Visual Assessment Report

Valencia Road: Wade Road to Ajo Highway (SR 86)

Pima County Project No. 4RTVWE

October 2016

Prepared for:

PIMA COUNTY

RTA
Regional Transportation Authority

Prepared by:

Kimley»Horn

Kimley»Horn

October 5, 2016

Paul Bennett, P.E.
Project Manager
Pima County Department of Transportation
201 N. Stone Ave, Tucson, AZ 85701
520-724-6408

RE: ***4RTVWE – Valencia Road, Wade Road to Ajo Hwy (SR86) – Visual Assessment Report***

Dear Mr. Bennett:

We are pleased to submit the Visual Assessment Report for Valencia Road, Wade Road to Ajo Hwy. This report was prepared by Rebeca Field, PLA and was reviewed by Rick Solis, P.E.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Rebeca Field, PLA
Project Landscape Architect

Ray Montoya, P.E.
Quality Control Manager

Visual Assessment Report

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Pima County Project No. 4RTVWE

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Prepared for:

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1 PURPOSE & METHODOLOGY

1.1 Purpose

The purpose of the Visual Impact Assessment Report is to provide information to the public, designers and decision makers on the visual consequences of the proposed roadway/drainage improvements.

This report contains an abbreviated description of the proposed project improvements, an inventory of existing visual elements that characterize the site, and an assessment of the visual impacts of the proposed roadway project. Lastly, this report provides recommendations for mitigation strategies that can minimize adverse visual impacts and identify opportunities for enhancing visual quality.

1.2 Methodology

- *Define the existing project area, setting and viewshed.* The project limits were delineated based on a review of initial design plans and discussions with the design team. The project viewshed was determined based on field observations in the Spring and Summer of 2016 and a review of color orthophoto imagery dated Spring 2016.
- *Identify existing landscape features and document existing and future land uses.* The identification of existing features was accomplished through site visits and a review of aerial images and GIS map data from Pima County.
- *Identify and describe key elements of the proposed design that might impact the visual quality of the project area.* The identification of key elements of the proposed design was based on a review of initial design plans and on information gathered at coordination meetings with the design team. Key elements include those proposed by the project, to be added to, modified, or removed from the project area.
- *Identify user groups and key viewpoints.* User groups and viewpoints were determined based on site visits to the project area and the surrounding area. Selected viewpoints represent typical views that each user group might encounter.
- *Analyze and evaluate existing visual conditions at each viewpoint.* The visual evaluation included an assessment of the users, viewing conditions, setting and estimated project visibility.
- *Assess the impact of proposed project elements on existing visual conditions.* Photographs from project viewpoints showing an overlay of the project footprint and associated elements were used as a tool to assess the visual project impact for three key viewpoints. The three key viewpoints represent the areas of the project with the most anticipated viewers or impact. Components that will be modified, removed, and added to the viewshed were considered. Photographs were taken from additional viewpoints to document existing conditions at other locations throughout the project.
- *Propose mitigation strategies and treatment options based on the results of the Impact Assessment.* Mitigation strategies and treatment options are intended to minimize any anticipated adverse visual impacts of the proposed roadway project and enhance existing views to and from the site. Mitigation strategies address details such as texture and color of materials, the addition of screening elements at strategic locations, and the placement of focal features to guide views.

2 PROJECT SETTING

2.1 Location & Context

The project is located west of Tucson in unincorporated Pima County. The proposed transportation improvements are along Valencia Road from approximately Wade Road to Ajo Highway (SR86). Roughly half of the adjacent property abutting Valencia Road is presently undeveloped, with future subdivisions planned. A location map is included as Figure 1 and a vicinity map is included as Figure 2.

The existing roadway is generally straight and uncurbed. One curve exists at the approach to SR86. Half of the roadway is comprised of two twelve-foot travel lanes with paved shoulders, separated by a twelve-foot continuous two-way left turn lane. The other half of the roadway has two twelve-foot travel lanes and paved shoulders. The existing roadway surface is asphaltic concrete. The posted speed limit is 45 mph.

There are 24 concentration drainage flow points along the corridor. Drainage flow points are at-grade dip crossings, with the exception of four existing pipe culverts. Storm water runoff from pavement is currently conveyed along roadside ditches and outlets to the west where it merges with offsite drainage.

There are currently no existing traffic signals or lighting within the corridor.

The existing terrain generally slopes to the northwest. The project is located within the lower reaches of several watersheds emanating from the Sierrita Mountains southwest of Tucson. These offsite watersheds are broad and unconfined with low topographic relief. Watershed boundaries are poorly defined and numerous upstream locations have been identified where breakout flows occur between watersheds. Contributing runoff drains from southeast to northwest, and crosses Valencia Road and eventually drains to the Black Wash. The cross slope along Valencia Road has no significant cut or fill slopes. Minor drainage ditches parallel Valencia Road. Lined concrete channels within the right-of-way exist between Reed Bunting Drive and Mountain Eagle Drive.

Distant views within the project corridor consist of the Tucson Mountains to the north, Cat Mountain and the hills associated with the Drexel Heights area to the east, Black Mountains to the southwest, Sierrita Mountains to the south, and the Roskruge Mountains to the west.

In the eastern section of the project, the middle-ground views are a mixture of walled medium-density residential developments and open space featuring primarily native vegetation. From Reed Bunting Dr. to the project's end at Ajo Highway, the middle-ground views are of undeveloped open space with mostly native vegetation. Power poles run parallel along the southern side of the roadway and cross Valencia Road twice near the west end of the project.

The foreground views of the residential area are of walled developments with minimal landscape screening, 2-lane paved roadways, wide unpaved roadway shoulders which are predominantly devoid of vegetation, and numerous concrete drainage structures. Interspersed areas of mesquite trees with non-native grass understory are present along the roadway. Along the western section of the project, dense stands of mesquite trees and native shrubs with an understory of non-native and native grasses, all within the right-of-way, dominate the foreground views.

Figure 1. Location Map

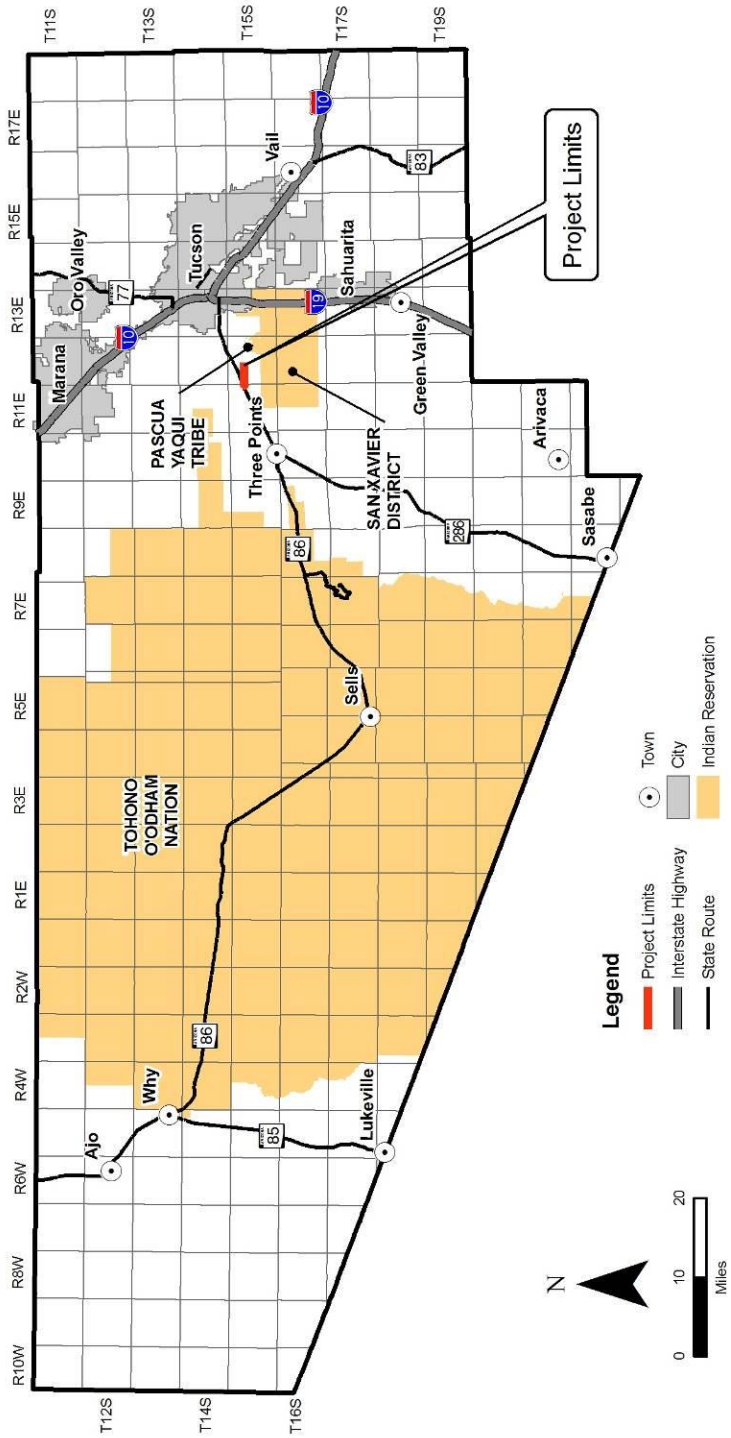


Figure 2. Vicinity Map

2.2 Hydrological Features

The project area is relatively flat; descending gradually from southeast to northwest. The approximate elevation at Ajo Highway, the project's west end, is 2,430 feet above mean sea level. The east end of the project is 2,480 feet above mean sea level. The average elevation for this project is 2,456.60 feet above sea level. The project area lies at the southeastern end of the Avra Valley. The Tucson Mountains are approximately 5 miles north of the project and the Sierrita Mountains are 13 miles to the southwest. These low desert mountain ranges are between 4,600 feet and 6,000 feet in elevation. Black Mountain is approximately 5 miles southeast of the project and is prominent among scattered outlying hills and low peaks forming a discontinuous ridge of somewhat elevated terrain between the Tucson and Sierrita mountains. This slight ridge forms a low saddle between the Avra Valley and the Santa Cruz River Valley, 7 miles to the east.

The Santa Cruz River; a major ephemeral drainage, follows the eastern side of the Tucson Mountains within the Tucson Basin, then trends northwest. Black Wash and many unnamed ephemeral drainages cross Valencia Road just east of or within the project limits and converge to form the southeastern tributary to Brawley Wash, which eventually joins the Santa Cruz River nearly 30 miles northwest.

Soils in the area are of the Tubac-Sonoita-Grabe Association. These are deep, well-drained, moderately coarse to fine-textured, nearly level to strongly sloping soils of the uplands, valley plains and wide floodplains formed in mixed old and recent alluvium derived mostly from igneous rocks (Hendricks 1985, Richard, et al. 2000).

