



City of Tucson

Arizona

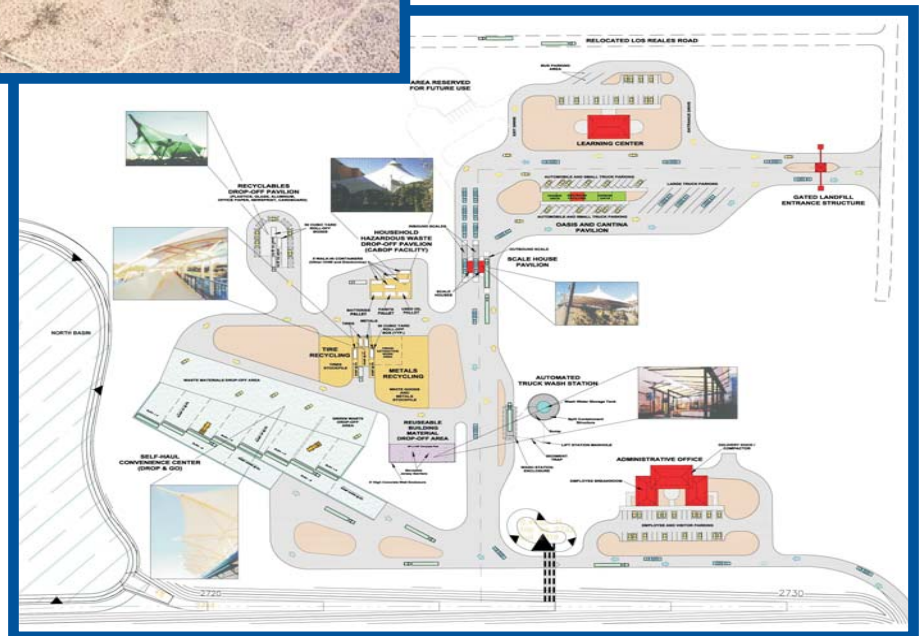


Los Reales Landfill Planned Area Development

(Volume 1 of 2)

Adopted:

Mayor &
Council
Ordinance No:



Mayor & Council Hearing
June 6, 2006

**LOS REALES LANDFILL PAD
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- A. Neighborhood Meeting Minutes
- B. Preliminary Drainage Report
- C. Plant Inventory and Plant Re-vegetation Tables
- D. Environmental Resource Report
- E. A Cultural Resources Survey of Eighty Acres Near the Los Reales Landfill
- F. ADEQ's Municipal Solid Waste Landfill Plan Approval
- G. Los Reales Landfill, Traffic Impact Analysis
- H. Existing Uses and Structures on the Los Reales Landfill PAD
- I. Landscape Border Example Exhibits



A. INTRODUCTION

A-1. Introduction

The City of Tucson and its surrounding metropolitan area is one of the fastest growing regions of the country. Continued population growth presents a number of development challenges to the City including management of traffic, water availability, stormwater runoff and solid waste disposal. As with other community services, infrastructure, and utilities, it is critical that the City plan for solid waste capacity into the future.

The Los Reales Landfill currently accepts approximately 550,000 tons of municipal solid waste per year. Landfill expansion is required in order to provide long-term, environmentally sound disposal capacity for this fast growing region. The City of Tucson's Environmental Services has been working with the Arizona Department of Environmental Quality (ADEQ) to design, plan, and implement a safe and efficient municipal solid waste facility. On May 27, 2005, the ADEQ issued a Municipal Solid Waste Facility Plan approval for the proposed landfill expansion. Environmental Services has also been conducting public outreach and meeting with local residents since 2003 to obtain their feedback on the landfill expansion.

The Los Reales Landfill is the sole solid waste disposal facility for the City of Tucson. Existing land use designations do not adequately reflect the intent and purpose of the City's management goals for this facility. The creation, adoption, and implementation of the planning associated with this Planned Area Development (PAD) will ensure that development will respond to community needs and concerns and be implemented in a timely manner. When adopted, the PAD will replace existing land use designations.

A-2. Project Overview and Location

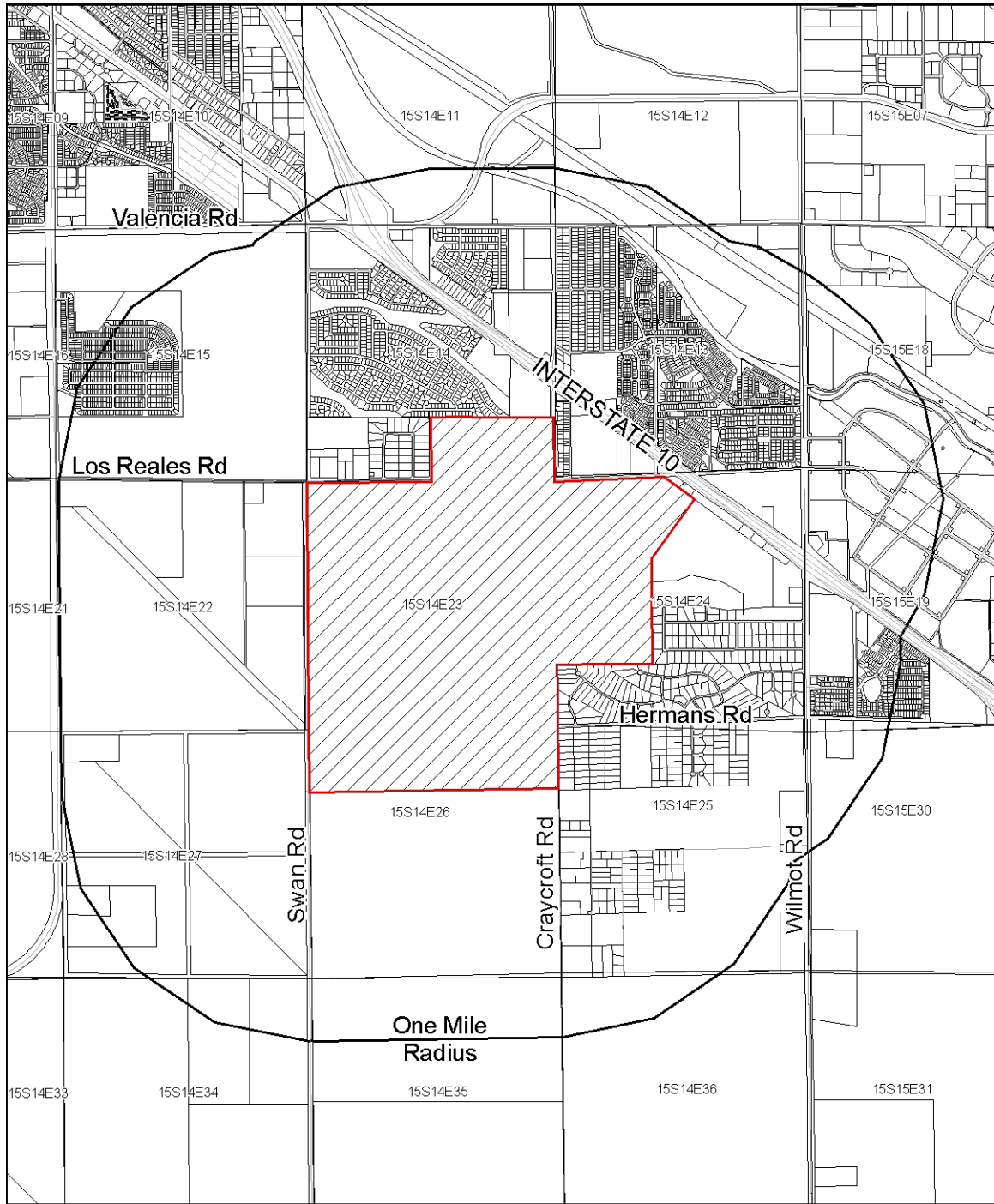
The Los Reales Landfill PAD will provide long-term, environmentally and economically sound disposal capacity to the residents and businesses of Tucson and Pima County. The Los Reales Landfill PAD project area consists of approximately 1,087 acres in southeastern Tucson located directly south of Interstate 10 between Swan Road and Wilmot Road (see Exhibit A.1. Project Location). The address of the landfill is 5300 East Los Reales Road. The property lies within Sections 14, 23, 24, and 26 of Township 15 South, Range 14 East. The project area was defined based on the need to provide adequate areas for landfill disposal, recycling opportunities, open space areas in conformance with the City's Native Plant Preservation Ordinance, and support functions for the landfill and recycling operations.

This document establishes the overall Los Reales Landfill PAD which consists of five PAD Districts as summarized below (refer also to Exhibit A.2. PAD Districts):

- Solid Waste Disposal District (approximately 428 acres). This District encompasses the existing and expanded landfill.
- Community Resource Center District (approximately 51 acres). This District provides a relocated entrance to the landfill as well as recycling, administration and education facilities.
- Stormwater and Ancillary Uses District (approximately 304 acres). This District provides key support functions to the operation of the landfill and Community

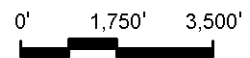


EXHIBIT A.1. PROJECT LOCATION



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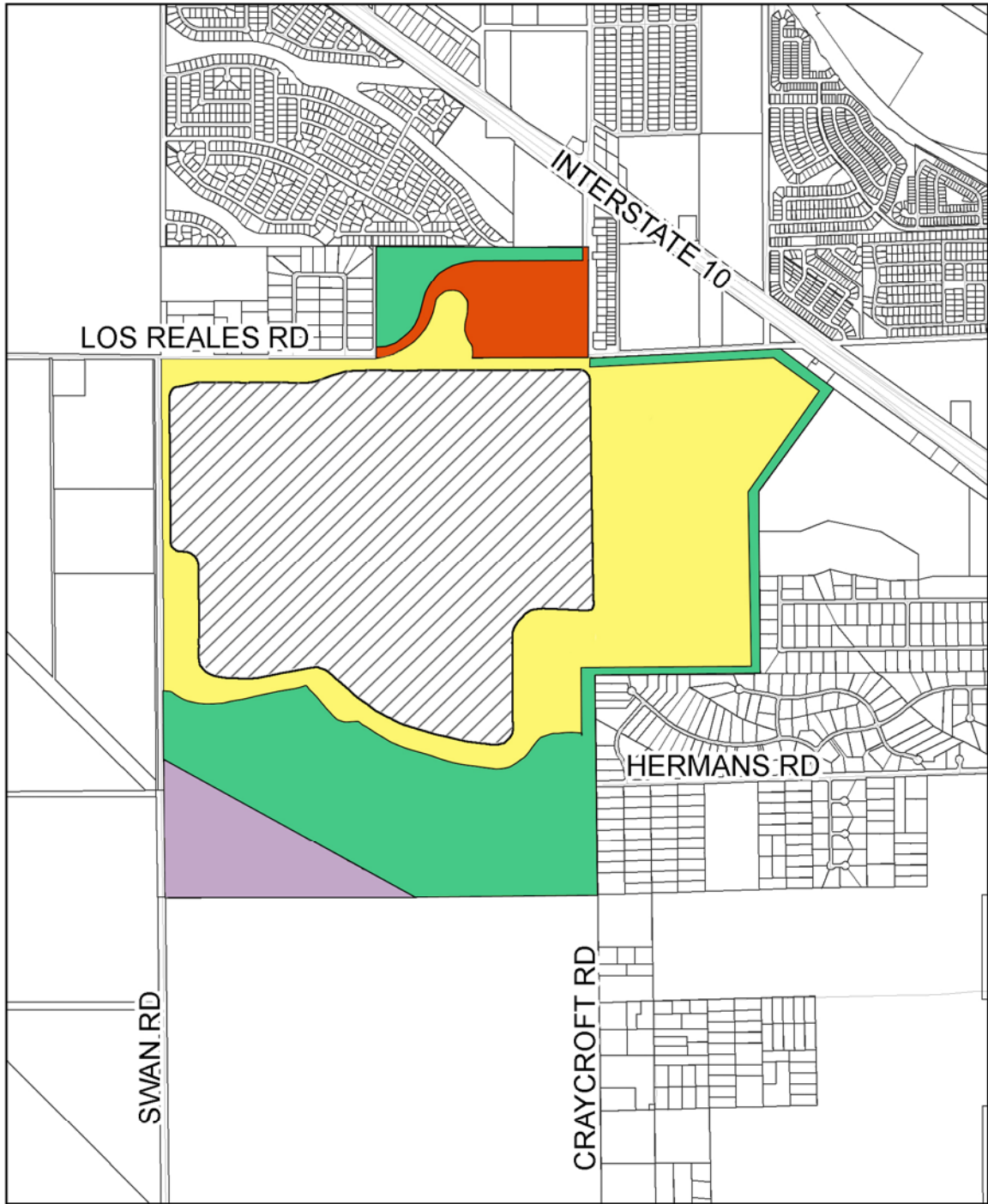
 Project Site








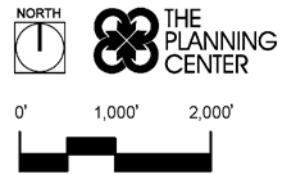
Source: PCLIS, January, 2005



EXHIBIT A.2. PAD DISTRICTS



- Legend**
-  WASTE DISPOSAL DISTRICT
 -  OPEN SPACE DISTRICT
 -  STORMWATER AND ANCILLARY USES DISTRICT
 -  RESERVED DISTRICT
 -  COMMUNITY RESOURCE CENTER DISTRICT



Source: PCLIS, January, 2005



Resource Center such as stormwater management basins and channels.

- Open Space District (approximately 243 acres). This District preserves a significant area of the PAD site as natural, undisturbed open space.
- Reserved District (approximately 61 acres). This District provides Tucson Water with adequate area to build a water reservoir and connections with nearby waterlines. This District also results from the planned expansion of Alvernon Way and is reserved for industrial uses in conformance with the City's I-2 zoning classification.

The expansion of the Los Reales Landfill will employ environmentally sound landfill design features and operation procedures. The addition of the Community Resource Center (CRC) will serve to create a positive interface between the landfill and the general community by providing recycling and reuse areas and educational opportunities.

Primary ingress and egress to the Los Reales Landfill PAD will be from Los Reales Road. The alignment of Los Reales Road will be moved north through the northern quarter of the CRC. The Landfill entrance will be accessed from Craycroft Road, approximately a quarter mile south of Interstate 10.

This document is organized into five major sections with supporting attachments. These sections include an introduction (Section A); a site analysis and inventory summary of existing conditions (Section B); the Los Reales Landfill PAD District proposal (Section C); the implementation and administration procedures for the PAD (Section D); and a list of definitions (Section E). This document has been prepared to satisfy the requirements of Article II, Division 6, Section 2.6.3 of the City's Land Use Code (LUC).

A-3. Landfill History

The Los Reales Landfill began as a borrow pit during the construction of Interstate 10 in the 1950's. The City of Tucson began to operate the Los Reales Landfill in 1967. In 1996, the Mayor and Council approved a plan to maximize the life of the landfill using the City-owned land at the Los Reales site. The area north of Los Reales Road designated for the CRC was annexed into the City in 2004.

The first permitted expansion of the landfill occurred with the opening of the first lined cell in July 2000. Cell Two, an additional lined cell, was opened in the summer of 2002. The projected capacity under the 1997 Solid Waste Facility Plan permitted by ADEQ is expected to last until approximately 2016.

A-4. Purpose and Intent of PAD District

The purpose of this PAD is to provide a clear vision of the City's plan for managing its municipal solid waste. The PAD is a way to establish comprehensive guidelines and standards for achieving that vision through the development of the expansion of the Los Reales Landfill and associated districts. When adopted, the Los Reales Landfill PAD will serve as the zoning for the subject property. Future development of the property must be consistent with the PAD.



The main goals of the Los Reales Landfill PAD are as follows:

- To provide long-term (60 years or more) disposal capacity to the residents and businesses of Tucson and Pima County.
- To facilitate the recycling and reuse of valuable materials at the CRC, thereby conserving natural resources and valuable landfill space.
- To develop and operate the expanded Los Reales Landfill and CRC such that the impacts to surrounding land uses are considered and minimized.
- To heighten the public's awareness and understanding that the City's proposed waste management solution promotes sustainability and responsible stewardship of the land.

The intent of the Los Reales Landfill PAD is to codify a zoning designation and land use with appropriate standards and controls that meets the City's waste management infrastructure needs, promotes resource conservation, and is sensitive to the concerns and impacts of surrounding land owners and uses.

A-5. Legislative Authority

The authority for the PAD Districts is found in the LUC Article II, Division 6, Section 2.6.3. The LUC authorizes PAD Districts to enable and encourage comprehensively planned development in accordance with adopted plans and policies. Once adopted, the Los Reales Landfill PAD is a regulatory plan, which serves as the zoning code and development standards for the project. Final plats, development plans and any other development approvals must be in compliance with the adopted PAD.

A-6. Conformance with General Plan and City Land Use Plans

The primary objective of the Los Reales Landfill PAD is to implement the City's General Plan and the Rincon Southeast Subregional Plan through the translation of the City's broader development policies into design concepts development controls tailored to the planned land uses. All City policies, standards, criteria and procedures will apply with the Los Reales Landfill PAD, except where specific modifications are warranted to improve design quality, flexibility and/or creativity as provided herein.

A-6.a. City General Plan

The City of Tucson's General Plan was first adopted in 1979 and has since been amended several times. The most recent amendment was in 2001 in response to the Growing Smarter Act and the Growing Smarter Plus legislation adopted by the State of Arizona. These acts required the City to amend its General Plan elements to analyze the environmental impacts of the development anticipated by the General Plan. The primary objectives of the Los Reales Landfill PAD are to continue to implement the environmental policies set forth in the General Plan as well as follow all City, State, and Federal standards, procedures and policies. The Los Reales Landfill PAD will accomplish the goals of the City of Tucson General Plan by:



- Contributing to the economic vitality of Tucson by reducing the economic burden of waste management for the City's residents and businesses.
- Setting aside a reasonable amount of buffer area between the landfill and other adjacent land uses.
- Enhancing and protecting the environmental quality of Tucson by implementing innovative programs and procedures.

A-6.b. Other Area and Regional Plans

The Rincon/Southeast Subregional Plan (RSSP) was originally adopted by the City of Tucson's Mayor and Council in December 1995. As areas within the boundaries of the RSSP are annexed into the City, the plan is amended. On July 7, 1997, the Mayor and Council amended the RSSP to include the existing Los Reales Landfill along with the parcel to the south identified as land for future expansion of the landfill. These parcels are located in Section 23, Township 15 South, Range 14 East. The landfill property, as well as all other parcels in this annexation district, are designated for Heavy Industrial land uses. Although the northeast corner of the section is zoned SH, Suburban Homestead, the RSSP states that it is not likely that residential development will occur, as the land is designated for Heavy Industrial land use.

A-7. Rationale for Use of Planned Area Development

The primary rationale for using the PAD District for this project is the unique nature of the proposed land use, i.e., municipal solid waste recycling and landfilling. The City's current LUC is structured for more traditional residential, commercial and industrial development and land uses.

A-8. Benefits to the Community and Applicant by the Use of a PAD District

The benefit to the community of using the PAD District is to provide more specificity and control over the design and operation of the proposed land uses than currently specified under the LUC, as well as to provide additional specific performance standards to ensure environmental and aesthetic standards are upheld. The benefit to the applicant of using a PAD District is the ability to define and regulate five different districts within the overall Los Reales PAD District. Each of the five sub-districts is unique and needs to be regulated in accordance with the proposed land uses. For example, the Waste Disposal District is primarily regulated by an outside agency, ADEQ, not the City of Tucson.

A-9. Suitability of PAD District to Significant Environmental Factors

The integrated municipal waste management facility being proposed by the City in this PAD District is by its very nature an environmental project. The proposed expansion of the Los Reales Landfill has required extensive analysis of the suitability of the proposed site for a landfill expansion. This suitability analysis is contained in the Solid Waste Facility Plan for the Los Reales Landfill that was submitted by the City to ADEQ on June 17, 2004 and approved by ADEQ on May 27, 2005. A copy of the Solid Waste Facility Plan is kept on file by Environmental Services. The analysis included a determination that the site meets all applicable federal and state location standards, including floodplain issues, airports,



wetlands, faults/seismic areas, unstable areas, endangered species/plants, and archeology. Floodplain issues not under ADEQ's jurisdiction will be reviewed and approved by the City of Tucson. The Solid Waste Facility Plan also includes the proposed and approved design and operation plan of the expanded landfill.

A-10. Compatibility of the PAD with Adjoining Land Uses

Land uses within one mile of the PAD vary widely. Proximity to Interstate 10 makes this area highly desirable for various types of development. The Pima County Comprehensive Plan Land Use Intensity designations, City and County zoning, and the approved subdivisions and development plans reflect the diversity of land uses in the area. Exhibits A.3, A.4, A.5 and A.6 show the zoning (Exhibit A.3), surrounding land uses (Exhibit A.4), subdivisions/development plans (Exhibit A.5), and Pima County and RSSP land use intensity designations (Exhibit A.6).

Land uses north of the PAD are consistent with existing land use regulations. Adjoining land uses to the north are primarily light industrial activities such as warehousing, contractor's yards, and welding manufacturing, along with areas of vacant land. There is a small residential area, consisting of approximately 24 mobile homes, on the east side of Craycroft Road just south of Interstate 10. This residential area is primarily renter-occupied. The immediately northern industrial neighbors serve to buffer the landfill from the growing residential areas both north and south of the Interstate 10 corridor. There are 10 approved residential subdivisions within one mile north of the PAD that are at a sufficient distance that landfill uses will have negligible impact on future residents. Development standards for the landfill expansion will ensure residential uses are properly buffered and screened from uses associated with the landfill and CRC.

Land to the east of the site is primarily vacant with some low density residential development. Low density residential uses abut the PAD along the southeastern edge. Residences in the area are located a minimum of 1,000 feet from the proposed landfill. Residential uses along the Craycroft Road alignment and east of the PAD are inconsistent with Land Use Intensity designations in the Pima County Comprehensive Plan and the City of Tucson's Rincon Southeast Subregional Plan. This area is designated Urban Industrial and zoned Suburban Homestead. Although residential uses are within a quarter mile of the landfill to the east, development standards for the landfill expansion will ensure these residential areas are properly buffered and screened from uses associated with the landfill.

