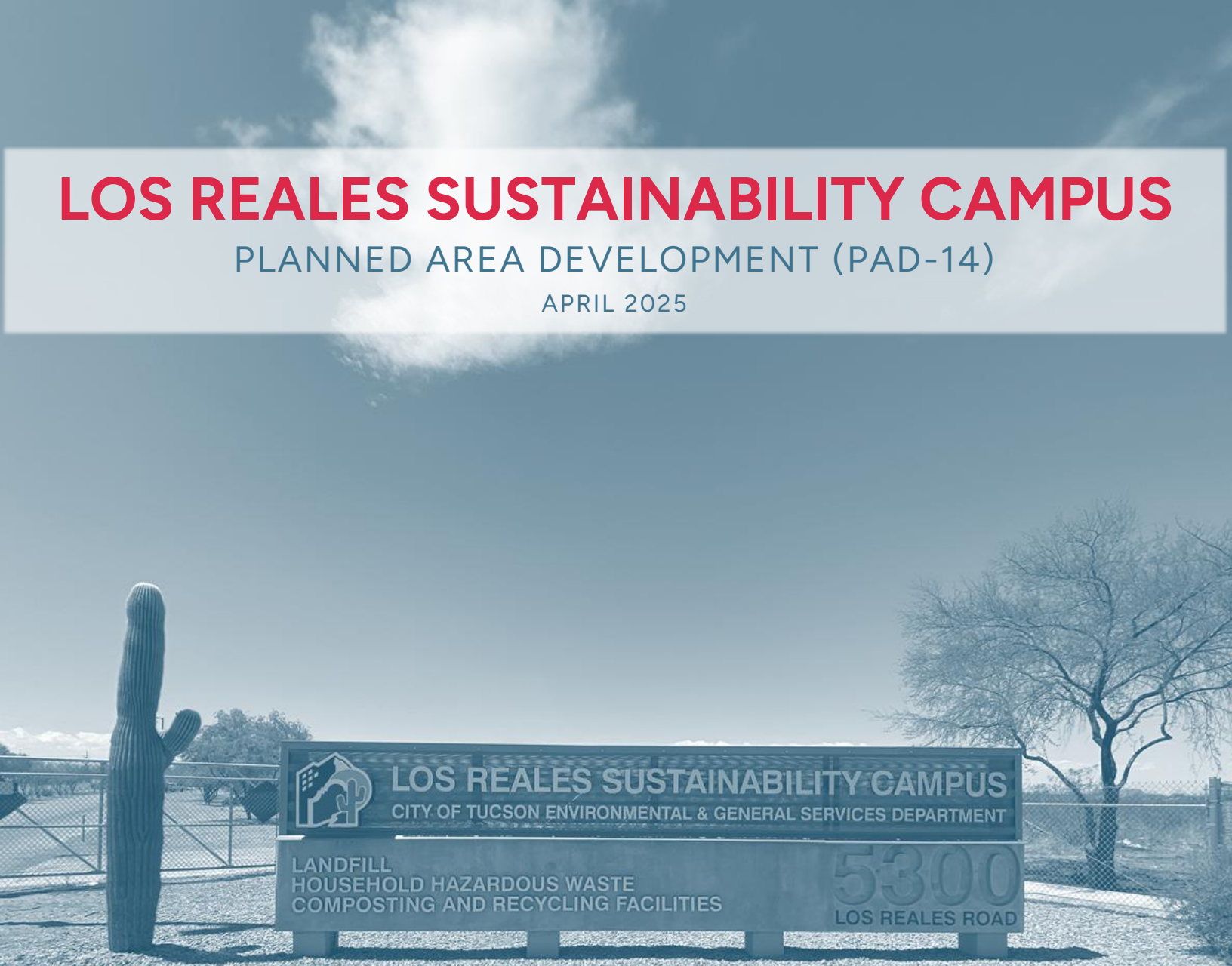
LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT (PAD-14)

APRIL 2025



THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT AMENDMENT

5300 East Los Reales Road
Tucson, AZ 85715

Submitted to:

CITY OF TUCSON
Planning & Development Services Department
201 North Stone Avenue
Tucson, Arizona 85701

Prepared for:

CITY OF TUCSON
Environmental Services Department
4004 South Park Ave., Bldg. #1
Tucson, Arizona 85714

Prepared By:

THE PLANNING CENTER
2 East Congress Street, Suite 600
Tucson, Arizona 85701

APRIL 2025

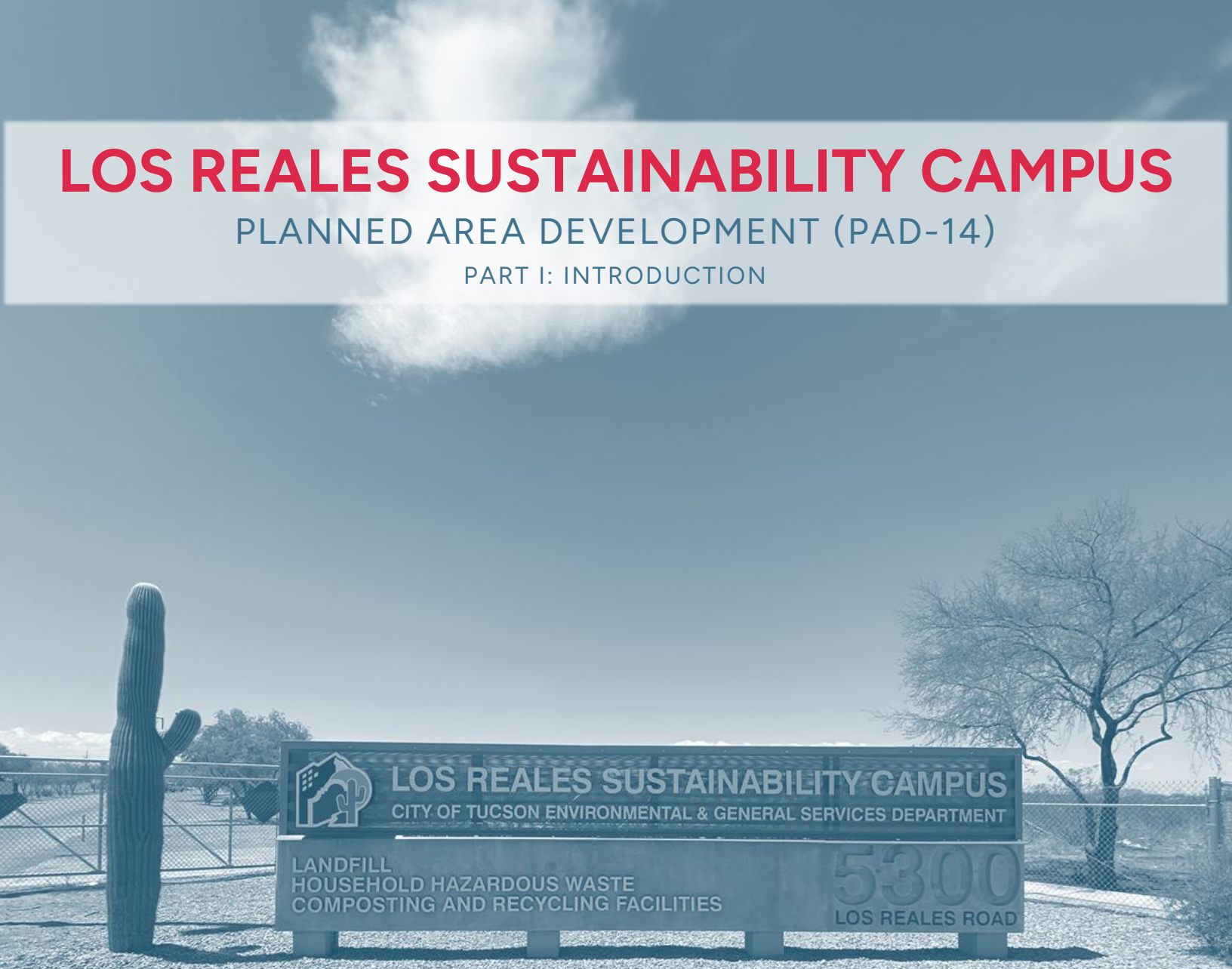
TABLE OF CONTENTS

LIST OF EXHIBITS

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT (PAD-14)

PART I: INTRODUCTION



THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

I. INTRODUCTION

A. PROJECT OVERVIEW

Situated within the southeastern portion of the City of Tucson ('City') and its ever-growing metropolitan area, the Los Reales Sustainability Campus ('LRSC') stands as a testament to the City's unwavering commitment to developing a "Thriving Desert City" that can withstand the unknown challenges presented by population growth and climate uncertainties (refer to **EXHIBIT I.A:** PROJECT LOCATION). Starting as a borrow pit in the 1950s during the construction of Interstate 10 (I-10) and formally opened as a landfill by the City in the late 1960s, the Los Reales Landfill has drastically evolved to not only accommodate the hundreds of thousands of tons of municipal solid waste that is generated by the community each year but also to be an environmentally conscious resource intended to be a driving force in making Tucson a more climate-resilient community. The evolution of the Los Reales Landfill is most notably marked by the ongoing efforts pursued by the City's Environmental Services Department ('ESD') to re-envision the landfill as an integrated and cutting-edge waste and resource management campus aimed at implementing various sustainability programs and provide economic development opportunities and a community open space asset.

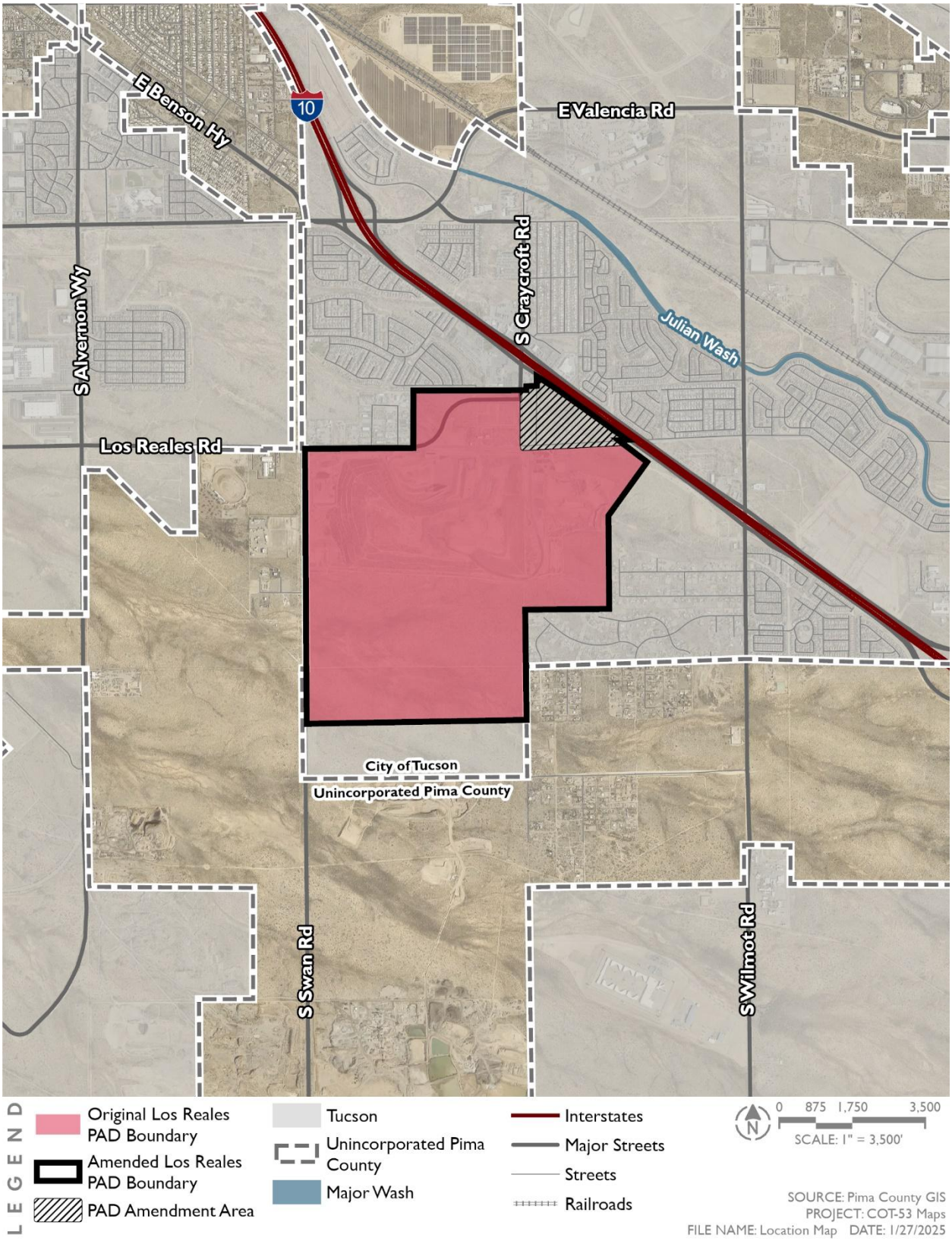
Currently, activities at the LRSC are governed by the Los Reales Planned Area Development (PAD-14), which was initially adopted in 2006 and subsequently amended in 2008 and 2015 to effectively design, plan, and implement the expansion of the 1,087-acre landfill. Now that nearly two decades have passed since PAD-14 was adopted, and the overall operations and vision of the landfill have changed, ESD is seeking to overhaul the Los Reales PAD to ensure the sustainability campus can come to life as envisioned and achieve the City's zero waste goals, which are:

1) *To be a physical catalyst in driving, supporting, and implementing the various programs and initiatives of the Declaration of Climate Emergency for the City of Tucson;*
2) *To provide the physical infrastructure to foster and entice just and equitable regional collaboration in the areas of climate, environment, and sustainability;*
3) *To provide an integrated and cutting-edge solid waste and resource management for generations to come as to achieve the City of Tucson Zero Waste goal by 2050;*
4) *To ensure that the Sustainability Campus is seen as a community open space asset today and in the future;*
5) *To transition how we view and treat waste as a liability to a resource; and*
6) *To maximize the use of current assets.*

The primary purposes for reimagining PAD-14 are as follows: 1) to rename the PAD from Los Reales PAD to Los Reales Sustainability Campus PAD; 2) to expand the planning boundary to include additional parcels/right-of-way (approximately 44 acres) that the City has acquired/incorporated into the PAD since it was initially adopted; 3) establish tailor fit development regulations and standards that reflect the overall vision and intent of the sustainability campus and the current standards of the City's Unified Development Code (UDC); and 4) other minor text modifications resulting from new information. With these modifications, PAD-14 will help transform the City's waste management facility into a net zero campus that implements the best practices of sustainable waste and resource management while providing recreation areas, spaces for private businesses to operate, a plant

nursery, and an educational center to inform residents of the operations and programs at the sustainability campus.

EXHIBIT I.A: PROJECT LOCATION



B. BACKGROUND

The LRSC's story unfolds against the backdrop of Tucson's growth and development, starting as a borrow bit used to excavate material for the construction of Interstate 10 in the 1950s. With the completion of Interstate 10 in the 1960s, the City began to grow exponentially, which led to the need to open a regional waste facility. In 1967, the City formally opened Los Reales Landfill and began accepting municipal waste. Recognizing the need to plan for the future, a comprehensive strategy was devised in 1996 to extend the landfill's operational life. This strategy aimed to maximize the landfill's efficiency, sustainability, and longevity, capitalizing on the available city-owned land at the Los Reales Landfill location. The subsequent years saw an expansion of this commitment, culminating in 2006 with the establishment of the Los Reales PAD. The Los Reales PAD created a plan for the City to provide a long-term strategy for waste disposal by allowing for the expansion of the landfill, incorporating sustainable practices such as recycling, and increasing public awareness of waste management solutions proposed by the City.

In 2020, the City declared a Climate Emergency in response to the growing impact of climate change on the everyday lives of Tucsonans and the infrastructure and functions of the City's services. This declaration acknowledged the realities of climate change, directed the City to develop a climate action and adaptation plan, instructed all departments to align their efforts with the Paris Agreement, and committed to carbon neutrality across City operations by 2030. The climate action plan born from this declaration is now known as Tucson Resilient Together, adopted by the Mayor and Council in March 2023. Tucson Resilient Together sets clear, actionable steps and goals the City is undertaking to achieve net zero emissions by 2030, such as planting a million trees, transitioning to using renewable energy for transit and updating development regulations and City building standards to help achieve carbon neutrality. Creating a Zero Waste Plan is another critical component to the City becoming a model of climate resiliency.

As part of the Tucson Resilient Together action plan, ESD was tasked with 1) attaining 50 percent waste diversion by 2030 and 2) achieving zero waste by 2050. To help achieve these goals, ESD created the Zero Waste Roadmap to identify several ways the City can reduce waste through new and expanded services, partnerships, and programs. A significant part of the zero waste initiative is the continued and improved operations of the landfill.

In 2021, the Los Reales Landfill was renamed the Los Reales Sustainability Campus, and a strategy was devised setting forth very specific goals to optimize the sustainability operations of the landfill, maximize economic development opportunities, and ultimately shift the perspective of the landfill from not only being a waste management facility but also a recreation and community open space asset.

In order to achieve this, the following provides a general summary of how the PAD is being modified:

- *Renaming the PAD from Los Reales PAD to the Los Reales Sustainability Campus PAD.*
- *Expanding the planning boundary to include parcels that the City has acquired since the original adoption of the PAD (approximately 44 acres).*

- *Updating Part I: Introduction and Policy to align with current goals and policy directives.*

- *Updating Part II: Site Analysis to reflect current conditions and include pertinent site information related to the acquired parcels.*

- *Updating Part III: Plan Proposal to reflect the current vision of LRSC to create a state-of-the-art waste and resource management facility which contemplates three types of campus activities (Waste Reclamation, Community Resources, and Eco-Commerce) intended to be governed by a single land use designation (Sustainability Campus District) as well as an open space/recreation land use designation (Open Space + Recreation District). In addition to providing a narrative for what each campus activity may consist of, discussions related to the overall circulation plan, drainage plan, landscape plan, grading plan, and cultural resources plans are also being revised to include new and updated information. For example, the grading plan was updated to suggest that the goal is to mitigate visual impacts and create attractive views of the campus while complying with the grading standards of the City of Tucson and the Arizona Department of Environmental Quality*

- *Revising the Land Use Plan to create more flexibility within the landfill operations area and including an exhibit conceptually depicting the proposed activity areas that align with the grander vision of a sustainability campus.*

- *Updating Part IV: Development Regulations to reflect current UDC standards, incorporate previously approved minor amendments, and the other proposed modifications as opposed to the previous standards that referenced the LUC. Landscape and drainage standards are also being updated to reflect current development package submittals and previous discussions with Planning and Development Services Department.*

- *Revising Part V: Implementation and Administration to reference applicable UDC standards for processing PAD amendments.*

C. RATIONALE FOR USE OF PLANNED AREA DEVELOPMENT (PAD)

The primary rationale for using a PAD for this project is the unique nature of the proposed land use (i.e., a sustainable waste management and resource recovery facility with open space, recreation facilities, an educational center, shovel-ready opportunities for synergistic uses to co-locate at the campus, etc.). As a mechanism for development flexibility, ESD has crafted this PAD's development regulations to align with sustainability campus operations and allow for a broader range of uses than what would be afforded if utilizing conventional zoning districts.

D. BENEFITS TO THE COMMUNITY

The benefit to the community of using a PAD is that it provides more specificity and control over the design and operation of the proposed land uses than currently specified under the UDC and provides standards to ensure environmental and aesthetic standards are upheld. The benefit to the applicant of using a PAD is the ability to define and regulate development within the LRSC in a manner that is responsive to the community's needs and the ultimate vision of converting the landfill into a zero-waste facility.

