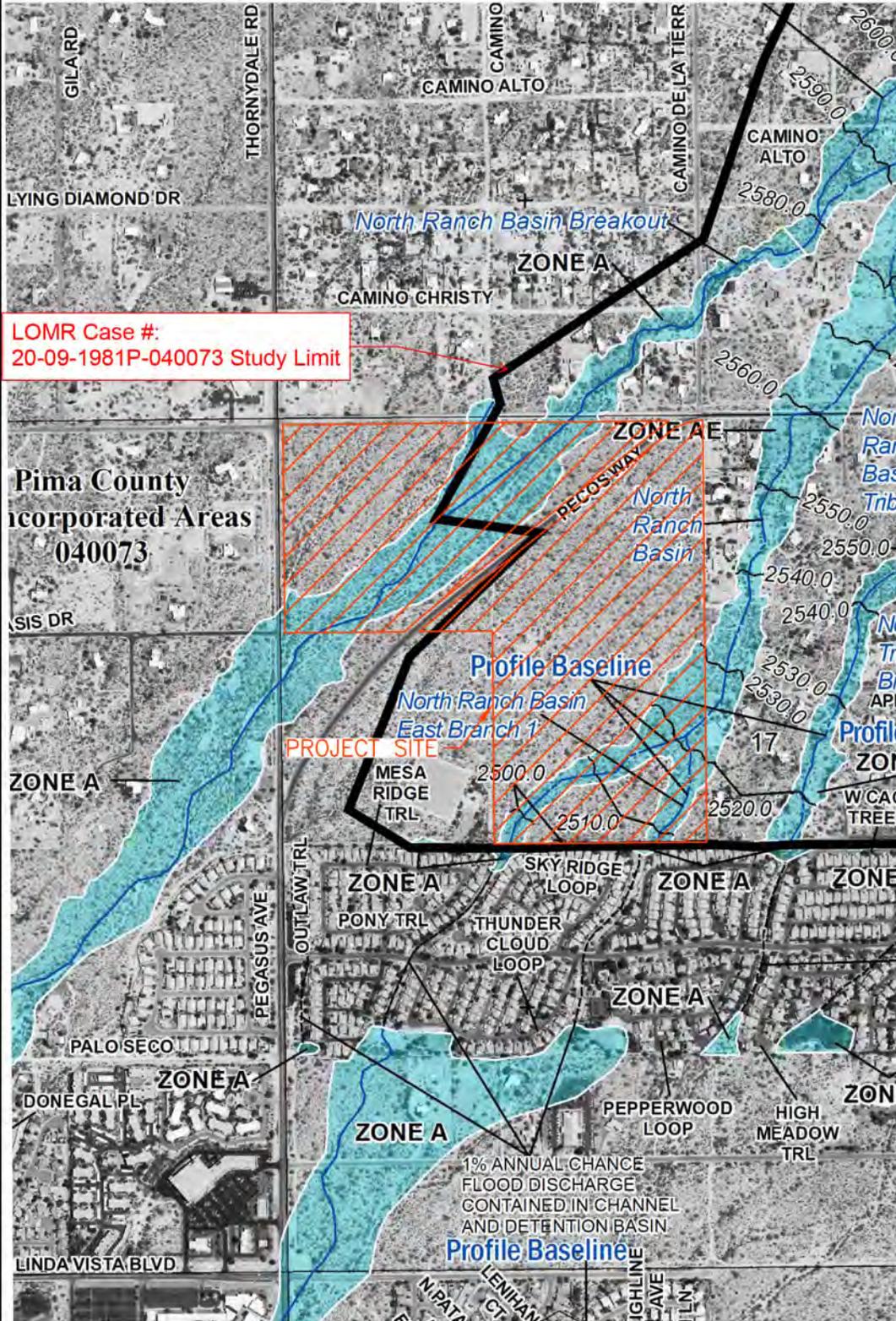
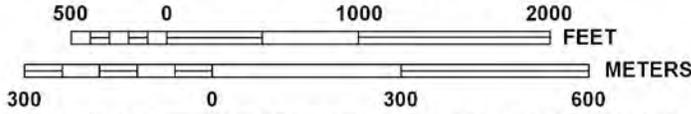
**PECOS PROPERTY**  
 EXHIBIT I-C.1  
 EXISTING OFF-SITE & ON-SITE HYDROLOGY MAP

PROJECT NO: 5438 SCALE: 1"=200'  
 DRAWN BY: JRK DATE: 4/4/2024

\\at.rickeng.com\projects\105000\5438\_Pecos\_Property\Hydrology\5438\_Hydrology.dwg - plotted by ghudson on 2024-04-04 @ 10:21 - altres\_res\_2022.ctb - © 2024 Rick Engineering Company



MAP SCALE 1" = 1000'



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, AR9, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AD Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alternate run flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE AR9 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS
Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)

- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Limit of Moderate Wave Action
Base Flood Elevation on line and value; elevation in feet\* (EL. 987)
Base Flood Elevation value, where uniform within zone; elevation in feet\*
\* Referenced to the North American Vertical Datum of 1988.
Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
76° 07' 45", 32° 22' 30"
600000 FT
3000-meter grid values; Arizona State Plane coordinate system, Central zone (FIPSZONE 0232), Transverse Mercator projection
DX5510 x
Bench mark (see explanation in Notes to Users section of this FIRM panel)
M.L.S. River Mile

PANEL 1070L
FIRM
FLOOD INSURANCE RATE MAP
PIMA COUNTY, ARIZONA AND INCORPORATED AREAS
PANEL 1070 OF 4750
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
MARANA TOWN OF 040118 1370 L
GRO VALLEY TOWN OF 040105 1370 L
PIVA COUNTY 040073 1910 L
REVISED TO REFLECT LOMR EFFECTIVE: June 23, 2021
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER 04019C1070L
MAP REVISED JUNE 16, 2011
Federal Emergency Management Agency

\\cp.rickeng.com\projects\T05000\5438\_Pecos\_Property\WaterRes\5438\_FIRM.dwg



3945 E FORT LOWELL RD #111
TUCSON, AZ 85712
520.795.1000
rickengineering.com

PECOS PROPERTY
EXHIBIT I-C.2
FEMA FIRM

Table with 2 columns: Field Name and Value. Includes PROJECT NO: 5438, DRAWN BY: AJH, CHECKED BY: AJH, SCALE: 1"=1000', DATE: 03/26/2024.

**D. BIOLOGICAL RESOURCES**

1. Conservation Lands System (CLS)

The entire Property is classified as either Multiple Use Management Area (MUMA) or Important Riparian Area (IRA) and is overlaid by the Special Species Management Area designation. See Exhibit I-D-1: Conservation Lands System.



2. Priority Conservation Area (PCA)

<u>Species</u>	<u>Within PCA?</u>
• Pima Pineapple Cactus .....	No
• Needle-Spined Pineapple Cactus .....	No
• Cactus Ferruginous Pygmy Owl.....	Yes
• Western Burrowing Owl.....	No

3. Saguaros & Ironwoods

A field inventory has been conducted and the results are shown on Exhibit I-D-2: Saguaros & Ironwoods.

4. Habitat Protection / Community Open Space

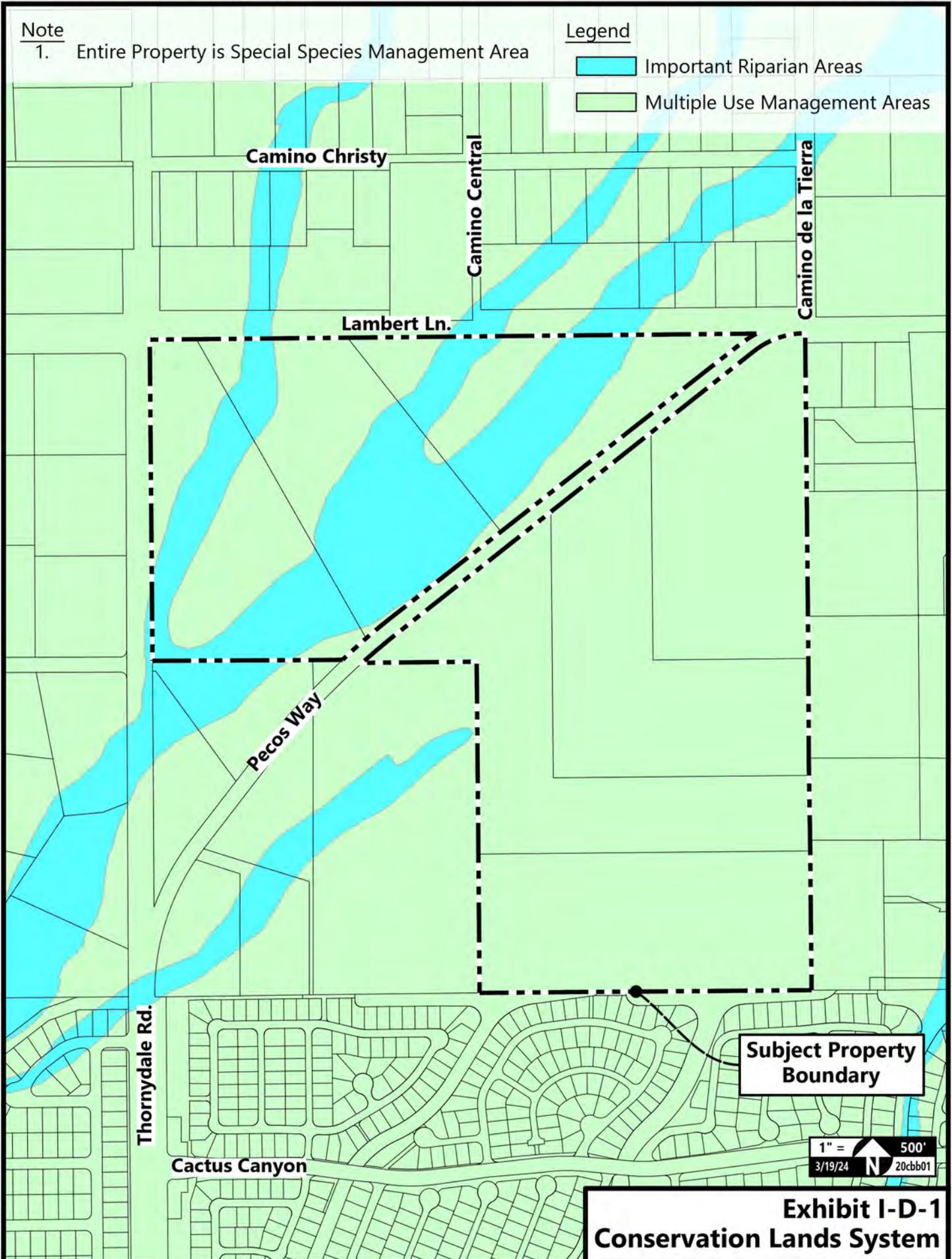
The Property is not currently identified for acquisition as public open space.

Note

- 1. Entire Property is Special Species Management Area

Legend

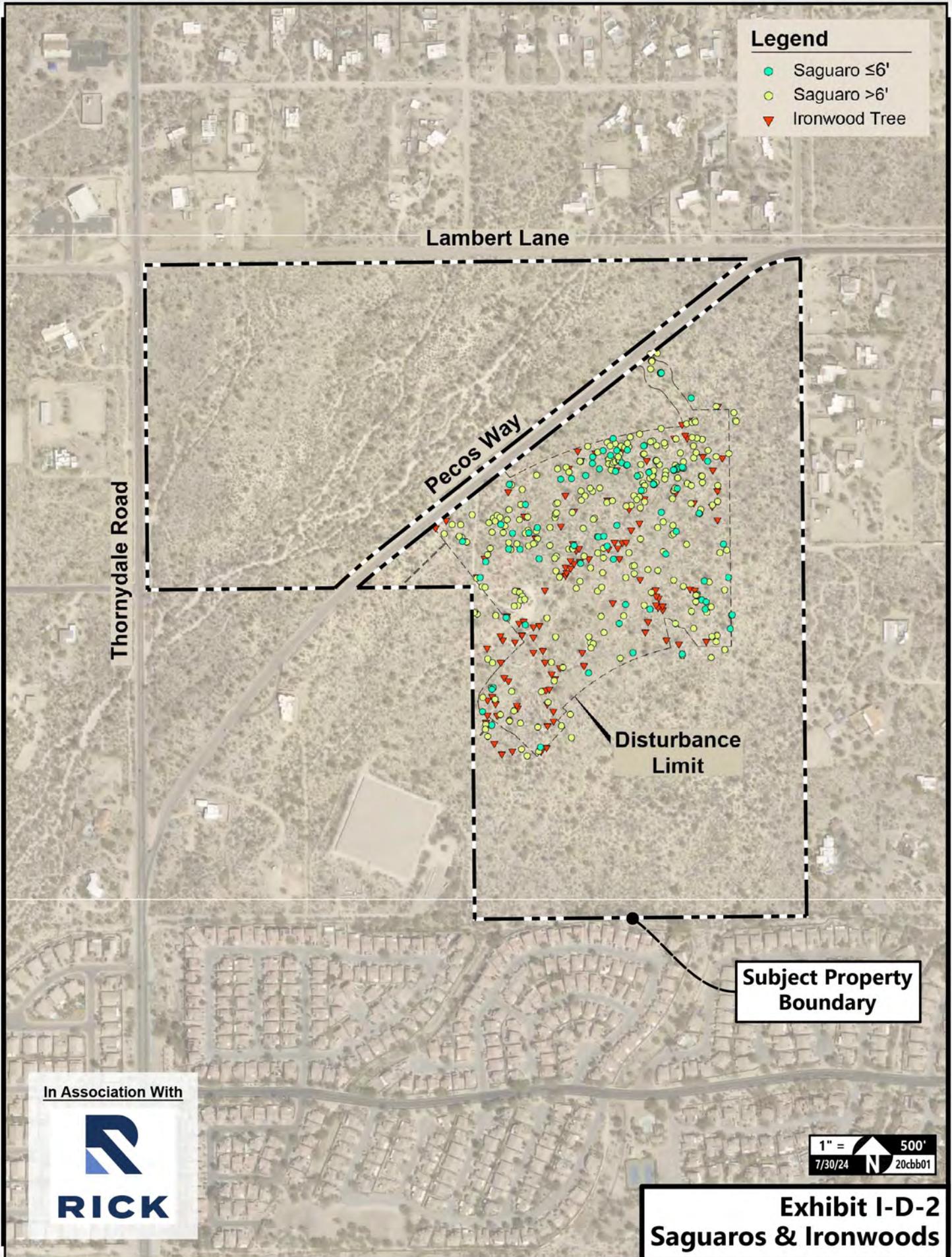
-  Important Riparian Areas
-  Multiple Use Management Areas



Subject Property Boundary

1" = 500'  
3/19/24 N 20cbb01

Exhibit I-D-1  
Conservation Lands System



**E. TRANSPORTATION**

1. Existing / Planned Offsite Streets

The Property is directly adjacent to Pecos Way, Lambert Lane, and Thornydale Road, although site access is only proposed via Pecos Way. Based on the projected trip generation of this Project all nearby roadways can accommodate traffic generated by this Project. The table below shows the existing right-of-way widths, number of lanes, capacity and posted speed limits, average daily volumes (ADTs), as well as bike lanes and pedestrian ways for roadways within one mile of the Property.