2.3 Vegetation

The project area lies in the north Sonoran Desert biotic region and the south portion of the Basin and Range physiographic province. This region supports a biologically diverse desert vegetative community. Per the Pima County Sonoran Conservation Plan (SDCP), the vegetation composite is described as Sonoran Desert Scrub Palo Verde-Mixed Cacti with a few areas of Sonoran Riparian and Oasis Forest Mesquite Series at the western limits of the project. Pima County Regulated Riparian Habitat exists within the project area, including areas designated as Important Riparian Areas in several sections of the project. Pima County Regulated Riparian Habitat within the vicinity of the project is noted in Figure 3.

Common shrubs and cacti in the vegetative communities found within the project area include triangleleaf bursage *(Ambrosia deltoidea)*, fourwing saltbush *(Atriplex canescens)*, longleaf jointfir *(Ephedra trifurca),* broom snakeweed *(Gutierrezia sarothrae),* burroweed (*Isocoma tenuisecta*), creosote bush *(Larrea tridentata)*, wolfberry *(Lycium* sp.), whitethorn acacia *(Vachellia [Acacia] constricta),* graythorn *(Ziziphus obtusifolia)*, Arizona pencil cholla *(Cylindropuntia arbuscula)*, jumping cholla *(Cylindropuntia fulgida* var. *fulgida)*, desert Christmas cactus *(Cylindropuntia leptocaulis)*, cane cholla *(Cylindropuntia spinosior),* pink flower hedgehog cactus *(Echinocereus fasciculatus),* barrel cactus *(Ferocactus wislizeni)*, and brown-spine prickly pear *(Opuntia phaeacantha)*. Foothill palo verde *(Parkinsonia [Cercidium] microphylla)* and saguaro *(Carnegiea gigantea)* are widely scattered and uncommon in the area. Pima pineapple cactus *(Coryphantha scheeri* var. *robustispina),* a federal endangered species, was found adjacent to the project limits.

Blue palo verde *(Parkinsonia [Cercidium] florida),* canyon ragweed *(Ambrosia ambrosioides)*, and fringed twinevine *(Sarcostemma cynanchoides)* are found along ephemeral drainages.

Terrain adjacent to the western end of Valencia Road is currently undeveloped. An unpaved utility service road on the south side of Valencia Road is used by area residents for walking, biking and ATV'ing.

The northern and southern ROW along the eastern portion of Valencia Road that borders residential housing developments has been disturbed. The setbacks are mostly barren between the existing roadway

and the constructed drainage channels and/or the vegetative buffer bordering these developments. Occasional velvet mesquite, Mexican palo verde *(Parkinsonia aculeata)*, blue palo verde, sweet acacia *(Acacia farnesiana)*, desert willow *(Chilopsis linearis)*, brittlebush *(Encelia farinosa)*, barrel cactus *(Ferocactus wislizeni)* and desert spoon *(Dasylirion wheeleri)* are found within these setback areas.

Many invasive and disturbance-adapted species are present along the corridor, as most of the ROW and artificial drainage-ways have been disturbed. Species identified include Mexican paloverde, Canadian horseweed *(Conyza canadensis)*, prickly lettuce *(Lactuca serriola)*, yellow sweetclover *(Melilotus officinalis)*, prickly Russian thistle *(Salsola tragus),* desert senna *(Senna covesii)*, Bermudagrass (*Cynodon dactylon*), stinkgrass *(Eragrostis cilianensis),* buffelgrass *(Pennisetum ciliare),* desertbroom *(Baccharis sarothroides),* whiplash pappusgrass *(Pappophorum vaginatum),* and Johnsongrass *(Sorghum halepense).*

Vegetation along neighborhood edge.

2.4 User Groups

Those affected by the proposed Valencia Road improvements are residents and future mixed-use inhabitants who live/work adjacent to Valencia Road, Ryan Airfield users, Valencia Road motorists, and Valencia Road pedestrians and bicyclists. Refer to Table 1 and Figure 4 for a description of the User Groups.

Table 1. User Groups

User Group	Description
A	Residents along Valencia Road, including those residing in Star Valley Village, West Star Estates, Diablo Village Estates, Caddis Haley Estates, Tucson Mountain Ranch, Sonoran Ranch Estates I & II, and Eagle Point Estates
B	Future Mixed Use Inhabitants of the Pomegranate Farms and Sendero Pass developments
C	Valencia Road Motorists
D	Bicyclists/Pedestrians along Valencia Road
E	Ryan Airfield Users
F	Ajo Highway Motorists

2.5 Speed Limits

The existing speed limit is posted at 45 miles per hour (mph). The roadway design speed is 50 mph with a 20 foot clear zone to obstacles. The posted speed after construction will remain at 45 mph.

Figure 3. Riparian Habitat

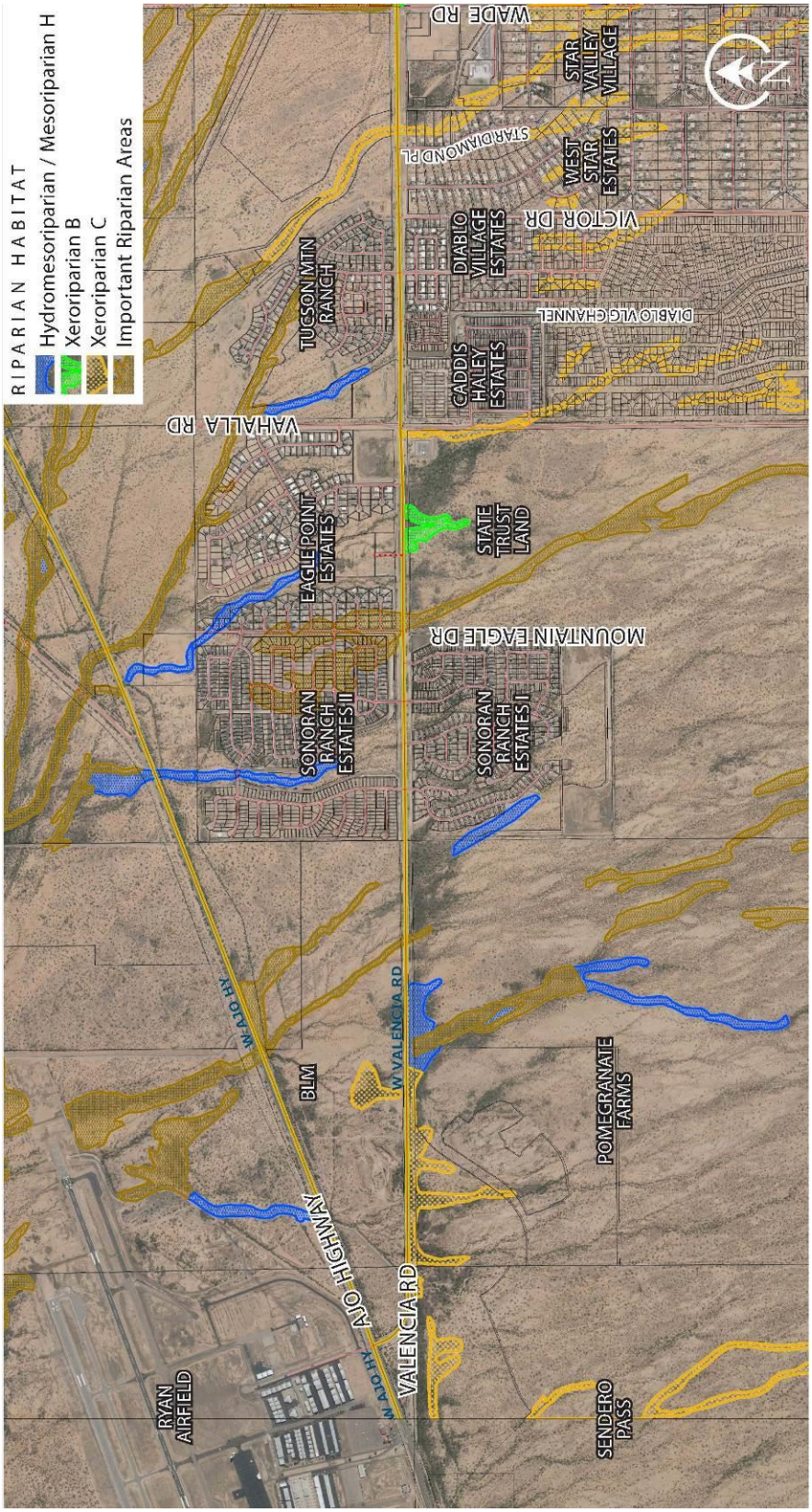
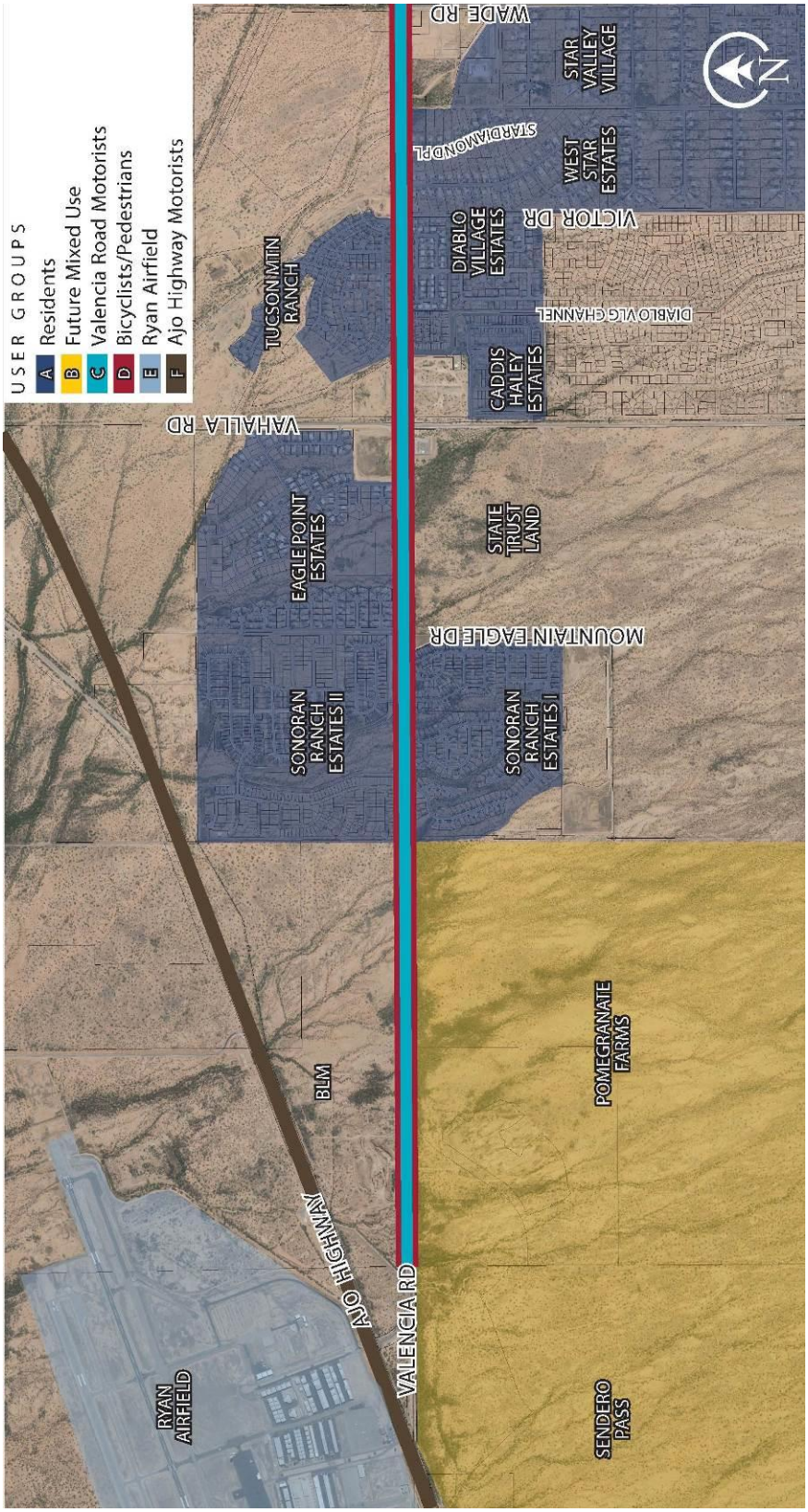


