Thornydale Sumter
SPECIFIC PLAN

Pima County Case Number: P23SP00001

Approved October 17, 2023

Law Offices of
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I. INTRODUCTION & POLICY

A. Introduction

ZDC Properties, LLC ("ZDC" or "Owner"), an affiliate of the Channing Corporation, is proposing to develop the land at the northeast corner of Thornydale Road and Sumter Drive in unincorporated Pima County ("County"), Assessor's Parcel Numbers 224-44-0570 and -058A (the "Property"). (*See Exhibit I.A.1: Regional Location Map*.) The Property is approximately 18.51 acres, but a dedication of land for a future widening of Thornydale Road will result in a development of site of approximately 17.88 acres.

Parcel -058A ("East Parcel") measures approximately eight acres and has been heavily disturbed and developed as a single-family residence horse property. Parcel -0570 ("West Parcel"), which is approximately 10.5 acres, is mostly undisturbed vacant land. (See *Exhibit I.A.2: Aerial Photo*.) A Property Survey has been provided as *Appendix A* of this Specific Plan.

ZDC proposes to develop the Property with multi-family residential ("MFR") uses and a small commercial component (the "Project"). The Property is zoned Suburban Ranch ("SR"), and its Comprehensive Plan, *Pima Prospers*, land use designation is Low Intensity Urban 0.3 ("LIU-0.3") despite being surrounded on three sides by medium-to-high residential development. The Project thus requires a rezoning with a comprehensive plan amendment.

This document, the Thornydale Sumter Specific Plan ("Specific Plan") serves as both the land use proposal for the Project and an amendment to the County's Comprehensive Plan, *Pima Prospers*. Section I.B, below, is the request and rationale to amend *Pima Prospers*. Section II, Land Use Proposal, describes the Project proposal, including the permitted uses and applicable development standards. Section III describes the Project's implementation plan, including how the Specific Plan coexists with the Pima County Zoning Code ("PCZC"), and County review process for development of the Project. Section IV, Site Analysis, includes an analysis of the Property's existing conditions. The final section of the document will include the Specific Plan's conditions of approval, pursuant to the ordinance adopted by the Board of Supervisors.

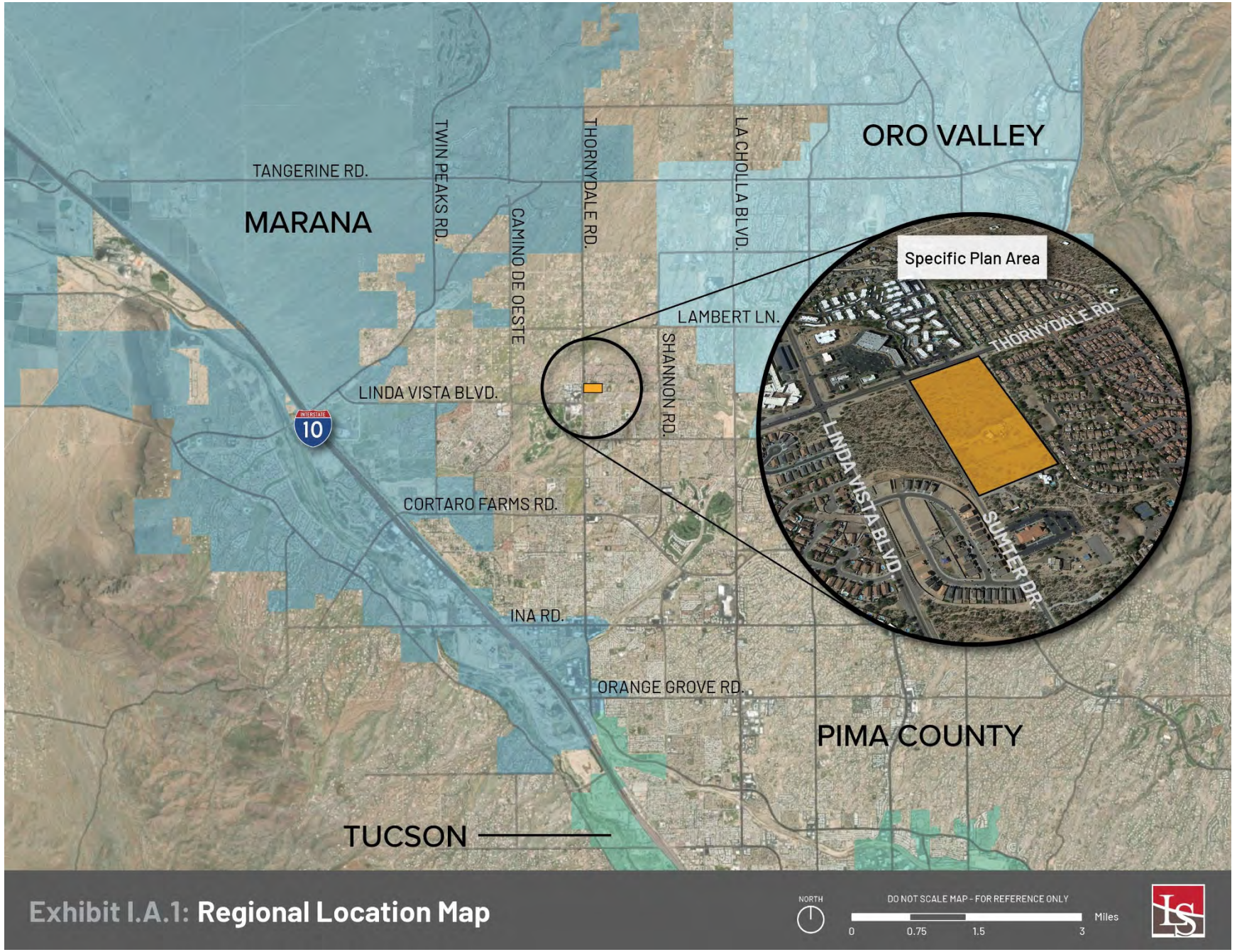


Exhibit I.A.1: Regional Location Map

Exhibit I.A.2: Aerial Photo

B. Pima Prospers Amendment

The Property is located within the Tortolita Planning Area of *Pima Prospers* and is currently identified as LIU-0.3. Concurrent with this Specific Plan proposal is a request to amend the Property's Pima Prospers land use designation to Planned Development Community ("PDC"). The PDC designation is meant for properties planned as a single community with unique features and designed within the context of its environment. This Specific Plan is consistent with the intent of the PDC designation, as well as the goals and policies of *Pima Prospers*. The following policies from *Pima Prospers* are relevant and support this Specific Plan:

1. Use of Land

a. Land Use Element

- Policy 3.1.1.2: Provide an appropriate mix of land uses that:
  a) Supports a balance of housing, employment, shopping, recreation, and civic uses;
  b) Furthers expansion of economic development goals;
  c) Recognizes in the unincorporated County the dominant suburban growth pattern within the metropolitan area and the dominant rural growth pattern outside of the metropolitan area;
  d) Promotes the integrated and efficient use of infrastructure and services; and
  e) Conserves, protects and maintains culturally and biologically important lands.
- Policy 3.1.1.4: Support land uses, densities, and intensities appropriate for the urban, suburban, and rural areas of the unincorporated County.
- Policy 3.1.1.5: Include regulatory floodplains and regulated riparian habitat areas as open space priorities to maintain hydrologic integrity, wildlife corridor connectivity and contiguous open space corridors.
- Policy 3.1.1.6: Promote a compact form of development in urban and suburban areas where infrastructure is planned or in place and the market is receptive.
- Policy 3.1.1.8: Require all mixed-use developments to incorporate design elements for walkability, bikeability and access to work, school, services, infrastructure, and healthy foods.

The Specific Plan meets the Land Use Element policies of Pima Prospers. The Property is located within a part of the County's metropolitan area and is surrounded on three sides by medium-to-high density residential. The Project will fill in an area encircled by the existing growth pattern and bring much-needed, new multi-family development within an existing higher-density growth pattern. The Project is situated to take advantage of existing infrastructure and services because it is located along an existing arterial roadway that supports existing higher-density residential and commercial uses in this area. Existing utilities, like sewer and water, are adjacent to the

Property and require little new infrastructure. Because of these factors, the Project represents appropriate infill development.

The Project's primary use is MFR, and it includes a mixed-use element at a scale appropriate to the Project. The Project's commercial component will offer amenity or personal service-type uses tailored to serve both the residents of this Project, as well as those of neighboring residential areas. This unique land use plan allows for commercial amenities available to Project residents and neighbors alike.

The Project's design responds to the Property's unique physical constraints by setting aside significant riparian vegetation and wash corridors as natural undisturbed open space ("NUOS"), while focusing a significant portion of the development within the Property's previously disturbed areas. NUOS makes up 36 percent of the Property, and approximately 46 percent of the current natural undisturbed land will remain undisturbed. The Project is being designed to meet the policies of the Maeveen Marie Behan Conservation Lands System ("CLS"), as described below.

b. Environmental Element

- Policy 3.4.1.3: The following Conservation Guidelines apply to Important Riparian Areas (IRA):
    a) Across the entirety of the CLS landscape, at least 95 percent of the total acreage of lands within this designation shall be conserved in a natural or undisturbed condition;
    b) Every effort should be made to protect, restore and enhance the structure and functions of IRA, including their hydrological, geomorphological and biological functions;
    c) Areas within an IRA that have been previously degraded or otherwise compromised may be restored and/or enhanced;
    d) Such restored and/or enhanced areas may contribute to achieving the 95 percent conservation guideline for IRA;
    e) Restoration and/or enhancement of degraded IRA may become a condition or requirement of approval of a comprehensive plan amendment and/or rezoning; and
    f) On-site mitigation is preferable, however mitigation may be provided on-site, off-site, or in combination.

- Policy 3.4.1.8: The following Conservation Guidelines apply to Special Species Management Areas:
    a) Across the entirety of the CLS landscape, at least 80 percent of the total acreage of lands within this designation shall be conserved as undisturbed natural open space and will provide for the conservation, restoration, or enhancement of habitat for the affected Special Species;

b) Projects subject to this policy and within this designation will yield four conserved (mitigation) acres for each acre to be developed:
   1. Mitigation acres may be provided on-site, off-site, or in combination;
   2. The preference is for the mitigation acres to be within a designated Special Species Management Area;
   3. The 4:1 mitigation ratio will be calculated according to the extent of impacts to the total surface area of that portion of any parcel designated as Special Species Management Area;
   4. Development shall be configured in the least sensitive portion(s) of the property;
   5. On-site area(s) of undisturbed natural open space will be configured to facilitate the movement of the relevant Special Species through the landscape and will include conservation values essential to survival of the relevant Special Species; and
   6. A TDR may be used in order to secure mitigation lands.

The Specific Plan meets the Environmental Element policies of Pima Prospers and will comply with the CLS policies. The Property is within a designated Special Species Management Area. Of the Property's 17.88-acre development site, 11.39 acres is proposed for development, which requires 45.56 acres of mitigation. Proposed onsite mitigation includes 6.48 acres, and the remaining mitigation area requirement will be achieved with ZDC acquiring at least 39.08 acres of offsite mitigation land and dedicating it to Pima County.

A significant portion of the single-family residential/horse property has been disturbed since the 1970s. Most of the disturbance is on the eastern portion of the Property, which is where the majority of the Project's development is focused. Of the 11.18 acres of undisturbed land, the Project will be preserving 5.15 acres, or 46 percent of the current undisturbed land.

c. *Housing and Community Design Element*

Policy 3.5.8.1: Incorporate through good design housing types within mixed use developments at scales generally compatible, but more dense than adjacent established neighborhoods.

Policy 3.5.10.2: Encourage development in suburban areas to be integrated with its Sonoran Desert setting by:

a) Encouraging a Sonoran Desert color palette that is not limited to earth tones;
b) Incorporating the site's prominent existing natural features (rock formations, etc.) as part of the design, where appropriate;
c) Supporting contemporary and energy efficient versions of vernacular architectural styles;
d) With the exception of local food production, continue to utilize a drought- tolerant plant palette that emphasizes both the use of

native species and precludes the use of non-native invasive plant species near public preserves and natural open spaces;

e) Establishing trail linkages to surrounding natural areas; and
f) Maximizing the use of shade devices where most appropriate including planting trees for pedestrians.

Policy 3.5.14: Encourage cost-effective green building and site design methods, techniques and materials.

1. Decrease heat island effect and reduce water run-off through site development strategies.
2. Reduce outdoor water use by encouraging water-efficient practices such as:
    a. Low water use, drought-tolerant or native vegetation (xeriscapes) with the exception of local food production;
    b. Drip irrigation;
    c. Increase use of reclaimed water and rainwater harvesting; and
    d. Low Impact Development (LID) principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product where applicable and feasible.
3. Reduce indoor water use by installing water-efficient fixtures and appliances.
4. Increase building energy efficiency by encouraging active and passive solar methods of construction.

The Specific Plan meets the Housing and Community Design Element policies of Pima Prospers. The proposal responds to the region's current housing shortage by offering a quality rental product in high demand. The Project is located in an area that already features a variety of housing types, including older multi-family across the street. The existing higher residential apartments are located toward the arterial roadways, and the Project will mimic this land-use pattern by providing new multi-family along Thornydale.

The Project has been sensitively designed within its desert context, incorporating drought-tolerant and transplanted vegetation and preserving significant onsite riparian corridors. The Project will feature a variety of energy-efficient, green building and site design elements that are supported by Pima Prospers. These approaches include:

- *Significant portion of the Property to remain NUOS with pervious surface.*
- *Primarily east/west building orientation to take advantage of solar exposure.*

- *High-efficiency LED lighting throughout.*
- *High Seer air conditioning systems.*
- *Low-water-use plumbing fixtures.*
- *Rainwater to be directed to landscape areas for plantings and recharge back into the ground.*
- *Landscaping featuring low-water-use vegetation and an abundance of shade trees.*
- *Use of pervious hardscape and porous paving systems, where possible.*
- *Covered parking areas located throughout the Project, with the goal of including on some covered parking solar panels to generate power for the Project's community, commercial, and office spaces.*
- *Electric vehicle ("EV") charging stations provided, with conduit provided for additional future charging stations as demand grows.*

2. Physical Infrastructure

a. Energy Element

- Policy 4.3.1.7: Mitigate urban heat island effect by reducing paved areas, increasing shade and applying other methods, where practical.

  The Specific Plan meets the Energy Element policies of Pima Prospers. The Project will employ numerous strategies for mitigating the urban heat island effect, including:

  - *Significant portion of the Property to remain NUOS with pervious surface.*
  - *Incorporation of shade trees into the landscaping and near parking areas.*
  - *Use of pervious hardscape and porous paving systems, where possible.*
  - *Covered parking areas located throughout the Project.*

II. LAND USE PROPOSAL

A. Project Overview

ZDC is proposing a mixed-use development for the Property, consisting of a MFR project with small "amenity commercial" component to provide personal services uses for the Project's tenants and surrounding neighborhoods.

The residential portion of the Project will include seven three-story buildings, each containing 30 apartments, and three two-story buildings, each containing 20 apartments, for a total of 270 units. These residential units will help respond to the current regional shortage of residential units, and particularly address the need for high quality multi-family residential in the immediate area. The Project will bring "class A" apartments to address the increasing demand for this product in the area.

The two-story clubhouse will encompass approximately 8,000 square feet, approximately 3,000 square feet of which will be dedicated commercial uses open to the public. The remaining clubhouse area will be used for the apartment complex administration and amenities for the residents of the Project.

The Project is located in an area where new housing units and density is appropriate. This is an infill site, surrounded on the north and south by medium-density residential, and to the west by existing multi-family and commercial. Existing utility and road infrastructure will serve the Project. The Project will be directly located on Thornydale, a major arterial street, and will serve as a transition to the medium density neighborhood to the north.

The Project will be designed to be sensitive to the environment, as it will preserve 36 percent of the existing NUOS. In accordance with CLS requirements, the Project will also preserve approximately 39.08 acres of offsite natural open space (to be dedicated to the County), as well as over 95 percent of the Property's important riparian area ("IRA"). The Project will also restore the areas of the IRA that had been previously disturbed.

All site improvements are illustrated on *Exhibit II.A: Preliminary Development Plan*.

SPECIFIC PLAN PDP

EXISTING COMPREHENSIVE PLAN USE:	LIU 0.3	TOTAL SITE AREA:	806,348.7 S.F. (18.51 AC)	COMMERCIAL FLOOR AREA:	+/- 3,000 S.F.
EXISTING ZONING:	SUBURBAN RANCH - SR	ROW DEDICATION:	27,157.9 S.F. (0.62 AC)	TOTAL DWELLING UNITS:	270 UNITS
		PROJECT AREA:	779,191 S.F. (17.88 AC)	RESIDENTIAL DENSITY:	15.1 RAC
PROPOSED COMPREHENSIVE PLAN USE:	PDC			PARKING PROVIDED:	438 SPACES
PROPOSED ZONING:	SPECIFIC PLAN - SP	NATURAL UNDISTURBED OPEN SPACE:	282,268.8 S.F. (6.48 AC)		
		FUNCTIONAL OPEN SPACE:	210,394.8 S.F. (4.83 AC)		

AT THE TIME OF DEVELOPMENT, THE PROJECT WILL SUBMIT A DETENTION WAIVER TO PCRFCD BASED ON THE CURRENT PROPOSAL.