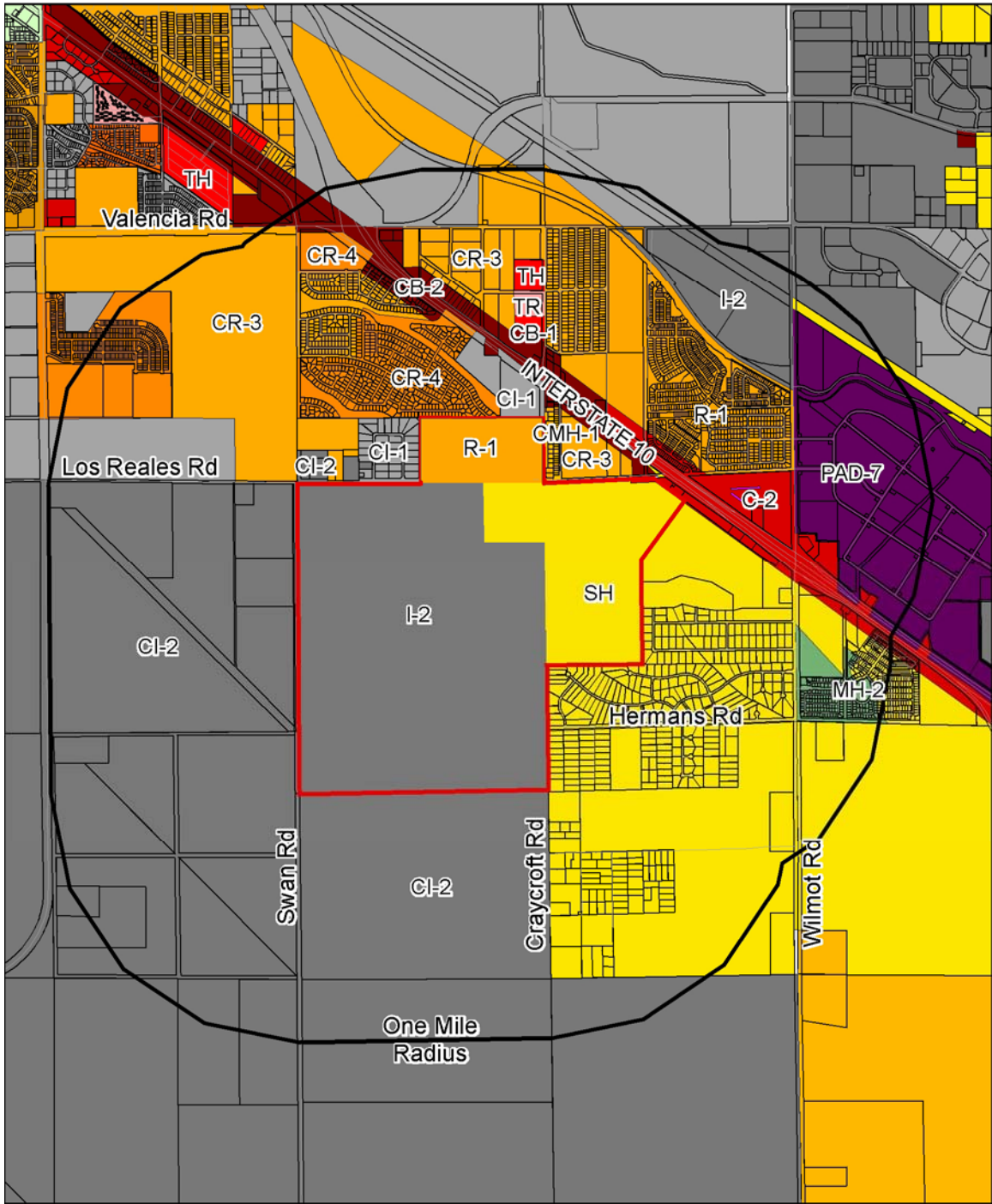
South and west of the PAD most of the land is vacant; the few land uses are industrial with the exception of a raceway track. Both City and County zoning and Pima County Comprehensive Plan Land Use Intensity designations serve to ensure that future development remains industrial in nature and therefore consistent with uses associated with the landfill. Although development in this area is increasing rapidly, proposed uses proximal to the PAD do not preclude permanent waste disposal. Therefore, proposed land uses within this PAD are generally compatible with adjoining land uses.

A-10.a. Public Outreach

Over the past two years, Environmental Services staff members have had ongoing communication with stakeholders who are neighbors of the Los Reales Landfill. Through public meetings and personal contacts, staff has met with stakeholders to keep them apprised of new developments, and also to ensure that any concerns about landfill activities can be addressed as quickly as possible.



EXHIBIT A.3. AREA ZONING



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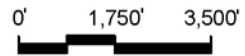
City Zoning

- SH Suburban Homestead
- R-1 Single Family Residence
- C-2 General Commercial
- PAD-7 Planned Area Development 7
- I-1 Light Industrial
- I-2 Heavy Industrial

- RX-1 Low Density Residential
- RV Parking
- SR Suburban Ranch
- SH Suburban Homestead
- CR-3 Single Residence
- CR-4 Mixed Dwelling Type

County Zoning

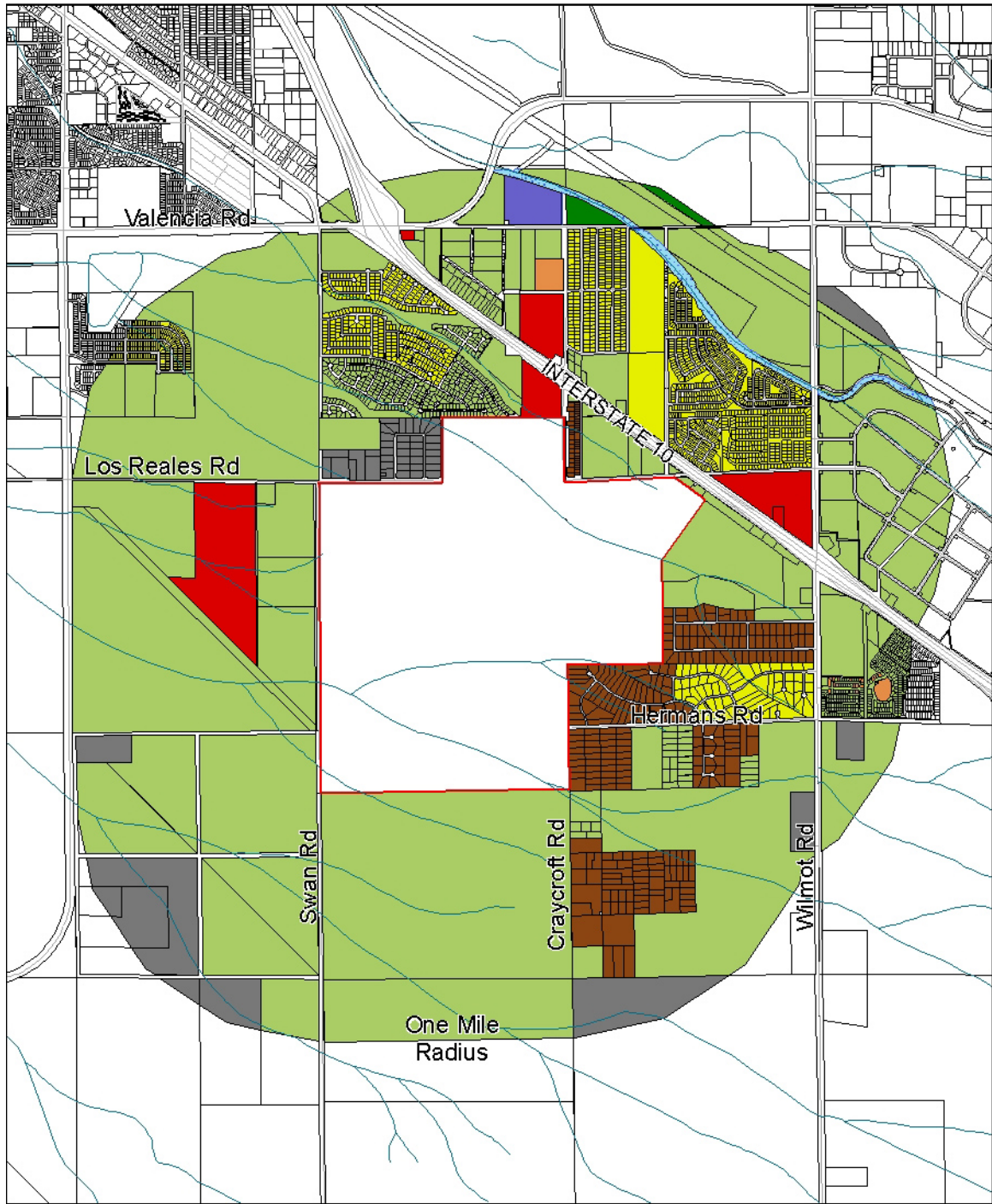
- CMH-1 Mobile Home 1
- TR Transitional
- CB-2 General Business
- TH Trailer Homesite
- CI-1 Light Industrial/Warehouse
- CI-2 General Industrial
- CB-1 Local Business



Source: PCLIS, January, 2005



EXHIBIT A.4. SURROUNDING LAND USES



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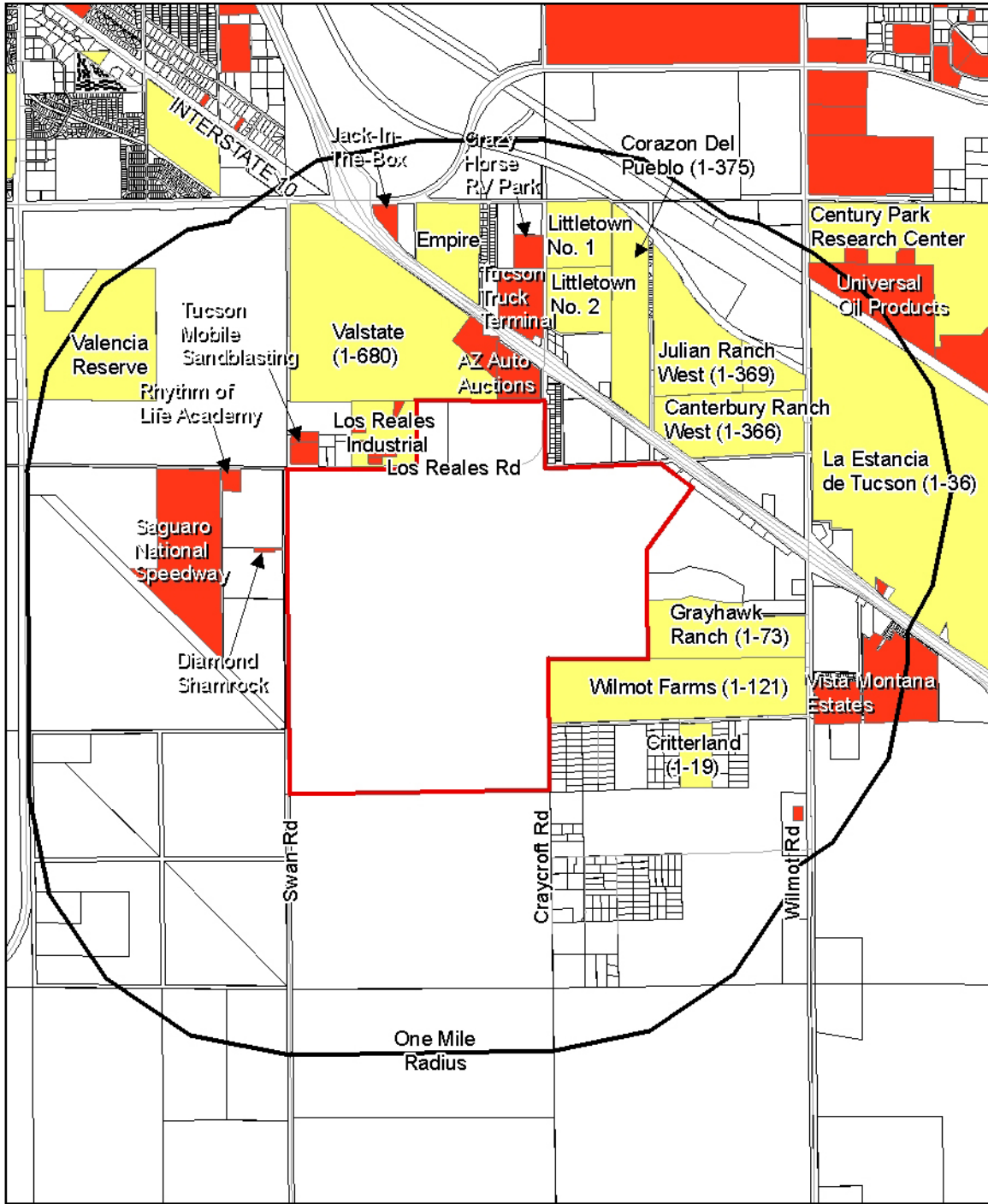
- | | | |
|-------------------------|------------|--------------------------------|
| Project Site | Industrial | Julian Wash Future Linear Park |
| Single Family Residence | Commercial | Park |
| Mobile Home Park | School | Vacant |
| Manufactured Home | | |



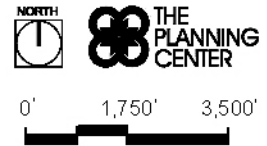
Source: PCLIS, January, 2005



EXHIBIT A.5. SURROUNDING SUBDIVISIONS AND DEVELOPMENT PLANS



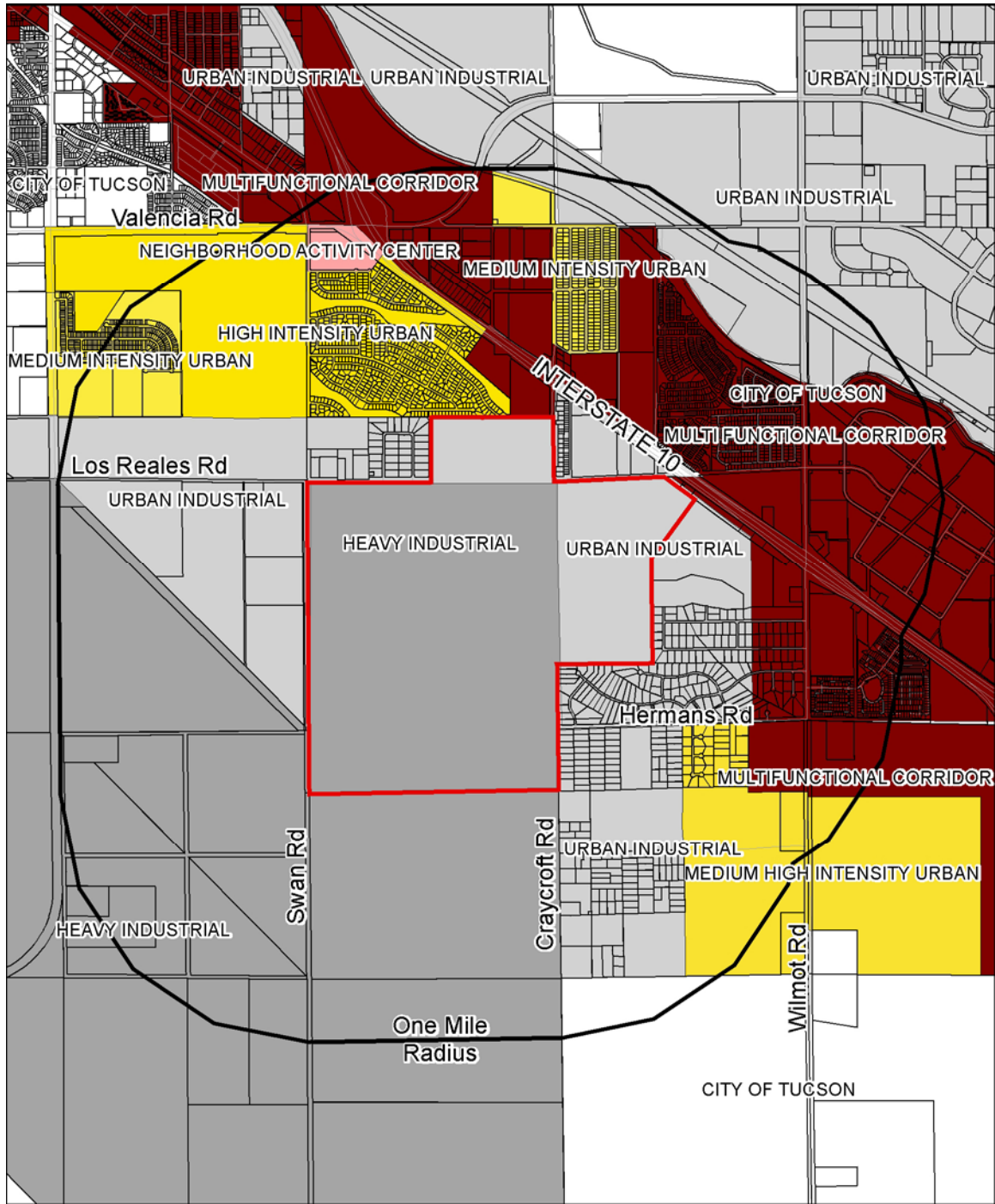
- Legend**
- Project Site
 - Subdivisions
 - Development Plans












Source: PCLIS, January, 2005



EXHIBIT A.6. PIMA COUNTY COMPREHENSIVE PLAN AND RINCON SOUTHEAST SUBREGIONAL PLAN LAND USE INTENSITY DESIGNATIONS



Legend

- | | |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
|  Project Site |  HIU High Intensity Urban |
|  I Urban Industrial |  MIR Medium Intensity Rural |
|  HI Heavy Industrial |  NAC Neighborhood Activity Center |
|  MIU Medium Intensity Urban |  MFC Multifunctional Corridor |
|  MHIU Medium High Intensity Urban | |



Since the acquisition of the 80-acre parcel in 2003, Environmental Services staff has had numerous meetings with property owners, business owners, and residents to inform them of the plans for expansion of the landfill, and to seek their input into the planning process. These meetings are briefly summarized below:

- **October 30, 2003 – Open House/Public Meeting, Desert View High School**
A meeting notice was sent to all property owners and residents in the areas adjacent to the landfill. The purpose of the meeting was to discuss the planned expansion and improvements at the Los Reales Landfill. The mailing included a preliminary drawing illustrating the planned uses. Seven (7) residents/property owners attended the meeting and were added to a mailing list for future contact.
- **January 2005 – Meetings with Neighbors, Business Owners, and Property Owners**
A letter was sent to all property owners and residents in the areas adjacent to the Los Reales Landfill to inform them that Environmental Services staff and consultants were seeking their input in the planning process. The letter invited any interested neighbors or property owners to set up an appointment for an individual meeting. Citizens who called were scheduled for individual meeting times and at a location convenient for them. Many of the meetings were held in the residents' homes or at the businesses adjacent to the landfill. Staff also met with KB Homes to ensure it was informed of the planned expansion as it is currently developing a large, residential subdivision northwest of Los Reales Landfill. Twelve (12) appointments were scheduled.
- **June 2005 – Follow-up Meetings with Neighbors, Business Owners, and Property Owners**
Individuals who staff had met with in January were contacted by phone and asked if they wanted to meet to hear updates on the Los Reales PAD project. Staff had meetings with three (3) individuals. Many of the neighbors contacted said they did not feel they needed another meeting and they were not concerned about the proposed expansion.
- **July 25, 2005 – Meeting with Rancho Valencia Home Owners Association (HOA)**
Environmental Services staff contacted the Rancho Valencia HOA (KB development, platted as Valstate) and offered to meet with them at their convenience. Staff was invited to present the plans at the HOA meeting scheduled in July. Jim Mikolaitis, Landfill Engineer and Mike Alter, Clear Creek Associates, attended the meeting and presented background information about the landfill, groundwater impacts and remediation systems in place, and the planned expansion. Twelve (12) residents attended the meeting.
- **December 2005 – Neighborhood Meeting/Open House**
On December 10, 2005 the required Neighborhood Meeting for all stakeholders and interested citizens was held at the Los Reales Landfill. Environmental Services staff and the City's consultants provided a presentation on the proposed Los Reales Landfill PAD. As part of the meeting a landfill open house was held and the various features of the landfill, including liner construction, well monitoring, gas collection and recovery, and groundwater remediation, were explained to the citizens by City staff and consultants. The Neighborhood Meeting minutes are included in Attachment A.



A-11. Physical/Economic Suitability and Feasibility with Existing Infrastructure

The Los Reales Landfill has been located at this site since 1967. The PAD will be an expansion of the existing landfill and ancillary facilities. The infrastructure is already in place and adequately supporting the current waste management activities. The primary impact to the existing infrastructure will be the relocation of Los Reales Road (and utilities along Los Reales Road) and moving the landfill entrance from Swan Road to Craycroft Road. Additionally, development of the CRC will require utility improvements.

All significant infrastructure necessary to support this development is nearby and can be effectively extended into the property for the proposed development. Given that the PAD will continue and build upon the existing land use as a landfill and recycling operation, the impact of the PAD will be negligible on the infrastructure and public services currently in place. In concert with community understanding and Mayor and Council decisions in supporting this project, impacts to infrastructure and public services will be as minimal as feasible using best known and available technologies. Therefore, expansion of the Los Reales Landfill is both economically and physically suitable.



B. GENERAL SITE INVENTORY

B-1. Site Location and Regional Context

The Los Reales Landfill PAD is located within Township 15 South, Range 14 East and includes all of Section 23 and portions of Section 24, Section 26 and Section 14. The PAD project area currently consists of six (6) tax code parcels in the vicinity of Swan and Craycroft Roads, Interstate 10, and Los Reales Road. The process is underway to combine these six parcels into one tax code parcel. The area is not entirely bound by roadways, as much of the area is vacant and most development is relatively recent (refer to Exhibit A.1. Project Location).

The project site is located in the southeastern area of metropolitan Tucson. This area is growing rapidly and is expected to continue to experience rapid growth. Development in the area is generally consistent with the both the Pima County Comprehensive Plan and the City of Tucson's Rincon Southeast Sub Regional Plan which recommend a mix of residential, commercial, and industrial development. In addition, there are large areas of open space or vacant land surrounding the project site.

The Los Reales landfill was begun in 1967 in, at that time, a relatively remote location. Since then development has advanced along the Interstate 10 corridor in closer proximity to the landfill.

B-2. Existing Zoning and Land Use

B-2.a. Existing Zoning and Land Use On-Site

Existing zoning onsite includes a combination of various zoning districts including I-2 (Heavy Industrial), SH (Suburban Homestead), and R-1 (Single Family Residence). The SH zoning onsite is inconsistent with the existing land use, and the R-1 zoning on-site is inconsistent with the proposed land use for the 80-acre parcel (CRC District). Under the Los Reales Landfill PAD the SH and R-1 zoning districts will be rezoned to a PAD zone. The locations of the various zoning districts onsite are shown on Exhibit B.1.

