



26th STREET WELL SITE E-016
Special Exception
Preliminary Development Package

26th Street Well Site E-016 SCADA Upgrade Special Exception

Tucson, Arizona 85710

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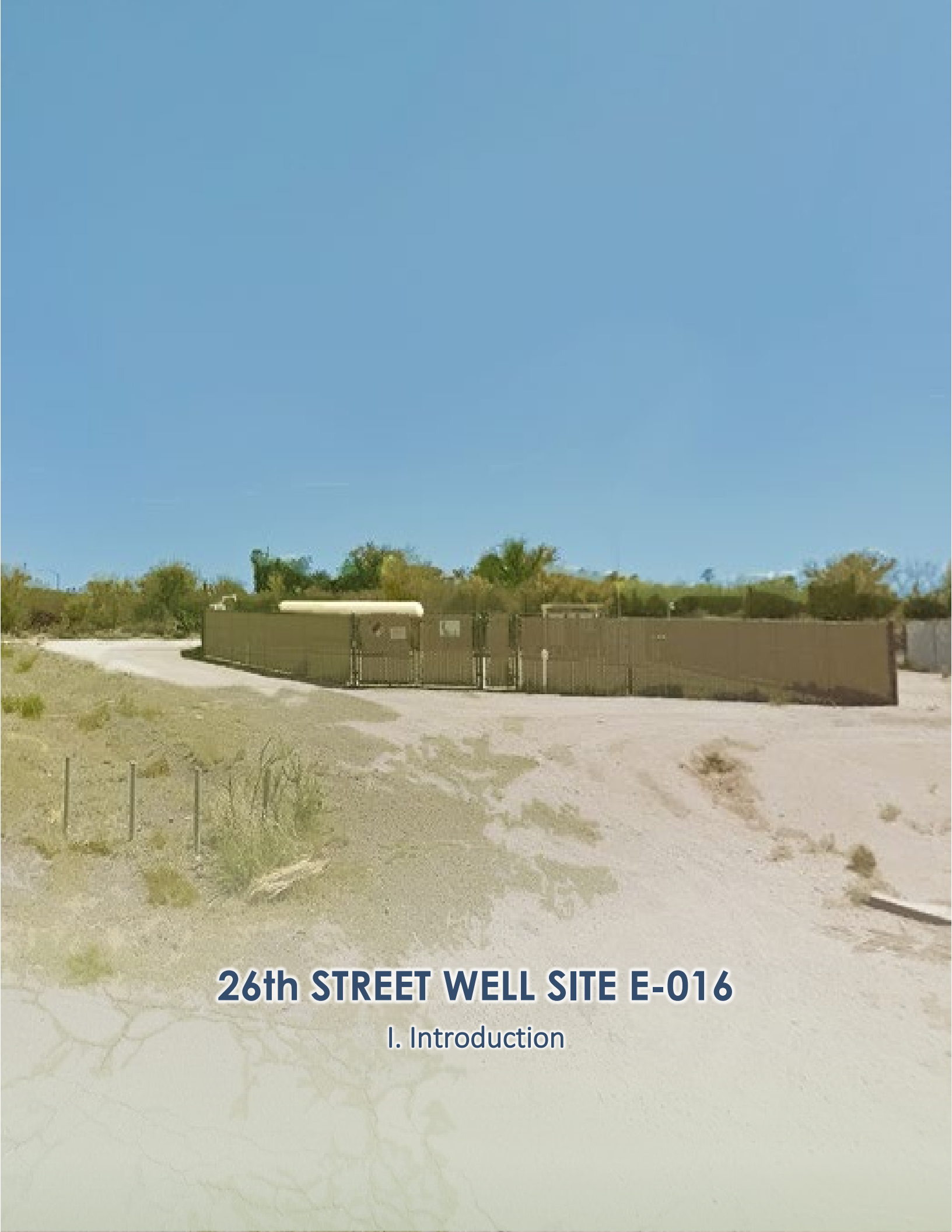


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I. Introduction

This document is submitted on behalf of the City of Tucson Water Department (Tucson Water) as a requirement for a Special Exception application for minor technology improvements to Well E-016. The site is located approximately 0.4 miles south of 22nd Street and 330 feet west of Harrison Road.

The well site occupies an approximately 0.21-acre parcel owned by the City of Tucson and is identified by Assessor's Parcel Number (APN) 136-07-2810. See *Exhibit I.A: Project Location*. It is zoned R-1 (Residence Zone) and located within Township 14, Range 15 East, Section 22.

Per the Unified Development Code Section 4.7.4, the proposed utility distribution use is permitted as a special exception use within the R-1 (Residence) zone upon approval from the Zoning Examiner.

A. Background

As part of a long-term water management strategy to improve water quality and delivery services, Tucson Water's Water Quality and Operations Division have been diligently working to install several technology and instrument upgrades to better monitor water service at more than 200 wells, 61 reservoirs, and 266 sampling stations throughout the Tucson Water service area. The 26th Street Site (Well E-016) is one of many wells serving as a critical water supply facility within the Tucson Water service area. It requires some upgrades to the existing Supervisory Control and Data Acquisition (SCADA) system which is generally located in the southeastern portion of the site.



The SCADA system is a computerized remote monitoring system that moves water efficiently throughout the community, maintains water pressure, collects water system data, and regulates water monitoring. The upgrades are primarily technology improvements; however, such modifications require adding equipment to the existing well and installing a new shade structure to protect new and existing electrical components. Due to the site's existing zoning and the proposed modifications, it was determined that approval of a special exception was necessary. The new shade structure and the new SCADA system are the only improvements anticipated. No other site modifications are proposed.