Figure 4. User Groups



3 PROPOSED PROJECT DESCRIPTION

3.1 Roadway Alignment

The total project length is 2.8 miles beginning a 1/3 mile west of Wade Road and ending at Ajo Hwy (SR86). The new roadway footprint will include four travel lanes, bike lanes (paved shoulders) in each direction, a raised landscaped median, shared-use pathway, and new sidewalks connecting to existing residential developments. The roadway improvements will also include concrete box/pipe culverts to convey the 100-year storm under the roadway. Turn lanes will be added to the future signalized intersections and where otherwise warranted. A 0.3-mile portion of Vahalla Road (cross street) will be realigned. The typical roadway section is shown in Figure 5.

Major Features

The current right-of-way will accommodate most of the proposed four-lane section and embankment. A short segment of new right-of-way is required near Vahalla due to the addition of turn lanes and drainage infrastructure. The vertical alignment of the roadway will be raised to accommodate drainage improvements.

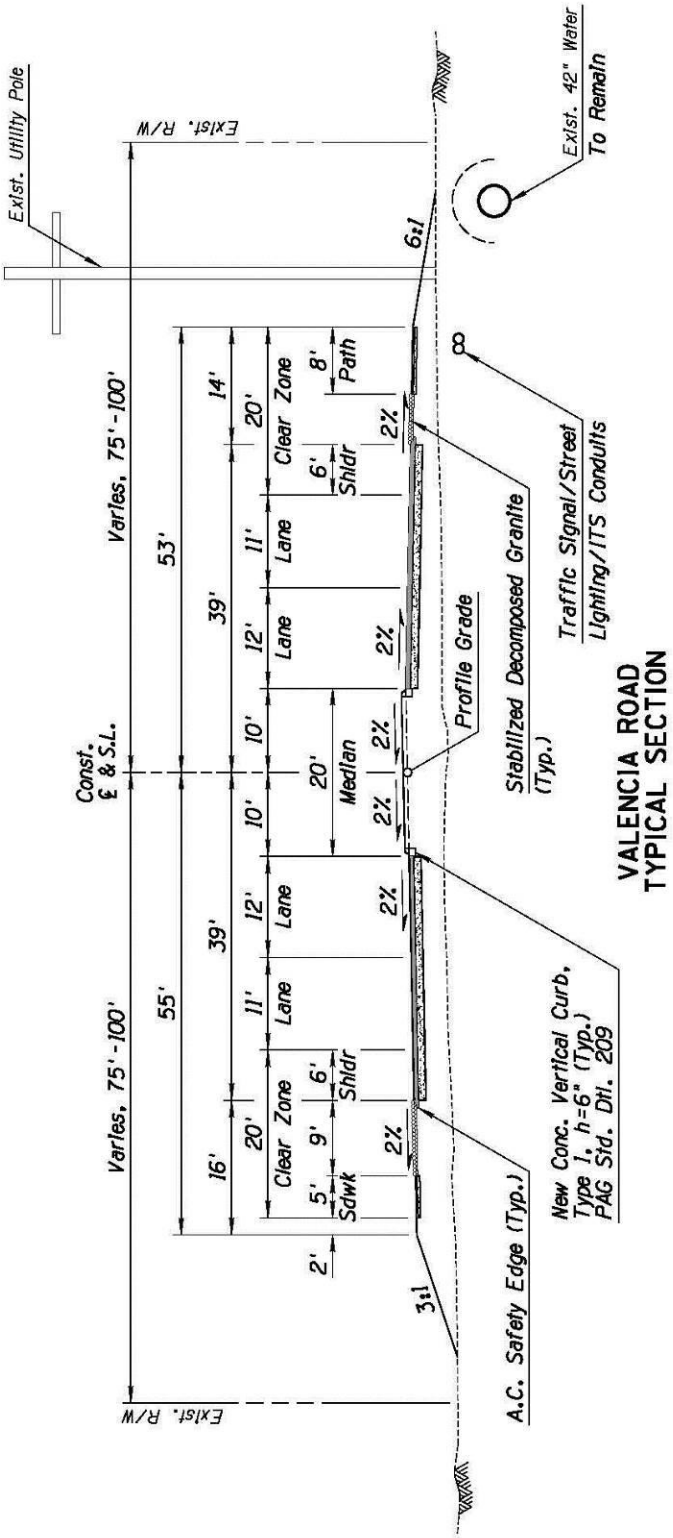
Valencia Road drainage improvements include 24 new box or pipe culvert crossings and 1 trench drain designed to convey the 100-year storm beneath the roadway and replace existing at-grade dip drainage crossings. Roadside channels will be constructed at the western end of the project to collect pavement drainage and offsite runoff. These channels will have various erosion control linings, e.g. vegetated earthen, rock riprap, wire-tied riprap, or concrete. Existing concrete lined channels within the project limits will remain. Metal handrail will be placed at culvert headwalls and along pedestrian facilities where needed.

Existing utilities are located on both sides of the roadway centerline and along the adjoining cross streets. They include service, distribution, and transmission of gas, electric, communications, potable water, and wastewater. Some of these utilities will be relocated with the new alignment.

Although there is no proposed intersection signalization, conduit and pull boxes will be provided at Iberia Avenue, Vahalla Road, and at other median openings that are anticipated to warrant future signalization. Street lighting will be added at all cross street intersections with Valencia Road and along the approach curve to SR86.

Pedestrian amenities include ADA compliant sidewalks and a multi-use pathway. Medians and roadway right-of-ways will be revegetated per PCDOT guidelines. Where feasible, storm water runoff will be captured to supplement irrigation. Public art is also included to enhance the transportation improvements along Valencia Road.

Figure 5. Typical Roadway Cross Section



3.2 Intersections

Two intersections are proposed for roadway improvements.

Upgrades at the Vahalla Road intersection include dedicated northbound/southbound left-turn and right-turn lanes with 110'/150' storage lengths, respectively. Refer to Figure 6.

At the Iberia Avenue intersection, a dedicated left-turn lane with a shared thru/right-turn lane is recommended. Due to existing constraints, a 110' dedicated left-turn lane for the SB approach and 105' dedicated left-turn lane for the NB approach is suggested. A 150' right-turn lane is warranted for the westbound approach of the intersection. Refer to Figure 7.

Vertical curbs will be used at the curb returns at both intersections to protect future traffic signal equipment and allow for the placement of ADA compliant wheelchair ramps.

Figure 6. Valencia Road and Vahalla Road Intersection Improvements

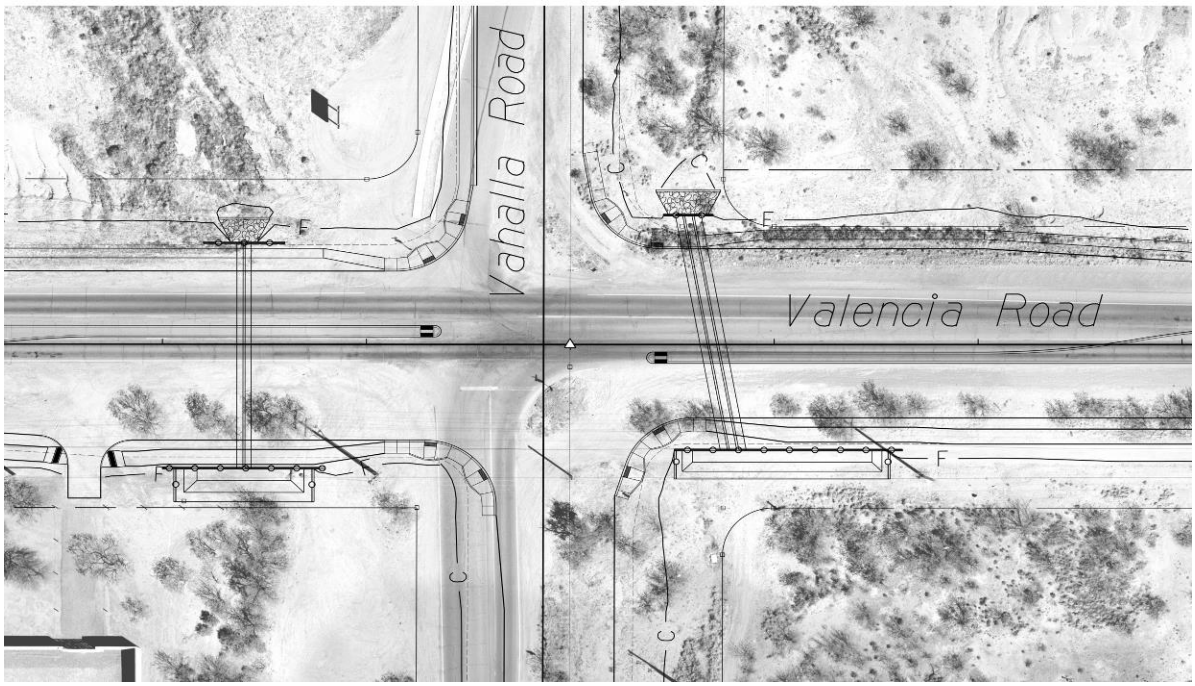
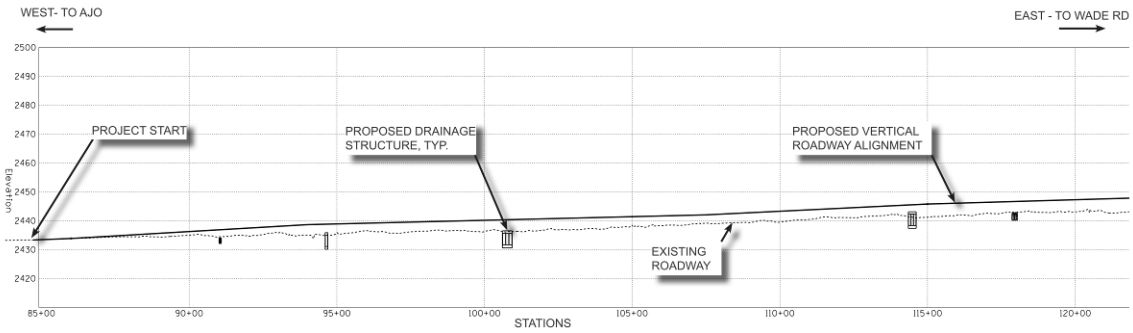