Short descriptions of the physical characteristics of the major streets adjacent to or near the Property are provided after the table.

Roadway Name	Existing R.O.W.	Ultimate R.O.W.	Travel Lanes	Capacity (2024 TIA)	Speed Limit	ADT (2024 TIA)	Bike Route	Sidewalk	Sun Tran Bus Route
Pecos Way	60'	60'	2	15,930	45	4,461	n/a	No	No
Lambert Lane	Varies	150'	2	15,930	40-45 **	5,317	n/a	No	No
Thornydale Road (Lambert to Pecos)	Varies	150'	2	15,930	40	10,314	Striped & Paved Shoulder	No	Yes *
Thornydale Road (Pecos to Linda Vista)	Varies	150'	2	16,815	40	16,293	Striped & Paved Shoulder	No	Yes *

\* Thornydale Rd. is a Sun Tran route south of Linda Vista Boulevard, approximately 3/4-mile south of the Property.

\*\* Adjacent to the Property Lambert Lane is a dirt road with a posted speed limit of 15 mph.

Pecos Way bisects the Property diagonally as it connects Lambert Lane to Thornydale Road. It is a two-lane urban minor collector roadway according to federal functional classification standards, with a posted speed limit of 45 mph. It functions as a diagonal shortcut between Lambert Lane and Thornydale Road.

Lambert Lane is located along the northern boundary of the Property. It is designated as a Scenic, Major Route on the County’s Major Streets & Scenic Routes Plan. It is a two-lane urban minor collector roadway with a posted speed limit of 45 mph east of the Property and 40 mph west of the Property. Approaching the Property from the east, Lambert Lane curves to the southwest and functionally becomes Pecos Way, while the actual Lambert alignment continues due west as a dirt road with a posted speed limit of 15 mph, adjacent to the northern boundary of the Property.

Thornydale Road is located along the western boundary of the Property. It is designated as a Scenic, Major Route on the County’s Major Streets & Scenic Routes Plan. It is a two-lane urban collector roadway with striped / paved bike lanes, and a posted speed limit of 40 mph.

2. Distances to Existing Drives / Intersections

The closest intersections to the Property are Lambert Lane / Pecos Way / Camino de la Tierra at the Property’s northeastern corner, Lambert Lane / Camino Central along the Property’s northern boundary, Thornydale Road / Lambert Lane at the Property’s northwest corner, Thornydale Road / Oasis Drive along the Property’s western boundary, and Thornydale Road / Pecos Way approximately one-quarter mile southwest of the Property. Two residential driveways exist along Pecos Way between the Property and Thornydale Road, the closest of which is roughly 420 feet from the Property. Several residential driveways also exist across from the Property along Lambert Lane and Thornydale Road.

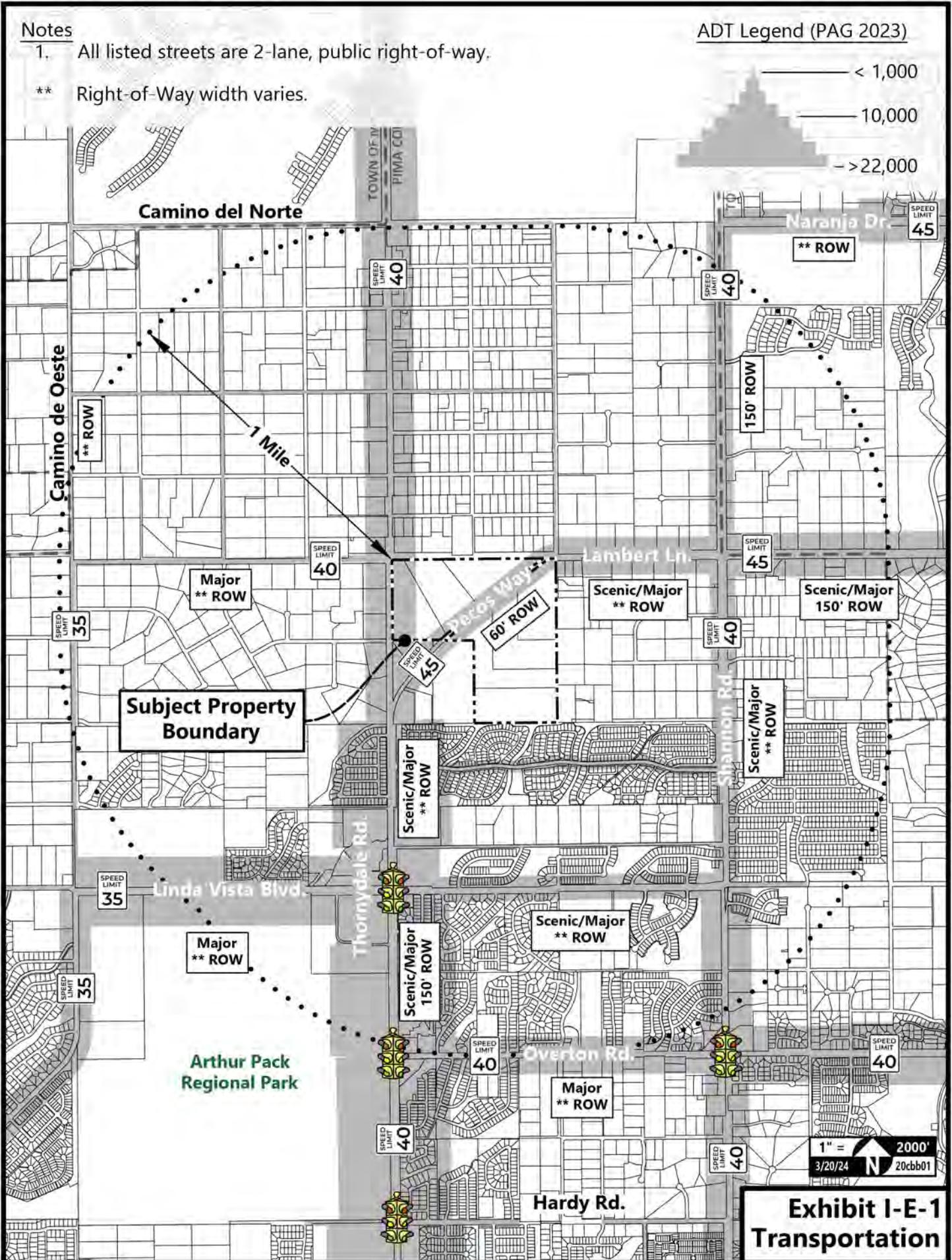
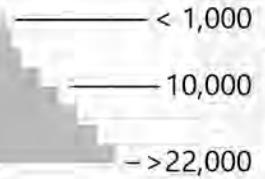
3. Public Transit

The only public transportation route in this vicinity is Sun Tran Route 412, which runs along Linda Vista Blvd. and Thornydale Road approximately three-quarters of a mile south of the Property. See Exhibit I-E-1: Transportation.

Notes

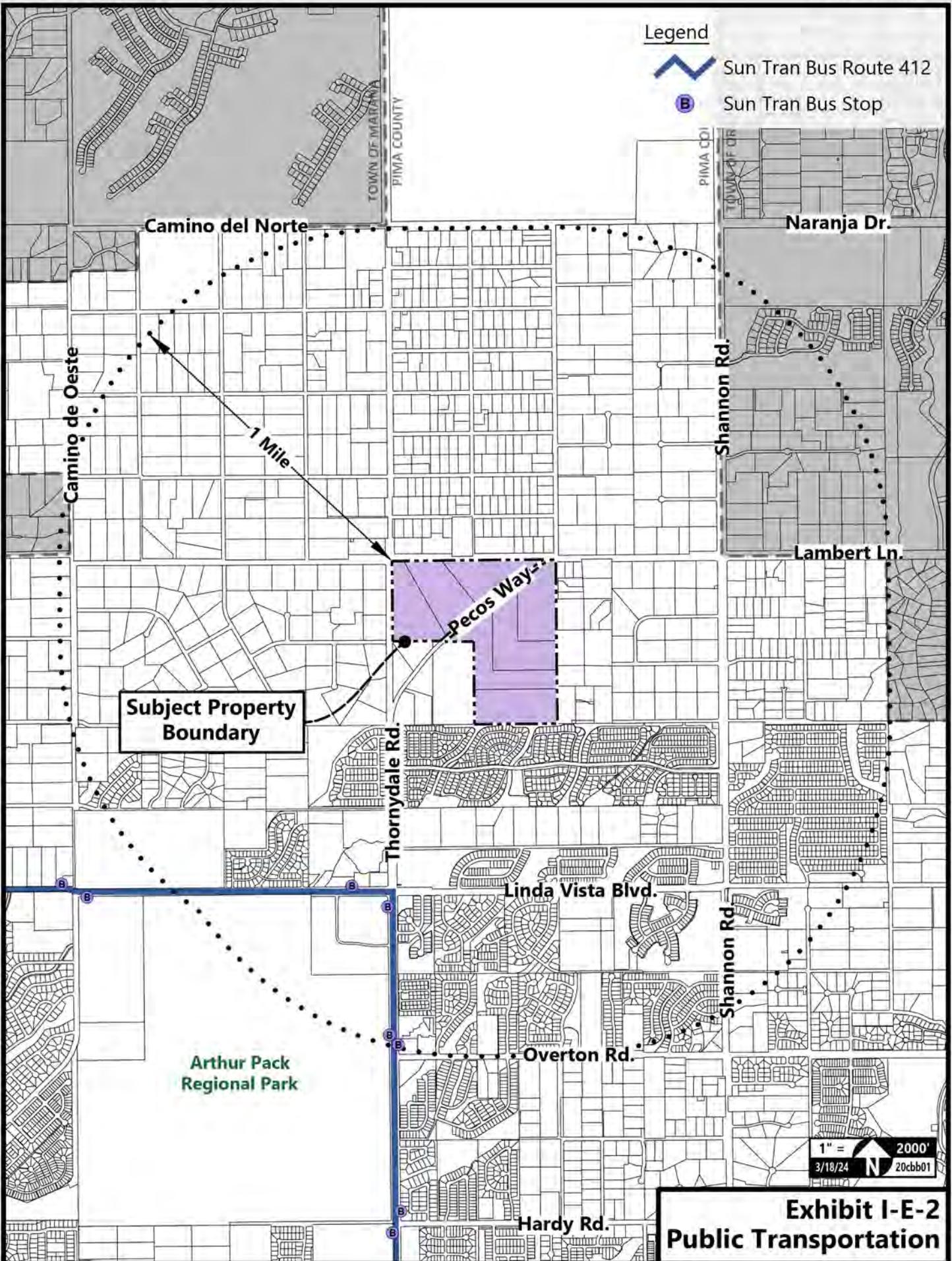
- 1. All listed streets are 2-lane, public right-of-way.
- \*\* Right-of-Way width varies.

ADT Legend (PAG 2023)



1" = 2000'  
 3/20/24 N 20cbb01

**Exhibit I-E-1  
 Transportation**



**Exhibit I-E-2  
Public Transportation**

**F. WASTEWATER**

## 1. Existing Public Sewer

There are existing sewer lines in the North Ranch subdivision south of the Property. A capacity letter from Pima County Wastewater Reclamation Department, dated March 4, 2024, is included in Section II of this document. It states that there is currently capacity to serve this Property in public sewer #I-85-241 downstream from manhole 4478-39 just north of Desert Bend Loop within a 20'x20 public sewer easement onsite along the southern property boundary. See Exhibit I-F-1: Existing Sewer.

## 2. Site Constraints for Sewer

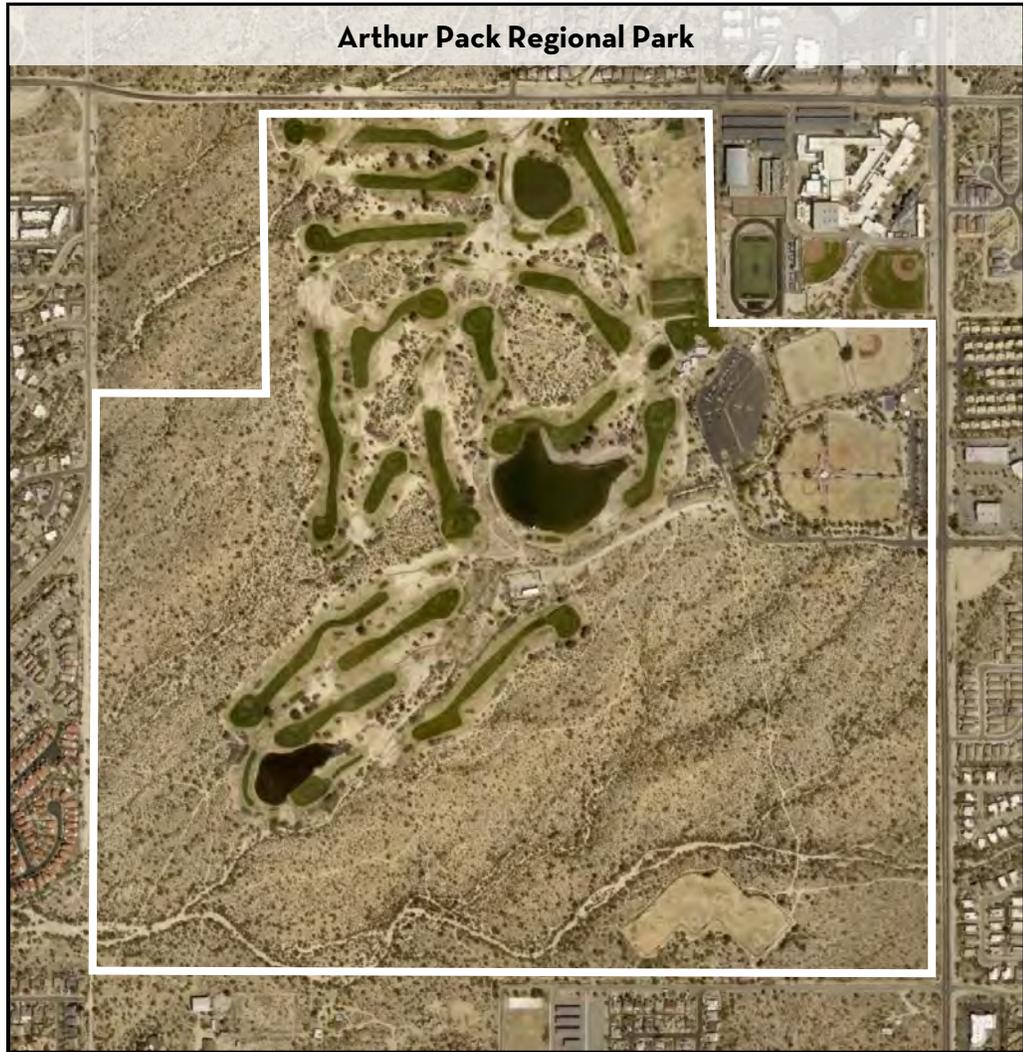
None.



