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Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation

Appendix E8, Noise Report

March 2019

U.S. Department of Transportation Federal Highway Administration

ADOT

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Noise Report

I-11 Corridor Draft Tier 1 EIS

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EXECUTIVE SUMMARY

The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) have developed a noise assessment methodology for the Interstate 11 (I-11) Corridor from Nogales to Wickenburg, Arizona in, support of the Tier 1 Environmental Impact Statement. FHWA is the federal lead agency and ADOT is the local project sponsor under the National Environmental Policy Act.

The overall purpose of the I-11 Corridor is to provide a high priority, access-controlled, north-south transportation corridor; support improved regional mobility for people, goods, and homeland security; connect major metropolitan areas and markets in the Intermountain West with Mexico and Canada; and enhance access to the high capacity transportation network to support economic vitality. The problems, issues, and opportunities that support the need for a proposed interstate freeway facility are population and employment growth; congestion and travel time reliability; system linkages and regional and interstate mobility; access to economic activity centers; and Homeland Security and national defense.

This analysis was performed in compliance with the current ADOT Noise Abatement Requirements (NAR) (May 2017) as well as Title 23 Code of Federal Regulations Part 772. The ADOT NAR establishes official policy on highway noise and describes the process that is used in determining traffic noise impacts and evaluating noise abatement measures in Arizona.

The ADOT NAR is based on the noise levels approaching FHWA Noise Abatement Criteria (NAC). ADOT defines “approaching” as within 1 decibel on the A-weighted decibel scale (dBA) of FHWA NAC for Activity Categories A, B, C, D, and E. There are no noise impact thresholds for Activity Categories F or G. FHWA and ADOT require that feasible and reasonable measures be considered and evaluated to abate traffic noise at all identified traffic noise impacts.

Existing noise levels throughout the corridor are compiled from both previous studies and new noise measurements; these ranged from lows of about 40 dBA to 50 dBA in undeveloped areas to highs of about 73 dBA near to existing highways. Traffic noise levels in the Project Corridor were modeled and evaluated using FHWAs Traffic Noise Model, Version 2.5, with predicted 2040 traffic volumes.

The residential NAC (67 dBA) was approached or exceeded at 74 of the 94 modeled receiver locations along the Green Alternative. The NAC was approached or exceeded at 110 of the 133 modeled receiver locations along the Orange Alternative. The NAC was approached or exceeded at 71 of the 73 modeled receiver locations along the Purple Alternative.

As the Project proceeds into Tier 2 analyses and a specific alignment is determined, additional noise analyses will be required to determine the need for noise abatement measures.

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Acronyms

ADOT	Arizona Department of Transportation
CAP	Central Arizona Project
dBA	decibel on the A-weighted scale
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
I	Interstate
IWCS	I-11 and Intermountain West Corridor Study
mph	miles per hour
NAC	Noise Abatement Criteria
NAR	Noise Abatement Requirements
SNP	Saguaro National Park
SR	State Route
Study Area	I-11 Corridor Study Area
TI	Traffic Interchange
TMC	Tucson Mitigation Corridor
TNM	Traffic Noise Model
US	United States

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E8.1 INTRODUCTION

E8.1.1 Overview

The Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) are conducting the environmental review process for the Interstate 11 (I-11) Corridor Study Area (Study Area) from Nogales to Wickenburg, Arizona. A Tier 1 Environmental Impact Statement (EIS) is being prepared as part of this process in accordance with the National Environmental Policy Act and other regulatory requirements. FHWA is the federal lead agency and ADOT is the local project sponsor under the National Environmental Policy Act.

The environmental review process builds upon the prior *I-11 and Intermountain West Corridor Study* (IWCS) completed in 2014, which was a multimodal planning effort that involved ADOT, the Nevada Department of Transportation, FHWA, Federal Railroad Administration, Maricopa Association of Governments, Regional Transportation Commission of Southern Nevada, and other key stakeholders. The IWCS identified the I-11 Corridor as a critical piece of multimodal infrastructure that would diversify, support, and connect the economies of Arizona and Nevada. The study also concluded that it could be part of a larger north-south transportation corridor, linking Mexico and Canada.

In January 2015, the United States (US) Congress approved the Fixing America's Surface Transportation Act, which is a 5-year legislation to improve the Nation's surface transportation infrastructure. The Fixing America's Surface Transportation Act formally designates I-11 throughout Arizona, reinforcing ADOT's overall concept for the I-11 Corridor that emerged from the IWCS study.

FHWA and ADOT are continuing to study the I-11 Corridor in Arizona for the approximate 280-mile section between Nogales and Wickenburg, as shown on **Figure E8-1** (I-11 Corridor Study Area [Nogales to Wickenburg]). There were originally a wider range of Options which through a robust evaluation process was reduced to a reasonable range to be carried forward into the Tier 1 EIS for further study, along with the No Build Alternative (i.e., do-nothing option).

E8.1.2 Purpose of Report

The purpose of this *Noise Report* is to describe the noise evaluation conducted to date and present the findings for this Tier 1 phase of the environmental review. At the Tier 1 phase, this noise analysis focuses mostly on a qualitative description of the noise sensitive land use categories and existing highway traffic noise sources, including alternative noise sources such as nearby railroads and airports, within the Analysis Area. Furthermore, a menu of potential mitigation measures will be developed on a programmatic scale for further consideration in the Tier 2 analysis. The required extent and reach of this particular Tier 1 EIS noise analysis does not include site specific or project-specific noise analysis; those are to be completed in future Tier 2 environmental reviews.

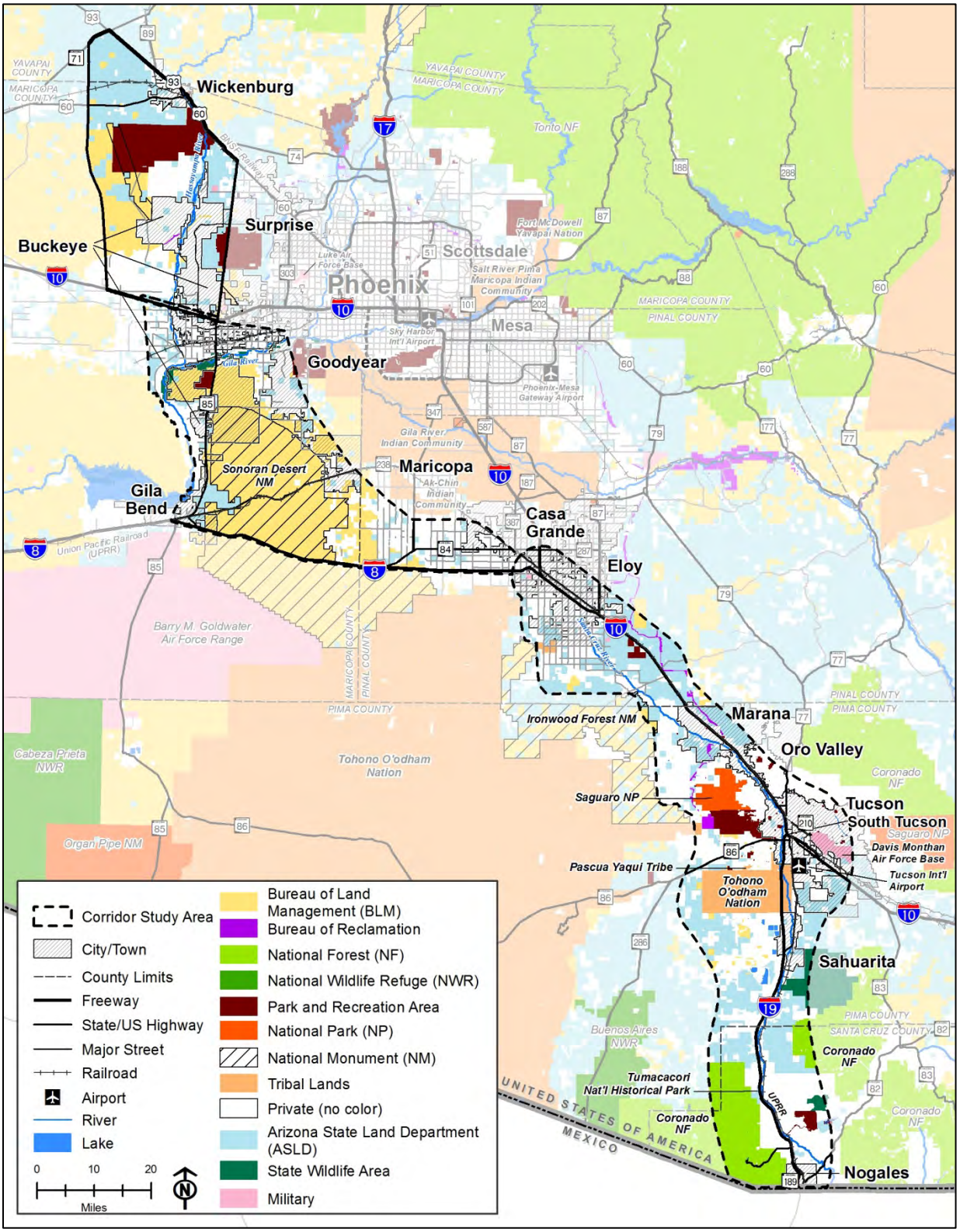

Figure E8-1 I-11 Corridor Study Area (Nogales to Wickenburg)

E8.1.3 Methodology

To the extent feasible, the evaluation was performed consistent with 23 Code of Federal Regulations (CFR) 772 (Procedures for Abatement of Highway Traffic Noise and Construction Noise), FHWA guidelines for assessing highway traffic noise, and the ADOT Noise Abatement Requirements (NAR) dated May 2017.

The procedure used to evaluate noise impacts included the following steps:

1. Identify noise sensitive land uses in the Corridor.
2. Establish existing noise levels by utilizing noise measurements that were obtained from previous noise studies conducted by ADOT throughout the I-11 Corridor dating from August 2013 to December 2017. New measurements also were conducted in February 2018.
3. Predict future (2040) noise levels using available traffic information and the Traffic Noise Model (TNM), Version 2.5.
4. Determine traffic noise impacts at noise sensitive receivers by comparing predicted noise levels in 2040 with the appropriate noise abatement criteria (NAC).
5. Qualitatively describe noise impacts from project construction activities and construction vibration.
6. Evaluate or discuss potential noise mitigation measures, if warranted.
7. Determine vacant land-use zoning classification to provide to local planning agencies regarding future-year noise levels for their use in making land-use decisions regarding undeveloped or unpermitted areas in the corridor.

This evaluation represents a corridor-level assessment based on limited design information and traffic information and other related assumptions available at the time of the analysis (January 2018). As the Project proceeds into Tier 2 analysis and the design options develop further, additional noise analyses would be required. The results of this analysis and the mitigation considerations described should not be considered final; they will be verified and refined as the design progresses.

E8.1.3.1 Characteristics of Noise

Sound travels through the air as waves of minute air pressure fluctuations caused by vibration. In general, sound waves travel away from the noise source as an expanding spherical surface. As a result, the energy contained in a sound wave is spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the noise source.

Sound-level meters measure the actual pressure fluctuations caused by sound waves and record separate measurements for different sound frequency ranges. The decibel (dB) scale used to describe sound is a logarithmic scale that accounts for the large range of sound pressure levels in the environment. Most sounds consist of a broad range of sound frequencies. Several frequency-weighting schemes have been used to develop composite dB scales that approximate the way the human ear responds to sound levels. The decibel on the A-weighted scale (dBA) is most widely used for this purpose. Typical dBA noise levels for various types of sound sources are summarized in the **Figure E8-2** (Common Outdoor and Indoor Noise Levels).