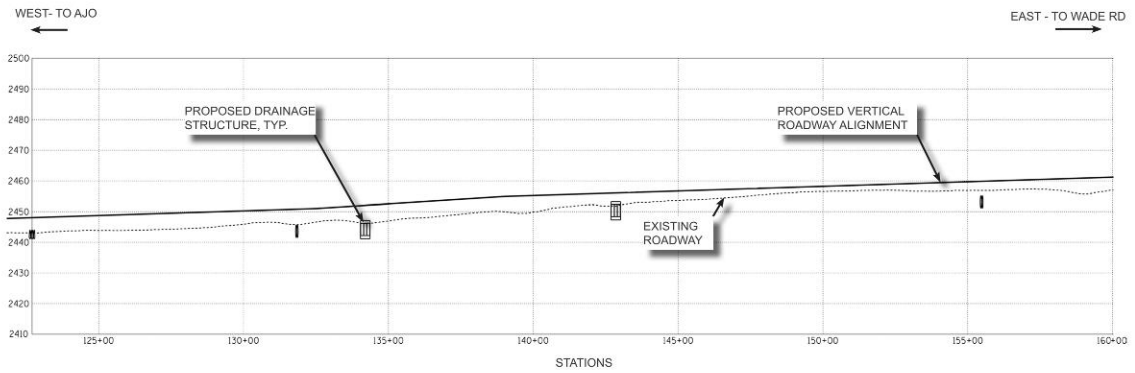
Figure 7. Valencia Road and Iberia Avenue Intersection Improvements

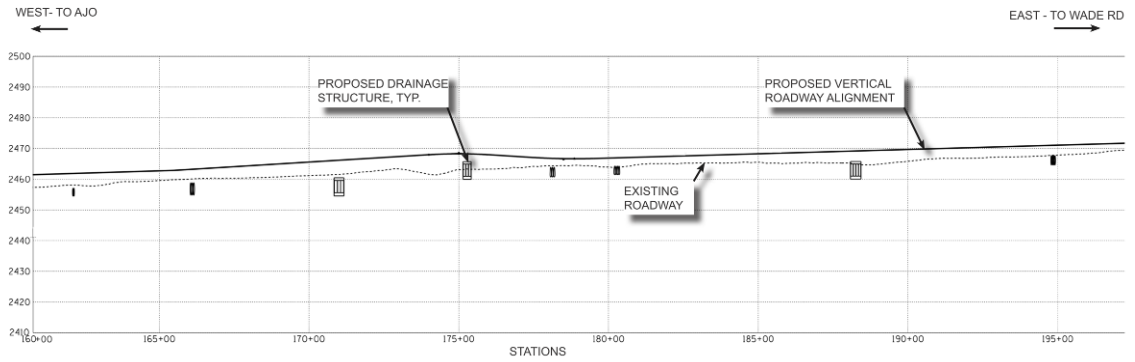
3.3 Site Grading

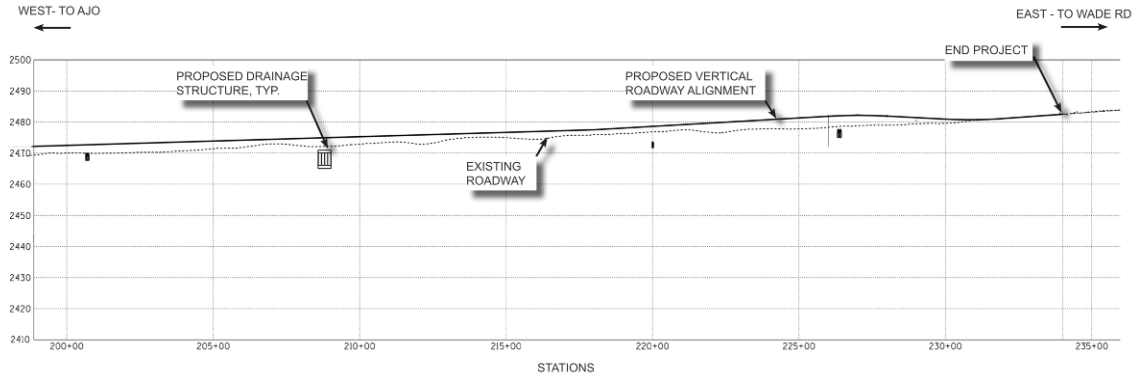
The new roadway profile is designed above the existing grade to keep the pavement subgrade at or above the maximum headwater elevation, to minimize embankment requirements, and to provide adequate clearance for the new cross drainage culverts. A maximum 6% grade is used to tie into existing cross streets. Proposed roadside channels are included to collect and direct offsite flows to the new culvert crossings. Figure 8 depicts the proposed roadway vertical alignment.

Figure 8. Proposed Roadway Vertical Alignment Diagram









3.4 Artwork

As with all Pima County capital improvement projects, a portion of the funds are set aside for the commission of art to be displayed in a variety of public venues. The Tucson Pima Arts Council is currently seeking proposals from artists/design team to create public art along Valencia Road from Wade Road to the Ajo Highway terminus.

3.5 Overhead Utilities

A utility corridor runs parallel to Valencia Road and along all major cross streets. The corridor includes gas, electric, communications, potable water, and wastewater. A

Existing overhead utilities along Valencia Road.

portion of TEP's overhead electric lines will be relocated from the south side to north side of Valencia Road.

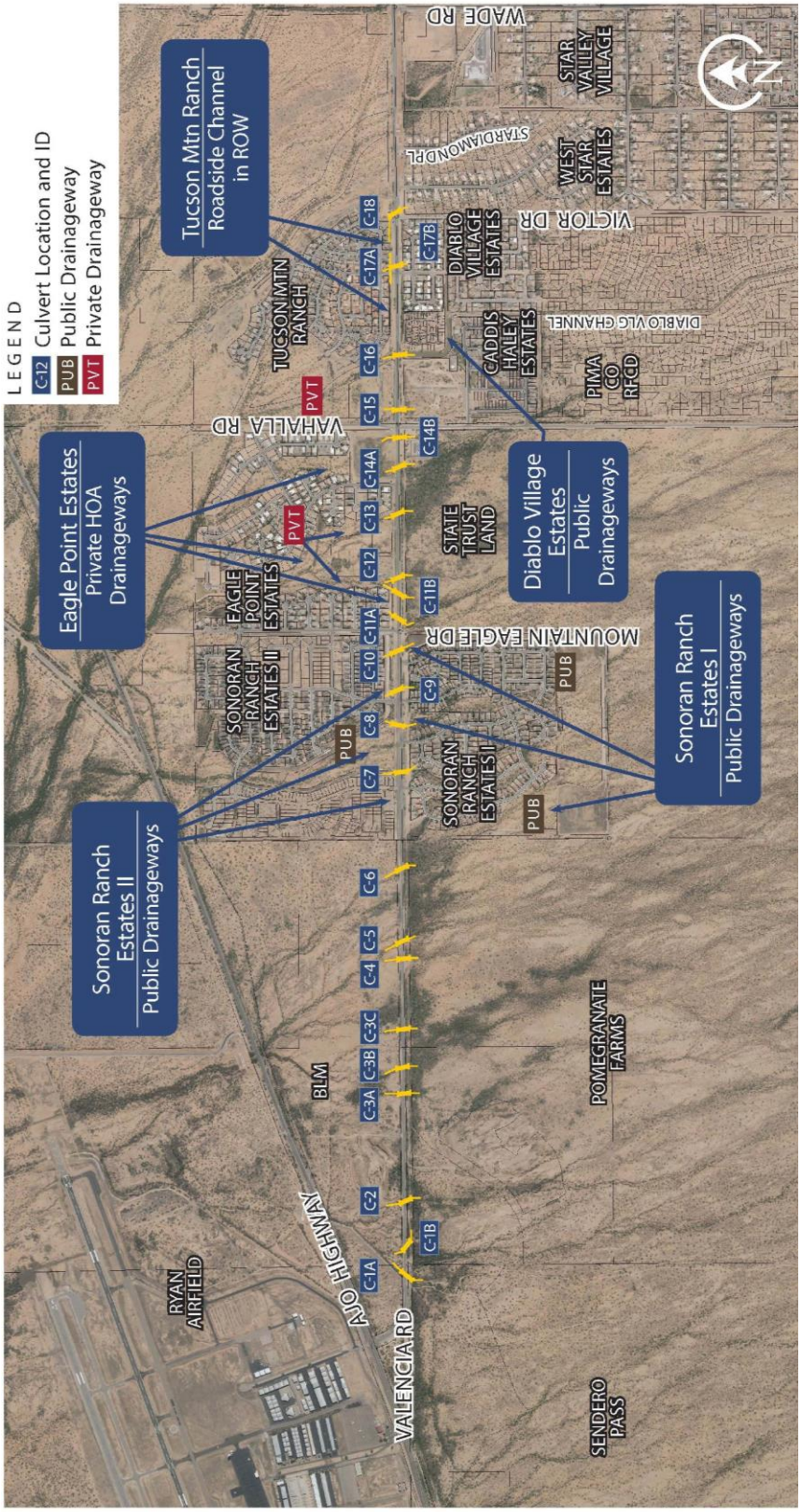
3.6 Proposed Drainage Features

24 new drainage structures are planned along Valencia Road. They are located and sized for effective and efficient conveyance of offsite flows. At-grade dip crossings have been replaced by culverts designed with drop inlets to achieve the lowest possible roadway profile. Locations of the proposed drainage crossings are located to maintain existing drainage patterns. Refer to Table 2 and Figure 9. Proposed drainage structures include spiral ribbed pipes, reinforced concrete box culverts, and steel pipe arches.