Exhibit I.A: Project Location



Legend

-  Well Site
-  Parcels



File Name: E-016-Project Location
Source: MapTucson GIS 2020



B. Tucson Water Policy Guidance

Tucson Water has a long-term strategy to improve water system redundancy and upgrade existing infrastructure elements to monitor water service throughout the distribution system. Water supply redundancy is being accomplished by drilling replacement wells within the older Central Well Field System. Substantial capital investment has already been made in replacing the 30-year-old SCADA system. The main central control system hardware and software have already been replaced. The next step involves upgrading the SCADA system capabilities at remote locations, including well sites, booster stations, and reservoirs.

Policy guidance for this work is provided through the (Draft) 2020 Drought Preparedness and Response Plan. Further authorization for completing upgrades to the SCADA system is also provided in the Department's Capital Improvement Plan budgets. In the early 2000s, Tucson Water discontinued pumping non-renewable groundwater resources and converted to renewable Colorado River water resources. This action has been taken to comply with the 1980 Arizona Groundwater Code, which aims to reduce the over-drafting of local aquifers. One of the consequences of over-drafting aquifers is lowering the water table, ultimately rendering older wells inoperable.

C. Conformance with Plan Tucson and Area Plan

The project site is subject to the policies laid forth in the City of Tucson's General and Sustainability Plan, *Plan Tucson*, and the *Pantano East Area Plan*.

1. Plan Tucson

The subject property is within an area designated by *Plan Tucson* as an "Existing Neighborhood." The proposed SCADA upgrade aligns with this designation as it provides a low-impact use in a predominantly residential area. The SCADA system upgrade will allow Tucson Water to continue to provide a safe and sustainable clean drinking water supply for the community. The following policies in *Plan Tucson* support the proposed well site:

- *LT28.1.3 – Improve the appearance of above-ground utilities and structures.*

A new shade structure will be installed to protect electrical equipment. It will be painted to match the existing shade structure as part of the improvements.

- *LT28.2.12 – Support environmentally sensitive design that protects the integrity of existing neighborhoods, complements adjacent land uses and enhances the overall function and visual quality of the street, adjacent properties, and the community.*

The well yard is entirely screened by existing chain link fencing with opaque privacy slats. The existing chain link fence that encloses the site will be refreshed with new tan vinyl privacy slats to better screen the utility equipment from surrounding neighbors. Additionally, a ten-foot landscape border will be provided along 26th Street to further screen the well site from view and enhance the visual character of the neighborhood.

Other policies that support the SCADA upgrade include:



- *PI1 – Invest in the highest priority needs to manage and maintain public infrastructure and facilities that are fundamental to economic development and to sustaining and enhancing living conditions in the community.*
- *PI2 – Prioritize major public infrastructure investments in developed areas and for improvements of existing infrastructure.*
- *PI3 – Expand the use of state-of-the-art, cost-effective technologies, and services for public infrastructure and facilities.*

The proposed improvements to Well Site E-016 conform to the goals and policies outlined in *Plan Tucson* by ensuring that clean water is distributed efficiently and sustainably, and that the equipment is as up to date as possible. The SCADA upgrades allow Tucson Water to monitor water pressure and distribution and collect water system data.

2. Pantano East Area Plan

Mayor and Council adopted the *Pantano East Area Plan* on June 28, 1982, to provide policy direction for approximately 11 square miles and 34,000 people on the City's east side. The planning boundary includes all land east of the Pantano Wash to Houghton Road, south of Tanque Verde/Wrightstown Road to Golf Links Road. The subject property is in the south-central portion of the area plan (see *Exhibit I.C.2: Location Within Pantano East Area Plan Boundary*).

The intent of the *Pantano East Area Plan* is to provide guidelines for future growth while protecting the existing development in the Pantano East area and determine the effects of new development on existing and future residential areas, the effectiveness of mass transit, the necessity for and timing of infrastructure improvements and capital expenditures, and the development of compatible and viable uses.

Tucson Water's SCADA improvements to the existing well site conform to the *Pantano East Area Plan* through compliance with the following goals and policies:

- *PLAN GOAL: Provide guidelines for future growth while protecting the existing development in the Pantano East Area.*
- *Ensure the compatibility of new development with existing land uses.*

The proposed SCADA upgrades and the required equipment upgrades to Well E-016 will allow the well site to better monitor the water quality, and quality of service provided to the area. Well E-016 has been in use for decades, and its position on the property, as well as the position of both the existing equipment and the proposed improvements mitigate the well site's impact on surrounding properties. The well equipment is entirely screened by an opaque fence and the addition of a ten-foot landscape border as a part of the proposed improvements will further screen the site from view.