**G. RECREATION**

1. Existing Recreational Facilities Onsite & within One Mile

There are no existing recreational facilities within the Property. Two public parks exist within one mile of the Property. Arthur Pack Regional Park is approximately one mile to the south and features the Crooked Tree Golf Course, several baseball/softball diamonds, two soccer fields, many walking trails, and a number of other amenities. Linda Vista Park is approximately three-quarters of a mile to the southeast and features half-court basketball, picnic areas, and a play structure. See Exhibit I-G-1: Recreation & Trails.



2. Trail Rights-of-Way

There are no trail rights-of-way within or adjacent to the Property.

Notes

- 1. There are no Pima County Trails Master Plan trails in the Property vicinity other than several alignments that are internal to Arthur Pack Regional Park.

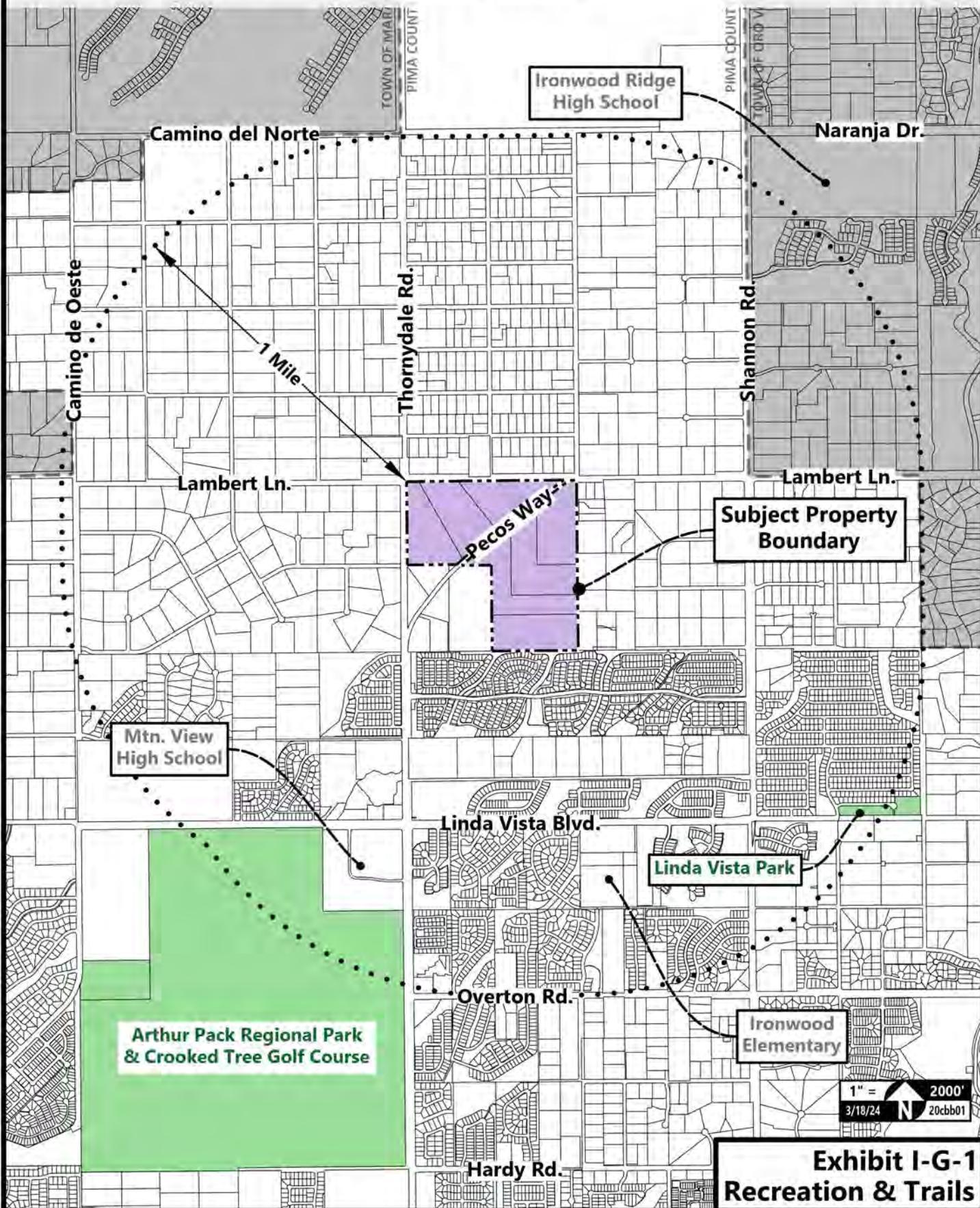


Exhibit I-G-1  
Recreation & Trails

**H. CULTURAL RESOURCES: ARCHAEOLOGICAL & HISTORIC SITES**

Portions of the Property were surveyed for archaeological assets six times between 1981 and 2018. In 2023 Tierra Right-of-Way Services completed a survey of the entire property. No significant cultural resources were found, and no further work is recommended. Arizona Antiquities laws will be followed if any human remains or funerary objects are discovered during construction.

**A Class III Cultural Resources Survey of Approximately 115.0  
Acres (46.5 ha) Southeast of the Intersection of Thornydale  
Road and Lambert Lane, Marana, Pima County, Arizona**

*Prepared by:*  
Galen McCloskey, M.A.

Tierra Archaeological Report No. 2023-075  
October 27, 2023



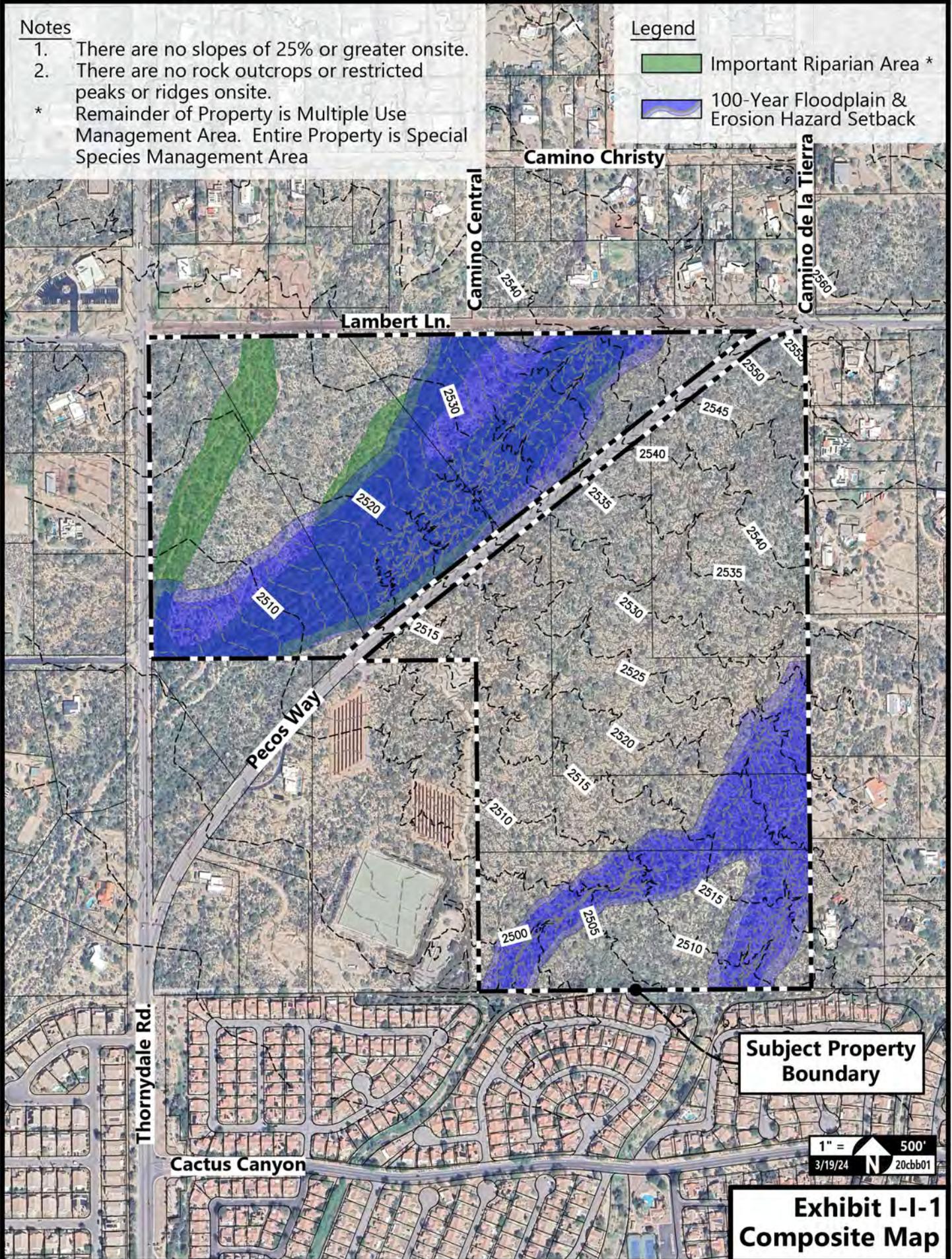
Tierra Right of Way Services, Ltd.  
1575 East River Road, Suite 201  
Tucson, Arizona 85718

Notes

- 1. There are no slopes of 25% or greater onsite.
- 2. There are no rock outcrops or restricted peaks or ridges onsite.
- \* Remainder of Property is Multiple Use Management Area. Entire Property is Special Species Management Area

Legend

-  Important Riparian Area \*
-  100-Year Floodplain & Erosion Hazard Setback



Subject Property Boundary

1" = 500'  
3/19/24 N 20cbb01

Exhibit I-I-1  
Composite Map

## II. LAND USE PROPOSAL

This section describes how the development responds to the opportunities and constraints described in the Inventory & Analysis section of this document, along with the Pima County Land Development Code. As evidenced by the site plan and the information below, this proposed rezoning has been crafted after careful and responsive consideration of the Property’s context.

### A. PROJECT OVERVIEW

1. Proposed Zoning Boundaries

The entire Property is proposed to be rezoned to CR-1.

2. Project Description

This document has been prepared in support of a request to rezone the Property from SR (Suburban Ranch) to CR-1 (Single Residence Zone). This will allow for construction of approximately 101 homes, which equates to a gross density of under one home per acre in accordance with the density range permitted by the Pima Prosperis Comprehensive Plan’s Low-Intensity Urban 0.3 land use designation when more than two-thirds of a site is preserved as open space.

Development of this Property will have minimal impacts on surrounding land uses. The size of the Property allows the proposed neighborhood of homes to be situated centrally within the Property, at least 300 feet from the nearest neighboring residential properties. The size of the property also allows the proposed neighborhood to be clustered entirely away from mapped Important Riparian Areas and areas impacted by sheet flooding, thus minimizing potential impacts to wildlife and nearby property owners. CLS conservation guidelines will be achieved onsite, resulting in 80% of the Property being set aside as open space.

With only 101 homes, traffic generated by this neighborhood can be accommodated by the public collector and arterial street system in the project vicinity. Two access points are proposed, both directly via Pecos Way.



### 3. Compliance with Zoning Code

This project will adhere to all applicable development standards associated with CR-1 zoning as stated in the Pima County Zoning Code. All buildings will meet minimum setback requirements and height restrictions. Exterior colors will be desert neutral and designed to blend with the surrounding structures and the desert environment. The site has been designed to provide both natural and functional open space and to create a comfortable environment for future residents while minimizing impacts to existing nearby landowners. Dark sky compliant lighting will be provided throughout the neighborhood and recreation areas to help ensure adequate lighting for safety while minimizing light pollution.

*i. Airport Environs Zone ("AEZ")*

This Property is not within the Airport Environs Height, Land Use, or Noise Overlay Zones.

*ii. Buffer Overlay Zone ("BOZO")*

This property is not within the BOZO.

*iii. Gateway Overlay Zone*

This Property is not within the Gateway Overlay Zone.