Table 2. Proposed Drainage Culverts

Concentration Point	Roadway Station	Design Flow (cfs)	Structure Description
1A	91+05	47	3-24" SRP
1B	94+34	174	1-8'x4' RCBC
2	100+77	520	3-10'x4' RCBC
3A	114+48	335	3-8'x4' RCBC
3B	117+95	557	4-49"x33" STEEL PIPE ARCH
3C	122+70	193	4-49"x33" STEEL PIPE ARCH
4	131+84	122	2-48" SRP
5	134+20	746	3-10'x4' RCBC
6	142+85	422	3-10'x4' RCBC
7	155+48	160	2-48" SRP
8	162+13	57	2-30" SRP
9	166+10	245	3-48" SRP
10	171+00	523	3-10'x4' RCBC
11A	175+28	282	3-8'x4' RCBC
11B	178+13	228	3-57"X38" STEEL PIPE ARCH
12	180+28	200	4-49"x33" STEEL PIPE ARCH
13	188+26	666	4-8'x4' RCBC
14A	194+85	179	4-36" SRP
14B	198+40	77	2-36" SRP
15	200+70	97	3-42"x29" STEEL PIPE ARCH
16	208+80	1500	4-10'x5' RCBC
17A	219+21	134	3-49"x33" STEEL PIPE ARCH
17B	220+01	25	2-24" SRP
18	226+38	137	3-49"x33" STEEL PIPE ARCH

Figure 9. Proposed Drainage Culverts



4 LAND USE PLANNING

The Valencia Road improvements are entirely within unincorporated Pima County. Land use around the project area is a mixture of undeveloped parcels owned by private, State, and Federal agencies, residential single-family homes, and an electric substation. State Trust Land is located on the south side of Valencia Road from Mountain Eagle Drive to Vahalla Road. The Department of the Interior Bureau of Land Management (BLM) owns the Federal land parcel. Refer to Figure 10 for a Land Use Map of the project area. There are no tribal lands along this segment of Valencia Road.

4.1 Pima County Zoning & Planning

There is a mixture of zoning within the project area. It includes rural/suburban homestead/residential (SH, RH, and GR-1); single residences and multiple dwelling residences (CR-1, CR-3, CR-4 and CR-5); local business (CB-1); manufactured and mobile homes (CMH-1); transitional development (TR); and a Specific Plan (SP). Refer to Figure 11 for a Zoning Map of the project area.

The project is located within a Special Area Policy called Ajo Corridor/Western Gateway as described in Pima County's Comprehensive Plan dated May, 2015. The Ajo Corridor/Western Gateway is located along Ajo Highway west from the intersection with Valencia Road and south of Ryan Airfield. Policies within this area include the following:

- Landscaping shall promote preservation of natural vegetation and application of xeriscape concepts in landscape design.
- Areas to remain natural in this gateway corridor area shall be supplemented with plant materials natural to this area and planted with desert wildflower seed mix for an area of 40 feet on both sides of the right-of-way.

The Ajo Corrido/Western Gateway Special Area Policy also addresses the preservation and restoration of riparian areas associated with Black Wash. While the project is not specifically in the Black Wash area, the policy encourages the preservation and restoration of riparian habitat to provide opportunities for view enhancement and interpretive signage.

4.2 Future Land Use Concepts

The Valencia Road corridor has five (5) active or proposed developments. They include:

- Sendero Pass – The proposed Master Plan development is a residential, commercial and industrial mixed use project located south of the Valencia Road curve at Ajo Highway (SR86).
- Pomegranate Farms – The proposed development includes single-family residences, condominiums, townhomes, apartments, and live/work units. It is located adjacent to and east of the Sendero Pass Development.
- Sonoran Ranch Estates II – This is an ongoing housing development adjacent to the BLM property.
- Vahalla Estates –This proposed housing development is located at the southeast corner Valencia Road and Vahalla Road.
- Tucson Mountain Ranch – This planned development is located at the northwest corner Valencia Road and Vahalla Road.

It is anticipated that the State Land property and the other empty lots will be developed in the future. The entire corridor is included in the Pima County Southwest Infrastructure Plan.

Figure 10. Land Use Map

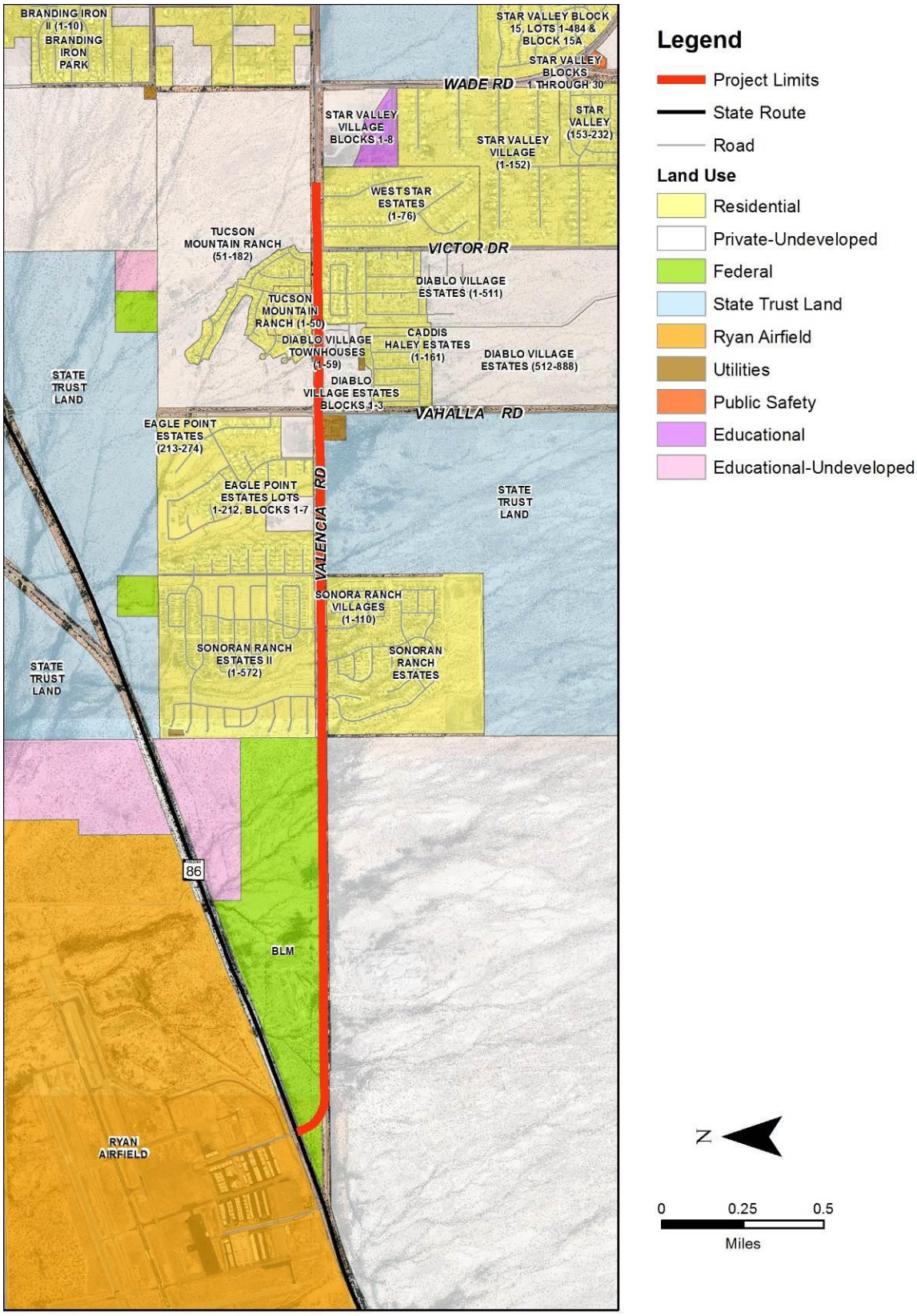
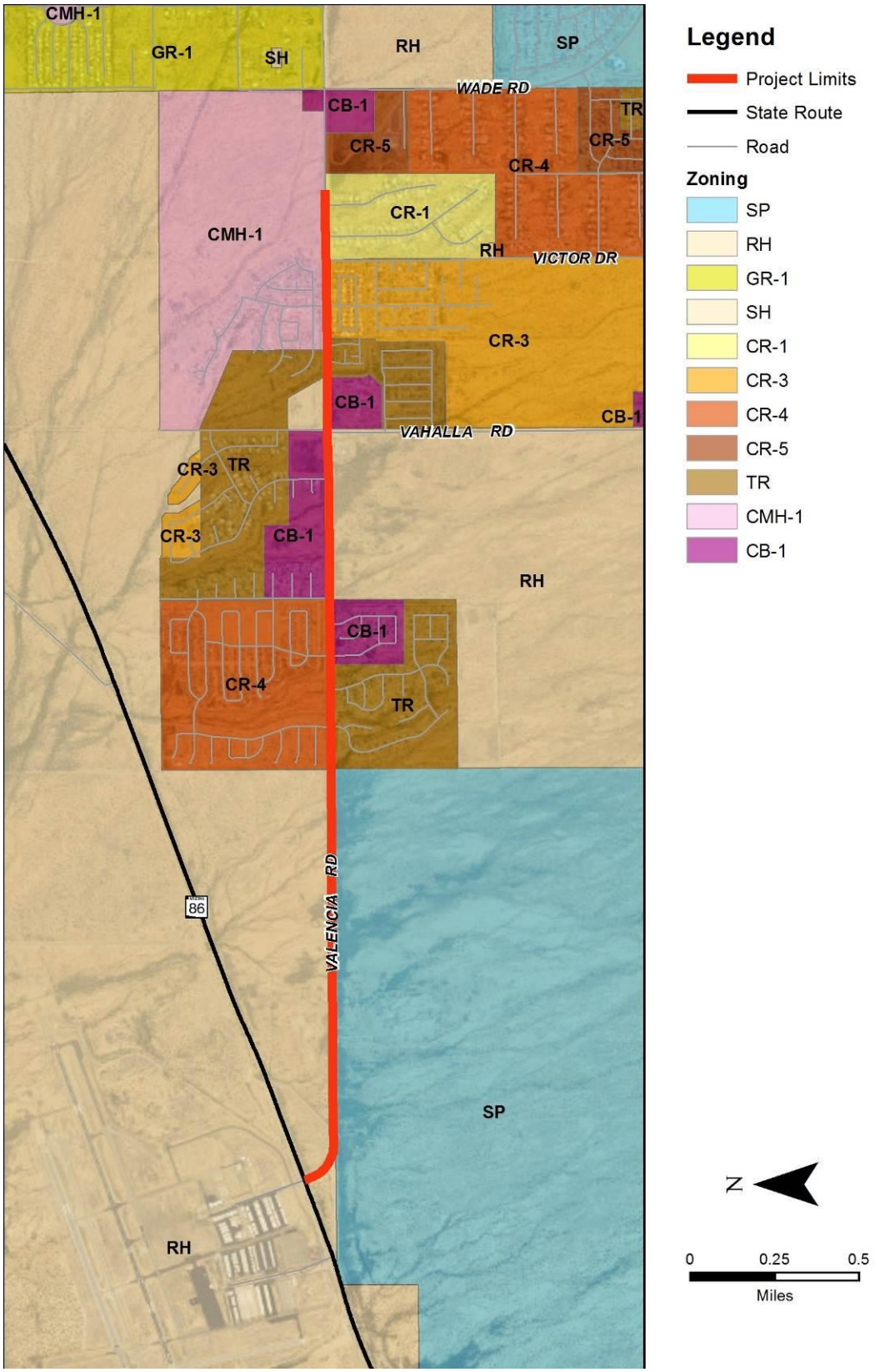