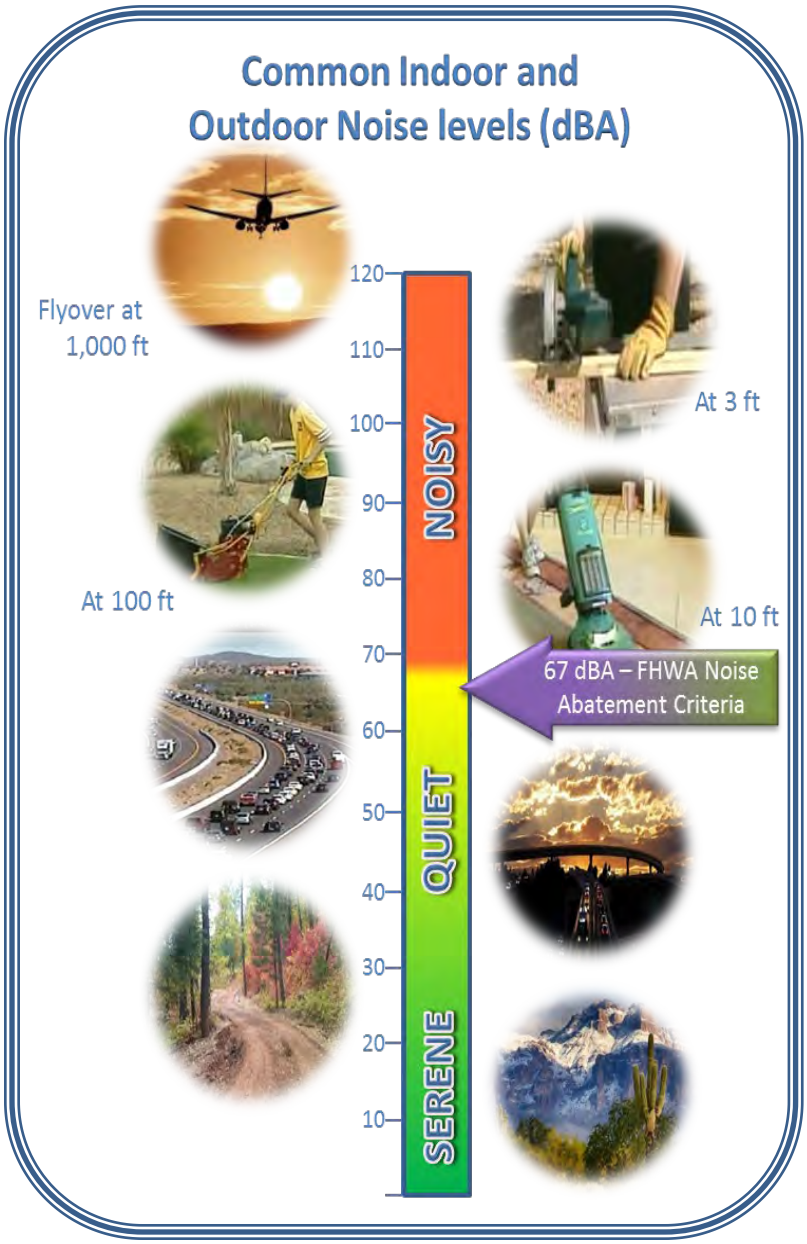

Figure E8-2 Common Outdoor and Indoor Noise Levels

E8.1.3.2 Noise Abatement Criteria

NAC are used to define the noise levels that are considered an impact for each land-use activity category. The NAC are listed in **Table E8-1** (Noise Abatement Criteria). As required by 23 CFR 772.5, ADOT defines a Substantial Increase in noise levels as an increase in noise levels of 15 dBA in the predicted noise level over the existing noise level. Any Receptor that meets this criterion is considered impacted. FHWA traffic noise regulations do not define the point at which a noise level "approaches" the NAC for a specific land use category. As required by 23 CFR

772.11(e), the point at which the noise levels "approach" the NAC is defined by ADOT as one dBA, for Categories A, B, C, D, and E. There is no noise impact threshold for Category F or Category G locations.

Table E8-1 Noise Abatement Criteria

Activity Category	dBA Leq(h) (1),(2)	Common Indoor Noise Levels
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 (exterior)	Residential
C	67 (exterior)	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, churches, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, churches, public meeting rooms, public or nonprofit institutional structures, radio structures, recording studios, schools, and television studios
E	72 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in categories A–D or F
F	—	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	—	Undeveloped lands that are not permitted

(1) The 1-hour equivalent loudness in A-weighted decibels, which is the logarithmic average of noise over a 1-hour period.

(2) The $L_{eq}(h)$ activity criteria values are for impact determination only, and are not design standards for noise abatement measures.

NOTE: Activity Categories B, C, and E include undeveloped lands permitted for each activity category.

SOURCES: FHWA (2011); 23 CFR 772.

E8.2 NOISE SENSITIVE LAND USES

E8.2.1 Corridor Options

A range of Corridor Options were identified and evaluated in each of the three sections: South, Central, and North, as illustrated in **Figure E8-3** (I-11 Corridor Study Area Sections).

Corridor Options A through G in the South Section are located between Nogales and Casa Grande and are comprised of a series of corridors along existing interstate highways (A, B, G) and a series of Options that do not follow existing highway (C, D, CAP Design Option, and F).

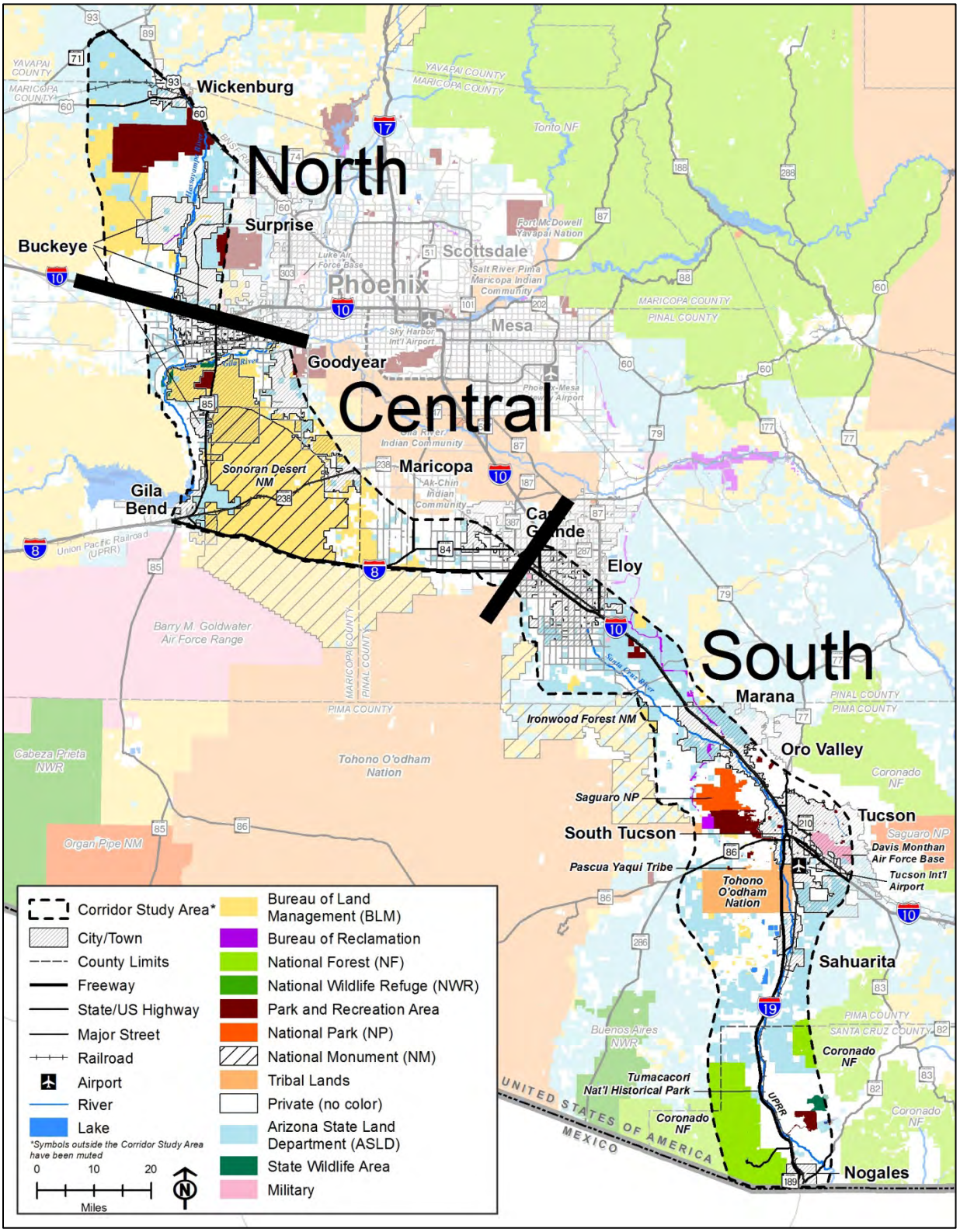

Figure E8-3 I-11 Corridor Study Area Sections

Corridor Options in the Central Section from Casa Grande to Buckeye include Options along the existing corridors of I-8 and State Road (SR) 85 (H, K, Q1, Q2, and Q3) and along with several Options not following existing highways that traverse the area north and west of the Sonoran Desert National Monument (I, L, M, N, and R).

Corridor Options S through X in the North Section are located between Buckeye and Wickenburg. The North Section does not include an existing high capacity north-south transportation corridor that traverses the entire section. Most Options in the North Section are do not follow existing highways, with the exception of US 60/US 93, an urban arterial roadway, which crosses the northeast portion of the section, but does not make a connection with the Central Section.

E8.2.1.1 CAP Design Option

The CAP Design Option would replace sections of Options C and D where they are co-located with Sandario road, and would instead run parallel along the western edge of the Central Arizona Project (CAP) Canal within the Tucson Mitigation Corridor (TMC). The analysis for this Option was conducted following the methodology and regulations described in the resource section.

E8.2.2 Build Corridor Alternatives

The highest performing Options in each section were assembled to develop three Build Corridor Alternatives that represent the various preferences in corridor theme (existing vs. new corridors) and encompass all Options advanced for detailed analysis in the Tier 1 EIS. The combined Options were compiled from screening results, notably the mobility criteria and traffic modeling analysis, which ensures each alternative meets the I-11 Corridor Purpose and Need.

Figure E8-4 (Build Corridor Alternatives for Tier 1 EIS Analysis) illustrates the three Build Corridor Alternatives. Assembled together, the three Build Corridor Alternatives are as follows, with each assigned a color for reference,

- Purple Alternative
  - A+C+G+I[1,2]+L+N+R+X
  - Represents a corridor with a mix of existing and new Corridor Options
- Green Alternative
  - A+B+D+F+I2+L+M+Q2+R+U
  - Represents a corridor comprised almost entirely of new Corridor Options
- Orange Alternative
  - A+B+G+H+K+Q[1,2,3]+S
  - Represents a corridor comprised almost entirely of existing Corridor Options

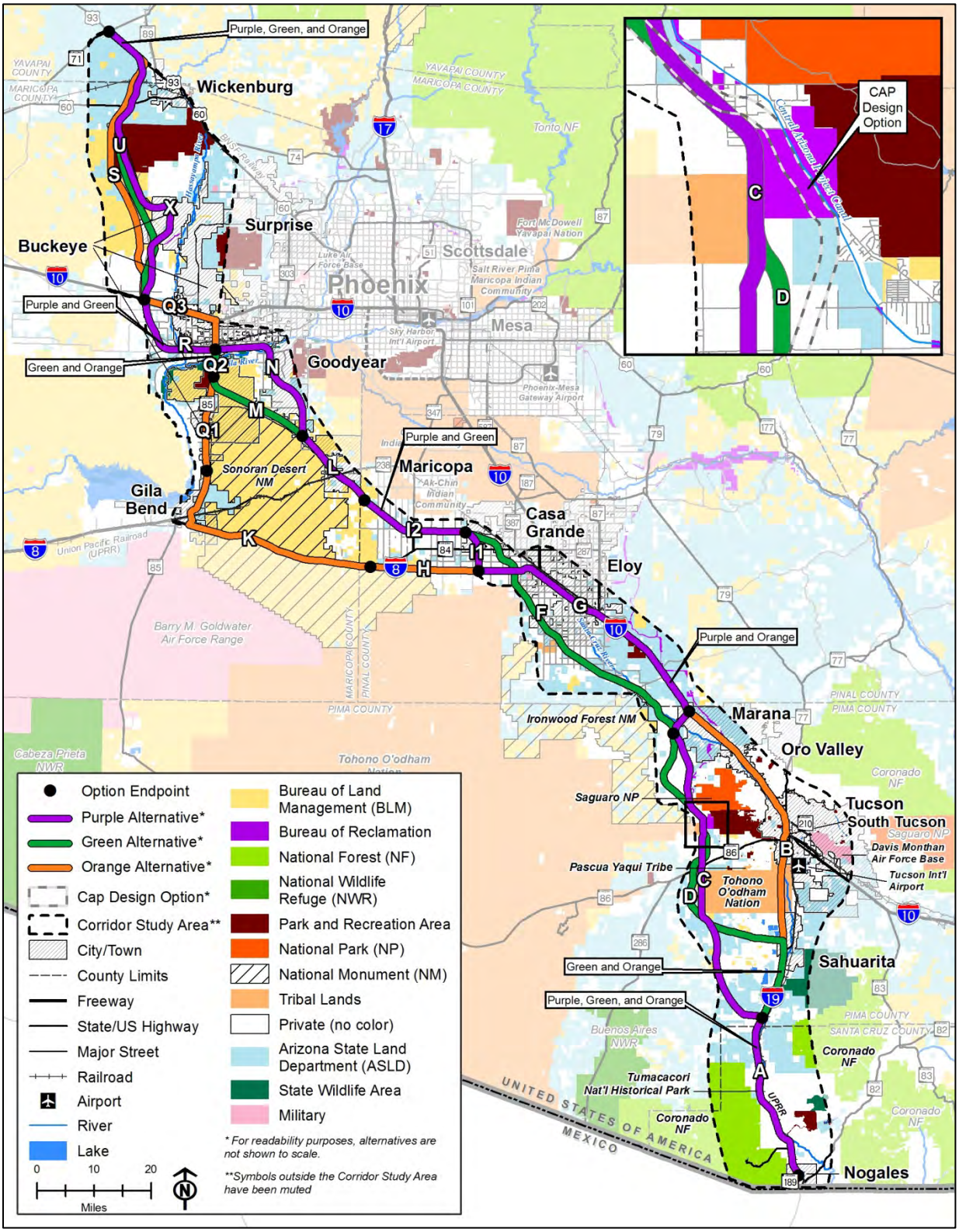

Figure E8-4 Build Corridor Alternatives for Tier 1 EIS Analysis

E8.3 EXISTING NOISE ENVIRONMENT

Existing noise data was obtained from previous noise studies as well as new noise measurements conducted by ADOT throughout the I-11 corridor dating from August 2013 to August 2018 and are shown in **Table E8-2** (Ambient Noise Monitoring Data). The previous noise measurements were conducted within approximately 5 years and are still considered valid. New measurements were taken in areas where new roadways are being proposed as well as noise sensitive areas along existing roadways that were not represented in the previous analyses.