*iv. Hillside Development Zone ("HDZ") / Restricted Peaks & Ridges*

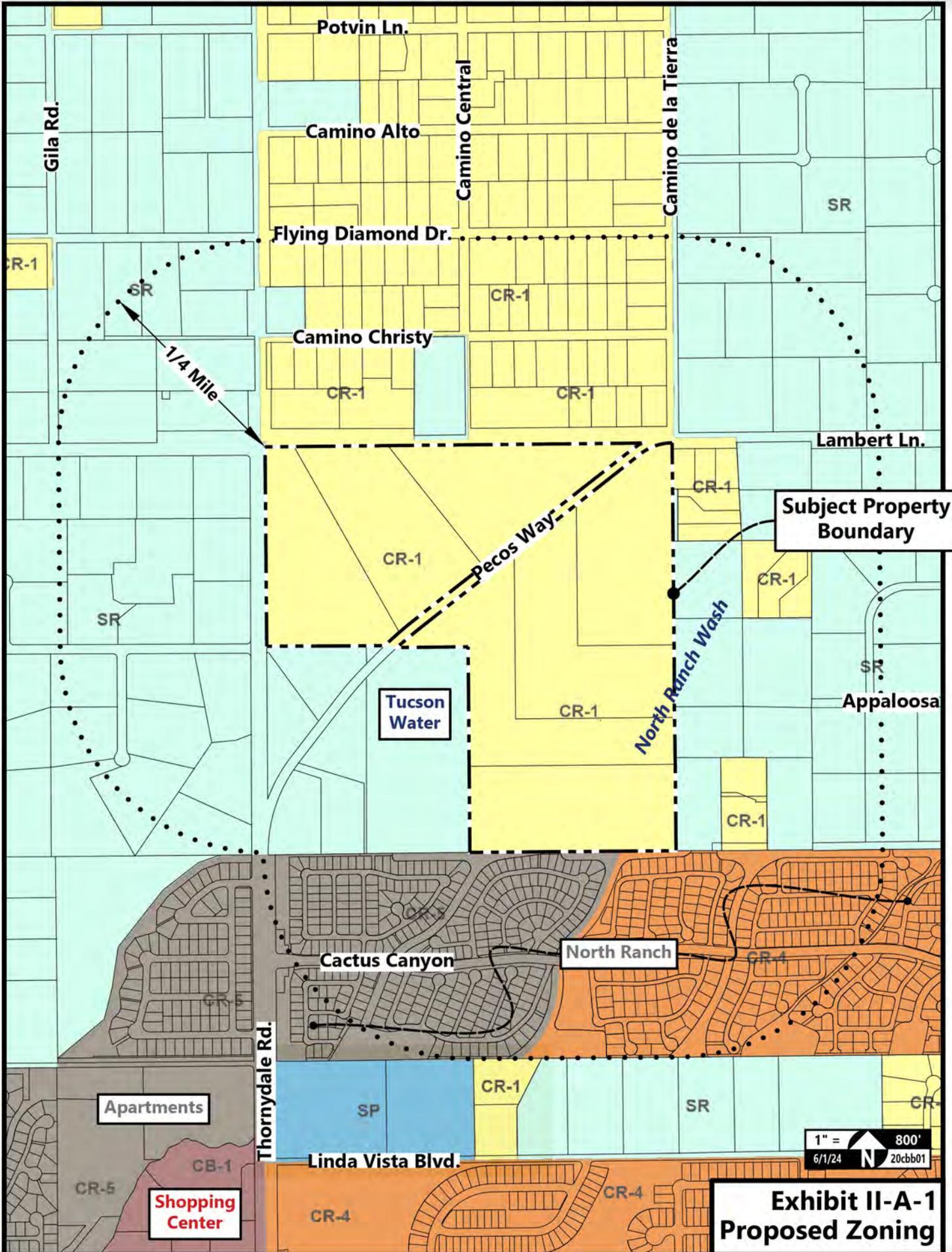
There are no HDZ or Restricted Peaks & Ridges onsite.

*v. Major Streets & Scenic Routes ("MSSR")*

All MSSR requirements apply to this Property.

*vi. Native Plant Preservation Ordinance ("NPPO")*

A field inventory has not been conducted at this time because 80% of the site will remain as open space. An inventory of the proposed developed portions of the site will be conducted in accordance with the native plant ordinance at the platting stage



**Exhibit II-A-1  
Proposed Zoning**

**B. PRELIMINARY DEVELOPMENT PLAN**

Pulte Homes proposes development of a single-family neighborhood occupying 20% of the approximately 114-acre Property. The remaining 80% of the Property will be preserved as open space in accordance with the Maveen Behan Conservation Lands System. The neighborhood will feature roughly 101 homes, which equates to a gross density of under one home per acre in accordance with the density range permitted by the Pima Prosper Comprehensive Plan’s Low-Intensity Urban 0.3 land use designation when more than two-thirds of a site is preserved as open space.

The homes will be a mix of single- and two-story, as allowed in the CR-1 zone. The size of the property and high open space percentage suggest that natural landscape bufferyards are the most appropriate approach to softening edge conditions, so that is what Pulte proposes. Recreation areas are provided in two locations within the neighborhood, increasing visibility and access to these features for all residents. Other open spaces will function either as drainage areas, revegetated areas, or natural open space.



The size of the Property allows the proposed neighborhood of homes to be situated centrally within the Property, at least 300 feet from the nearest neighboring residential properties. The size of the property also allows the proposed neighborhood to be clustered entirely away from mapped Important Riparian Areas and areas impacted by sheet flooding, thus minimizing potential impacts to wildlife and nearby property owners.

Please refer to Exhibit I-B-1: Preliminary Development Plan.

**Property Data**

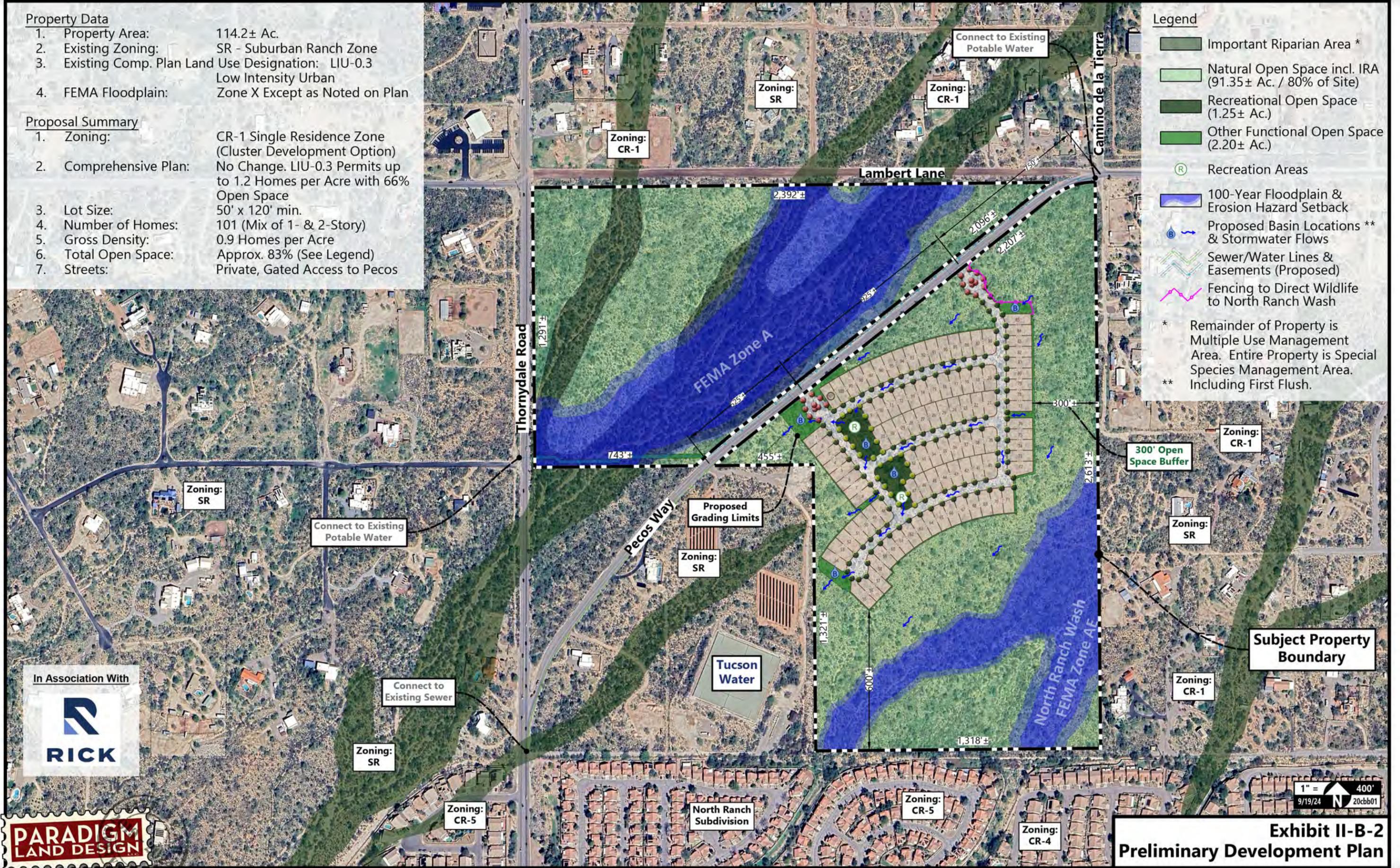
1. Property Area: 114.2± Ac.
2. Existing Zoning: SR - Suburban Ranch Zone
3. Existing Comp. Plan Land Use Designation: LIU-0.3 Low Intensity Urban Zone X Except as Noted on Plan
4. FEMA Floodplain:

**Proposal Summary**

1. Zoning: CR-1 Single Residence Zone (Cluster Development Option)
2. Comprehensive Plan: No Change. LIU-0.3 Permits up to 1.2 Homes per Acre with 66% Open Space
3. Lot Size: 50' x 120' min.
4. Number of Homes: 101 (Mix of 1- & 2-Story)
5. Gross Density: 0.9 Homes per Acre
6. Total Open Space: Approx. 83% (See Legend)
7. Streets: Private, Gated Access to Pecos

**Legend**

- Important Riparian Area \*
  - Natural Open Space incl. IRA (91.35± Ac. / 80% of Site)
  - Recreational Open Space (1.25± Ac.)
  - Other Functional Open Space (2.20± Ac.)
  - Recreation Areas
  - 100-Year Floodplain & Erosion Hazard Setback
  - Proposed Basin Locations \*\* & Stormwater Flows
  - Sewer/Water Lines & Easements (Proposed)
  - Fencing to Direct Wildlife to North Ranch Wash
- \* Remainder of Property is Multiple Use Management Area. Entire Property is Special Species Management Area.  
 \*\* Including First Flush.



In Association With



**C. TOPOGRAPHY & GRADING**

## 1. Development / Mitigation on Steep Slopes

There are no steep slopes onsite.

## 2. Natural Areas Under HDZ

The Property is not subject to the Hillside Development Zone.

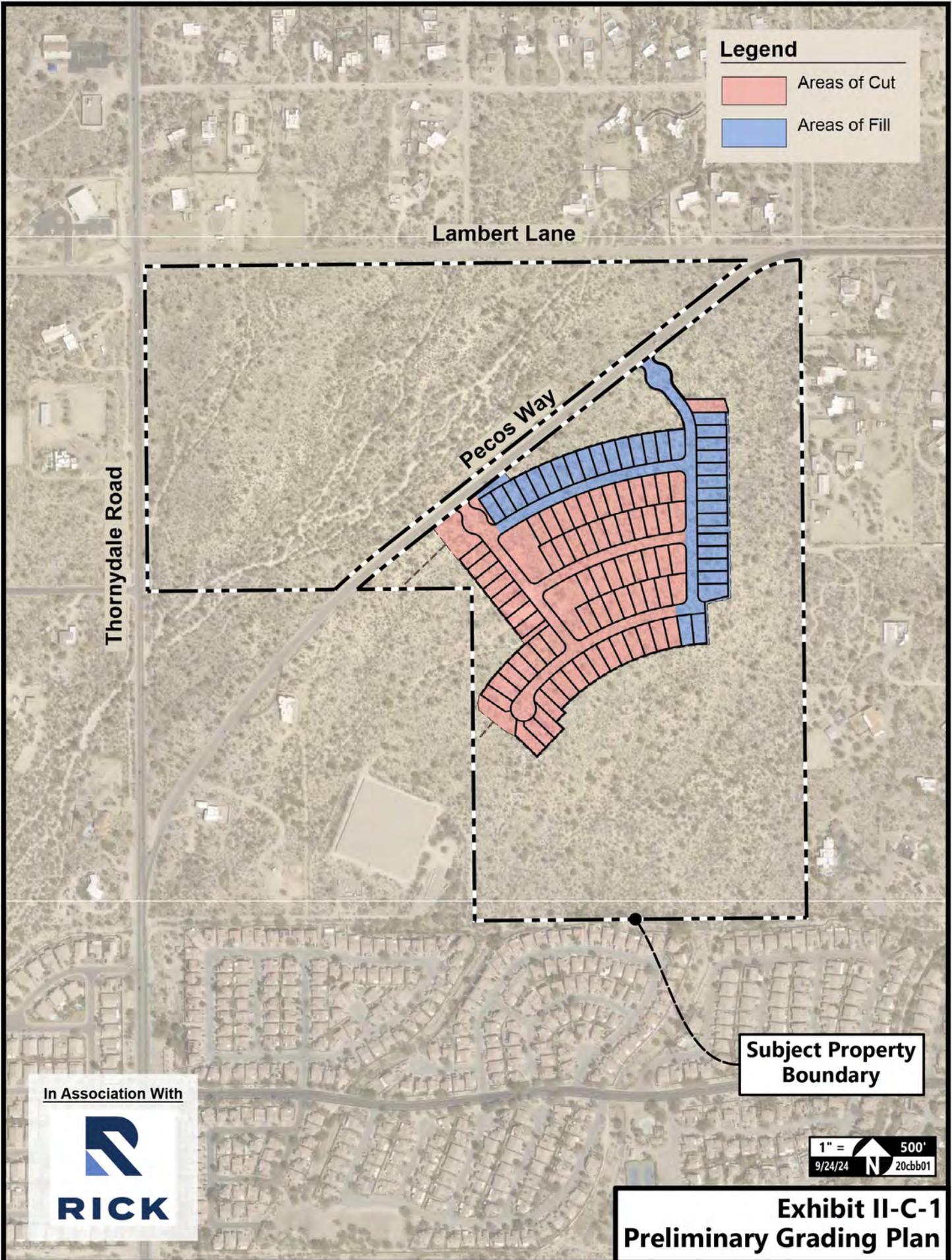
## 3. Disturbed, Revegetated, Natural Areas

Approximately 24 acres of the Property will be graded to allow for the construction of homesites, roadways, recreation areas, drainage facilities, and a sewer line. All disturbed areas will be relandscaped. After development, 91.35 acres of the Property will be left as open space, including the roughly 1.5 acres used for recreation areas and revegetated sewer easement.