In addition, the LRSC benefits the community by:

- *Expanding solid waste disposal areas within the landfill to meet future waste management needs of the City;*
- *Establishing a progressive framework that provides the physical environment to foster net zero waste city-wide and entices just and equitable regional collaboration in the climate, environment, and sustainability arenas;*
- *Employing sustainable waste and resource management practices that encourage resource recovery and waste diversion;*
- *Providing meaningful recreational amenities that foster community interaction and can contribute to sports tourism in the region;*
- *Providing community educational and engagement opportunities that foster public awareness of sustainability and waste management best practices; and*
- *Creating shovel-ready spaces for private enterprises to co-locate at the sustainability campus, supporting the development of new industries, employment opportunities, and alternative waste disposal technologies.*

E. CONFORMANCE WITH GENERAL PLAN AND OTHER ADOPTED PLANS AND ORDINANCES

The primary objective of the LRSC PAD is to implement Plan Tucson, the City's General and Sustainability Plan, and the Rincon Southeast Subregional Plan through the translation of the City's broader development policies into design concepts and development controls tailored to the planned land uses. The LRSC also implements the policies and standards set forth by the City's Major Streets and Routes (MS&R) Setback Overlay and Environmental Resource Zone (ERZ) Overlay. All City policies, standards, criteria, and procedures will be honored in the LRSC PAD, except where specific modifications are warranted to improve design quality and flexibility as provided herein.

1. PLAN TUCSON

The City of Tucson's General Plan, Plan Tucson, was adopted in 1979 and has since been amended several times, most recently in 2015. The primary objectives of the LRSC PAD are to continue to implement the environmental policies outlined in Plan Tucson and follow all City, State, and Federal standards, procedures, and policies. The LRSC PAD will accomplish the following goals and policies of *Plan Tucson*:

Urban Agriculture Policies:

- *AG4: Collaborate with key partners to facilitate new opportunities for urban-scale gardens, farms, gleaning, and distribution systems.*

Parks and Recreation Policies:

- *PR4: Ensure a range of recreational opportunities from passive to active*

- *PR9: Develop an urban multipurpose path system that provides mobility options, with recreational and health benefits, to access parks, residential areas, places of employment, shopping, schools, recreational facilities, transportation hubs, natural resources, and watercourses for people of all abilities.*

Jobs & Workforce Development Policies:

- *JW3: Increase and promote environmentally sensitive businesses, industries, and technologies, including desert-adapted technologies and goods and services tailored to the special needs of Tucson as a desert community.*

- *JW4: Support and expand entrepreneurship through partnerships, technical assistance, and incentives.*

- *JW5: Expand opportunities to fulfill local needs with locally produced goods and services to help Tucson capture a greater market share and advance a sustainable economy.*

Regional & Global Positioning Policies:

- *RG6: Promote Tucson as an internationally recognized center for innovation and creativity in the areas of science, technology, and the arts.*

Business Climate Policies:

- *BC1: Recognize that government plays an instrumental role in creating a business supportive climate through investment in public infrastructure and services, through its regulations and policies, and in building public-private partnerships.*

- *BC2: Continue to develop and implement local strategies, services, and incentives to enhance Tucson's business climate.*

- *BC4: Provide assistance and incentives to encourage entrepreneurial efforts and technological innovations that lead to local business development and expansion.*

Energy & Climate Readiness Policies:

- *EC1: Encourage new and existing City infrastructure, facilities, and operations to use best energy efficiency technologies and energy conservation practices and strive for net zero energy facilities.*

- *EC8: Assess and prepare for the effects of climate change on City infrastructure, facilities, and operations.*

Green Infrastructure Policies:

- *GI3: - Create and maintain a connected urban greenway system for non-motorized mobility and to provide human and environmental health benefits.*

- *GI6: - Protect, restore, enhance, and manage trees for their long-term health, including providing guidance on proper planting, care, and maintenance.*

Environmental Quality Policies:

- *EQ1: Strive for a "zero waste" model for solid and hazardous waste through integrated waste management and waste reduction.*

- *EQ4 - Reduce and mitigate noise in neighborhoods, along roadways, and near industrial and airport zones through enforcement of existing codes, use of noise reducing and mitigating materials and designs, and deliberative decisions regarding compatible land uses and related zoning. (Environmental Quality)*

- *EQ6: Promote recycling as well as the responsible disposal of electronics and hazardous waste and reduce other environmentally damaging forms of waste.*

- *EQ7: Develop practices to reduce utility, fuel, and procurement costs and to improve environmental performance through process, technological, and behavioral changes to demonstrate City leadership in sustainable practices and improve operational efficiencies.*

Overall Summary:

Overall, LRSC's compliance with Plan Tucson is achieved by:

1) Contributing to the economic vitality of Tucson by reducing the financial burden of waste management for the City's residents and businesses.

2) Setting aside a reasonable amount of buffer area between the landfill and other adjacent land uses.

3) Enhancing and protecting Tucson's environmental quality and reputation by implementing innovative programs and procedures.

2. Rincon/Southeast Subregional Plan (RSSP)

The Rincon/Southeast Subregional Plan (RSSP) was initially adopted by the City 's Mayor and Council in December 1995. In 1997, the Mayor and Council amended the RSSP to include the landfill property within the RSSP as a new map detail (Map Detail #11) with a land use designation of Heavy Industrial despite the inconsistencies associated with the underlying suburban zoning – at that time, portions of the landfill were zoned SH.

When the landfill was expanded in 2006, parcels located within Map Detail #9 and designated as Industrial were incorporated into the landfill planning area and what is ultimately reflected in the current PAD. As properties surrounding the site were annexed into the City limits and ultimately into the LRSC planning boundary, map details weren't modified. As such, portions of the sustainability campus are not included in a specific map detail. However, given the industrial nature of the surrounding areas, the LRSC does not present any conflicts with the RSSP.

3. Major Streets & Routes (MS&R) Overlay

The Major Streets and Routes (MS&R) Plan provides comprehensive guidance on the City's transportation network with respect to roadway widths and classifications and land use coordination to ensure safe and efficient circulation throughout the City. Several arterial roadways identified by the MS&R Plan are near the LRSC. Many of these roadways are also within Pima County and are subject to the Pima County Major Streets and Scenic Routes Plan. These arterials are further discussed in *Section II.E: Major Transportation, Roads, and Circulation*.

The LRSC PAD conforms to this overlay zone by:

- Providing a minimum 10-foot building setback as required for non-residential uses adjacent to MS&Rs.

4. Environmental Resource Zone (ERZ) Overlay

The purpose of the ERZ Overlay is to preserve and protect the City's natural watercourses and critical habitat. Similar to what was initially contemplated, the LRSC will comply with the ERZ Overaly by continuing to preserve the significant wash corridors and critical riparian habitat areas in the site's southern portion. These areas are planned to remain largely undisturbed and will be further strengthened by including a sizable natural buffer along the eastern part of the sustainability campus, which will facilitate wildlife movement through the LRSC. Encroachment prudent to the overall operations of the LRSC may occur within the wash corridors or riparian habitats.

F. COMPATABILITY OF ADJOINING LAND USES

As a result of the careful planning that has occurred over the past two decades, the LRSC has adapted to the changing landscape of the surrounding area to ensure compatibility is maintained with the various industrial, commercial, and residential uses that surround the site. Such adaptation is reflected in the latest efforts to reposition the landfill as a cutting-edge waste management facility and community asset that strategically places landfill operations in the interior of the campus or near existing industrially-zoned properties while implementing development regulations and open space provisions to ensure harmonious development with the adjoining residential uses.

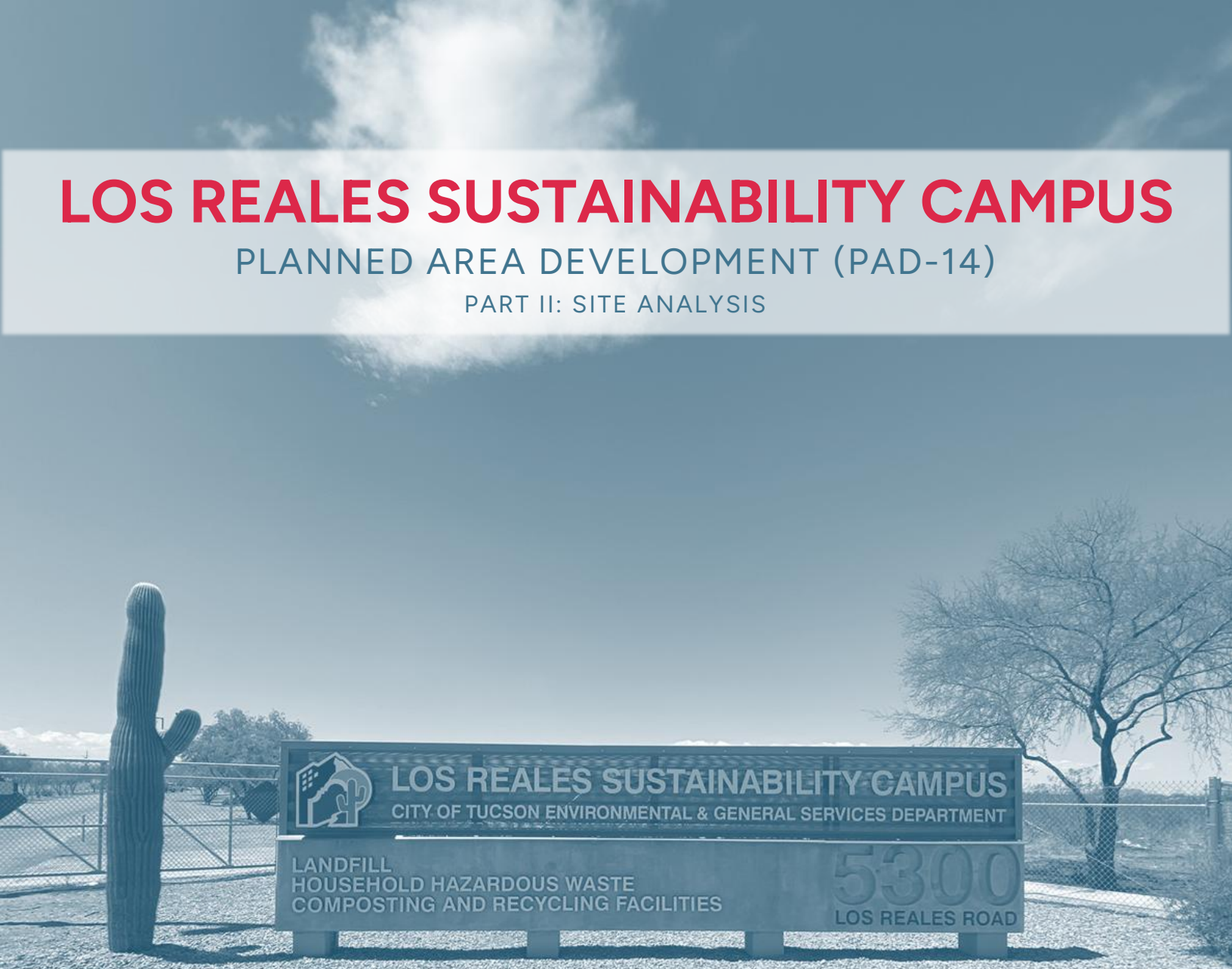
G. PHYSICAL & ECONOMIC SUITABILITY

Since the landfill has effectively been in operation for quite some time now, much of the infrastructure needed to serve LRSC is already in place to support current activities; however, some infrastructure improvements may be warranted to support new sustainability initiatives/programs or new users of the LRSC. Significant infrastructure needs to support future development activities at the LRSC will be further analyzed at the time of development. The LRSC will also contribute positively to the City's economic well-being by leasing space to private businesses to co-locate, thereby generating sales taxes, construction sales taxes, impact fees, etc., and reducing the City's economic burden for waste disposal operations. Therefore, the LRSC is both economically and physically suitable.

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT (PAD-14)

PART II: SITE ANALYSIS



THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

II. SITE ANALYSIS

The purpose of *Part II: Site Analysis* is to highlight physical characteristics, identify opportunities and constraints, and provide analysis that will guide development sensitive to the physical conditions of the site. Information for this section was prepared in accordance with the City of Tucson UDC and compiled from a variety of sources, including site visits, recent studies and assessments, and correspondence with ESD staff.

A. SITE LOCATION

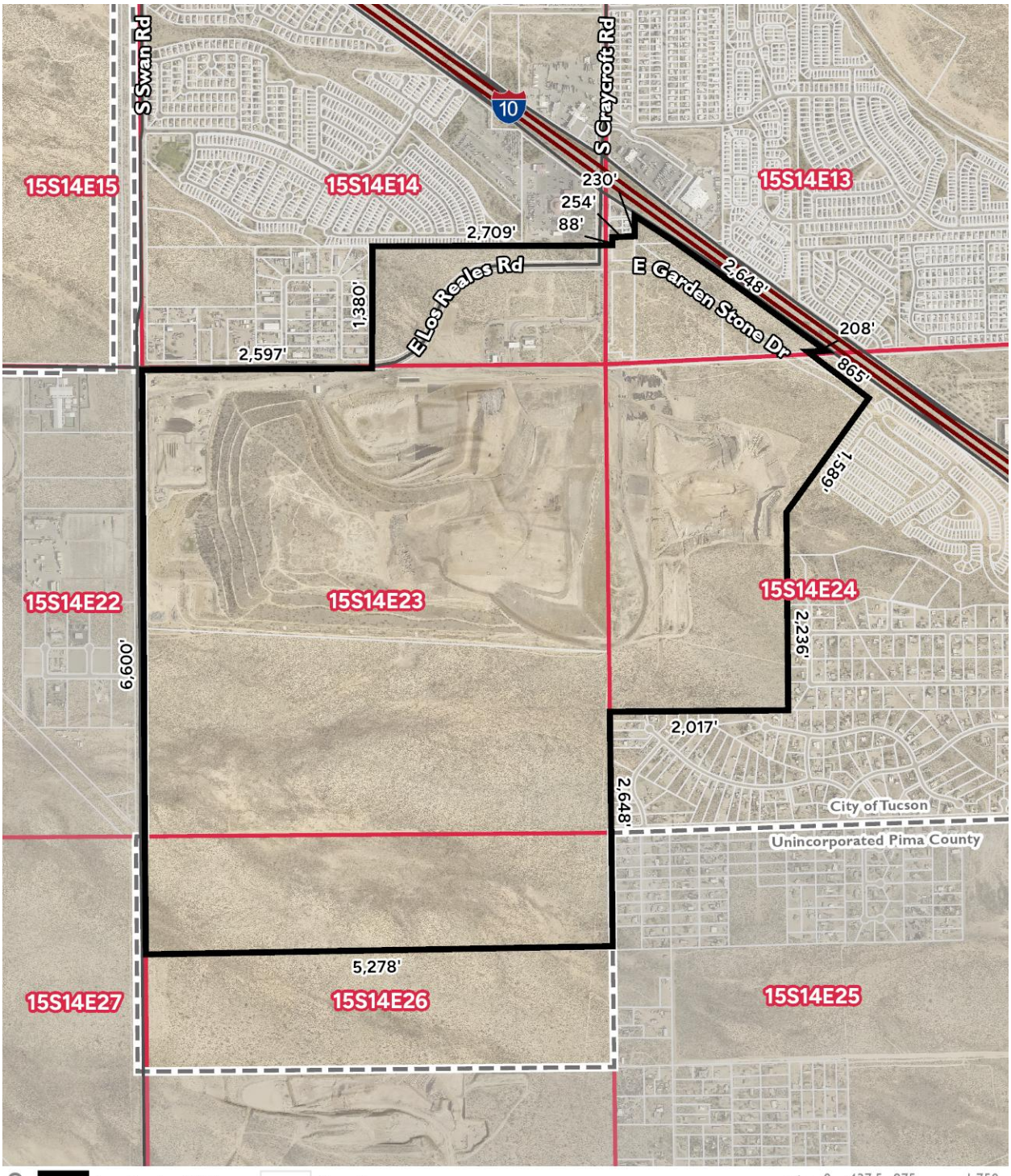
The Los Reales Sustainability Campus encompasses sixteen parcels and public right-of-way totaling approximately 1,136 acres located 600 feet south of Interstate 10 in the vicinity of Swan Road, Craycroft Road, and Los Reales Road within Township 15 South, Range 14 East, Section 23 and portions of Section 24, Section 26 and Section 14.

EXHIBIT II.A: LOS REALES SUSTAINABILITY CAMPUS depicts the LRSC PAD boundary and provides approximate boundary dimensions, while **TABLE II.A** provides a list of all parcels within the PAD and their approximate acreage based on public record, as well as an acreage estimation for the public streets (i.e., Los Reales Road, Craycroft Road, and Garden Stone Drive) that are included in the PAD boundary.

TABLE II.A: PARCELS WITHIN LRSC PLANNING BOUNDARY

ASSESSOR PARCEL NUMBER	ACREAGE
140-39-052E	28.44
140-39-052F	44.79
140-37-0700	1.68
140-37-085A	1.54
140-37-071C	1.2
140-37-071E	12.07
140-37-116B	5.59
140-37-071D	18.79
140-37-072B	2.34
140-37-073C	0.94
140-37-071F	0.10
140-44-008C	0.42
140-44-008D	200.88
140-44-007E	376.03
140-44-007A	262.14
140-46-0010	159.81
Total Real Property	1,116.76
Public Right-of-Way	19.03
	1,135.79

EXHIBIT II.A: LOS REALES SUSTAINABILITY CAMPUS



B. SIGNIFICANT BUILT AND NATURAL CONSTRAINTS OF SITE AND SURROUNDINGS

1. ONSITE USES AND NATURAL CONSTRAINTS

As a fully operational waste management facility that serves the region, numerous structures and uses exist on the property. The structures presently found at LRSC consist of the administrative offices, pavilions for the weigh stations and household hazardous waste storage areas, and other buildings and operation areas that support waste reclamation and resource recovery operations. Ongoing uses at LRSC include the landfill cells where waste is disposed of, access roads, various material storage/recycling areas, leachate storage systems, groundwater treatment systems, treated groundwater storage ponds, a composting area, monitoring wells, and a flare and blower system. Additional uses at the campus include stormwater drainage infrastructure and basins, a tree growing center supporting the Million Tree Initiative, and storage areas for contract-partners to store their waste containers. The public right-of-way for Los Reales Road, Craycroft Road, and the newly constructed Garden Stone Drive are also within the PAD's boundary.

The North Fork of the Airport Wash and its unnamed tributaries cross the property's southern portion. The southwest corner of the campus contains a FEMA-mapped floodplain (Zone A) and riparian habitat associated with the North Fork of the Airport Wash. The Rodeo Wash and its tributaries flow in the northernwesternportions of the campus and contains a patch of riparian habitat. There is also an unnamed wash that traverses the site in the northeast corner of the campus just south of Garden Stone Drive, which contains fragmented riparian habitat. While this wash has flows greater than 100 cfs, it does not meet the criteria of the ERZ due to previous disturbances and, therefore, is not subject to the requirements or regulations outlined in the UDC.

Refer to **EXHIBIT II.B**: EXISTING LAND USES AND NATURAL CONSTRAINTS.

2. Surrounding Uses and Natural Constraints

Land uses surrounding the LRSC include a mix of industrial, residential, and commercial uses. Immediately north of the campus (i.e., within 150 feet) is Los Reales Road, a major arterial street, a 241-lot single-family subdivision known as Rancho Valencia (Phase I and II) and a 816-lot single-family subdivision know as Val State (Phase I and II); both of which were constructed between 2005 and 2015, and Manheim Tucson, an automobile auction house. Just across Los Reales Road is Raul's Auto Repair shop, Bee Line Transportation, Liberty Disposal, Inc., and the Los Reales Industrial Park, which contains automotive/diesel truck repair shops, construction-related companies, and contractor's yards, truck storage facilities, equipment rental facilities, warehouses, and manufacturing activities.