Figure 11. Zoning Map



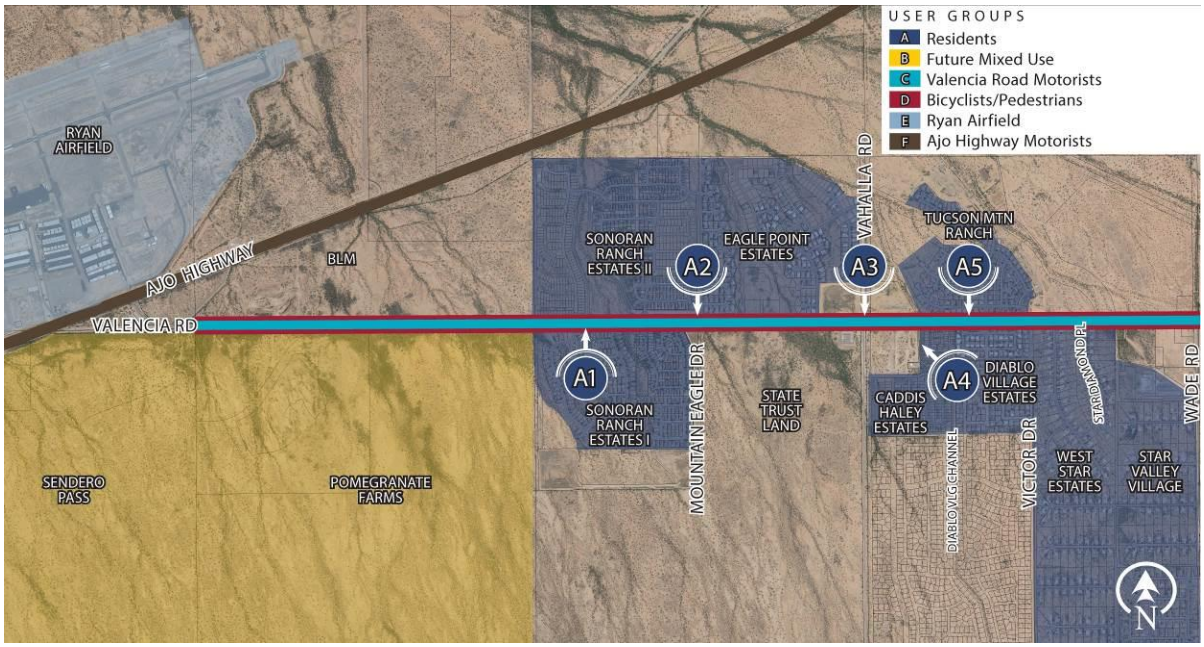
5 Overview of User Groups & Viewpoints

Six user groups have been identified within the proposed project's area of visibility. Viewpoints appropriate for each user group were selected to assess the impacts of the proposed transportation improvements along Valencia Road. General descriptions of the natural environment (vegetation, landforms), man-made environment (buildings, roadways, etc.), and project visibility are provided for each user group.

5.1 User Group A

Residents along and adjacent to Valencia Road. Refer to Figure 12 for selected viewpoints.

Figure 12. User Group A Selected Viewpoints



Viewing Conditions

Travel speeds are 0 mph. Viewsheds for residents are generally static and can potentially include 360° views. These users are interested in natural/cultural localized environments relevant to viewer's location and not as much with overall project coherence.

Viewshed Description

The existing residential areas are located at the eastern portion of the project. They are walled developments with minimal landscape screening. Valencia Road is a 3-lane paved roadway with wide unpaved shoulders with concrete lined channels along the north ROW. The wide ROW is mostly devoid of vegetation, but is interspersed with mesquite trees with non-native grass understory. The dominant background views are of the Tucson Mountains to the northeast with more distant mountain views to the southeast. Overhead utilities are visible in both foreground and background viewpoints.

Project Visibility

Project visibility is variable for the residential area. For those residents directly adjacent to Valencia Road, the proposed project infrastructure and neighboring residential structures are most visible. However, the screening wall surrounding the residential development restricts direct visibility of the Project.

View A1 - Existing view to the North from Sonoran Ranch Estates I.

View A2 - Existing view to the South from Mountain Eagle Dr.

Three key viewpoints were selected along the project area for the preparation of photo simulations to reflect the proposed roadway design. Photo simulations were prepared using the roadway design model overlaid onto existing site photos. The key viewpoints were selected to reflect typical viewing conditions in some of the most frequented or impacted areas.

Figure 13 is a depiction of the before and after views from Key Viewpoint A3 (Vahalla Road). As this is the side street most impacted by the project, this photo reflects what residents can expect to see in the area once construction is completed.

Figure 14 is a depiction of the before and after views from Key Viewpoint A4 (Diablo Channel). This photo reflects the typical view that residents could have of some of the proposed drainage improvements along Valencia Road. This particular drainage improvement consists of an RCBC structure. Other drainage improvements include steel pipe arch structures and SRP structures. Refer to Figure 9 for the locations of the proposed drainage features.

Figure 15 is a depiction of the before and after views from Key Viewpoint A5 (Iberia Avenue). This photo reflects the typical view for residents approaching the new roadway improvements from within their neighborhood.

Figure 13. Viewpoint A3 - Vahalla Road, Looking South – Before & After Views

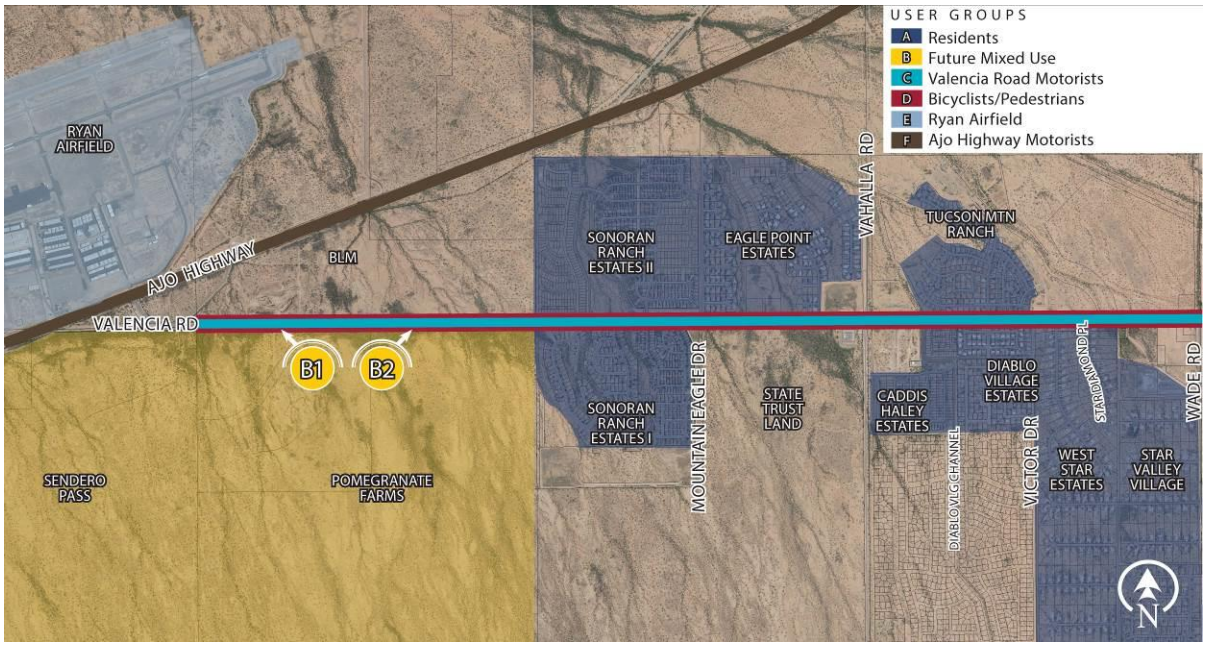
Figure 14. Viewpoint A4 - Diablo Channel Improvements, Looking North – Before & After Views

Figure 15. Viewpoint A5 - Iberia Avenue, Looking South – Before & After Views

5.2 User Group B

Future mixed use inhabitants along and adjacent to Valencia Road. Refer to Figure 16 for selected viewpoints.

Figure 16. User Group B Selected Viewpoints



Viewing Conditions

Travel speeds are 0 mph. Viewsheds for the future mixed use neighbors are generally static and can potentially include 360° views. These users are interested in the natural/cultural environment relevant to wayfinding and with good project coherence.

Viewshed Description

Future mixed-use development is proposed for the western portion of the project, from Reed Bunting Dr. to project's end at Ajo Highway. Valencia Road is a 2-lane paved roadway with unpaved shoulders and many at-grade dip crossings. The dominant background views are of the Tucson Mountains to the northeast with more distant mountain views to the southeast. Middle-ground views are of undeveloped open space with native vegetation mostly within the BLM parcel on the north side of Valencia Road. Dense stands of mesquite trees and native shrubs with an understory of non-native and native grasses dominate the foreground views within the right-of-way.

The BLM property has a 'C' rating as defined by BLM's Visual Resource Manual based on landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. This is the lowest of three scenic quality ratings described in BLM's Visual Resources Manual.

Project Visibility

It is anticipated that the project improvements will be in place prior to the users inhabiting the mixed use developments. While the roadway is expected to be a prominent part of the foreground, the project improvements are anticipated to meet BLM's Visual Resource Management classification for the area. As a Class IV area, the BLM recognizes that the characteristic landscape is subject to change as long as impacts are minimized to the greatest extent possible.