## 4. Changes to Natural Grade of More than Five Feet

The site plan has been designed to restrict homesites to areas that are outside of the 100-year floodplain limits and mapped riparian areas. Site grading will be restricted to roadways, homesites, and necessary ancillary grading for drainage, utilities, etc. There will be minimal areas in the project with no more than five feet of cut or fill. The perimeter of the subdivision site will be left at grade or 2-4 feet higher to provide for acceptance and or diversion of the drainage sheet flows. The cut material will be used to raise the exterior development area. The elevations at these locations will be dictated by the specific drainage and roadway design requirements. The maximum fill will be 2-4 feet.

See Exhibit II-C-1: Preliminary Grading Plan.



**Legend**

- Areas of Cut
- Areas of Fill

Thornydale Road

Lambert Lane

Pecos Way

**Subject Property Boundary**

In Association With



**RICK**

1" = 500'  
9/24/24 N 20cbb01

**Exhibit II-C-1  
Preliminary Grading Plan**

## D. HYDROLOGY

### 1. Post-Development Onsite Hydrology

#### *i. Washes to be Left Natural*

The North Ranch Wash and the unnamed wash onsite will be left in their natural state.

#### *ii. Regulatory Floodplains*

Two regulatory floodplains exist onsite as described in Section I of this document. The proposed neighborhood has been located entirely outside of the floodplains.

#### *iii. Erosion Hazard Setbacks*

No change is proposed to the erosion hazard setbacks associated with the mapped FEMA floodplain. Any minor encroachments will be mitigated by construction of erosion and scour protection in accordance with the design standards of the Pima County Regional Flood Control District.

#### *iv. Regulated Riparian Habitat and any Mitigation Areas*

No encroachments are proposed into regulated riparian habitat except for necessary utility crossings. A required water easement has been included in the proposed grading and open space calculations .

#### *v. Proposed Drainage Structures*

New drainage structures within the project limits include berms, swales, and erosion/scour protection to direct upstream flows into stormdrains and basins within the subdivision. Basin outlet structures will be installed along the downstream edge to release stormwater flows in accordance with the design standards of the Pima County Regional Flood Control District. First flush retention will be provided as well.

#### *vi. Cross-Drainage Structures*

Stormdrains are proposed to direct flows within the subdivision. Culverts will be employed where necessary to convey overland flow beneath streets.

#### *vii. Floodplain Encroachment and Erosion Protection*

No encroachment is proposed into the floodplain other than the sewer line mentioned in Section II-D-1-v. Any encroachments into the erosion hazard setback will require installation of erosion/scour protection.

#### *viii. Proposed Stormdrains & Inlets*

Stormdrains and inlets are planned within the subdivision as depicted in Exhibit II-D-1 Proposed Drainage Conditions Map.

#### *ix. Drainage Easement Conflicts*

None.

### 2. Preliminary Integrated Water Management Plan (PIWMP)

A Preliminary Integrated Water Management Plan has been provided at the end of this document.

See Appendix B.

3. Proposed Hydrology

*i. PDP Response to Hydrologic Characteristics Onsite*

The Property is within a designated critical basin and therefore post-development 2-,10-, and 100-year peak discharges from the proposed subdivision must be reduced to 90% of pre-development peak discharge rates. Also, as is typical within the Tortolita Fan, this Property features several small wash braids in addition to the two larger washes described elsewhere in this document. Accordingly, a series of berms and swales along the upstream development envelope will direct stormwater flows into several stormdrain inlets so the water can flow to three above-ground onsite detention basins along the downstream development envelope to meet the target outflow rates within each sub-watershed.

*ii. Floodplain Encroachment*

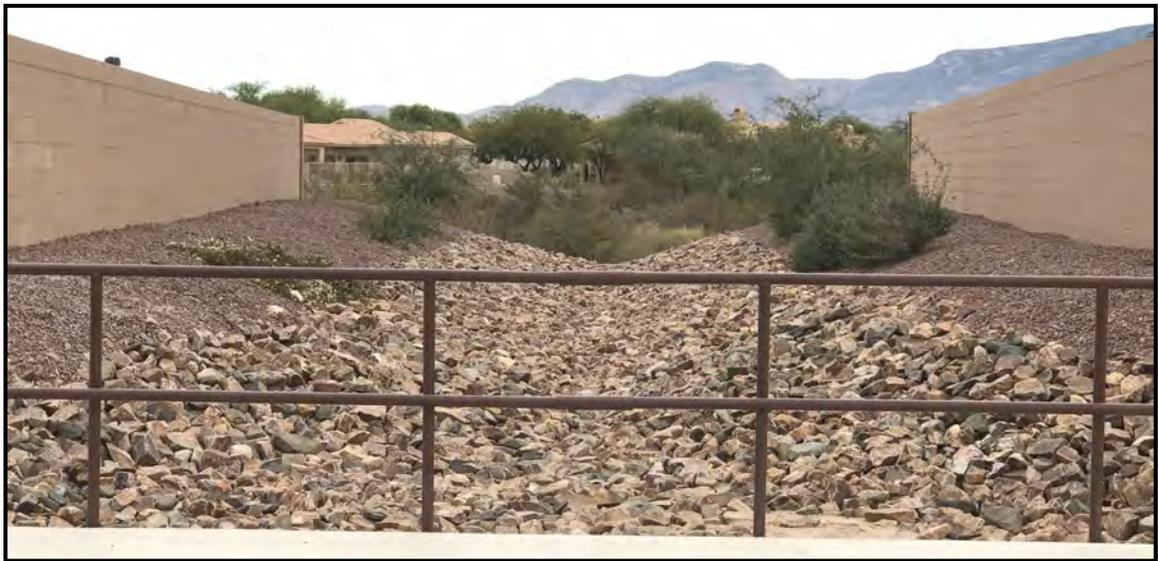
No encroachment is proposed into the floodplain other than for required utility installations. Any encroachments into the erosion hazard setback will require installation of erosion/scour protection.

*iii. Proposed Design Flows*

Discharge rates for flows coming onto and leaving the site must be reduced by 10% because this Property is within a designated critical basin. See Exhibit II-D-1 Proposed Drainage Conditions Map.

*iv. Proposed Engineering Facilities*

The proposed conveying drainage facilities are drainage inlets (catch basins and scuppers) that will discharge either to flow storage basins or stormdrain systems that will be routed to flow storage basins.



*v. Overall Effect of the Development on Existing Drainage Patterns*

The development will have negligible effects on drainage patterns of the site including upstream and downstream improvements. No encroachments into the Floodway will occur. The drainage plan conforms to applicable Pima County and FEMA design standards and will include a 10% reduction of pre-development flows in accordance with Pima County’s critical basin requirements.

WATERSHED CPs	AREA (ac)	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)	CUMULATIVE CPs	CUMULATIVE Q2* (cfs)	CUMULATIVE Q10* (cfs)	CUMULATIVE Q100* (cfs)
1P1	2.43	1.6	5.1	12.4				
1P2	1.30	1.1	3.1	6.6				
1P	9.32	19.1	39.5	69.0				
1OS	3.45	3.10	8.20	18.90				
3E1**	6.15	2.3	8.3	22.1				
<b>Basin 1E/2E*</b>	<b>22.65</b>				<b>CPs: 1P+1P1+3E1</b>	<b>23.0</b>	<b>52.9</b>	<b>103.5</b>
2P	5.96	14.1	25.8	44.9				
3P	2.30	5.6	10.1	17.6				
5E1**	1.87	0.9	2.8	7.2				
<b>Basin 3E*</b>	<b>10.13</b>				<b>CPs: 2P+3P+5E1</b>	<b>20.6</b>	<b>38.7</b>	<b>69.7</b>
3P1	2.84	7.4	13.4	23.0				
4P	1.89	4.8	8.7	14.9				

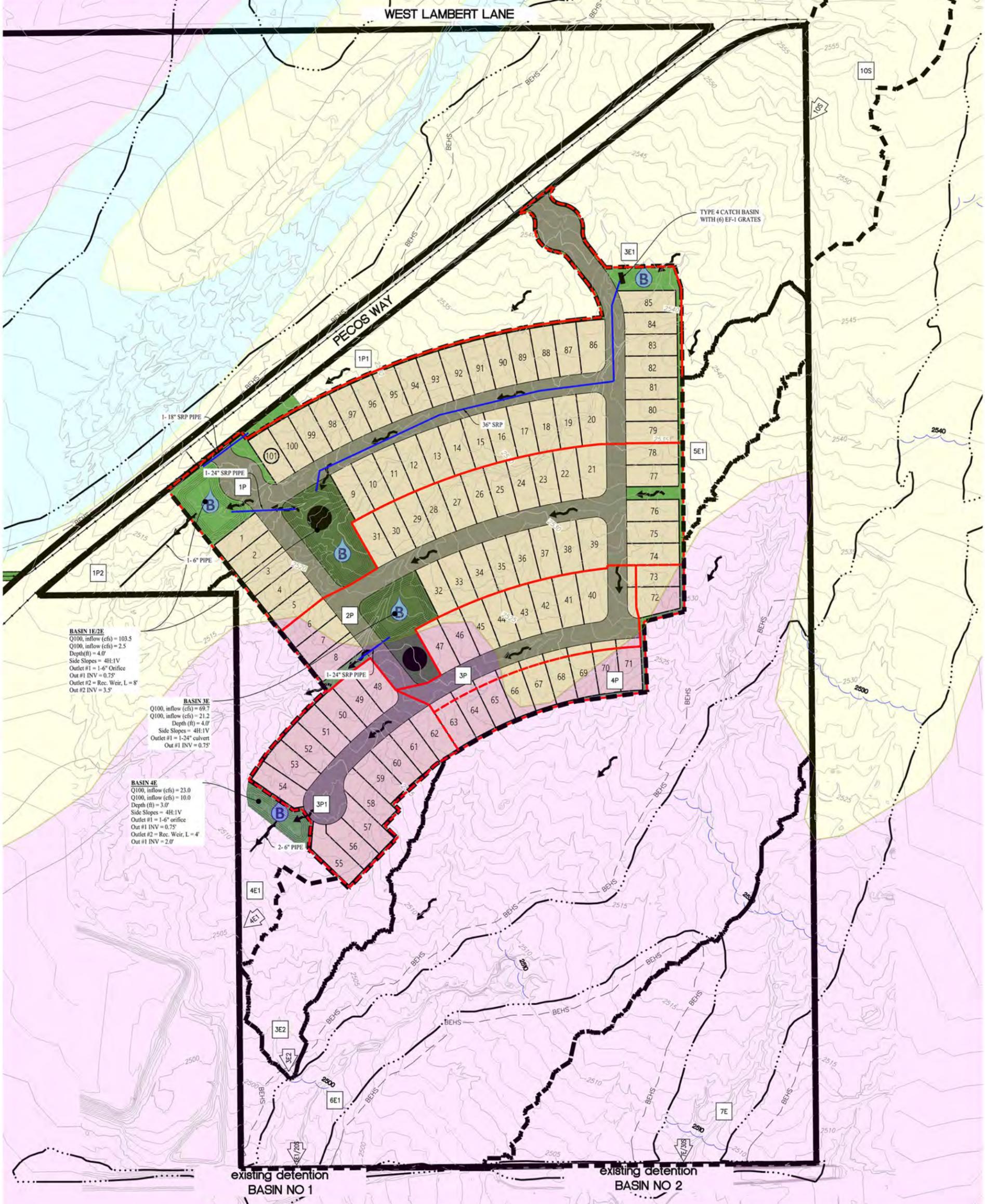
\*Arithmetic sum. In basin 2E routing, Offsite flow from 1OS is discounted or assumed as flow through.  
 \*\*Upstream undisturbed portion of watershed 3E and 5E

**LEGEND**

- WATERSHED
- CONCENTRATION POINT
- UNDISTURBED WATERSHED BOUNDARY
- DISTURBED WATERSHED BOUNDARY
- NRCS SOILS GROUP "A" (100%)
- NRCS SOILS GROUP "A" (60%); "C" (40%)
- NRCS SOILS GROUP "C" (50%); "D" (50%)
- BEHS
- FEMA FLOODPLAIN (EFFECTIVE)
- WATER SURFACE ELEVATION

Watershed ID	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
POST-OUT	10.2	24.4	48.6
PRE-OUT***	9.3	32.0	80.6
Difference	0.9	-7.6	-32.0

\*\*\*Target peak discharge. ~90% of total pre-dev outflow



**BASIN 1E/2E**  
 Q100, inflow (cfs) = 103.5  
 Q100, inflow (cfs) = 2.5  
 Depth (ft) = 4.0'  
 Side Slopes = 4H:1V  
 Outlet #1 = 1-6" Orifice  
 Outlet #2 = Rec. Weir, L = 8'  
 Out #2 INV = 3.5'

**BASIN 3E**  
 Q100, inflow (cfs) = 69.7  
 Q100, inflow (cfs) = 21.2  
 Depth (ft) = 4.0'  
 Side Slopes = 4H:1V  
 Outlet #1 = 1-24" culvert  
 Out #1 INV = 0.75'

**BASIN 4E**  
 Q100, inflow (cfs) = 23.0  
 Q100, inflow (cfs) = 10.0  
 Depth (ft) = 3.0'  
 Side Slopes = 4H:1V  
 Outlet #1 = 1-6" orifice  
 Out #1 INV = 0.75'  
 Outlet #2 = Rec. Weir, L = 4'  
 Out #2 INV = 2.0'



**RICK** ENGINEERING COMPANY  
 3945 E FORT LOWELL RD #111  
 TUCSON, AZ 85712  
 520.795.1000  
 rickengineering.com

**PECOS PROPERTY**  
 EXHIBIT I-C.3  
 PROPOSED HYDROLOGY MAP

PROJECT NO: 5438 SCALE: 1"=100'  
 DRAWN BY: AHJ DATE: 9/25/2024

\usr\rickeng.com\projects\105000\5438\_Pecos\_Property\Hydrology\5438\_0809-Reviewed.dwg - plotted by: ahudson, 09/25/2024 12:31 - c:\temp\as\_2022.dwg - © 2024 Rick Engineering Company

**E. IMPACTS TO BIOLOGICAL RESOURCES**

This rezoning proposes to leave 80% of the Property as open space, nearly all of which will be natural undisturbed open space. Homes will not encroach into the regulatory floodplain or mapped riparian areas. As such, unless this Property were to be acquired as permanent open space, the proposed site plan represents the most sensitive approach to cluster development in accordance with the guidelines of the Conservation Lands System while still making reasonable use of the significant public investments in nearby trunk infrastructure.