Table E8-2 Ambient Noise Monitoring Data

Noise Monitoring Site # [1]	Previous Project or New Measurement	Date	Noise Level (dBA) [2]	GPS Coordinates	Location Description
Mon 1	SR 189, International Border to Grand Ave[3]	March 2016	53	31°22'3.51"N 110°56'43.84" W	Nogales High School near baseball field
Mon 2	New Measurement	February 2018	59	31°23'3.42"N 110°57'16.95" W	Near 2873 N Bitache Dr, Nogales, 85621
Mon 3			64	31°30'5.65"N 111° 0'41.49"W	East of 422 Gamino Agosto, Rio Rico, 85648
Mon 4			51	31°36'9.22"N 111° 2'59.46"W	Corner Post Way & Lombard Way, Tubac, 85646
Mon 5			55	31°48'44.87"N 111° 0'28.70"W	Behind 3994 S Via de Cristal, Green Valley, 85614
Mon 6	I-19 Noise Complaint Green Valley[4]	July 2015	64	31°53'18.89"N 110°59'17.43" W	1222 N La Canoa, Green Valley - near Duval Mine Road
Mon 7	New Measurement	February 2018	63	31°57'45.01"N 110°59'21.54" W	Near 1130 W Vuelta Portillo Mesteno (Rancho Resort Community), Sahuarita, 85629
Mon 8			73	32° 8'35.38"N 110°59'9.80" W	966 W Mossman St, Tucson, 85706
Mon 9	Ajo Way (SR 86) Traffic Interchange (TI) [5]	April 2014	70	32°10'1.91"N 110°59'5.45" W	Alley adjacent to residence at 4658 S 19th Ave
Mon 10			61	32°10'9.67"N 110°59'3.61" W	Near driveway to residence at 4525 S 19th Ave

Table E8-2 Ambient Noise Monitoring Data (Continued)

Noise Monitoring Site # [1]	Previous Project or New Measurement	Date	Noise Level (dBA) [2]	GPS Coordinates	Location Description
Mon 11	Ajo Way (SR 86) TI	April 2014	71	32°10'13.12"N 110°59'6.15" W	On west side of privacy wall of residence at 942 W Macarthur St
Mon 12	Ajo Way (SR 86) TI	April 2014	68	32°10'14.98"N 110°59'11.22" W	Near driveway to residence at 1013 W Michigan St
Mon 13			67	32°10'27.73"N 110°59'12.18" W	Near driveway to residence at 1020 W District St
Mon 14			70	32°10'27.63"N 110°59'5.69" W	On west side of privacy fence of residence 926 W District St
Mon 15			60	32°10'30.46"N 110°59'3.78" W	Site in La Mar Park
Mon 16			64	32°10'35.25"N 110°59'12.52" W	Near driveway to residence at 1016 W Ebner Pl
Mon 17			58	32°10'37.26"N 110°59'0.99" W	West corner at property 851 W Ajo Way
Mon 18			63	32°10'38.03"N 110°59'16.50" W	Near driveway to residence at 3808 S Lamar Ave
Mon 19			52	32°11'24.19"N 110°59'3.01" W	In Paseo De Las Iglesias east of Cottonwood Ln
Mon 20	New Measurement	February 2018	60	32°12'28.98"N 110°58'37.14" W	Corner of S Osborn Ave & W 21st St, near 599 W 21st St, Tucson, 85701
Mon 21			59	32°14'34.84"N 110°59'7.84" W	1679 N Halron Ct, Tucson, 85705
Mon 22	I-10 Ruthrauf TI [6]	December 2017	65	32°17'43.63"N 111° 1'44.88"W	4842 N Shannon Road
Mon 23			65	32°17'49.20"N 111° 1'50.13"W	4945 N Shannon Road
Mon 24			64	32°17'54.93"N 111° 1'54.49"W	5001 N Shannon Road
Mon 25			60	32°18'2.42"N 111° 2'1.00"W	Near 3051 Jade Place

Table E8-2 Ambient Noise Monitoring Data (Continued)

Noise Monitoring Site # [1]	Previous Project or New Measurement	Date	Noise Level (dBA) [2]	GPS Coordinates	Location Description
Mon 26	I-10 Corridor Study, Tangerine Rd to Ina Rd [7]	August 2013	67	32°20'43.58"N 111° 4'12.77"W	4902 West Massingale, Marana
Mon 27			60	32°21'22.81"N 111° 4'59.61"W	8221 N Cerius Stra, Marana
Mon 28			68	32°21'45.07"N 111° 5'18.48"W	Cortaro Ranch, undeveloped lot
Mon 29			63	32°21'58.84"N 111° 5'39.11"W	8815 Joplin Lane
Mon 30			57	32°22'1.80"N 111° 5'58.04"W	Marana Golf Continental Ranch
Mon 31			64	32°24'30.35"N 111° 8'25.02"W	111000 N Casa Grande Highway, Marana
Mon 32			72	32°24'59.76"N 111° 9'14.18"W	8800 N Frontage, Rillito
Mon 33			64	32°25'22.00"N 111° 9'32.10"W	A-Bar-A Recreational Vehicle Park
Mon 34	New Measurement	February 2018	39	32°16'39.26"N 111°14'37.61" W	Saguaro National Park (SNP) – Near 12900 Sweetwater Dr, Tucson, 85743
Mon 35			40	32°18'42.17"N 111°15'19.57" W	SNP – Near 13500 W Mustang Rd, Tucson, 85743
Mon 35a		August 2018	43	32°15'46.21"N 111°14'7.26" W	SNP – near 12690 W Fort Lowell Rd, Tucson 85743
Mon 35b			46	32°15'13.38"N 111°13'0.36" W	SNP – NE corner of W Mile Wie Rd & N Sandario Rd at Camp Site
Mon 35c	SNP, Discovery Trail[8]	2016	39	32°15'37.30"N 111°12'36.90" W	SNP – Discovery Trail
Mon 36	Picacho_2017_Draft Noise Report[9]	April 2017	56	32°43'5.81"N 111°29'51.91" W	Picacho School Playground

Table E8-2 Ambient Noise Monitoring Data (Continued)

Noise Monitoring Site # (1)	Previous Project or New Measurement	Date	Noise Level (dBA) (2)	GPS Coordinates	Location Description
Mon 37	New Measurement	February 2018	68	32°46'59.23"N 111°37'39.32" W	3400 N Outer Dr, Eloy, AZ 85131
Mon 38			48	32°51'0.22"N 111°51'35.23" W	South of SKP Co-OP Retreat Mobile Home Park -SE corner W Selma Hwy & S Montgomery Rd, Casa Grande, 85193
Mon 39			60	32°50'1.30"N 112° 7'53.19"W	Within Saguaro-One Recreational Vehicle Park-52725 West of I-8 Frontage Rd, Maricopa, 85139
Mon 40			48	32°57'24.39"N 112° 7'48.49"W	NE Corner of W Teel Road and N Johnson Road, Maricopa, 85139
Mon 41			55	32°56'34.61"N 112°41'16.50" W	South end of the Mobile home park near S Butterfield Tr & S Main St, Gila Bend, 85337
Mon 42			49	33°20'39.17"N 112°28'8.60" W	19478 W Corto Lane, Buckeye, 85326
Mon 43			52	33°21'18.28"N 112°39'12.80" W	27935 W Hazen Rd, Buckeye, 85326
Mon 44			41	33°29'21.23"N 112°49'45.70" W	36032 W Weldon Ave, Tonopah, 85354
Mon 45			50	34° 2'35.76"N 112°50'28.12" W	22275 W El Grande Trl, Wickenburg, 85390

(1) Monitoring site numbers correspond to labels in the figures attached in **Attachment 2**.
(2) Equivalent sound level.
GPS = Global Positioning System.
SOURCES:
(3) ADOT 2016;
(4) ADOT 2015;
(5) ADOT 2014;
(6) ADOT DEC 2017;
(7) ADOT 2013;
(8) Job 2016;
(9) ADOT 2017.

According to these previous reports, noise levels were recorded with factory-calibrated Larson Davis Model 820 Type I integrating sound-level meters (SLM).The equipment used for the February and August 2018 noise measurements was a Larson Davis Model LXT Class 1 integrating SLM. The SLM was calibrated in the field before each measurement using a Larson Davis Model CAL200. Existing noise measurements were collected under meteorologically acceptable conditions when the pavement was dry and winds were calm or light. Additional data collected at each monitoring location included atmospheric conditions such as general wind speed and direction, humidity, dewpoint, barometric pressure, and ambient temperature. Measurements were collected based on the acceptable collection of existing noise level readings per FHWA Report number FHWA-PD-96-046, and "Measurement of Highway Related Noise" (FHWA 1996).

Measurements closer to existing highways or other noise sources typically consist of three 10- to 15-minute measurements that are then averaged and rounded to the nearest whole dBA. Measured noise levels ranged from a high of 73 dBA near I-19 in South Tucson to a low of 39 dBA in the area of the SNP. In general, measured noise levels were consistent with the prevailing land uses, with higher noise levels in the more urban areas and lower noise levels elsewhere in the Corridor. Noise monitoring locations are listed in **Attachment 1** (Receiver Identification Tables) and are shown in **Attachment 2** (Receiver Location Figures).

Local airports also are a contributing factor to the existing noise environment, disturbance from aircraft noise can be greater in areas with low background noise than in urban areas. There are several airports adjacent to the Project Corridor including; Buckeye Municipal Airport, Marana Regional Airport, Palm Valley Tucson Airport, Pinal Airpark, and the Tucson International Airport. Below, **Figure E8-5** (Airports and Noise Monitor Locations within the Study Area) shows the all of the nearby airports and Nosie Monitor Locations within the Study Area.

E8.4 NOISE IMPACT ANALYSIS

FHWA approved TNM 2.5 was used to predict the highway traffic noise levels. Highway traffic noise levels are dependent on several variables such as roadway geometry, topography, traffic volume, vehicle type, vehicle speed, terrain types, and location of noise receptors. TNM estimates acoustic intensity at receiver locations based on the sound energy generated from a series of straight-line road segments. Where appropriate, the effects of local shielding from existing structures (for example, privacy walls or intervening rows of homes), vegetation, terrain, and other adjustment factors can be included in the model to provide greater levels of detail and accuracy. ADOT NAR requires that "worst-case" noise conditions are used in determining existing and predicting future traffic noise levels from highway projects, and that provision was applied here. Although the worst-case predicted noise levels are not likely to be prevailing, using worst-case conditions will ensure that any potential impact is captured and eventual noise abatement measure determination is the appropriate one.

The goal of the noise impact analysis was to determine whether the predicted noise levels associated with the proposed alignment corridors would approach or exceed the applicable NAC, thereby warranting consideration of noise abatement measures.