FUNCTIONAL OPEN SPACE
NATURAL UNDISTURBED OPEN SPACE
COVERED PARKING
IRA
BUILDING

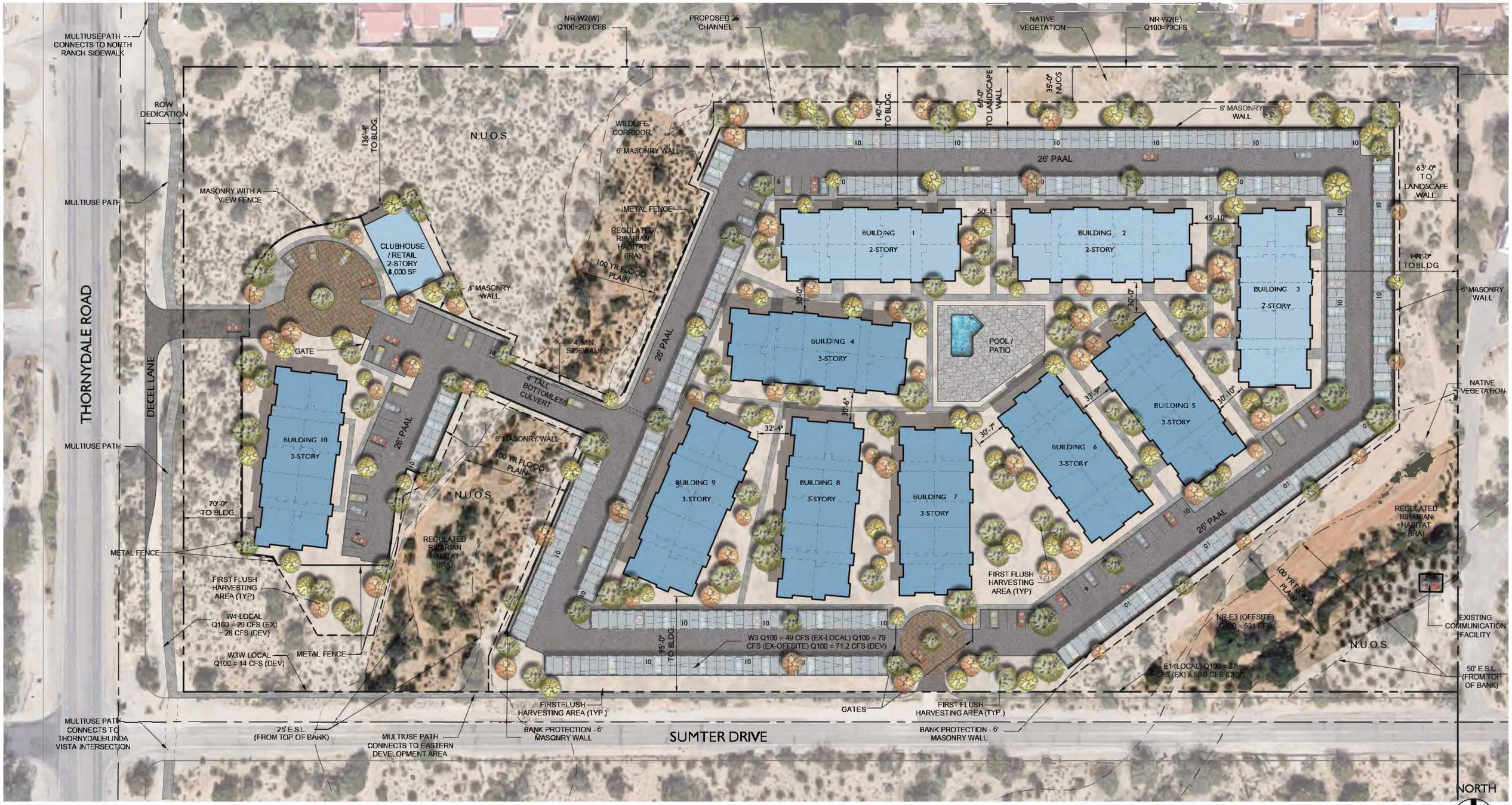


EXHIBIT II.A: PRELIMINARY DEVELOPMENT PLAN

THORNYDALE AND SUMTER - SITE PLAN

DATE: 05.08.23 JOB#23000

a.23 studios

B. Permitted Uses

1. Primary Permitted Uses

- Duplex, condominium, townhouse, apartment, or other multiple dwelling development

2. Secondary Permitted Uses

- Art studio
- Personal services, including, but not limited to, the following:
  - Personal training/sports & fitness instruction
  - Massage therapy
  - Beauty salon (hair, nails, etc.) or barber shop
- Professional & semi-professional office/co-working space
- Existing communications facilities at the southeast corner of the Property may remain.

C. Development Standards

1. Site Development

The following development standards shall govern site development throughout the Specific Plan.

- Minimum Site Area: N/A
- Maximum Site Coverage: 50 percent
- Maximum Building Height: 34 feet/3 stories, except that Buildings 1, 2, 3 and Office/Recreation Center (as identified on the PDP) shall be limited to 24 feet/2 stories
- Minimum Building Separation: per building code
- Minimum Site Setbacks, Primary Structures:
  - Street: Thornydale: 65 feet and Sumter: 90 feet
  - East: 135 feet
  - North: 130 feet
- Minimum Site Setbacks, Accessory Structures:
  - Street: Thornydale: N/A and Sumter: 15 feet
  - North and East: 50 feet
  - Accessory Structures include, but are not limited to, covered parking structures
- NUOS Areas: No new structures shall be constructed within any area designated as NUOS, as identified on the PDP.

2. Vehicular & Bicycle Parking

   a. *Vehicular Parking*

      - Vehicular parking will comply with PCZC requirements.
      - A minimum of one parking space for each unit will be covered.
      - The Project will include five parking spaces that are equipped with EV charging stations. In addition, ten percent of all parking spaces will be "EV Ready" so that those spaces will be accessible to electrical infrastructure (conduit that originates at an electrical service panel or sub-panel) at the time of construction that enables the installation of future EV charging stations.

   b. *Bicycle Parking*

      Bicycle parking shall be provided in accordance with PCZC standards.

3. Loading

   No loading zones are required within this Specific Plan.

4. Native Plant Preservation and Transplanting

   The Project will comply with the Native Plant Preservation ("NPP") requirements of the PCZC § 18.72, except for the following provisions, which supersede County NPP regulations:

   a. *Plant Inventory*

      - All saguaros that are eighteen (18) feet or more in height will be preserved in place, where possible, and if preservation is not possible, shall be mitigated onsite with three (3) saguaros of at least four (4) feet in height.
      - All saguaros that are between fifteen (15) and seventeen (17) feet in height will be preserved in place, where possible, and if preservation is not possible, shall be transplanted onsite, and this transplanting is limited to one occurrence (i.e., transplanting will be to the saguaro's permanent location).
      - All saguaros that are fourteen (14) feet or less in height will be preserved in place, where possible, and if preservation is not possible, may be transplanted directly, or be stored in a temporary location prior to being transplanted onsite.

   b. *Harvesting Process*

      The Owner will hire a contractor licensed in the State of Arizona and experienced in the transplanting of native plants common to the region. The contractor will be required to follow the Best Management Practices for Saguaro Translocation and Replanting (included as *Appendix B*).

   c. *Restoration*

      The estimated 0.20 acres of IRA-classified areas of the Property that have been previously disturbed will be restored. These areas will be seeded and

revegetated using native, low-maintenance riparian plants that also provide quality habitat for native fauna. These restoration areas will prioritize the use of plants transplanted from the developed areas of the Property.

d. Retention Basin

The first-flush retention basin located directly south of Building 10 on the Project's west side (the "West Basin"), shall be reconfigured/designed to avoid inclusion of any saguaros over 12 feet in height. Any saguaros located within the West Basin under 12 feet in height shall be transplanted on the west parcel, as near as possible to their original location, per AGFD guidelines.

5. Landscape Standards

Landscape bufferyards will comply with the planting standards of Pima County's Bufferyard "C" with any structural requirements as indicated in this section.

a. Perimeter Bufferyards

- North: the existing North Ranch residential subdivision ("North Ranch") wall along the northern edge of the Property will remain. A 35-foot NUOS bufferyard will be provided along the northern Property line adjacent to the existing North Ranch wall. A 25-foot drainage basin and/or channel will be provided between the 35-foot NUOS bufferyard and the parking area. A five-foot masonry screen wall will be installed between the parking spaces and the drainage channel. No wall or fencing will block the wildlife corridors shown on the PDP as NUOS or IRA. Barriers to separate the Project from North Ranch are required below at Sec. II.C.5.b.
- South: a 16-foot landscaped drainage basin will be provided along the southern Project boundary between the parking area and Sumter Drive right-of-way. No wall or fencing is required.
- East: a 6-foot masonry wall will be provided along the eastern edge of the Project, adjacent to the parking area, as indicated on the PDP.
- Southeast: a 6-foot combination masonry wall and metal fence will be provided along the edge of the parking area near the riparian habitat at the southeast corner of the Project, as noted on the PDP. The bottom section will be a masonry wall at least three (3) feet to provide adequate light screening into the NUOS.
- West: a swath of NUOS with a minimum width of 60 feet will be provided along the western edge of the Project adjacent to Thornydale Road future right-of-way.

b. Amenity and Interior Landscaping

- All areas designated as NUOS or IRA on the PDP shall remain natural and not include any landscaping other than transplanting of native vegetation from the Project's developed area.
- As noted on the PDP, the western NUOS will be protected by a metal fence around the Project's building envelope (including parking areas), with the following conditions:

  - The intent of the fencing is to separate the Project's developed areas from the NUOS and IRA to protect the existing wildlife corridors while discouraging trespass to and from North Ranch to the north.
  - Where the fence is located adjacent to parking spaces along the western NUOS, the screen shall be a six (6) foot masonry block wall base to shield the NUOS from vehicle lights and noise, except that the parking spaces located near the Project office shall have a four (4) foot masonry screen wall.
- The areas designated as "Native Vegetation" on the PDP shall be landscaped with native plants, and will, when possible, use plants transplanted from the developed areas of the Property. These areas will utilize surface runoff rainwater harvesting techniques whenever possible, such as berms and swales.

6. Environmentally Sensitive Design Guidelines

- The designated IRA areas of the Project will not be disturbed, other than the limited disturbances needed for the Project's bridge crossing. The onsite IRA is approximately 2.09 acres. Approximately 0.08 acres (3.8% disturbance) will be disturbed to build the bridge, which includes a ten-foot offset from either side of the bridge to accommodate for grading.
- Low-profile lighting will be incorporated throughout the Project to ensure adequate visibility for safety while also protecting the dark skies and encouraging wildlife movement. Lighting shall be downlit, fully shielded and shall not intrude into the NUOS and IRA areas to limit any impact on wildlife corridors. No lighting will be installed at the top of the buildings except as required per fire/safety standards and all such required lighting shall be fully shielded and, if possible, be triggered by motion sensors. All pathway lighting shall include motion sensors and be fully shielded so as to limit any light spillover into the wildlife corridors and adjacent properties.
- The goal of exterior lighting shall be to provide for onsite safety while reducing artificial light at night (i.e., ALAN) and preventing light spillover beyond the built environment (structures, paths, parking and roadways) into disturbed areas, NUOS, and adjacent properties. Outdoor lighting shall utilize full cutoff, shielded outdoor lighting fixtures.
- Lighting under covered parking structures shall be controlled by motion sensors to avoid light spillover beyond the built environment, into disturbed areas, NUOS, and adjacent properties.
- Lighting in the pool amenity area shall be controlled by motion sensors during the time period the pool is closed for use by residents.
- Roofs of buildings and covered parking structures will be constructed with a subtle pitch to direct rainwater towards basins to promote rainwater harvesting. This water will be directed toward vegetation in the Project's interior landscaped areas where feasible, and otherwise to the exterior of the Project into the washes.
- Rainwater will be directed from paved areas into the washes, where feasible.

7. Water Conservation

The following water conservation measures will be incorporated into the Project:

- Incorporate EPA WaterSense fixtures in all dwelling units. WaterSense requirements include, but are not limited to, the following low water use items:
  - Toilets
  - Showerheads
  - Bathroom faucets
  - Irrigation systems, including irrigation controllers
- No portion of the NUOS, as designated on the PDP, will be landscaped or irrigated. Previously disturbed NUOS may be restored, in coordination with PCFCD.
- The Project shall only include Xeriscape landscaping with native and/or desert adaptive vegetation that is drought tolerant. The Project will use a water efficient drip irrigation system.
- The Project's common areas will be graded to capture onsite stormwater runoff to promote passive rainwater harvesting.
- The Project shall be designed so that stormwater runoff from the buildings and covered parking is directed into interior common area landscaping areas to promote passive rainwater harvesting.
- The Project shall not include non-functional natural turf grass. Artificial turf may be substituted for natural turf.
- The Project shall not include any fountains and water features in common areas.
- Dedicated irrigation meter(s) shall be installed to monitor landscaping water use separate from residential potable use.
- A leak detector for each multi-family building shall be installed to help identify and remediate water overuse and/or water leaks.
- The community pool shall be designed to drain into the sanitary sewer system.

8. Invasive Non-Native Species

The Owner shall remove invasive non-native species from the Property. While no buffelgrass was observed on the Property, the Owner shall have a continuing responsibility to remove buffelgrass (*Pennisetum ciliare*) from the Property. Acceptable methods of removal include chemical treatment, physical removal, or other known effective means of removal. This obligation also transfers to any future owners of the Property within the Specific Plan area.

9. Erosion Hazard Setbacks

In accordance with Pima County regulations, erosion hazard setbacks along regulatory watercourses are based on the corresponding 100-year discharge. Any required PCFCD approved bank protection will be constructed of vertical or near-vertical gabions. In

areas that do not include PCFCD approved bank protection, the setbacks for the project site are listed in *Table II.D.7*, below.

Table II.D.7: EHS Setbacks

Erosion Hazard Setbacks for North Ranch Wash		
Concentration Point	Q_{100} (cfs)	Setback (ft)
NR-W3	303	25
NR-E3	531	50

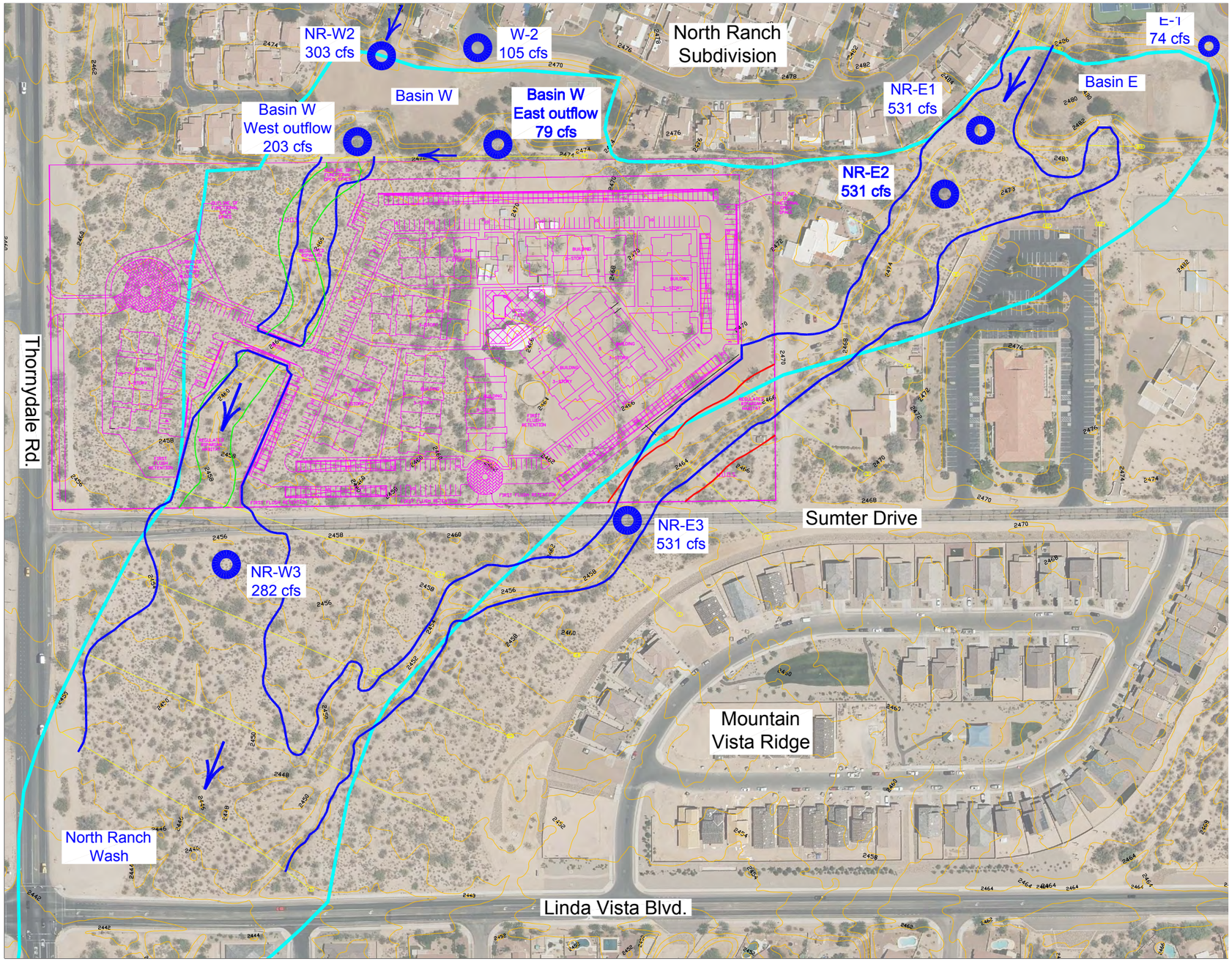
D. Hydrology

The Project generally avoids/is developed outside of the two natural washes, located in the southeast corner of the site and in the western portion of the Property. As demonstrated on *Exhibit II.D.1: Developed Conditions Floodplain Map* and *Exhibit II.D.2: Developed Condition Hydrology Map*, the Project will be developed in such a manner to minimize the disturbance and encroachment into the main flow area and riparian habitat of the west wash area, with the only significant encroachment being the roadway/utility crossing to connect the western portion of the Property and entry off Thornydale Road to the balance of the Project within the middle/eastern portion of the Property. This crossing will be accomplished via a bottomless arch culvert crossing to minimize/avoid disturbance to the existing wash invert. This bottomless arch culvert will provide a minimum of four feet of clear height to allow for not only drainage to pass through easily, but to allow for small/medium-sized wildlife to safely pass as well. In the southeast area, there will be minimal encroachment into the existing floodplain. In both wash areas, there will not be any adverse impact on the properties upstream or downstream by the Project or encroachments. A channel will be utilized along the north boundary to direct flow from the existing easterly basin outlet to the north into the westerly natural wash.