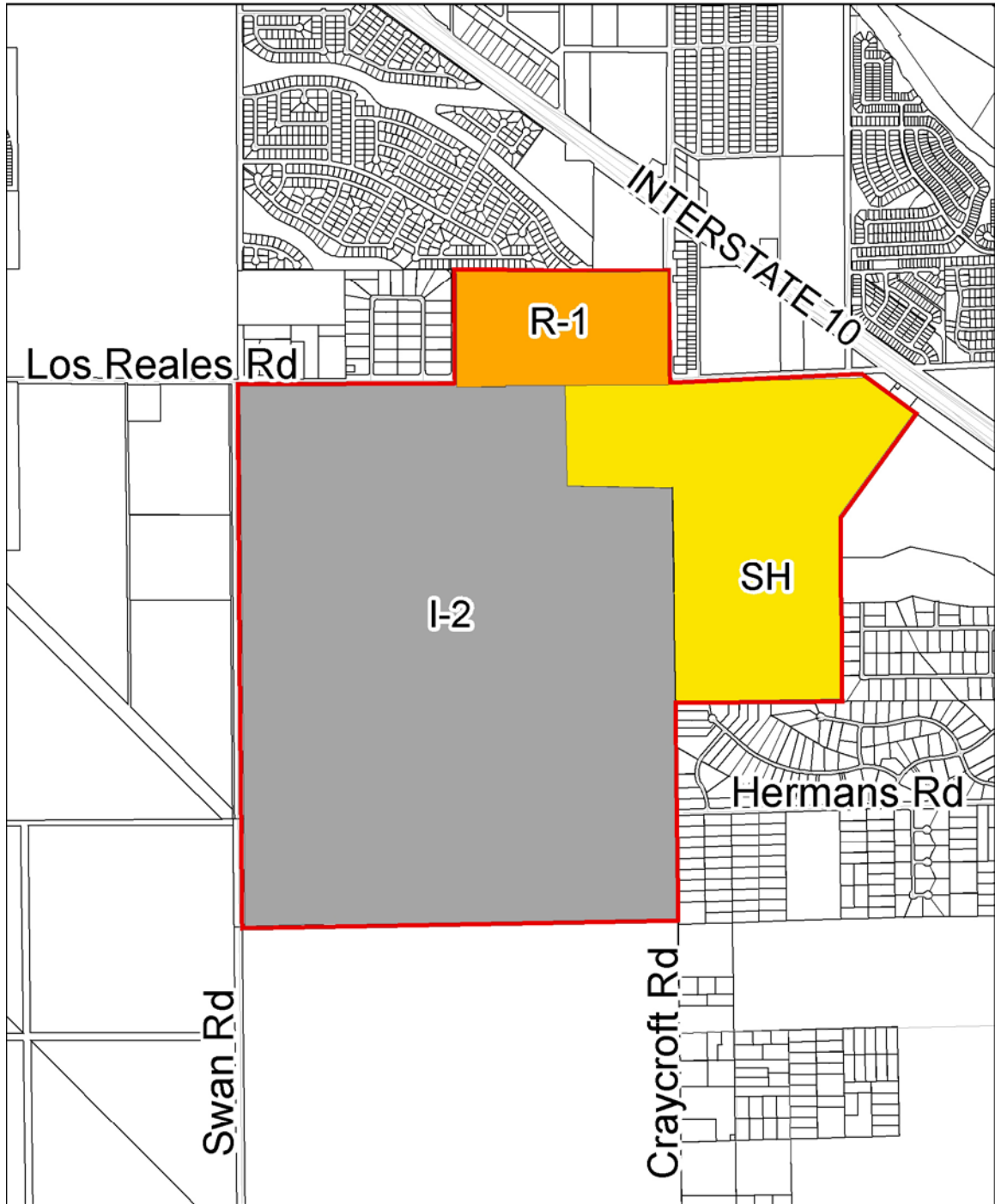
Existing land uses onsite consist of the existing landfill, recycling center, and the ancillary facilities in support of those activities. In addition, there are large areas of vacant land within the project boundaries. The 80-acre parcel lying north of Los Reales Road, which includes the proposed CRC, is entirely vacant. The approximately 300 acres of the proposed Stormwater and Ancillary Use District is vacant with the exception of the existing borrow pit associated with the current operation of the existing landfill. The proposed Open Space District and Reserved District are also vacant.

B-2.b Existing Zoning and Land Use within 1-Mile of the Site

Zoning in the vicinity of the project varies widely and is indicative of the changing nature of the area. The southeast region of Tucson was historically very rural in nature and supported various industrial uses dominated by mining. However, large tracts of inexpensive land and proximity to Interstate 10 have led to the rapid growth of the area, including both residential and commercial development. Zoning in the area reflects this history.



EXHIBIT B.1. EXISTING ZONING ON-SITE



Legend

City Zoning

- SH Suburban Homestead
- R-1 Single Family Residence
- I-2 Heavy Industrial



Source: PCLIS, January, 2005



To the south of the site, zoning includes CI-2 (County General Industrial) and SH (Suburban Homestead). This area is almost entirely open space with the exception of two residential subdivisions (Greyhawk Ranch and Wilmot Farms) located south and east of the project site. Southwest of the project site the area is zoned entirely CI-2, and includes a sand and gravel mining operation and a manufacturing plant. (see Exhibit A.3. Area Zoning)

The area west of the site is dominated by vacant land, along with a small commercial race track, the Saguaro National Speedway. The area west of the site is zoned CI-2 (County General Industrial), CI-1 (County Light Industrial/Warehouse), CR-3 (County Single Family Residence), and approximately one mile away an area of CR-4 (County Mixed Dwelling Type). In June 2004, the Valencia Reserve subdivision plat was approved in association with the CR-4 zoning.

Land north of the site includes CB-1 (County Local Business), CB-2 (County General Business), CI-1 (County Light Industrial/Warehouse), CI-2 (County General Industrial), CR-3 (County Single Residence), CMH-1 (County Mobile Home 1), TR (Transitional), and TH (Trailer Homesite) zoning districts.

Land uses north of the site are varied, representing residential, commercial, and industrial uses. Along Los Reales Road, north of the existing landfill, a small industrial park composed of various warehouse and manufacturing activities was developed in 1987. Also adjacent to the existing landfill, along Craycroft Road, a small residential area of mobile homes was developed during the 1970's and 1980's. South of Interstate 10 and west of Craycroft Road is an automobile auction house, while north of Interstate 10 is a gas station, convenience market, and restaurant style truck stop (see Exhibit A.4. Surrounding Land Uses).

To the northeast of the site, across Interstate 10, a number of large residential subdivisions have been developed since the 1950's. The Littletown subdivision along Craycroft Road north of Interstate 10 was developed in 1952. To the immediate east of the Littletown subdivision is a 375 lot subdivision, Corazon del Pueblo. Also north of the project site is the Empire subdivision, approved in 1948, that remains vacant. Directly north of the project site, and the sole residential subdivision on the south side of Interstate 10 and north of the project site, is the Valstate plat. This is a recently approved subdivision of 680 lots, currently under construction as Rancho Valencia (see Exhibit A.5. Surrounding Subdivisions and Development Plans).

The area east of the project site is zoned SH (Suburban Homestead), MH-2 (Mobile Home 2), C-2 (General Business), RV (Recreational Vehicle), R-1 (Single Family Residence), and PAD-7 (La Estancia PAD). With the exception of a motel and gas station on the northwest corner of Wilmot Road and Interstate 10, the area east of the project area is composed of low density residential development, a mobile home park, and vacant land. The two newer subdivisions east of the project site are both across Interstate 10 to the east, and include the 369 lots of Julian Ranch and the 366 lots of Canterbury Ranch West. The Rincon Southeast Subregional Plan designates this area as Urban Industrial, and Multi-Functional Corridor (see Exhibit A.6. Pima County Comprehensive Plan and Rincon Southeast SubRegional Plan Land Use Intensity Designations).



B-3. Open Space, Recreation, Parks, and Trails

Although there is a significant amount of vacant land within and around the vicinity of the project area, there is very little functional open space. Very little recreation infrastructure has been built in the area (see Exhibit B.2. Open Space, Recreation, Parks, and Trails).

There are no parks, improved trails, or public recreational facilities in the immediate vicinity of the PAD. Approximately one mile north of the project site is the Thomas J. Littleton Regional Park. This park provides various facilities including ADA accessible facilities, lighted baseball field and basketball court, concession building, volleyball court, t-ball field, lighted softball field, picnic area, ramadas, playground, restrooms, drinking water and community center. Also, about a mile northeast of the site is a river park along the Julian Wash, adjacent to the Julian Ranch subdivision.

A segment of Airport Wash that passes through the PAD is listed in the Eastern Pima County Trail System Master Plan (EPCTSMP) as trail route #308 and is used by equestrian enthusiasts.

B-4. Community and Cultural Resources

B-4.a. Schools

There are two schools within the one-mile radius of the project site. Craycroft Elementary School and Billy Lane Lauffer Middle School are approximately one mile directly north of the PAD site. The site and schools are within the Sunnyside School District. The Vail School District boundary is approximately one-half mile east of the project site (see Exhibit B.3. Community and Cultural Resources).

B-4.b. Libraries

There are no existing libraries within one mile of the project site. The library nearest to the site is the Valencia Branch located at 202 West Valencia Road, approximately five miles west of the PAD site.

B-4.c. Health Care Facilities

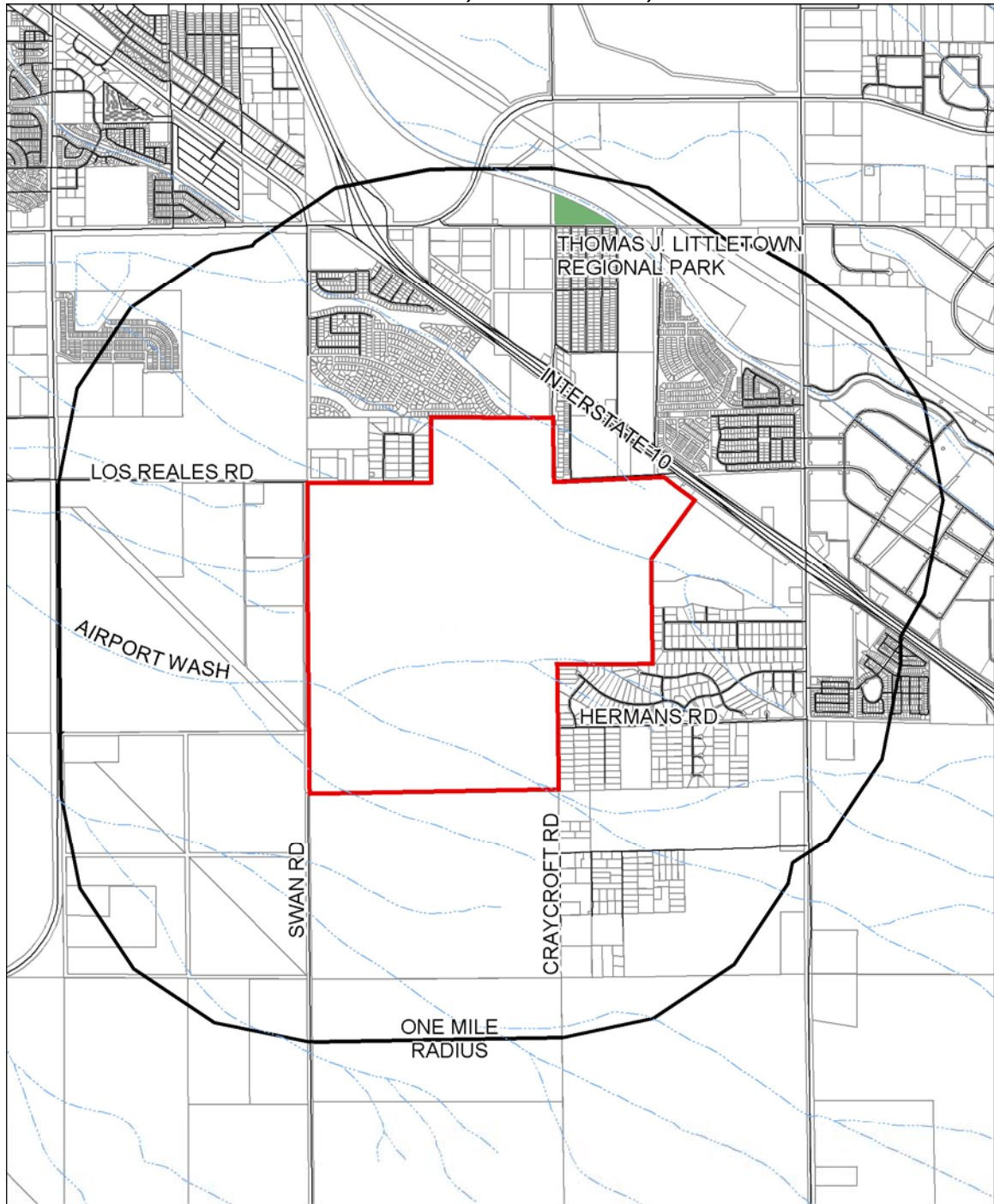
There are no health care facilities within a one-mile radius of the project area. The nearest hospital to the project site, TMC Southeast, is a new facility built in the Rita Ranch area at 8045 South Rita Road. This facility houses a child psychiatry clinic, pediatrics, obstetrician/gynecologist, and an urgent care facility. TMC Southeast is approximately four miles from the PAD site. The University Physicians Healthcare Hospital at Kino, a private facility approximately five miles from the project site, is located at 2800 East Ajo Way,. In addition, the Veterans Administration Hospital is located approximately 6.5 miles from the project site at 3601 South Sixth Avenue.

B-4.d. Fire/Emergency Vehicle Services

The Los Reales Landfill PAD lies within the boundaries of the Tucson Fire Department. The nearest Tucson Fire Department Station is station Number 6 located approximately three miles south of the project site at 10001 S. Wilmot Rd. In addition, there is the Rural/Metro



EXHIBIT B.2. OPEN SPACE, RECREATION, PARKS AND TRAILS



Legend

- Site Boundary
- Parks
- Washes

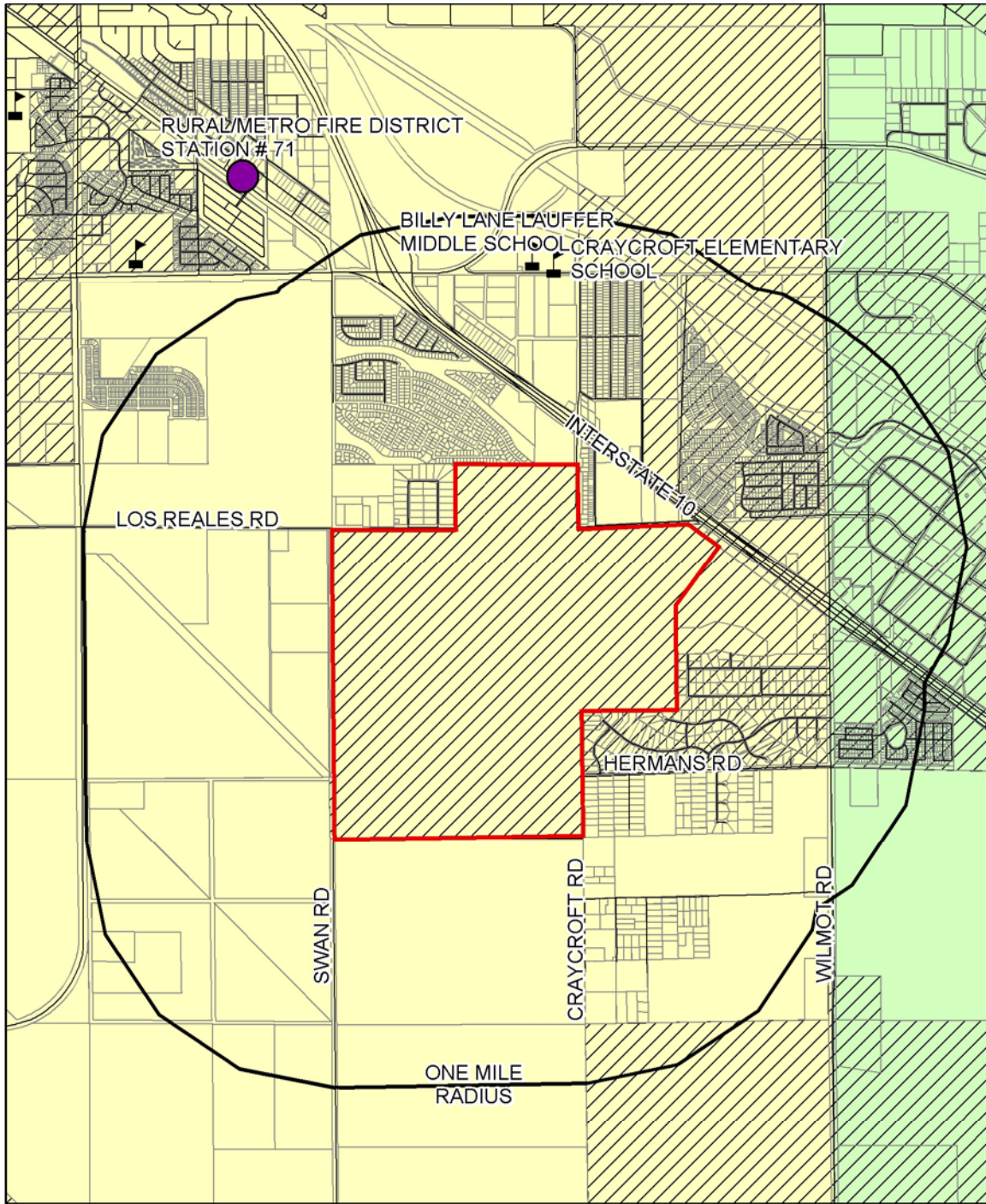


File: SHW-01recreation.mxd

Source: PCLIS, January 2005



EXHIBIT B.3. COMMUNITY AND CULTURAL RESOURCES



Legend

- Site Boundary
- Sunnyside School District
- Vail School District
- Tucson Fire District
- Fire Station
- School

Source: PCLIS, January 2005

NORTH
 THE PLANNING CENTER

0' 1,750' 3,500'

File: SHW-01recreation.mxd



Fire Station Number 71 and the Tucson Airport Authority Fire District Station Number 1, approximately one and a half and two and half miles from the site respectively (see Exhibit B.3: Community and Cultural Resources).

B-4.e. Law Enforcement Services

The Los Reales 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 facilities are located in closer proximity including the Pima Community College Department of Public Safety, Arizona State Department of Public Safety Highway Patrol, Davis Monthan Air Force Base Police, and the Pima County Sheriff's Department. None of these facilities are within one mile of the Los Reales Landfill PAD.

B-5. Major Transportation, Roads and Circulations

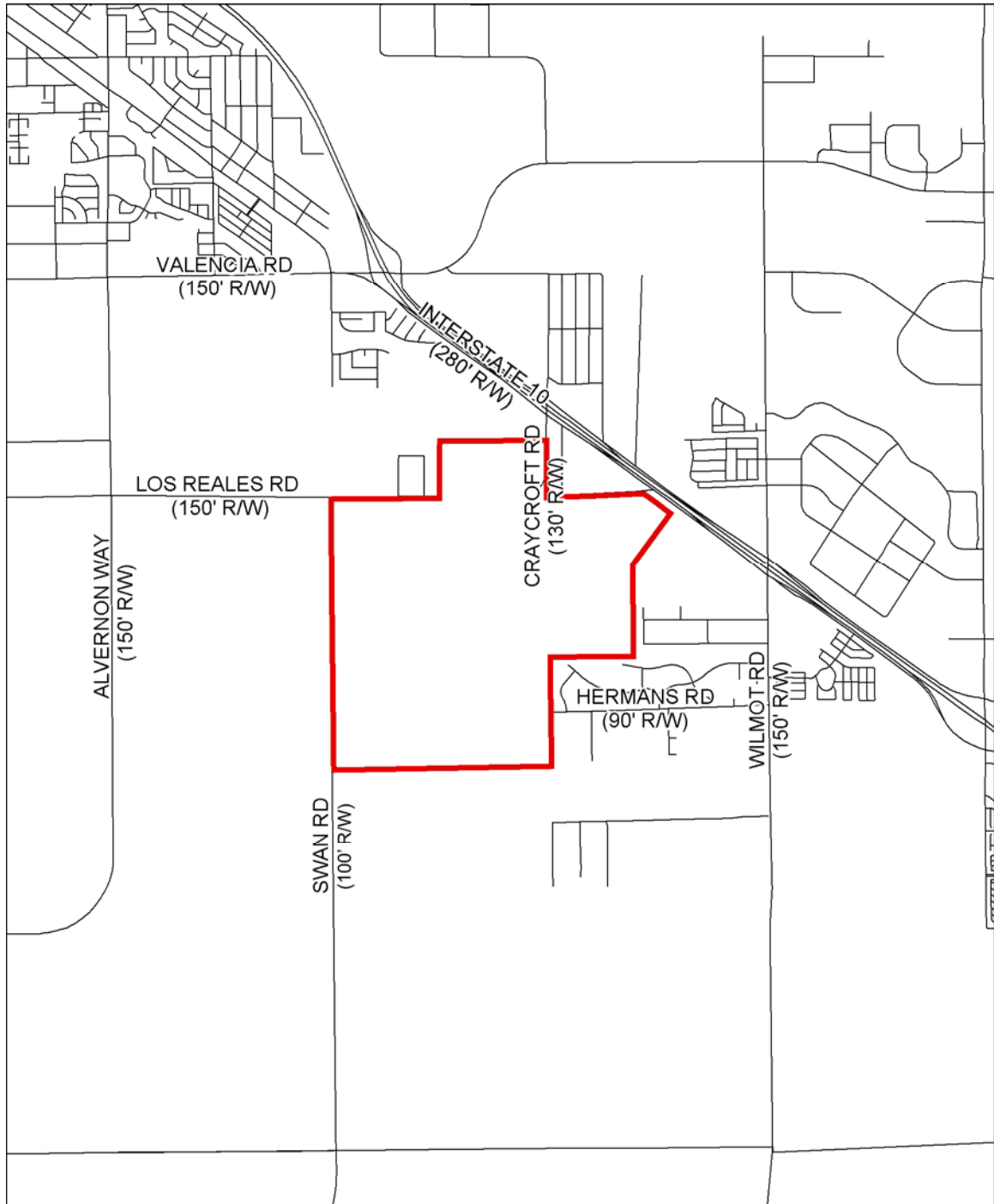
B-5.a. Existing Roadways

The primary roadway in the vicinity of the project site is Interstate 10 (see Exhibit B.4. Existing Roadways). The majority of landfill users currently access the site via the Craycroft exit on I-10. Going south on Craycroft, the roadway turns west becoming Los Reales Road. The landfill entrance is on Swan Road just south of Los Reales Road, with vehicles exiting on Los Reales Road. The landfill may also be accessed via Valencia Road and Alvernon Way. Due to various annexations by the City of Tucson, these roads generally fall both within and outside of City boundaries. Therefore, classifications are listed for both the City and Pima County where applicable (see Table B.1. Existing Roadways Classifications).