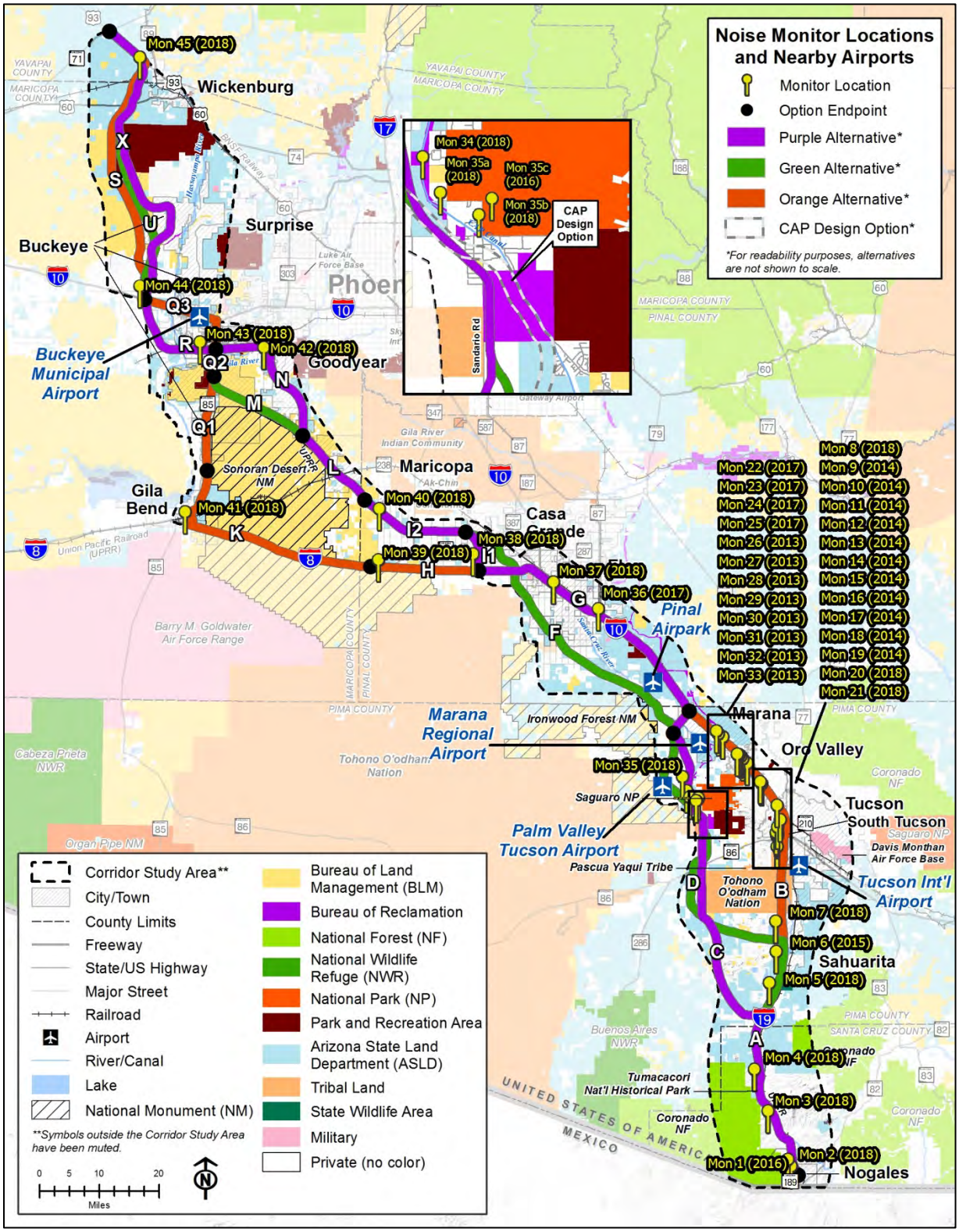

Figure E8-5 Airports and Noise Monitors Locations within the Study Area

E8.4.1 Roadway Geometry and Topographic Data

Some of the roadway geometry data used for the noise modeling was compiled from TNM files related to previous noise studies throughout the I-11 Corridor. Google Earth also was used to model elements (roadways, existing barriers, receivers, etc.) in areas where no recent studies had been conducted.

E8.4.2 Traffic Volumes

The existing, No Build, and Build scenario traffic volumes used in the noise analysis were developed by the I-11 study team and are shown in **Attachment 3** (Traffic Data).

E8.4.3 Vehicle Mix

Different vehicle types produce different noise emission levels, with trucks producing higher noise levels than automobiles. The vehicle mix used in this analysis is unique to the three scenarios (Existing, No Build, and Build) and is shown in **Attachment 3**.

Automobiles are categorized as vehicles with two axles and four wheels designed primarily for passenger or cargo transportation. Generally, the gross vehicle weight of an automobile is less than 9,900 pounds. Medium trucks are categorized as vehicles having two axles and six wheels designed for the transportation of cargo. Generally, the gross vehicle weight of a medium truck is greater than 9,900 pounds but less than 26,400 pounds. Heavy trucks are categorized as all vehicles having three or more axles and designed for the transportation of cargo. Generally, the gross vehicle weight of a heavy truck is greater than 26,400 pounds.

E8.4.4 Vehicle Speed

The modeled vehicle speed varied from 65 to 80 miles per hour (mph) throughout the I-11 corridor, which for automobiles and medium trucks is 5 mph higher than the currently posted speed limit of 65 to 75 mph. Heavy trucks were modeled at the posted speed limit.

E8.4.5 Atmospheric Conditions and Ground Type

Sound levels are affected by various atmospheric conditions, such as temperature and humidity, as well as the type of ground the sound is traveling over. FHWA recommends a default temperature of 68ºF and a default humidity of 50 percent. Ground type affects how noise propagates from the source to the receiver. The difference in predicted noise levels at 800 feet from the highway, depending on the ground type, may be as high as 8 dBA. The hard soil ground type was used to account for a more conservative approach; however, ground type may be different at specific locations and would be reconsidered at Tier 2 level of analyses.

E8.4.6 Future Noise Environment and Impact Determination

The noise modeling evaluation focused on areas of active, permitted residential developments. Under the ADOT NAR, permitted developments are those locations where a commitment to develop land has been issued in the form of a site development plan and the issuance of

building permits (described in Section 2.6 of the NAR, Residential Developments [Activity Category B Modeling]).

For the Purple Alternative, the future build (2040) traffic noise is predicted to impact 71 of the 73 modeled noise receiver locations. See **Table E8-3** (TNM 2.5 Predicted Traffic Noise Levels – Purple Alternative) for noise modeling results. For the Green Alternative, the future (2040) traffic noise is predicted to impact 42 of the 49 modeled noise receiver locations. See **Table E8-4** (TNM 2.5 Predicted Traffic Noise Levels – Green Alternative) for noise modeling results. For the Orange Alternative, the future build (2040) traffic noise is predicted to impact 110 of the 133 modeled noise receiver locations. See **Table E8-5** (TNM 2.5 Predicted Traffic Noise Levels – Orange Alternative) for noise modeling results. Noise modeling locations are listed in **Attachment 1** (Receiver Identification Tables) and are shown in **Attachment 2**.

Table E8-3 TNM 2.5 Predicted Traffic Noise Levels – Purple Alternative

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID [1]	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_A1	**73**	**71**	-2	R_C5	--	**72**	--
R_A2	**67**	65	-2	R_C6	--	**68**	--
R_A3	**70**	**68**	-2	R_C7	--	**79**	--
R_A4	65	63	-2	R_C8	--	**73**	--
R_A5	**75**	**73**	-2	R_C9	--	**69**	--
R_A6	**75**	**73**	-2	R_C10	--	**77**	--
R_A7	**69**	**67**	-2	R_C11	--	**75**	--
R_A8	**68**	**66**	-2	R_C12	--	**71**	--
R_A9	**71**	**69**	-2	R_G1	**84**	**82**	-2
R_A10	**74**	**72**	-2	R_G2	**82**	**80**	-2
R_A11	**76**	**74**	-2	R_G3	**77**	**75**	-2
R_A11A	**72**	**70**	-2	R_G4	**83**	**81**	-2
R_A12	**76**	**73**	-3	R_G5	**82**	**79**	-3
R_A13	**77**	**74**	-3	R_G6	**77**	**75**	-2
R_A14	**74**	**72**	-2	R_G7	**78**	**76**	-2
R_A15	**74**	**71**	-3	R_G8	**80**	**78**	-2
R_A16	**71**	**69**	-2	R_G9	**74**	**72**	-2
R_A17	**76**	**74**	-2	R_I11	--	**73**	--
R_A18	**76**	**73**	-3	R_I12	--	**73**	--
R_A19	**69**	**67**	-2	R_I13	--	**70**	--
R_A20	**73**	**71**	-2	R_I21	--	**81**	--
R_A21	**73**	**71**	-2	R_I22	--	**82**	--
R_A22	**72**	**70**	-2	R_I23	--	**71**	--
R_A23	**73**	**71**	-2	R_N1	--	**84**	--
R_A24	**81**	**79**	-2	R_N2	--	**76**	--
R_A25	**78**	**76**	-2	R_N3	--	**71**	--

Table E8-3 TNM 2.5 Predicted Traffic Noise Levels – Purple Alternative (Continued)

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID (1)	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_A26	**73**	**70**	-3	R_C2	**--**	**72**	--
R_A27	**68**	**66**	-2	R_C3	**--**	**67**	--
R_A28	**77**	**75**	-2	R_C4	**--**	**76**	--
R_A29	**76**	**74**	-2	R_N4	--	**84**	--
R_A30	**71**	**69**	-2	R_N5	--	**78**	--
R_5.2 DCAP 1	**--**	**67**	--	R_N6	--	**73**	--
R_5.2 DCAP 2	**--**	64	--	R_R1	--	**84**	--
R_5.2 DCAP 3	**--**	60	--	R_R2	--	**75**	--
R_5.2 DCAP 4	**--**	**71**	--	R_R3	--	**68**	--
R_5.2 DCAP 5	**--**	**66**	--	R_X1	--	**80**	--
R_5.2 DCAP 6	**--**	63	--	R_X2	--	**74**	--
R_C1	**--**	**78**	--	R_X3	--	**69**	--

(1) Receiver ID's correspond to labels in the figure attachment and the tables in **Attachment 1**.

NOTES: **Bolded** values are equal to or greater than ADOT NAR noise impact threshold of 66 dBA.
Dashes (--) are areas where there is no existing roadway; therefore, No Build Alternative noise levels are not relevant.

Table E8-4 TNM 2.5 Predicted Traffic Noise Levels – Green Alternative

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID [1]	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_A1	**73**	**71**	-2	R_B5	65	65	0
R_A2	**67**	65	-2	R_B6	63	63	0
R_A3	**70**	**68**	-2	R_B7	61	61	0
R_A4	65	63	-2	R_B8	64	64	0
R_A5	**75**	**73**	-2	R_B9	60	60	0
R_A6	**75**	**73**	-2	R_B10	**69**	**69**	0
R_A7	**69**	**67**	-2	R_B11	**67**	**66**	-1
R_A8	**68**	**66**	-2	R_B12	**67**	**66**	-1
R_A9	**71**	**69**	-2	R_B13	**72**	**72**	0
R_A10	**74**	**72**	-2	R_B14	**73**	**72**	-1
R_A11	**76**	**74**	-2	R_B15	**72**	**72**	0
R_A11A	**72**	**70**	-2	R_B16	**70**	**70**	0
R_A12	**76**	**73**	-3	R_B17	**66**	65	-1
R_A13	**77**	**74**	-3	R_B18	**71**	**70**	-1
R_A14	**74**	**72**	-2	R_B19	**69**	**69**	0
R_A15	**74**	**71**	-3	R_B20	**71**	**71**	0
R_A16	**71**	**69**	-2	R_B21	**76**	**73**	-3
R_A17	**76**	**74**	-2	R_B22	**76**	**73**	-3
R_A18	**76**	**73**	-3	R_B23	**76**	**73**	-3
R_A19	**69**	**67**	-2	R_B24	**74**	**71**	-3
R_A20	**73**	**71**	-2	R_B25	**75**	**73**	-2
R_A21	**73**	**71**	-2	R_B26	**76**	**73**	-3
R_A22	**72**	**70**	-2	R_B27	**67**	64	-3
R_A23	**73**	**71**	-2	R_B28	**77**	**74**	-3
R_A24	**81**	**79**	-2	R_B29	**68**	65	-3
R_A25	**78**	**76**	-2	R_B30	**76**	**73**	-3
R_A26	**73**	**70**	-3	R_B31	**68**	65	-3
R_A27	**68**	**66**	-2	R_B32	**77**	**73**	-4
R_A28	**77**	**75**	-2	R_B33	**70**	**67**	-3
R_A29	**76**	**74**	-2	R_B34	**76**	**72**	-4
R_A30	**71**	**69**	-2	R_B35	**74**	**71**	-3
R_B1	65	64	-1	R_B36	**71**	**67**	-4
R_B2	64	64	0	R_B37	**75**	**72**	-3
R_B3	63	62	-1	R_B38	**70**	**67**	-3
R_B4	**68**	**67**	-1	R_B39	**64**	61	-3

Table E8-4 TNM 2.5 Predicted Traffic Noise Levels – Green Alternative (Continued)

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID (1)	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_B40	**68**	**66**	-2	R_D4	--	61	--
R_B41	**74**	**73**	-1	R_D5	--	64	--
R_B42	**76**	**75**	-1	R_D6	--	58	--
R_B43	**74**	**73**	-1	R_F1	--	**81**	--
R_B44	**74**	**73**	-1	R_F2	--	**76**	--
R_B45	**70**	**69**	-1	R_F3	--	**71**	--
R_5.2 DCAP 1	--	**67**	--	R_I21	--	**81**	--
R_5.2 DCAP 2	--	64	--	R_I22	--	**82**	--
R_5.2 DCAP 3	--	60	--	R_I23	--	**71**	--
R_5.2 DCAP 4	--	**71**	--	R_R1	--	**84**	--
R_5.2 DCAP 5	--	**66**	--	R_R2	--	**75**	--
R_5.2 DCAP 6	--	63	--	R_R3	--	**68**	--
R_D1	--	64	--	R_U1	--	**73**	--
R_D2	--	61	--	R_U2	--	**75**	--
R_D3	--	58	--	R_U3	--	64	--

(1) Receiver ID's correspond to labels in the figure attachment and the tables in **Attachment 1**.