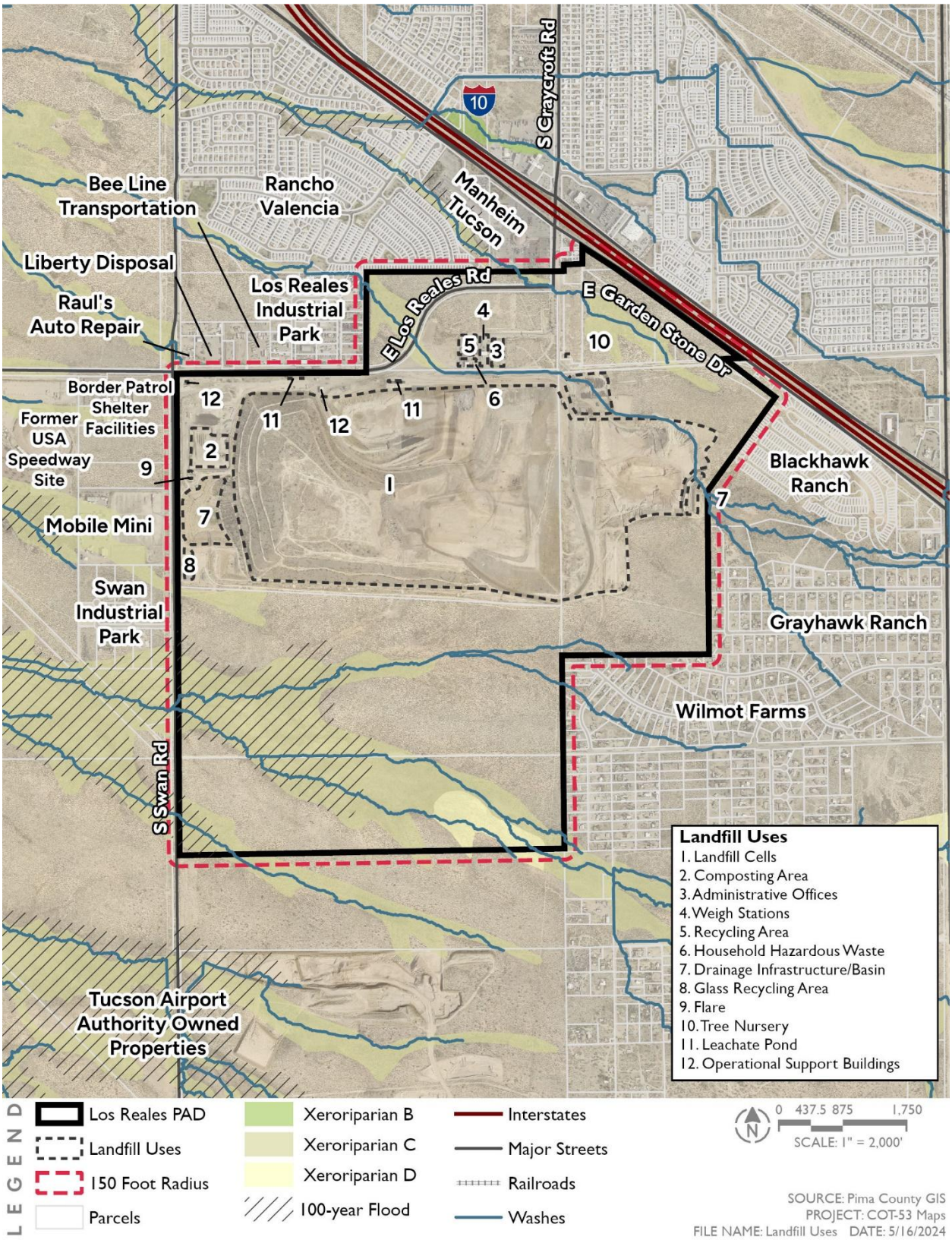
Various uses are located within 150 feet of the campus's western boundary across Swan Road, including the former USA Speedway site, which was recently graded and is planned for industrial users, Border Patrol shelter facilities, Mobile Mini Portable Storage and Offices, the Swan Industrial Park, and vacant land. The North Fork of the Airport Wash and its floodplain constrains much of the properties immediately west of the southwest corner of the LRSC.

Immediately south of LRSC (i.e., within 150 feet) is a vacant industrially-zoned property owned by Tucson Airport Authority (TAA).

Land uses within 150 feet east of LRSC predominantly consist of single-family subdivisions, including Wilmot Farms (constructed sometime between 1998 and 2002 based on aerial imagery), Grayhawk Ranch (constructed sometime between 1998 and 2002 based on aerial imagery), Blackhawk (currently under construction), and other unregulated subdivisions. Interstate 10 is also located within 150 feet of the northeast boundary.

Refer to **EXHIBIT II.B**: EXISTING LAND USES AND NATURAL CONSTRAINTS.

EXHIBIT II.B: EXISTING LAND USES AND NATURAL CONSTRAINTS



C. EXISTING ZONING

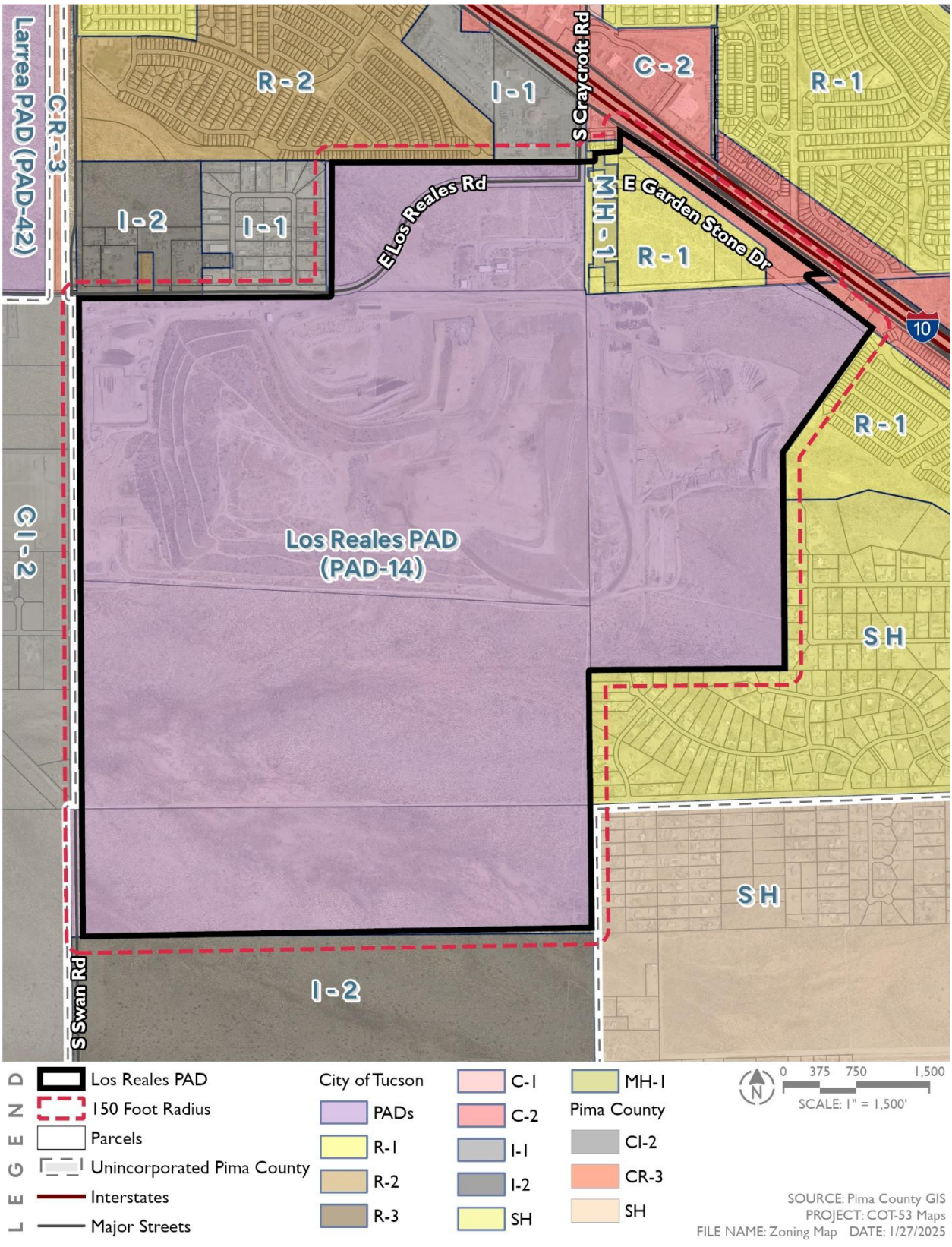
Existing zoning onsite includes the Los Reales PAD (PAD-14), R-1 (Residence Zone), MH-1 (Residence Zone), and C-2 (Commercial Zone). Refer to **EXHIBIT II.C:** EXISTING ZONING.

EXHIBIT II.C: EXISTING ZONING also depicts the existing zoning for all properties within 150 feet of the LRSC, which are also outlined in **TABLE II.C** below.

TABLE II.C: EXISTING ZONING

DIRECTION	ZONING
North	City of Tucson: R-1, R-2, R-3, C-2, I-1, I-2,
West	City of Tucson: I-1, I-2, Larrea PAD (PAD-42) Pima County: CR-3, CI-2
South	City of Tucson: I-2 Pima County: CI-2
East	City of Tucson: SH, R-1, C-2 Pima County: SH

EXHIBIT II.A.2: EXISTING ZONING



D. MAJOR TRANSPORTATION, ROADS, AND CIRCULATION

The following information was derived from a traffic impact analysis (TIA) prepared by CivTech, Inc. The full TIA can be found under a separate cover.

1. Existing Roadways

The existing roadway network within the Study Area includes Garden Stone Drive, Swan Road, Craycroft Road, and Los Reales Road. The roadway classifications were obtained from the Tucson Functionally Classified Roads Map.

Garden Stone Drive is a newly constructed east-west local roadway that provides a connection between Wilmot Road and Craycroft Road through the LRSC and the Blackhawk Subdivision to the east. Garden Stone Drive is a 3-lane road with a lane of travel in each direction, a center two-way left-turn lane (TWLTL), and sidewalks and bicycle infrastructure on both sides of the road. The posted speed limit is 35 miles per hour (mph).

Swan Road is a north-south major collector roadway. North of Los Reales Road, Swan Road is a 3-lane road with a lane of travel in each direction and a center two-way left-turn lane (TWLTL). South of Los Reales Road, Swan Road is a 2-lane road. The roadway begins north at Valencia Road, where it converts from Benson Highway and terminates to the south at Mouse Trail. The posted speed limit is 55 mph within the vicinity of the site.

Craycroft Road is a north-south, 2-lane major collector roadway with one (1) lane of travel in each direction of travel. The roadway begins to the north at Littletown Road and terminates to the south at Los Reales Road. Craycroft Road provides access to the I-10 freeway. The posted speed limit is 35 mph within the vicinity of the site.

Los Reales Road is an east-west major collector roadway. West of Early Avenue, Los Reales Road is a 2-lane road with one (1) lane of travel in each direction. East of Early Avenue, Los Reales Road is a 3-lane road with one (1) lane of travel in each direction of travel and a center TWLTL. The roadway begins to the west at Airport Drive and terminates to the east at Craycroft Road. The posted speed limit is 40 mph within the vicinity of the site.

Other roadways within one-mile that serve LRSC include Interstate 10 (I-10), Valencia Road, Benson Highway, and Wilmot Road.

2. Intersection Configuration

The Swan Road/Los Reales Road intersection is a four-legged intersection with STOP control on all approaches. The NB and SB approaches consist of a left-turn lane and a shared through/right-turn lane. The EB and WB approaches consist of a shared left/through/right-turn lane.

The Craycroft Road/Los Reales Road/Garden Stone Drive intersection was recently constructed to be a four-way intersection four-way with STOP control on all approaches.

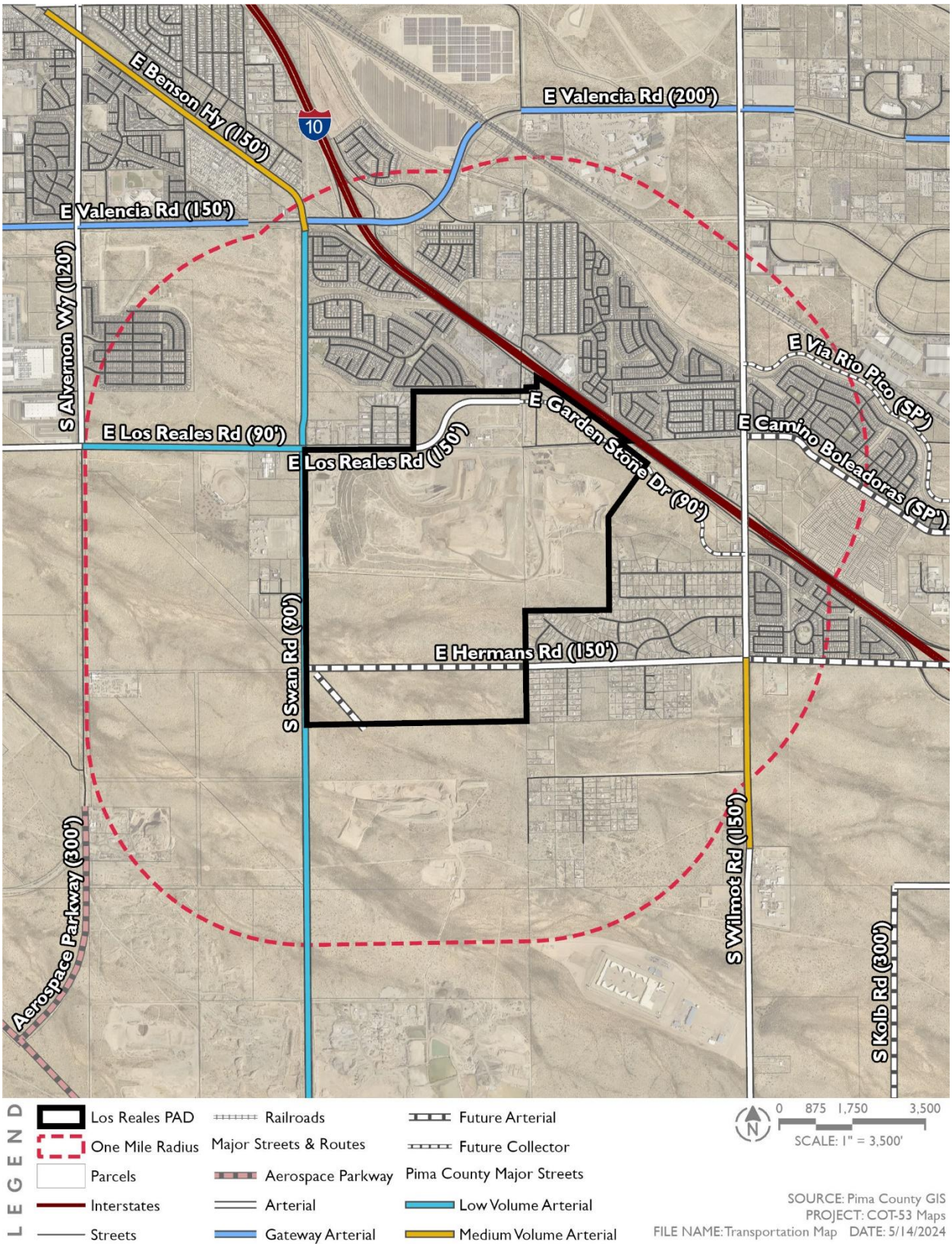
3. Future and Planned Roadways

Projects listed in the Pima Association of Governments 20-year Regional Transportation Plan near the project site have been completed. The next iteration of the Regional Transportation Plan has not been released or approved to allow for the evaluation of planned roadways in the vicinity of the project. Additionally, The City of Tucson has no planned roadways in the vicinity of the site, but their Capital Improvements Program lists two Prop 411 projects that would resurface the loop road through the industrial park adjacent to the project site's northern property line and upgrade traffic signals along Valencia Road.

4. Public Transportation

The landfill is not currently served by public transportation. The nature of landfilling operations, in which vehicles deliver waste materials for disposal, does not lend itself to public transportation.

EXHIBIT II.D: EXISTING ROADWAYS



E. OPEN SPACE, RECREATION, PARKS, AND TRAILS

Although there is a significant amount of vacant land within and around a one-mile vicinity of the LRSC, very little functional open space and public recreation infrastructure has been built in this area.

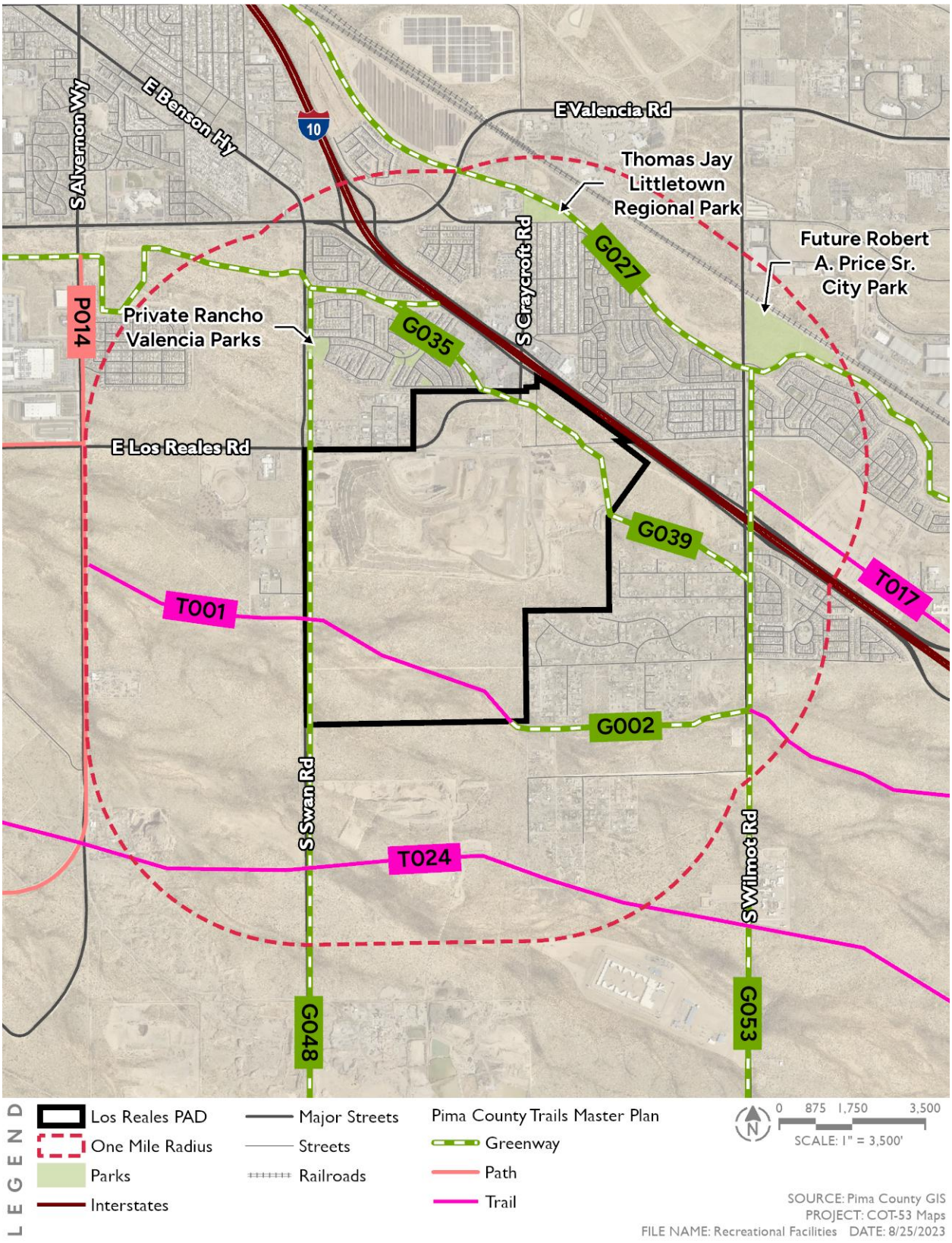
There are no parks, improved trails, or public recreational facilities in the immediate vicinity of the LRSC. Approximately one-half a mile north of the site along Swan Road is the Rancho Valencia Recreation Area. The Rancho Valencia subdivision also contains smaller open space areas and two pocket parks within the neighborhood. The Blackhawk subdivision to the east is currently under construction and is anticipated to feature open space and other recreational amenities.