TABLE B.1. EXISTING ROADWAYS CLASSIFICATION			
Roadway Name	Classification	Right-of-Way	ADT (year)
Interstate 10, Valencia Rd to Craycroft Rd	Interstate Highway Pima County Scenic Route	280'	37,000 (2004)
Los Reales Road	Pima County Major Route City of Tucson Arterial Route	150'	4,062 (May-05)
Alvernon Way	Pima County Major Route	150'	13,876 (May-2005)
Swan Road	Pima County Major Route	100'	1,575 (Nov-04)
Valencia Road	City of Tucson Gateway Route Pima County Scenic Route	150'	25,876 (Nov-04)
Craycroft Road	Pima County Major Route	130'	1,481 (Sep-03)
Wilmot Road	City of Tucson Arterial Route	150'	3,716 (May-05)
Hermans Road	City of Tucson Arterial Route	90'	Not Available
Note: 1. ADT = Average Daily Traffic.			

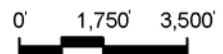


EXHIBIT B.4. EXISTING ROADWAYS



Legend

 Site Boundary



File: SHW-01\roadways.mxd

Source: PCLIS, January 2005



B-5.b. Future and Planned Roadways

The Pima Association of Governments has completed updating the 2030 Regional Transportation Plan as a prelude to holding an election in 2006 to significantly increase funding for transportation improvements throughout the region. The Southeast Area Arterial Study envisions important changes in the vicinity of the landfill including the joining of Swan Road and Alvernon Way to create a limited access roadway, and the downplaying of the role for Craycroft Road and Los Reales Road. Impact fees and development requirements will extend Swan Road north of Los Reales Road to Valencia Road and the proposed Swan Southlands development could significantly add to the traffic to and from the south.

B-5.c. 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.

B-6. Existing Infrastructure and Public Services

B-6.a. Water

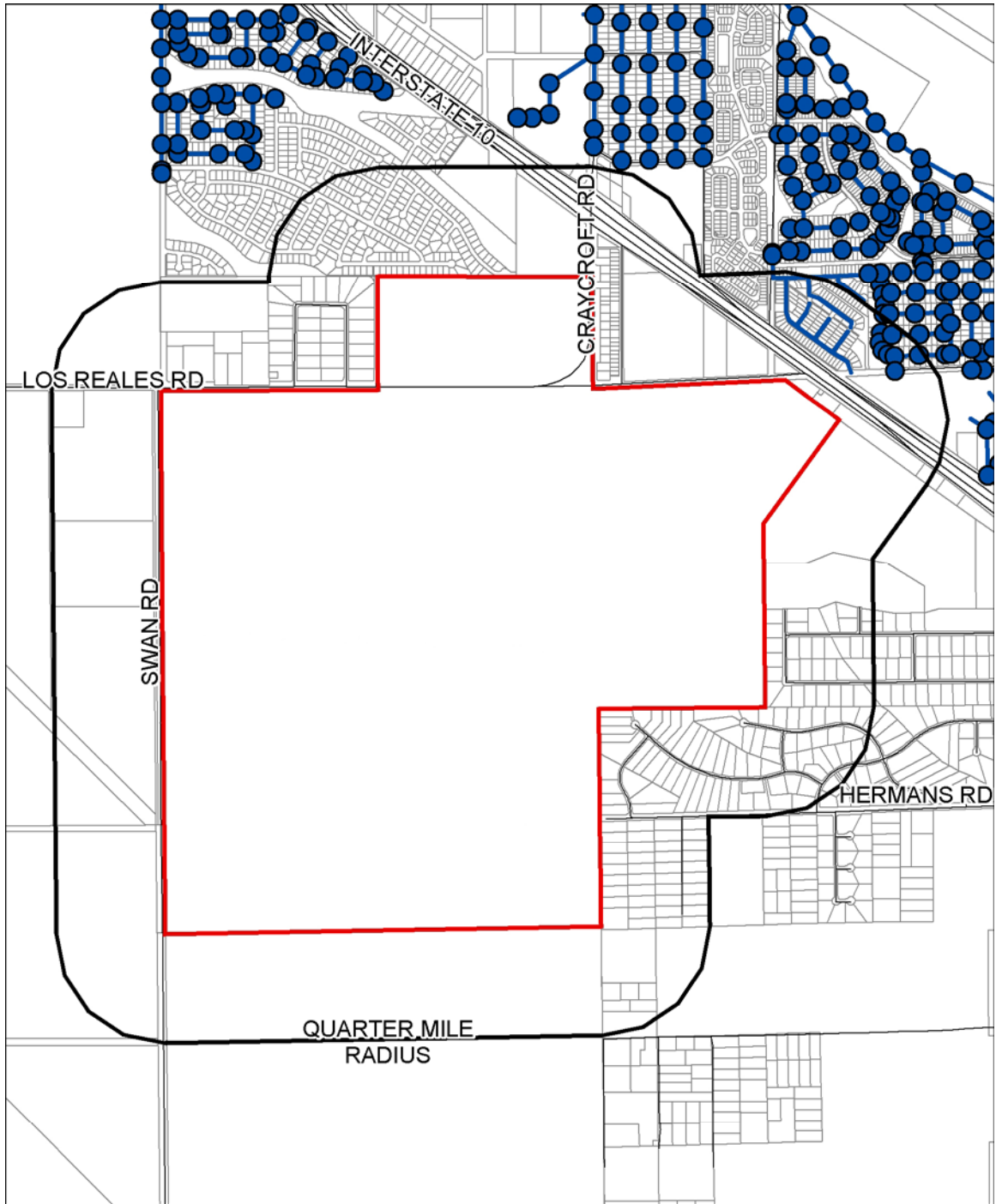
According to the records of Tucson Water Department, there are two main water lines surrounding the landfill property. Water service into the existing Los Reales Landfill property is provided from the 8-inch water line that runs along the Los Reales Road right-of-way adjacent to the property along its northern boundary. This 8-inch water line converts to a 6-inch water line as it moves east towards Craycroft Road. Along this water line there are 3 main stub outs that appear to terminate within the landfill property. 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 the landfill and also serves as a location for a fire hydrant. The second stub out is located approximately 1815 feet from the northwest corner of the property. This location provides the primary water service into the landfill 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 2205 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 the landfill property. There do not appear to be any service connections along this line within the landfill property.

B-6.b. Sewer

According to records provided by the Pima County Wastewater Management Department there is currently no sewer network on the project site. The sewer network does reach within one-quarter mile of the site (refer to Exhibit B.5). Sewer connections are currently being extended through the Valstate/Rancho Valencia subdivision directly north of the site. In addition, the sewer network is extended through subdivisions to the north including Canterbury Ranch West, Littletown, and Julian Ranch.

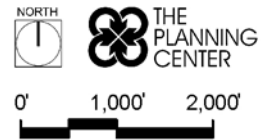


EXHIBIT B.5. SEWER SYSTEM LOCATION



Legend

- Manhole Covers
- Sewer Network
- Streets
- Site Boundary



File: SHW-01\sewer.mxd

Source: PCLIS, January 2005



B-6.c. Reclaimed Water

The Tucson Water Department was consulted and according to its records there is no reclaimed water service located on or adjacent to the landfill property.

B-6.d. Waste Disposal

The City currently provides solid waste collection, recycling and disposal services for the waste generated on-site and will continue to provide this service for the life of the project.

B-6.e. Private Utilities

Electricity and telecommunication services are currently provided to the Los Reales Landfill by various private companies. The service providers are expected to remain as is with no changes. However, if additional services are required, the City will obtain prior approval from the Development Services Department before installation occurs.

B-7. Topography

B-7.a. Topographic Characteristics

Topography on the site generally slopes from east to west (see Exhibit B.6: Topographic Map of the Los Reales Landfill PAD Area). The existing landfill is the dominant topographic feature and as of July 2003 had a peak elevation of approximately 2815 feet. The 80-acre parcel that lies north of Los Reales Road is undeveloped and slopes from east to west, from approximately 2733 to 2703 feet. The property east of the permitted landfill footprint also slopes from east to west, generally from about 2757 to 2730 feet. A stormwater detention basin and a soil stockpile exist on this east portion of the property, with the balance undeveloped. South of the permitted landfill footprint, the property again slopes from east to west from approximately 2742 to 2700 feet.

B-8. Hydrology and Water Resources

A Preliminary Drainage Report has been prepared as part of the PAD application (refer to Attachment B). Existing conditions are summarized below.

B-8.a. Offsite Drainage

The Los Reales 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 of the properties drain into the Airport Wash watershed. Both Airport Wash and Rodeo Wash drain northwest eventually into the Santa Cruz River.

There are several washes upstream of the Los Reales properties that affect the site. The Old Rodeo Wash enters the site on the east side of the property. The exact size and properties of this watershed were not evaluated in this study, 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 historic construction of the landfill in the 1970's and subsequent construction of the existing East Basin, all flows from the Old Rodeo Wash are now captured by the 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 southern portion of the site. The exact size and properties of this watershed 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. For the purposes of the attached Preliminary Drainage Report, these have been named NFAW-T3, NFAW-T1e, and NFAW-T1d and have areas of 166.8 acres, 70.5 acres, and 66.1 acres respectively. The location of these washes and watersheds is shown on Exhibit B.7: Stormwater Management, Pre-Development Plan.

Additionally, there are numerous small watersheds with flowrates under 100 cubic feet per second (cfs) that enter the site. The location and flowrates of these watersheds are shown on Exhibit B.7.

B-8.b. Onsite Drainage

The Preliminary Drainage Report evaluated the on-site drainage for the non-landfill portions of the property. A report entitled "Los Reales On-Site 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, Appendix F (see Attachment B).

There are two watercourses on the northern portion of the property which may be affected by the non-landfill development of the property. These watercourses both cross the proposed realignment of Los Reales Road. Both watercourses are within the Rodeo Wash watershed. One appears to represent the historic alignment of the Rodeo Wash, although the upstream portion has been cut off by previous development at the landfill site. The other watercourse has a drainage area which begins on the northern fringe of the eastern portion of the landfill property, flows across undeveloped and mobile home property outside the landfill property, and then re-enters the landfill property at the extreme northeastern corner of the northern portion of the landfill property. In addition, there are several small watercourses originating on the landfill property outside of areas proposed for landfill development. The locations of these watersheds are shown on Exhibit B.7.

B-8.c 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, as shown in the Preliminary Drainage Report, Appendix B. 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. Based on the current Master Plan for development of the Los Reales Landfill, most 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 that will be affected include the headwaters of Rodeo Wash (which will be crossed by the relocated Los Reales Road and the extreme headwaters of one of the channels will be occupied by a stormwater detention basin) and one of the tributaries (NFAW-T1) of the North Fork of Airport Wash (this channel will be diverted south around the landfill footprint and the relocated channel discharged to its



natural location through a spreading structure designed to maintain low flow depths and velocities). 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.

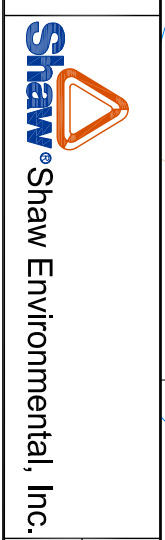


REV. NO.	DATE	DESCRIPTION

The Acacia Group
 3881 North First Avenue
 Tucson, Arizona 85719
 Fax: (520) 407-4071
 Fax: (520) 407-8073

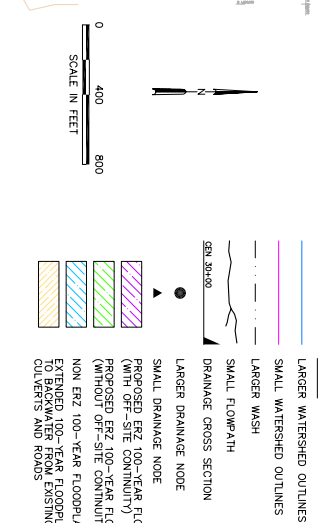
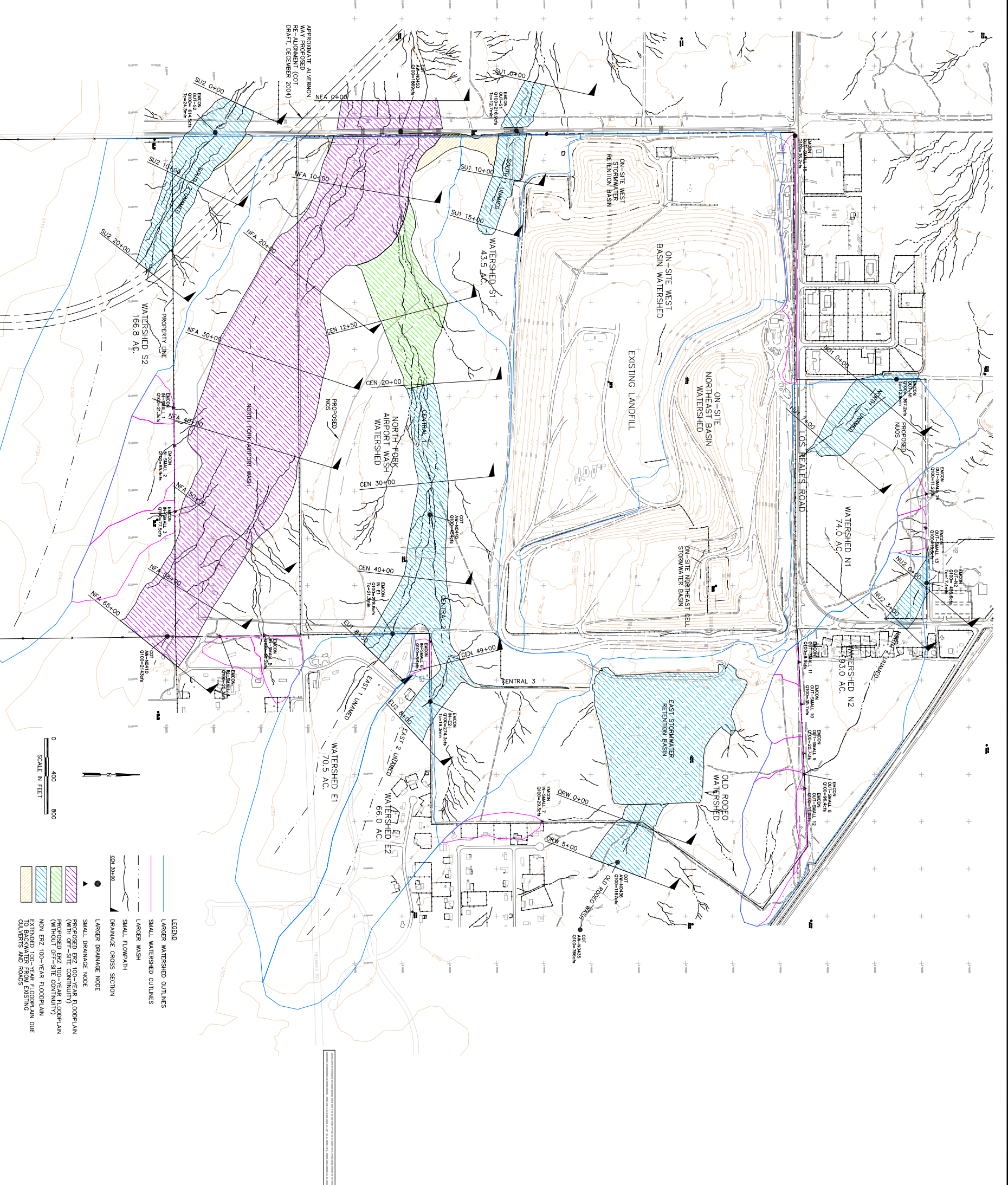


THE CITY OF TUCSON



**LOS REALES LANDFILL EXPANSION
 CITY OF TUCSON, ARIZONA
 STORMWATER DRAINAGE PLAN
 PRE-DEVELOPMENT PLAN**

PROJ. NO.:	11811	DATE:	APRIL 2005
DESIGNED BY:	JSR	EXHIBIT:	B.7
DRAWN BY:	MDC		
CHECKED BY:			
APPROVED BY:			



Throughout the Los Reales Landfill 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 which 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 landfill footprint and this diversion may impact a small portion of the proposed ERZ designation for this tributary. The overall landscaping plan for the proposed Los Reales Landfill Master Plan should be considered in establishing mitigation requirements for this disturbance.

B-9. Vegetation and Wildlife

B-9.a. Existing Vegetation

Sonoran Desertscrub Biotic Community. The Los Reales site is located in the Arizona Upland Subdivision of the Sonoran Desertscrub biotic community. This community occurs primarily on gentle slopes and ridges. The primary vegetation associations found on the site are Creosotebush-Mixed Scrub-Mixed Cacti and Xeroriparian-Mixed Scrub. The Creosotebush, *Larrea tridentata*, is the predominant plant. Mesquite and Palo Verde trees are present, occurring in low densities except in washes. Acacia species occur on the site in the flats, rivulets and washes. Cholla varieties, Barrel Cactus, Soap tree Yucca and Ocotillo occur throughout in moderate to low densities. The primary understory forbs are Plantago and Peppergrass, *Lepidium*. Spider Grass, *Aristida*, occurs in low densities and Mediterranean Grass, *Schismus barbatus*, occurs in moderate densities typically around Creosotebushes. Other shrubs include Desert Hackberry, *Celtis*, Triangleleaf Bursage, *Ambrosia*, and Saltbush, *Atriplex*.

Creosote-Mixed Scrub-Mixed Cacti Community Transect Inventories. Transect studies of plants and relative densities were carried out in the Creosote-Mixed Scrub-Mixed Cacti community on the site (see Attachment C, Table 1). A1, A2 and A5 transects were made in the expansion area south of the solid waste footprint. Transects B1 and B2 were made on the east expansion area of the site. Transect C1 was made in the 80-acre expansion site north of the existing solid waste footprint. Each transect measured fifty feet by fifty feet with an area of 2,500 square feet. The specific plants identified in each transect are listed below. Only predominant plants were counted and the actual numbers of these large indicator plants are listed in the inventory. For other plants, such as grasses and forbs, only the relative density was observed and the density number was ranked from 5 for high density to 1 for low density. The locations of the transects are shown on Exhibit B.8.





REV. NO.	DATE	DESCRIPTION

The Acacia Group
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THE CITY OF TUCSON



**LOS REALES LANDFILL EXPANSION
 CITY OF TUCSON, ARIZONA**

WILDLIFE AND VEGETATION

PROJ. NO.:	111811	DATE:	APRIL 2005
DESIGNED BY:	JSR	EXHIBIT:	
DRAWN BY:	MDC		
CHECKED BY:			
APPROVED BY:			

B.8

Xeroriparian-Mixed Scrub Community. This plant association is found primarily in the north fork of Airport Wash that flows northwesterly through the south expansion area. It also is found in the 80-acre parcel north of Los Reales Road. In spite of the fact that some trees appear to be stressed or dying due to a lower water table, lack of seasonal rains or a reduction of water flow through the site, there still is a greater diversity of plants in this area. Water that is available supports grasses, wildflowers, shrubs and trees. The primary trees found here are Mesquite and Acacias at moderate to high densities. The primary shrubs are the Saltbush, Atriplex and the Turpentine Bush, Isocoma.

The Xeroriparian-Mixed Scrub Community in the south expansion area has the highest wildlife values of the vegetation existing on the site. Preservation of as much as possible of this area is a goal of the planning effort for Los Reales Landfill site.

Xeroriparian Transect Inventories. Two transect studies of plants of the existing landfill and relative densities were made in the Xeroriparian Community located in the south expansion area (see Attachment C, Table 2). These transects also measured fifty feet by fifty feet and totaled 2,500 square feet each. The specific plants identified in each transect are listed below. Only predominant plants were counted and the actual numbers of the large indicator plants are listed in the inventory. Only the relative density of other plants, such as the grasses and forbs, is listed.

Inventory of All Native Plants Observed On the Site. Because detailed transect studies were made, a fairly detailed inventory of all of the plants on the site was possible. The inventories (see Attachment C, Tables 3 and 4) will be used for selecting plants for re-vegetation efforts and for the landscape border requirements of the City of Tucson Landscape Ordinance.

Protected Plants and Other Significant Vegetation. No Ironwood Trees or Pima Pineapple Cactus have been observed on the project expansion areas. However, the Arizona Department of Agriculture has noted the proximity of this site to populations of the Pima Pineapple Cactus. Westland Resources, Inc. completed a review of a 20-acre portion of the east-side expansion site for Pima Pineapple Cactus and found none to be present.

Two (2) Saguaros have been identified within the expansion areas. A 10-foot double spear was identified in the east expansion area, south of the existing drainage basin, and a 6-inch Saguaro was identified in the northern expansion area (refer to Exhibit B.8).

The area of dense Mesquite and Acacia trees on the west side of the south expansion area will remain undisturbed. Neighbors to the east recognize the south expansion area as an open space neighborhood amenity and a scenic resource although the vegetation on the project site generally provides low scenic value.

A massive Oleander hedge has been maintained for about 1,800 linear feet along the north edge of the existing landfill site along Los Reales Road. The hedge provides a good screen of the landfill operations as seen from the road.

None of the City of Tucson's screening borders have been developed so far on street right-of-ways and interior property lines due to the fact that the landfill was developed prior to the code requirements for the borders.



B-9.b. Wildlife Habitat

There are two areas of habitat designated Class II by Pima County located in the Los Reales expansion areas (refer to Exhibit B.8). Class II habitat, per Shaw 1986, is any major segment of riparian habitat not linked with protected areas. These Class II habitats provide some of the last remaining habitat for many birds and mammals in urban neighborhoods. They can be important neighborhood amenities for scenery and open space. The North Fork of Airport Wash is the primary Class II habitat on the Los Reales site covering approximately 96 acres. Class II habitat also occurs east of the existing detention basin and on the northeast corner of the 80-acre parcel.

The Arizona Game and Fish Department was asked to review the landfill expansion for the potential presence of endangered plants and wildlife species. The response from the Game and Fish Department cited the requirements for federal and state regulatory compliance. These requirements include the following.

- Compliance with the US Fish & Wildlife Service guidelines for the Cactus Ferruginous Pygmy-Owl survey zones and federally listed endangered species.
- Compliance with the Arizona Native Plant Law.
- Adherence to the Desert Tortoise handling guidelines.
- Adherence to the Arizona Game and Fish Department's requirements for disposition of bat roosts if found on the site.
- Adherence to the Arizona Game and Fish Department's requirements for disposition of active raptor's nests if found on the site.