NOTES: **Bolded** values are equal to or greater than ADOT NAR noise impact threshold of 66 dBA.
Dashes (--) are areas where there is no existing roadway; therefore, no build values are not relevant.

Table E8-5 TNM 2.5 Predicted Traffic Noise Levels – Orange Alternative

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID [1]	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_A1	**73**	**71**	-2	R_B5	65	65	0
R_A2	**67**	65	-2	R_B6	63	63	0
R_A3	**70**	**68**	-2	R_B7	61	61	0
R_A4	65	63	-2	R_B8	64	64	0
R_A5	**75**	**73**	-2	R_B9	60	60	0
R_A6	**75**	**73**	-2	R_B10	**69**	**69**	0
R_A7	**69**	**67**	-2	R_B11	**67**	**66**	-1
R_A8	**68**	**66**	-2	R_B12	**67**	**66**	-1
R_A9	**71**	**69**	-2	R_B13	**72**	**72**	0
R_A10	**74**	**72**	-2	R_B14	**73**	**72**	-1
R_A11	**76**	**74**	-2	R_B15	**72**	**72**	0
R_A11A	**72**	**70**	-2	R_B16	**70**	**70**	0
R_A12	**76**	**73**	-3	R_B17	**66**	65	-1
R_A13	**77**	**74**	-3	R_B18	**71**	**70**	-1
R_A14	**74**	**72**	-2	R_B19	**69**	**69**	0
R_A15	**74**	**71**	-3	R_B20	**71**	**71**	0
R_A16	**71**	**69**	-2	R_B21	**76**	**73**	-3
R_A17	**76**	**74**	-2	R_B22	**76**	**73**	-3
R_A18	**76**	**73**	-3	R_B23	**76**	**73**	-3
R_A19	**69**	**67**	-2	R_B24	**74**	**71**	-3
R_A20	**73**	**71**	-2	R_B25	**75**	**73**	-2
R_A21	**73**	**71**	-2	R_B26	**76**	**73**	-3
R_A22	**72**	**70**	-2	R_B27	**67**	64	-3
R_A23	**73**	**71**	-2	R_B28	**77**	**74**	-3
R_A24	**81**	**79**	-2	R_B29	**68**	65	-3
R_A25	**78**	**76**	-2	R_B30	**76**	**73**	-3
R_A26	**73**	**70**	-3	R_B31	**68**	65	-3
R_A27	**68**	**66**	-2	R_B32	**77**	**73**	-4
R_A28	**77**	**75**	-2	R_B33	**70**	**67**	-3
R_A29	**76**	**74**	-2	R_B34	**76**	**72**	-4
R_A30	**71**	**69**	-2	R_B35	**74**	**71**	-3
R_B1	65	64	-1	R_B36	**71**	**67**	-4
R_B2	64	64	0	R_B37	**75**	**72**	-3
R_B3	63	62	-1	R_B38	**70**	**67**	-3
R_B4	**68**	**67**	-1	R_B39	**64**	61	-3

Table E8-5 TNM 2.5 Predicted Traffic Noise Levels – Orange Alternative (Continued)

Receiver ID	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels	Receiver ID (1)	2040 No Build (dBA)	2040 Build (dBA)	Difference in Noise Levels
R_B40	**68**	**66**	-2	R_B72	**70**	**70**	0
R_B41	**74**	**73**	-1	R_B73	65	65	0
R_B42	**76**	**75**	-1	R_B74	**70**	**69**	-1
R_B43	**74**	**73**	-1	R_B75	**67**	65	-2
R_B44	**74**	**73**	-1	R_B76	**73**	**72**	-1
R_B45	**70**	**69**	-1	R_B77	**69**	**67**	-2
R_B46	**73**	**72**	-1	R_B78	**68**	**66**	-2
R_B47	**73**	**71**	-2	R_B79	**69**	**67**	-2
R_B48	**71**	**69**	-2	R_B80	65	62	-3
R_B49	**72**	**69**	-3	R_B81	**78**	**75**	-3
R_B50	**72**	**69**	-3	R_B82	**71**	**69**	-2
R_B51	**66**	65	-1	R_B83	**71**	**69**	-2
R_B52	**76**	**75**	-1	R_B84	65	63	-2
R_B53	**76**	**74**	-2	R_G1	**84**	**82**	-2
R_B54	**77**	**75**	-2	R_G2	**82**	**80**	-2
R_B55	**77**	**75**	-2	R_G3	**77**	**75**	-2
R_B56	**68**	**66**	-2	R_G4	**83**	**81**	-2
R_B57	**76**	**74**	-2	R_G5	**82**	**79**	-3
R_B58	**77**	**75**	-2	R_G6	**77**	**75**	-2
R_B59	**71**	**69**	-2	R_G7	**78**	**76**	-2
R_B60	**72**	**70**	-2	R_G8	**80**	**78**	-2
R_B61	**70**	**68**	-2	R_G9	**74**	**72**	-2
R_B62	**67**	**66**	-1	R_H1	**81**	**78**	-3
R_B63	**67**	65	-2	R_H2	**75**	**72**	-3
R_B64	**73**	**73**	0	R_H3	**71**	**68**	-3
R_B65	**79**	**78**	-1	R_K1	**70**	**68**	-2
R_B66	**71**	**70**	-1	R_K2	**71**	**69**	-2
R_B67	**72**	**72**	0	R_K3	**66**	64	-2
R_B68	**71**	**71**	0	R_Q11	**73**	**70**	-3
R_B69	**70**	**69**	-1	R_Q12	**68**	**66**	-2
R_B70	**68**	**68**	0	R_Q13	59	57	-2
R_B71	**76**	**75**	-1				

(1) Receiver ID's correspond to labels in the figure attachment and the tables in **Attachment 1**.

NOTES: **Bolded** values are equal to or greater than ADOT NAR noise impact threshold of 66 dBA.
Dashes (--) are areas where there is no existing roadway; therefore no build values are not relevant.

The analysis showed that the noise levels within the existing corridors in all 2040 Build Scenario are predominantly slightly lower or equal to those in 2040 No Build Scenario with very few exceptions. Specific segments of the corridors that overlap with existing alignments of I-19 and I-10 have railroad alongside roadways; those may be considered as a significant alternative noise source and need to be included in Tier 2 noise analyses of the segments.

In consideration of noise effects on the SNP; the Purple (Option C) and Green (Option D) Alternatives come closest (approximately within 1,600 feet) to the western boundary of the Park. The CAP Design Option measures just beyond that of Options C and D at 1,600 feet from the western boundary of the Park. There are negligible differences in noise levels and impacts in comparing Options C and D to the CAP Design Option. The Green Alternative (Option C) is to the park's boundary in the northern section but the distances are approximately 3,770 feet, and meaningful effects at those distances to the park are highly unlikely. Irrespective of Scenario selected, based on the design year traffic volumes, the noise levels at 1,600 feet from the highway are highly unlikely to reach 60 dBA at any point in the park; however, there may be potential impacts due to a substantial increase in noise levels (15 dBA or more). Noise measurements were taken at two residential areas near the SNP in February 2018; the noise levels ranged from 39 to 40 dBA. Two additional measurements were taken within the SNP boundary in August 2018; the noise levels ranged from 43 to 46 dBA. The Orange Alternative (Option B) follows the existing alignment of I-10 and would not result in any meaningful changes to the park that would require additional analysis. See **Attachment 4** (Consideration of Noise Effects on Saguaro National Park).

E8.5 POTENTIAL NOISE ABATEMENT

The ADOT NAR has specific requirements for analyzing the feasibility, reasonableness, and cost-effectiveness of noise abatement measures such as sound walls, earthen berms, and other measures.

The abatement evaluation requires specific design details that are not yet available for this project. As a result, a detailed barrier evaluation is not possible at this preliminary stage of the Project. As described in Section E8.4.2 of this report, noise impacts are expected to occur at most of the residential developments along all Build Corridor Alternatives (Activity Category B). . For the Purple Alternative, sound walls would likely be warranted at some locations along Options A, C, and the CAP Design Option. For the Green Alternative, sound walls would likely be warranted at some locations along Options A, D, and the CAP Design Option. For the Orange Alternative, sound walls would likely be warranted at some locations along Options A, B, and G.

As a general matter, new highway alignments constructed in otherwise quiet noise environments, such as those in the undeveloped areas of the I-11 Corridor Study Area, will oftentimes result in a substantial noise increase at nearby residences (that is, 15-dBA or greater increases over existing noise levels). Under such circumstances and depending on the presence of noise-sensitive land uses (Activity Categories), detailed consideration of sound walls would be warranted.

For the Purple Alternative, 97 percent of the modeled noise-sensitive receivers were impacted. For the Green Alternative, 97 percent of the modeled noise-sensitive receivers were impacted.

For the Orange Alternative, 83 percent of the modeled noise-sensitive receivers were impacted; in addition, this alternative would most likely require the consideration of sound walls due to the presence of dense residential areas that currently do not have sound walls. Analysis Limitations

This evaluation is based on limited design and traffic information and presents preliminary model results. Certain assumptions were made to complete the noise analysis. Specific roadway alignments are needed to build the TNM model predicting future noise levels. The modeling evaluation for Options not following and existing highway were conducted by placing a centerline at the existing grade in the middle of the 2,000-foot-wide Build Corridor Alternative. As the design for the Project is developed further and alignments are refined or eliminated, additional noise analyses would be required.

For the Tier 2 Analysis, updated noise measurements would need to be conducted throughout the entire corridor, especially in rural areas where a substantial noise increase would be likely. Detailed noise modeling would need to be conducted in the dense residential areas near Nogales, Rio Rico, Tubac, Green Valley, and Tucson, Arizona. However, all noise sensitive areas would be considered at Tier 2 level of analysis, within the selected corridor.

E8.6 CONSTRUCTION NOISE AND VIBRATION

Constructing roads causes a substantial amount of temporary noise. Noise during construction could be a nuisance to nearby residents and businesses. All three Build Corridor Alternatives would generate similar types of noise that would occur sporadically in different locations throughout the construction period.

The most common noise source in construction areas would be from engine-powered machinery such as earth-moving equipment (bulldozers), material-handling equipment (cranes), and stationary equipment (generators). Mobile equipment (such as trucks and excavators) operates in a sporadic manner, while stationary equipment (generators and compressors) generates noise at fairly constant levels.

Typical noise levels from construction equipment range from 69 dBA to 106 dBA at 50 feet from the source; however, most typical construction activities fall in the 75 dBA to 85 dBA range at 50 feet. Peak noise levels from pile driving associated with structures such as interchanges and overpasses are about 106 dBA at 50 feet. To some people, noise at 65 dBA is intrusive and 80 dBA is disruptive. At 80 dBA, people must shout to be heard. Hearing protection is recommended at noise levels above 90 dBA.

Construction noise at locations farther away than 50 feet would decrease by 6 dBA to 8 dBA for each doubling of the distance from the source. For example, if the noise level from a jackhammer is 90 dBA at 50 feet, it would decrease to about 83 dBA at 100 feet and 76 dBA at 200 feet.