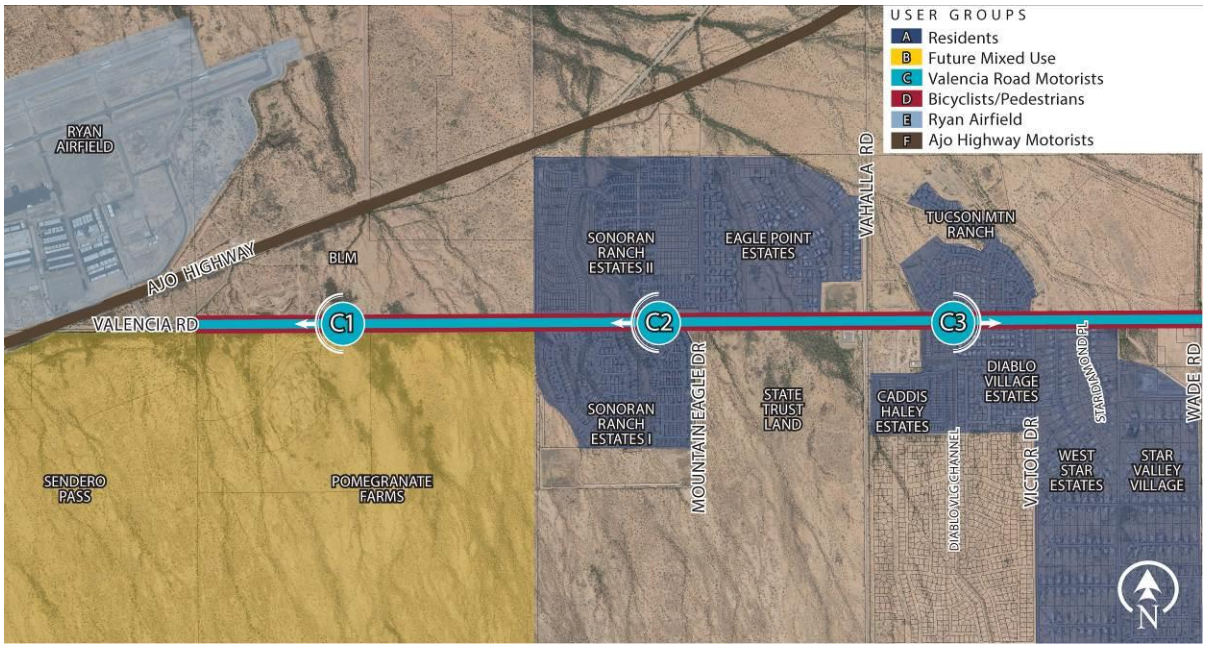
View B1 - Existing view to the Northwest from future development.

View B2 - Existing view to the Northeast from future development.

5.3 User Group C

Valencia Road motorists. Refer to Figure 17 for selected viewpoints.

Figure 17. User Group C Selected Viewpoints



Viewing Conditions

Travel speeds are currently 45 mph and will remain at 45 mph upon project completion. The viewsheds for the motorist are travel direction dependent and are generally less than 180° views. These users are most interested in project coherence and natural/cultural environments relevant to wayfinding.

Viewshed Description

Distant views within the project corridor consist of the Tucson Mountains to the north, Cat Mountain and the hills associated with the Drexel Heights area to the east, Black Mountains to the southwest, Sierrita Mountains to the south and the Roskruge Mountains to the west.

In the eastern section of the project, the middle-ground views are a mixture of walled medium-density residential developments and open space generally featuring native vegetation. From Reed Bunting Dr. to the project's end at Ajo Highway, the middle-ground views are of undeveloped open space with native vegetation. Power poles run parallel to Valencia Road along the entire south side of the roadway.

The foreground views of the residential area are of walled developments with minimal adjacent landscape, a 3-lane paved roadway with unpaved shoulders, numerous concrete drainage structures, and roadside areas with minimal vegetation. Interspersed areas of mesquite trees with non-native grass understory are present along the roadway. Along the western section of the project, dense stands of mesquite trees and native shrubs with an understory of non-native and native grasses, all within the right-of-way, dominate the foreground views. Here, Valencia Road is a 2-lane paved roadway with unpaved shoulders and many at-grade dip drainage crossings.

View C1 - Typical existing view from Valencia Road (undeveloped end) – looking west.

View C2 - Typical existing view from Valencia Road (developed area)-looking west.

View C3 - Typical existing view from Valencia Road (developed area)-looking east.

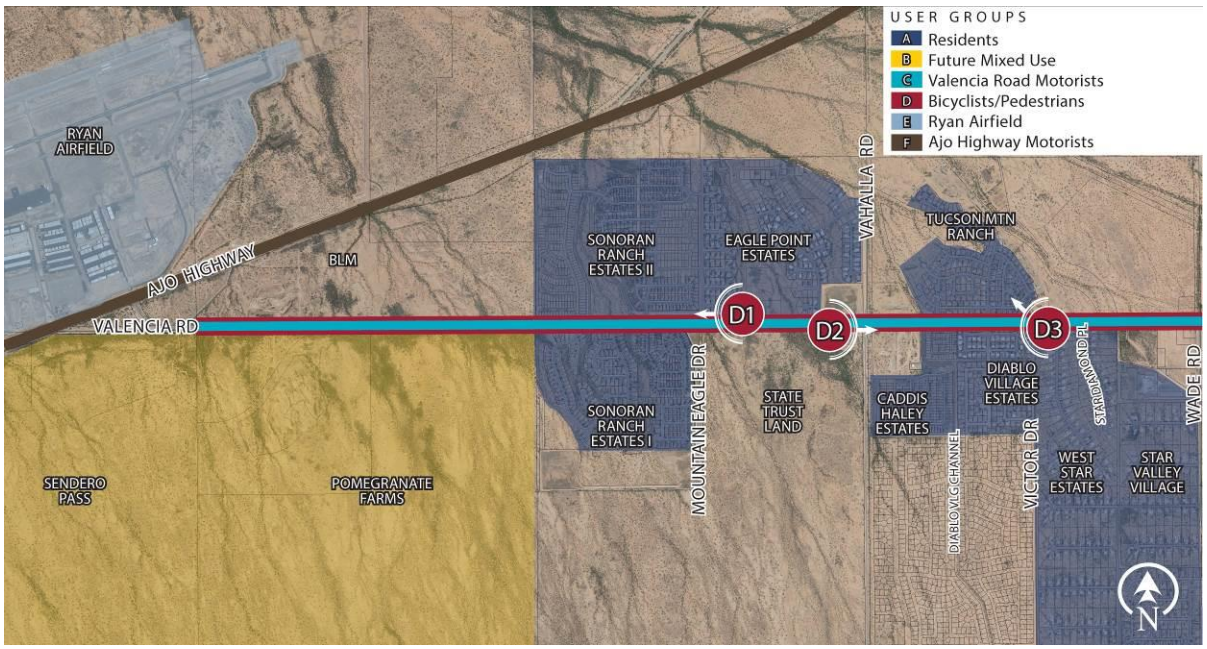
Project Visibility

Although viewers in this user group will be travelling at higher speeds, they will be highly sensitive to the proposed changes to the project area that affect wayfinding and safety. The new roadway will have a wider footprint, which will include additional drive lanes, raised medians, turn lanes and bicycle lanes. Existing vegetation will be reduced in many areas but will be mitigated with new landscaped medians and roadside plantings.

5.4 User Group D

Valencia Road bicyclists and pedestrians. Refer to Figure 18 for selected viewpoints.

Figure 18. User Group D Selected Viewpoints



Viewing Conditions

Travel speeds are 0-15 mph. The slower paced pedestrians tend to be more interested in localized views relevant to location, and how these pertain to the walking/cultural infrastructure and not focused on project coherence. As bicyclists use the roadway, their preference is more for project coherence and riding infrastructure.

Viewshed Description

Distant views within the project corridor consist of the Tucson Mountains to the north, Cat Mountain and the hills associated with the Drexel Heights area to the east, Black Mountains to the southwest, Sierrita Mountains to the south and the Roskruge Mountains to the west.

In the eastern section of the project, the middle-ground views are a mixture of walled medium-density residential developments and open space generally featuring native vegetation. From Reed Bunting Dr. to the project's end at Ajo Highway, the middle-ground views are of undeveloped open space with native vegetation. Power poles run parallel along the entire south side of Valencia Road.

The foreground views of the residential area are of walled developments with minimal adjacent landscape, a 3-lane paved roadway with unpaved shoulders, numerous concrete drainage structures, and roadside areas with minimal vegetation. Interspersed areas of mesquite trees with non-native grass understory are present along the roadway. Along the western section of the project, dense stands of mesquite trees and native shrubs with an understory of non-native and native grasses, all within the right-of-way, dominate the foreground views. Here Valencia Road is a 2-lane paved roadway with unpaved shoulders and many at-grade dip drainage crossings.

View D1 - Typical view of Valencia Road ROW looking west.

View D2 - Typical view of Valencia Road ROW looking east.

View D3 - Typical view of Valencia Road ROW looking northwest.

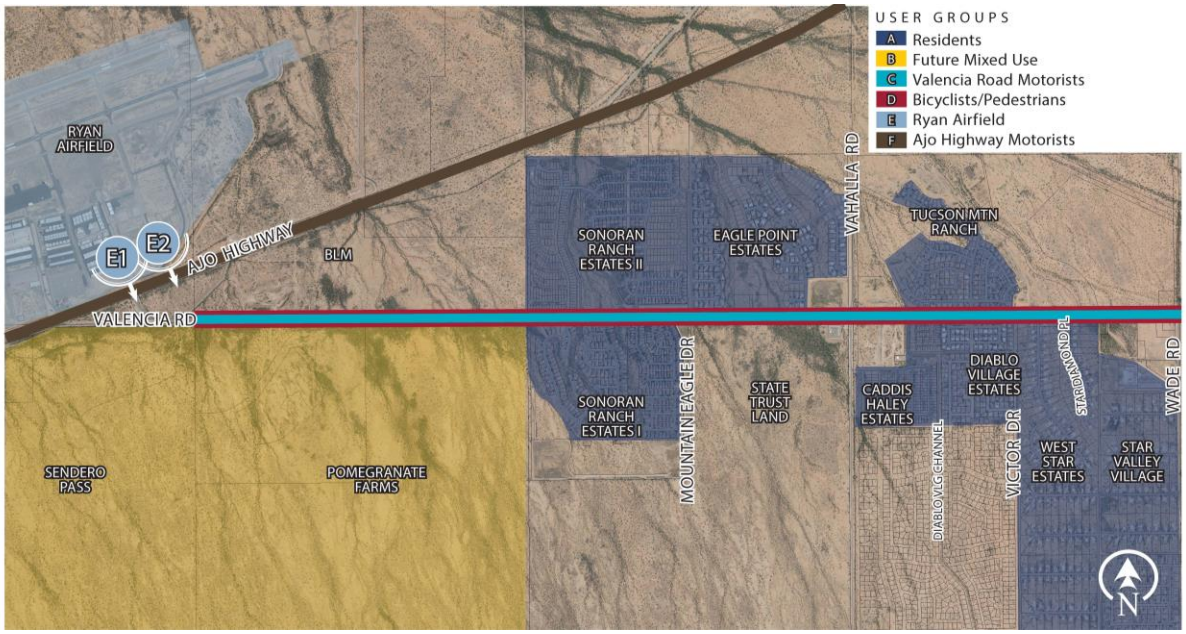
Project Visibility

Viewers in this user group will be highly sensitive to the proposed changes to the project area that affect wayfinding and safety. The new roadway will have a wider footprint, which will include additional drive lanes, raised medians, turn lanes and bicycle lanes. Existing vegetation will be reduced in many areas, but will be mitigated with new landscaped medians and roadside plantings to provide additional shade for users in this group.