The nearest public park, approximately one mile north of the LRSC, is the Thomas J. Littletown Regional Park. This park provides various facilities, including ADA-accessible facilities, lighted sports courts, a picnic area, ramadas, a playground, restrooms, drinking water fountains, and a community center. Also, the Julian Wash River Park is located about one mile north/northeast of the site and facilitates connections to the Chuck Huckelberry Loop.

The Pima Regional Trail System Master Plan shows four planned greenways and one trail adjacent to the site. The Swan Road Greenway (G048) is proposed to travel parallel to Swan Road, adjacent to the western property line of the site. The Rodeo Wash Greenway (G039) travels through the site's northeast corner. The Rancho Valencia North Greenway (G035) is north of the site and connects two segments of the Rodeo Wash Greenway through the Rancho Valencia subdivision. The Airport Wash North Greenway (G002) is southeast of the site and connects to the Airport Wash North Trail (T001), which travels through the southwest corner of the site.

Refer to **EXHIBIT II.E**: OPEN SPACE, RECREATION, PARKS AND TRAILS.

EXHIBIT II.E: OPEN SPACE, RECREATION, PARKS AND TRAILS



F. COMMUNITY AND CULTURAL RESOURCES

As shown in **EXHIBIT II.F:** COMMUNITY AND CULTURAL RESOURCES, there are a variety of community and cultural facilities within a one-mile radius of the LRSC.

1. SCHOOLS

Two schools are located within one mile of the LRSC: Craycroft Elementary School and Billy Lane Lauffer Middle School. The site and schools are within the Sunnyside School District. However, the Vail School District boundary is approximately one-half mile east of the LRSC.

2. LIBRARIES

There are no existing libraries within one mile of the LRSC. The library nearest to the site is the Pima County Public Library - Valencia, located at 202 West Valencia Road, approximately five miles west of the site.

3. HEALTHCARE FACILITIES

There is one healthcare facility within one mile of the site, Carondelet St. Raphael's Emergency Center, located at 7401 South Wilmot Road just north of Interstate 10 in La Estancia. The University Physicians Healthcare Hospital, a private facility approximately five miles from the LRSC, is located at 2800 East Ajo Way. Additionally, the Tucson Veteran's Administration Medical Center is located about 6.5 miles from the project site at 3601 South Sixth Avenue.

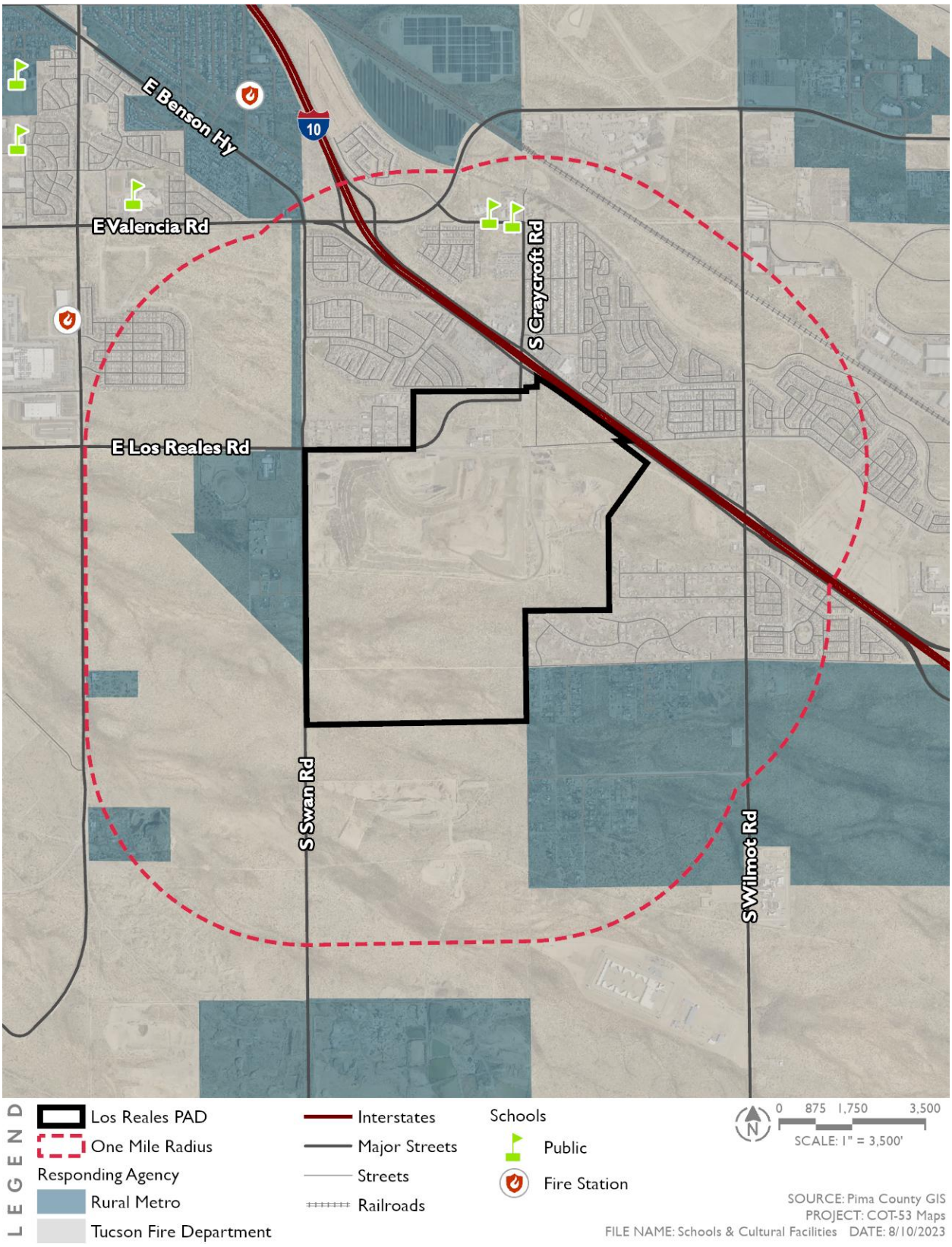
4. FIRE/EMERGENCY VEHICLE SERVICES

The PAD lies within Tucson Fire Department's service area. The nearest Tucson Fire Department facility is Station #22, located approximately one-mile northwest of the project site at 6810 South Alvernon Way. In addition, there is a Rural/Metro Fire Department Station approximately 1.5 miles from the site and a Tucson Airport Fire Station over 2.5 miles west of the site, respectively (see **EXHIBIT II.F:** COMMUNITY AND CULTURAL RESOURCES).

5. LAW ENFORCEMENT SERVICES

The Los Reales Sustainability Campus PAD is served by the City of Tucson Police Department. The nearest police station is approximately six miles northwest of the project site, the Tucson Police Santa Cruz Substation. Several other law enforcement agencies have facilities closer to LRSC, including the Pima Community College Police Department, Arizona State Department of Public Safety Highway Patrol, Davis Monthan Air Force Base Police, and the Pima County Sheriff's Department. However, none of these facilities are within one mile of the LRSC.

EXHIBIT II.F: COMMUNITY AND CULTURAL RESOURCES



G. EXISTING INFRASTRUCTURE AND PUBLIC SERVICES

1. WATER

The LRSC is in Tucson Water's Obligated Service Area. According to Tucson Water records, two main water lines surround the PAD property. Water service into the existing campus is provided from the 8-inch water line that runs along the Los Reales Road right-of-way. This 8-inch water line converts to a 6-inch water line as it moves east towards Craycroft Road. Along this water line, three main stub outs appear to terminate within LRSC.

The first stub out occurs approximately 465 feet east of the northwest corner of the property. This stub out provides fire protection service to one or more of the buildings within LRSC and also serves as a location for a fire hydrant. The second stub out is approximately 1,815 feet from the northwest corner of the property. This location provides the primary water service into LRSC and is also the location of a second fire hydrant. The third stub out is located across from the intersection of Craycroft and Los Reales roads adjacent to the property and is the location of another fire hydrant.

Additionally, a 6-inch valve and closed valve also appear to terminate within the property approximately 2,205 feet west of the Craycroft and Los Reales roads intersection. A 24-inch water line is located along the Hermans Road right-of-way through the southern end of LRSC. There do not appear to be any service connections along this line.

2. SEWER

According to sewer infrastructure data provided by the Pima County Regional Wastewater Reclamation Department through PimaMaps, the public sewer network is within the Los Reales Road, Garden Stone Drive and Craycroft Road right-of-ways and extends into the northern portion of the LRSC (refer to **EXHIBIT II.G.2:** SEWER NETWORK).

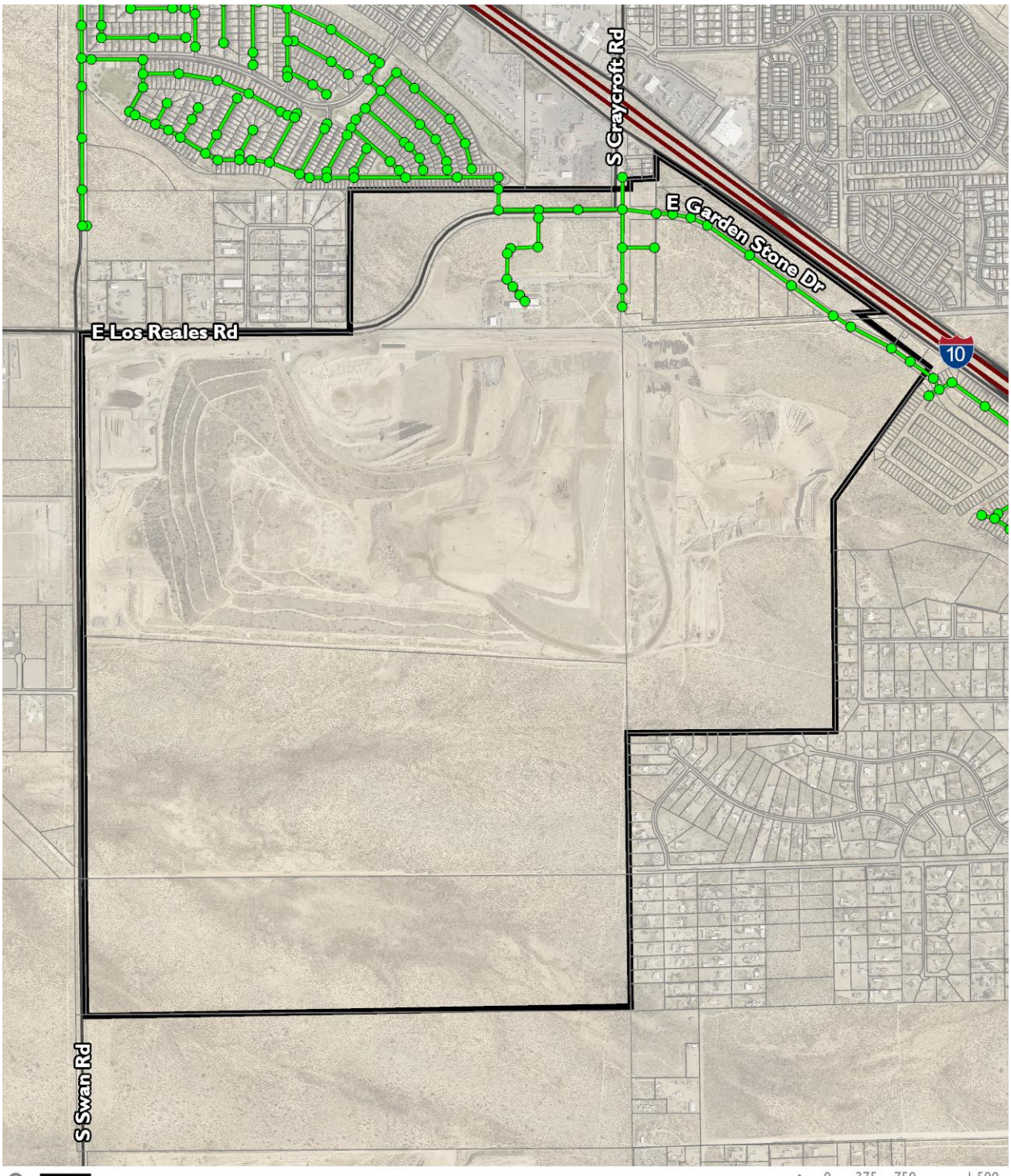
3. RECLAIMED WATER

Tucson Water was consulted, and according to its records, no reclaimed water service is located on or adjacent to LRSC. Tucson Water's long-term water management plans indicate that the reclaimed water system network will eventually move near the LRSC, but at this time, it is unknown when that system will reach the campus.

4. PRIVATE UTILITIES

Electricity and telecommunication services are currently provided to LRSC. The service providers are expected to remain as is with no changes. However, if additional services are required, all necessary approvals will be obtained before installation.

EXHIBIT II.G.2: SEWER NETWORK



H. HYDROLOGY AND WATER RESOURCES

1. OFFSITE DRAINAGE

The LRSC properties are located on the divide between two major watersheds in the Tucson Basin area. The northern portion of the properties drain into the Rodeo Wash watershed, and the southern portion drains into the Airport Wash watershed. Both Airport Wash and Rodeo Wash drain northwest.

Several washes upstream of the Los Reales properties affect the site. The Old Rodeo Wash enters the site on the east side of the property. This study did not evaluate the exact size and properties of this watershed, as flowrates from the Tucson Stormwater Management Study were used. Historically, Old Rodeo Wash was a part of the Rodeo Wash system flowing in a northwest direction. However, due to the historic construction of the landfill in the 1970s and subsequent construction of the existing East Basin, all flows from the Old Rodeo Wash are now captured by the East Stormwater Retention Basin. Flows greater than the 100-year event are diverted to the Airport Wash watershed via a spillway and channel sized for the 100-year storm event.

Additionally, the North Fork of the Airport Wash crosses the site's southern portion. This watershed's exact size and properties were also not evaluated due to information being available from the Tucson Stormwater Management Study.

Unnamed tributaries to the North Fork Airport Wash also affect the site. Additionally, numerous small watersheds with flowrates under 100 cubic feet per second (cfs) enter the site.

The location of these washes and watersheds is shown on **EXHIBIT II.H.1:** STORMWATER MANAGEMENT, PRE-DEVELOPMENT PLAN.

2. ONSITE DRAINAGE

Onsite drainage in the north portion of the LRSC has changed significantly since the adoption of the PAD in 2006. The Preliminary Drainage Report submitted as part of the original PAD effort evaluated the onsite drainage for the non-landfill portions of the property. Several additional reports have continued to evaluate onsite drainage of the non-landfill portions of the property as part of new development in the north portion. These drainage reports are listed below.

- *Engineering and Environmental Consultants, Inc. "Drainage Report, Los Reales Road Roadway Re-Alignment, August 15, 2007, revised: November 19, 2007*
- *Drainage Report for Los Reales Landfill – Entrance Facilities, Cornerstone Environmental, October 2010*
- *ByFusion Drainage Report, May 2024, DOWL*
- *LRSC – Linear Trail & Intersection Drainage Report, under review – June 2024, DOWL*

A report entitled "Los Reales Onsite Drainage Management" prepared for the landfill portion of the site was included in the Solid Waste Facility Plan submitted to ADEQ and the Preliminary Drainage Report.

There are two watercourses on the northern portion of the property, which may be affected by the non-landfill development of the property. Both watercourses are within the Rodeo Wash watershed. North 1 Unnamed watercourse appears to represent the historic alignment of the Rodeo Wash, although the upstream portion has been cut off by previous development at the LRSC. The North 2 Unnamed watercourse has a drainage area that begins on the northern fringe of the eastern part of the LRSC, flows across undeveloped and former mobile home properties being added to the LRSC, and then crosses the Los Reales and Craycroft intersection with flow onto the commercial property at the northwest corner of the intersection. The North 1 Unnamed Wash has been impacted by development at the LRSC since the adoption of the PAD in 2006. North 2 Unnamed Wash is in largely the condition outlined in the original PAD. Please refer to the *Drainage Report for Los Reales Landfill – Entrance Facilities* dated October 2010 by Cornerstone Environmental and the *LRSC – Linear Trail and Intersection Drainage Report* by DOWL for information on changes to the North 1 Unnamed wash since it's initial evaluation by the 2006 PAD. The locations of these watersheds are shown on **EXHIBIT II.H.1**.

3. Applicability of City Floodplain Ordinances

Watercourses that convey discharges greater than 100 cfs in a 100-year design storm event are considered regulatory by the City of Tucson. As such, their associated floodplains have been mapped in accordance with City regulations.The areas subject to regulations include the North Fork of Airport Wash and its associated un-named tributaries and some un-named headwaters to Rodeo Wash. Development in these areas will require a Floodplain Use Permit. of the regulatory floodplain area will remain undeveloped and will be protected as part of the set-aside areas designated for compliance with the City's Native Plant Preservation Ordinance (NPPO).

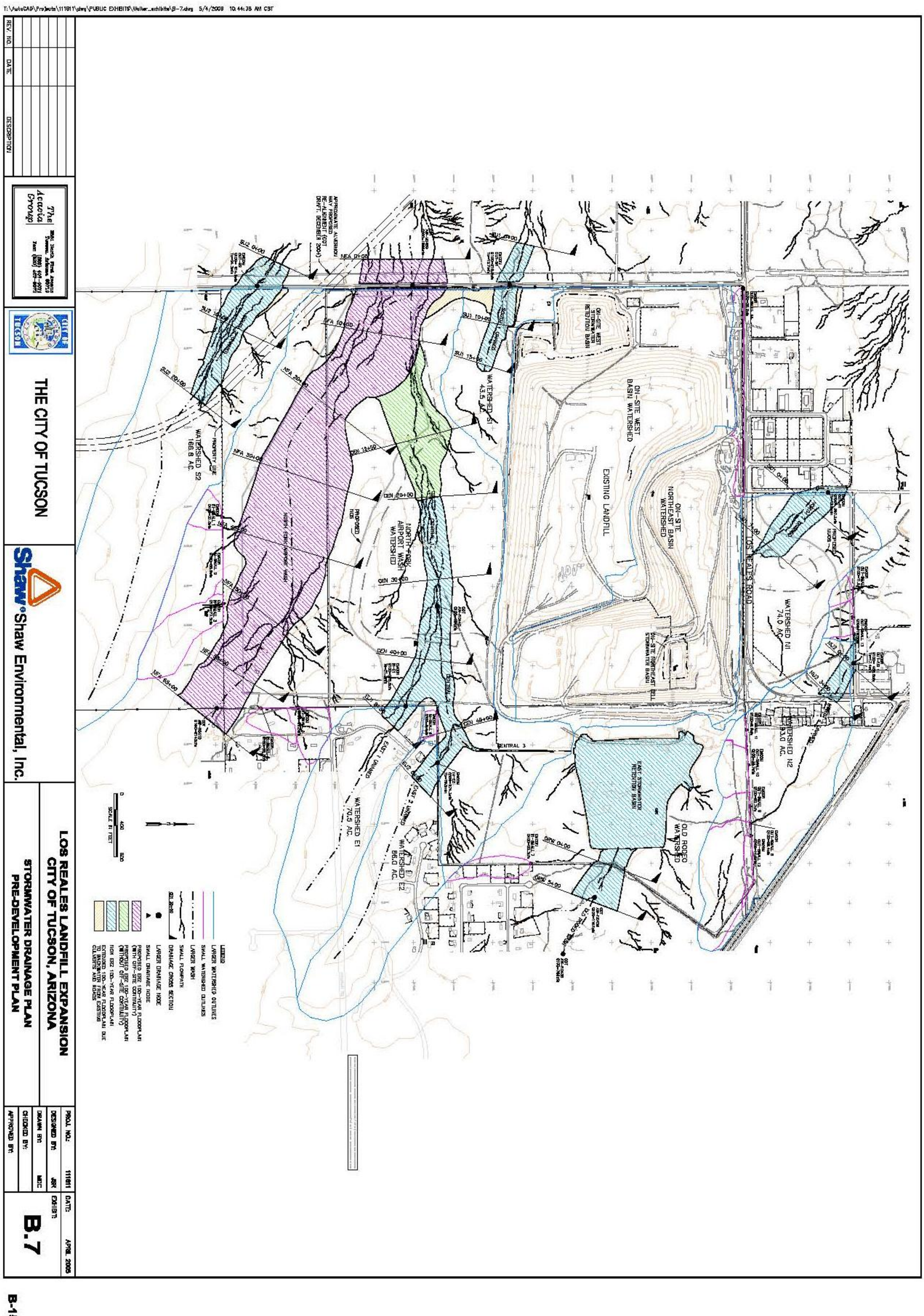
The primary regulatory floodplain areas are affected include the headwaters of Rodeo Wash and one of the tributaries (NFAW-T1) of the North Fork of Airport Wash. In addition, the headwaters of another tributary to the North Fork of Airport Wash (NFAW-T2) will be detained in a retention/detention basin immediately upstream of Swan Road. The current inter-watershed diversion of historic Rodeo Wash flows from east of the landfill property into the Airport Wash basin watershed will be eliminated. These flows will be impounded in a retention basin east of the landfill footprint.