ADOT's *Standard Specifications for Road and Bridge Construction* (2008) stipulate that all exhaust systems on equipment should be in good working order and that properly designed engine enclosures and intake silencers should be used where appropriate. For all projects, ADOT will consider the effects of noise from project construction activities and will determine any additional measures that are needed in the plans or specifications to minimize or eliminate adverse impacts from construction noise.

Ground vibration and ground-borne noise also can be a source of annoyance to individuals who live or work close to vibration-generating activities. Pile driving, demolition activity, blasting, and crack-and-seat operations are the primary sources of vibration, while the impact pile driving can be the most significant source of vibration at construction sites. It is recommended to apply methods that may be practical and appropriate in specific situations, to reduce vibration to an acceptable level. Such measures may be:

- Jetting
- Predrilling
- Cast-in-place or auger cast piles
- Non-displacement piles
- Pile cushioning
- Using alternative non-impact drivers
- Scheduling activities to minimize disturbance at near-construction sites

Railroad trains are potential sources of substantial ground vibration depending on the distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the vibration velocity level. The vibration velocity level is expressed on the decibel scale. The abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams, and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. **Table E8-6** (Typical Levels of Groundborne Vibration) identifies some common sources of vibration and the association to human perception or the potential for structural damage.

Table E8-6 Typical Levels of Groundborne Vibration

Human/Structural Response	Velocity Level, VdB	Typical Events (50-foot setback)
Threshold, minor cosmetic damage	100	Blasting, pile driving, vibratory compaction equipment Heavy tracked vehicles (Bulldozers, cranes, drill rigs)
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, occasional events	80	Commuter rail, typical Bus or truck over bump or on rough roads
Residential annoyance, frequent events	70	Rapid transit, typical
Approximate human threshold of perception to vibration	70	Buses, trucks and heavy street traffic
	60	Background vibration in residential settings in the absence of activity
Lower limit for equipment ultrasensitive to vibration	50	Background vibration in residential settings in the absence of activity

E8.7 LAND USE PLANNING

The ADOT NAR states that "Environmental documents will contain information identifying areas that may be impacted by traffic noise, noise level contour information, the best estimation of future noise levels in the vicinity of the Project, and other appropriate highway project design information." All vacant lands were identified and categorized based on zoning type. The results are listed in **Attachment 1** (Receiver Identification Tables) and are shown in **Attachment 2**.

E8.8 REFERENCES

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Attachment 1

Receiver Identification Tables

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Purple Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
Segment A			
Noise Sensitive Areas A			
1-AE	Santa Cruz	B	N OF MARIPOSA RD-W CONGRESS DR. VACANT LOT, OLD MOBILE HOME PARK
2-AE	Santa Cruz	C	N. MARIPOSA RD AND E CONGRESS DR. MANUEL TAPIA RECREATIONAL PARK
3-AE	Santa Cruz	C	LATTER DAYS SAINTS CHURCH
4-AE	Santa Cruz	B	N. MESQUITE PLACE DR. VALLE VERDE RESIDENTIAL AREA
5-AE	Santa Cruz	C	ST ANDREW'S EPISCOPAL CHURCH
6-AE	Santa Cruz	B	MULTIPLE RESIDENCES
7-AE	Santa Cruz	B	E OF I-19 FRONTAGE RD, MULTIPLE RESIDENTIAL UNITS
8-AE	Santa Cruz	E	FRESH PRODUCE ASSOCIATION
9-AE	Santa Cruz	E	BERNARDI & ASSOCIATES, INC
10-AE	Santa Cruz	C	CHURCH E I-19 FRONTAGE RD S-GARDEN VIEW DR
11-AE	Santa Cruz	B	E. MARTAN RD. RESIDENTIAL UNITS
12-AE	Santa Cruz	B	N. MARTAN RD. POCKET OF RESIDENTIAL UNITS
13-AE	Santa Cruz	B	E. FRONTAGE RD. W. OLD TUCSON HWY. SEVERAL RESIDENTIAL UNITS
14-AE	Santa Cruz	E	S. OLD TUCSON HWY. E. FRONTAGE RD. US FOREST SERVICES OFFICES
15-AE	Santa Cruz	B	RESIDENTIAL AREA; N. CALLE BARRIO DE TUBAC-S. SANTA GERTRUDIS LN
16-AE	Santa Cruz	C	CHRISTUS REX LUTHERAN CHURCH
17-AE	Santa Cruz	B	SANTA GERTRUDIS RANCH
18-AE	Santa Cruz	E	SANTA CRUZ CHILI AND SPICE
19-AE	Santa Cruz	C	TUMACACORI NATIONAL HISTORICAL PARK.
20-AE	Santa Cruz	E	W. FRONTAGE RD. RESTAURANT AND STORE. ABE'S OLD TUMACACORI BAR
21-AE	Santa Cruz	E	US POST OFFICE, TUMACACORI, AZ
22-AE	Santa Cruz	E	WISDOMS CAFÉ, TUMACACORI, AZ
23-AE	Santa Cruz	C	PUBLIC PARK, TUMACACORI, AZ
24-AE	Santa Cruz	B	RESIDENTIAL AREA: N. TRES DE MAYO RD. S. CALLE BARRIO DE TUBAC
25-AE	Santa Cruz	E	TUBAC COMMERCIAL DISTRICT: TUBAC MARKET, THE ITALIAN PEASANT, SHELBY'S BISTRO
26-AE	Santa Cruz	E	US POST OFFICE, EL MERCADO, MELIO'S TRATTORIA
27-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
28-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
29-AE	Santa Cruz	B	MULTIPLE RESIDENCES, STORES, OFFICES
30-AE	Santa Cruz	C	APOSTOLIC CHURC
31-AE	Santa Cruz	C	GREEN VALLEY CHURCH
32-AE	Santa Cruz	C	UNITARIAN UNIVERSALIST CONGREGATION

Purple Alternative

Reciver I.D.	County	NAC Category	Description
1-AW	Santa Cruz	C	NOGALES HIGH SCHOOL PARK.
2-AW	Santa Cruz	B	RESIDENTIAL COMPLEX N. FRANK REED RD. AND W. PLACITA RIVAS
3-AW	Santa Cruz	B	SINGLE RESIDENCE.
Noise Sensitive Areas A			
4-AW	Santa Cruz	B	SINGLE RESIDENCE. N. SAN LORENZO DR.
5-AW	Santa Cruz	E	GROUP OF SEVERAL OFFICES AND WAREHOUSES. BETWEEN BODEGA DR. AND N. COUNTRY CLUB
6-AW	Santa Cruz	B	MULTIPLE RESIDENCES. S. DEL REY DAVIS BLVD.
7-AW	Santa Cruz	E	GROUP OF OFFICES-WAREHOUSES: DEL CAMPO, KALIROY PRODUCE
8-AW	Santa Cruz	C	US DRUG ENFORCEMENT ADMINISTRATION
9-AW	Santa Cruz	B	STRIP OF LAND WITH MULTIPLE RESIDENCES. RIO RICO SUBDIVISION
10-AW	Santa Cruz	E	GARRETS IGA SUPERMARKET, NICK'S DINER
11-AW	Santa Cruz	B	GROUP OF SEVERAL RESIDENCES. SUB BELLA VISTA
12-AW	Santa Cruz	E	STRIP OF SEVERAL BUSINESS INCLUDING RESTAURANT LAS TANKA'S, RIO RICO PHARMACY, US POST OFFICE
13-AW	Santa Cruz	C	HILLTOP FELLOWSHIP CHURCH
14-AW	Santa Cruz	B	STRIP OF MULTIPLE RESIDENCES
15-AW	Santa Cruz	E	RIO RICO HAWK PIZZA, MANNY'S COWBOY BURGERS
16-AW	Santa Cruz	C	CALABASAS MIDDLE SCHOOL
17-AW	Santa Cruz	C	MOUNTAIN VIEW ELEMENTARY SCHOOL
18-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
19-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
20-AW	Santa Cruz	C	AMADO BAPTIST CHURCH
21-AW	Pima	E	STRIP WITH RESTAURANT AND US POST OFFICE, AMADO, AZ
22-AW	Pima	B	MULTIPLE RESIDENCES
23-AW	Pima	B	MULTIPLE RESIDENCES
Vacant Land A			
1ASC	Santa Cruz	E	GENERAL COMMERCIAL
2ASC	Santa Cruz	E	GENERAL COMMERCIAL
3ASC	Santa Cruz	G	FEDERAL
4ASC	Santa Cruz	F	LIGHT INDUSTRIAL
5ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL
6ASC	Santa Cruz	F	LIGHT INDUSTRIAL
7ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL
8ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
9ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT

Purple Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
10ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
11ASC	Santa Cruz	F	LIGHT INDUSTRIAL
12ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
13ASC	Santa Cruz	G	GENERAL RURAL
14ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
15ASC	Santa Cruz	F	LIGHT INDUSTRIAL
16ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
17ASC	Santa Cruz	G	GENERAL RURAL
18ASC	Santa Cruz	B	RESIDENTIAL (6,000 SQ FT)
19ASC	Santa Cruz	G	GENERAL RURAL
20ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
Vacant Land A			
21ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
22ASC	Santa Cruz	B	MULTI-FAMILY RESIDENTIAL
23ASC	Santa Cruz	G	GENERAL RURAL
24ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
25ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
26ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
27ASC	Santa Cruz	G	GENERAL RURAL
28ASC	Santa Cruz	G	GENERAL RURAL
29ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
30ASC	Santa Cruz	E	NEIGHBORHOOD BUSINESS
31ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
32ASC	Santa Cruz	G	GENERAL RURAL
33ASC	Santa Cruz	G	GENERAL RURAL
34ASC	Santa Cruz	F	LIGHT INDUSTRIAL

Purple Alternative

Reciver I.D.	County	NAC Category	Description
35ASC	Santa Cruz	G	GENERAL RURAL
36ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
37ASC	Santa Cruz	G	GENERAL RURAL
38ASC	Santa Cruz	B	SUBURBAN RANCH
39ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
40ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
41ASC	Santa Cruz	B	SUBURBAN RANCH
42ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
43ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
44APIMA	Pima	B	RURAL HOMESTEAD ZONE
45APIMA	Pima	B	RURAL HOMESTEAD ZONE
46APIMA	Pima	E	GENERAL BUSINESS ZONE
47APIMA	Pima	B	RURAL HOMESTEAD ZONE
Segment C			
Noise Sensitive Areas C			
1-C	Pima	B	MULTIPLE RESIDENCES
2-C	Pima	B	MULTIPLE RESIDENCES
3-C	Pima	B	MULTIPLE RESIDENCES
4-C	Pima	B	MULTIPLE RESIDENCES
5-C	Pima	B	MULTIPLE RESIDENCES
6-C	Pima	B	MULTIPLE RESIDENCES
7-C	Pima	B	MULTIPLE RESIDENCES
8-C	Pima	B	MULTIPLE RESIDENCES
9-C	Pima	B	MULTIPLE RESIDENCES
10-C	Pima	B	MULTIPLE RESIDENCES
11-C	Pima	B	MULTIPLE RESIDENCES
Vacant Land C			
205CPIMA	Pima	B	RURAL HOMESTEAD ZONE
207CPIMA	Pima	B	COUNTRY MANUFACTURED AND MOBILE HOME
208CPIMA	Pima	B	RURAL HOMESTEAD ZONE
210CPIMA	Pima	B	SUBURBAN HOMESTEAD ZONE
211CPIMA	Pima	B	SINGLE RESIDENCE HOME
213CPIMA	Pima	B	SINGLE RESIDENCE HOME
214CPIMA	Pima	B	RURAL HOMESTEAD ZONE