Special status species within five miles of Los Reales where state-listed sensitive species are known to occur include the Sonoran Desert Tortoise, Western Burrowing Owl, Cave Myotis and the Western Yellow-Billed Cuckoo.

The project falls within Zone 2 of the Cactus Ferruginous Pygmy-Owl Zones. Surveys for the Pygmy-Owl were carried out on the south expansion area in 2001 by Westland Resources, Inc. No Pygmy-Owls were detected during the surveys. A subsequent letter from the U.S. Fish & Wildlife Service recommended no further surveys would be needed due mainly to the amount of disturbance on the surrounding land and also to lack of suitable habitat for the owl.

Twenty acres of the east side expansion area were investigated for the existence of Pima Pineapple Cactus in 2001 by WestLand Resources and none were found. The remaining expansion areas will be investigated as they are developed and vegetation is grubbed and removed.

There are no high densities of a given species or a high diversity of species known to exist on the project site. There are no aquatic or riparian ecosystems. The North Fork of Airport Wash on the project site is in fact recognized as a neighborhood open space amenity, a scenic and wildlife resource.



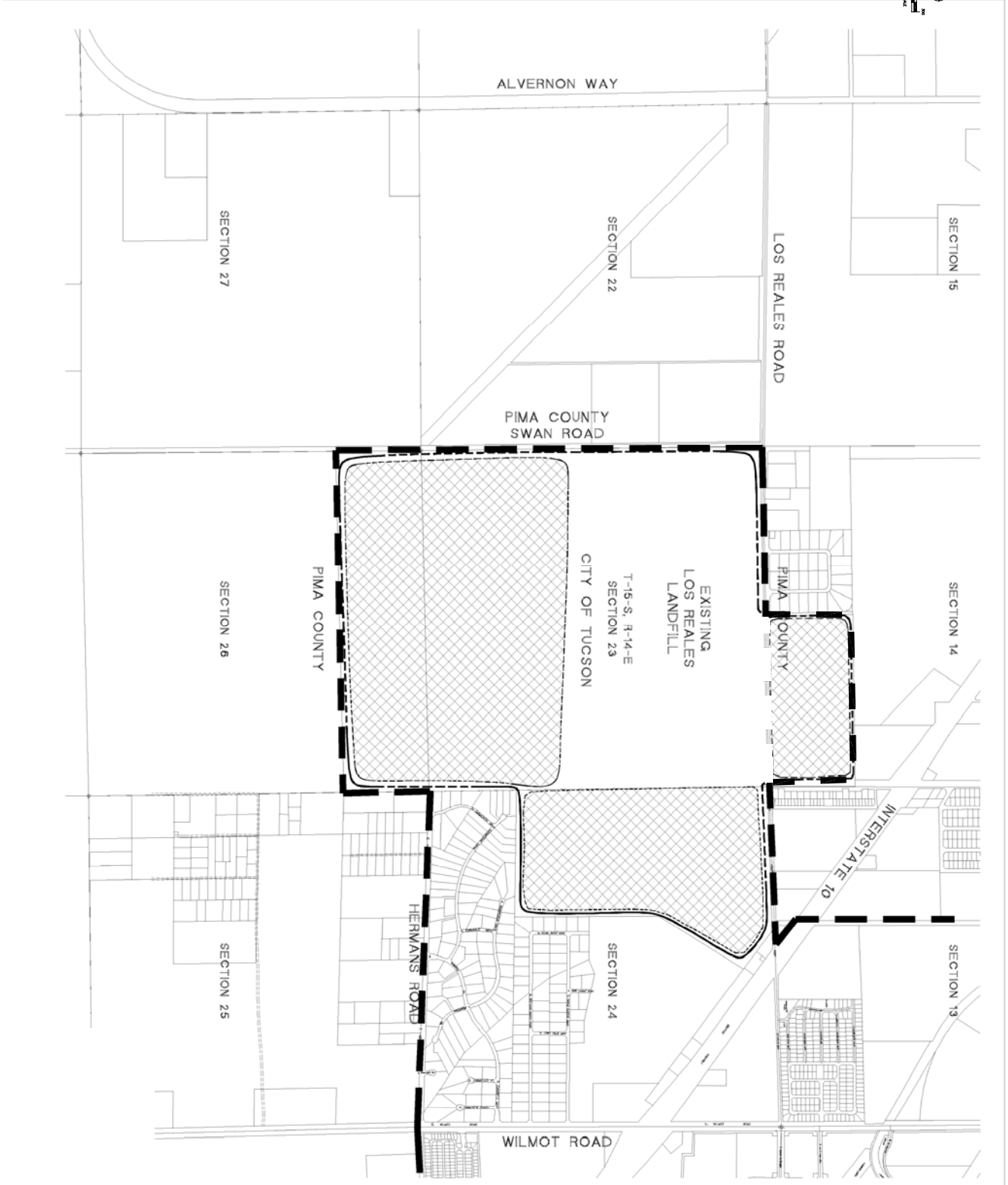
The Class II areas of the North Fork of Airport Wash are planned to remain in a natural condition, preserved under the proposed native plant set-aside area. The Class II habitat east of the existing detention basin on the east expansion area as well as the northeast corner of the 80-acre expansion parcel are planned to remain undisturbed. Any disturbance to these habitats will be mitigated with native plant materials.

The Class II xeroriparian communities with moderate densities of acacia and mesquite trees are the expansion area's only significant vegetation community. Wildlife movement through the corridor created by the north fork of the Airport Wash is restricted by the existing perimeter chain link fence.


B-9.c Environmental Resource Report

An Environmental Resource Report (see Attachment D) has been prepared as a requirement of the Set Aside Methodology of the City of Tucson's Native Plant Preservation Ordinance (NPPO) which is applicable to the expansion areas of the Los Reales PAD (see Exhibit B.9: Landfill Expansion Areas Under the NPPO). Three expansion areas are shown on Exhibit B.9 to the south, east and north of the existing landfill.





LEGEND

 LANDFILL EXPANSION AREAS
 CITY/COUNTY LIMITS

REV. NO.	DATE	DESCRIPTION

The
Acacia
Group

3041 North Rock Avenue
 Phoenix, AZ 85018
 Tel: (602) 477-0073



THE CITY OF TUCSON

Shaw Shaw Environmental, Inc.

LOS REALES LANDFILL EXPANSION
CITY OF TUCSON, ARIZONA
 LANDFILL EXPANSION
 AREAS UNDER THE NPPD

PROJ. NO.:	11811	DATE:	April, 2005
DESIGNED BY:	JAV	EXHIBIT:	B.9
DRAWN BY:	FEL		
CHECKED BY:			
APPROVED BY:			

The southern expansion area includes approximately 424 acres of undisturbed desert except for a water line easement and a perimeter maintenance road. The 204-acre eastern expansion area consists of 39 acres of previously disturbed area, a 35 acre stormwater basin (previously graded and re-vegetated) and 130 acres of undisturbed desert except for a perimeter maintenance road. The northern section is an 80-acre parcel of mostly undisturbed desert. Thirty percent (30%) of the site expansion area will be preserved as natural, undisturbed open space consisting primarily of high quality xeroriparian vegetation.

Two set-aside areas are planned. The predominant area of 187 acres includes almost all of the North Fork of the Airport Wash in the south expansion area. The second area of 25 acres includes the existing natural drainage area in the north 80-acre expansion area as well as the north edge of that parcel. The total set-aside area, which includes 212 acres of the most valuable landscape resources on the site, is 30 percent of the 708 acre expansion.

B-10. Geology and Soils

B-10.a. Geological Features

The Los Reales Landfill PAD area 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. Additional information regarding the geologic features of the PAD area can be found in the 1997 Solid Waste Facility Plan prepared by Black & Veatch on behalf of the City of Tucson.

B-10.b. Soils

Black & Veatch conducted a subsurface investigation on the landfill property as well as adjacent properties to the east and south as part of the 1997 Solid Waste Facility Plan. Fifteen (15) separate borings were drilled to depths ranging from 30 to 75 feet. The Black and Veatch report indicated the following concerning on-site soils:

Based on the borings and test results, the soils at the site can be generally divided into three categories:

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 all 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.

The three soil types discussed above were found at varying depths and layer thicknesses. In some borings, one soil type was present for up to 30 feet of the boring. In other borings, the soil appeared to be in approximately one foot thick layers.

The consistency of the soil types and the layering generally indicates that the depositional environment of this area has not changed for many thousand years. Sands and silts wash down from the nearby mountains. Surface runoff separates the soil into various particle sizes. The sands at the site are dense and cemented. The cementation tends to decrease with depth. The top five feet in many of the borings contained highly cemented caliche. The silts and clays are hard and have a low plasticity. The average in place water content is approximately 3%.

B-11. Viewsheds and Visual Analysis

The existing Los Reales Landfill is approximately 100 feet high and about ½ mile by 1 mile in size. The landform is visible from 3 miles away with perception of the landform becoming prominent at about 2 miles away. The engineered grading makes the existing landform look like a big pillow. The focus of the visual analysis and subsequent visual impact mitigation measures is to alter the big pillow effect and create a natural appearing landform. If the landform is altered to look more natural, the resulting vegetation cover also will appear more natural, enhancing mitigation measures. There are a number of factors that affect views and visibility.

- Distance of the viewer from the landfill. Background or distant views are beyond 1 mile. Mid-ground views are ¼ mile to 1 mile and foreground views are less than ¼ mile.
- Color and form. Colors and forms that contrast with the setting are perceived more prominently than colors that blend with the setting.
- Texture. A texture that is smooth or a texture that's rugged typically contrasts more with the setting and is more visually prominent. A moderately textured landform typically blends in more with its setting.
- Observation point. A high observation point generally increases the visibility of objects in the landscape. The view of the landform from I-10 driving east is significant because of the elevated road bed. A low observation point usually has foreground obstructions that inhibit the visibility of an object in the environment such as the landfill.
- Duration of the view. Objects in the environment are more visually significant with a long duration of the view. Driving by the landfill at 65 mph for a short duration at an oblique angle is less significant than a static full view.



- Direction of the view. An oblique view is typically less significant than a straight ahead view.
- Familiarity. The first time one sees a prominent view, the impact of the view tends to be more significant than after many subsequent views.
- Concentration of viewers. The greater the concentration of viewers, the more significant the visual impact becomes because it affects a larger number of people.

The viewshed for the Los Reales Landfill is shown on Exhibit B.10, Regional Visibility and Viewshed. This exhibit shows that prominent visibility occurs from about 2 miles away from the landfill. The viewshed is the area where the landform is always visible. Within the Los Reales viewshed, the views of primary concern are from the existing roads and from adjacent and nearby development because these are the locations with the largest concentration of viewers. Consequently, visual impact mitigation measures will focus on mitigating the impact of the landfill for the traveler and nearby property owners.

B-11.a. Views from Adjacent Properties

Views of the existing landfill from each compass direction have been analyzed from adjacent and distant properties. Visual impact from adjacent properties is shown on Exhibit B.11. Local Visibility.

View to the North. From the vacant land south of the site, the landfill is prominently visible with a background of the Santa Catalina Mountains. Foreground, mid-ground and distant views are all characterized by undisturbed native vegetation and landform that slopes gently toward the landfill. The Santa Catalina Mountain backdrop helps to mitigate the visual impact of the landfill by softening the silhouette aspects of views to the north. The landfill is perceived primarily by its contrasting tan color in relation to the color of the Santa Catalina Mountains in the background and the green Creosote desert in the fore- and mid-ground.



View of landfill and Santa Catalina Mountains from adjacent southern property.



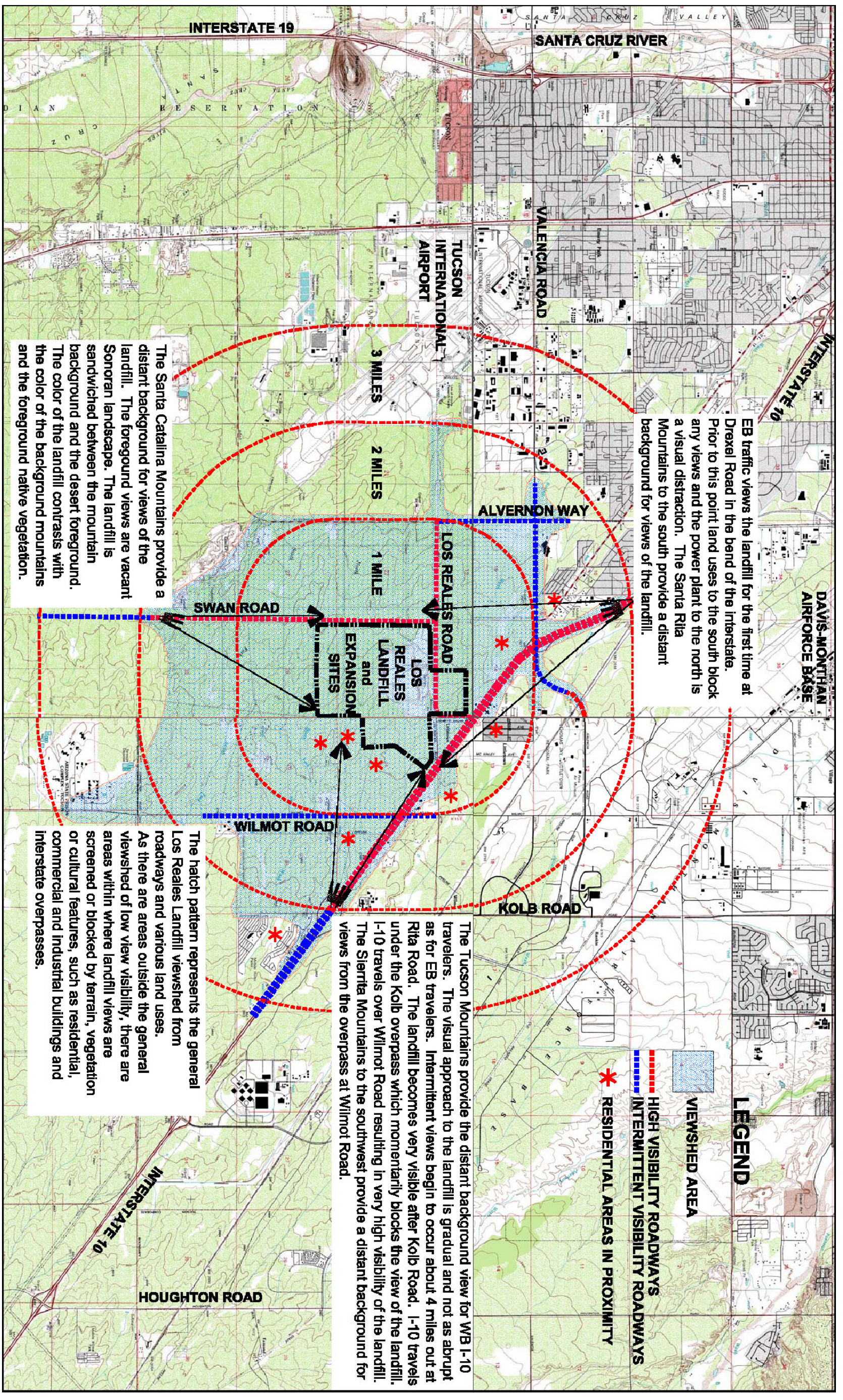
REV. NO.	DATE	DESCRIPTION



THE CITY OF TUCSON



LOS REALES LANDFILL EXPANSION CITY OF TUCSON, ARIZONA REGIONAL VISIBILITY AND VIEWSHED	
PROJ. NO.:	111811
DESIGNED BY:	JPV
DRAWN BY:	PEL
CHECKED BY:	
APPROVED BY:	
DATE:	APRIL 2005
EXHIBIT:	B.10



EB traffic views the landfill for the first time at Drexel Road in the bend of the interstate. Prior to this point land uses to the south block any views and the power plant to the north is a visual distraction. The Santa Rita Mountains to the south provide a distant background for views of the landfill.

The Santa Catalina Mountains provide a distant background for views of the landfill. The foreground views are vacant Sonoran landscape. The landfill is sandwiched between the mountain background and the desert foreground. The color of the background mountains and the foreground native vegetation.

The Tucson Mountains provide the distant background view for WB I-10 travelers. The visual approach to the landfill is gradual and not as abrupt as for EB travelers. Intermittent views begin to occur about 4 miles out at Rita Road. The landfill becomes very visible after Kolb Road. I-10 travels under the Kolb overpass which momentarily blocks the view of the landfill. I-10 travels over Wilmot Road resulting in very high visibility of the landfill. The Sierra Mountains to the southwest provide a distant background for views from the overpass at Wilmot Road.

The hatch pattern represents the general Los Reales Landfill viewshed from roadways and various land uses. As there are areas outside the general viewshed of low view visibility, there are areas within where landfill views are screened or blocked by terrain, vegetation or cultural features, such as residential, commercial and industrial buildings and interstate overpasses.

- LEGEND**
- VIEWSHED AREA
 - HIGH VISIBILITY ROADWAYS
 - INTERMITTENT VISIBILITY ROADWAYS
 - RESIDENTIAL AREAS IN PROXIMITY

REV. NO.	DATE	DESCRIPTION

The Acacia Group
3881 North Reid Avenue
Tucson, Arizona 85718
TEL: (520) 467-8071
FAX: (520) 467-8073

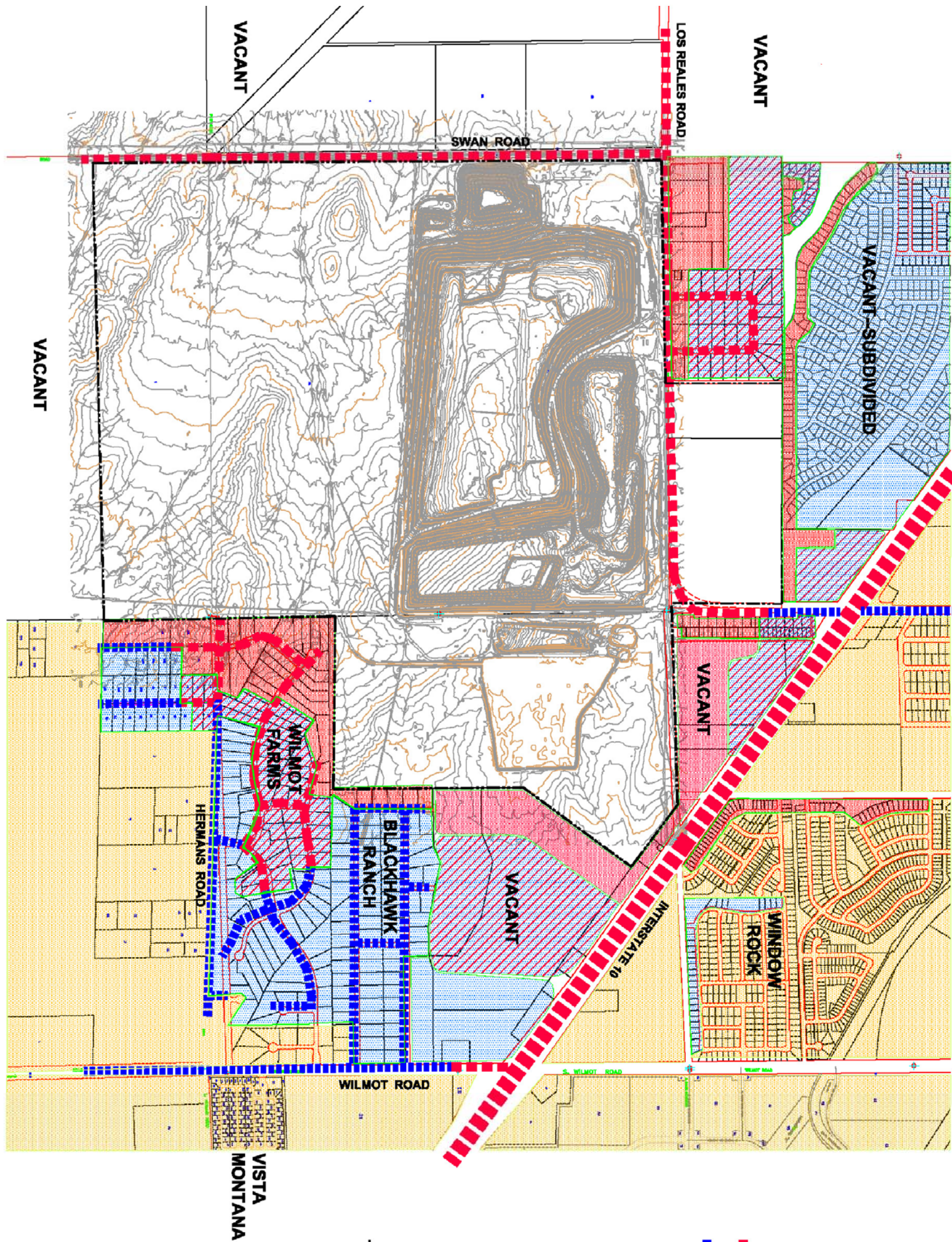


THE CITY OF TUCSON

Shaw Shaw Environmental, Inc.

LOS REALES LANDFILL EXPANSION
CITY OF TUCSON, ARIZONA
LOCAL VISIBILITY

PROJ. NO.:	111811	DATE:	APRIL 2005
DESIGNED BY:	JPV	EXHIBIT:	B.11
DRAWN BY:	PEL		
CHECKED BY:			
APPROVED BY:			



LEGEND

VEWS FROM ROADS

- Red dashed line: HIGH VISIBILITY
- Blue dashed line: INTERMITTENT VISIBILITY

VEWS FROM ADJACENT LAND USES

- Pink solid box: HIGH VISIBILITY
- Green solid box: TRANSITION from HIGH to INTERMITTENT or LOW VISIBILITY
- Blue solid box: INTERMITTENT or LOW VISIBILITY
- Yellow solid box: LOW to NO VISIBILITY

Black dashed line: PROJECT BOUNDARY

Views to the South. The most important views looking to the south are from I-10, Craycroft Road and Los Reales Road. Views from I-10 heading east have the highest visual impact of all locations because the angle of the highway is 45 degrees to the landfill and the road bed is elevated. There also is high visibility from industrial properties just north of Los Reales Road and from the mobile homes on Craycroft Road. Eventual screening by the proposed landscape border treatments will reduce the visual impact from Los Reales Road, the industrial properties and the mobile homes. Views from I-10 will be mitigated by naturalizing the landform and by introducing the interim erosion control measures and long-term closure treatments of the landfill's surface.