The entire Property is classified as either Multiple Use Management Area (MUMA) or Important Riparian Area (IRA) and is overlaid by the Special Species Management Area designation. The Property does not include Pima Pineapple Cactus or Needle-Spined Pineapple Cactus Priority Conservation Areas. A vegetation inventory of the proposed developed portions of the site will be conducted in accordance with the native plant ordinance at the platting stage. This Property is outside of the Buffer Overlay Zone (“BOZO”).

**F. LANDSCAPE, BUFFERYARDS, & VISUAL MITIGATION**

1. Bufferyard Conflicts

Two existing utility easements cross the proposed bufferyards: A 15’-wide water easement near the center of the Property and a 20’-wide sewer easement along the southern edge of the Property. These crossings are not an impediment to development of the proposed neighborhood.

2. Vegetation Transplanting Impacts

Natural vegetation that meets the requirements for transplanting will be inventoried and transplanted to common areas that are able to accommodate mature vegetation within the proposed neighborhood.

3. Mitigation of Visual Impacts

The significant setbacks proposed within this neighborhood completely mitigate any potential viewshed impacts from surrounding properties.



**Natural Landscape Bufferyard along Southern Edge**

4. Significant Vegetation

A vegetation inventory of the proposed developed portions of the site will be conducted in accordance with the native plant ordinance at the platting stage. Mature vegetation that meets transplant requirements will be inventoried and transplanted onsite.

Bufferyard Notes

1. 10' Bufferyard Type 'A' shall contain 3 canopy trees, 6 shrubs, and 9 cacti & succulents / grasses / subshrubs per 100 linear feet of bufferyard along Pecos Way. Plant species shall be drought tolerant and found on the official regulatory plant list in the Pima County Screening and Bufferyard Design Manual.



**G. TRANSPORTATION**

1. Proposed Ingress / Egress

Access to the proposed neighborhood will come directly from Pecos Way.

2. Distances to Access Points

The northern proposed driveway access into the Property will be approximately 750 feet from the intersection of Lambert Lane and Camino de la Tierra. The southern proposed access driveway will be approximately 975 feet from the nearest residential driveway to the south along Pecos Way, and roughly 2,000 feet from the intersection of Pecos Way and Thornydale Road.

3. Offsite Road Improvements

The 2024 traffic report prepared by Rick Engineering, which has been included with this submittal, indicates that left-turn lanes should be constructed at both project entries on Pecos Way. Additionally, the intersection of Thornydale Road and Pecos Way will be reconfigured to remove the existing skew so that the southbound approach to Thornydale becomes a “T” intersection. These improvements will be constructed by the developer.

4. ADT & Level of Service

The proposed neighborhood of approximately 101 homes is expected to generate roughly 952 ADT, which can be accommodated on nearby trunk roadway infrastructure without significantly diminishing projected levels of service that include an assumed 2% annual background (non-project) growth rate. The table below from Rick Engineering shows the projected levels of service at nearby intersections with and without the project in the expected opening year of 2026. The only drop to LOS E is the eastbound left-turn at Thornydale Rd. and Lambert Lane, which has a one second projected increase in delay.

#	INTERSECTION	CONTROL	DIR.	OPENING YEAR (2026)				OPENING YEAR (2026) WITH PROJECT			
				AM Peak		PM Peak		AM Peak		PM Peak	
				DELAY <sup>1</sup>	LOS <sup>2</sup>	DELAY <sup>1</sup>	LOS <sup>2</sup>	DELAY <sup>1</sup>	LOS <sup>2</sup>	DELAY <sup>1</sup>	LOS <sup>2</sup>
1	Thornydale Rd / Lambert Ln	(TWSC)	EB-LR	34.8	D	18.8	C	35.8	E	19.2	C
			WB-LR	19.2	C	17.8	C	19.5	C	18.2	C
2	Camino De La Tierra / Pecos Way / Lambert Ln	(TWSC)	NB-LTR	12.0	B	10.9	B	12.1	B	11.0	B
			SB-LTR	13.0	B	12.6	B	13.1	B	12.7	B
3	Thornydale Rd / Pecos Way	(OWSC)	WB-LR	23.3	C	22.4	C	29.4	D	27.6	D
4	Thornydale Rd / Linda Vista Blvd	(Signal)	Overall	21.6	C	16.6	B	24.0	C	18.2	B
			EB-L	21.7	C	19.4	B	21.8	C	19.5	B
			EB-T	14.0	B	14.6	B	14.0	B	14.4	B
			EB-R	14.8	B	12.6	B	14.7	B	12.4	B
			WB-L	16.7	B	15.9	B	16.6	B	15.7	B
			WB-T	0.0	A	0.0	A	0.0	A	0.0	A
			WB-R	15.2	B	15.3	B	15.2	B	15.1	B
			NB-L	39.3	D	24.6	C	49.4	D	30.1	C
			NB-T	15.6	B	15.2	B	16.1	B	17.1	B
			NB-R	10.7	B	8.7	A	10.8	B	9.0	A
			SB-L	11.0	B	9.5	A	11.1	B	10.0	A
			SB-T	30.9	C	16.9	B	36.3	D	18.2	B
SB-R	16.7	B	12.2	B	17.1	B	12.7	B			
5	Pecos Way / South Project Dwy	(OWSC)	NB-L	-	-	-	-	11.8	B	11.6	B
6	Pecos Way / North Project Dwy	(OWSC)	NB-L	-	-	-	-	11.6	B	11.2	B

Footnotes:

Results calculated utilizing the methodologies described in Chapters 19, 20, 21, and 22 in the 6th edition of the HCM .

1) Delay is measured in seconds per vehicle.

2) Level of Service

(S)=Signalized, (TWSC)=Two-Way Stop Controlled, (AWSC)=All-Way Stop Controlled

NB=Northbound, WB=Westbound, etc.

L=Left-turn movement, R= Right-turn movement, LT=Left-Through lane, LTR=Left-Through-Right lane , etc.

### 5. Concurrency

To address the Secondary Transportation Concurrency Concern identified by Pima County staff, the traffic report recommends the following:

- At the Thornydale Road / Pecos Way intersection it is recommended to realign the existing skew at this intersection as to have the southbound Pecos Way traffic approach the Thornydale Road intersection at a 90 degree “T” intersection. This will help improve sight visibility and will also provide intersection widening opportunities for additional vehicle storage at the intersection. This intersection should continue to operate as an unsignalized intersection with the westbound approach being stop-controlled.
- At the Pecos Way / Lambert Lane intersection it is recommended dedicate the necessary right-of-way to realign the Pecos Way / Lambert Lane intersection at a 90 degree “T” intersection approximately 300’ west of Camino De La Tierra. This intersection should operate as an unsignalized intersection with the northbound approach being stop-controlled.

### 6. Bicycle & Pedestrian

Sidewalks do not currently exist along Pecos Way, Lambert Lane, or Thornydale Road, although Thornydale does include marked bicycle lanes which provide some pedestrian access to the Property. Pedestrian accessibility will be provided by sidewalks that will be constructed throughout this subdivision. The internal sidewalk system will provide pedestrian access to the recreation areas.

### 7. Onsite Street System

All internal streets within the proposed subdivision will be private and designed and built as local streets per the Pima County Subdivision & Development Street Standards.

## H. WASTEWATER

### 1. Capacity Response Letter

Pima County Wastewater Reclamation has indicated that capacity exists to serve this project. Please refer to Exhibit II-H-1: Sewer Capacity Response Letter.

### 2. Method of Providing Sewer

The existing 8-inch sewer line stubbing into the southern edge of the Property has capacity to serve this Project downstream from manhole 5177-08 as indicated in the Capacity Response Letter.

### 3. Sewer Easements

New public sewer easements will be granted as needed during the site development process, subject to approval by the Pima County Wastewater Reclamation Dept.

### 4. Mitigation of Site Constraints

The site’s minimal topographic constraints will allow a gravity sewer connection to the existing sewer line described earlier in this document without crossing the North Ranch Wash as previously proposed.



**PIMA COUNTY**

WASTEWATER RECLAMATION  
201 NORTH STONE AVENUE  
TUCSON, ARIZONA 85701-1207

**JACKSON JENKINS**  
DIRECTOR

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

June 12, 2024

Corey Thompson  
Rick Engineering  
3945 E Fort Lowell Rd, Suite 111  
Tucson, AZ 85712

**Sewerage Capacity Investigation No. P24WC00167 Type I**

**RE: Thornydale & Lambert SEC, Parcels 22444050A, 22444051A, 22444051B, 22444051C,  
22444052A, 22444052B, 22444052C  
Estimated Flow 22,464 gpd (ADWF)**

Greetings:

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

Capacity is currently available for a project this size in the public sewer G-88-074, downstream from manhole 5177-08.

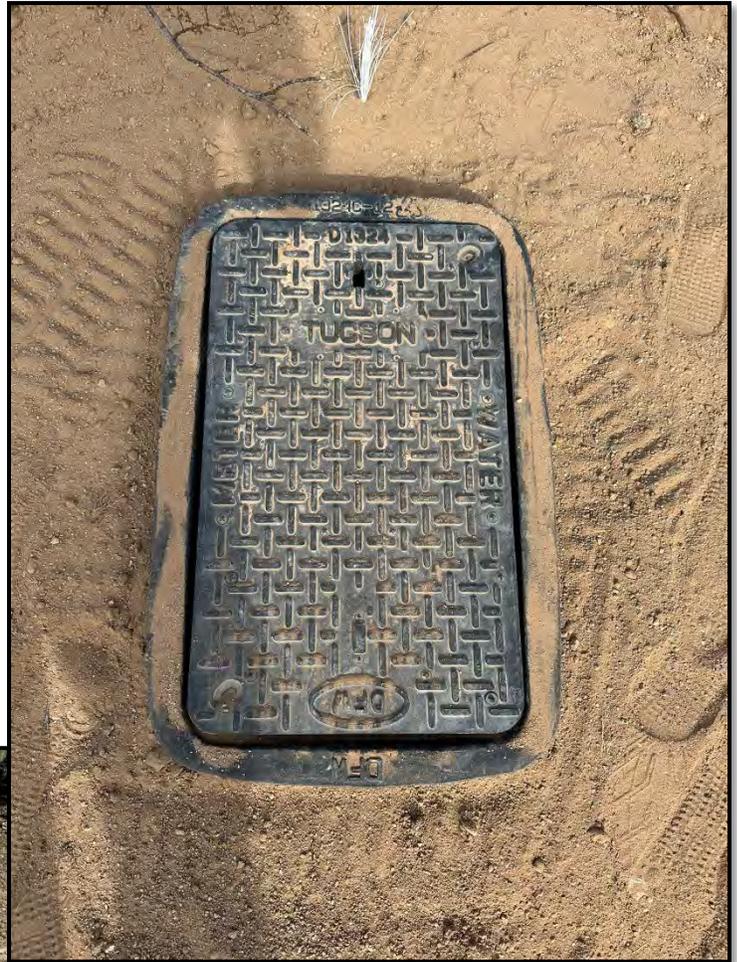
This letter is not a reservation or commitment of treatment or conveyance capacity for this project. It is not an approval of point and method of connection. It is an analysis of the system as of this date. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6488.

Reviewed by: Mirela Hromatka, Planner III

I. WATER

This project will have no negative impacts on any of the surrounding developments. Water service will be provided by Tucson Water Company. Discussions are currently underway with Tucson Water staff to request water service extension by applying the Tucson Water Service Area Policy. A Water Feasibility Study has been submitted to Tucson Water and is currently under review for compliance with the policy. The intent is to build a water main along Pecos Way and install water meters to the six Hawks AZ Land LLC parcels along Pecos Way to include them into the obligated service area. Exhibit II-H-1 displays the will-serve letter for one of the parcels. The developer is in the process of obtaining will-serve letters for the remaining parcels south of Pecos Way. When approved Tucson Water will issue a Water Assurance letter.





August 02, 2023

Paradigm Land Design LLC  
372 S. Eagle Rd. #284  
Eagle, ID 83616  
Attn: Paul Oland

**SUBJECT: Water Availability for Project: 3595 W. Pecos Way, APN: 22444050A, Case#: TW-WAV-0823-00222, 12S13E17, Location Code: UNINCORPORATED PIMA COUNTY, Total Area: 16.70ac**

#### **Water Supply**

Tucson Water will provide water service to this project based on the subject zoning of the above parcel. 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) Easement/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 (520) 791-4718.

Sincerely,

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

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

**J. SCHOOLS**

## 1. Access to Adjacent or Onsite Schools

The Property is within the Marana School District. There are no schools located onsite or adjacent to the Property. The nearest schools are Ironwood Elementary School (0.5 mi. to the south), Casas School (1 mi. to the east), Mountain View High School (0.75 mi. to the south), Ironwood Ridge High School (1 mi. to the northeast), and Legacy Traditional School (2 mi. to the south).

## 2. School Capacity

Marana School District has indicated that it has capacity to serve students from K-12 grades should their parents decide to put them in government schools. It is important to remember that more and more parents are now choosing not to place their children in government schools. A number of students from this neighborhood will undoubtedly attend the area's quasi-governmental charter schools such as Legacy Traditional School, which has also indicated that it has capacity to serve at least some students from this development. Other students will attend one of the area's several non-governmental private schools. The northwest Tucson metropolitan area also has a thriving homeschool community, which further reduces the number of students expected to attend nearby government schools.

Please see Exhibit II-I-1: Marana School District Capacity Letter and Exhibit II-I-2: Legacy Traditional School Capacity Letter.

## 3. Agreement with School District for Mitigation

Not Applicable.

**GOVERNING BOARD**

Maribel Lopez, Ed.D., President  
 Kathryn Mikronis, Vice President  
 Tom Carlson, Member  
 Hunter Holt, Member  
 David Willard, Member



**ADMINISTRATION**

Daniel Streeter, Ed.D., Superintendent  
 Mark Goligoski, Assistant Superintendent  
 Denise Linsalata, Assistant Superintendent  
 Kristin Reidy, Assistant Superintendent  
 Joshua Bayne, Executive Director  
 Dan Contorno, Chief Financial Officer

March 11, 2024

Dear Mr. Oland,

Thank you for informing us of the plan for Paradigm Land Design, LLC to construct homes within the Marana Unified School District. Based on the proposal, we understand that the site is planned to develop approximately 110 single-family homes directly north of Ironwood Elementary. Marana Unified School District currently uses a factor of .25 students per home for elementary and .1 students per home for secondary. The maximum conceptual design of 110 homes could generate about 28 elementary and 11 secondary students.