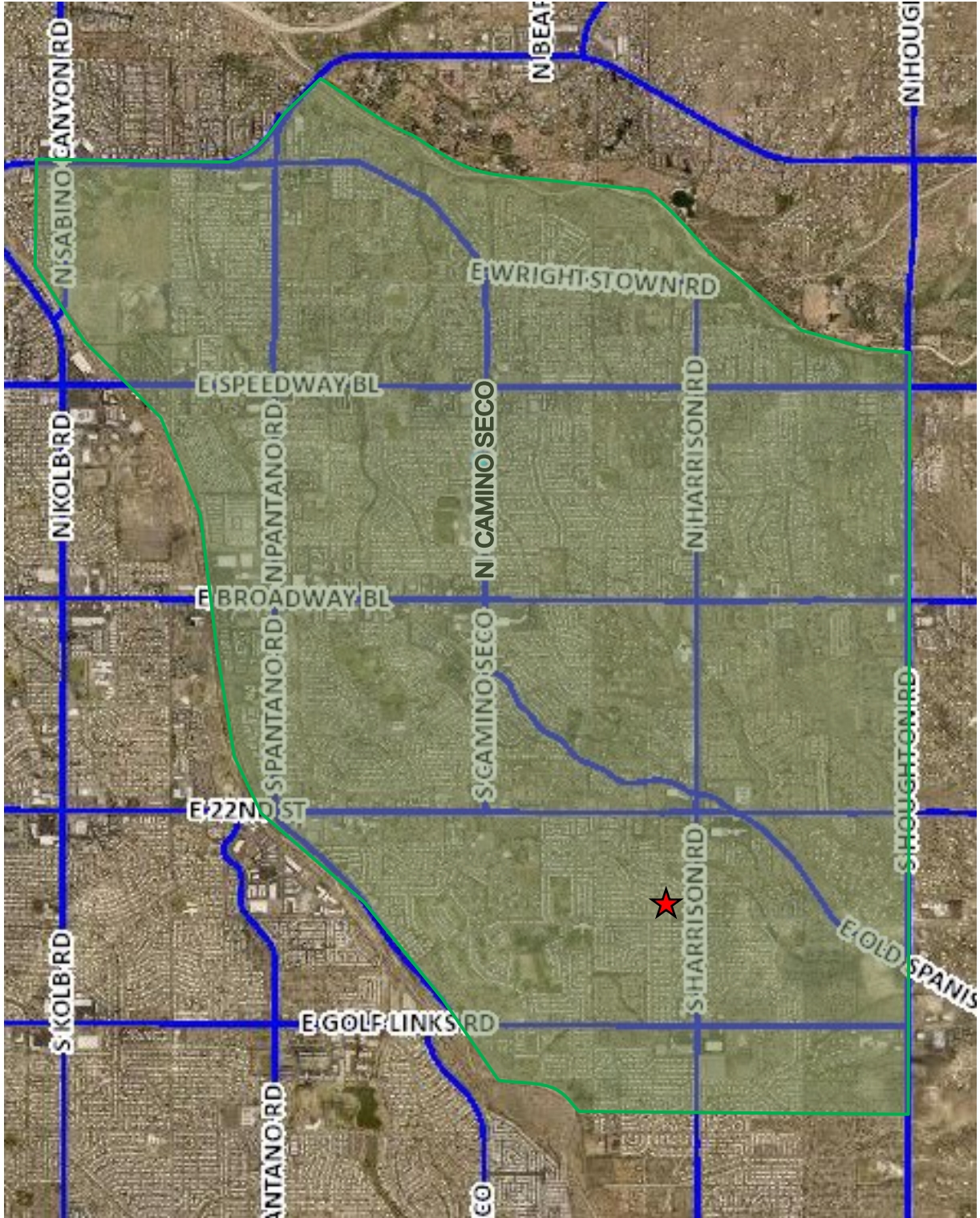


D. Conflicts with Adopted City Ordinances or Policy




The proposed utility use does not conflict with the *Pantano East Area Plan* or *Plan Tucson*. The proposed use is permitted by the City of Tucson *Unified Development Code* pending the approval of the Special Exception application.