The view from I-10 is particularly significant because it is seen by about 44,000 travelers per day. This number can be expected to more than double over the next 25 years. Thus, improving the view of the landfill from I-10 is not only desirable for local highway users but also is seen as a City public relations activity.

Foreground views from I-10 include recently built single-family homes. The landfill is part of the mid-ground view. The Santa Rita Mountains are seen in the distance.



View looking south from east bound I-10.





View looking south to the Santa Rita Mountains from the northeast corner of the landfill site.

Views to the East. Currently there are prominent views of the landfill from Swan Road. Turning southbound onto Swan from Los Reales Road puts the landfill squarely in the foreground view from the road. The view from Swan Road is very prominent and needs mitigation. South on Swan Road traveling north, background, mid-ground and foreground views exist. The landfill is first noticed about 2 miles south. Because there currently is no development, the view of the landform is seen over low-growing native desert plants, primarily Creosotebush. Also, the background and mid ground are mostly from an elevated viewing position and the landfill is even more prominent.



View of landfill from Swan Road

Like the foreground view from Swan Road at the northwest corner of the site, the northbound foreground views of the landfill area are also prominent. It has a high concentration of viewers because the landfill is accessed from the west. Swan Road is a main arterial for this part of Tucson both currently and in future land-use plans. The landfill is very visible from points further west where the land is largely undeveloped. The main visual impacts at this



time are for people driving on Swan Road. Eventual screening by the required landscape border treatments and an additional planned berm with desert re-vegetation on the landfill property will reduce the visual impact from Swan Road.

Views to the West. The visibility of the landform is perhaps the most problematic for the views from the current homes that border the landfill on the east. Residential, single family homes exist in the Wilmot Farms and Blackhawk Ranch developments east of the landfill. Vacant property east of the landfill is zoned residential but may be developed as commercial. Residents east of the landfill have highly visible foreground views of the landfill. Today's views currently have undisturbed Creosote desert in the foreground. Residents further south view the Tucson Mountains and the Sierrita Mountains in the background and have mid-ground views of the landfill to the northwest. Foreground views include undisturbed Creosote desert.



View of the landfill looking northeast from Wilmot Farms.

Views from I-10 for westbound travelers are intermittent from about 4 to 2 miles away because vegetation, terrain and overpasses effectively screen and block visibility of the landfill. On non-elevated sections of I-10, mid-ground views for travelers from 2 miles to 1 mile away from the landfill are still mostly intermittent. The Tucson Mountains and Sierrita Mountains present an important distant visual backdrop, especially on elevated portions of I-10.

Views from more distant residential properties vary due to vegetation, terrain and existing land uses. These views are mostly intermittent. Overall, residential properties within a couple miles are minimally affected by the existing landfill. The contrasting color of the existing landfill is the primary factor in the current perception of the landfill versus the landfill form.

The landfill that exists today is treated with a daily and interim cover of dirt. Landfill cells currently in operation are above grade. When operations occur on top of the landfill in the future, there may be a high visibility of the operations from I-10 and adjacent land uses. This is a visual impact of final build-out that may not be able to be entirely averted. By working from the outside in during the development of the south expansion area, however, berms at the edges of the new cells can be raised to hide the operations and mitigate all but the initial activities of the south expansion.



B-11.b. Elevation and Regional Visibility

Due to the size of the solid waste footprint, about 435 acres at build out, and also due to the ultimate height, with peaks 100 feet higher than today's elevation, the landfill will always be visible on a regional basis. The top of the peaks are likely to be seen from all directions by a person with direct line of sight. Visibility is shown graphically on Exhibit B.12. Areas of Current Regional Visibility Based on Elevation and Exhibit B.13. Areas of Closure Regional Visibility Based on Elevation. These exhibits identify visibility based on topography and contour line elevations. Regional visibility based on elevation is defined as the following.

- Visible. The top half of the landfill structure is easily recognizable from 360 degrees. The highly visible zone lies above the 2750 contour.
- Hardly Visible. This portion of the landfill lies generally between the 2750 and the 2700 contours, the approximate surrounding base elevation.
- Not Visible. These areas are below the 2700 elevation such as drainage basins and the initial below grade stages of each new cell development.

EXHIBIT B.12. AREAS OF CURRENT REGIONAL VISIBILITY BASED ON ELEVATION

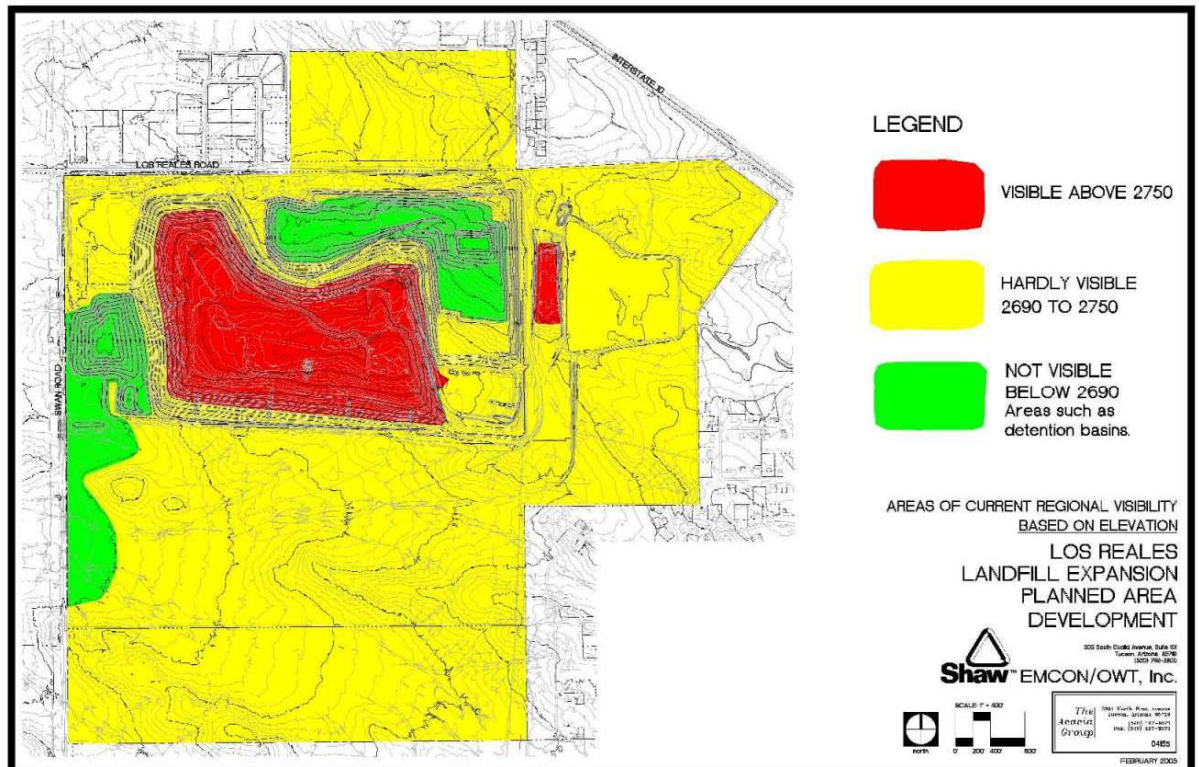
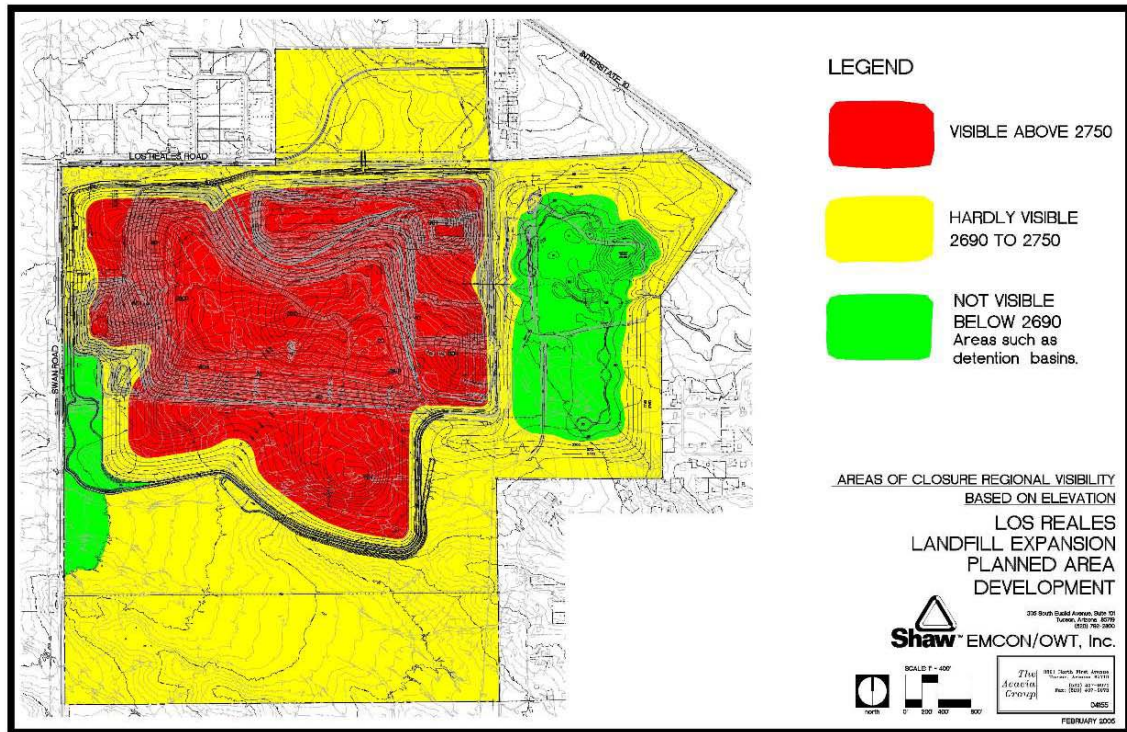


EXHIBIT B.13. AREAS OF CLOSURE REGIONAL VISIBILITY BASED ON ELEVATION



B-12. Paleontological and Cultural Sites, Structures and Districts

B-12.a. Location of Cultural Resources

The following text is excerpted from the 1997 Black and Veatch Solid Waste Facility Plan and was included in the 2004 Solid Waste Facility Plan approved by ADEQ in May, 2005:

The Los Reales Landfill site has been disturbed by landfilling and earthmoving activities since 1967. No archaeological finds have occurred on the site during this time. In order to obtain the clearance required by the State Historic Preservation Act, Black & Veatch has requested a review of the site be conducted by the Arizona State Historic Preservation Office, Arizona State Parks. A copy of the request is included as Exhibit 6.1A. The State Historic Preservation office has reviewed the request and issued a finding that the landfill or the planned construction within the landfill property has "No Effect" to cultural resources. Written confirmation of the finding is included as Exhibit 6.1B (Black & Veatch, 1997).

The City has recently acquired properties adjacent to the south and east of the landfill. At the request of the City of Tucson, Desert Archaeology, Inc. conducted archaeological surveys of the landfill and adjacent properties. The results of these surveys are summarized in Archaeological Survey of the Los Reales Landfill Expansion Project, Tucson, Arizona (Desert Archaeology, Inc., 1995a). Desert Archaeology, Inc. also prepared a data recovery plan of the south adjacent property (Desert Archaeology, Inc., 1995b) and conducted data recovery of the south adjacent property (Desert Archaeology, Inc., 1996). The three reports prepared by



Desert Archaeology, Inc. (1995a, 1995b, and 1996) are included as Attachment 2 to the Assessment of Wetlands and other Waters of the United States for the Los Reales Landfill Project (B&V, 1996), which is included as Appendix A to this SWFP.

Desert Archaeology, Inc. (1996) concluded that the cultural resources located on the south adjacent property have either been adequately recorded or adequately recovered during survey and data recovery investigations, and recommends clearance for development of the land to the south of the current landfill. The City will conduct a similar data recovery of the east property depending on the ultimate use of that property.

Prior to purchasing the 80-acre expansion area north of Los Reales Road, the City of Tucson contracted with Desert Archaeology, Inc. to conduct an archaeological survey of the parcel. Desert Archaeology completed its final report on November 8, 2002 (see Attachment E) and found no significant historical or archaeological material on the site. Desert Archaeological, Inc. recommended that the purchase of the property proceed as planned and that should any buried archaeological remains be encountered during construction, work should be temporarily halted until an archaeologist assessed their significance. The City proceeded to purchase the property and annexed it into the City in 2004.



C. LOS REALES LANDFILL PAD DISTRICT PROPOSAL

C-1. Purpose

This section is intended to provide the regulatory zoning provisions for the Los Reales Landfill PAD, which is designed to guide the implementation of the vision for long-term use of the landfill through the plan review and development permitting processes, and to comply with the provisions of the Planned Area Development Zone, Section 2.6.3 of the *Land Use Code (LUC)*. These provisions constitute the primary tools for use by the City and developers in ensuring that the Los Reales Landfill PAD develops in conformance with the vision presented in this document, as adopted by the Mayor and Council.

The figures and tables in this document concerning the hydrology, topography, traffic impacts and other aspects of the Los Reales Landfill PAD area do not all contain detailed information; the required information shall be submitted to the appropriate City of Tucson staff in conjunction with applications for block plats and/or development plans submitted to implement this PAD. Development plans and plats will be required for all structures except for City of Tucson owned and operated structures located outside of the CRC and Reserve Districts.

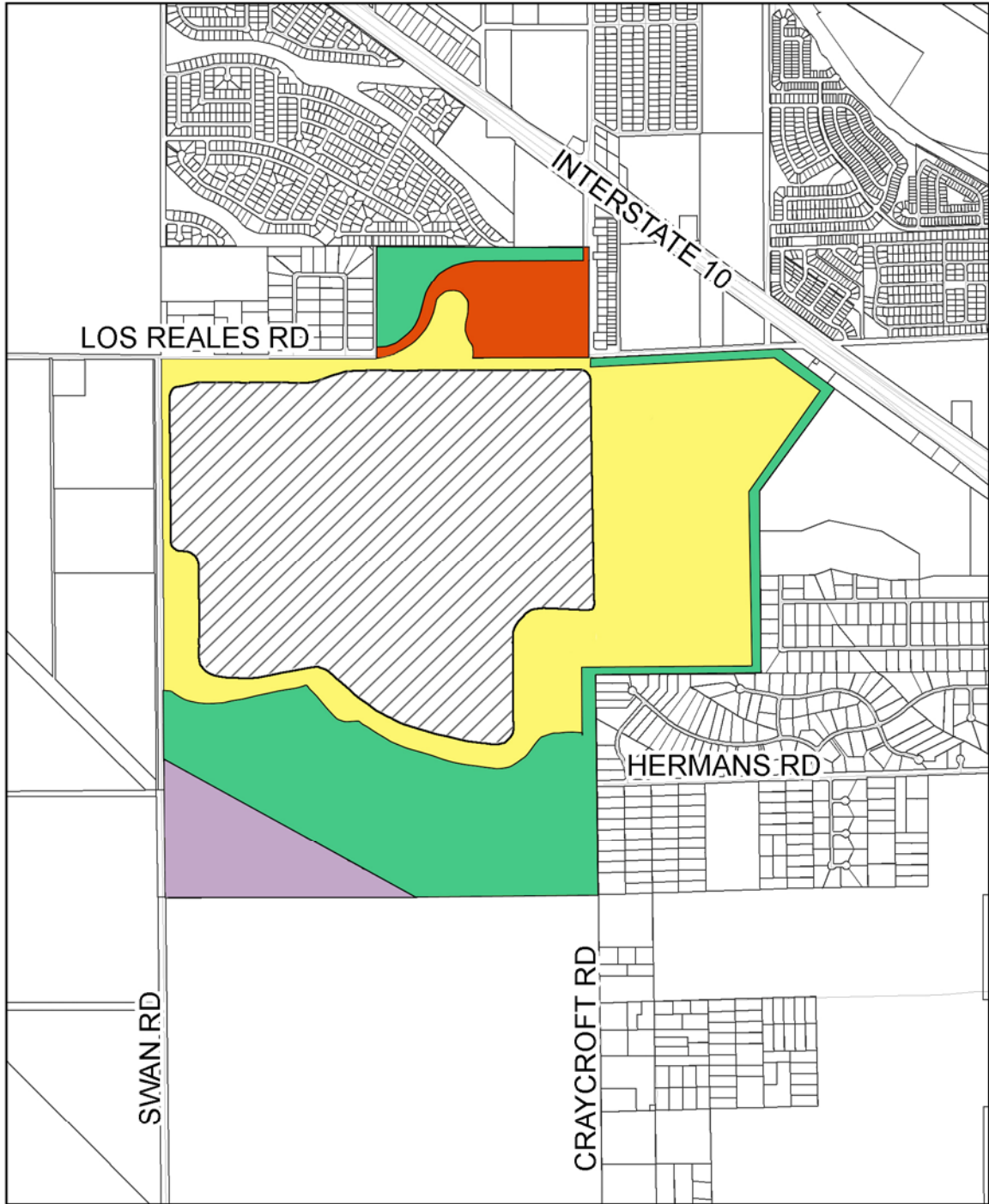
C-2. Los Reales Landfill PAD Districts - During Active Life of the Landfill

As previously indicated, it is anticipated that the Los Reales Landfill will be used as an active landfill for the next several decades. For conceptual purposes, five districts have been identified to describe the land uses most likely to occur in these districts during landfill operations (see Exhibit C.1). While the following are the most likely uses, other uses are permitted, as identified in Section C-5 of this document. Many of the uses listed in C-5 can be realized only after the landfill has closed.






- **Waste Disposal District.** The Waste Disposal District encompasses the existing and future landfill footprint, along with a buffer providing access to the landfill and separation from adjacent uses. Additional uses may include: green waste storage and processing, composting, material recovery facility, cottage industries, shopping cart storage, material storage/stockpiling, landfill equipment maintenance, truck wash and container storage. Disposal of solid waste at the Los Reales Landfill will be regulated by ADEQ through the Municipal Solid Waste Landfill Facility Plan Approval (refer to Attachment F) issued on June 1, 2005 and as modified by ADEQ. In addition to waste disposal and the additional uses listed above, other uses are permitted. See Section C-5 for a complete listing of permitted land uses.
- **Community Resource Center District.** The Community Resource Center (CRC) District includes two primary functional uses. First, the CRC provides improvements to more efficiently manage traffic and the handling of waste at the facility. These improvements include a re-alignment of Los Reales Road, a gated landfill entrance, a scalehouse pavilion, a rest area pavilion, a truck wash facility and an administrative office for the City's Environmental Services. Second, the CRC provides a comprehensive range of facilities to promote recycling and reuse of waste and enhance environmental awareness. These facilities include a drop-off pavilion for recyclables, a drop-off pavilion for household hazardous waste and other "orphan" materials such as electronics, a drop-off pavilion for tires and appliances, a self-haul convenience center for residents to drop off household waste and green waste,



EXHIBIT C.1. LOS REALES LANDFILL PAD DISTRICTS



Legend

-  WASTE DISPOSAL DISTRICT
-  OPEN SPACE DISTRICT
-  STORMWATER AND ANCILLARY USES DISTRICT
-  RESERVED DISTRICT
-  COMMUNITY RESOURCE CENTER DISTRICT



Source: PCLIS, January, 2005



cottage industries and a learning center. This District may also provide space for potential future solid waste handling facilities such as a Material Recovery Facility and/or a transfer station.

The proposed general location of these uses is shown on Exhibit C.2. A more detailed preliminary site plan is shown on Exhibit C.3. Both of these exhibits are for illustrative purposes; the locations of the uses shown are not fixed, and these exhibits will not be used for regulation of the final development of this District. In addition to the above, other uses are allowed in this District. See Section C-5 for a complete listing of permitted land uses.

- Stormwater and Ancillary Uses District. The Stormwater and Ancillary Uses District provides key support functions to the operation of the Los Reales Landfill and CRC including stormwater management structures, access roads, environmental monitoring systems, soil borrow pit, landfill equipment maintenance shop, waste container and collection vehicle storage, shopping cart storage, material stockpiling (no stockpiling will occur within the regulatory floodplain), processing areas for green wastes and other materials, composting, truck wash, material recovery facility and cottage industries.

The general location of these uses is shown on Exhibit C.4. This exhibit is for illustrative purposes. The locations of these uses are not fixed, and this exhibit will not be used for regulation of the final development of this District.

In addition to the above uses, other uses are allowed in this District. See Section C-5 for a complete listing of permitted land uses.

- Open Space District. The Open Space District encompasses the highest quality wildlife and vegetative areas within the Los Reales PAD property. This District preserves a significant area of the property as natural, open space (NOS) and will meet the 30 percent set aside required by the Tucson Native Plant Preservation Ordinance, as modified in this document (see Section C-7.a). This District also features extensive landscaping along the property's eastern and northern borders where residential land uses exist or are planned. In addition to the open space uses, other uses are allowed in this District. See Section C-5 for a complete listing of permitted land uses.
- Reserved District. The Reserved District is designed to allow the Environmental Services to work with other City of Tucson departments in providing utility services to area residents. The intent of this District is to provide Tucson Water with adequate area to build a water reservoir and provide connections with nearby water lines. Tucson Water facilities are exempt from parking, PAAL, and sidewalk requirements, i.e., these items are not required. Dust control shall be provided. Tucson Water facilities will not be accessible to the general public.

The Reserved District is also designed for potential future land uses which have not yet been determined. It is anticipated that this District will be impacted by the expansion of Alvernon Way that will cut through the southwest corner of the PAD area. See Section C-5 for a complete listing of permitted land uses and Section C-6 for a listing of development standards.