First flush basins will be provided along the perimeter of the parking areas as well as scattered throughout the interior of the development where practical, with bank protection provided along the wash/Project boundaries where required. Where the Project requires bank protection, it will be a gabion design with vertical or near vertical walls.

Per our ongoing correspondence and coordination with PCFCD, detention for onsite flows will be waived if it can be demonstrated that the flows discharging at the southern boundary will not increase for the local and sub-regional watersheds. Onsite flows may increase where discharging into the two natural washes without detention such that said increases will not exceed the overall existing flow of those washes. For any areas of the Project that allow for retention that is above the required retention volume, that retention shall be maximized.

When improvements are proposed within the effective FEMA SFHA, both a Conditional Letter of Map Revision (CLOMR) and LOMR are required. The CLOMR shall be approved by FEMA prior to start of grading.



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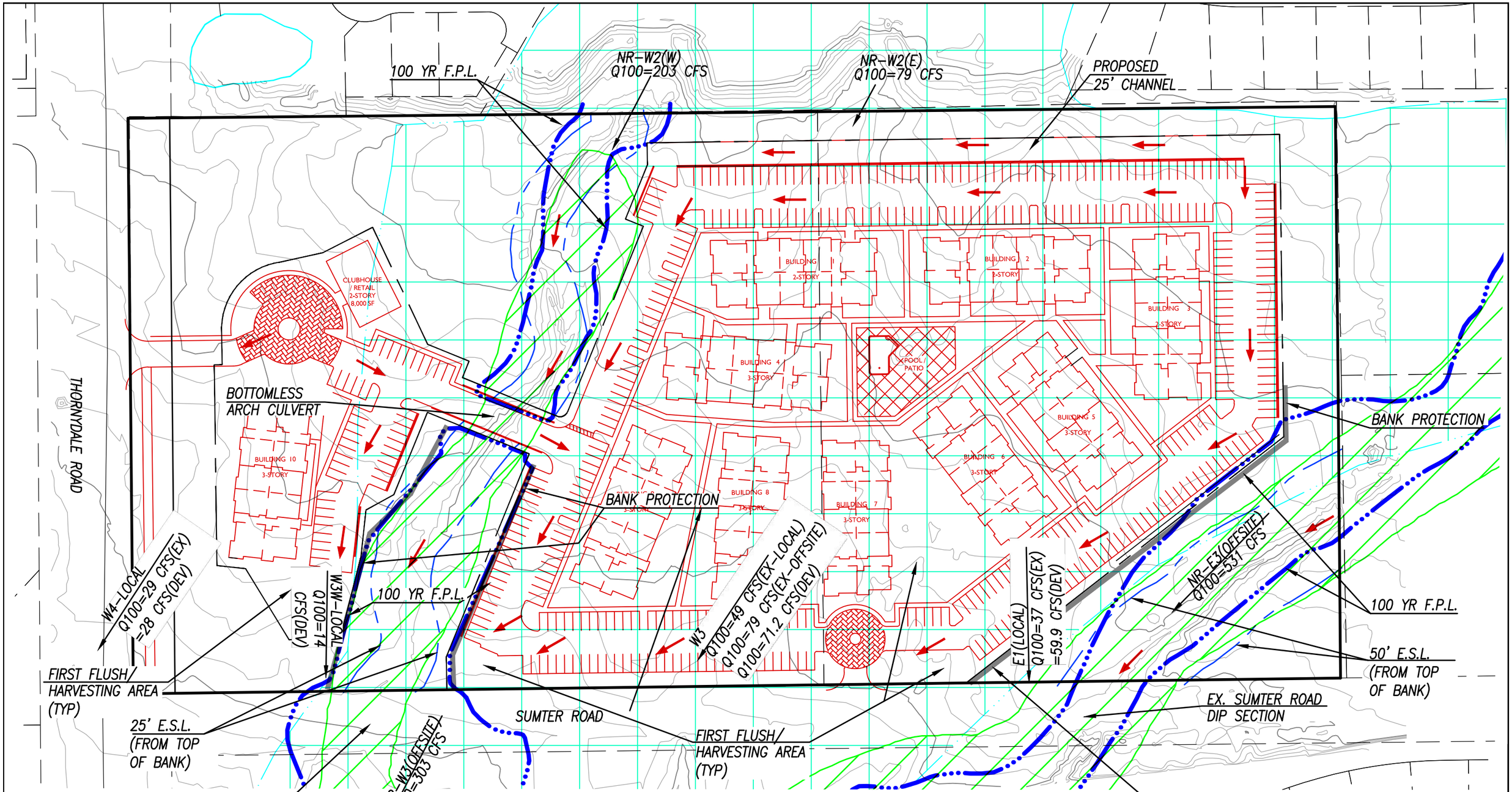
SCALE

LEGEND

- 100-year developed floodplain
- FEMA 100-year floodplain (Zone A)
- 25-ft erosion hazard setback
- 50-ft erosion hazard setback
- HEC-RAS cross section
- Project site, with proposed footprint
- Flow arrow
- NR-E3 531 cfs — Conc. point with 100-year discharge

EXHIBIT II.D.1:
DEVELOPED CONDITIONS FLOODPLAIN MAP

ARROYO ENGINEERING, LLC
Water Resources & Civil Engineering Consultants



N

0 100

SCALE IN FEET

C.I. = 5'

LEGEND

- 100 YR FLOOD PRONE LINE (F.P.L.)
- EROSION SETBACK LINE (E.S.L.)
- RIPARIAN HABITAT
- FEMA "A" ZONE FLOODPLAIN

EXHIBIT II.D.2: DEVELOPED CONDITION HYDROLOGY MAP for THORNYDALE/SUMTER

Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

5/5/23

2580\SPECIFIC-PLAN-EXHIBITS.DWG

E. Transportation and Circulation

1. Proposed Ingress/Egress and Onsite Vehicular Circulation

Access is shown at two locations: on Thornydale Road opposite the existing Le Mirage Apartments driveway and on Sumter Drive approximately 771 feet east of Thornydale Road. Both driveways will be for ingress/egress with full access (all turns allowed) and will be gated with card or keypad access controls.

The Project team considered how a Sumter Drive ingress/egress will affect the Project's total trip distribution. Doing this would shift some inbound Project traffic from Thornydale Road to Sumter Drive.

Although the turn lane warrant analysis conducted with the Traffic Impact Study ("TIS") found that neither an eastbound left turn on Sumter Drive nor a northbound right turn lane will be warranted on Sumter Drive or on Thornydale Road at the Project driveways, ZDC will construct a northbound turn lane on Thornydale into the Project driveway to address concurrency issues.

2. Distances to Existing Drives/Intersections

The Project has two access points: one on Thornydale Road and another on Sumter Rd. Distances from these Property access points to existing driveways and intersections are shown for Thornydale Road and Sumter Road in *Exhibit II.E.2.a: Distances to Existing Driveways & Intersections – Thornydale* and *Exhibit II.E.2.b: Distances to Existing Driveways & Intersections – Sumter*.

3. Offsite Road Improvements

The TIS for this Project (provided as *Appendix E*) includes recommendations for offsite improvements. These improvements include:

- Construct the Project driveways to County standards, with one ingress and one egress lane at each of the Project's two access points.
- Ensure that there is acceptable sight distance to and from the Project entrances.
- Provide stop signs for traffic exiting the Project driveways.
- The developer will construct a multi-use path from an existing sidewalk along the North Ranch development to Linda Vista Boulevard along the east side of Thornydale Road. See *Exhibit II.E.3: Multi-Use Path*. A multi-use path will also be constructed by the developer along Sumter Drive from the western edge of the Project's access on Sumter Drive to the intersection of Sumter Drive and Thornydale Road, approximately 771 feet in length. These off-site improvements are to be constructed to address concurrency concerns. The multi-use paths will be designed and built to Pima County standards.
- Roadway and subdivision design should conform to current County standards.

- All new traffic signs and markings must comply with the current Manual on Uniform Traffic Control Devices and local requirements.

4. Average Daily Traffic & Level of Service

The Project is expected to add approximately 1,820 new external vehicle trips per day, based on average trip rates for the land use "Multi-Family Detached Unit – Low Rise". See *Table II.E.4.a: Trip Generation*.

Distributing these trips to the study area roadways based on existing traffic patterns and adding them to the future background volume for the year 2024 results in the total daily volumes shown in *Table II.E.4.b*.

Table II.E.4.a: Trip Generation

				Trip Generation Average Rates					
				Weekday AM		Weekday PM		Avg Weekday	
Land Use	Unit	No. Units	ITE Categ.	In	Out	In	Out	In	Out
Multi Family Detached Unit	Units	270	220	0.4		0.51		6.74	
Low Rise				24%	76%	63%	37%	50%	50%

				Trip Generation					
				Weekday AM		Weekday PM		Avg Weekday	
Land Use	Unit	No. Units	ITE Categ.	In	Out	In	Out	In	Out
Multi Family Detached Unit	1000 SF	270	220	108		138		1,820	
Low Rise				26	82	87	51	910	910

Note: AM, PM Rates based on Peak Hour of Adjacent Street Traffic (7-9 AM; 4-6 PM)

Table II.E.4.b: 2024 Daily Volumes (With & Without Project)

Street	*Daily Capacity at LOS D**	*2024 ADT No Project*	*Site Trips*	*2024 ADT With Project*	*Over LOS D Capacity (No Project)*	*Over LOS D Capacity (With Project)*
Thornydale Road						
Pecos Drive to Linda Vista	16,730	15,830	655	16,485	No	No
Linda Vista to Overton	16,730	20,710	655	21,365	Yes	Yes
Shannon Road						
Lambert to Linda Vista	12,740	4,130	437	4,567	No	No
Linda Vista to Overton	12,740	8,170	437	8,607	No	No
Sumter Road						
Thornydale Road to Shannon Road	10,660	710	1,274	1,984	No	No
Linda Vista Boulevard						
Camino de Oeste to Thornydale Road	13,990	11,650	0	11,650	No	No
Thornydale Road to Shannon Road	13,990	3,110	0	3,110	No	No

*Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, *from 2020 FDOT Quality/Level of Service Handbook Tables.*