Exhibit I.C.2: Location within Pantano East Area Plan Boundary



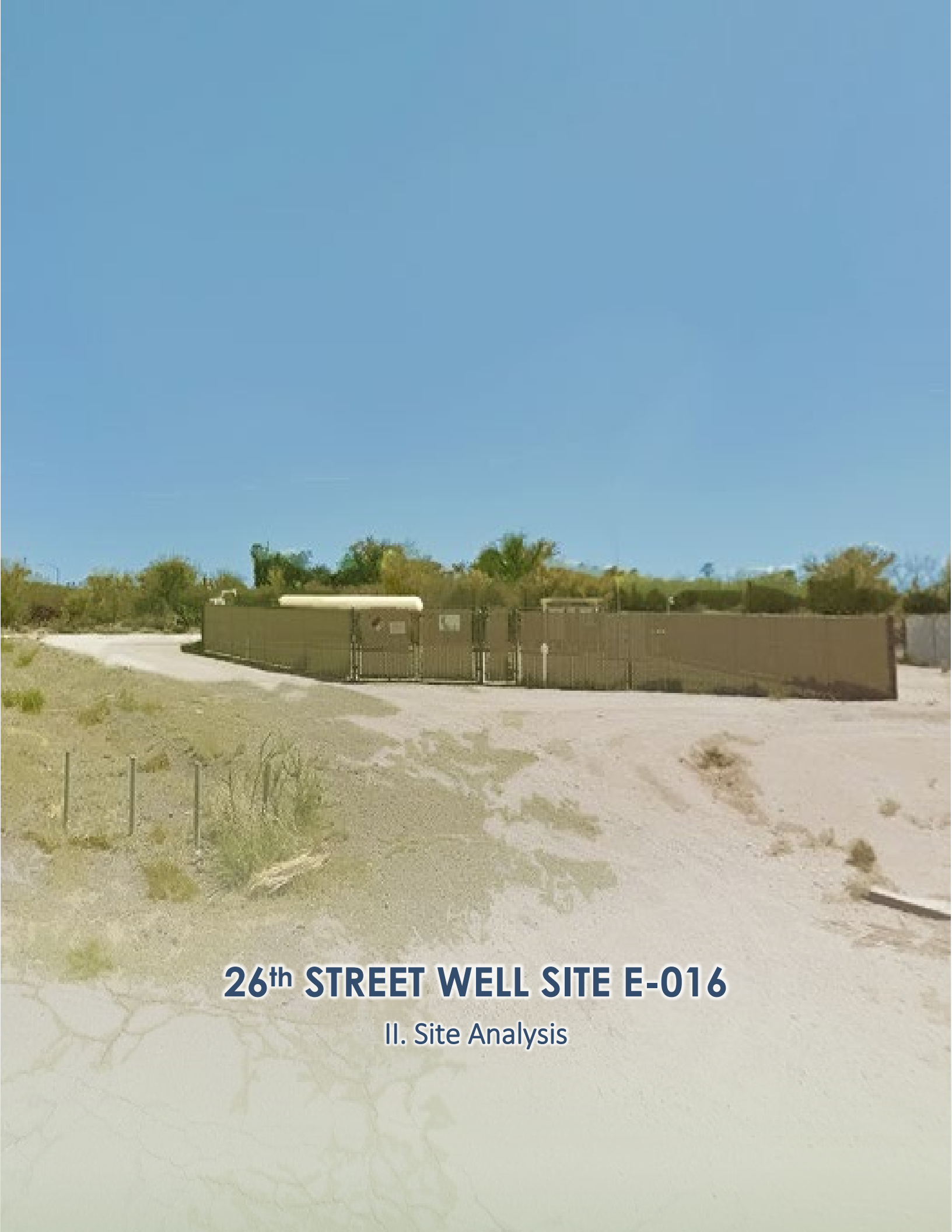
Legend

-  Well Site
-  Pantano East Area Plan
-  Major Streets



File Name: E-016-Area Plan
Source: MapTucson GIS 2020





26th STREET WELL SITE E-016

II. Site Analysis

A. General Information

1. Project Location

The area subject to this request is a 0.21-acre, city-owned parcel identified by APN 136-07-2810. The site is in the Hermosa Highlands neighborhood, located approximately 0.4 miles south of 22nd Street and 330 feet west of Harrison Road (See *Exhibit I.A: Project Location*).

2. On-site and Adjacent Land Uses

As demonstrated on *Exhibit II.A.2.a: Existing Conditions*, the site contains the following:

- Well E-016
- Electric control components;
- Communication antenna (20 feet in height)
- Shade structure (9 feet in height) about 2 feet from the south property line
- Chlorine building (6 feet in height)
- Chain link fence (6 feet in height)
- 5000-gallon discharge tank
- Piping and other necessary equipment to properly function the well.

The site and adjacent properties are zoned R-1 or RX-1 (Residence Zone). Single-family, medium-density homes surround the property. Only one residential parcel directly abuts the well property to the west. An alley to the south separates the subject property from the property to the south while a wash separates the subject property from the property to the east. Refer to *Exhibit II.A.2.a: Existing Conditions*, *Exhibit II.A.2.b: Zoning and Land Uses*, and *Exhibit II.E: Site Photos*.