Throughout the LRSC property, finished floor elevations of occupied buildings will be maintained at least one foot above the adjacent 100-year water surface elevation. As a consequence of the floodplains, development along the regulatory watercourses will adhere to the minimum erosion hazard setback requirements, which account for the lateral migration of the channel. These setbacks are calculated based on the methodologies approved by the City, are proportional to the square root of the discharge, and provide a factor of safety that accounts for the curvature of

the channel. Where approved by the City, the installation of bank protection that meets City requirements may be used to reduce required setbacks.

WASH AND ERZ ORDINANCE REQUIREMENTS

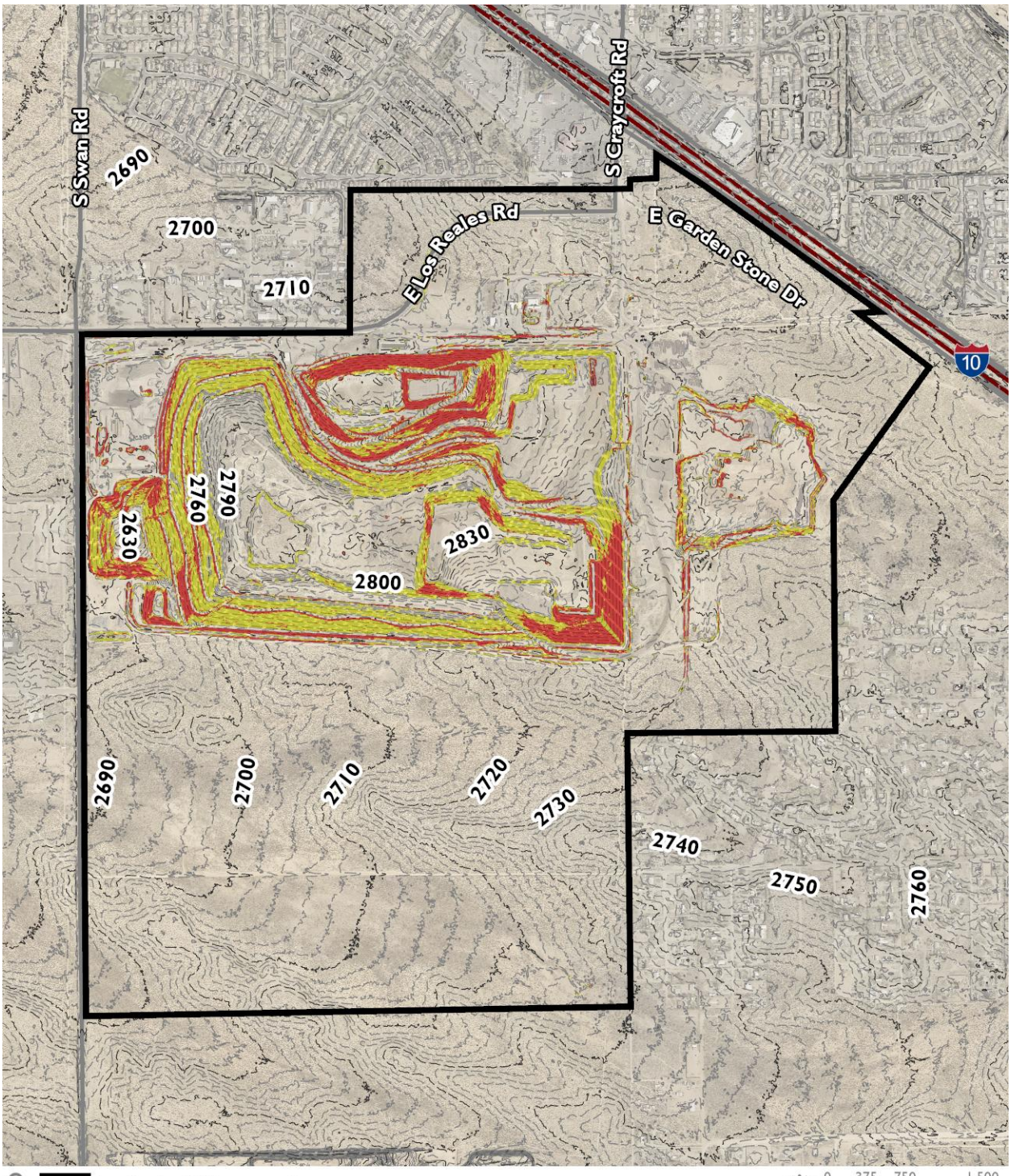
The only watercourses on the property potentially subject to these requirements are the North Fork of Airport Wash and one of its tributaries (NFAW-T1), which are designated as Proposed ERZ Washes. The planned development will not affect the North Fork of Airport Wash, as it is within the proposed set aside area for NPPO compliance. The portion of the NFAW-T1 tributary subject to the proposed ERZ designation is not well defined. As mentioned previously, a portion of this tributary upstream of the confluence with the main North Fork of Airport Wash is proposed to be diverted along the campus' footprint and this diversion may impact a small portion of the proposed ERZ designation for this tributary. The overall landscaping plan for the proposed LRSC should be considered in establishing mitigation requirements for this disturbance.


THE CITY OF TUCSON
Shaw Environmental, Inc.
LOS REALES LANDFILL EXPANSION
CITY OF TUCSON, ARIZONA
STORMWATER DRAINAGE PLAN
PRE-DEVELOPMENT PLAN
B.7
APRIL 2008
EXISTING LANDFILL
LOS REALES ROAD
NORTH FORK AIRPORT WASH WATERSHED
ON-SITE NORTHEAST BASIN WATERSHED
ON-SITE WEST BASIN WATERSHED
EAST STORMWATER RETENTION BASIN
OLD RODEO WATERSHED
WATERSHED N1 74.0 AC.
WATERSHED N2 93.0 AC.
WATERSHED S1 43.5 AC.
WATERSHED S2 166.8 AC.
WATERSHED E1 70.5 AC.
WATERSHED E2 86.0 AC.
B-15

I. TOPOGRAPHY

Topography on the site generally slopes down from east to west; please see **EXHIBIT II.G.6:** TOPOGRAPHY. The existing landfill/waste footprint is the dominant topographic feature with a peak elevation of approximately 2,815 feet with approximately 80- to 100-foot tall side slopes. The property slopes from east to west from approximately 2,742 to 2,700 feet south of the permitted landfill footprint. The land east of the LRSC rises from the west to the east with an approximate elevation of 2,736 feet to 2,756 feet.

EXHIBIT II.I: TOPOGRAPHY



LEGEND

Los Reales PAD

Surface Slope

15 - 25%

25 - 100%

Interstates

2-Foot Contour

10-Foot Contour

N

0 375 750 1,500

SCALE: 1" = 1,500'

SOURCE: Pima County GIS
PROJECT: COT-53 Maps
FILE NAME: Topography Map DATE: 8/31/2023

J. VEGETATION AND WILDLIFE

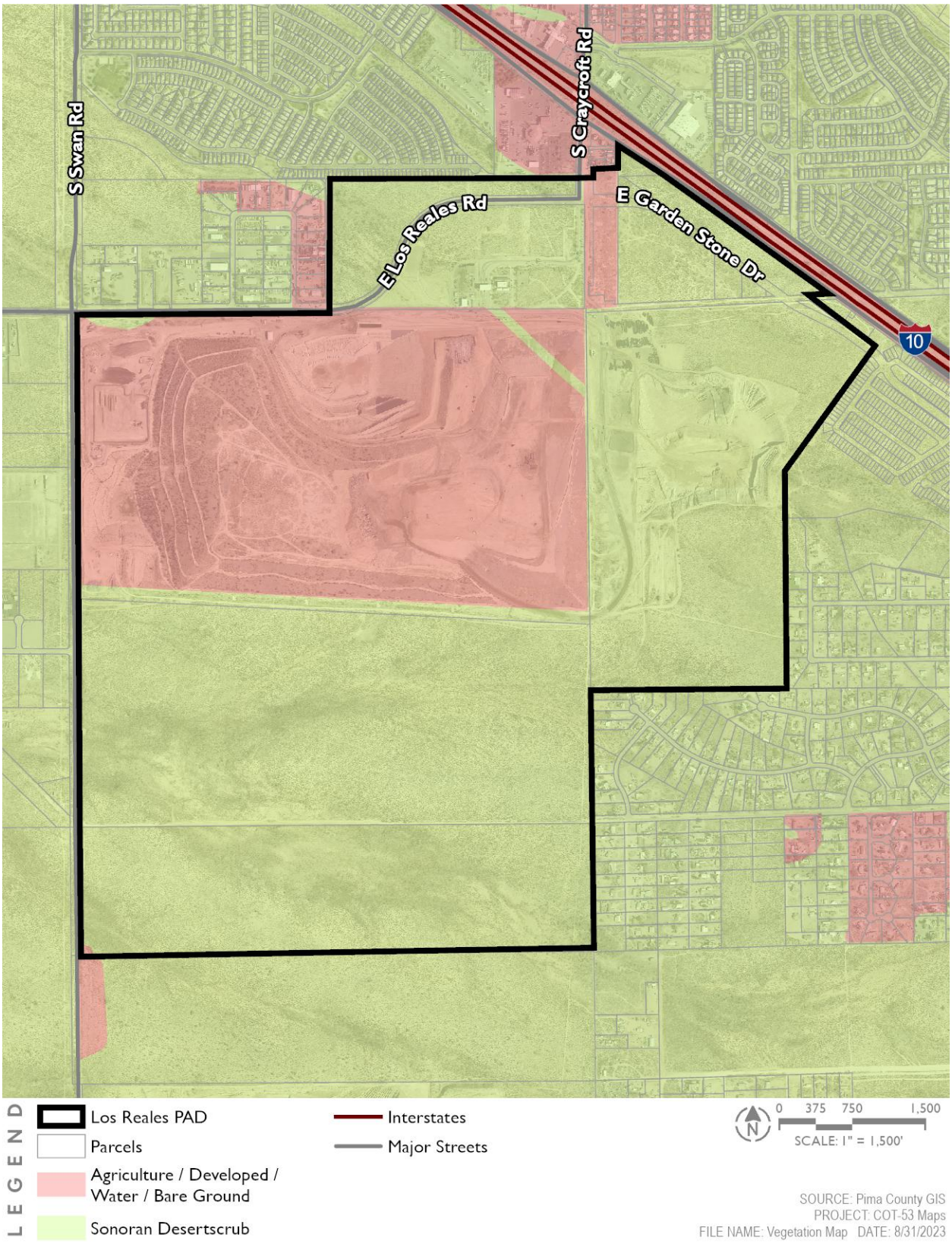
1. EXISTING VEGETATION

The LRSC is currently in operation and has been disturbed previously in and around its existing operations, as seen in **EXHIBIT II.B.1:** ONSITE USES AND NATURAL CONSTRAINTS. Undisturbed natural vegetation on the property is mainly located outside of current onsite activities. Vegetation density and composition vary depending upon relative proximity to the numerous washes and tributaries that affect the site. The site is within the Agriculture/Developed/Water/Bare Ground Biotic Community, while the remainder of the LRSC is within the Sonoran Desertscrub Biotic Community (refer to **EXHIBIT II.J.1**: EXISTING VEGETATION). The plant species within this community include creosote bush, mesquite, palo verde, cholla, barrel cactus, yucca, ocotillo, desert hackberry, triangleleaf bursage, and several other species.

2. WILDLIFE HABITAT

The Arizona Game and Fish Department's (AGFD) Heritage Data Management and Project Evaluation Program was consulted utilizing the Online Environmental Review Tool to determine occurrences of special species on the property. As shown in *Appendix A: Arizona Game and Fish Summary Report,* there are nine special status species that have been documented within a three-mile radius of the property, including Gila Longfin Dace, Western Burrowing Owl, Cactus Wren, Bailey's Pocket Mouse, Pima Pineapple Cactus, Monarch, Sonoran Desert Toad, Cave Myotis, and Regal Horned Lizard.

EXHIBIT II.J: EXISTING VEGETATION



K. GEOLOGY AND SOILS

1. GEOLOGICAL FEATURES

The Los Reales Sustainability Campus PAD is located near the center of the Tucson Basin, which is a broad, 1,000-square-mile area in the upper Santa Cruz River Basin. The Tucson Basin is a northwest trending alluvial valley bounded by the Santa Rita, Empire, Rincon, Tanque Verde, Santa Catalina, and Tortolita Mountains to the east and the Sierrita, Black, and Tucson Mountains to the west. The area is drained to the northwest by the Santa Cruz River and its principal tributaries including Rillito Creek Pantano Wash and Canada del Oro.

The underlying geologic units consist of the Pantano Formation overlain by the Tinaja beds, Fort Lowell Formation, and surficial deposits. The units comprise a single aquifer and are up to 2,000 feet thick and consist mainly of loosely consolidated to moderately cemented silty sand and gravel.

2. SOILS

Previous studies prepared on behalf of ESD have indicated the following soils are present:

- SILTS AND CLAYS: Typically light brown, hard, very dry, low plasticity, with trace sand, and lightly to highly cemented. All fine grained soils encountered at the site fall into this category.

- COARSE GRAINED SANDS: Typically light brown, well graded, sub-angular to sub-rounded, with trace gravel, very dry, lightly to highly cemented. These sands tend to have very high SPT blow counts. The blow counts tend to be more dependent on the degree of cementation rather than the relative density of the sands. Approximately 55% of the soil encountered in the borings was this sand.

- FINE GRAINED SANDS: Typically light brown, poorly graded, with trace coarse grained sand, very dry, lightly to moderately cemented. This sand is similar to the coarse grained sand except for the grain size and grading. Approximately 10% of the soil encountered in the borings was this sand.

L. VIEWS

As shown in **EXHIBIT II.L.1:** PHOTO LOCATIONS and **EXHIBIT II.L.1:** SITE PHOTOS, the LRSC can easily be seen from Interstate 10 just north of the LRSC entrance and from surrounding major roadways. Current views of the LRSC are marked by the existing landform that has been on the site for several decades. This landform is the most prominent object at the LRSC and can be seen for nearly a mile in all directions when looking toward the site. *Photos #1* and *#2* show that the landform screens much of the views to the south except for the entrance, weigh station, offices, and recycling center. As seen in *Photo #3*, when looking east across the site, the landform, again, screens much of the site except for the uses taking place west of the landform within the LRSC. As seen in *Photo #4* within the LRSC, specifically the eastern boundary, when looking east, the majority of properties abutting the eastern boundary are residential with varying screening treatments. As seen in *Photo #5*, views to the north/west are screened mainly by the landform except for the southern portion of the LRSC, which is undeveloped. This area provides distant views of the Tucson International Airport. *Photo #6* showcases views to the west across the portion of the site north of the existing landform. Existing vegetation on site screens much of the views to the west except for distant views of the Tucson mountains.

EXHIBIT II.L.1: PHOTO LOCATIONS

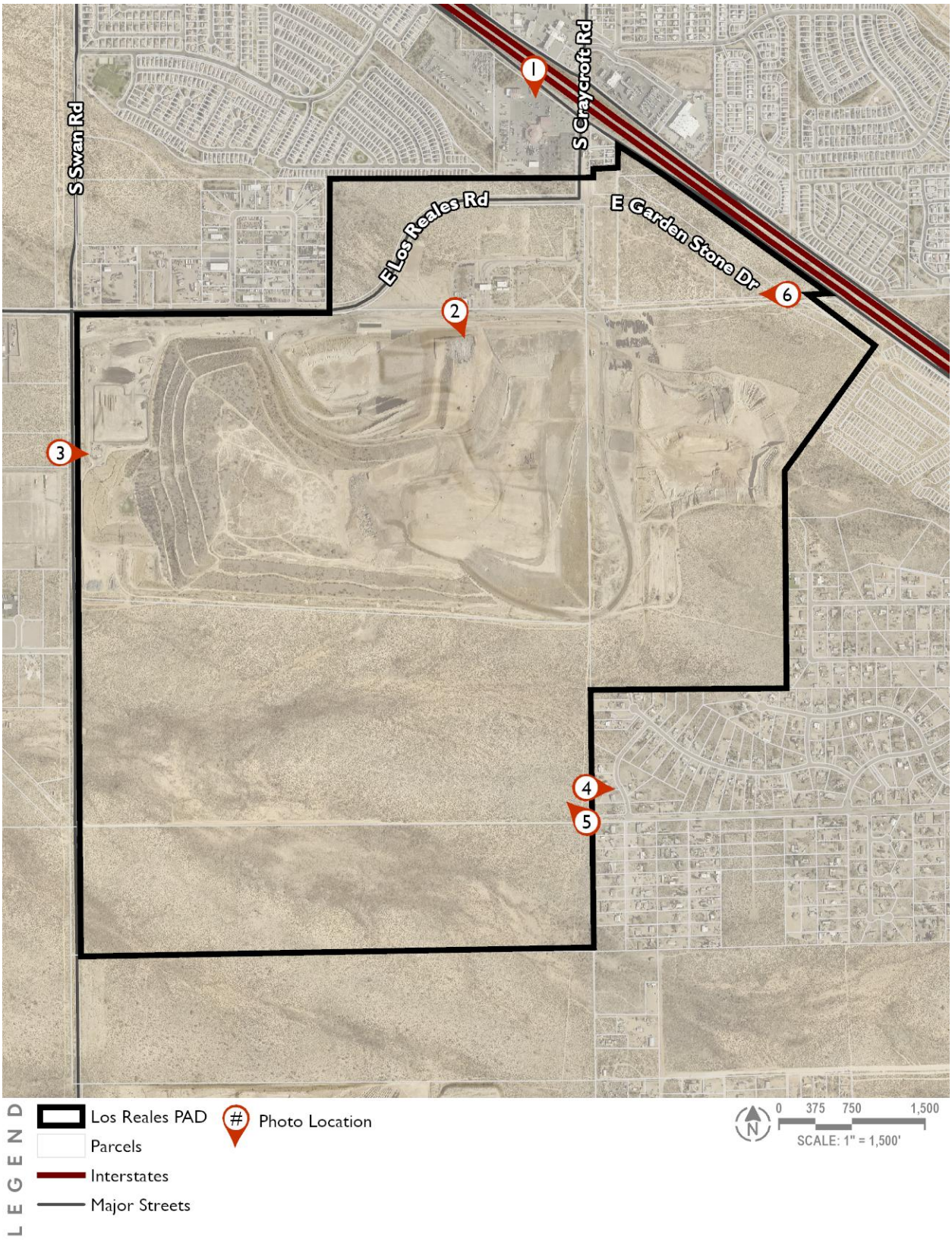


PHOTO #1: View of the LRSC from Interstate 10 facing south.

PHOTO #2: View of the LRSC from the interior access road facing south

PHOTO #3: View of the flare facility at the LRSC from Swan Road facing east.

PHOTO #4: View of the screening treatments on residential properties abutting the eastern boundary of the LRSC.

PHOTO #5: View of the LRSC from the eastern boundary at the end of Hermans Road facing northwest.

PHOTO #6: View across the vacant northern parcel of the LRSC from the eastern boundary at the end of Hermans Road facing northwest.

M. CULTURAL RESOURCES

Since its inception in 1967, the LRSC has conducted various site-wide activities associated with operating the landfill. Over the years, as the landfill expanded, multiple cultural resource surveys were performed by Desert Archaeology, Inc. to identify and determine if items of cultural significance were present on the property, including in 1996 as part of the Black and Veatch Solid Waste Facility Plan, and again in 2002 as part of the landfill expansion analysis which ultimately led to the creation of the Los Reales PAD in 2006.