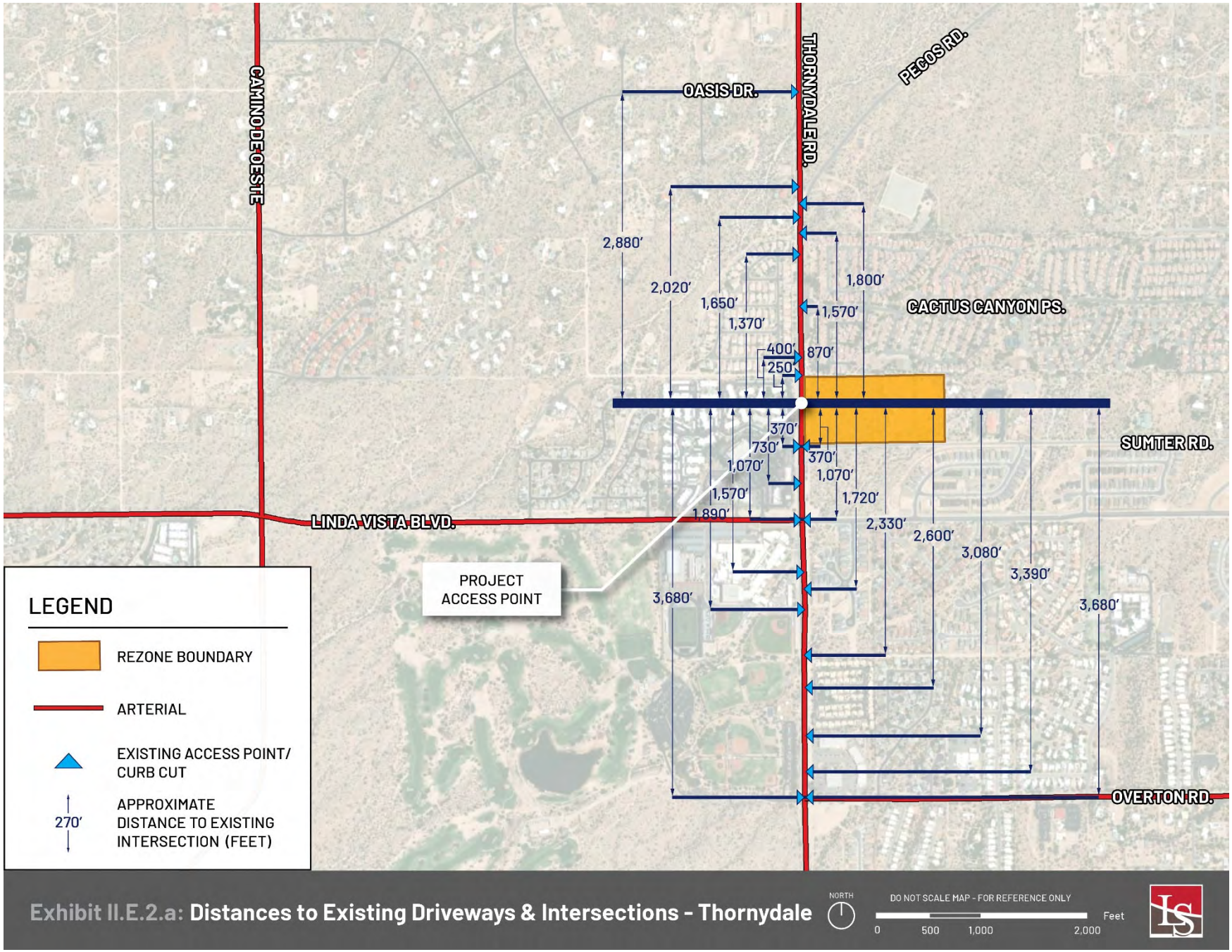


Exhibit II.E.2.a: Distances to Existing Driveways & Intersections - Thornydale

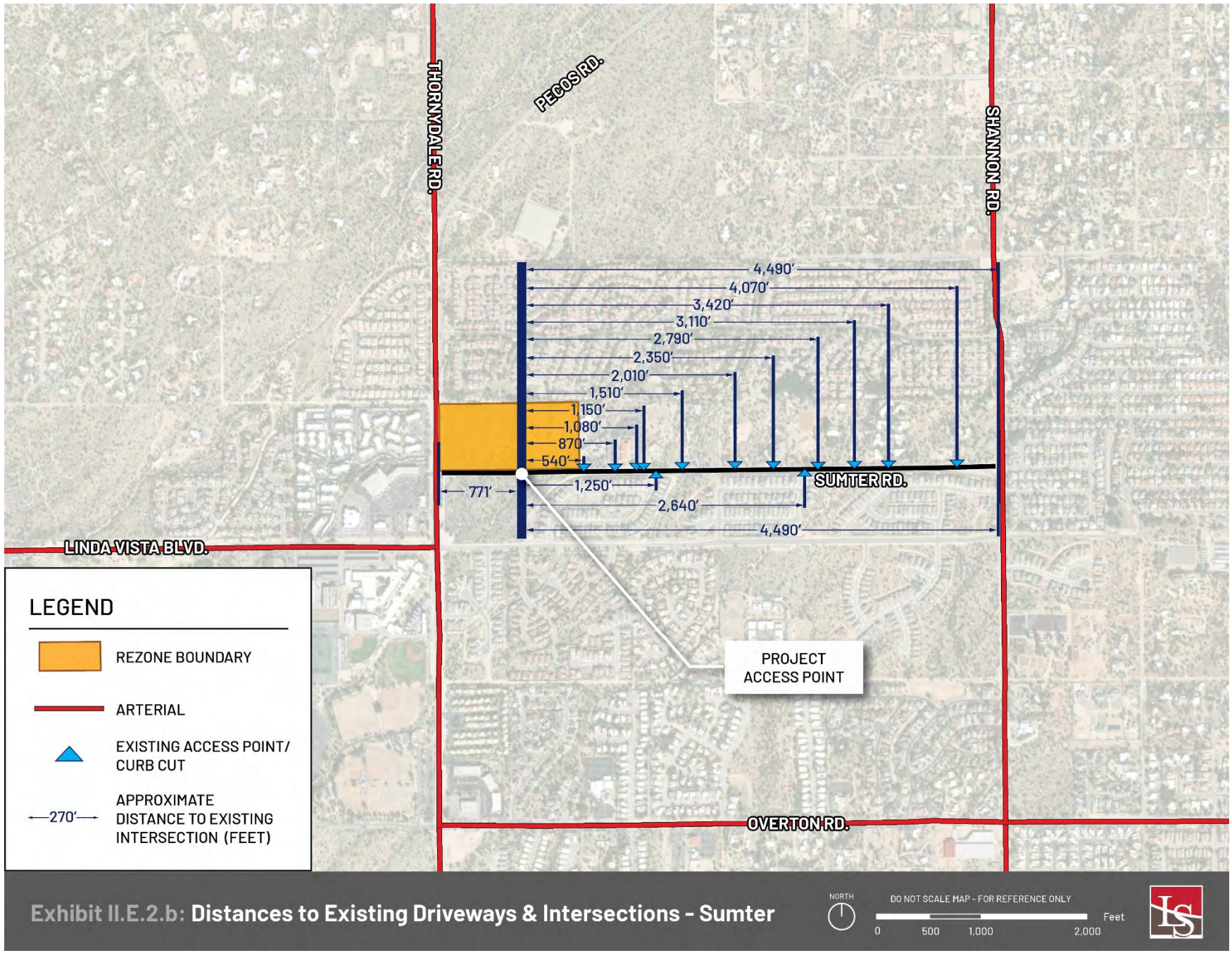


Exhibit II.E.2.b: Distances to Existing Driveways & Intersections - Sumter

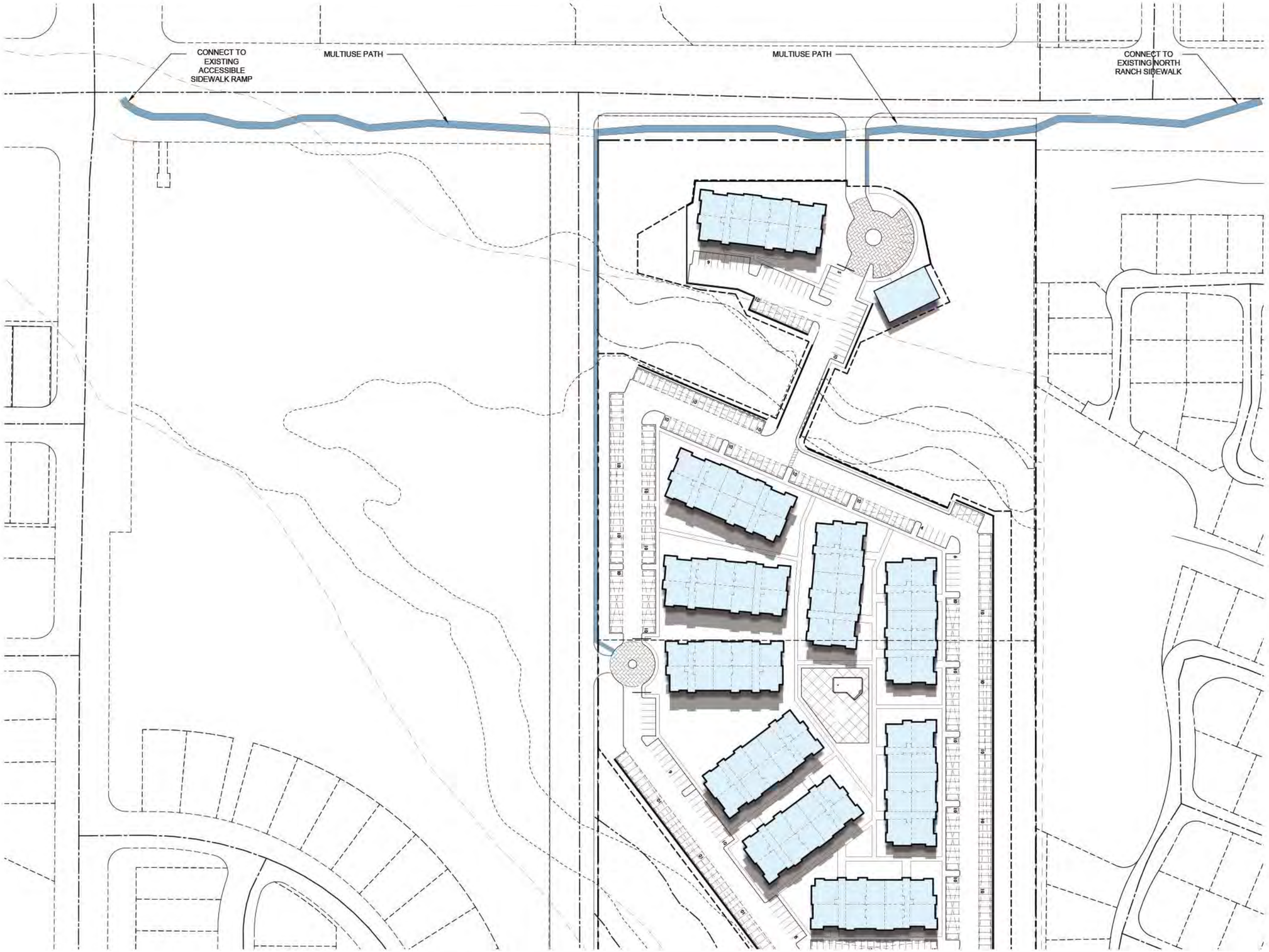


EXHIBIT II.E.3

THORNYDALE AND SUMTER - MULTIUSE PATH SITE PLAN

NORTH

DATE: 05.08.23 JOB#23000

a.23 studios

5. Concurrency

The Project qualifies as a Secondary Transportation Concurrency Concern under the Transportation Concurrency Policy. The Project will generate more than 250 ADTs and therefore further analysis of the Project is required. Under this analysis, the following supports a secondary concern:

- The Project is Infill Development: The Project is surrounded by existing development, including high-density residential and commercial to the west, medium-density residential to the north and south, and low-density residential and religious use to the east. All of the Property that surrounds the Project has been rezoned from the original zoning of Suburban Ranch, SR.

- The Project's Proposed Additional Mitigation: The Project will provide additional off-site improvements with a multi-use path that will extend both north and south of the Project (from North Ranch to Thornydale/Sumter). This multi-use path is intended to promote pedestrian and bicycle activity in the area, better connect residential areas to the Thornydale/Linda Vista intersection and improve the traffic flow along the Thornydale Road corridor. The Project team also will work with DOT regarding any potential signal timing improvements at the Thornydale/Linda Vista intersection. Finally, the Project will provide a right-turn lane into the Thornydale Road Project entrance, despite this not being warranted by the TIS. The Project team will work with DOT at the time of development to determine an acceptable length for this turn lane.

- The overall Project traffic is not proportionately significant: Overall, the Project will increase the 2024 ADTs on Thornydale Rd. by approximately four percent, a proportionately minor amount. As indicated in Subsection II.E.4, the projected ADTs in 2024 on Thornydale Road north of Linda Vista Boulevard shall remain at a LOS D, both with and without the Project. For the Thornydale Road segment south of Linda Vista Boulevard, the projected ADTs in 2024 exceed their daily LOS D volume threshold for a two-lane roadway, both without and with the Project. Although not on any current County improvement programs, the widening of Thornydale Road is on the project list for the 2024 RTA Next program that goes before voters in 2024. This widening had previously been on older roadway construction programs, such as the PAG Transportation Improvement Program. All other roadways currently (and will continue to) operate at LOS D or better with the Project trips added.

- The Project's CLS Compliance: The Project will fully conform with the CLS mitigation requirements and will provide additional environmental design components that exceed the CLS requirements. The CLS mitigation requirements require four acres of NUOS for each developed acre. With approximately 11.4 acres of development area, the Project will conserve approximately *45.6 acres of NUOS* (6.48 onsite and over 39 acres offsite). This significant open space preservation benefits both the Project and surrounding area, along with the County as a whole.

In addition, the Project has worked closely with the Coalition for Sonoran Desert Protection to develop additional environmentally sensitive design features that protect wildlife moving through the onsite wildlife corridors, improve riparian area health by capturing additional stormwater, and increasing overall sustainability by including EV charging stations and solar panels on some covered parking. The full list of environmentally sensitive design features is found throughout Section II-C.

- The Project's Dedication of ROW: In order to accommodate the future expansion of Thornydale Road, the Project will dedicate as part of the rezoning a 45-foot strip of land adjacent to the existing right-of-way.

6. Bicycle & Pedestrian Circulation

As described above in Section II-E.3, the Project will provide an offsite bicycle and pedestrian path along both Thornydale Road and Sumter Drive. The Thornydale path will extend from the North Ranch sidewalk south to the Thornydale/Linda Vista intersection. The internal streets will contain sidewalks, accommodating pedestrian needs.

7. Traffic Impact Study

The NEC Thornydale-Sumter Residential TIS is included as *Appendix E* of this Specific Plan.

F. Utility Infrastructure

1. Sewer

The Property is located within the Pima County Regional Wastewater Reclamation Department's ("PCWRD") sanitary sewer service area. (See *Exhibit II.F.1: PCWRD Capacity Letter*.) The Project will connect to existing manhole 4349-03 on the existing 15-inch sewer (G-85-083) located in the Thornydale Road right-of-way adjacent to the Property. The Project will incorporate a gravity sewer system to serve the Property. Sewer easements will be provided if/as necessary for any public sewers installed to serve the Project. No constraints have been identified that would preclude the use of gravity sewers to serve the Property.

2. Water

Metro Water District ("MWD") will provide water service to the Project. (See *Exhibit II.F.2: MWD Will-Serve Letter*.) The Project will connect to existing water facilities located to the southeast of the Property in the Sumter Road/Scenic Park Drive intersection. Water easements will be provided if/as necessary for any public water installed to serve the Project. No constraints have been identified that would preclude water service for the Property. At the time of development, the developer shall be required to select a combination of Water Conservation Measures from Table B (commercial) such that the point total equals or exceeds 15 points and includes a combination of indoor and outdoor measures.

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

JACKSON JENKINS
DIRECTOR

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

June 29, 2022

Martin Magelli
BAKER & ASSOCIATES ENGINEERING, INC.
3561 E Sunrise Dr. #225
Tucson, AZ 85718

Sewerage Capacity Investigation No. P22WC00202 Type I

RE: **Type I: Thornydale Sumter Specific Plan, Parcel 224440570, 22444058A Estimated Flow 87,120 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-85-053, downstream from manhole 4349-03.

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 you need further information, please feel free to contact me at (520) 724-6642.

Reviewed by: Olivia Cañez, Administrative Specialist Sr.

METRO WATER DISTRICT

In Email

July 15, 2022

Marty Magelli, P.E.
Baker Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225
Tucson, AZ 85718

Re: ±18.5 Acres at the NEC of Thornydale Road and Sumter Drive
(APN 224-44-0570 & APN 224-44-058A)
CAP22-06

Dear Mr. Magelli,

The subject property lies adjacent to service area of the Metropolitan Domestic Water Improvement District (MDWID), certified to provide water and designated as having a 100-year assured water supply. This letter is to formally state our willingness to serve the property as an extension of our existing service area.

Any onsite or offsite requirements deemed necessary to provide the domestic and fire flow water supply will be determined at the time of improvement plan submittal or whenever application for water service is received, and will be the financial responsibility of the owner or those developing the property. Pipe sizing and system augmentation will be determined per District design criteria at the time of plan submittal. The MDWID will also require the subject property to be formally amended into the District legal boundary, and formal abandonment of the existing well (ADWR No. 55-804900).

If an improvement plan has not been submitted within 2 years after the date of this letter, a reevaluation and reissuance of this will-serve letter will be necessary.

Please let me know if you have any questions or concerns at 575-8100.

Sincerely,

Timothy Dinkel, P.E.
Engineering Manager

Enclosure

c: Project File

Metropolitan Domestic Water Improvement District
P.O. Box 36870 Tucson, Arizona 85740 (520) 575-8100 (520) 575-8454 FAX www.metrowater.com

III. IMPLEMENTATION AND ADMINISTRATION

A. Administration and Interpretation

The Specific Plan shall be administered by the Pima County Planning Official, and all implementation decisions shall be based on the purpose of the Specific Plan. If a conflict arises between the Specific Plan and the PCZC, the Specific Plan shall control. If the Specific Plan is silent on any issue, and the PCZC is consulted, the purpose and intent of the Specific Plan shall control the Planning Official's decision whether and how to apply the PCZC. Appeals of any Planning Official interpretation of this Specific Plan may be made to the Board of Adjustment within 30 days of the date of the official written interpretation, pursuant to the process defined in the PCZC § 18.93.060. A fee in accordance with adopted Pima County Development Services Department Fee schedule for an "Appeal of an Interpretation" and an "Advertised Public Hearing" must accompany any such appeal. The Specific Plan will not result in the modification or change of any existing County-adopted building codes.

B. Phasing and Procedures for Development Review

This Project is intended to be built in a single phase. A site construction permit will be submitted after the Specific Plan is approved and will reflect all onsite and offsite improvements in conformance with the Specific Plan and conditions of approval. (See Section V.) Detailed traffic and hydrology reports will be submitted with the site construction permit, if required.

The Owner serves as the Master Association and Property Manager for the Specific Plan. Through a self-certification process, the Owner shall review and approve all development packages/Project design features, signage applications, and architectural/building plans proposed for the Property prior to County submittal.

C. Amendments

1. Minor

The County Planning Official may administratively approve minor (or insubstantial) changes to the Specific Plan, as defined below, provided such changes are in conformance with the overall intent, goals and objectives of the Specific Plan as presented herein.

The following shall be considered minor changes that fall within the administrative purview of the Planning Official:

- Addition of new information to the Specific Plan, maps or text otherwise in compliance with the below standards.
- Changes to the public or private infrastructure as presented herein as necessary to properly serve the Specific Plan.

- Addition of permitted uses that may not be specifically listed in Section II.B of this Specific Plan, but which are determined to be sufficiently similar in type and nature to those listed as permitted.
- Adjustments to the Development Standards in Section II.C of this document that are not harmful to the interests of the larger community or adjacent properties, or which are not explicitly stated in the Specific Plan, but which are consistent with the guiding goals and objectives of the Project and do not create any public health or safety issues.
- Adjustments to any aspect of Section II of this Specific Plan that is required to comply with changes in local, state or federal safety and/or health codes.

2. Major

Major (or substantial) amendments to the Specific Plan shall be those changes or modifications that materially alter the guiding goals and objectives as presented in the Specific Plan. Major amendments to the Specific Plan shall be processed in accordance with PCZC § 18.90.080.

IV. SITE INVENTORY

A. Land Use

1. Location/Regional Context

The 18.5-acre Property is located at the northeast corner of N. Thornydale Road and W. Sumter Drive within Township 12 South, Range 13 East, Section 17 in unincorporated Pima County. (See *Exhibit I.A: Regional Location Map* provided in previous section.)

2. Existing Land Uses

Existing land uses are identified on *Exhibit IV.A.2: Existing Land Uses*.

c. Onsite Land Uses

Existing land uses on the Property include undeveloped desert land, one single-family residence, and horse training facilities.

d. Offsite Land Uses

Existing land uses near the Property include low and high density single-family residential, multifamily residential, commercial/retail, restaurant, and natural open space uses.

3. Existing Zoning

All portions of the Property and surrounding properties are located in unincorporated Pima County. The zoning categories of the Property and surrounding properties are listed below and shown in *Exhibit IV.A.3: Existing Zoning*.