Exhibit II.A.2.a: Existing Conditions

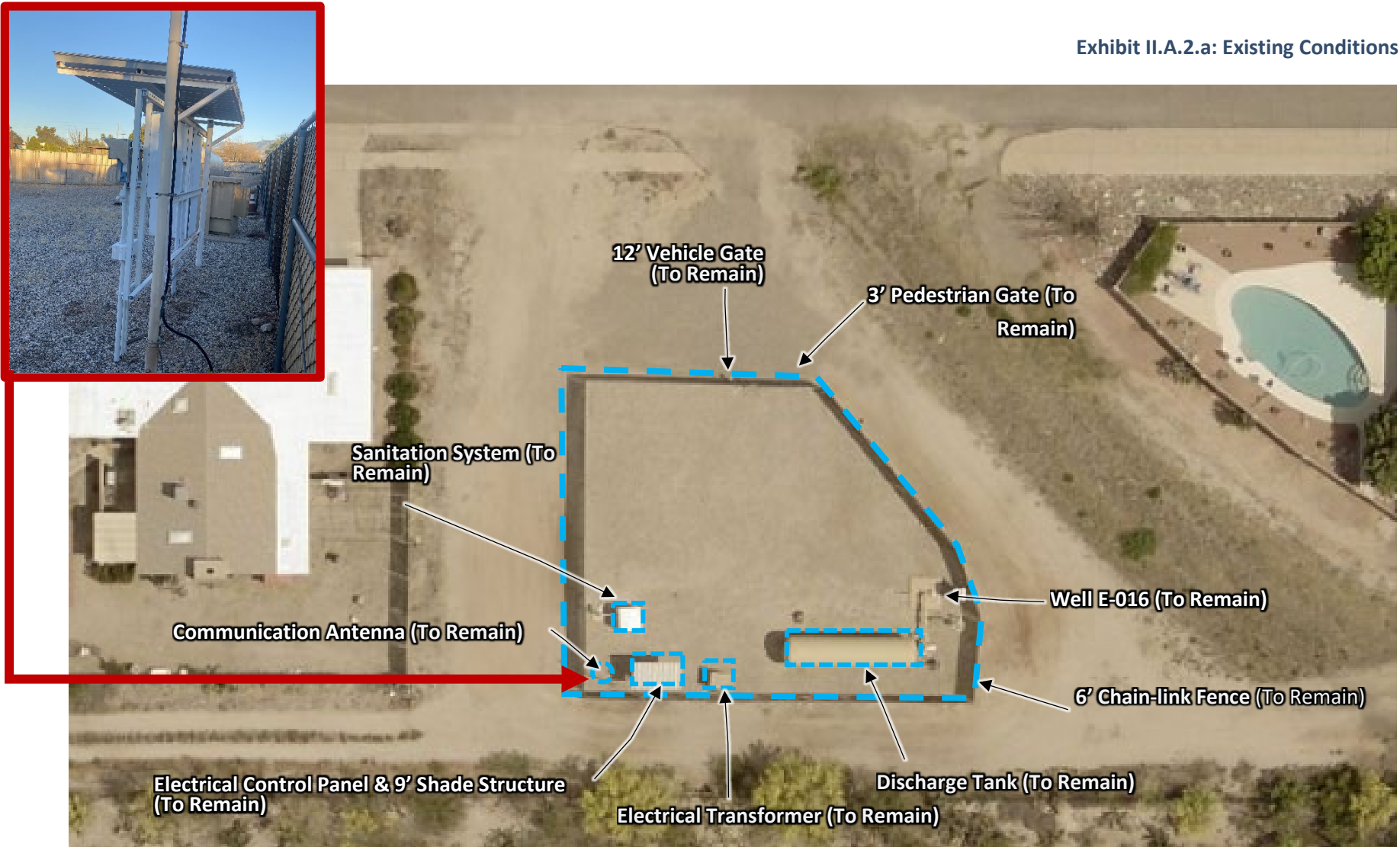
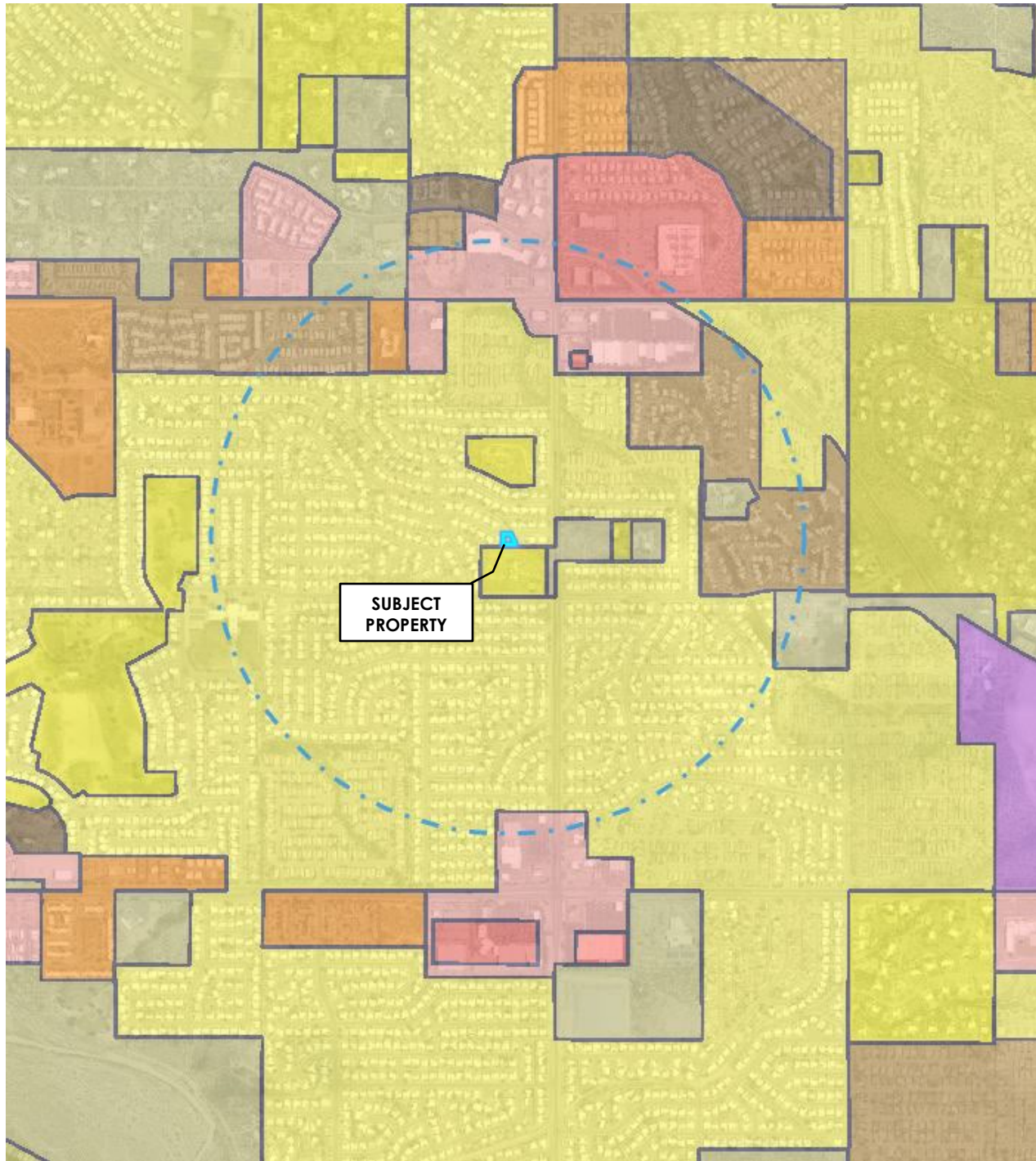





Exhibit II.A.2.b: Zoning and Land Uses



Zoning – City of Tucson

| | | | |
|---|------|---|-----|
|  | SR |  | C-1 |
|  | RX-1 |  | C-2 |
|  | R-1 |  | O-3 |
|  | R-2 | | |

Legend

| | |
|---|--------------------|
|  | Well Site Boundary |
|  | Half Mile Buffer |
|  | Major Streets |



0 0.15 0.3mi

File Name: E-016-Half Mile Buffer
Source: MapTucson GIS 2020



B. Circulation & Trips

The site subject to this request is located on 26th Street which is a minor local roads. Harrison Road is the nearest arterial street which lies approximately 330 feet to the east. 26th Street is a two-lane road with a right-of-way width of 50 feet. 26th Street features sidewalks but does not have curbs nor striping.