5.5 User Group E

Ryan Airfield Users. Refer to Figure 19 for selected viewpoints.

Figure 19. User Group E Selected Viewpoints



Viewing Conditions

Travel speeds are 0 mph. Viewsheds for the Ryan Airfield are generally static and can potentially include 360° views. These users are interested in localized views relevant to location and are not as concerned with project coherence.

Viewshed Description

There are clear views of the Tucson Mountains to the north, Cat Mountain and the hills associated with the Drexel Heights area to the east, Black Mountains to the southwest, and the Sierrita Mountains to the south from the entrance of Ryan Airfield. Airfield infrastructure somewhat obscures the distant views to the Roskruge Mountains in the west.

Looking south from Ryan Airfield towards Ajo Highway, the foreground view is dominated by an elevated roadbed and sparse vegetation within the right-of-way. Ajo Highway is currently under construction as part of an Arizona Department of Transportation (ADOT) project. The viewing conditions in this area are expected to change based on ADOT's work. The ADOT project is scheduled to be completed by early 2018.

View E1 - Existing view from Ryan Airfield Entry- Intersection with Ajo Highway/Valencia Road.

View E2 - Existing view from Ryan Airfield – looking south.

Project Visibility

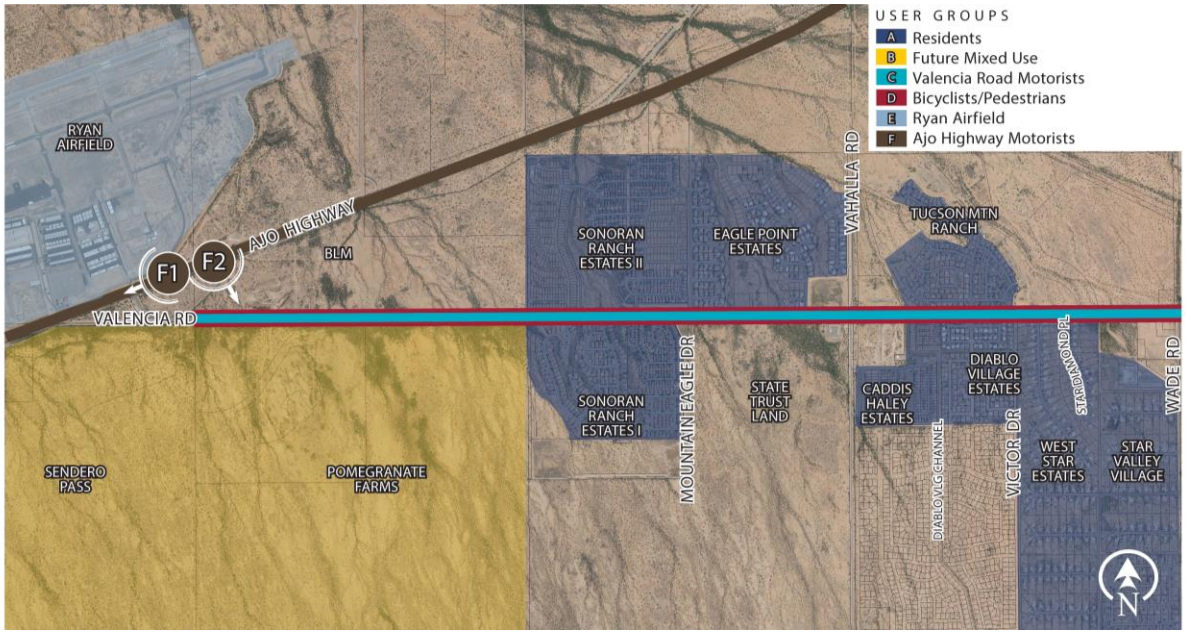
The relative distance of the project to Ryan Airfield is similar to the Ajo Highway users. Project visibility is in the middle ground of this user group's viewshed. The Ryan Airfield exit is located where Valencia Road intersects with Ajo Highway. At this location, the project is a prominent part of the foreground. Just beyond the intersection, Valencia Road makes a sharp curve to the east, greatly

reducing viewshed impacts. The vegetation along Ajo Highway generally screens views of the project area. The current Ajo Highway improvement project will have a higher impact to this user group than the planned modifications taking place as part of the Valencia Road: Wade Road to Ajo Highway improvement project.

5.6 User Group F

Ajo Highway motorists. Refer to Figure 20 for selected viewpoints.

Figure 20. User Group F Selected Viewpoints



Viewing Conditions

Travel speeds are 65 mph. The viewsheds for the motorist are travel direction dependent and are generally less than 180° views. These users are most interested in project coherence and natural/cultural environments relevant to wayfinding.

Viewshed Description

Ajo Highway is currently under construction as part of an ADOT project. The viewing conditions in this area are expected to change based on ADOT's work. The ADOT project is scheduled to be completed by early 2018.

Currently there are clear views of the Tucson Mountains to the north, Cat Mountain and the hills associated with the Drexel Heights area to the east, Black Mountains to the southwest, and the Sierrita Mountains to the south from the entrance of Ryan Airfeld. There are distant views to the Roskruge Mountains in the west.

In general, there is moderate vegetative cover in the foreground, directly adjacent to the roadway. Vegetation is denser in the many drainage areas along Ajo Highway. In the middleground, residential structures and overhead power lines along Valencia Road are occasionally visible to the south.

View F1 - Existing view from Ajo Highway – at Valencia Road intersection.

View F2- Existing view from Ajo Highway- looking south to Valencia Road.

Project Visibility

The relative distance of the project to the motorists on Ajo Highway makes the project visible in the middle ground of this user groups viewshed. Only at the T-intersection of Valencia Road and Ajo Highway, will the project them become a prominent part of the foreground as just beyond the intersection, Valencia Road makes a sharp curve to the east, greatly reducing viewshed impacts. The vegetation along Ajo Highway screens views of the project area. The current Ajo Highway improvement project will have a higher impact to this user group than the planned modifications taking place as part of the Valencia Road: Wade Road to Ajo Highway improvement project.

6 VIEWSHED IMPACTS & MITIGATION

6.1 Components Modified in Viewsheds

Roadway improvements that will modify user viewsheds include:

- Raised vertical roadway profile and widened footprint.
- TEP power pole relocation on western end of project.

6.2 Components Removed from Viewsheds

The proposed roadway improvements will necessitate the removal of dense riparian vegetation along the undeveloped western end of Valencia Road to implement the drainage upgrades that will eliminate the numerous at-grade drainage crossings.

6.3 Components Added to Viewsheds

Valencia Road improvements that will add elements to the existing viewshed include:

- Multi-use path and sidewalks
- New drainage structures - spiral ribbed pipes, reinforced concrete box culverts, and steel pipe arches.
- Drainage structure handrails
- Raised landscaped medians.
- Bike Lane
- Street Lighting
- Public Art
- Utility infrastructure for future signalized intersections.

6.4 Possible Mitigation Techniques

The visual character of the project area will be altered by the increased paving, relocation of power poles, and enlargement of drainage features. The addition of future signalized intersections will also change the visual character. Current traffic studies do not warrant signalized intersections for this project. However, they are anticipated to be added at a future date.

User groups located directly on or adjacent to the roadway will be affected by the addition of the proposed project improvements. User groups located a distance away from the roadway will not be affected be additional pavement or larger drainage features. However, they will be affected by the relocated power poles.

Visual Impact #1: Roadway Widening (expansion of paved surface)

Roadway widening (which includes bike lanes, a pedestrian pathway, and drainage structures) will have a moderate visual impact to user groups located on and adjacent to the roadway. Although the paved surface area will double in width from the existing condition, little existing vegetation will require removal adjacent to the residential areas (Wade Rd. to Reed Bunting Dr.). The majority of the existing unpaved right-of-way is currently cleared of vegetation. The western edge of the project is more rural (Reed Bunting Dr. to Ajo Highway) and will require removal of dense vegetation along the southern Valencia Rd. right–of–way.

The proposed raised median and buffer area at the edges of the roadway will aid to visually 'break up' the expanse of added pavement, pedestrian pathway and drainage structures. The relocation of the existing TEP poles to the opposite side of the road will not significantly impact the visual character of the project area.

Mitigation Strategy #1

To moderate project impacts, incorporate native plantings in the raised median and along roadside buffer areas using plant species typical of the surrounding biotic community. Avoid arranging plants in unnaturally straight lines and place trees so they screen undesirable views and frame more desirable views. Plant density and spacing should emulate the natural surroundings as much as possible. As described in the Ajo Corridor/Western Gateway Special Area Policy, a desert wildflower seed mix should be planted for an area of 40 feet on both sides of the right-of-way in areas to remain natural. Apply/combine native seed mix with rock mulch (matched to existing soil color) to blend with the existing landscape and reduce erosion in disturbed areas. Blend drainage structures into the landscape by selecting material colors and textures that mimic and blend with the natural surroundings. Locate new utilities/easements so as not to preclude tree planting.

Visual Impact #2: FUTURE Signalized Intersections

Future signalized intersections will affect the visual character of the area, attributable to the new poles, signals and associated electrical cabinets. These elements contrast with the low, relatively flat topography and vegetation existing in the project area and may obscure and clutter views to surrounding hills and mountains if not sensitively designed.

Mitigation Strategy #2

Current roadway design standards for signalized intersections limit the mitigation strategies for the placement, type and size of roadway signals used in the project. However, using pole diameters that are as small as structurally possible, limiting the number of poles needed by placing as many signals and signs as possible on a single pole and limiting or securing any loose or dangling wires needed for the signals can minimize the visual impact.

Mitigation Strategy #2a

Locate electrical cabinets either underground, in an area where they are less visible to the travelling public (allow adequate distance for signal maintenance), or where plant materials can be used as screening. Select cabinet finishes that will have minimal contrast with surrounding, i.e. earth tones (tan or sage green) or stainless steel. White cabinets are in high contrast with the surroundings. Sensitive siting of cabinets so that they are not the most dominant visible feature at intersections is also desirable. Locate new utilities/easements so as not to preclude tree planting. Avoid locating utilities easements (water, sanitary, gas) directly adjacent to pedestrian paths, where tree plantings are desirable.