These future potential students can be supported by the following schools with their current enrollment/capacity numbers shown; Ironwood Elementary School (370/602), Tortolita Middle School (516/1234), and Mountain View High School (1833/2257). All schools have the capacity for the impact this proposed development may have on our student population under current conditions.

Thank you for supporting the development of quality 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. The district uses these funds to ensure that necessary infrastructure is in place to support growth and maintain an inspiring education for every child. Voluntary developer 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.

If you require more information, please call me at 520-682-4757 or e-mail me at [m.j.goligoski@maranausd.com](mailto:m.j.goligoski@maranausd.com).

Cordially,

Assistant Superintendent of Operations

*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)

## Exhibit II-I-2: Legacy Traditional School Capacity Letter

---

**From:** Peggy Fite <Peggy.Fite@legacytraditional.org>  
**Sent:** Monday, March 11, 2024 3:29 PM  
**To:** Paul Oland <gpo@ParadigmLand.us>  
**Subject:** Legacy Traditional Northwest Tucson

Good afternoon,

I received an email last week regarding the construction of a new subdivision and questions regarding capacity at our school.

We are a free, public charter school for students in K-8th. Our enrollment capacity is 1320 and we currently have some openings for the 2024-25 school year in grades K-5.

Our 6th through 8th grade classes are full for the coming school year.

Enrollment numbers vary from year to year, but we do typically have room for some students.

If you have any additional questions please don't hesitate to contact me.

Thank you,

Peggy Fite

--

Peggy Fite, M.Ed.  
Principal

Legacy Traditional School  
3500 W. Cortaro Farms Rd.  
Tucson, AZ 85742  
(520)505-3640  
[peggy.fite@legacytraditional.org](mailto:peggy.fite@legacytraditional.org)

**K. RECREATION**

1. Onsite Recreation

Onsite recreation areas are provided within this proposed subdivision to serve the daily recreational needs of residents. Less frequent recreational needs can be satisfied at Arthur Pack Regional Park, which provides a wide range of recreational facilities.

2. Ownership of Recreation Areas

All onsite recreation areas will be privately owned and maintained by the HOA.

3. Proposed Trails On- or Offsite

No trails are proposed.



**L. ENVIRONMENTAL QUALITY**

1. Methods of Controlling Dust Pollution

During the grading and construction of the property, water trucks will be used to minimize dust pollution. Once construction is complete and all landscape materials have been installed, decomposed granite will be utilized as a top dressing to areas with exposed dirt.

**M. AGREEMENTS**

None.

## APPENDIX A - AZGFD ENVIRONMENTAL REVIEW TOOL

## Arizona Environmental Online Review Tool Report



*Arizona Game and Fish Department Mission*

*To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.*

**Project Name:**

Pecos 114

**Project Description:**

Single-family subdivision

**Project Type:**

Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction or expansion

**Contact Person:**

Paul Oland

**Organization:**

Paradigm Land Design LLC

**On Behalf Of:**

CONSULTING

**Project ID:**

HGIS-21663

*Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.*

Arizona Game and Fish Department  
Project ID: HGIS-21663

project\_report\_pecos\_114\_75835\_78029.pdf  
Review Date: 4/4/2024 09:16:27 AM

**Disclaimer:**

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. Arizona Wildlife Conservation Strategy (AWCS), specifically Species of Greatest Conservation Need (SGCN), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

**Locations Accuracy Disclaimer:**

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Arizona Game and Fish Department  
Project ID: HGIS-21663

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Review Date: 4/4/2024 09:16:27 AM

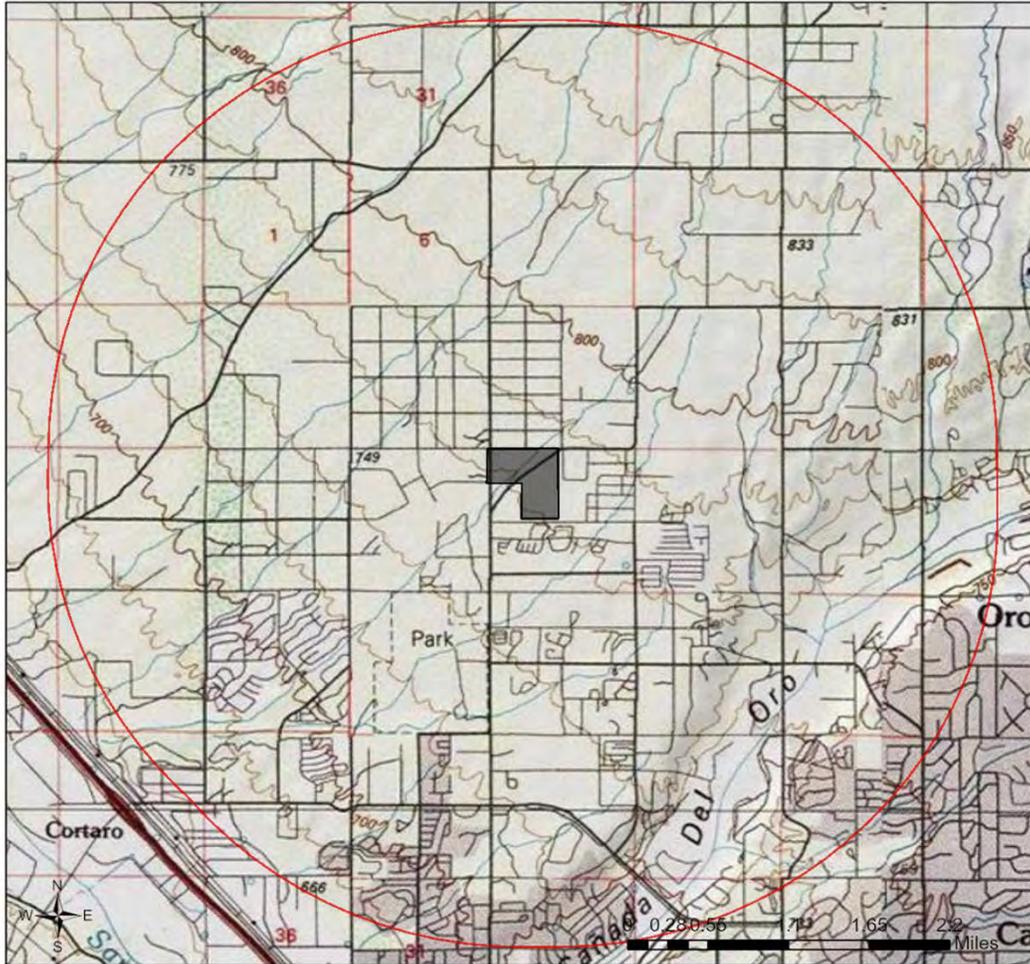
**Recommendations Disclaimer:**

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:  
**Project Evaluation Program, Habitat Branch**  
**Arizona Game and Fish Department**  
**5000 West Carefree Highway**  
**Phoenix, Arizona 85086-5000**  
**Phone Number: (623) 236-7600**  
**Fax Number: (623) 236-7366**  
**Or**  
[PEP@azgfd.gov](mailto:PEP@azgfd.gov)
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

Arizona Game and Fish Department  
Project ID: HGIS-21663

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Pecos 114  
USA Topo Basemap With Locator Map



- Buffered Project Boundary
- Project Boundary

Project Size (acres): 115.14  
 Lat/Long (DD): 32.3923 / -111.0419  
 County(s): Pima  
 AGFD Region(s): Tucson  
 Township/Range(s): T12S, R13E  
 USGS Quad(s): RUELAS CANYON

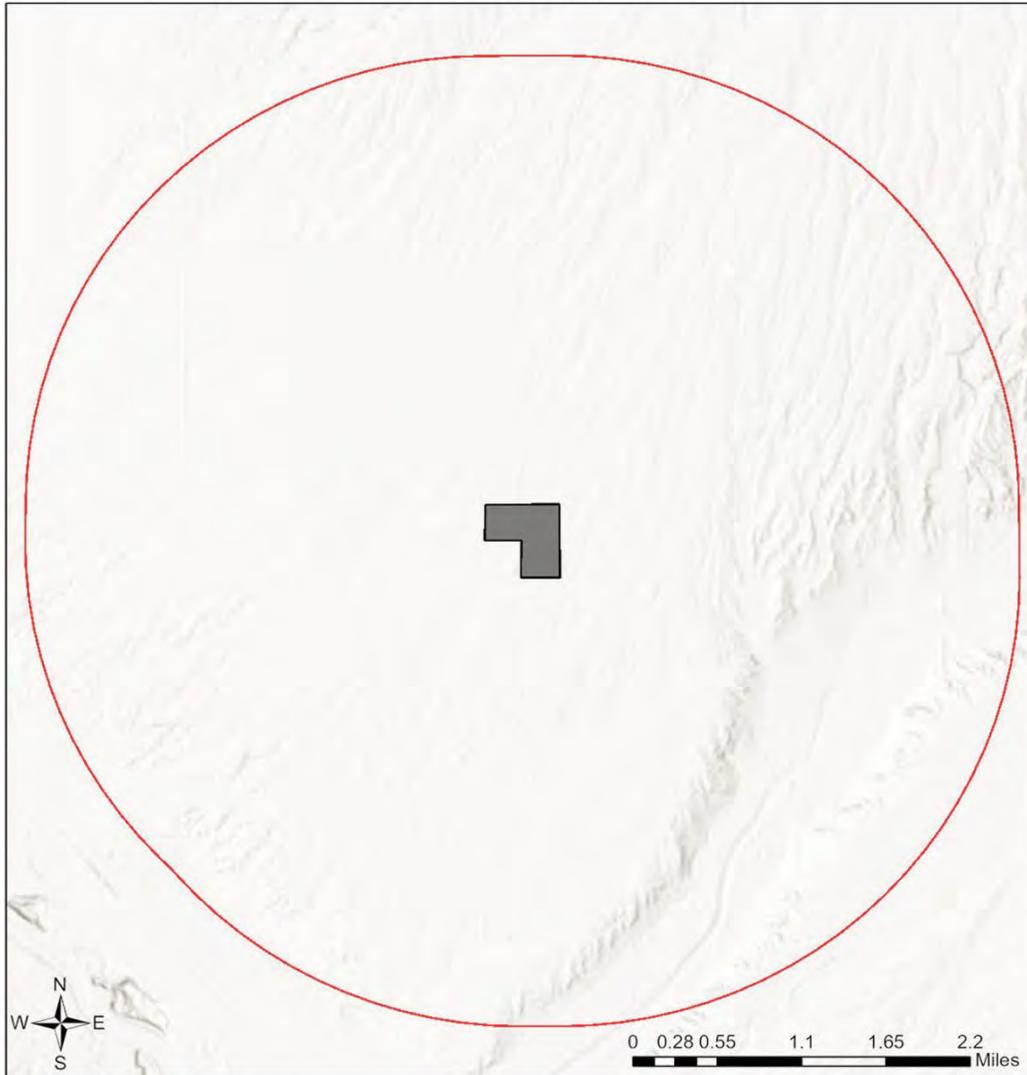
County of Yavapai, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS  
 Copyright: © 2013 National Geographic Society, i-cubed  
 Esri, USGS



Arizona Game and Fish Department  
Project ID: HGIS-21663

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Pecos 114  
Web Map As Submitted By User



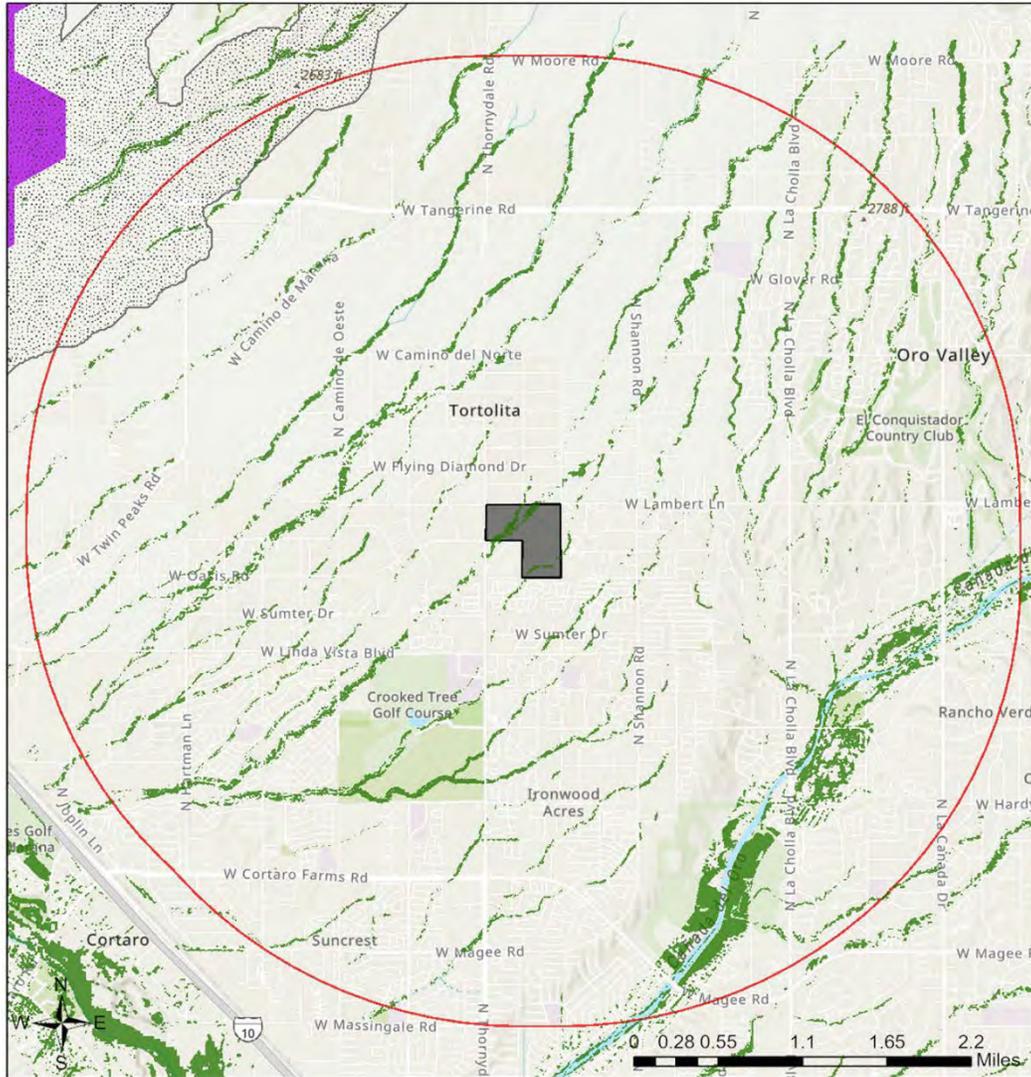
-  Buffered Project Boundary
-  Project Boundary