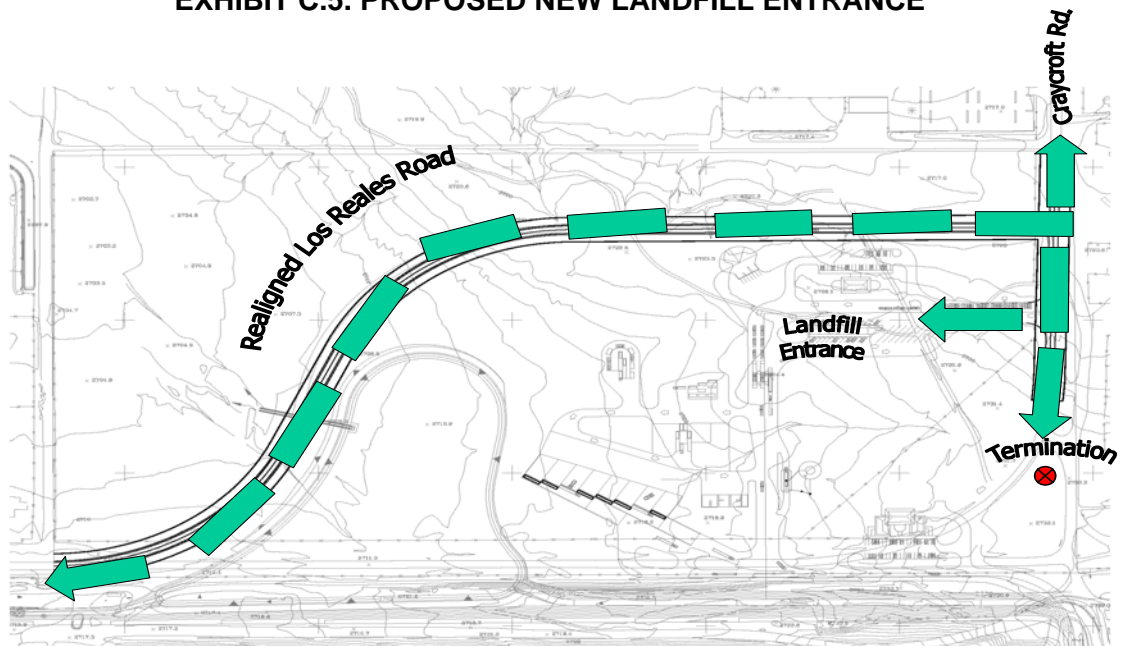
C-3. Major Streets Within or Near PAD

Two studies underway are expected to improve access in the vicinity of the landfill. As currently envisioned in the Southeast Arterial Study, Swan will be extended south of Valencia to Los Reales Road, and Alvernon will be extended south of Los Reales Road to the southeast, connecting to Swan just west of the landfill. An ADOT study focusing on I-10 improvements from Benson to Tucson is expected to result in improvements to I-10 in the vicinity of the landfill.

In conjunction with construction of the CRC area, Los Reales Road will be re-aligned to the north, and a new main entrance to the landfill will be constructed on Craycroft Road south of the relocated Los Reales Road (see Exhibit C-5). Craycroft Road will be terminated south of the new landfill entrance. After the new main entry from Craycroft has been completed, the Swan Road entrance may continue to be used as a secondary access. A planned 2006 update to the City's Major Streets and Routes Plan will include a realigning of Los Reales Road to be consistent with this PAD.

Upon entry to the CRC, an interconnected system of drives and parking area access lanes (PAALs) will provide access to various areas within the CRC, as well as to the actual landfill area. Attachment G contains a traffic analysis report prepared by Morrison Maierle, Inc., regarding impacts of planned improvements and the overall expansion of the Los Reales Landfill.

EXHIBIT C.5. PROPOSED NEW LANDFILL ENTRANCE



C-4. Typical Street Cross-Sections

The cross section for the relocated Los Reales Road west of Craycroft is shown on Exhibit C.6.

One-way PAALs will be paved and a minimum of twenty (20) feet wide. Two-way PAALs will be paved and a minimum of twenty-four (24) feet wide.

The design and location of all temporary roads developed for access to the various uses at the Los Reales Landfill PAD and for maintenance will be subject to the review and approval by City of Tucson's Environmental Services. The minimum width of the temporary roads around the perimeter will be sixteen (16) feet and the maximum width will be thirty (30) feet. If a temporary road is developed for maintenance of the water line its minimum width will be twelve (12) feet and the maximum width will be thirty (30) feet. The temporary road developed for the water line maintenance will be within thirty (30) feet of the south section line of Section 23, Township 15 South, Range 14 East. All temporary roads developed around the perimeter of the PAD will be located within one hundred (100) feet of the property line. All temporary roads will be unpaved.

C-4.a. Tucson Fire Department Requirements

The Los Reales Landfill PAD will comply with Chapter 5 of the 2003 International Fire Code. For the purposes of this PAD the term "structure" is defined as a building structure, not the Los Reales Landfill.

C-5. Land Uses Within the PAD Zone

The base zoning district proposed for the Los Reales Landfill PAD is I-2, as defined in Section 2.7.3 of the *LUC*, and as modified in Section C-5 of this document. The development designators and performance criteria listed in the *LUC* do not apply, except that all land uses permitted in this PAD (either permitted by the I-2 designation in the *LUC* or in this document) must comply with the performance criteria listed in *LUC* Section 3.5.5.1.F (see Table C.1, last entry in table).

C-5.a. Prior Existing Uses

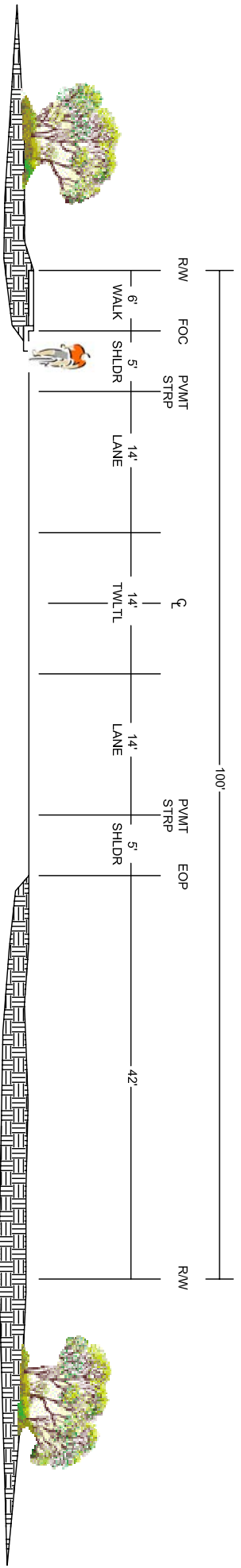
Uses and structures existing on the Los Reales PAD site at the time this PAD zone is approved are allowed until relocated or replaced. Attachment H contains maps showing the location of existing uses.

C-5.b. Permitted Uses

Land uses permitted within the Los Reales Landfill PAD (including but not limited to special exceptions land uses) are as defined in Section 2.7.3 of the *LUC*, as modified by the following:



LOS REALES ROAD
 PROPOSED ROADWAY CROSS-SECTION
 LOOKING WEST (N.T.S.)



**MORRISON
 MAIERLE, INC.**
 An Employee-Owned Company
 Engineers
 Surveyors
 Scientists
 Planners
 80 E. Rio Salado Parkway,
 Suite 201
 Tempe, AZ 85281
 Phone: (480) 517-5800
 Fax: (480) 517-5801

DRAWN BY: SIM
 CHK'D. BY:
 APPR. BY:
 DATE: 02/20/06

T:\Tom Buttkus Reales\Los Reales 3.dwg Plotted by smendhall on Feb/3/2006

TUCSON	LOS REALES ROAD	PROJECT NO. 8170012
PROPOSED ROADWAY CROSS-SECTION	ARIZONA	FIGURE NUMBER EXHIBIT C.6

C-5.c. Additional Permitted Uses

C-5.c.1. Civic Use Group, Sec. 6.3.4

- a. Civic Assembly
- b. Cultural Use
- c. Instructional School

C-5.c.2. Industrial Use Group, Sec. 6.3.6

- a. Primary Manufacturing
- b. Extraction
- c. Salvaging and Recycling

C-5.c.3. Recreational Use Group, Sec. 6.3.7

- a. Golf Course
- b. Neighborhood Recreation
- c. Recreation
- d. Open Space

C-5.c.4. Retail Use Group, Sec. 6.3.10

- a. Food and Beverage Sales

C-5.c.5. Utilities Use Group, Sec. 6.3.12

- a. Sanitation System

C-5.d. Excluded Land Uses (Not permitted in any District):

C-5.d.1. Agricultural Use Group, Sec. 6.3.3

C-5.d.2. Civic Use Group, Sec. 6.3.4

- a. Cemetery
- b. Correctional Use

C-5.d.3. Commercial Services Use Group, Sec.6.3.5

- a. Billboard
- b. Daycare



- c. Medical Service – Major
- d. Medical Service – Minor
- e. Traveler's Accommodation, Campsite

C-5.d.4. Residential Use Group, Sec. 6.3.8

- a. Residential Care Services: Rehabilitation Service or Shelter Care

C-5.e. Land Uses Permitted in the Reserve District Only

C-5.e.1. Commercial Services Use Group, Sec. 6.3.5

- a. Entertainment
- b. Transportation Service Air Carrier

C-5.e.2. Industrial Use Group, Sec. 6.3.6

- a. Hazardous Material Manufacturing
- b. Refining

C-5.f. Special Exception Land Uses

Land Use Classes not allowed as a permitted Land Use within the Los Reales Landfill PAD or within the I-2 zone *LUC* Section 2.7.3.2 are not permitted within this PAD, unless approved through a Zoning Examiner Legislative Procedure, *LUC* Sections 5.4.1 and 5.4.3. Land Uses are subject to any additional conditions listed as determined through the Zoning Examiner Legislative Procedure.

C-5.g. Secondary Land Uses

Land Use Classes allowed as a permitted Land Use within the I-2 zone *LUC* Section 2.7.3.4 are permitted within the Los Reales Landfill PAD, except the following Land Use Classes are not permitted within this zone as a Secondary Land Use.

C-5.g.1. Commercial Services Use Group, Sec. 6.3.5

- a. Medical Service – Major
- b. Medical Service – Outpatient

C-5.h. Accessory Land Uses

The land uses associated with, and incidental to, a principal structure, are accessory and subject to the provisions in *LUC* Section 3.2.5.1. Outdoor storage shall not be located in a buffer yard.

C-6 General Development Standards

The Los Reales Landfill PAD shall recognize the development standards provided in Table



C.1, *Los Reales Landfill PAD Development Standards*. These standards apply to the development of buildings, landscape borders, perimeter walls and performance criteria for all permitted uses within the PAD. The Los Reales Landfill development standards are intended to regulate all development within the Los Reales Landfill PAD. These standards will supercede the standards in the *LUC* (including but not limited to Article 3, Division 2 Development Criteria and Article 3, Division 5 Performance Criteria) in accordance with Section 2.6.3 of the *LUC*, except where specific references to such standards are provided in Section C of this document. Roadways, buildings and material stockpiles will not be located in or placed within regulatory floodplains.

Tucson Water facilities are exempt from parking, PAAL, and sidewalk requirements, i.e., these items are not required. Dust control shall be provided. Tucson Water facilities will not be accessible to the general public.

TABLE C.1 LOS REALES LANDFILL PAD DEVELOPMENT STANDARDS	
Minimum Lot Area	None
Maximum Lot Coverage	None
Maximum Floor Area Ratio	None
Maximum Building Height	40 feet ¹
Landscape Borders	See PAD Section C-6.a
Minimum Building Setback from Property Lines along perimeter of PAD Boundary	No closer than the back of the landscape border (see Table C.2)
Minimum Building Setback from Adjacent Streets to the PAD	No closer than the back of the landscape border (see Table C.2)
Minimum Building Setback from any Interior Street or PAAL	None
Perimeter Wall Requirements (for the Los Reales Landfill PAD or any use within)	See PAD Section C-6.a and C-6.b
Performance Criteria, all permitted uses	LUC Section 3.5.5.1. F

¹Communications equipment and the tensioned fabric roofs (or other structures used to screen the pavilions from sunlight and inclement weather) may be up to 100 feet.

C-6.a. Landscaping and Screening Requirements

C-6.a.1. Landscaping Goals

Two key landscaping strategies for the Los Reales Landfill are to preserve those areas with the highest habitat and wildlife value, and re-vegetate the landfill footprint and other disturbed areas. To satisfy the provisions of *LUC* Division 8, the Native Plant Preservation Ordinance (NPPO), as modified herein, the 30% set-aside method will be used. To recreate the Creosote-Mixed Scrub-Mixed Cacti and Xeroriparian –Mixed Scrub found in the existing native landscape, native vegetation will be restored on the landfill footprint and other disturbed areas within the PAD site. Additional landscaping goals are to eliminate invasive plant species, such as Buffelgrass and Bermuda grass; and mitigate visual, noise and dust impacts of the landfill on adjacent and nearby uses, especially residential uses.

Section C-7.a of this document addresses the NPPO requirements. Landscaping



requirements are as follows. During the active life of the landfill, the Los Reales Landfill PAD, CRC District, administrative office and learning center, will comply with the standards contained in *LUC* Section 3.7.2, Landscape Requirements, except as provided herein. No other landscaping requirements apply. Within the interior of this PAD, no screening is required between uses.

C-6.a.2. Landscape Borders

Perimeter landscaping is required as indicated in this section. Within the PAD site, street landscape borders are required along Los Reales Road. No landscape borders are required within the interior of the PAD site. Required Landscape Borders are shown in Exhibit C.7, and described in Table C.2. Attachment I contains examples of each of the landscape borders shown on Exhibit C.7. All trees in the landscape borders will be planted at 15 gallon minimum size. All shrubs and accent plants will be planted at 5 gallon minimum size. Cacti will be planted at the following minimum sizes: Prickly Pear Cactus – 8 pad minimum, Barrel Cactus – 8” minimum diameter, Saguaros – 4’ minimum height, Ocotillos – 10 cane minimum, and Cholla species – 2’ minimum height.

TABLE C.2 LANDSCAPE BORDERS AND SCREENS				
SYMBOL	TYPE	COMPONENTS	LOCATION	SCREEN
A	100-foot minimum natural desert landscape border	natural desert vegetation; northern-most border A will be enhanced with a minimum of 68 large trees	see Exhibit C.7	none
B-1 B-2	10-foot street landscape border	B-1 and B-2: 3 large trees and 2 small trees per 100 linear feet; 50% coverage of shrubs or vegetative ground cover; 28 shrubs per 100 linear feet, 4 cacti/accent plants per 100 linear feet; B-1: 100% coverage of inert ground cover; B-2: seed 100% of landscape border	B-1 is along re-aligned part of Los Reales Road; B-2 is along Swan and existing Los Reales Road	30-inch high plant screen; landscaped earthen berm up to 10 feet high along Swan Road west of landfill areas
C	10-foot perimeter landscape border and 6' wall	3 large trees and 2 small trees per 100 linear feet, 50% coverage of shrubs or vegetative ground cover, 28 shrubs and 4 cacti/accent plants per 100 linear feet; 100% coverage of inert ground cover	Landscape border on east side of northern 80 acres, 6-foot decorative wall adjacent to residential area	30-inch plant screen, 6-foot decorative wall
D	enhanced 100-foot perimeter border	5 large trees, 5 small trees, and 57 large shrubs per 100 linear feet; 10 cacti/accent plants per 100 linear feet; 100% ground cover by seeding and small shrubs	on east side of PAD site, adjacent to residential areas	Landscaped earthen berms up to 10 feet high
E	no landscape border		on the west side of the northern 80 acres; on the south side of the PAD site	



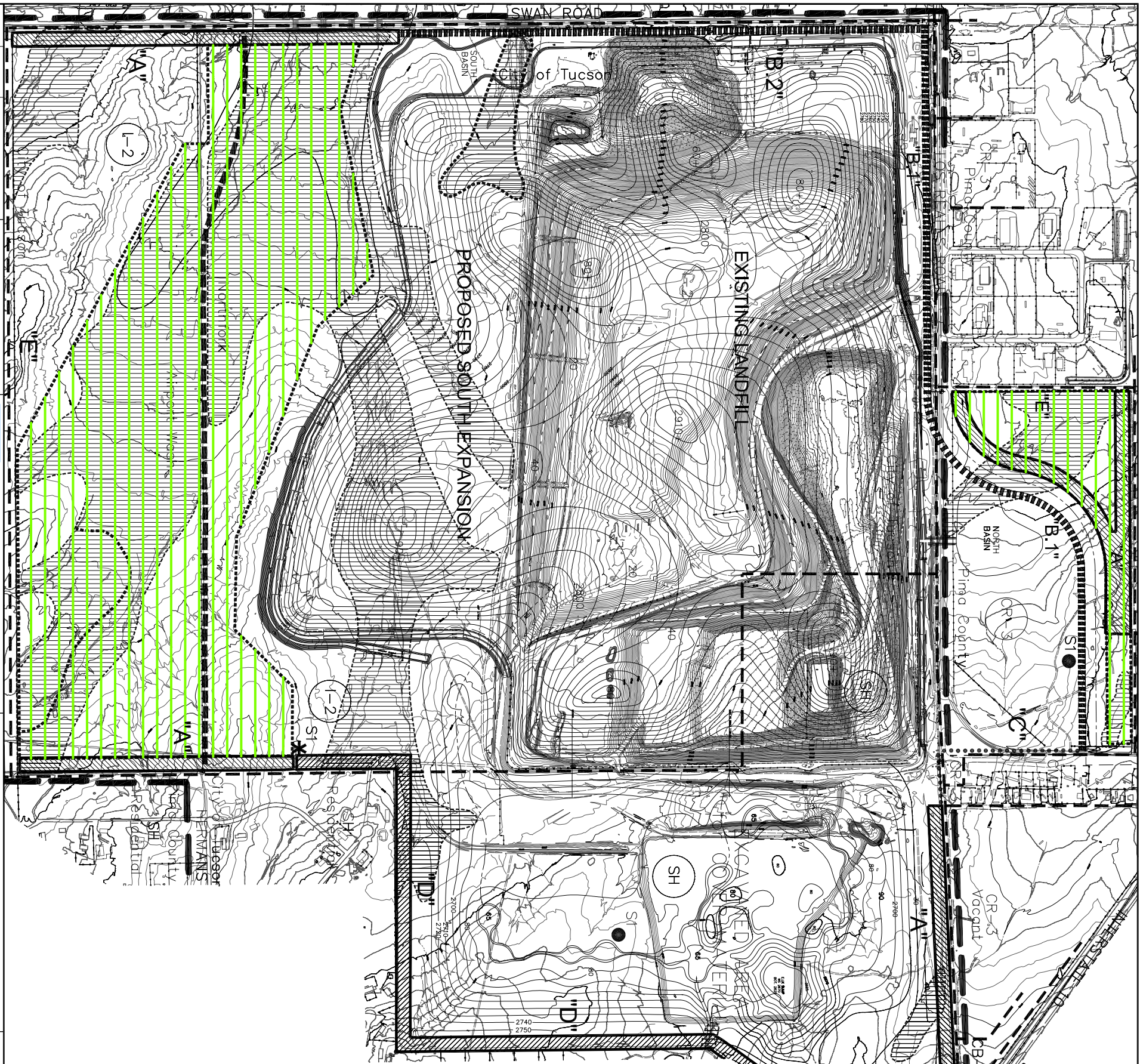
REV. NO.	DATE	DESCRIPTION

The Arcadia Group
3881 North Pinal Avenue
Tucson, Arizona 85718
Tel: (520) 407-9071
Fax: (520) 407-9073



THE CITY OF TUCSON

Shaw Environmental, Inc.



LANDSCAPE BORDER SUMMARY

LANDSCAPE BORDER TYPE	LOCATION	PROPOSED LANDSCAPE BORDER
"A" NATURAL DESERT (Street or Interior Borders) See this Sheet L-3.	<ul style="list-style-type: none"> NORTH SET-ASIDE AREA SOUTH PORTION SWAN RD. NORTHEAST CORNER 	100' NATURAL DESERT TO REMAIN
"B" STREET See Sheets L-4, L-5.	<ul style="list-style-type: none"> LOS REALES ROAD NORTH PORTION SWAN RD. 	10' BORDER WIDTH, PLANTING SCREEN, TREES: 3 Large per 100'; 2 small per 100' SHRUBS: 50% coverage, 28 per 100' CACTI and ACCENTS, 4 per 100' GROUND COVER: 100%
"C" INTERIOR See Sheet L-6.	<ul style="list-style-type: none"> NORTHEAST along RESIDENTIAL PROPERTY 	10' BORDER WIDTH, 6" WALL, TREES: 3 Large per 100'; 2 small per 100' SHRUBS: 50% coverage, 28 per 100' CACTI and ACCENTS, 4 per 100' GROUND COVER: 100%
"D" INTERIOR See Sheet L-7.	<ul style="list-style-type: none"> EAST along RESIDENTIAL PROPERTY 	100' BORDER WIDTH, EARTHEN BERMS TO 10' HEIGHT, LARGE TREES, 5 per 100', SMALL TREES, 5 per 100', CACTI and ACCENTS, 10 per 100' DESERT SEED MIX, 100% cover excluding maintenance road
"E" NONE See this Sheet L-3.	<ul style="list-style-type: none"> NORTH SET-ASIDE AREA SOUTH PROPERTY LINE 	NO BORDER PROPOSED

LEGEND

- Existing Zoning (1-2)
- Adjacent Land Use Zone (SH)
- Pinal County Trail
- Zoning Limits
- Existing Contour
- Proposed Contour
- Property Line / Right-of-Way
- 30% Natural Set Aside Areas
- Xerophilic "C" and "D"
- City / County Limits
- Existing Saguaro
- Saguaro (S) Transplant Location

NOTES

- The Los Reales right-of-way will be a 100-foot width per the Major Streets and Routes Plan.
- The Swan Road right-of-way is proposed as a 90-foot width.
- Shrub coverage is calculated by using 18 s.f. per shrub.
- See the example border plans Sheets L-4 to L-7.
- See Table C.2 for sizes of large and small trees and shrubs.

LANDSCAPE BORDER KEY

"A" NATURAL DESERT BORDER
This landscape border occurs wherever a 100-foot wide natural landscape border is possible.

"B" STREET LANDSCAPE BORDER
Proposed is a 10' wide Border and Planting Screen. This landscape border occurs along Swan Road and Los Reales Road. See Sheets L-4, "B.1", and L-5, "B.2", for specific conditions and treatments.

"C" INTERIOR LANDSCAPE BORDER
Proposed is a 10' wide Border and a 6" Wall. This landscape border occurs along residentially zoned properties.

"D" INTERIOR LANDSCAPE BORDER
Proposed is a 100' landscape border which occurs along residential properties. It includes undulating berms to 10' in height. Native trees, shrubs and cacti container plants are planted and 100% if border is seeded with native seeds. Screen: continuous undulating earth berms to 10' ht.

"E" NO LANDSCAPE BORDER IS REQUIRED
This condition occurs along properties with similar industrial land on the north and south sides of the site.

LOS REALES LANDFILL EXPANSION
CITY OF TUCSON, ARIZONA

LANDSCAPE DEVELOPMENT PLAN

PROJ. NO.: 111811 DATE: APRIL 2005
DESIGNED BY: JPV EXHIBIT:
DRAWN BY: FEL
CHECKED BY:
APPROVED BY:

C.7

The width of the landscape border described in Table C.2 will be measured from the edge of the right-of-way.

C-6.a.3. Retention Basin Landscaping

Landscaping of the retention basins on the PAD site will conform with the design criteria of Development Standard 10-01 after the closure of the Los Reales Landfill.