Primary ingress/egress to the site is from 26th Street via an existing driveway. Vehicular access to the well yard is provided through a locked 12-foot vehicular access gate on the yard's northern border. A 3-foot pedestrian gate is also located on the northern side of the well site. These access points will remain in their current configuration.

C. Cultural Resources

The well site has been in use for decades, with numerous improvements and maintenance occurring over time. It is unlikely that any significant cultural resources are present on the site.

D. Hydrology & Drainage

The site has been entirely graded, and the internal yard has been covered with gravel to prevent erosion. The subject property is not located within the FEMA 100-year floodplain, nor does it contain any drainageways subject to the Environmental Resource Zone (ERZ) provisions, Watercourse Amenities, Safety, and Habitat (WASH) ordinance, or erosion hazard setback areas.

E. Views

A 6-foot chain link fence equipped with a combination of vinyl privacy slats and wooden privacy slats currently encloses the entire well yard. Additionally, the well yard is situated on the toward the back of the property adjacent to the Robb Wash and an alleyway. The well site currently poses minimal impacts to neighboring views.

Two on-site structures extend above the wall/fence, the communications antenna (approximately 20 feet tall) and the shade structure over the electrical control panel (approximately 9 feet tall).

The only proposed change to the existing screening is the addition of tan privacy slats in the existing chain-link fence, and the addition of a ten-foot landscape border along 26th Street to improve the aesthetic appeal of the well site. With such minimal alterations to the site, the improvements will have little to no view impacts. See *Exhibit II.E: Site Photos*.



Exhibit II.E: Site Photos



Exhibit II.E: Site Photos (continued)