Project Size (acres): 115.14  
Lat/Long (DD): 32.3923 / -111.0419  
County(s): Pima  
AGFD Region(s): Tucson  
Township/Range(s): T12S, R13E  
USGS Quad(s): RUELAS CANYON  
Esri, NASA, NGA, USGS, FEMA

Arizona Game and Fish Department  
 Project ID: HGIS-21663

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### Pecos 114 Important Areas



- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 115.14  
 Lat/Long (DD): 32.3923 / -111.0419  
 County(s): Pima  
 AGFD Region(s): Tucson  
 Township/Range(s): T12S, R13E  
 USGS Quad(s): RUELAS CANYON

COMANP, Esri, TomTom, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA



Arizona Game and Fish Department  
Project ID: HGIS-21663

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**Special Status Species Documented within 3 Miles of Project Vicinity**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Ammospermophilus harrisi	Harris' Antelope Squirrel					2
Auriparus flaviceps	Verdin					2
Calypte costae	Costa's Hummingbird					2
Campylorhynchus brunneicapillus	Cactus Wren					2
Cardinalis sinuatus	Pyrrhuloxia					2
Catharus guttatus	Hermit Thrush					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Colaptes chrysoides	Gilded Flicker			S		2
Columbina inca	Inca Dove					2
Crotalus tigris	Tiger Rattlesnake					2
Cyananthus latirostris	Broad-billed Hummingbird		S			2
Danaus plexippus	Monarch	C		S		
Dendrocygna bicolor	Fulvous Whistling-Duck	SC				
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	LT	S	S		1
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Heloderma suspectum	Gila Monster					1
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC		S		1
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza lincolni	Lincoln's Sparrow					2
Melospiza aberti	Abert's Towhee		S			2
Parabuteo unicinctus	Harris's Hawk					2
Progne subis hesperia	Desert Purple Martin			S		2
Rana yavapaiensis	Lowland Leopard Frog	SC	S	S		1
Setophaga nigrescens	Black-throated Gray Warbler					2
Tumamoca macdougallii	Tumamoc Globeberry	SC	S	S	SR	

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

**Special Areas Documented that Intersect with Project Footprint as Drawn**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Riparian Area	Riparian Area					

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Accipiter gentilis	Northern Goshawk	SC	S	S		2
Ammospermophilus harrisi	Harris' Antelope Squirrel					

Arizona Game and Fish Department  
 Project ID: HGIS-21663

project\_report\_pecos\_114\_75835\_78029.pdf  
 Review Date: 4/4/2024 09:16:27 AM

**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Aquila chrysaetos</i>	Golden Eagle			S		2
<i>Aspidoscelis sonorae</i>	Sonoran Spotted Whiptail					2
<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl	SC	S	S		2
<i>Auriparus flaviceps</i>	Verdin					2
<i>Buteo swainsoni</i>	Swainson's Hawk					2
<i>Calypte costae</i>	Costa's Hummingbird					2
<i>Camptostoma imberbe</i>	Northern Beardless-Tyrannulet		S			2
<i>Campylorhynchus brunneicapillus</i>	Cactus Wren					2
<i>Chaetodipus baileyi</i>	Bailey's Pocket Mouse					2
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)					
<i>Colaptes chrysoides</i>	Gilded Flicker			S		2
<i>Columbina inca</i>	Inca Dove					2
<i>Crotalus tigris</i>	Tiger Rattlesnake					2
<i>Empidonax wrightii</i>	Gray Flycatcher					2
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat					
<i>Falco mexicanus</i>	Prairie Falcon					2
<i>Falco peregrinus anatum</i>	American Peregrine Falcon					
<i>Falco sparverius</i>	American Kestrel					2
<i>Gastrophryne mazatlanensis</i>	Sinoloan Narrow-mouthed Toad					
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl					
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	CCA	S	S		1
<i>Heloderma suspectum</i>	Gila Monster					1
<i>Icterus cucullatus</i>	Hooded Oriole					2
<i>Incilius alvarius</i>	Sonoran Desert Toad					2
<i>Lanius ludovicianus</i>	Loggerhead Shrike	SC				2
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			2
<i>Leptonycteris yerbabuenae</i>	Lesser Long-nosed Bat	SC				1
<i>Lithobates yavapaiensis</i>	Lowland Leopard Frog	SC	S	S		1
<i>Macrotus californicus</i>	California Leaf-nosed Bat	SC		S		2
<i>Megascops kennicottii</i>	Western Screech-owl					
<i>Melanerpes uropygialis</i>	Gila Woodpecker					2
<i>Melospiza lincolni</i>	Lincoln's Sparrow					2
<i>Melospiza aberti</i>	Abert's Towhee		S			2
<i>Micrathene whitneyi</i>	Elf Owl					
<i>Micruroides euryxanthus</i>	Sonoran Coralsnake					2
<i>Myotis velifer</i>	Cave Myotis	SC		S		2
<i>Myotis yumanensis</i>	Yuma Myotis	SC				2
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat					2
<i>Nyctinomops macrotis</i>	Big Free-tailed Bat	SC				2

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**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Parabuteo unicinctus	Harris's Hawk					2
Passerculus sandwichensis	Savannah Sparrow					2
Peucaea carpalis	Rufous-winged Sparrow					2
Phrynosoma solare	Regal Horned Lizard					2
Phyllorhynchus browni	Saddled Leaf-nosed Snake					2
Poocetes gramineus	Vesper Sparrow					2
Progne subis hesperia	Desert Purple Martin					
Spizella breweri	Brewer's Sparrow					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					
Toxostoma bendirei	Bendire's Thrasher					2

**Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Odocoileus hemionus	Mule Deer					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

**Project Type: Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction or expansion**

**Project Type Recommendations:**

Fence recommendations will be dependent upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located on Wildlife Friendly Guidelines page, which is part of the Wildlife Planning button at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

## Appendix A - AZGFD Environmental Review Tool (Cont'd)

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Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at <https://www.invasivespeciesinfo.gov/unitedstates/az.shtml> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at <https://imap.natureserve.org/imap/services/page/map.html>.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select "See What's Here" for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

The construction or maintenance of water developments should include: incorporation of aspects of the natural environment and the visual resources, maintaining the water for a variety of species, water surface area (e.g., bats require a greater area due to in-flight drinking), accessibility, year-round availability, minimizing potential for water quality problems, frequency of flushing, shading of natural features, regular clean-up of debris, escape ramps, minimizing obstacles, and minimizing accumulation of silt and mud.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Based on the project type entered, coordination with State Historic Preservation Office may be required (<https://azstateparks.com/>).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches.

## Appendix A - AZGFD Environmental Review Tool (Cont'd)

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Communities can actively support the sustainability and mobility of wildlife by incorporating wildlife planning into their regional/comprehensive plans, their regional transportation plans, and their open space/conservation land system programs. An effective approach to wildlife planning begins with the identification of the wildlife resources in need of protection, an assessment of important habitat blocks and connective corridors, and the incorporation of these critical wildlife components into the community plans and programs. Community planners should identify open spaces and habitat blocks that can be maintained in their area, and the necessary connections between those blocks to be preserved or protected. Community planners should also work with State and local transportation planning entities, and planners from other communities, to foster coordination and cooperation in developing compatible development plans to ensure wildlife habitat connectivity. The Department's guidelines for incorporating wildlife considerations into community planning and developments can be found on the Wildlife Friendly Guidelines portion of the Wildlife Planning page at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Reduce/minimize barriers to allow movement of amphibians or fish (e.g., eliminate falls). Also for terrestrial wildlife, washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise, while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Guidelines for culvert designs to facilitate wildlife passage can be found on the home page of this application at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (<http://www.azdeq.gov/>).

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<https://new.azwater.gov/>).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (<http://www.usace.army.mil/>).

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife at [PEP@azgfd.gov](mailto:PEP@azgfd.gov) or at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/project-evaluation-program/> and <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

**The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at [PEP@azgfd.gov](mailto:PEP@azgfd.gov).**

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**Project Location and/or Species Recommendations:**

HDMS records indicate that one or more native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:

Arizona Department of Agriculture  
 1688 W Adams St.  
 Phoenix, AZ 85007  
 Phone: 602.542.4373

<https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf> starts on page 44

HDMS records indicate that **Lesser Long-nosed Bats** have been documented within the vicinity of your project area. Please review the Lesser Long-nosed Bat Management Guidelines

at: <https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/planningFor/wildlifeFriendlyGuidelines/FINALIecuyeHabitatGdln.pdf>

HDMS records indicate that one or more **Listed, Proposed, or Candidate** species or **Critical Habitat** (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <https://www.fws.gov/office/arizona-ecological-services> or:

**Phoenix Main Office**

9828 North 31st Avenue #C3  
 Phoenix, AZ 85051-2517  
 Phone: 602-242-0210  
 Fax: 602-242-2513

**Tucson Sub-Office**

201 N. Bonita Suite 141  
 Tucson, AZ 85745  
 Phone: 520-670-6144  
 Fax: 520-670-6155

**Flagstaff Sub-Office**

SW Forest Science Complex  
 2500 S. Pine Knoll Dr.  
 Flagstaff, AZ 86001  
 Phone: 928-556-2157  
 Fax: 928-556-2121

This review has identified **riparian areas** within the vicinity of your project. During the planning stage of your project, avoid, minimize, or mitigate any potential impacts to riparian areas identified in this report. Riparian areas play an important role in maintaining the functional integrity of the landscape, primarily by acting as natural drainages that convey water through an area, thereby reducing flood events. In addition, riparian areas provide important movement corridors and habitat for fish and wildlife. Riparian areas are channels that contain water year-round or at least part of the year. Riparian areas also include those channels which are dry most of the year, but may contain or convey water following rain events. All types of riparian areas offer vital habitats, resources, and movement corridors for wildlife. The Pinal County Comprehensive Plan (i.e. policies 6.1.2.1 and 7.1.2.4), Open Space and Trails Master Plan, Drainage Ordinance, and Drainage Design Manual all identify riparian area considerations, guidance, and policies. Guidelines to avoid, minimize, or mitigate impacts to riparian habitat can be found

at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Based on the project type entered, further consultation with the Arizona Game and Fish Department and Pinal County may be warranted.

HDMS records indicate that **Sonoran Desert Tortoise** have been documented within the vicinity of your project area.

Please review the Tortoise Handling Guidelines found at <https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/2014%20Tortoise%20handling%20guidelines.pdf>.

## APPENDIX B - PRELIMINARY INTEGRATED WATER MANAGEMENT PLAN (PIWMP)

### 1. Water Will-Serve Letter

The Property was divided into several parcels in order to gain service by Tucson water according to their policies. Below is the will-serve letter for one of the parcels. The developer is in the process of obtaining will-serve letters for the remaining parcels south of Pecos Way.

August 02, 2023		
Paradigm Land Design LLC 372 S. Eagle Rd. #284 Eagle, ID 83616 Attn: Paul Oland		
<b>SUBJECT: Water Availability for Project: 3595 W. Pecos Way, APN: 22444050A, Case#: TW-WAV-0823-00222, 12S13E17, Location Code: UNINCORPORATED PIMA COUNTY, Total Area: 16.70ac</b>		
<b><u>Water Supply</u></b>		
Tucson Water will provide water service to this project based on the subject zoning of the above parcel. 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.		
<b><u>Water Service</u></b>		
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) Easement/Common Areas.		
Any specific area plan fees, protected main/facility fees and/or other needed facilities' cost, are to be paid by the developer. <i>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.</i>		
<b>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.</b>		
If you have any questions, please call New Development at (520) 791-4718.		
Sincerely,  Michael Mourreale, P.E. Engineering Manager Tucson Water Department		
P.O.BOX 27210 • TUCSON, AZ 85726-7210 (520) 791-4718 • www.tucsonaz.gov/water		

## Appendix B - Preliminary Integrated Water Management Plan (Cont'd)

## 2. Water Conservation Measures

The following water conservation measures listed in Table A - Water Conservation Measures are planned to be included as part of the proposed project:

- I-3a: All toilets have a maximum flow rate of 1.28 gallons per flush. (3 points)
- I-5: Install new washing machine with water factor of 4.5 or less. (2 points)
- I-6: Install 1.5 gallons per minute kitchen sink and dishwasher which uses less than 3.5 gallon/cycle. (3 points)
- O-3c: Use only native and/or drought-tolerant, low-water use plants for 75% of Landscape Area landscape plantings with a Water Use of 1 or 2, designed to be self-sustaining based upon water harvesting. (4.5 points)
- O-4a: CC&Rs that restrict the use of non-native plants and turf grasses in front yards of lots. (0.5 points)
- O-6b: Install an irrigation system with the following components: 1) Weather based irrigation controller or soil moisture sensor-based irrigation controller. Controller shall have two watering schedules posted at the controller: a) for the initial grow-in period and b) for the established landscape. Controller shall be set to irrigate during the hours of 10 p.m. to 8 a.m.; 2) Turf spray heads, if installed, shall only be used for turf and shall achieve a lower quarter distribution uniformity (DULQ) of 65% or greater and contain check valves to prevent gravity drainage of water from heads; 3) Separate sprinkler zones for beds, with plants grouped based on watering needs (hydro zoning); 4) Drip irrigation for all non-turf planting beds. (2.5 points)

The final selection of water conservation measures will be determined during the site engineering process.

## 3. Proximity to renewable and potable water supplies

Tucson Water has access to a renewable potable water supply.

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<http://www.arizonafuture.org/progress-meters/natural-resources/water-use/>

<https://www.census.gov/quickfacts/pimacountyarizona>

<http://www.broward.org/waterservices/documents/eei00700.pdf>