Property:	Suburban Ranch (SR)
North:	Multiple Residence Zone (CR-5)
South:	Mixed-Dwelling Type (CR-4)
East:	Single Residence (CR-1)
West:	Multiple Residence Zone (CR-5) and Local Business (CB-1)

Exhibit IV.A.2: Existing Land Uses

Exhibit IV.A.3: Existing Zoning

4. Existing Easements

There is a 10-foot communications easement located on the Western Parcel approximately 25 feet from and parallel to Thornydale Road.

There are two easements located on the Eastern Parcel, as noted on the Property Survey (included as *Appendix A*):

- 10-foot underground easement (Dkt. 5684, Pg. 678). No information was found regarding this easement on the County Recorder's website.
- A communications easement and lease agreement (Seq. No. 20130020365)

5. Comprehensive Plan

This Property and all surrounding properties are located within the Tortolita, Planning Area 11, of *Pima Prospers*. The Comprehensive Plan Land Use Intensities of this and surrounding properties are listed below and shown in *Exhibit IV.A.5: Comprehensive Plan Designations*.

Property:	Low Intensity Urban 0.3 (LIU-0.3)
North:	Medium Intensity Urban (MIU)
South:	Medium Low Intensity Urban (MLIU)
East:	Low Intensity Urban 0.3 (LIU-0.3)
West:	Higher Intensity Urban (HIU) & Neighborhood Activity Center (NAC)

Exhibit IV.A.5: Comprehensive Plan Designations

B. Topography & Grading

1. Topographic Characteristics

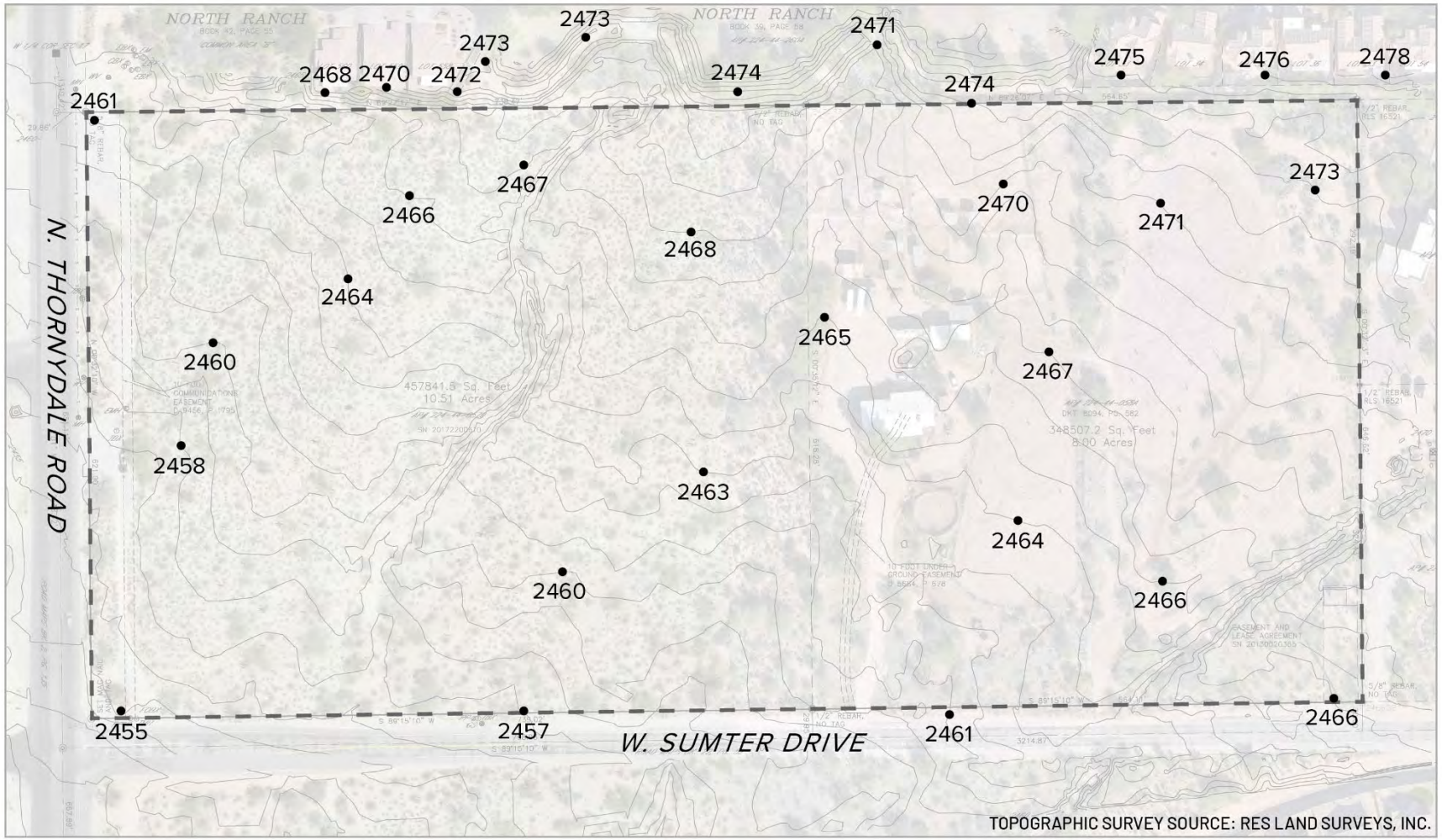
There are no significant topographic features on the Property. There are no restricted peaks and ridges on or near the Property, no rock outcrops or talus slopes and no slopes 15% to 25% or greater.

Areas of the eastern portion of the property have been previously developed/disturbed with an existing single-family residence and associated disturbances for a horse property (pens, riding areas, etc.).

See *Exhibit IV.B: Existing Topography*.

2. Average Cross Slope

The Property's topography gradually slopes from the north to the south. Using the County's Pre-Development Average Cross Slope calculation (PCZC § 18.61), the Property's average cross-slope is 3.53%



LEGEND

PROJECT BOUNDARY

2457 1-FOOT ELEVATION CONTOUR

Exhibit IV.B: Existing Topography

NORTH

DO NOT SCALE MAP - FOR REFERENCE ONLY

0 50 100 200 Feet

C. Hydrology

Two watercourses, regulated by both the County and the Federal Emergency Management Agency ("FEMA"), are located on the Property. The two watercourses combine to form a single FEMA 100-year floodplain for the North Ranch Wash, which is designated as "Zone A." By definition, Zone A is a floodplain determined by approximate methods. Consequently, there are no site-specific hydrologic data, hydraulic model, or floodplain mapping which can be used to define the onsite floodplain at a level of detail required for site development. New hydrologic analyses and new hydraulic model have been completed to define the existing and proposed 100-year floodplain on the site. The report containing these analyses is included as *Appendix C* within this Specific Plan.

1. Offsite

A hydrologic and hydraulic analysis for the North Ranch Wash, located north of the North Ranch subdivision, was previously completed to determine 100-year peak discharges, flood depths, and floodplain boundaries using FLO-2D (North Ranch Floodplain Study, 2019). The Watershed Map from the 2019 study is provided as *Exhibit IV.C.1.a: Existing Conditions Hydrology Map*.

The 100-year discharges were calculated at various locations within the North Ranch Wash study area and are shown on *Exhibit IV.C.1.b: Existing Conditions Floodplain Map*. These discharges, which flow through the North Ranch subdivision and then across the Property within the two onsite watercourses, are summarized in the following table.

Table IV.C.1: 100-Year Discharges

North Ranch Wash FEMA 100-Year Discharges			
Location Downstream limit of FIS	Concentration Pt. (for this project)	Recording Section	Q_{100} (cfs)
West branch	NR-W	212	303
East branch	NR-E	210	531

2. Onsite

The west branch and the east branch of the North Ranch Wash flow through the North Ranch subdivision, combine with onsite flows from the North Ranch subdivision, and then enter the Property along its northern boundary. The flows from the North Ranch subdivision enter the watercourses both by direct discharge and detention basin outflows.

The 100-year peak discharges along the west branch and the east branch of the North Ranch Wash for locations on and near the Property were determined by combining hydrographs from the upstream North Ranch Wash and the downstream flows from both the North Ranch subdivision and the onsite contributions from the Property.

For the upstream flows from the North Ranch Wash, 100-year hydrographs were obtained from the FLO-2D model (North Ranch Floodplain Study, 2019).

For the downstream flows from the North Ranch subdivision and the Property, hydrologic calculations were performed and hydrographs generated using the web-based PC-Hydro 7.1, in accordance with guidelines from the PC-Hydro User Guide (Pima County Regional Flood Control District, 2019; Arroyo Engineering, 2007).

Watersheds are shown on *Exhibit IV.C.1.b: Existing Conditions Floodplain Map*.

Hydrograph summations did not include any peak-flow reduction effects from the North Ranch detention basins. From an evaluation of the offsite and onsite hydrographs, it was determined that the difference in the time to peak for 1) the offsite flows (3.3 hours) in North Ranch Wash and 2) the local flows (15 minutes) from the North Ranch subdivision and the Property were so large that the offsite flows and the onsite runoff contributions are mutually exclusive. In other words, the local flows have no effect on the regional peak flows along the North Ranch Wash.

The hydrograph analyses are included in *Appendix C*.

3. Floodplain

Detailed hydraulic models were prepared, using RiverCAD and HEC-RAS software, for onsite watercourses. Concentration points and 100-year floodplains are shown on *Exhibit IV.C.1.b: Existing Conditions Floodplain Map*. HEC-RAS summary output sheets are included in *Appendix C*. HEC-RAS input files are provided separately.

CI=2'
NAVD88

0 300 600

SCALE

North Ranch Wash

NR-W
303 cfs

NR-E
531 cfs

North Ranch Subdivision

W-1
47 cfs

NR-W1
303 cfs

Thornydale Rd.

NR-W2
303 cfs

W-2
105 cfs

E-1
74 cfs

Basin W

NR-E1
531 cfs

Basin E

Basin W
West outflow
203 cfs

Basin W
East outflow
79 cfs

NR-E2
531 cfs

Project Site

NR-E3
531 cfs

Sumter Drive

NR-W3
282 cfs

Mountain Vista Ridge

LEGEND

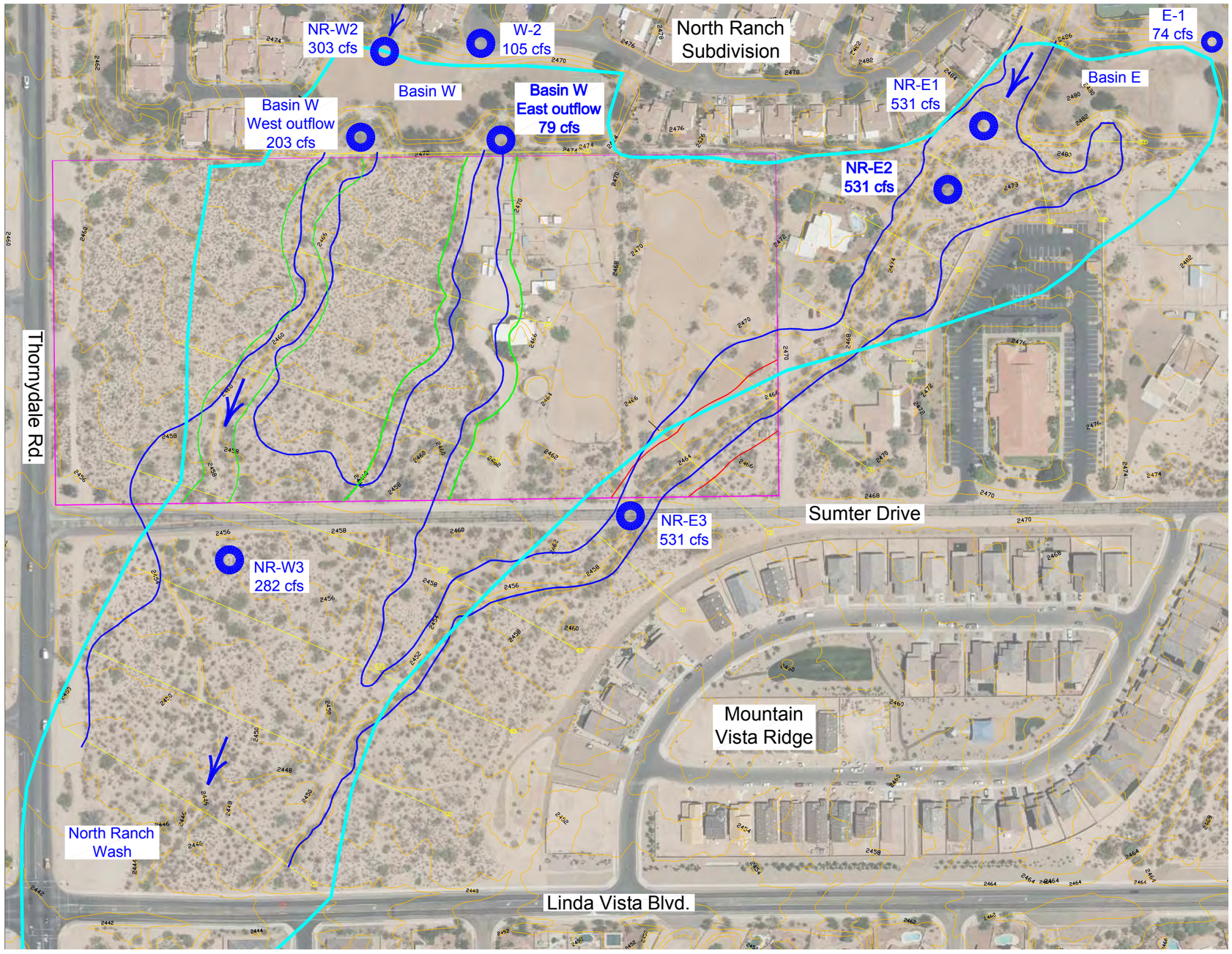
- Local watershed boundary
- Flow arrow
- Project site

E-1
73 cfs — Concentration point with 100-year discharge

NR-E
531 cfs — 100-year discharge at FLO-2D recording section
(North Ranch Floodplain Study, Arroyo Engineering, March 2019)

EXHIBIT IV.C.1.a:
EXISTING CONDITIONS HYDROLOGY MAP

ARROYO ENGINEERING, LLC
Water Resources & Civil Engineering Consultants



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NAVD88

0 200 400
SCALE

LEGEND

- 100-year existing floodplain
- FEMA 100-year floodplain (Zone A)
- 25-ft erosion hazard setback
- 50-ft erosion hazard setback
- HEC-RAS cross section
- Project boundary
- Flow arrow
- NR-E3 531 cfs — Conc. point with 100-year discharge

EXHIBIT IV.C.1.b: EXISTING CONDITIONS FLOODPLAIN-MAP

ARROYO ENGINEERING, LLC
Water Resources & Civil Engineering Consultants

D. Biological Resources

A Biological Impact Report for the Property has been included as *Appendix D* within this Specific Plan.

1. Conservation Lands System

As shown on *Exhibit IV.D.1: Biological Map*, the Property is located in CLS Category Special Species Management Area, Multiple Use Management Area, and portions of the Property are within the CLS Category Important Riparian Area Xeroriparian C.

2. Priority Conservation Area

a. Pima Pineapple Cactus

The Property is not within Priority Conservation Area ("PCA") for the Pima Pineapple Cactus.

b. Needle-Spined Pineapple Cactus

The Property is not within PCA for the Needle-Spined Pineapple Cactus.

c. Cactus Ferruginous Pygmy Owl & Burrowing Owl

The Property is within Pygmy Owl Survey Zone 1. The Property is not within the Priority Conservation Area for the Burrowing Owl. Surveys have not been conducted on this Property, nor are they planned, for either species.

d. Saguaros & Ironwood Trees

Portions of the property have been disturbed for a single-family residence with equestrian facilities. The undisturbed portions contain both saguaros and ironwoods. See *Exhibit IV.D.2: Saguaro and Ironwood Inventory*.

3. Habitat Protection/Community Open Space

This Property is identified as a priority acquisition for either Habitat Protection or Community Open Space. There have been no discussions between the Property owner and the County regarding potential acquisition of the Property and none are planned.