Upon completion, Desert Archaeology, Inc. found no significant historical or archaeological material on the site and recommended that if cultural artifacts are discovered during grading or trenching, the City of Tucson Historic Preservation Office shall be contacted immediately to assess the resource.As part of their 2022 'Build Back Better' grant application, the City conducted cultural and biological surveys, which suggested similar findings to the studies performed at the original time of PAD adoption or with subsequent development plans/applications.

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT (PAD-13)

PART III: PLAN PROPOSAL

THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

III. PAD DISTRICT PROPOSAL

Part III: PAD District Proposal provides a comprehensive vision for developing the LRSC, an approximately 1,136-acre site (including public rights-of-way) that encompasses the City's primary waste and resource management facility. The LRSC PAD contemplates three types of campus activities (Waste Reclamation, Community Resources, and Eco-Commerce) intended to be governed by a single land use designation (Sustainability Campus District) as well as an open space/recreation land use designation (Open Space + Recreation District). Combined, these designations or districts are meant to re-envision the Los Reales Landfill as a cutting-edge zero-waste sustainability campus that will continue to provide a critical service to the region and complement the surrounding businesses and neighborhoods. The development regulations and standards presented within the LRSC PAD have been crafted to optimize the campus' current functions with an eye to the future to ensure sustained longevity by becoming an economic driver, a community resource center, and a recreational asset.

Modeled after the City of Tucson's I-2 (Heavy Industrial) Zone, the LRSC PAD will provide development regulations and design standards that foster sustainable waste and resource management practices and demonstrate sensitivity to the surrounding neighborhoods and the natural environment. The proposal presented herein responds to the site analysis, technical research, and community values.

A. LOS REALES SUSTAINABILITY CAMPUS LAND USE PLAN

As evidenced by the new development occurring in and around the campus, LRSC has successfully integrated with the surrounding environment, largely due to the development standards and regulations currently regulating the campus. Building off these established development parameters, and in response to the overall shift in operations, coupled with the changing urban fabric and need for community open space, the LRSC PAD contemplates two primary land uses, the Sustainability Campus District and Open Space + Recreation District (refer to **EXHIBIT III.A:** LRSC LAND USE PLAN). While the exact locations and boundaries for each activity area are yet to be determined, the Sustainability Campus District proposes three primary development activities within the campus: waste reclamation, community resources, and eco-commerce. **EXHIBIT III.A.2:** CONCEPTUAL ACTIVITY AREAS provides a conceptual illustration for where ESD anticipates each development activity occurring within the LRSC for planning purposes.

1. SUSTAINABILITY CAMPUS DISTRICT

a) Waste Reclamation Activity Area

Occupying approximately 764 acres, the Waste Reclamation Activity Area serves as the primary function of the LRSC and is the hub for managing waste and resources, catering to the community's waste disposal needs while adhering to sustainable practices. As the future waste disposal needs of the community are unknown, the boundaries of this planning area are conceptual and may need to be expanded or contracted to continue as the primary function of the LRSC. It houses various facilities, including landfill cells for waste disposal, administrative and operational support structures, weigh scales, and

material recovery zones for salvaging valuable resources. This activity area also features composting areas, facilities for processing organic waste, and innovative systems to harness methane gas for energy recovery. In addition, the Waste Reclamation Activity Area promotes ecological balance through reforestation initiatives and demonstrates adaptability by allowing for the construction of additional landfill cells to accommodate future waste disposal demands and other users when the current landfill's lifespan has ended. Multi-use paths and associated parking areas may also be provided in these areas.

b) Community Resources Activity Areas

The Community Resources Activity Areas are contemplated to cover approximately 8 acres of the LRSC and are intended to serve as a vibrant platform within the LRSC, fostering public engagement and education about sustainable practices and effective waste management. These activity areas are dedicated to providing valuable opportunities for the community to learn and connect with the principles upheld by the LRSC. Anchored by an education resource center and a tree growing center, the Community Resources Activity Areas offer an immersive experience that enlightens visitors about LRSC's mission, the City's ongoing sustainability program and initiatives, and the nuances of effective waste management practices.

A distinctive feature of the Community Resources Activity Areas is a thoughtfully designed interpretative nature trail system, which invites exploration and connection with the natural surroundings. The trail system provides recreational value and imparts insights into ecological balance and environmental stewardship. The Community Resources Activity Area may support waste reclamation activities; however, those activities shall be limited to administrative and operational support buildings, drainage facilities, or other ancillary uses compatible with the trail system. The storage of waste or other hazardous materials is prohibited in this area.

c) Eco-Commerce Activity Areas

Key to the overall success of the LRSC is establishing a circular economy that coalesces commerce with sustainable waste management practices. Occupying 90 acres at various locations within the LRSC, the Eco-Commerce Activity Areas serve as a conduit for commerce by providing shovel-ready opportunities for compatible businesses such as solid waste/resource management companies, re-use stores (e.g., Habitat for Humanity's HabiStore or ReStore), and material processing/manufacturing facilities, to co-locate within the campus. This activity area also provides opportunities for resource recovery operations and other ancillary support facilities and highlights the LRSC's role as a progressive community asset where businesses can thrive. Because the needs of future users is not known, the boundaries of the Eco-Commerce Activity Areas may change to accommodate more functional site planning and additional interest from businesses wishing to develop in the LRSC. While final designs and configurations have not yet been

determined, **EXHIBIT III.A.3:** ILLUSTRATIVE ECO-COMMERCE ACTIVITY AREA provides an illustration of what the Eco-Commerce Activity Area adjacent to Interstate 10 may look like.

2. Open Space + Recreation District

Encompassing approximately 274 acres of the LRSC, the Open Space + Recreation District contains areas that provide a vital function to the community through the preservation of critical floodplains and riparian habitat and active/passive recreation provisions. Recognizing that various residential neighborhoods border LRSC to the east, the Open Space + Recreation District provides a substantial buffer from landfill and waste reclamation operations while providing active and passive recreation facilities, including natural trails, multi-use paths, and a large community recreation area in the northeast corner of the LRSC intended to serve the community. The community recreation area may feature ball fields, splash pads, play equipment, walking paths, shade structures, bathrooms, and drinking fountains. While final designs and configurations have not yet been determined, **EXHIBIT III.A.4:** ILLUSTRATIVE COMMUNITY RECREATION AREA provides an illustration of what the community recreation area within LRSC may look like.

EXHIBIT III.A.1: LRSC LAND USE PLAN

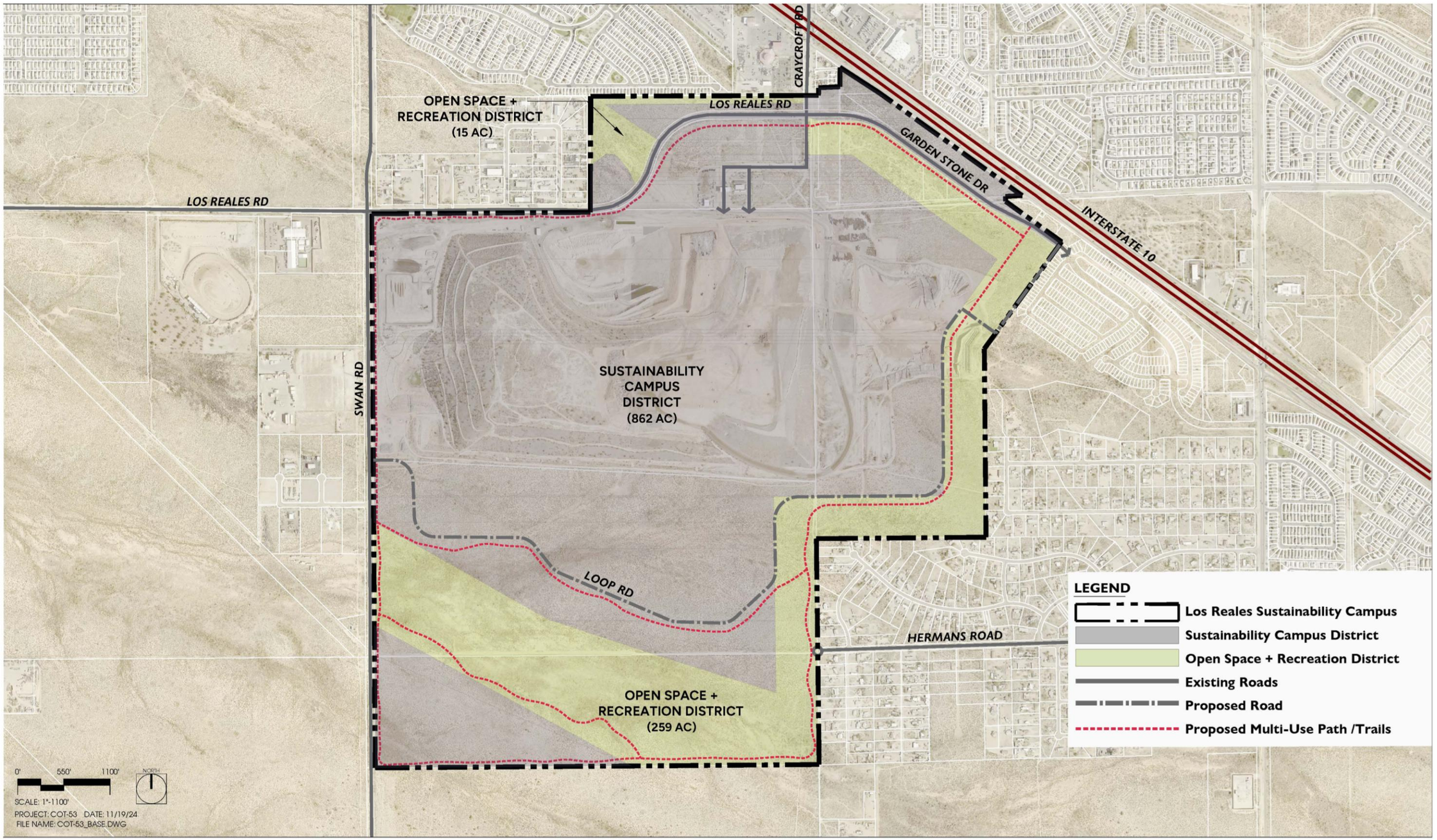


EXHIBIT III.A.2: CONCEPTUAL ACTIVITY AREAS

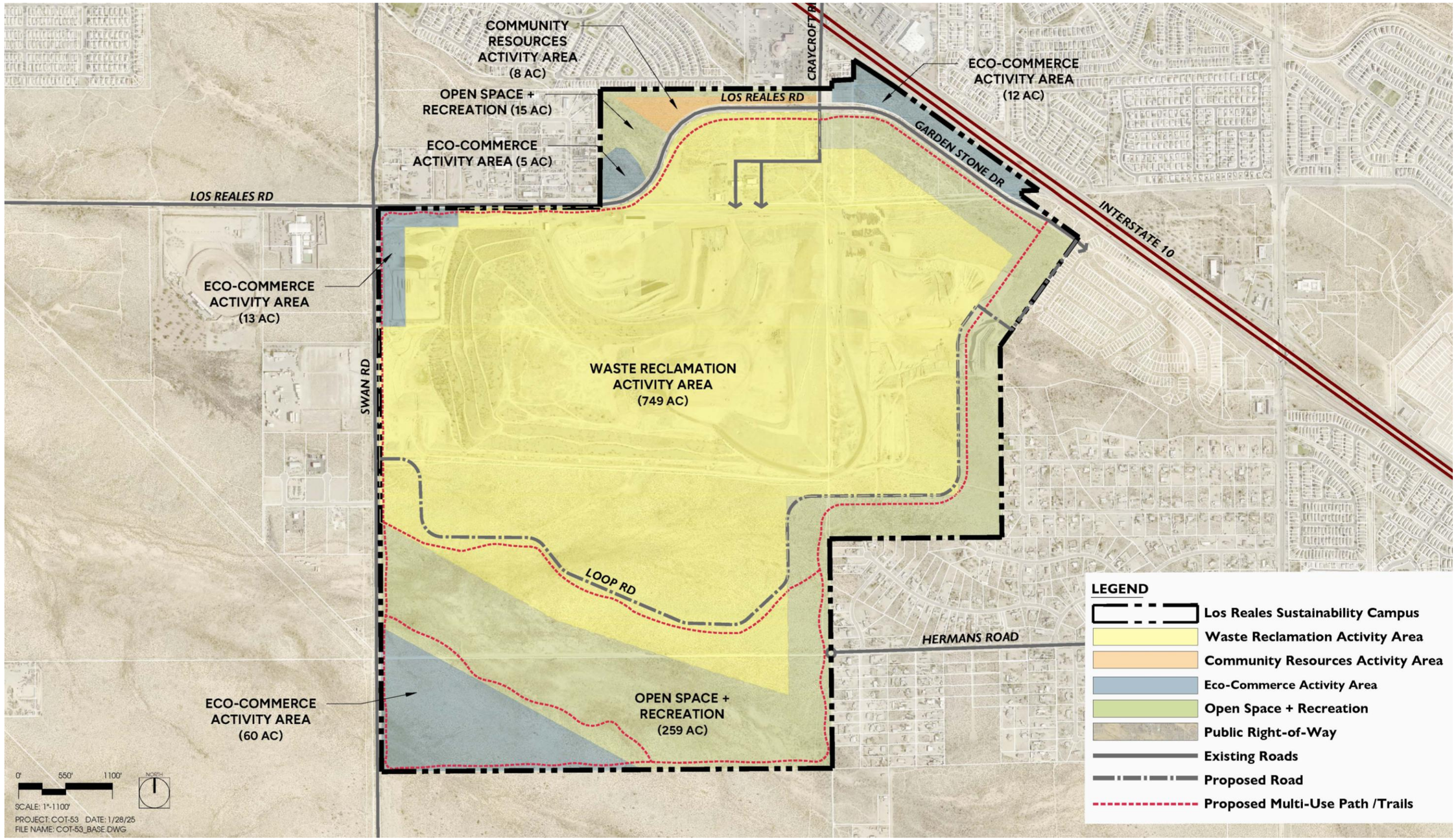


EXHIBIT III.A.3: ILLUSTRATIVE ECO-COMMERCE ACTIVITY AREA

EXHIBIT III.A.4: ILLUSTRATIVE COMMUNITY RECREATION ACTIVITY AREA

B. CIRCULATION PLAN

Fundamental to the LRSC is an integrated circulation network consisting of public streets, internal access roads, and multi-use paths (refer to **EXHIBIT III.B.1:** LOS REALES SUSTAINABILITY CAMPUS LAND USE PLAN). Primary access to LRSC is gained through a private access road extending southwardly from Craycroft Road and Los Reales Road/Garden Stone Drive. Los Reales Road bisects the Community Resources Activity Areas and provides direct access to the proposed Eco-Commerce Activity Areas and Swan Road. Garden Stone Drive, a newly constructed public road extending to Wilmot Road through the neighboring Blackhawk subdivision to the east, is intended to serve the new community recreation area and the proposed commerce area in the northeast portion of the campus adjacent to the interstate. There are four proposed site access driveways along the portion of Garden Stone Drive within the LRSC.

Swan Road borders the site's western edge and provides secondary access to the LRSC. This access point is referred to as the 'west gate entry' and is used by city employees, contractors, and other authorized users of the LRSC.

Internal roads will be provided within each activity area to facilitate connectivity between waste management and resource recovery operations and other activities anticipated to occur at LRSC. Internal circulation may consist of temporary roads made up of unpaved, compacted dirt or gravel-surfaced pedestrian area access lanes (PAALs) that serve the Waste Reclamation Activity Area or permanent PAALs built per city standards that serve the Community Resources or Eco-Commerce Activity Areas. Alertnative materials for street surfacing that further sustainability practices may be utilized upon approval from the ESD Director. To facilitate an alternative circulation pattern through LRSC, a new internal loop road will be developed to eventually connect Swan Road to Garden Stone Drive. While the timing for development and actual alignment is unknown, the loop road will be designed based on future analysis and to meet the needs of the ESD.

CivTech, Inc. has prepared a traffic impact analysis, submitted under separate cover, to analyze LRSC's impact on the public street network and offers recommendations for improvements.

C. LANDSCAPE PLAN

The goals for landscaping within the Los Reales Sustainability Campus are:

- *To preserve those areas with the highest habitat and wildlife value;*
- *To integrate substantial buffers between the campus and the adjacent residential properties;*
- *To showcase the campus as a community asset from a recreational and open space perspective and*
- *To incorporate green infrastructure and low-impact development techniques.*

To achieve these goals, the Landscape Plan for LRSC contemplates landscape borders, natural open space, revegetated areas, community recreation areas, and landscaping in parking areas. As the development of LRSC progresses, landscape plans will be prepared and submitted for review with future development packages to ensure compliance with the UDC and this PAD.

1. Street Landscape Borders

Street landscape borders will be provided along Los Reales Road, Craycroft Road, Garden Stone Drive, and Swan Road. These borders will be developed utilizing drought-tolerant plant species and materials typical to the surrounding area, and shallow depressed basins will be incorporated as required by the UDC to maximize rainwater harvesting opportunities. Trails and other multi-use paths that are natural in character may be located within the street landscape borders.

2. Perimeter Landscape Borders

Perimeter landscape borders will be provided along the eastern and northern boundaries where residential communities abut the campus to create a substantial buffer. Because of their breadth, these borders are intended to remain largely natural except where disturbances occur for recreational amenities, such as multi-use paths, trails, etc.

3. Natural Open Space

Natural open space will be provided in various locations throughout the sustainability campus. These areas are generally confined to wash corridors, floodplains, and riparian habitats. Encroachment into natural open space areas may be necessary to accommodate waste reclamation, eco-commerce, or recreational activities at the campus. In areas where encroachment occurs, native plant inventories, preservation plans, and mitigation plans shall be submitted and reviewed at the time of development.

4. Revegetated Areas

Areas anticipated to be revegetated with a seed mix include the landfill footprint as it is capped and where possible, and in other disturbed areas.

5. Community Recreation Area

The notion of providing meaningful recreational amenities that serve the larger community is critical to shifting the perspective of the campus as an open space asset. The community recreation area planned in the northeast portion of the LRSC is envisioned to serve the larger community and may feature sports courts, soccer fields, a splash pad, restrooms, parking areas, picnic areas, play equipment, and the like. Native plant material and drought-tolerant plant species particular to the Sonoran Desert will be incorporated into the overall landscape design.

6. Campus Landscaped Areas

Campus Landscaped Areas consist of locations where formalized landscaping is installed, such as in parking areas, around building foundations, and in amenities areas, to serve aesthetic and functionality purposes. Canopy trees, shrubs, groundcovers, and rainwater harvesting basins will be integrated into the overall design to provide shade, mitigate urban heat island effect, control impact of stormwater runoff and sequester carbon emissions.

D. DRAINAGE PLAN

Since portions of the LRSC are located within a critical basin, critical basin detention and first flush retention requirements would be triggered at the time of development. These requirements would need to be satisfied through a drainage report/hydrology analysis to be submitted to the city alongside the other necessary documents and plan sets to obtain a permit for the proposed work.

If the final proposed design of new development at the LRSC decreases or doesn't increase the site's overall impervious surface, then no retention/detention would be required with the formal drainage report/hydrology analysis. If retention/detention is required to achieve a reduction of flows, development within the LRSC may integrate water harvesting techniques in the design of the property. The methods used onsite may include directing surface flow from the parking areas or other large impervious surfaces into landscape areas, using structures to capture runoff for later use, dispersing runoff into the soils by increasing the amount of exposed surface area, and utilizing mulch to the maximum extent possible to reduce evaporation and retain moisture in the soil. Decomposed granite (DG) should be avoided in water harvesting areas due to its ability to clog soil pores and reduce infiltration rates. Excess volumes from existing basins within the LRSC may be used by future development within the LRSC to achieve their retention requirements as suggested by City of Tucson engineering in the LRSC – Linear Trail & Intersection Drainage Report by DOWL.