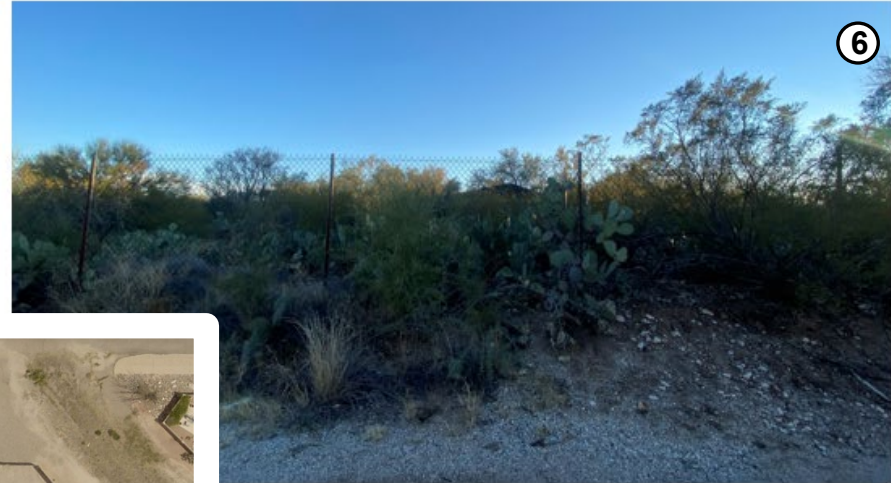
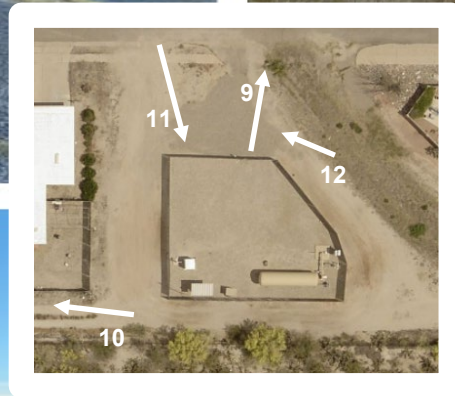
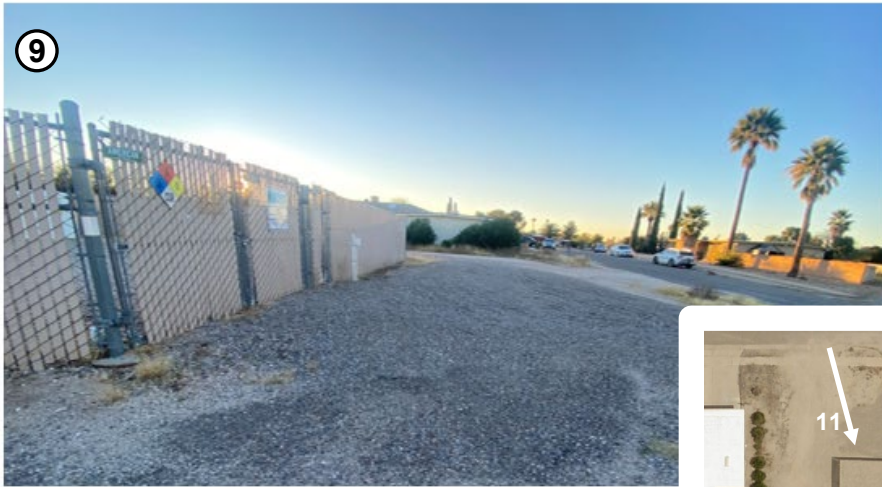
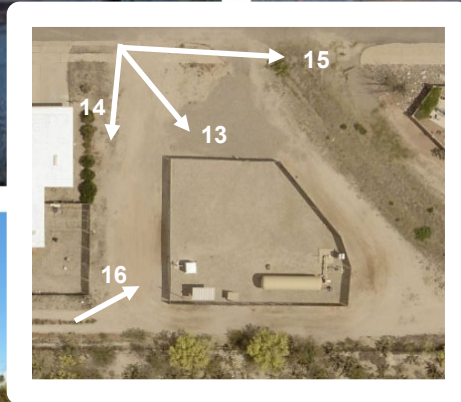
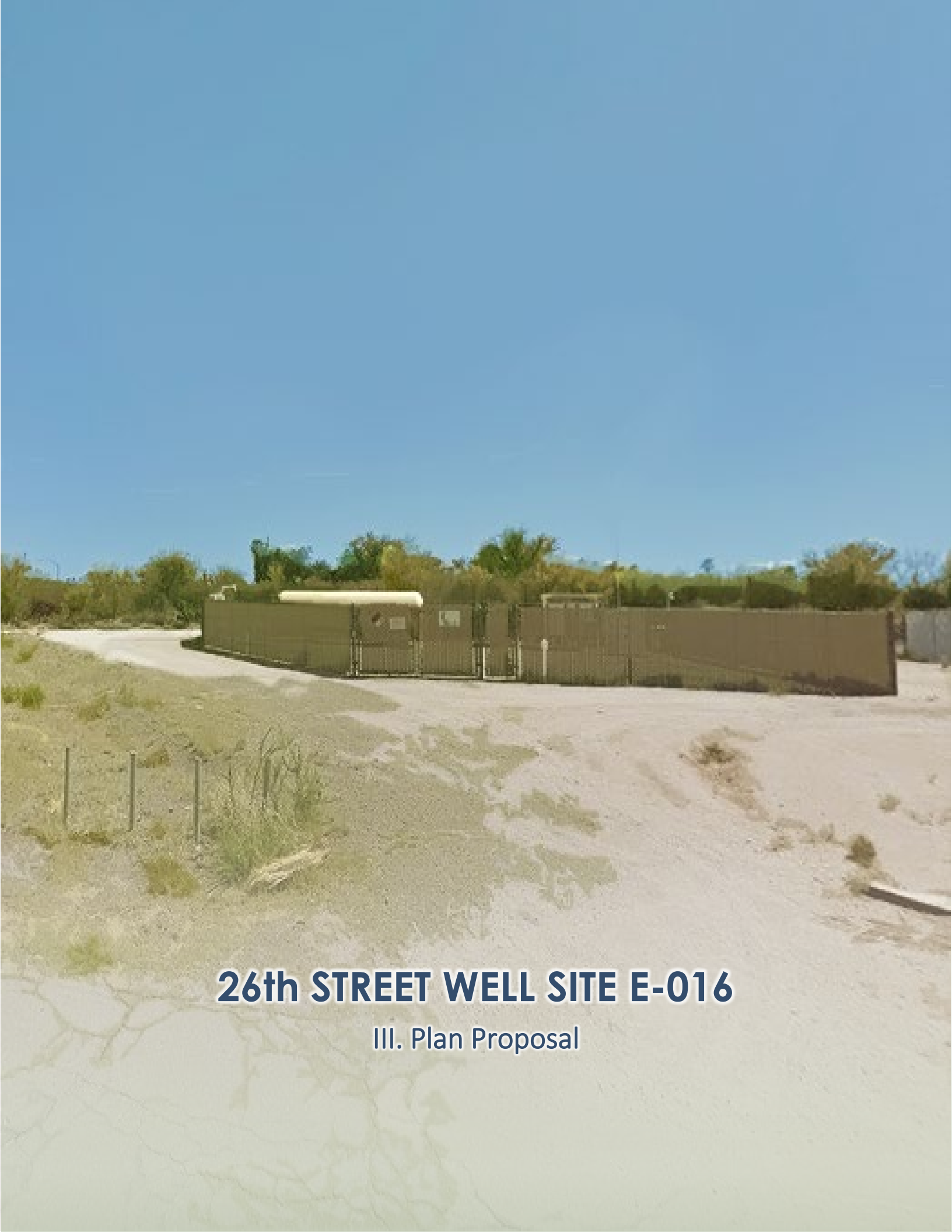


Exhibit II.E: Site Photos (continued)







26th STREET WELL SITE E-016

III. Plan Proposal

A. Site Layout

As demonstrated in *Exhibit III.A: Preliminary Development Plan (PDP)*, the proposed improvements consist of adding tan privacy slats to the existing chain-link fence, constructing an additional shade structure to protect the existing electrical control panel, repairing or replacing existing equipment, and installing SCADA upgrades.

Shade Structure

A shade structure currently the existing electrical control panel. This plan proposes installing a similar shade structure over the proposed second panel to protect it from the elements. The new shade structure will be 9 feet tall and designed similar to the existing shade structure. It will also be painted to match existing equipment onsite.