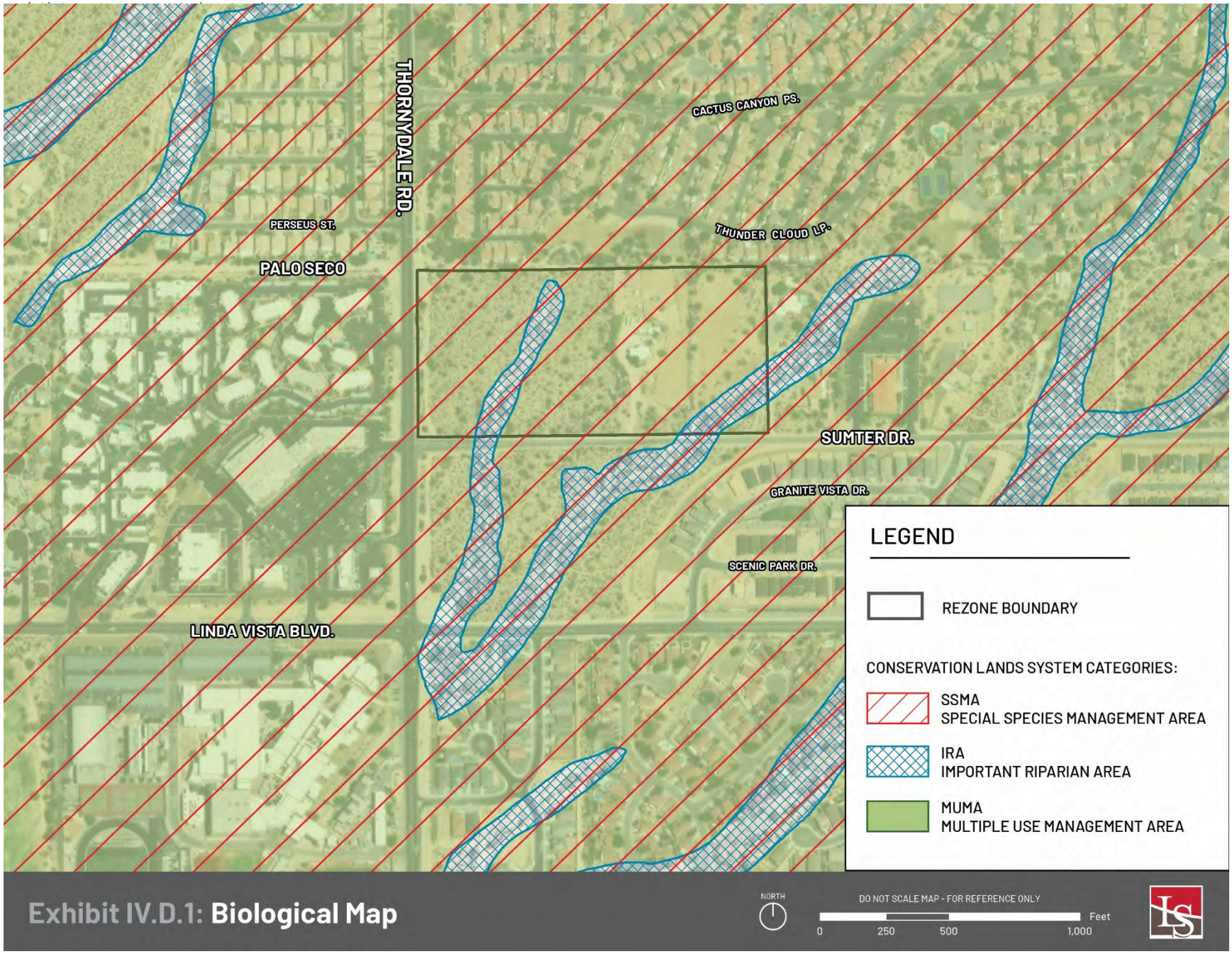
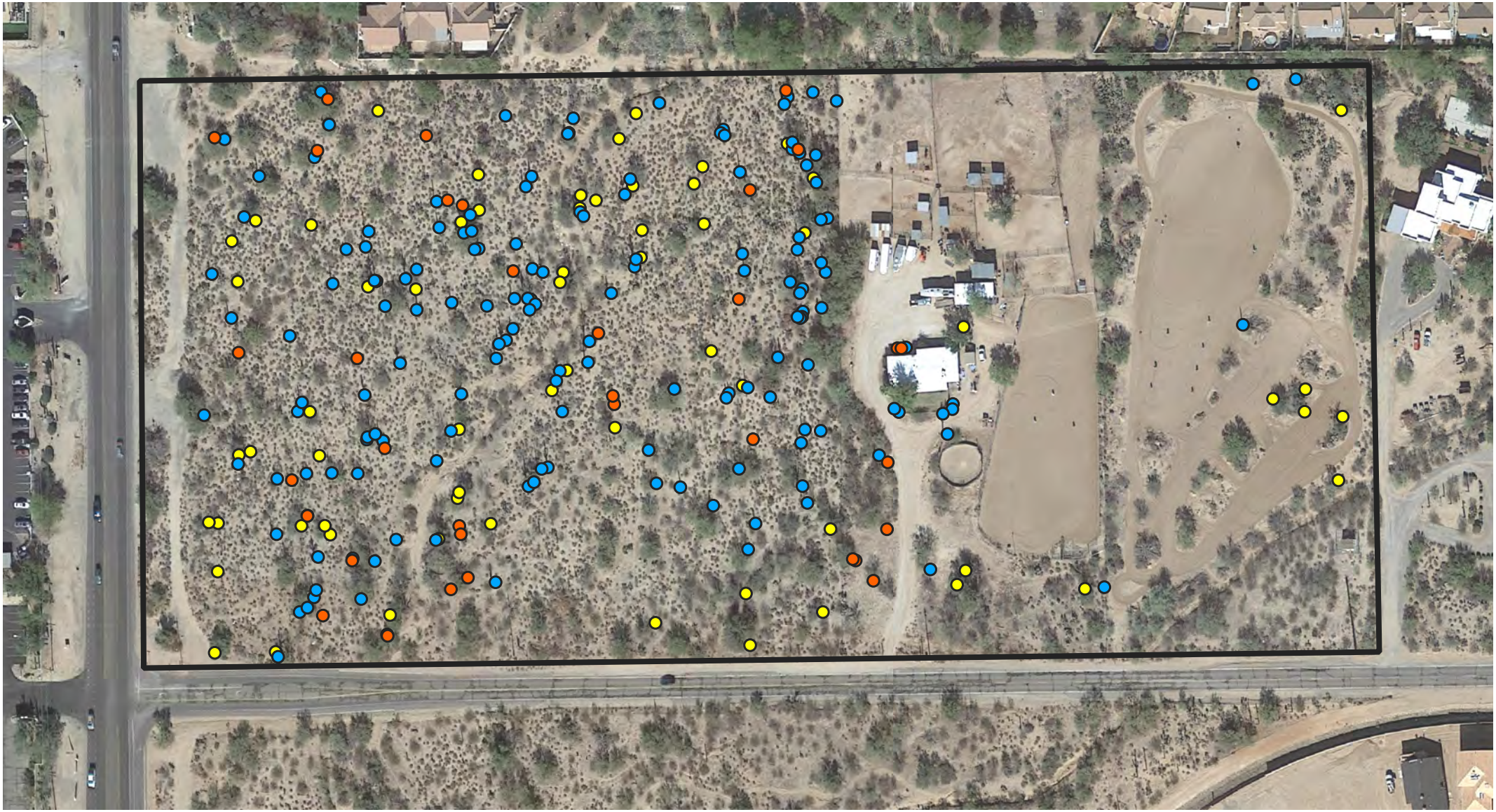


Exhibit IV.D.1: Biological Map

Novak Environmental, Inc.

Landscape Architecture ▪ Planning ▪ Natural Resources ▪ Mitigation

Exhibit IV.D.2: Saguaro and Ironwood Inventory



Thornydale and Sumter Property

Parcels 224-44-0570 and 224-44-058A

Novak Environmental, Inc.

Landscape Architecture ▪ Planning ▪ Natural Resources ▪ Mitigation

Saguaro and Ironwood Inventory

ID #	Species	Height
1	Olneya tesota	14
1	Olneya tesota	18
2	Olneya tesota	13
2	Olneya tesota	15
3	Carnegiea gigantea	17
3	Olneya tesota	12
4	Carnegiea gigantea	16
4	Olneya tesota	14
5	Carnegiea gigantea	12
6	Carnegiea gigantea	16
7	Carnegiea gigantea	10
8	Carnegiea gigantea	11
9	Carnegiea gigantea	10
10	Carnegiea gigantea	10
11	Carnegiea gigantea	13
12	Carnegiea gigantea	12
13	Carnegiea gigantea	11
14	Carnegiea gigantea	16
15	Carnegiea gigantea	15
16	Carnegiea gigantea	15
17	Carnegiea gigantea	13
18	Carnegiea gigantea	7
19	Carnegiea gigantea	7
20	Carnegiea gigantea	10
21	Carnegiea gigantea	18
22	Carnegiea gigantea	12
23	Carnegiea gigantea	12
24	Olneya tesota	17
25	Carnegiea gigantea	17
26	Carnegiea gigantea	16
27	Olneya tesota	26
28	Carnegiea gigantea	18
29	Carnegiea gigantea	16
30	Carnegiea gigantea	18
31	Carnegiea gigantea	18

ID #	Species	Height
32	Carnegiea gigantea	16
33	Carnegiea gigantea	6
34	Olneya tesota	17
35	Carnegiea gigantea	10
36	Olneya tesota	16
37	Carnegiea gigantea	16
38	Carnegiea gigantea	11
39	Carnegiea gigantea	18
40	Carnegiea gigantea	8
41	Carnegiea gigantea	6
42	Carnegiea gigantea	18
43	Carnegiea gigantea	7
44	Carnegiea gigantea	20
45	Carnegiea gigantea	16
46	Olneya tesota	15
47	Olneya tesota	14
48	Olneya tesota	16
49	Carnegiea gigantea	16
50	Carnegiea gigantea	5.5
51	Carnegiea gigantea	16
52	Carnegiea gigantea	6
53	Olneya tesota	14
54	Carnegiea gigantea	22
55	Carnegiea gigantea	25
56	Olneya tesota	13
57	Carnegiea gigantea	10
58	Carnegiea gigantea	12
59	Carnegiea gigantea	13
60	Carnegiea gigantea	13
61	Olneya tesota	14
62	Carnegiea gigantea	5
63	Carnegiea gigantea	4
64	Carnegiea gigantea	4
65	Carnegiea gigantea	16
66	Carnegiea gigantea	12

ID #	Species	Height
67	Carnegiea gigantea	16
68	Carnegiea gigantea	12
69	Carnegiea gigantea	13
70	Carnegiea gigantea	15
71	Olneya tesota	15
72	Carnegiea gigantea	10
73	Olneya tesota	12
74	Carnegiea gigantea	18
75	Carnegiea gigantea	18
76	Olneya tesota	8
77	Carnegiea gigantea	20
78	Carnegiea gigantea	14
79	Olneya tesota	15
80	Olneya tesota	12
81	Carnegiea gigantea	3.6
82	Olneya tesota	12
83	Carnegiea gigantea	12
84	Carnegiea gigantea	6
85	Carnegiea gigantea	10
86	Olneya tesota	14
87	Carnegiea gigantea	8
88	Carnegiea gigantea	12
89	Carnegiea gigantea	11
90	Olneya tesota	12
91	Carnegiea gigantea	5.5
92	Carnegiea gigantea	8
93	Carnegiea gigantea	5.5
94	Carnegiea gigantea	14
95	Carnegiea gigantea	16
96	Carnegiea gigantea	17
97	Carnegiea gigantea	17
98	Carnegiea gigantea	13
99	Olneya tesota	15
100	Carnegiea gigantea	16
101	Carnegiea gigantea	11

ID #	Species	Height
102	Carnegiea gigantea	16
103	Carnegiea gigantea	17
104	Olneya tesota	14
105	Carnegiea gigantea	9
106	Olneya tesota	13
107	Olneya tesota	14
108	Carnegiea gigantea	13
109	Carnegiea gigantea	4
110	Olneya tesota	12
111	Carnegiea gigantea	10
112	Carnegiea gigantea	5
113	Carnegiea gigantea	10
114	Olneya tesota	14
115	Carnegiea gigantea	5
116	Olneya tesota	12
117	Olneya tesota	13
118	Carnegiea gigantea	9
119	Carnegiea gigantea	5.5
120	Carnegiea gigantea	15
121	Carnegiea gigantea	1
122	Olneya tesota	15
123	Carnegiea gigantea	12
124	Carnegiea gigantea	18
125	Carnegiea gigantea	15
126	Carnegiea gigantea	16
127	Carnegiea gigantea	13
128	Carnegiea gigantea	15
129	Carnegiea gigantea	15
130	Carnegiea gigantea	6
131	Carnegiea gigantea	3
132	Carnegiea gigantea	6
133	Carnegiea gigantea	5
134	Carnegiea gigantea	4.5
135	Carnegiea gigantea	10
136	Carnegiea gigantea	6

ID #	Species	Height
137	Carnegiea gigantea	6
138	Carnegiea gigantea	10
139	Olneya tesota	22
140	Carnegiea gigantea	14
141	Carnegiea gigantea	14
142	Carnegiea gigantea	12
143	Carnegiea gigantea	15
144	Carnegiea gigantea	12
145	Carnegiea gigantea	13
146	Carnegiea gigantea	13
147	Carnegiea gigantea	16
148	Carnegiea gigantea	16
149	Olneya tesota	16
150	Olneya tesota	13
151	Olneya tesota	14
152	Carnegiea gigantea	10
153	Olneya tesota	16
154	Olneya tesota	18
155	Olneya tesota	20
156	Carnegiea gigantea	8
162	Carnegiea gigantea	6
162	Carnegiea gigantea	11
163	Carnegiea gigantea	13
164	Carnegiea gigantea	13
165	Carnegiea gigantea	7
166	Carnegiea gigantea	2
167	Olneya tesota	14
168	Olneya tesota	15
169	Carnegiea gigantea	11
170	Carnegiea gigantea	3
171	Carnegiea gigantea	5
172	Carnegiea gigantea	8
173	Olneya tesota	14
174	Olneya tesota	10
175	Olneya tesota	13

Thornydale and Sumter Property

Parcels 224-44-0570 and 224-44-058A

Novak Environmental, Inc.

Landscape Architecture ▪ Planning ▪ Natural Resources ▪ Mitigation

Saguaro and Ironwood Inventory

ID #	Species	Height
176	Olneya tesota	10
177	Carnegiea gigantea	3
178	Carnegiea gigantea	2.5
179	Carnegiea gigantea	19
180	Carnegiea gigantea	15
181	Carnegiea gigantea	16
182	Carnegiea gigantea	15
183	Olneya tesota	11
184	Carnegiea gigantea	9
185	Carnegiea gigantea	15
186	Carnegiea gigantea	5.5
187	Carnegiea gigantea	12
188	Carnegiea gigantea	11
189	Carnegiea gigantea	15
190	Carnegiea gigantea	13
191	Carnegiea gigantea	11
192	Carnegiea gigantea	9
193	Carnegiea gigantea	12
194	Carnegiea gigantea	5
195	Carnegiea gigantea	11
196	Olneya tesota	12
197	Carnegiea gigantea	12
198	Olneya tesota	7
199	Olneya tesota	7
200	Olneya tesota	10
201	Carnegiea gigantea	15
202	Olneya tesota	10
203	Carnegiea gigantea	20
204	Olneya tesota	8
205	Carnegiea gigantea	10
206	Olneya tesota	9
207	Carnegiea gigantea	9
208	Carnegiea gigantea	12
209	Carnegiea gigantea	10
210	Carnegiea gigantea	5

ID #	Species	Height
211	Olneya tesota	15
212	Olneya tesota	13
213	Olneya tesota	7
214	Carnegiea gigantea	17
215	Carnegiea gigantea	18
216	Carnegiea gigantea	3
217	Carnegiea gigantea	10
218	Carnegiea gigantea	15
219	Carnegiea gigantea	16
220	Olneya tesota	8
221	Olneya tesota	12
222	Carnegiea gigantea	16
223	Olneya tesota	13
224	Carnegiea gigantea	16
225	Olneya tesota	14
226	Olneya tesota	11
227	Carnegiea gigantea	12
228	Carnegiea gigantea	15
229	Olneya tesota	11
230	Carnegiea gigantea	15
231	Carnegiea gigantea	9
232	Carnegiea gigantea	17
233	Carnegiea gigantea	13
234	Olneya tesota	11
235	Olneya tesota	13
236	Olneya tesota	16
237	Carnegiea gigantea	17
238	Carnegiea gigantea	16
239	Carnegiea gigantea	10
240	Carnegiea gigantea	5.5
241	Carnegiea gigantea	12
242	Carnegiea gigantea	15
243	Olneya tesota	14
244	Olneya tesota	16
245	Olneya tesota	15

ID #	Species	Height
246	Carnegiea gigantea	17
247	Carnegiea gigantea	12
248	Carnegiea gigantea	9
249	Carnegiea gigantea	13
250	Carnegiea gigantea	10
251	Carnegiea gigantea	11
252	Carnegiea gigantea	15
253	Carnegiea gigantea	12
254	Carnegiea gigantea	13
255	Carnegiea gigantea	16
256	Olneya tesota	12
257	Carnegiea gigantea	13

Inventory Totals

Species	≤ 6'	> 6' and ≤ 18	> 18	Total
Saguaro	34	147	6	187
Desert Ironwood	-	-	-	70

Thornydale and Sumter Property

Parcels 224-44-0570 and 224-44-058A

E. Transportation

1. Existing/Planned Offsite Streets

a. Roadway Inventory

Table IV.E: Roadway Inventory shows the recorded or estimated weekday daily volumes from the Pima Associated Governments ("PAG") website, existing right-of-way widths, the number of lanes and posted speed limits, daily volume capacity at level of service ("LOS") D, bike lanes and pedestrian ways for roadways within one mile of the Project. *Exhibit IV.E.1.a: Existing Transportation Network* shows the roadway system within one mile of the Property.