E. GRADING PLAN

The main goal of the grading plan for the LRSC is to mitigate visual impacts and create attractive views of the sustainability campus, particularly the Waste Reclamation Activity Area, for nearby residents and travelers on adjacent roads. Much of the grading criteria for the solid waste footprint are controlled by the Arizona Department of Environmental Quality, which sets the maximum side slope gradient at 3:1 and the minimum gradient on top of the solid waste footprint at 33:1. These gradients are set in order to minimize erosion of the soil cover, provide slope stability and reduce ponding over the waste disposal area. Other areas within the Waste Reclamation Activity Area outside the solid waste footprint will either remain as natural open space or be filled/graded to create an even surface with the surrounding area, allowing for land reclamation after the closure of the landfill.

The remainder of the LRSC outside of the Waste Reclamation Activity Area will be graded at the time of development and subject to the standards of the City of Tucson's Unified Development Code.

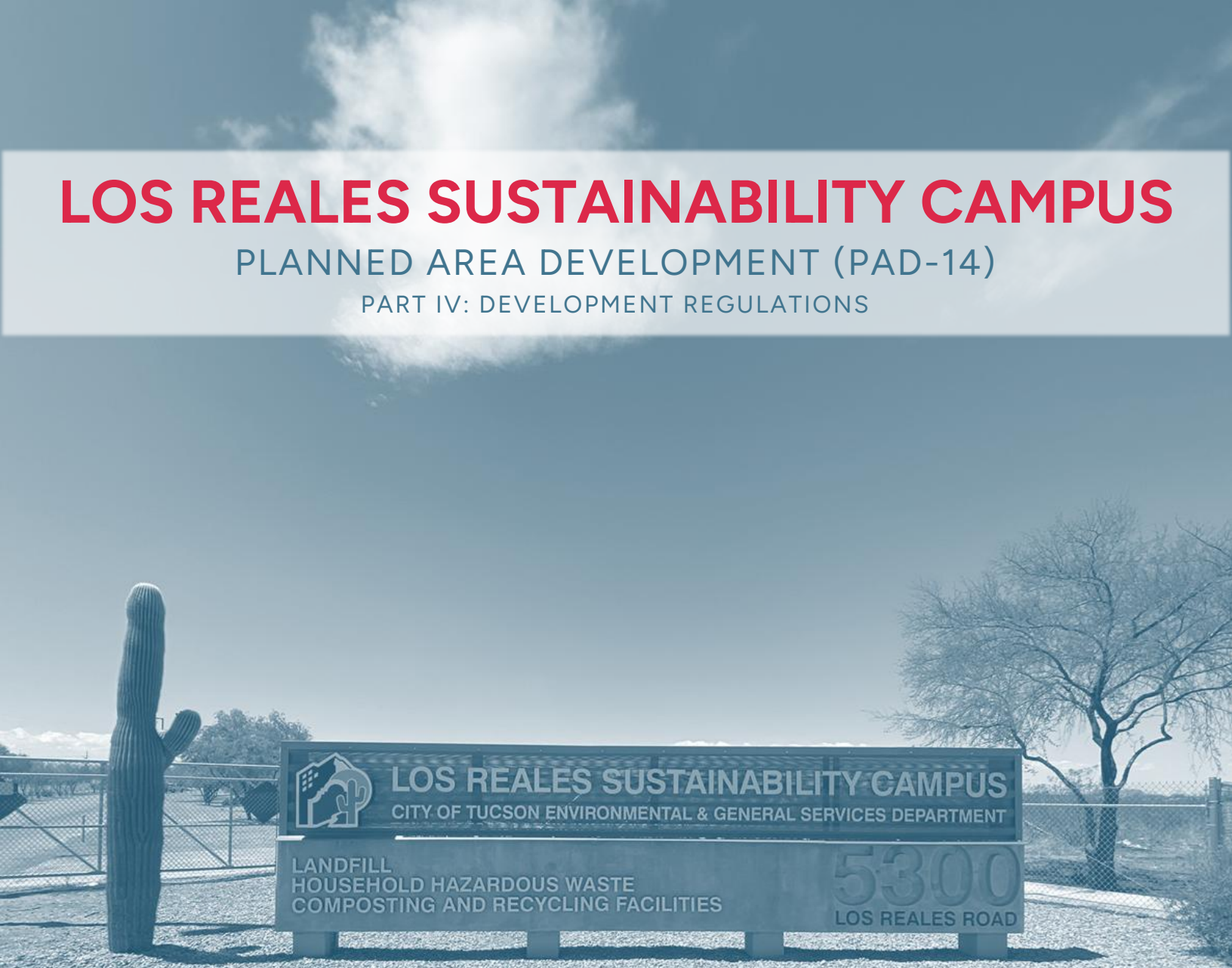
F. CULTURAL RESOURCES PLAN

Much of the LRSC has been surveyed for archaeological resources, and no significant artifacts have been found. As additional grading activities occur onsite, archaeological surveys will be performed by a qualified archaeologist. In the event cultural artifacts are to be discovered during grading or trenching, the City of Tucson Historic Preservation Office shall be contacted immediately to assess the resource.

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT (PAD-14)

PART IV: DEVELOPMENT REGULATIONS



THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

IV. DEVELOPMENT REGULATIONS

The following provides the development regulations that serve as the basis for development within LRSC PAD's land use districts, Sustainability Campus District, and Open Space + Recreation District. The development regulations presented herein have been crafted in response to 1) the site's existing operations and constraints, 2) emerging waste management trends and sustainability best practices, and 3) the desire to retain the flexibility to develop the landfill site as the community's needs and ESD's responsibilities shift. Recognizing that the existing entitlements for the parcels being incorporated into the PAD include zones that are not conducive to furthering the vision of the LRSC (i.e., R-1 MH-1, and C-2), the following development regulations have been crafted to mirror the regulations of I-2 zone (similar to the existing PAD), with the C-3 Zone serving as the baseline for commercial activities as the I-2 Zone does not permit commercial activities that are afforded in the C-3 Zone. Any new development within LRSC PAD shall conform to all applicable building, fire, and safety standards.

A. SUSTAINABILITY CAMPUS DISTRICT

Any permitted or special exception land use as listed in Table 4.8.7 of the UDC for the I-2 (Heavy Industrial) Zone and C-3 Zone are permitted within the Sustainability Campus District of the LRSC PAD unless modified herein.

1. Additional Permitted Land Uses

The following uses are permitted in the Sustainability Campus District:

- *Civic Assembly*
- *Community Garden, subject to UDC Section 4.9.2.B.1.a, .b, .d, .e, .f, .g*
- *Composting, Inerit Material Recycling, and Management of Other Organic Material Extraction, subject to UDC Section 4.9.5.B.2*
- *Culture Use*
- *Educational Use*
- *Food & Beverage Sales, Large Retail Establishment*
- *General Manufacturing*
- *General Merchandise Sales, Large Retail Establishment*
- *Hazardous Material Manufacturing, subject to UDC Section 4.9.5.C.1-8 and 4.9.13.Q*
- *Hazardous Material Storage, subject to UDC Section 4.9.13.Q*
- *Hazardous Material Wholesaling, subject to UDC Section 4.9.13.Q*
- *Heavy Equipment Manufacturing, subject to UDC Section 4.9.5.C.1-8 and 4.9.13.Q*
- *Parks and Recreation*
- *Personal Service*
- *Refining*
- *Renewable Energy Generation*
- *Salvaging & Recycling*
- *Sanitation System*
- *Urban Farm, subject to UDC Section 4.9.2.E.1.a, .b, .d, .e, .f*
- *Utility Distrubution*

2. Prohibited Land Uses

The following uses are prohibited in the Sustainability Campus District:

- *Billboards*
- *Correctional Use*
- *Residential Land Use Group*
- *Stockyard Operation*

B. OPEN SPACE + RECREATION DISTRICT

1. Permitted Land Uses

The following land uses are permitted in the Open Space + Recreation District:

- *Civic Assembly*
- *Cultural Uses*
- *Educational Uses*
- *Community Garden, subject to UDC Section 4.9.2.B.1.a, .b, .d, .e, .f, .g*
- *Commercial Recreation*
- *Entertainment*
- *Food Service, excluding Soup Kitchens*
- *Food and Beverage Sales:*
    - *Farmers' Market, Concessions Associated with Sports Facilities or Special Events (including Food Trucks)*
- *Golf Course*
- *Parking*
- *Parks and Recreation*
- *Urban Farm, subject to UDC Section 4.9.2.E.1.a, .b, .d, .e, .f*
- *Utilities, Drainage Infrastructure, Right-of-Way Improvements, or Other Public Infrastructure Necessary for the Continued Operations of the Los Reales Sustainability Campus.*

2. Prohibited Land Uses

- *All Permitted or Special Exception Uses of the I-2 zone of the UDC or Section IV.A.1 of this document unless modified through the amendment procedures outlined in Section V.C of this document.*

C. DEVELOPMENT STANDARDS

The following provides development standards for the LRSC PAD utilizing the basic parameters of the I-2 (Heavy Industrial) Zone with modifications. Where the LRSC PAD falls silent on specific development parameters, the development standards prescribed by the UDC for the I-2 Zone prevail.

1. Sustainability Campus District

The following table provides general development standards for the Sustainability Campus District.

TABLE IV.B.1: SUSTAINABILITY CAMPUS DISTRICT DEVELOPMENT STANDARDS

STANDARD	REQUIREMENT
Minimum Lot Area	None
Maximum Lot Coverage	None
Maximum Building Height	140 Feet Except in areas located north of Los Reales Road: 30 Feet
Separation Between Buildings	Per applicable fire code
Minimum Perimeter Yards	
Street Perimeter Yards - New development adjacent to Interstate 10, Swan Road, Los Reales Road, Garden Stone Drive, or the LRSC Interior Loop Road	10 Feet
New development adjacent to nonresidential uses/zones	None
New development adjacent to residential uses/zones	1.5 times building height

2. Open Space + Recreation District

The following table provides general development standards for the Open Space + Recreation District.

TABLE IV.B.2: OPEN SPACE + RECREATION DISTRICT DEVELOPMENT STANDARDS

STANDARD	REQUIREMENT
Minimum Lot Area	None
Maximum Lot Coverage	None
Maximum Building Height	30 Feet
Separation Between Buildings	Per applicable fire code
Minimum Perimeter Yards	
Street Perimeter Yards - New development adjacent to Garden Stone Drive or the LRSC Interior Loop Road	10 Feet
New development adjacent to residential zones of R-1 Zone or greater intensity	50 Feet
New development adjacent to residential zones less intense than the R-1 Zone (i.e., SH/SR Zones)	480 Feet
Parking Lots /Trailhead Access/Trails adjacent to residential zones	20 Feet

D. ADDITIONAL DEVELOPMENT STANDARDS

The following provides additional development standards that apply to the LRSC.

1. Tucson Water Facilities Standards

Tucson Water facilities are exempt from parking, PAAL, vehicular , landscape, and screening improvements (i.e., these items are not required). Dust control shall be provided.

2. Motor Vehicle and Bicycle Parking Standards

Motor vehicle and bicycle parking shall be provided in accordance with UDC Section 7.4.4 and 7.4.8, respectively. The Planning & Development Services Department Director may waive or reduce motor vehicle or bicycle parking requirements as required by the UDC if development plans demonstrate adequate parking for employees and anticipated users of the campus.

3. Off-Street Loading

Loading shall be provided in accordance with UDC Section 7.5. If challenges arise due to space limitations, user preferences, etc., Planning and Development Services may waive or reduce loading requirements or accept modified loading zone designs at the time of development. Interior streets and PAALs may be utilized to access loading areas. Screening is also not required for off-street loading.

4. Landscape and Screening Standards

The following landscape and screening standards apply to the LRSC PAD.

- Any land leased for private developmet is subject to the applicable landscape and screening requirements as specified by UDC Section 7.6.4.
- A 10-foot (minimum) street landscape border in accordance with Section 7.6.4 of the UDC shall be provided adjacent to all public roads adjacent to new development. Trails or other multi-use paths that are natural in character are permitted to locate within these borders.
- A 10-foot (minimum) landscape border shall be provided adjacent to the R-2 zoned subdivision to the north. The landscape border shall be planted in accordance with Section 7.6.4 of the UDC.
- A 20-foot (minimum) landscape border, either natural or improved, shall be provided adjacent to the R-1-zoned subdivision to the east. Improvements in this area are limited to those associated with public utilities, rights-of-way, trails, etc.
- A 480-foot (minimum) natural buffer shall be provided and maintained in the Open Space + Recreation District along the eastern property lines adjacent to the existing SH-zoned subdivisions. Improvements in this area are limited to those associated with public utilities, rights-of-way, trails, etc.
- Landscaping provided in borders and parking areas is subject to the applicable standards setforth in UDC Section 7.6.4.

- Landscape borders are not required for public uses proposed internally to the campus.
- Screening for new development shall be provided in accordance with UDC Section 7.6.4. In the event that the screening requirements as prescribed by UDC Section 7.6.4 are not practical or feasible, screening requirements may be modified through the non-substantial amendment procedure outlined in Part V of the PAD. No screening is required for internal operations unless desired by ESD.
- Plant material utilized for landscape border and landscape areas shall be selected utilizing the current version of Low Water Use & Drought Tolerant Plan List produced by the Arizona Department of Water Resource (ADWR). Recognizing that ADWR's plant list is not an exhaustive list of low water use or drought tolerant species, additional plants native to the Sonoran Desert may be utilized so as long as the plants are non-invasive.

5. Native Plant Preservation Standards

New development within the LRSC PAD is subject to the Native Plant Preservation Ordinance and the standards as prescribed by UDC Section 7.7, except as provided in this document. The 30% set-aside method will be utilized to meet the requirements of the NPPO. Areas used for set-aside will be managed as natural open spaces rather than natural undisturbed open spaces. Limited improvements/uses are allowed in NOS areas, including unpaved perimeter roads, environmental monitoring locations, hiking trails (and associated signage), and other passive recreational uses. Capped portions of the landfill may be utilized for set-aside areas.

6. Riparian Habitat, Floodplain, and Drainage Standards

The North Fork The North Fork of the Airport Wash is currently designated as a proposed Environmental Resource Zone (ERZ) Wash, and, for the purposes of implementation of this PAD, it will be treated as an ERZ Wash. Any encroachment into the regulatory floodplain of the North Fork of the Airport Wash shall be in accordance with UDC Section 7.14. Encroachment into the Airport Wash is permitted to facilitate unpaved roadways, utility improvements, drainage structures, game fencing and environmental monitoring locations. Areas where encroachment occurs should be revegetated to the greatest extent feasible and practicable.

Because of prior disturbance associated with the construction of Interstate-10, the neighboring residential community, and informal roadways from previous property owners, the unnamed wash and the associated riparian habitat are not subject to the ERZ's requirements.

Modifications to applicable riparian habitat, floodplain, and drainage standards may be necessary to further the goals of the LRSC. Such modificatons may be permitted in coordination with the City of Tucson Planning and Development Services Department Engineering Section Manager and Landscape Architect.

Any land lease for private development within the LRSC PAD is subject to the applicable hydrology standards set forth in UDC Section 7.14.

7. Solid Waste and Recycling Standards

Development within the LRSC PAD is subject to the applicable solid waste standards of the UDC. The ESD Director may waive, reduce or modify solid waste and recycling standards at the time of development as necessary.

8. Signage

All signage within the LRSC PAD is subject to the applicable standards of the UDC.

9. Lighting Standards

Development within the LRSC PAD is subject to the most recent iteration of the City of Tucson/Pima County Outdoor Lighting Code.

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT AMENDMENT

PART V: IMPLEMENTATION AND ADMINISTRATION

THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

V. IMPLEMENTATION AND ADMINISTRATION

The purpose of *Part V: Implementation and Administration* is to establish the mechanisms for implementing the LRSC PAD and the departments and persons responsible for its administration.

A. ADMINISTRATION

The LRSC PAD shall be administered and enforced by the City of Tucson Planning and Development Services Department Director.

B. INTERPRETATIONS

The Los Reales Sustainability Campus PAD supplements and supersedes existing regulations within the UDC. Where there is a conflict between the LRSC PAD and the UDC, the LRSC PAD shall govern. Should an issue, condition, or situation arise regarding definitions, conditions, standards, and/or situations not addressed within the LRSC PAD, the UDC, Development Standards, or other City regulations shall apply.

C. AMENDMENT PROCEDURES

The following provisions are intended to provide criteria for the determination of non-substantial changes and substantial changes to the LRSC PAD. In addition, this section is designed to define amendment procedures applicable to non-substantial and substantial modifications proposed to the PAD.

1. LRSC PAD Amendments

Amendments to the LRSC PAD may be necessary over time to respond to changing market demands, new development conditions, and financial considerations or to respond to the requirements of potential users or builders on the property. Only the contents of the specific amendment request may be considered and acted upon by the Development Services Director, Zoning Examiner, or Mayor and Council.

2. Non-substantial Changes

Non-substantial changes to the LRSC PAD shall be approved pursuant to *UDC Section 3.5.5.I* and include the following:

- *Changes to infrastructure, such as drainage, water and sewer systems, or street typologies, which do not change the overall intent of the LRSC PAD;*
- *Realignment or removal of internal roadways (i.e., Loop Road);*
- *Any analogous interpretations of the list of permitted, exception, and accessory uses of the property set forth in the LRSC PAD, as determined by the Development Services Director;*

- *Modifications to tax code parcel boundaries, including changes to interior boundaries of planning areas or combining parcels, except that changes to the LRSC PAD perimeter boundary may not be considered a minor amendment or non-substantial change to the PAD.*

- *Modifications to district boundaries as shown on LRSC Land Use Plan provided the development standards set forth in the LSRC PAD are maintained.*

- *Minor modifications to the location and size of trails and pedestrian paths, so long as the modifications meet the general intent of the LRSC PAD;*

- *Adjustments and/or substitutions to the development standards within the LRSC PAD that do not impact the general health, safety, and welfare of the residents of the City and further sustainability;*

- *Any other items not expressly defined as Substantial Changes in the UDC Section 3.5.5.J.2.c.*

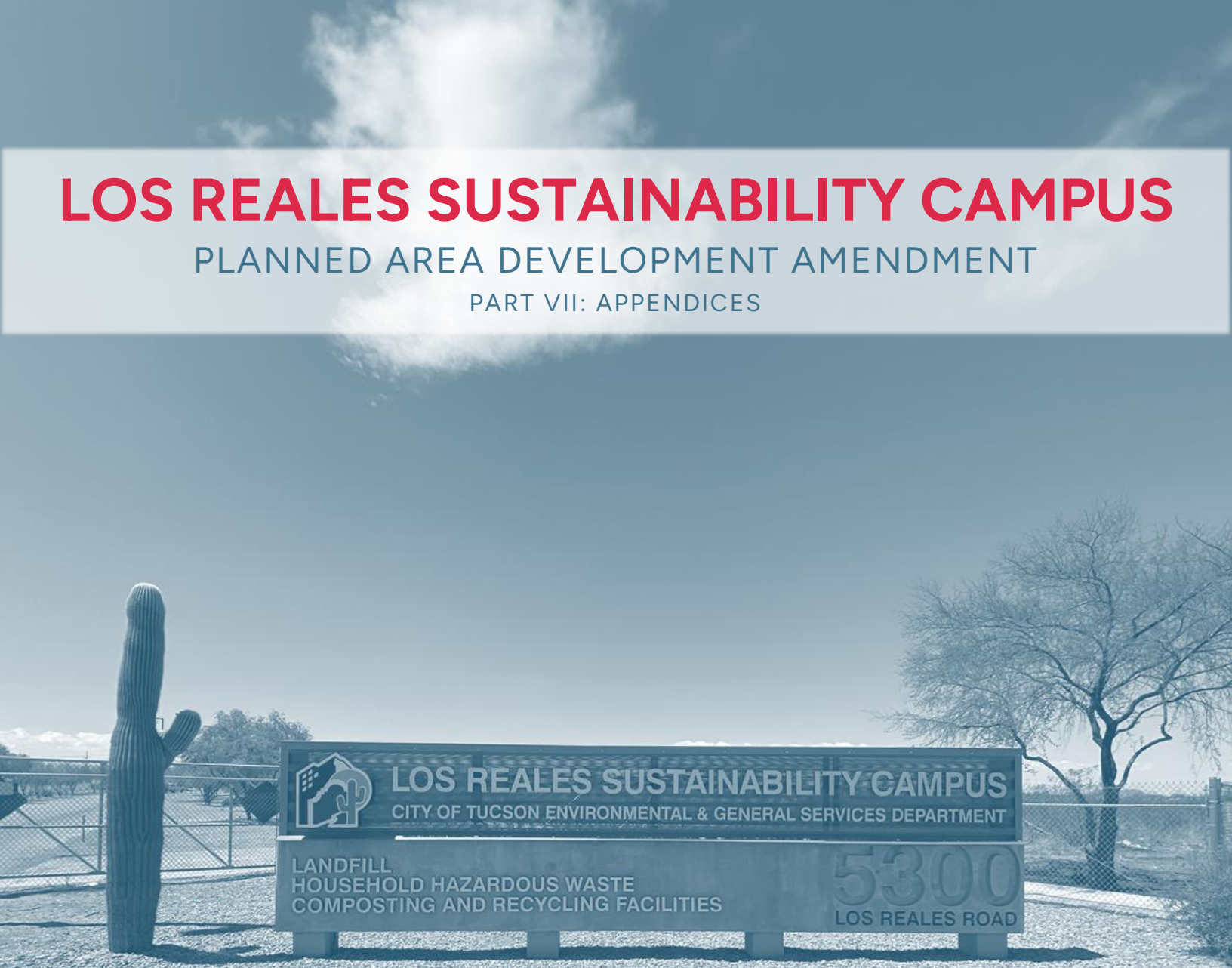
3. Substantial Changes

Substantial changes are changes to the LRSC PAD as defined in *UDC Section 3.5.5.J.2.* and are subject to the amendment application process outlined in *UDC Section 3.5.5.J.2*.