C-6.a.4 Phasing of Landscape Borders

Landscape borders shall be implemented as described in Table C.3.

TABLE C.3 LANDSCAPE BORDER PHASING	
Landscape Border Type	Trigger for Implementation
Type E, no landscape borders (existing natural desert)	Not Applicable
Type A, 100-foot natural desert borders, with additional trees along the northern-most border	When north 80 acres (CRC area) is developed
Type B-1, along realigned portion of Los Reales Road	When roadway is realigned and CRC area is developed
Type C, on east side of north 80 acres	When north 80 acres (CRC area) is developed
Type D, along east side of actual landfill area	The landscaped berm adjacent to existing residential areas will be constructed prior to the southern expansion of the landfill or expansion of excavation in the east basin south of the current excavation area.
Type B-2, street landscape borders along Swan and existing part of Los Reales Road	The 10' landscape border will be developed when the first development plan is submitted pursuant to this PAD. The 10' berm will be developed prior to the development of the western expansion of the landfill.

C-6.a.5 Screening Requirements

Screening will comply with LUC Section 3.7.3, except as provided for in Section C-6.a of this PAD document. During the active life of the landfill, within the interior of the PAD, no screening is required between uses. Fencing will be provided to control access to the site, as per Section C-6.b. of this document.

C-6.b. Fencing and Walls

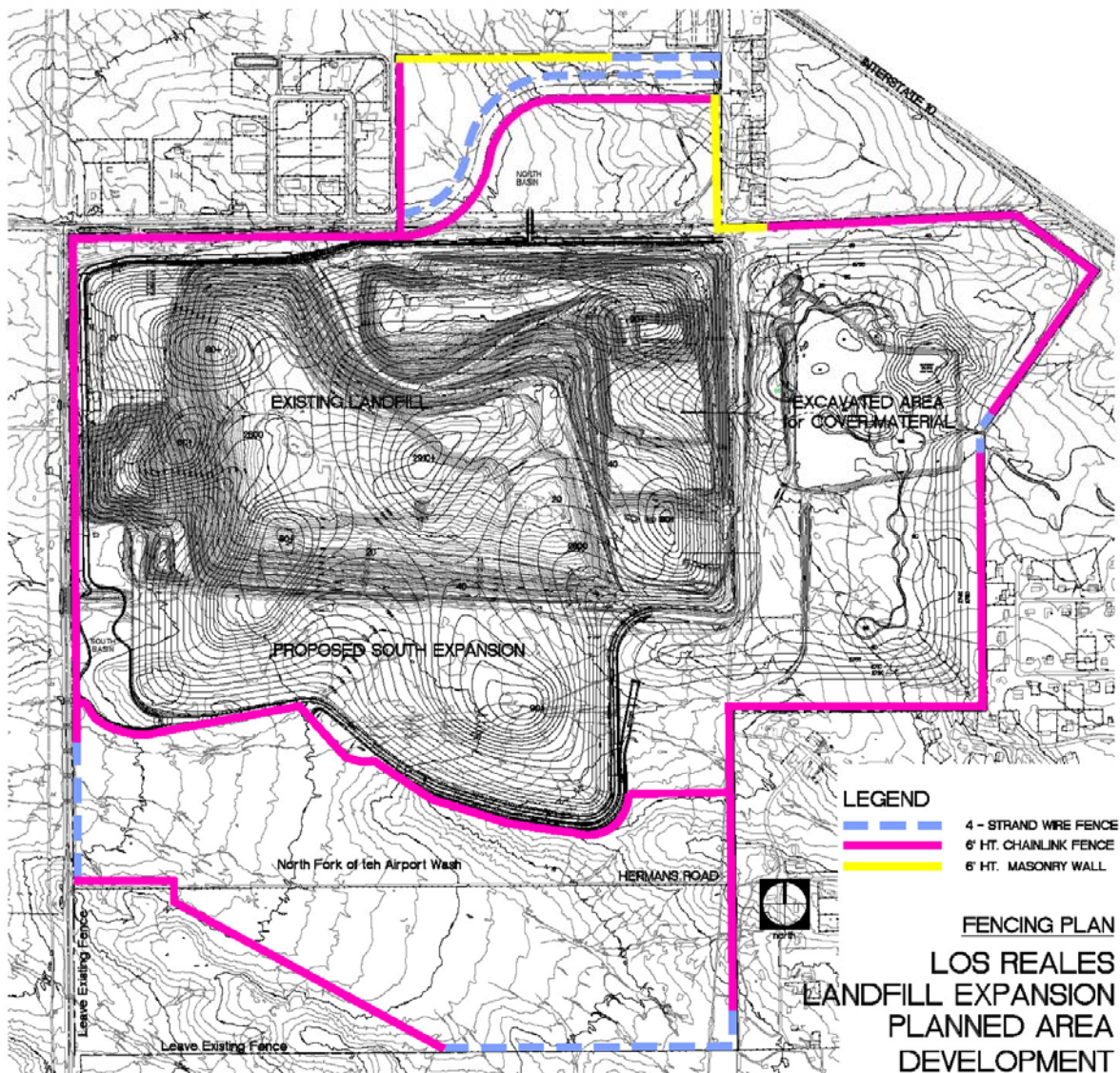
Vehicular and other access to the PAD site will be controlled through the use of fencing



(refer to Exhibit C.8). The fencing plan is described below. (Note: All chain link fencing will be open and will not have slats.)

- Remove the perimeter chain link fencing along the existing south property line and install 4-strand wire wildlife friendly fence along the entire south boundary. Use the Arizona Game & Fish Department's game fence construction detail.
- Fence the southern edge of the landfill expansion area with 6-foot chain link fence. The chain link fence shall be located 20 feet from the proposed top of the landfill drainage channel. Tie the fence into the east property line with a 6-foot chain link fence and into the west property line with 4-strand wire wildlife friendly fence.

EXHIBIT C.8. FENCING PLAN



- Relocate the property line chain link fence on the north half of the west property line, the east property line north of the Airport Wash, and the north property up to the 80-acre parcel.
- Install a 4-strand wire wildlife friendly fence on the south side of the set-aside area in the south expansion area.
- Fence the north set-aside area with a 6-foot height chain link fence on the west property line (with the exception of the regulatory floodplain of Rodeo Wash which will be fenced with 4-strand wire wildlife friendly fence) , a masonry wall on the north property line will be developed by KB Homes along the property it is developing, a 4-strand wire wildlife friendly fence along the remaining north property line, and a 4-strand wire wildlife friendly fence on the north side of the new Los Reales Road right-of-way.
- Remove the chain link fence along the Hermans Road alignment through the property.
- Install a 6-foot masonry wall on the east side of the 80-acre parcel per the requirements of Landscape Border C.
- Install a 6-foot chain link fence on the inside of the Street Landscape Border along the south side of the realignment of Los Reales Road.
- Retain existing 6-foot chain link fence on the north, east and south side of the east expansion area. Replace the chain link fence with 4-strand wire wildlife friendly fence across the regulatory floodplain of the Old Rodeo Wash in conformance with the City's Floodplain Ordinance.

C-6.c. Motor Vehicle and Bicycle Parking

The Los Reales Landfill PAD, CRC District, will comply with the LUC, Article III, Division 3, Motor Vehicle and Bicycle Parking Requirements with the following exceptions:

1. Parking Areas: Parking for the administrative office and learning center areas is to be provided as follows:
 - 1 space/200 square feet on first floor
 - 1 space/250 square feet on all floors above first floor

Parking space dimensions will conform to the *LUC*.

2. Pavilion Areas: Parking spaces for the pavilion areas shall be provided as follows: 1 space per pavilion area. Parking space dimensions shall be a minimum of 8 ½ feet wide by 18 feet long, to provide sufficient room for small trucks and vans.
3. Other City owned and operated buildings are not required to provide parking.



4. All Other Areas: Parking areas are to be provided as follows: 1 space/1,000 feet on first floor and all floors above the first floor. Parking space dimensions will conform to the *LUC*.
5. Passenger Drop-Off Areas: One passenger drop-off parking area shall be provided by the Instructional School (aka Learning Center). The space shall be 14 feet wide by 50 feet long to accommodate school buses. It shall be located adjacent to curb allowing visitors to step off and into the building safely.
6. Physically disabled parking and two spaces of Class 2 bicycle parking will be provided at the learning center, administrative office, and all non-City owned and operated facilities.
7. Screening is not required for motor vehicle and bicycle parking.

C-6.d. Off-Street Loading Requirements

No designated loading spaces are required by the Los Reales Landfill PAD. If off-street loading is provided the spaces will comply with the *LUC*, Article III, Division 4, Off-Street Loading Requirements with the following exceptions:

1. Dimensions of off-street loading spaces will be a minimum of 12 feet wide by 55 feet long.
2. Access to and maneuvering for loading spaces can utilize interior streets and Parking Area Access Lanes (PAAL) within the PAD.
3. Screening is not required for off-street loading spaces..

C-6.e. Containerized Waste Requirements

The Los Reales Landfill PAD will comply with the City of Tucson Development Standard 6-01 only for any external waste containers required at the Learning Center, Administrative office, material recovery facility, or cottage industries. Enclosures or screening for containers at the material recovery facility or cottage industries will be provided only if containers are placed facing residential neighborhoods and are not substantially screened by buildings or other landscaping. Access requirements for servicing the above facilities will be provided if collection services are to be provided by the City of Tucson Collections Division.

C-6.f. Pedestrian Circulation

The Los Reales Landfill PAD will provide pedestrian connectivity as detailed in Development Standard 2-08 within the CRC and Reserve Districts, except for the pavilion areas of the CRC District. The minimum width of sidewalks will be four (4) feet and will be constructed with decomposed granite.

C-7. Natural Resources Standards

Standards are provided for the preservation of native plants, and designated washes. Protection of wildlife will be in accordance with regulatory requirements of the Arizona Game



and Fish Department. Fencing standards are provided to control access to various parts of the PAD site.

C-7.a. Native Plant Preservation

The Los Reales Landfill PAD will comply with the standards contained in *LUC* Division 8: Native Plant Preservation, except as provided in this document. The 30% set-aside method will be used to meet NPPO requirements, however, this area will be managed as natural open space (NOS), rather than natural undisturbed open space. 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. These improvements/uses will be sited in cooperation with the City of Tucson's Parks and Recreation Department.

C-7.b. Wash Protection

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 *LUC* Sections 2.8.6 and the Tucson City Code, Chapter 23A, Development Compliance Code. Limited improvements/uses are allowed in the Airport Wash, including unpaved roadways within one hundred (100) feet of the western and southern property lines, an unpaved road within thirty (30) feet along the existing water line, game fencing, drainage structures required to maintain the unpaved roadways, and environmental monitoring locations. These improvements/uses will be sited in cooperation with the City of Tucson's Parks and Recreation Department and the Development Services Department, Landscape Section. Any fencing constructed in a regulatory floodplain will comply with applicable City of Tucson standards.

C-8. Mitigation of Visual Impacts

During the active life of the landfill, visual mitigation will be achieved via landscaping and screening requirements, as per Sections C-6.a. and C-6.b. of this document. Landfill grading and revegetation strategies implemented as part of the closure phase will provide additional visual impact mitigation after the landfilling has been completed.

C-8.a. Goals

The visual strategies and proposals for the Los Reales Landfill are to mitigate visual impacts and create attractive views of the landfill. The most important goal is altering the big pillow effect of an engineered landform. Two main approaches are integrated in the strategies below. The first is making the landfill aesthetically-pleasing to look at, especially from distant view points such as I-10. The second is screening the landfill from adjacent residents and travelers on adjacent roads. Another important visual goal of this site is to make the borrow pit in the east expansion area appear naturalistic, including development of a native plant riparian habitat for the drainage retention basins needed there.

C-8.b. Visual Strategies and Proposals

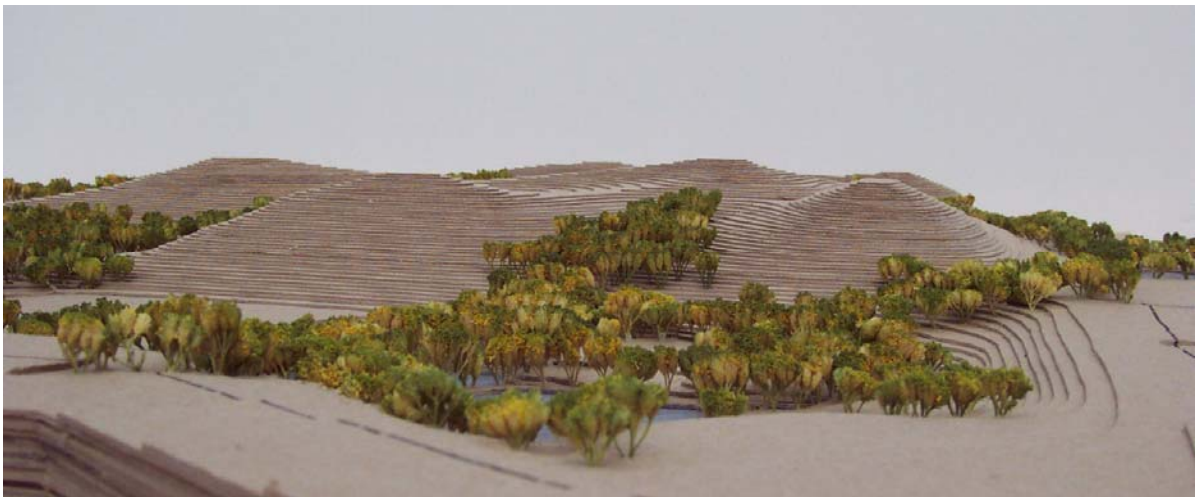
C-8.b.1. Landform and Revegetation. There are two main treatments proposed for mitigating visual impacts of the landform of the solid waste footprint.



1. Grading the landform with peaks and valleys to look more natural than an engineered landform. Grading the borrow area to look like the existing natural landscape of the site area.
2. Re-vegetating the proposed landfill and borrow area to look natural.

The landform and re-vegetation strategies and proposals are listed below.

- Grading of the Landfill Landform. 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.
- Landform Peaks. The solid waste footprint will be graded with seven peaks. The center peak will rise to an elevation of 2910. Elevations for the six peaks at the perimeter of the solid waste footprint will range between 2890 and 2860.
- Landform Valleys. Shallow valleys will be graded between the peaks so as to appear like natural drainages from distant views
- Soil Cover. Related to the grading, the final soil cover will include a minimum 30-inch cover on side slopes and peaks and a deeper cover in the valleys. These cover depths will allow for re-vegetation of side slopes and peaks with native desert plants, recreating the Creosote-Mixed Scrub-Mixed Cacti Community. The deeper cover in the valleys will allow for re-vegetation with native trees like those found in the north fork of the Airport Wash including Whitethorn Acacia, Catclaw Acacia, and Velvet Mesquite. This re-vegetation pattern will appear to be very similar to a natural hillock environment (refer to the photographs that follow).



The peaks and valleys landform with a soil cover in the valleys allows vegetation to be planted in a natural appearing landscape such as this view of the 3-D model from the northeast corner of the site.





The peaks of the re-vegetated landfill at closure rising above the residences in the foreground.

- Grading of the Borrow Pit Area. A grading transition will be made on the east side of the solid waste footprint to the borrow area including a continuation of the valley in the center of the east side of the waste footprint. Another valley transition will occur in the southeast part of the waste footprint. Side slope transition grades in the borrow area will be cut at gentle slopes (5 to 1 maximum) falling to the retention basins.. The slopes and adjacent flat areas are consistent with the existing natural topography of the site and will provide a good topographic base for desert re-vegetation.

A number of interconnected retention basins are planned and storm water run off will flow gently between basins ending in a deep retention basin that will hold all of the storm water run off from the borrow area as well as incoming water from the Rodeo Wash which enters the site from the east. This retention basin will be a permanent water resource. After re-vegetation, this area can become a natural desert preserve with a hydro-riparian wetland area -- a valuable wildlife habitat.





This view of the 3-D model shows how the landform grading and riparian trees will integrate the solid waste footprint with the borrow pit and the retention basins.

- Native Vegetation Preservation. The 212 acres of native landscape consisting primarily of riparian vegetation that will be preserved under the Native Plant Preservation Ordinance is also an outstanding visual resource. Because the native riparian landscape will be preserved, the treatment of the simulated valleys on the waste footprint will appear consistent with the setting.
- Native Plant Re-vegetation. Using only native plants for the landscaping of the landfill footprint and the borrow area will be the best approach for visual mitigation and enhancing the naturalistic character of the grading improvements. Re-vegetation with native plants is a PAD requirement. The specific landscaping and re-vegetation strategies are discussed below and in Attachment C.

The landfill footprint and the large borrow pit area to the east will be re-vegetated at closure by simulating the two types of existing native vegetation on the site: Creosotebush-Mixed Scrub-Mixed Cacti and Xeroriparian-Mixed Scrub. The native plants on the site for each of these natural vegetation associations are listed in Attachment C, Tables 5 and 6. These plant species will be the plant palette used for both interim slope and soil stabilization and for final closure. Re-vegetation of the solid waste footprint will be carried out by using seeding methods and planting container plants. A deeper depth of capping material will be placed in the troughs so that container-grown trees may be planted and established simulating the xeroriparian vegetation existing in the washes on site. Temporary irrigation will be used to germinate the seeding and drip irrigation will be used for the container plants. Some of these native plants may not be found on the City of Tucson regulatory Drought Tolerant Plant List, but they will be allowed by these specific PAD standards. These PAD standards also will allow for the use of any other desert plant found to be growing on the Los Reales site but not included in Attachment C as long as that plant is not an invasive, non-native species. Refer to the model view above



simulating the planting of trees in the troughs and illustrating how the troughs can be merged with other existing and proposed xeroriparian vegetation on the site.

C-9. Infrastructure Phasing

The re-alignment of Los Reales Road and installation of traffic signals will be implemented prior to the development of the CRC District. The City of Tucson's Department of Transportation, based on the traffic impact of other developments in the area, will determine when the re-aligned Los Reales Road will need to be widened.

C-10. Certification of Architectural Design

In order to provide consistency in the implementation of the Los Reales Landfill PAD, and to expedite the review by the City for plat and development plans, the Design Review Committee (DRC) will self-certify the all plats and development plans for architectural theme and design. At time of submittal to the City all plats and plans will be stamped to verify compliance to this section.

The DRC will be composed of representatives from Environmental Services, the City Manager's Office or designee of the City Manager's Office, and a community representative.



D. IMPLEMENTATION AND ADMINISTRATION

D-1. Purpose and Intent.

This section is intended to provide regulatory procedures designed to guide the implementation for the PAD through implementation and administration of the project. The Provisions below shall apply to all property intended for development under the Los Reales Landfill PAD as defined in this PAD.

D-2. Extent of the PAD District to Supplement or Supersede Adopted City Zoning Regulations

The Los Reales Landfill PAD supplements and supercedes existing zoning on the property as defined within this document. Where there is a conflict between the Los Reales Landfill PAD and the LUC, and the Development Standards, the Los Reales Landfill PAD shall govern. The Los Reales Landfill PAD shall not govern in any conflict with applicable building codes or other applicable regulations.

If an issue, condition, or situation arises that is not specifically covered within the PAD, the LUC, Development Standards, or other City regulation shall apply.

D-3. Amendment Procedures

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

D-3.a. PAD Amendments

Amendments to the PAD as represented within this document may become necessary from time to time for various reasons to respond to changes resulting from new development conditions, financial conditions, and/or to respond to the requirements of potential users or builders on the property. The City of Tucson, other developers, or agents representing either may request amendments to the approved PAD. 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.

When changes or modifications to the PAD are necessary or appropriate, proposed amendments or modifications shall conform to the following requirements:

D-3.b. Insubstantial Changes.

Changes that are not substantial include the following:

- Changes to infrastructure, such as drainage, water and sewer systems which do not have the effect of increasing or decreasing development capacity of the PAD, nor change the overall intent of the PAD;



- Any analogous interpretations of the list of permitted, exception, secondary and accessory uses of the property set forth in the PAD, as determined by the Development Services Director;
- Minor modifications or adjustments to intrusions, encroachments, easements, roadway alignments or open space areas, so long as the modifications do not produce a net reduction in open space areas in the PAD;
- Minor modifications to the location and size of trails and pedestrian paths, so long as the modifications meet the general intent of the PAD;
- Minor adjustments and/or substitutions to the development standards within the PAD that do not impact the general health, safety and welfare of the residents of the City;
- Any other items not expressly defined as Substantial changes in the LUC Section 2.6.3.11.B.3.

D-3.c. Substantial Changes

Substantial changes are changes to the PAD as defined in LUC Section 2.6.3.11.B.3.

D-3.d. Amendment Procedures.

The PAD may be amended through the process set forth in LUC Section 2.6.3.11.B.4 for substantial changes or LUC Section 2.6.3.11.B.5 for insubstantial changes, as determined by the standards set forth above.

D-4. Interpretations.

On occasion, it may be necessary to request formal and informal interpretations from the Zoning Administrator related to the implementation and/or interpretation of the PAD. These circumstances may relate to provisions of the LUC or to interpretation of intent of narrative contained in the PAD. It is anticipated that interpretations to these provisions will be made in written form to the City of Tucson, Environmental Services (or City Manager's Office).



E. DEFINITIONS

E-1. Purpose and Intent

In order to clarify the intent of the Los Reales Landfill PAD the following terms have been defined.

1. Cottage industries – Industries associated with or supportive of the uses at the Los Reales Landfill PAD.
2. Learning Center – The enclosed facility located within the CRC District that will be used for educating the public about the City of Tucson's integrated approach to managing its solid waste in an environmentally sound manner.
3. Material Recovery Facility – An enclosed facility that accepts source separated recyclables for processing and transportation to end users.
4. Natural Open Space – Portions of the PAD site that will be left undeveloped except for the following uses: passive recreation, trails, signage, unpaved roadways, drainage structures required to maintain unpaved roadways, utilities related infrastructure, environmental monitoring locations, and landscape enhancements.
5. Pavilions – Areas located within the CRC District for the unloading of recyclables, CABOP (computers, anti-freeze, batteries, oil and paint) materials, reusable materials, green waste, and municipal solid waste.
6. Temporary Road – An unpaved road developed for access to landfill operations, monitoring/remediation equipment, utilities, and around the perimeter of the Los Reales PAD.
7. Transfer Station – As defined by the Arizona Revised Statutes, Section 49-701, means a site that is owned, operated or used by any person for the rehandling or storage for ninety days or less of solid waste that was generated off site for the primary purpose of transporting that solid waste. Transfer facility includes those facilities that include significant solid waste transfer activities that warrant the facility's regulation as a transfer facility.