A short description of the physical characteristics of the major streets near the Project is also provided below.

Table IV.E: Roadway Inventory

Street	*Weekday Daily Volume*	*Data Year*	*Source*	*ROW Width (ft)*	*No. Thru Lanes*	*Speed Limit*	*Sidewalks*	*Bike Route*	*Daily Capacity at LOS D**
Camino de Oeste									
Lambert Lane to Linda Vista	1,233	2021	PAG	35-105	2	35	No	No	10,660
Thornydale Road									
North of Lambert	9,116	2021	PAG	70-150	2	40	No	No	12,740
Lambert to Pecos Drive	15,213	2022	FDS	105	2	40	No	No	12,740
Pecos Drive to Linda Vista	15,213	2022	FDS	100-145	2	40	Some, East Side	No	16,730
Linda Vista to Overton	19,514	2021	PAG	150	2	40	No	No	16,730
South of Overton	16,956	2021	PAG	150	2	40	No	No	16,730
Shannon Road									
Lambert to Linda Vista	3,890	2021	PAG	100-160	2	40	No	No	12,740
Linda Vista to Overton	7,699	2021	PAG	110	2	40	No	No	12,740
Lambert Lane									
Camino de Oeste to Thornydale	1,069	2021	PAG	75-150	2	40	No	No	12,740
Thornydale Road to Shannon Road	5,601	2021	PAG	40-150	2	25-45	No	No	12,740
Sumter Road									
Thornydale Road to Shannon Road	679	2022	PAG	45	2	35	No	No	10,660
Linda Vista Boulevard									
Camino de Oeste to Thornydale Road	10,976	2021	PAG	120-150	2	25-35	South Side by MV High Sch	Yes	13,990
Thornydale Road to Shannon Road	2,935	2021	PAG	105-135	2	35	Yes	Yes	13,990
Overton Road									
Thornydale Road to Shannon Road	7,810	2021	PAG	75-115	2	35	No	No	10,660

*Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, *from 2020 FDOT Quality/Level of Service Handbook Tables*.

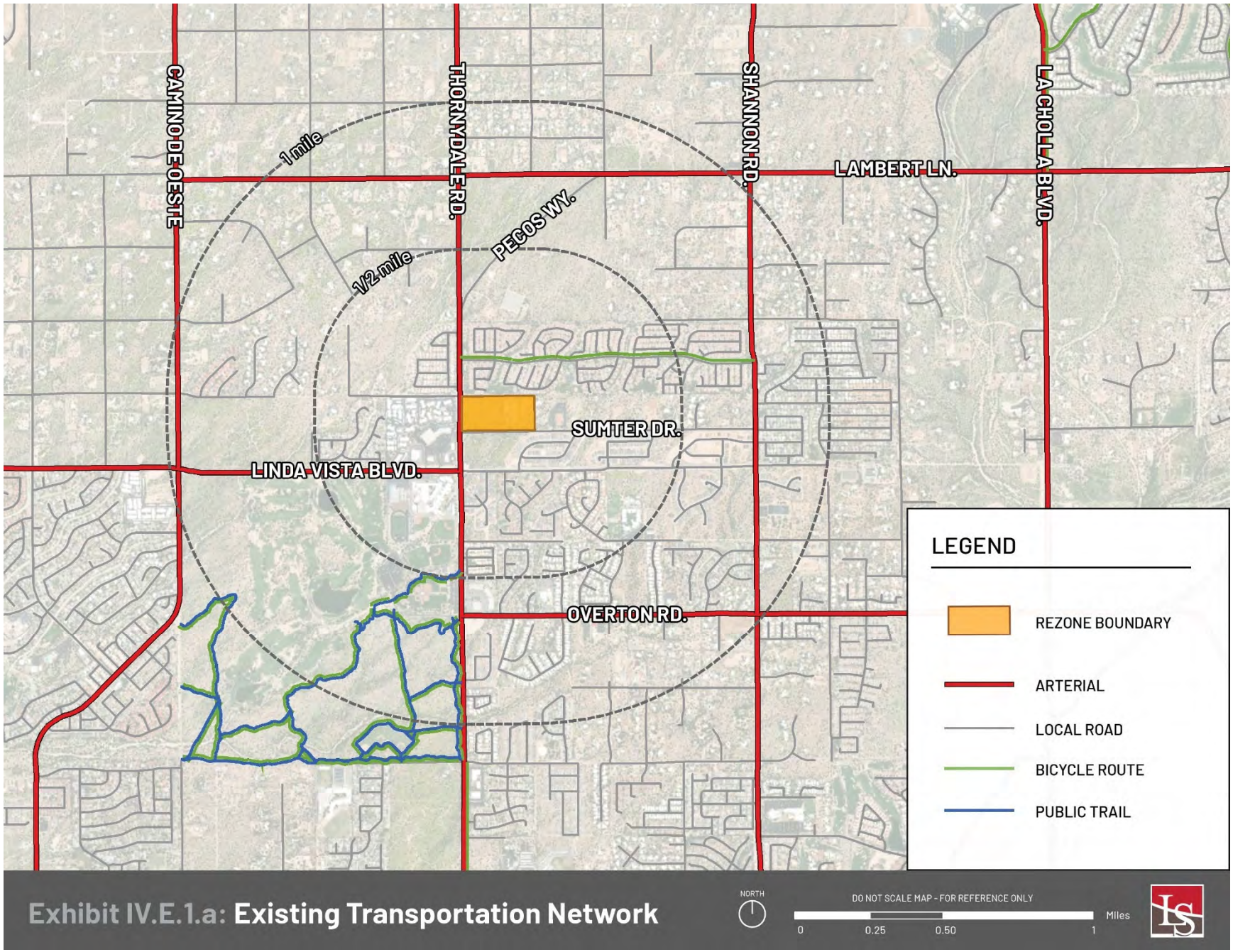


Exhibit IV.E.1.a: Existing Transportation Network

(1) Thornydale Road

Thornydale Road is a nine-mile north/south paved roadway from its northern paved terminus north of Moore Road to its southern terminus at River Road. It is a two-lane arterial road with a two-way left turn lane in the vicinity of the Project and is classified as an urban minor arterial in ADOT's Functional Classification system. It is classified as a medium volume arterial with a 150-foot right-of-way in the Pima County Major Streets Plan and as a Scenic, Major Route in the Pima County Scenic Routes Plan.

In the vicinity of the Project, Thornydale Road has a 45-mph speed limit. It has unpaved shoulders along the Project frontage. There are some sidewalks on the east side between Pecos Drive and Linda Vista Boulevard. There are no bike routes along the frontage of the Project site.

Sun Shuttle Route 412 (Thornydale/River) runs along Thornydale Road with a stop at Thornydale/Linda Vista.

(2) Shannon Road

Shannon Road is a two-lane north/south undivided paved roadway that is classified as a minor arterial along the Project frontage. It is classified as a low volume arterial with a 90-foot right-of-way in the County's Major Streets Plan and as a Scenic, Major Route in the County's Scenic Routes Plan.

Its speed limit is 40 mph. There are no sidewalks, bike lanes or bus routes along the Project frontage.

(3) Linda Vista Boulevard

Linda Vista Boulevard is a two-lane east/west paved roadway. It is classified as a medium volume arterial with a 150-foot right-of-way in the Pima County Major Streets Plan west of Shannon Road and as a low volume arterial with a 90-foot right-of-way east of Shannon Road. Between Thornydale Road and Shannon Road, it is also classified as a Scenic, Major Route in the Pima County Scenic Routes Plan. It is also classified as an urban minor collector on the Federal Functional Classification System map.

West of Thornydale Road, Linda Vista Boulevard has a two-way left turn lane. East of Thornydale Road, the road continues with a two-way left turn lane to Shannon Road. It continues as a local road at Shannon Road to the east. West of Thornydale Road, the posted speed limit is 25 mph and east of Thornydale Road, the posted speed limit is 35 mph.

There are sidewalks and bike lanes along Linda Vista Boulevard within the study area.

(4) Sumter Drive

Sumter Drive is a two-lane east-west undivided road between Thornydale Road and Shannon Road. It is classified as an urban minor arterial on the Federal Functional Classification System map. Its speed limit is 35 mph. There are no sidewalks, bike lanes or bus routes along the Project frontage. It provides local access to residential uses and a church on the north side of Sumter Drive.

b. Planned Improvements

There are no known planned right-of-way ("ROW") improvements on roadways within the Project study area within the next five years.

c. Distances to Existing Drives/Intersections

Driveway spacings and distances from the Property to existing offsite intersections, streets and other access points are shown in *Exhibit II.E.2.a: Distances to Existing Driveways & Intersections – Thornydale* and *Exhibit II.E.2.b: Distances to Existing Driveways & Intersections – Sumter* within Section II of this Specific Plan.

2. Public Transit

Sun Shuttle Route 412 (Thornydale/River) runs north on Thornydale Road and then west on Linda Vista Road. This route and several associated stops are located within walking distance to the Property and are depicted in *Exhibit IV.E.2: Public Transit Map*. The Property is also located within the eligibility area for the Sun Shuttle Dial-A-Ride service. This service provides reservation pickup service for disabled individuals who live within the special-needs eligibility area in Pima County.

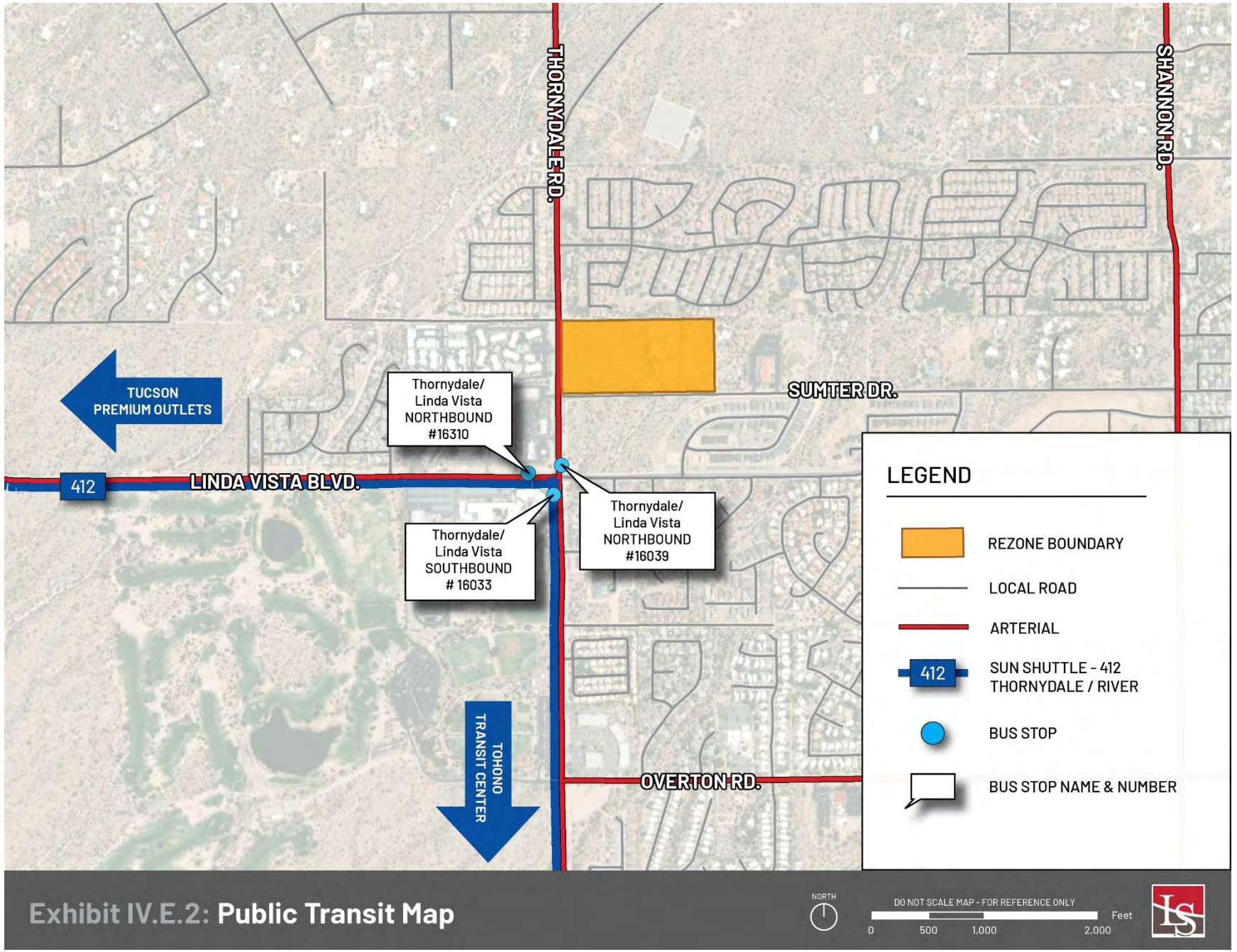


Exhibit IV.E.2: Public Transit Map

F. Utilities

1. Sewer

The Property is located within the PCWRD sanitary sewer service area. According to PimaMaps, as shown on *Exhibit IV.F.1*, there is an existing 15-inch sewer line (G-85-053) located within the eastern portion of the Thornydale Road right-of-way, directly adjacent to the western boundary of the Property. This sewer will provide sewer service to the Property. No constraints have been identified that would preclude the use of gravity sewers to serve the Property.

2. Water

Metro Water District ("MWD") will provide water service to the Project. (Refer to *Exhibit II.F.2: MWD Will-Serve Letter* in Section II.) The Project will connect to existing water facilities located to the southeast of the Property in the Sumter Road/Scenic Park Drive intersection. Water easements will be provided if/as necessary for any public water installed to serve the Project. No constraints have been identified that would preclude water service for the Property. (See *Exhibit IV.F.2: Existing Water Facilities*.)

G. Recreation

There are no existing recreational facilities onsite.

Arthur Pack Regional Park, a 500-acre County-owned park, is located approximately ¼ mile southwest of the Property and wraps around the south and west sides of Mountain View High School at the corner of Thornydale Road and Linda Vista Boulevard. The park includes the Crooked Tree Golf Course, playground equipment, picnic areas, multiple sports fields and a 4.7-mile network of pedestrian, bike and equestrian trails through the Maeveen Behan Desert Sanctuary. Vehicular access into the park is provided at Thornydale Road and Overton Road.

See *Exhibit IV.G: Recreation Map*.