LOS REALES SUSTAINABILITY CAMPUS

PLANNED AREA DEVELOPMENT AMENDMENT

PART VII: APPENDICES



THE PLANNING CENTER
PLANNING | LANDSCAPE ARCHITECTURE

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:
COT-53

Project Description:
Los Reales Sustainability Campus

Project Type:
Development Within Municipalities (Urban Growth), Commercial/industrial (mall) and associated infrastructure, New construction

Contact Person:
Garrett Aldrete

Organization:
The Planning Center

On Behalf Of:
CONSULTING

Project ID:
HGIS-20182

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

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.

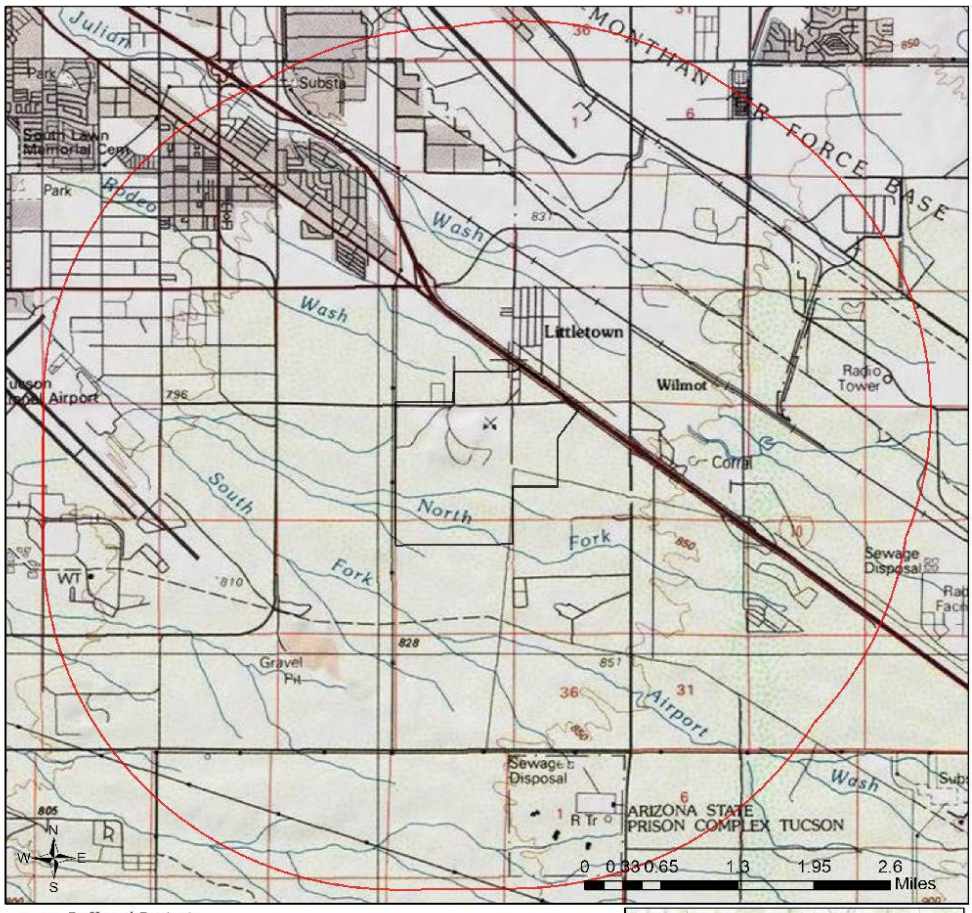
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

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
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

COT-53

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 1,134.40

Lat/Long (DD): 32.1123 / -110.8805

County(s): Pima

AGFD Region(s): Tucson

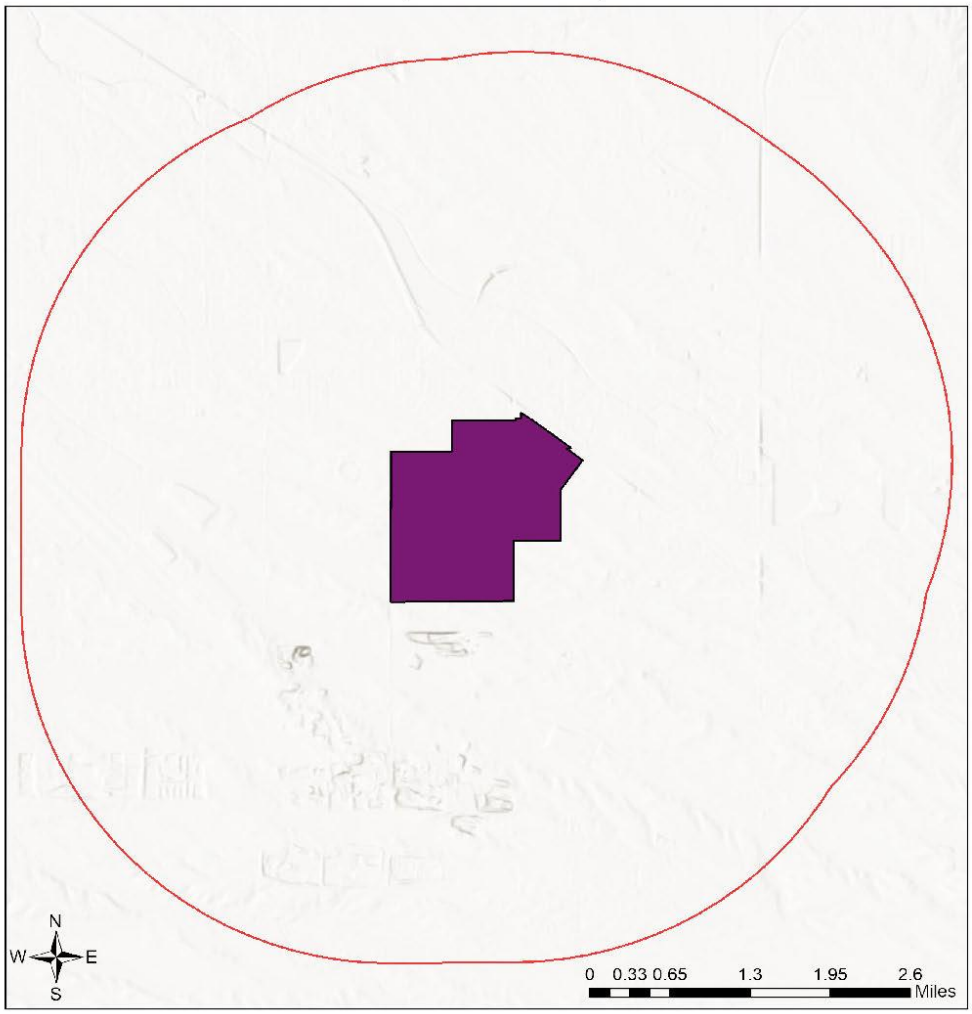
Township/Range(s): T15S, R14E

USGS Quad(s): TUCSON SE; TUCSON SW

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

COT-53

Web Map As Submitted By User



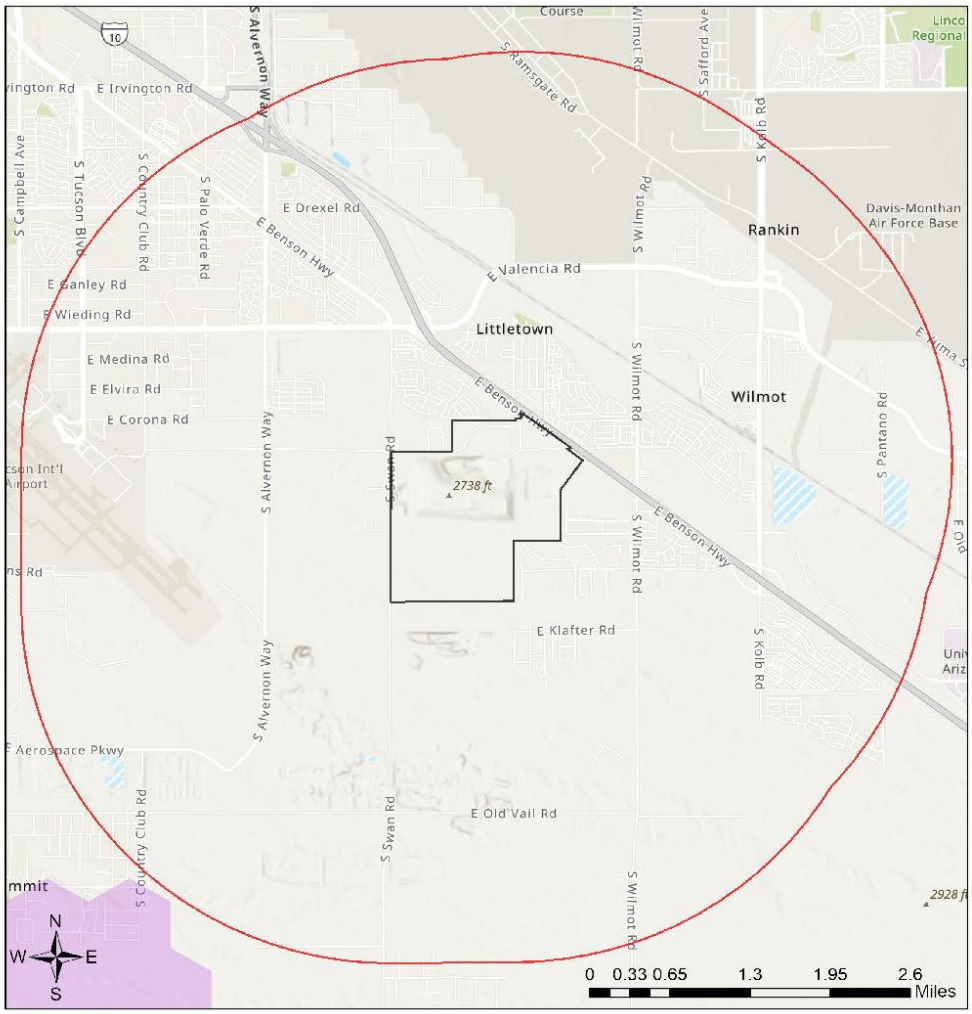
Buffered Project Boundary
Project Boundary

Project Size (acres): 1,134.40
Lat/Long (DD): 32.1123 / -110.8805
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T15S, R14E
USGS Quad(s): TUCSON SE; TUCSON SW

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

COT-53

Important Areas

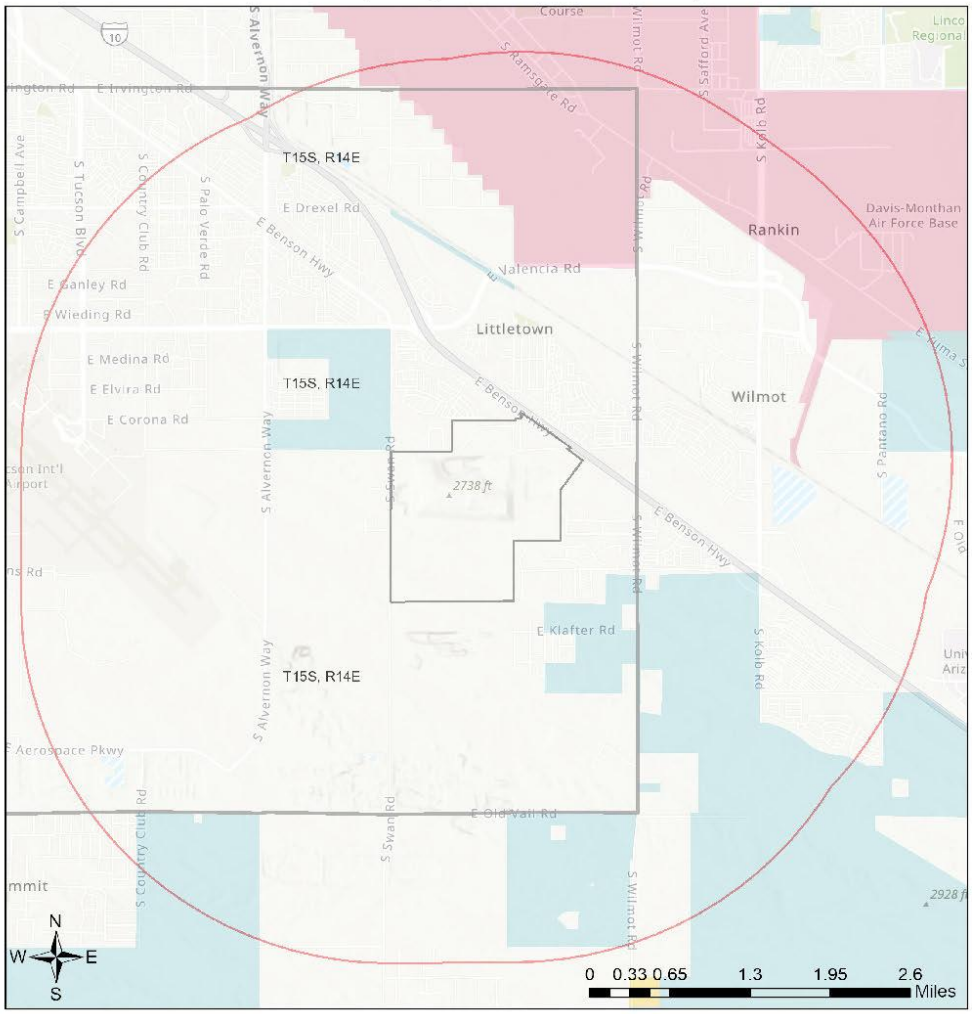


- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 1,134.40
Lat/Long (DD): 32.1123 / -110.8805
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T15S, R14E
USGS Quad(s): TUCSON SE; TUCSON SW

COT-53

Township/Ranges and Land Ownership



- Buffered Project Boundary
- Project Boundary
- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge
- Township/Ranges

Project Size (acres): 1,134.40
Lat/Long (DD): 32.1123 / -110.8805
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T15S, R14E
USGS Quad(s): TUCSON SE; TUCSON SW

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Agosia chrysogaster chrysogaster	Gila Longfin Dace	SC		S		2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Campylorhynchus brunneicapillus	Cactus Wren					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Coryphantha scheeri var. robustispina	Pima Pineapple Cactus	LE			HS	
Danaus plexippus	Monarch	C		S		
Incilius alvarius	Sonoran Desert Toad					2
Myotis velifer	Cave Myotis	SC		S		2
Phrynosoma solare	Regal Horned Lizard					2

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

No Special Areas Detected
No special areas were detected within the project vicinity.

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
Ammodramus savannarum perpallidus	Western Grasshopper Sparrow					
Ammospermophilus harrisii	Harris' Antelope Squirrel					
Anthus spragueii	Sprague's Pipit	SC				2
Aquila chrysaetos	Golden Eagle			S		2
Asio otus	Long-eared Owl					2
Aspidoscelis sonorae	Sonoran Spotted Whiptail					2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Auriparus flaviceps	Verdin					2
Buteo regalis	Ferruginous Hawk	SC		S		2
Buteo swainsoni	Swainson's Hawk					2
Buteogallus anthracinus	Common Black Hawk					2
Calcarius ornatus	Chestnut-collared Longspur					2
Calypte costae	Costa's Hummingbird					2
Camptostoma imberbe	Northern Beardless-Tyrannulet		S			2
Campylorhynchus brunneicapillus	Cactus Wren					2
Catharus ustulatus	Swainson's Thrush					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Charadrius montanus	Mountain Plover	SC				2
Chilomeniscus stramineus	Variable Sandsnake					2
Choeronycteris mexicana	Mexican Long-tongued Bat	SC	S	S		2

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
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)					
Colaptes chrysoides	Gilded Flicker			S		2
Columbina inca	Inca Dove					2
Corvus cryptoleucus	Chihuahuan Raven					2
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1
Crotalus tigris	Tiger Rattlesnake					2
Cynanthus latirostris	Broad-billed Hummingbird		S			2
Empidonax wrightii	Gray Flycatcher					2
Eumops perotis californicus	Greater Western Bonneted Bat					
Falco mexicanus	Prairie Falcon					2
Falco peregrinus anatum	American Peregrine Falcon					
Falco sparverius	American Kestrel					2
Gastrophryne mazatlanensis	Sinoloan Narrow-mouthed Toad					
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl					
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Heloderma suspectum	Gila Monster					1
Icterus cucullatus	Hooded Oriole					2
Incilius alvarius	Sonoran Desert Toad					2
Kinosternon sonoriense sonoriense	Desert Mud Turtle					
Lanius ludovicianus	Loggerhead Shrike	SC				2
Lasiurus blossevillii	Western Red Bat		S			2
Lasiurus cinereus	Hoary Bat					2
Lasiurus xanthinus	Western Yellow Bat		S			2
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1
Macrotus californicus	California Leaf-nosed Bat	SC		S		2
Megascops kennicottii	Western Screech-owl					
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza lincolnii	Lincoln's Sparrow					2
Melozone aberti	Abert's Towhee		S			2
Micrathene whitneyi	Elf Owl					
Micruroides euryxanthus	Sonoran Coralsnake					2
Myadestes townsendi	Townsend's Solitaire					2
Myotis auriculus	Southwestern Myotis					2
Myotis velifer	Cave Myotis	SC		S		2
Myotis yumanensis	Yuma Myotis	SC				2
Notiosorex cockrumi	Cockrum's Desert Shrew					2
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					2
Nyctinomops macrotis	Big Free-tailed Bat	SC				2

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
Perognathus amplus	Arizona Pocket Mouse					2
Peucaea carpalis	Rufous-winged Sparrow					2
Phrynosoma solare	Regal Horned Lizard					2
Pooecetes 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 Within Municipalities (Urban Growth), Commercial/industrial (mall) and associated infrastructure, New construction

Project Type Recommendations:
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.

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

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at PEP@azgfd.gov.

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 **Western Burrowing Owls** have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at:
https://www.azgfd.com/wildlife/speciesofgreatestconservneed/burrowingowlmanagement/.

RESOURCES

MapTucson, City of Tucson GIS, 2023

Pima Association of Governments, Transportation Data Management System, 2023

PimaMaps, Pima County GIS, 2021

Pima Regional Trail System Master Plan, Revised May 2012

City of Tucson Unified Development Code, 2016.

Aerial Photographs, Pictometry, 2020.

Plan Tucson, City of Tucson General & Sustainability Plan, ratified 2014.