Screening

The site is bordered by chain link fencing with a combination of wooden and opaque vinyl privacy slats. The existing chain link fence will remain; however, the existing privacy slats will be refreshed with new tan vinyl privacy slats. The chain link fencing serves to keep people out of the well yard as well as to screen neighboring views of the well. A new 10-foot landscape border will be added along 26th Street to further screen the well from view and beautify the neighborhood. The well's location adjacent to an alleyway and wash also mitigates visual impacts on neighbors.



Circulation

Tucson Water technicians will enter the site through the existing vehicular and pedestrian gates on the northern border of the well yard to service the equipment as necessary. On-site parking is provided for technicians, eliminating the need for on-street parking.



Vehicle and Pedestrian Access Gates (To Remain)

B. Design Compatibility

This Special Exception request upgrades the well's SCADA system and installs a new shade structure to protect an existing electric control panel. While individual well components may be replaced or added, the overall site layout maintains its current configuration and preserves existing screening and configuration of the site. The proposed shade structure is the southern portion of the well yard next to the existing shade structure and electrical controls. The new shade structure will be constructed of similar materials as the existing shade structure and be similar in size, approximately 9 feet in height and covering approximately 40 square feet.

1. Applicable Use-Specific Standards

The proposed utility distribution system is appropriate within the R-1 zone when special consideration is given to minimize the adverse impacts of the use on adjacent properties. The following lists the applicable use-specific standards as required by the UDC for utility distribution systems in the R-1 zone and demonstrates how the SCADA control building meets the intent of all applicable use-specific standards outlined in UDC Section 4.9.11.A.1, .2, .5, .8, .9, and .11.

- **Use Specific Standard 4.9.11.A.1:** *The setback of the facility, including walls or equipment, shall be 20 feet from any adjacent residential zone.*
Exhibit III.A: Preliminary Development Plan demonstrates that the new shade structure will be located on the well yard's southern boundary. The additional structures will be setback a minimum of 20 feet from adjacent residences. The existing well and associated equipment will remain in the same configuration as they have been for decades though some pieces may be replaced or added onto as part of the SCADA upgrade. The existing fences, and wall will also remain and mitigate the well site's impact on neighbors.
- **Use-Specific Standard 4.9.11.A.2:** *Where a facility is not enclosed within a building, the surrounding screen shall be used as the building wall for the purposes of setbacks.*
As demonstrated in *Exhibit III.A: Preliminary Development Plan*, the well yard is enclosed by chain link fencing. The SCADA system will be entirely contained within the well yard. Due to the well's current location and the configuration of the associated equipment, the 20-foot setbacks for the wall/fence cannot be met on the southern property line. However, the proposed structure will be set back a minimum of 20 feet from the property line. The configuration of chain link fence will remain unaltered by the SCADA Upgrade.
- **Use-Specific Standard 4.9.11.A.5:** *The use shall not have any service or storage yards. No permanent service or storage yards are proposed with this special exception application.*
- **Use-Specific Standard 4.9.11.A.8:** *Any building housing such facility shall be in keeping with the character of the zone in which it is located. The Design Review Board (DRB) shall review all applications and make recommendations to the Zoning Examiner. The DRB shall review architectural style, building elevations, materials on exterior facades, color*



schemes, new mechanical equipment locations, light of outdoor areas, window locations and types, screening, landscaping, vehicular use areas, and other contributing design features.

If deemed necessary, a DRB application will be submitted to ensure the shade structure design is compatible with the surrounding neighborhood.

- **Use-Specific Standard 4.9.11.A.9:** *The use shall be located wholly within an enclosed building or within an area enclosed on all sides with a masonry wall or compact evergreen hedge, not less than six feet, nor more than ten feet, in height.*

Exhibit III.A: Preliminary Development Plan demonstrates that the SCADA Upgrade and new shade structure will be located within the well yard and enclosed by a 6-foot chain link fence with opaque vinyl slats.

- **Use-Specific Standard 4.9.11.A.11:** *The use shall be limited to water pumping and storage facilities, telephone exchanges, and power substations with an input voltage no greater than 138 kilovolts.*

The improvement area and entire well site are solely used for water pumping and distribution facilities. No other uses are proposed.

2. Building Setbacks

Exhibit III.A: Preliminary Development Plan shows that the proposed shade structure will be set back approximately two feet from the chain link fence enclosing the well. The well yard is set back well over 20 feet from the nearest residence. The existing well equipment and structures will remain in their current configuration. The fencing around the well yard will minimize any impacts on the neighbors created by the new structure.

3. Transition of Building Heights

The proposed shade structure will be approximately 9 feet tall and located next to the existing shade structure on the southern side of the well site. The new shade structure will be constructed with similar materials as the existing shade structure on-site. The location and materials of the new shade structure ensure it will blend in with the existing shade structure and minimally impact neighboring views.

4. Landscaping & Screening

A 10-foot landscape border will be provided along 26th Street. The existing perimeter fence will be improved with new vinyl privacy slats. These elements screen neighboring views while maintaining neighborhood character.



5. Vehicular Use Areas

The well site accommodates the minimum parking standards outlined in UDC Section 7.4.4. The Utilities Use Group requires one (1) parking space per 500 square feet of Gross Floor Area (GFA), with a minimum of two (2) parking spaces per facility. The well yard provides space for one parking spot within the enclosed fence. Space adjacent to the well yard within the alley and along Palm Tree Drive may be used for additional parking.

C. Post-Development Hydrology

The new shade structure is the only new impervious surface proposed. Runoff from such a small structure, approximately 40 square feet, will be minimal and contained on-site. The site's natural drainage condition will remain in its current state with no adverse impacts created by the proposed improvements.

D. Utilities

All utilities necessary for the well to properly functionality currently exist on the property.