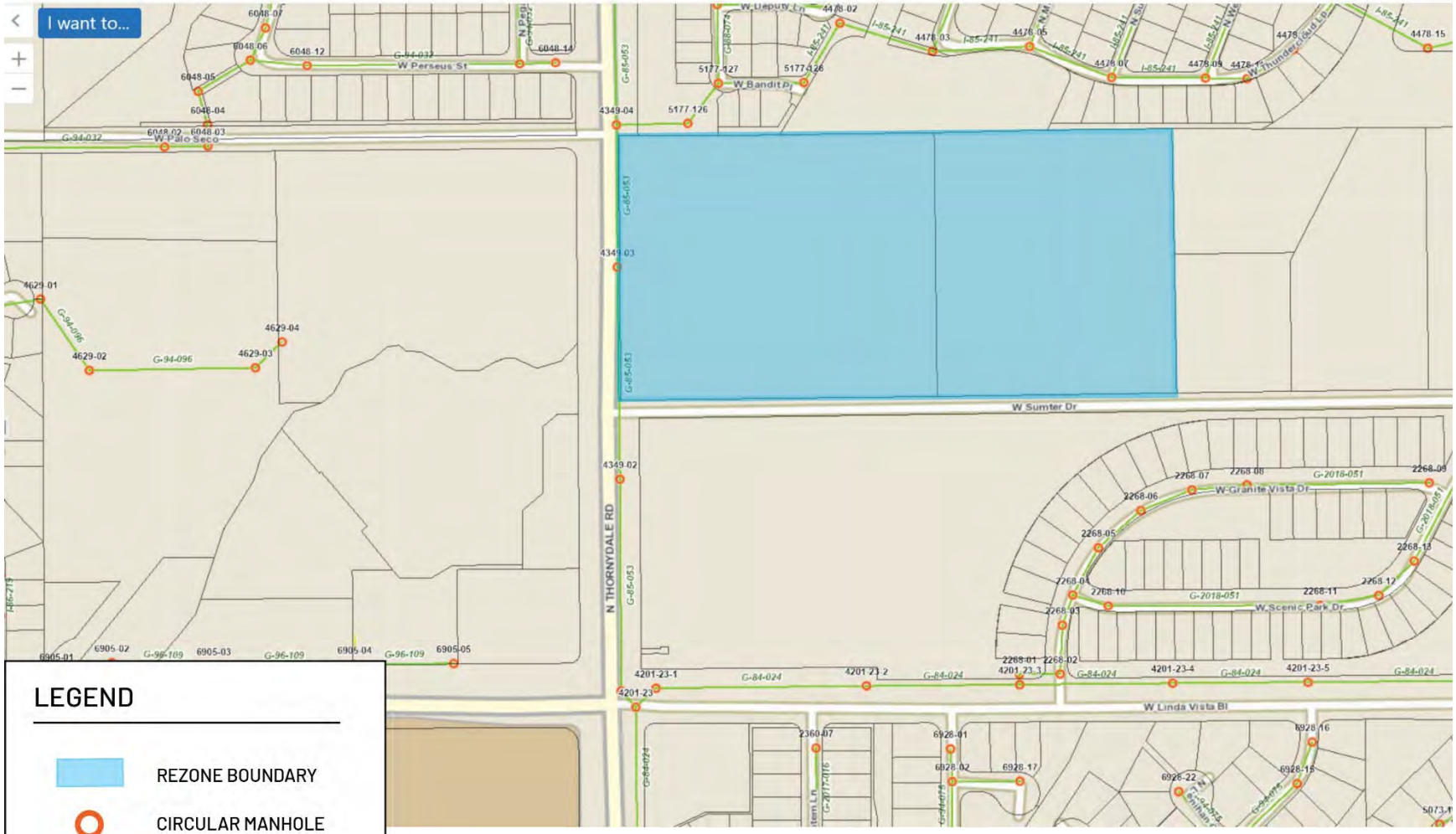


Exhibit IV.F.1: Existing Sewer Facilities

Exhibit IV.F.2: Existing Water Facilities

METRO WATER DISTRICT

THE INFORMATION CONTAINED IN THESE VALVE MAPS IS THE BEST CURRENTLY AVAILABLE. THE M.D.W.I.D. CANNOT GUARANTEE OR WARRANT THAT THE WATER LINE LOCATIONS AND OR DIMENSIONS SHOWN HEREIN ARE ACCURATELY DEPICTED ON THESE MAPS. THESE MAPS ARE ONLY A GRAPHICAL REPRESENTATION OF THE EXISTING METRO WATER FACILITIES AND SHOULD NOT BE USED AS A DESIGN TOOL. ALL FACILITIES SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

Legend

Pipe

- 4" & Less Pipe
- 6" Pipe
- 8" Pipe
- 10" & 12" Pipe
- Larger Than 12" Pipe
- Tucson Water
- Oro Valley Water
- Private Water
- Abandoned Water

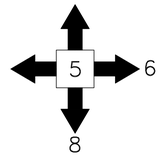
Boundaries

- MDWID-LB — Metro Legal
- MDWID-SB — Metro Service
- HUB-LB — Hub Legal
- HUB-SB — Hub Service
- CFIA — Cortaro Farms Impact
- LCIA — La Cholla Impact
- OVWC — Oro Valley Water
- TCL — Tucson City
- MTL — Marana Town
- OVTL — Oro Valley Town

Symbols

- Inline Valve
- Isolation Valve
- Check Valve
- Butterfly Valve
- Isolation Butterfly Valve
- Altitude Valve
- Air Release Valve
- Pressure Regulator Valve
- Fire Hydrant With Valve
- Fire Hydrant Without Valve
- Fire Hydrant With Blow-Off Valve
- Private Fire Hydrant With Valve
- Private Fire Hydrant Without Valve
- Reducer
- Stub Out
- Drain Valve Assembly
- Section Corner
- Dimension Number
- Other Water Providers
- M-YEAR-# As-Built Plan Number
- 3200-N Address Range Numbers
- ? Not Verified as Correct
- As-Built Waterline Beginning & End
- Water Service Meter W/ Single Hookup
- Water Service Meter W/ Double Hookup
- Irrigation Water Meter
- Corosion Test Station
- Active Well
- Abandoned Well
- Inactive Well
- Monitor Well
- Dry Well
- Private Well
- Sand Separator
- Surge Tank
- Active Booster Pump
- Inactive Booster Pump
- Reservoir
- Storage Tank and Size
- Pressure Tank
- Service Areas Outside Of Legal Limits
- Improvement Impact Areas
- 10'UE — Easements Sizes and Type
- 6"PVC — Water Line Type and Size

Map Reference



36	31	32	33	34	35	36	31
1	6	5	4	3	2	1	6
12	7	8	9	10	11	12	7
13	18	17	16	15	14	13	18
24	19	20	21	22	23	24	19
25	30	29	28	27	26	25	30
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Sheet Number: 5
Updated: MAY 2021
Setup By: TJD
Scale: 1"=200'

10400-N
9600-N
3800-W
2900-W
T.12 R.13 SEC.17
PROJECT
LAMBERT LANE
SHANNON ROAD
THORNYDALE ROAD
PECOS WAY
OASIS ROAD
APPALOOSA ROAD
GYMKHANA WAY
SUMTER DRIVE
LINDA VISTA BOULEVARD
CAMINO DE LA TIERRA
RANCHITOS PALOS VERDES LOTS 1-27 M.P. 23/22
NORTH RANCH LOTS 545-688 M.P. 42/55
NORTH RANCH LOTS 1-187 M.P. 39/58
NORTH RANCH LOTS 689-780 M.P. 42/62
NORTH RANCH LOTS 188-544 M.P. 41/68
NORTH RANCH LOTS 781-885 M.P. 45/32
TUCSON RESERVOIR
THE CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS D.P. 7/95
HACIENDAS DE LA CAROLINA LOTS 1-8 M.P. 56/64
MOUNTAIN VISTA RIDGE, LOTS 1-201 SEQ #20183340400

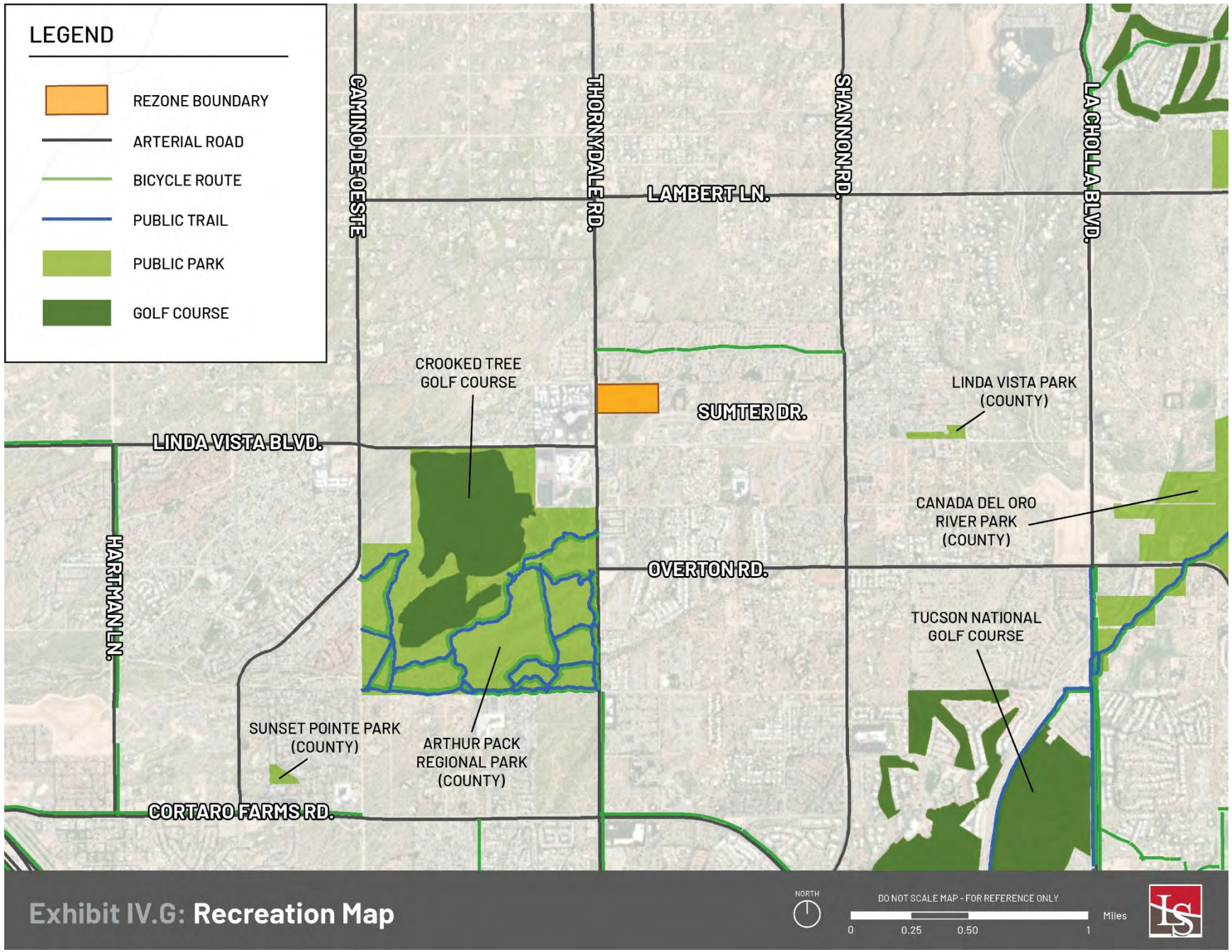

Exhibit IV.G: Recreation Map

H. Cultural Resources

Correspondence from the Arizona State Museum ("ASM") is included as *Exhibit IV.H*.

Per correspondence with the County's Office of Sustainability, Cultural Resources & Historic Preservation Division, previous archaeological surveys covered this area, so no new survey is required. Development of the Property is subject to ARS § 41-865 regarding State protection of human remains and funerary objects.

I. Composite

A Composite Map is provided as *Exhibit IV.I*. This map indicates the Property's existing physical constraints, including structures, topography, hydrology, riparian habitat, significant vegetation, utilities and easements.

THE UNIVERSITY OF ARIZONA
ARIZONA STATE MUSEUM

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Robin Large
Lazarus & Silvyn, P.C.
5983 E. Grant Rd., Ste. 290
Tucson, AZ 85712

April 19, 2022

RE: Thornydale & Sumter Specific Plan
Parcels 224-44-0570 & 224-44-058A

Dear Robin,

The Arizona State Museum (ASM) has reviewed archaeological project and site records in support of the following project:

> Lazarus & Silvyn's Thornydale & Sumter Specific Plan project (Lazarus & Silvyn Project No. 2205-002; ASM Job No. 004560)

Correspondence indicates this project will involve the rezoning of privately-owned land with the intent of apartment development. The project area is located at 3620 W. Sumter Dr. within unincorporated Pima County, and encompasses parcels 224-44-0570 and 224-44-058A within Township 12 South, Range 13 East, Section 17.

I invite you to review the results of ASM's research, which are summarized below.

Search Results:

According to a search of the archaeological site records and reports held in ASM collections, 40 archaeological investigations were conducted within a one-mile radius of the project area between 1979 and 2020. Of these 40 archaeological investigations, three intersect the project area.

For the three archaeological investigations that intersect the project area, Table 1 summarizes their basic information and scope.

Additionally, four archaeological sites have been identified within a one-mile radius of the project area. Of these four archaeological sites, none intersect the project area.

ASM Reference Number (AZProj/Accession)	Report Author(s)	Year(s) Conducted	Scope of Project
1981-0174	Madsen et al.	1981-1986	Archaeological survey for research
1985-0089	Phillips	1985	Archaeological survey for development
2003-0022	Hesse	2003	Archaeological survey for transmission line

Table 1. ASM archaeological investigations that intersect the project area

Recommendations and Responsibilities:

1. Although the entire project area has been previously surveyed, the work was conducted 19 to 41 years ago. It is standard archaeological practice for a property to be re-surveyed if the previous survey was conducted 10 or more years ago, as there is a possibility for previously unidentified archaeological sites to have since been exposed. Therefore, ASM recommends—but does not require—that a qualified archaeological contractor be consulted before any ground-disturbing activity begins. A list of archaeological contractors is available on the ASM website at:
https://statemuseum.arizona.edu/crm/document/aaa-qualified-consultants

2. Pursuant to Arizona Revised Statute §41-865, if any human remains or funerary objects are discovered during project work, all work must stop within the area of the remains and the ASM Repatriation Office must be contacted at 520-626-0320.

3. City, county, or municipal governments may have their own requirements; therefore, ASM recommends that the relevant jurisdiction(s) be consulted.

If you have any questions about the results of this records search, please feel free to contact me at jknightonwisor@arizona.edu or 520-621-4011.

Sincerely,

Jonathan Knighton-Wisor
Research Specialist
Archaeological Records Office
Arizona State Museum
520-621-4011
jknightonwisor@arizona.edu

References:

Hesse, Jerome S.

2003 The Linda Vista Transmission Main Cultural Resource Survey, Pima County, Arizona. Cultural Resources Report No. 03-32. SWCA, Inc. Tucson.

Madsen, John, Paul Fish, and Suzanne Fish

1993 *The Northern Tucson Basin Survey: Research Directions and Background Studies*. Arizona State Museum Archaeological Series No. 182. Tucson, Arizona.

Phillips, David A.

1985 *Letter Report to Mr. Don Laidlow of Cella Barr Associates from David A. Phillips.* New World Research, Inc., Tucson, Arizona.

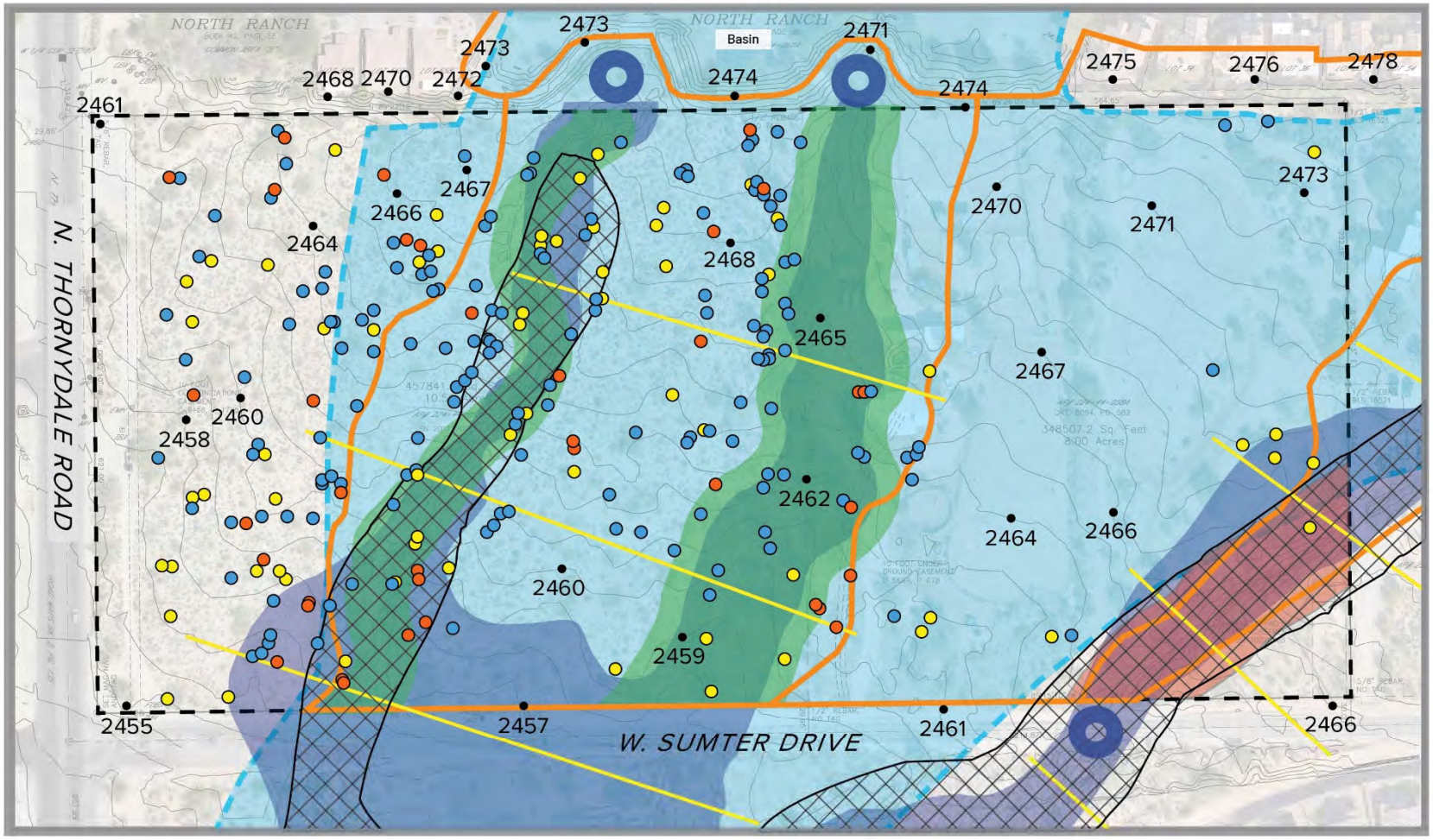

Exhibit IV.I: Composite Map