Purple Alternative

Reciver I.D.	County	NAC Category	Description
Segment G			
Noise Sensitive Areas G			
1-GE	Pinal	B	MULTIPLE HOMES
2-GE	Pinal	B	MULTIPLE HOMES
3-GE	Pinal	E	MULTIPLE BUSSINES AREA: AMERICAS BEST VALUE INN
4-GE	Pinal	B	MULTIPLE HOMES AREA + SILVERADO RV RESORT
5-GE	Pinal	E	MULTIPLE BUSSINES AREA: MCDONALD'S, CHEVRON, CARL'S JR
6-GE	Pinal	E	MULTIPLE BUSSINES AREA: DAYS INN ELOY, SOUTHWEST TOWING
7-GE	Pinal	B	MULTIPLE HOMES AREA
8-GE	Pinal	B	MULTIPLE HOMES AREA
9-GN	Pinal	B	MULTIPLE HOMES AREA
10-GN	Pinal	C	MOUNTAIN VIEW CEMENTERY
11-GN	Pinal	B	MULTIPLE HOMES AREA
1-GW	Pinal	C	ARIZONA VETERANS MEMORIAL CEMENTERY
2-GW	Pinal	B	MULTIPLE HOMES AREA
3-GW	Pinal	B	PICACHO PEAK RV RESORT
4-GW	Pinal	B	MULTIPLE HOMES AREA
5-GW	Pinal	C	FIRST BAPTIST CHURCH PICACHO
6-GW	Pinal	E	FRANKIE'S CHUCKWAGON
7-GW	Pinal	C	SAN MIGUEL GOLF CLUB
8-GW	Pinal	E	PIZZA HUT
9-GW	Pinal	B	MULTIPLE HOMES AREA
10-GW	Pinal	E	MULTIPLE BUSSINES AREA: MOTEL 6 CASA GRANDE
11-GW	Pinal	B	MULTIPLE HOMES AREA
12-GS	Pinal	B	MULTIPLE HOMES AREA
13-GS	Pinal	B	MULTIPLE HOMES AREA
14-GS	Pinal	E	TRANSPORTATION DEPARMENT HWY
15-GS	Pinal	B	MULTIPLE HOMES
16-GS	Pinal	B	MULTIPLE HOMES
17-GS	Pinal	B	MULTIPLE HOMES
19-GS	Pinal	B	MULTIPLE HOMES
Vacant Land G			
99GPINAL	Pinal	F	LIGHT INDUSTRY AND WAREHOUSE ZONE
100GPINAL	Pinal	F	INDUSTRIAL ZONE

Purple Alternative

Reciver I.D.	County	NAC Category	Description
Vacant Land G			
101GPINAL	Pinal	B	MULTIPLE RESIDENCE ZONE
102GPINAL	Pinal	E	GENERAL BUSINESS ZONE
103GPINAL	Pinal	E	LOCAL BUSINESS ZONE
104GPINAL	Pinal	E	LOCAL BUSINESS ZONE
105GPINAL	Pinal	G	GENERAL RURAL ZONE
106GPINAL	Pinal	B	SUBURBAN RANCH ZONE
107GPINAL	Pinal	E	LOCAL BUSINESS ZONE
108GPINAL	Pinal	B	LIGHT INDUSTRY AND WAREHOUSE ZONE
109GPINAL	Pinal	B	MANUFACTURED HOME PARK ZONE
110GPINAL	Pinal	F	INDUSTRIAL ZONE
111GPINAL	Pinal	E	GENERAL BUSINESS ZONE
112GPINAL	Pinal	E	LOCAL BUSINESS ZONE
113GPINAL	Pinal	E	GENERAL BUSINESS ZONE
114GPINAL	Pinal	G	GENERAL RURAL ZONE
115GPINAL	Pinal	B	PARK MODEL & RECREATIONAL VEHICLE PARK ZONE
116GPINAL	Pinal	E	LOCAL BUSINESS ZONE
117GPINAL	Pinal	F	INDUSTRIAL ZONE
118GPINAL	Pinal	B	PARK MODEL & RECREATIONAL VEHICLE PARK ZONE
119GPINAL	Pinal	B	MANUFACTURED HOME ZONE
120GPINAL	Pinal	B	SINGLE RESIDENCE ZONE
121GPINAL	Pinal	E	COMMUNITY COMMERCIAL
122GPINAL	Pinal	B	MEDIUM DENSITY RESIDENTIAL
123GPINAL	Pinal	F	GENERAL INDUSTRIAL
124GPINAL	Pinal	B	ESTATE DENSITY RESIDENTIAL (43,560 SQ. FT)
125GPINAL	Pinal	F	LIGHT INDUSTRAIL
126GPINAL	Pinal	E	COMMUNITY COMMERCIAL
127GPINAL	Pinal	B	HIGH DENSITY RESIDENTIAL (24DU/ACRE)
128GPINAL	Pinal	F	LIGHT INDUSTRAIL
129GPINAL	Pinal	B	ESTATE DENSITY RESIDENTIAL (43,560 SQ. FT)
130GPINAL	Pinal	E	COMMUNITY COMMERCIAL
131GPINAL	Pinal	F	LIGHT INDUSTRAIL
132GPINAL	Pinal	F	GENERAL INDUSTRIAL
133GPINAL	Pinal	F	LIGHT INDUSTRAIL

Purple Alternative

Reciver I.D.	County	NAC Category	Description
134GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
135GPINAL	Pinal	F	LIGHT INDUSTRAIL
136GPINAL	Pinal	B	HIGH DENSITY RESIDENTIAL (10DU/ACRE)
137GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
138GPINAL	Pinal	F	LIGHT INDUSTRAIL
139GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
140GPINAL	Pinal	B	MEDIUM DENSITY RESIDENTIAL (8.000 SQ. FT)
141GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
Vacant Land G			
142GPINAL	Pinal	E	COMMUNITY COMMERCIAL
143GPINAL	Pinal	F	LIGHT INDUSTRAIL
144GPINAL	Pinal	G	RURAL ZONING
145GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
146GPINAL	Pinal	F	LIGHT INDUSTRAIL
147GPINAL	Pinal	G	RURAL ZONING
148GPINAL	Pinal	B	GUEST RANCH
149GPINAL	Pinal	E	GENERAL BUSINESS ZONE
150GPINAL	Pinal	B	MANUFACTURED HOME
151GPINAL	Pinal	E	GENERAL BUSINESS ZONE
152GPINAL	Pinal	B	GUEST RANCH
153GPINAL	Pinal	B	SUBURBAN RANCH ZONE
154GPINAL	Pinal	B	GUEST RANCH
155GPINAL	Pinal	B	GUEST RANCH
156GPINAL	Pinal	B	SUBURBAN RANCH ZONE
157GPINAL	Pinal	E	GENERAL BUSINESS ZONE
158GPINAL	Pinal	B	GUEST RANCH
159GPINAL	Pinal	E	GENERAL BUSINESS ZONE
160GPINAL	Pinal	B	SINGLE RESIDENCE ZONE
161GPINAL	Pinal	B	SINGLE RESIDENCE ZONE
Segment I1			
Noise Sensitive Areas			
1-I1	Pinal	B	MULTIPLE HOMES
2-I1	Pinal	B	MULTIPLE HOMES
3-I1	Pinal	B	MULTIPLE HOMES

Purple Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
4-I1	Pinal	B	MULTIPLE HOMES
5-I1	Pinal	B	MULTIPLE HOMES
6-I1	Pinal	B	MULTIPLE HOMES
7-I1	Pinal	B	MULTIPLE HOMES
8-I1	Pinal	B	MULTIPLE HOMES
Vacant Land I1			
166aI1PINAL	Pinal	E	GENERAL BUSINESS ZONE
166bI1PINAL	Pinal	B	RESIDENTIAL UNIT PLAN OF DEVELOPMENT (OVERLAY)
166cI1PINAL	Pinal	B	MANUFACTURED HOME PARK ZONE
166dI1PINAL	Pinal	E	GENERAL BUSINESS ZONE
166eI1PINAL	Pinal	F	LIGHT INDUSTRIAL
Segment I2			
Noise Sensitive Areas I2			
1-I2	Pima	B	MULTIPLE RESIDENCES
2-I2	Pima	B	MULTIPLE RESIDENCES
Noise Sensitive Areas I2			
3-I2	Pima	B	MULTIPLE RESIDENCES
4-I2	Pima	B	MULTIPLE RESIDENCES
5-I2	Pima	B	MULTIPLE RESIDENCES
6-I2	Pima	B	MULTIPLE RESIDENCES
Vacant Land I2			
166fI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE
166gI2PINAL	Pinal	B	SINGLE RESIDENCE
166hI2PINAL	Pinal	E	LOCAL BUSINESS ZONE
166iI2PINAL	Pinal	E	GENERAL BUSINESS ZONE
166jI2PINAL	Pinal	F	CI-1 LIGHT INDUSTRY AND WAREHOUSE ZONE
166kI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE
166lI2PINAL	Pinal	B	GUEST RANCH
166mI2PINAL	Pinal	E	LOCAL BUSINESS ZONE
166nI2PINAL	Pinal	E	MULTIPLE-FAMILY ZONING DISTRICT WITH 1,000 SF MINIMUM PER DWELLING UNIT
166oI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE

Purple Alternative

Reciver I.D.	County	NAC Category	Description
Segment L			
Noise Sensitive Areas L			
1-L	Maricopa	B	MULTIPLE HOMES
2-L	Maricopa	B	MULTIPLE HOMES
3-L	Maricopa	B	MULTIPLE HOMES
4-L	Maricopa	C	MOBILE ELEMENTARY SCHOOL, GOOD YEAR FIRE DEPARTMENT #187
5-L	Maricopa	B	MULTIPLE HOMES
Vacant Land L			
177aLMARICOPA	Maricopa	G	Rural With 190,000 Sf Minimum Per Dwelling Unit
Segment N			
Noise Sensitive Areas N			
1-N	Maricopa	B	MULTIPLE HOMES
2-N	Maricopa	B	MULTIPLE HOMES
3-N	Maricopa	B	MULTIPLE HOMES
4-N	Maricopa	B	MULTIPLE HOMES
5-N	Maricopa	B	MULTIPLE HOMES
6-N	Maricopa	B	MULTIPLE HOMES
7-N	Maricopa	B	MULTIPLE HOMES
8-N	Maricopa	B	MULTIPLE HOMES
9-N	Maricopa	B	MULTIPLE HOMES
10-N	Maricopa	B	MULTIPLE HOMES
11-N	Maricopa	B	MULTIPLE HOMES
12-N	Maricopa	B	MULTIPLE HOMES
13-N	Maricopa	B	MULTIPLE HOMES
14-N	Maricopa	B	MULTIPLE HOMES
Noise Sensitive Areas N			
15-N	Maricopa	B	MULTIPLE HOMES
16-N	Maricopa	B	MULTIPLE HOMES
17-N	Maricopa	B	MULTIPLE HOMES
18-N	Maricopa	B	MULTIPLE HOMES
Vacant Land N			
178bNMARICOPA	Maricopa	E	GENERAL COMMERCIAL
178cNMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
178dNMARICOPA	Maricopa	G	RURAL ZONING DISTRICT

Purple Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
Segment R			
Noise Sensitive Areas R			
1-R	Maricopa	B	MULTIPLE HOMES
2-R	Maricopa	B	MULTIPLE HOMES
3-R	Maricopa	B	MULTIPLE HOMES
4-R	Maricopa	B	MULTIPLE HOMES
5-R	Maricopa	B	MULTIPLE HOMES
6-R	Maricopa	B	MULTIPLE HOMES
7-R	Maricopa	B	MULTIPLE HOMES
8-R	Maricopa	B	MULTIPLE HOMES
9-R	Maricopa	B	MULTIPLE HOMES
10-R	Maricopa	B	MULTIPLE HOMES
11-R	Maricopa	B	MULTIPLE HOMES
12-R	Maricopa	B	MULTIPLE HOMES
13-R	Maricopa	B	MULTIPLE HOMES
14-R	Maricopa	C	ELLSWORTH PARK
15-R	Maricopa	B	MULTIPLE HOMES
16-R	Maricopa	B	MULTIPLE HOMES
17-R	Maricopa	B	MULTIPLE HOMES
Vacant Land R			
201aRMARICOPA	Maricopa	B	RURAL RESIDENTIAL
201bRMARICOPA	Maricopa	E	COMMUNITY COMMERCIAL
201cRMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
Segment X			
Noise Sensitive Areas X			
1-X	Maricopa	B	MULTIPLE HOMES
2-X	Maricopa	B	MULTIPLE HOMES
Vacant Land X			
202VMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT

Green Alternative

Reciver I.D.	County	NAC Category	Description
Option A			
Noise Sensitive Areas A			
1-AE	Santa Cruz	B	N OF MARIPOSA RD-W CONGRESS DR. VACANT LOT, OLD MOBILE HOME PARK
2-AE	Santa Cruz	C	N. MARIPOSA RD AND E CONGRESS DR. MANUEL TAPIA RECREATIONAL PARK
3-AE	Santa Cruz	C	LATTER DAYS SAINTS CHURCH
4-AE	Santa Cruz	B	N. MESQUITE PLACE DR. VALLE VERDE RESIDENTIAL AREA
5-AE	Santa Cruz	C	ST ANDREW'S EPISCOPAL CHURCH
6-AE	Santa Cruz	B	MULTIPLE RESIDENCES
7-AE	Santa Cruz	B	E OF I-19 FRONTAGE RD, MULTIPLE RESIDENTIAL UNITS
8-AE	Santa Cruz	E	FRESH PRODUCE ASSOCIATION
9-AE	Santa Cruz	E	BERNARDI & ASSOCIATES, INC
10-AE	Santa Cruz	C	CHURCH E I-19 FRONTAGE RD S-GARDEN VIEW DR
11-AE	Santa Cruz	B	E. MARTAN RD. RESIDENTIAL UNITS
12-AE	Santa Cruz	B	N. MARTAN RD. POCKET OF RESIDENTIAL UNITS
13-AE	Santa Cruz	B	E. FRONTAGE RD. W. OLD TUCSON HWY. SEVERAL RESIDENTIAL UNITS
14-AE	Santa Cruz	E	S. OLD TUCSON HWY. E. FRONTAGE RD. US FOREST SERVICES OFFICES
15-AE	Santa Cruz	B	RESIDENTIAL AREA; N. CALLE BARRIO DE TUBAC-S. SANTA GERTRUDIS LN
16-AE	Santa Cruz	C	CHRISTUS REX LUTHERAN CHURCH
17-AE	Santa Cruz	B	SANTA GERTRUDIS RANCH
18-AE	Santa Cruz	E	SANTA CRUZ CHILI AND SPICE
19-AE	Santa Cruz	C	TUMACACORI NATIONAL HISTORICAL PARK.
20-AE	Santa Cruz	E	W. FRONTAGE RD. RESTAURANT AND STORE. ABE'S OLD TUMACACORI BAR
21-AE	Santa Cruz	E	US POST OFFICE, TUMACACORI, AZ
22-AE	Santa Cruz	E	WISDOMS CAFÉ, TUMACACORI, AZ
23-AE	Santa Cruz	C	PUBLIC PARK, TUMACACORI, AZ
24-AE	Santa Cruz	B	RESIDENTIAL AREA: N. TRES DE MAYO RD. S. CALLE BARRIO DE TUBAC
25-AE	Santa Cruz	E	TUBAC COMMERCIAL DISTRICT: TUBAC MARKET, THE ITALIAN PEASANT, SHELBY'S BISTRO
26-AE	Santa Cruz	E	US POST OFFICE, EL MERCADO, MELIO'S TRATTORIA
27-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
28-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
29-AE	Santa Cruz	B	MULTIPLE RESIDENCES, STORES, OFFICES
30-AE	Santa Cruz	C	APOSTOLIC CHURC
31-AE	Santa Cruz	C	GREEN VALLEY CHURCH
32-AE	Santa Cruz	C	UNITARIAN UNIVERSALIST CONGREGATION

Green Alternative

Reciver I.D.	County	NAC Category	Description
1-AW	Santa Cruz	C	NOGALES HIGH SCHOOL PARK.
2-AW	Santa Cruz	B	RESIDENTIAL COMPLEX N. FRANK REED RD. AND W. PLACITA RIVAS
3-AW	Santa Cruz	B	SINGLE RESIDENCE.
4-AW	Santa Cruz	B	SINGLE RESIDENCE. N. SAN LORENZO DR.
Noise Sensitive Areas A			
5-AW	Santa Cruz	E	GROUP OF SEVERAL OFFICES AND WAREHOUSES. BETWEEN BODEGA DR. AND N. COUNTRY CLUB
6-AW	Santa Cruz	B	MULTIPLE RESIDENCES. S. DEL REY DAVIS BLVD.
7-AW	Santa Cruz	E	GROUP OF OFFICES-WAREHOUSES: DEL CAMPO, KALIROY PRODUCE
8-AW	Santa Cruz	C	US DRUG ENFORCEMENT ADMINISTRATION
9-AW	Santa Cruz	B	STRIP OF LAND WITH MULTIPLE RESIDENCES. RIO RICO SUBDIVISION
10-AW	Santa Cruz	E	GARRETS IGA SUPERMARKET, NICK'S DINER
11-AW	Santa Cruz	B	GROUP OF SEVERAL RESIDENCES. SUB BELLA VISTA
12-AW	Santa Cruz	E	STRIP OF SEVERAL BUSINESS INCLUDING RESTAURANT LAS TANKA'S, RIO RICO PHARMACY, US POST OFFICE
13-AW	Santa Cruz	C	HILLTOP FELLOWSHIP CHURCH
14-AW	Santa Cruz	B	STRIP OF MULTIPLE RESIDENCES
15-AW	Santa Cruz	E	RIO RICO HAWK PIZZA, MANNY'S COWBOY BURGERS
16-AW	Santa Cruz	C	CALABASAS MIDDLE SCHOOL
17-AW	Santa Cruz	C	MOUNTAIN VIEW ELEMENTARY SCHOOL
18-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
19-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
20-AW	Santa Cruz	C	AMADO BAPTIST CHURCH
21-AW	Pima	E	STRIP WITH RESTAURANT AND US POST OFFICE, AMADO, AZ
22-AW	Pima	B	MULTIPLE RESIDENCES
23-AW	Pima	B	MULTIPLE RESIDENCES
Vacant Land A			
1ASC	Santa Cruz	E	GENERAL COMMERCIAL
2ASC	Santa Cruz	E	GENERAL COMMERCIAL
3ASC	Santa Cruz	G	FEDERAL
4ASC	Santa Cruz	F	LIGHT INDUSTRIAL
5ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL
6ASC	Santa Cruz	F	LIGHT INDUSTRIAL
7ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL
8ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
9ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT

Green Alternative

Reciver I.D.	County	NAC Category	Description
10ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
11ASC	Santa Cruz	F	LIGHT INDUSTRIAL
12ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
13ASC	Santa Cruz	G	GENERAL RURAL
14ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
15ASC	Santa Cruz	F	LIGHT INDUSTRIAL
16ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
17ASC	Santa Cruz	G	GENERAL RURAL
Vacant Land A			
18ASC	Santa Cruz	B	RESIDENTIAL (6,000 SQ FT)
19ASC	Santa Cruz	G	GENERAL RURAL
20ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
21ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
22ASC	Santa Cruz	B	MULTI-FAMILY RESIDENTIAL
23ASC	Santa Cruz	G	GENERAL RURAL
24ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
25ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
26ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
27ASC	Santa Cruz	G	GENERAL RURAL
28ASC	Santa Cruz	G	GENERAL RURAL
29ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
30ASC	Santa Cruz	E	NEIGHBORHOOD BUSINESS
31ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
32ASC	Santa Cruz	G	GENERAL RURAL
33ASC	Santa Cruz	G	GENERAL RURAL
34ASC	Santa Cruz	F	LIGHT INDUSTRIAL
35ASC	Santa Cruz	G	GENERAL RURAL
36ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
37ASC	Santa Cruz	G	GENERAL RURAL
38ASC	Santa Cruz	B	SUBURBAN RANCH
39ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
40ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
41ASC	Santa Cruz	B	SUBURBAN RANCH
42ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT

Green Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
43ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
44APIMA	Pima	B	RURAL HOMESTEAD ZONE
45APIMA	Pima	B	RURAL HOMESTEAD ZONE
46APIMA	Pima	E	GENERAL BUSINESS ZONE
47APIMA	Pima	B	RURAL HOMESTEAD ZONE
Option B			
Noise Sensitive Areas B			
33-BE	Pima	B	MULTIPLE RESIDENCES
34-BE	Pima	B	MULTIPLE RESIDENCES
35-BE	Pima	C	GREEN VALLEY HOSPITAL
36-BE	Pima	B	MULTIPLE RESIDENCES
37-BE	Pima	E	US POST OFFICE, GREEN VALLEY
Noise Sensitive Areas B			
38-BE	Pima	E	LAVENDER RESTAURANT
39-BE	Pima	C	HAVEN GOLF COURSE
40-BE	Pima	B	MULTIPLE RESIDENCES
24-BW	Pima	B	MULTIPLE RESIDENCES
25-BW	Pima	B	MULTIPLE RESIDENCES
26-BW	Pima	C	WYNDHAM GREEN VALLEY CANOA RANCH RESORT
27-BW	Pima	B	MULTIPLE RESIDENCES
28-BW	Pima	B	MULTIPLE RESIDENCES
29-BW	Pima	B	MULTIPLE RESIDENCES
30-BW	Pima	C	SAN IGNACIO GOLF COURSE
31-BW	Pima	B	MULTIPLE RESIDENCES
32-BW	Pima	C	DESERT HILLS GOLF CLUB
33-BW	Pima	B	MULTIPLE RESIDENCES
34-BW	Pima	E	CONTINENTAL SHOPPING PLAZA: MCDONALD'S, MAMA'S KITCHEN
35-BW	Pima	B	MULTIPLE RESIDENCES
36-BW	Pima	C	GREEN VALLEY RECREATION
37-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: BEST WESTERN GREEN VALLEY INN, CHINA VIEW, LA PLACITA RESTAURANT
38-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: COMFORT INN, ARIZONA FAMILY RESTAURANT
39-BW	Pima	B	MULTIPLE RESIDENCES
40-BW	Pima	C	SAHUARITA HOUSE OF WORSHIP
41-BW	Pima	B	SAHUARITA MISSION APARTMENTS

Green Alternative

Reciver I.D.	County	NAC Category	Description
42-BW	Pima	C	ARBY'S, DAIRY QUEEN, HOLIDAY INN EXPRESS
43-BW	Pima	D	DESERT SKY CINEMA
44-BW	Pima	B	MULTIPLE RESIDENCES
45-BW	Pima	C	ANAMAX RECREATION CENTER
Vacant Land B			
48BPIMA	Pima	B	RURAL HOMESTEAD ZONE
49BPIMA	Pima	B	RURAL HOMESTEAD ZONE
50BPIMA	Pima	B	MULTIPLE RESIDENCE ZONE
51BPIMA	Pima	E	GENERAL BUSINESS ZONE
52BPIMA	Pima	E	GENERAL BUSINESS ZONE
53BPIMA	Pima	B	RURAL HOMESTEAD ZONE
54BPIMA	Pima	G	TRANSITIONAL ZONE
55BPIMA	Pima	B	SINGLE RESIDENCE ZONE
56BPIMA	Pima	E	LOCAL BUSINESS ZONE
57BPIMA	Pima	E	GENERAL BUSINESS ZONE
58BPIMA	Pima	B	SPECIFIC PLAN
Vacant Land B			
59BPIMA	Pima	B	RURAL HOMESTEAD ZONE
60BPIMA	Pima	F	HEAVY INDUSTRIAL ZONE
61BPIMA	Pima	F	PARK INDUSTRIAL
62BPIMA	Pima	E	PLANNED AREA DEVELOPMENT
63BPIMA	Pima	B	RESIDENCE ZONE (R-1)
64BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
66BPIMA	Pima	B	MOBILE HOME ZONE (MH-1)
67BPIMA	Pima	E	OFFICE ZONE
68BPIMA	Pima	B	RESIDENCE ZONE
69BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
70BPIMA	Pima	B	RESIDENCE ZONE
71BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
72BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
73BPIMA	Pima	E	COMMERCIAL ZONE
74BPIMA	Pima	F	PARK INDUSTRIAL
75BPIMA	Pima	B	RESIDENCE ZONE (RX-1)
76BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)

Green Alternative

Reciver I.D.	County	NAC Category	Description
77BPIMA	Pima	B	GR-1 RURAL RESIDENTIAL ZONE
78BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
79BPIMA	Pima	G	TRANSPORTATION CORRIDOR ZONE
80BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
81BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
82BPIMA	Pima	B	SH SUBURBAN HOMESTEAD ZONE
83BPIMA	Pima	B	SPECIFIC PLAN
84BPIMA	Pima	E	VILLAGE COMMERCIAL
85BPIMA	Pima	B	SPECIFIC PLAN: CONTINENTAL RANCH
86BPIMA	Pima	B	SPECIFIC PLAN: CASCADA
87BPIMA	Pima	B	SPECIFIC PLANS
88BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
89BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
90BPIMA	Pima	B	GR-1 RURAL RESIDENTIAL ZONE
91BPIMA	Pima	G	LARGE LOT ZONE
92BPIMA	Pima	E	SHOPS AT TANGERINE AND I-10 MOTORPLEX
93BPIMA	Pima	G	MEDIUM LOT ZONE
94BPIMA	Pima	E	VILLAGE COMMERCIAL
95BPIMA	Pima	B	THE VILLAGES OF TORTOLITA SPECIFIC PLAN
96BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
Vacant Land B			
97BPIMA	Pima	B	SANDERS GROVE
98BPIMA	Pima	B	THE VILLAGES OF TORTOLITA SPECIFIC PLAN
Option D			
Noise Sensitive Areas D			
1-D	Pima	B	MULTIPLE RESIDENCES
2-D	Pima	C	ANAMAX RECREATION CENTER, ANAMAX DOG PARK
3-D	Pima	C	COMPREHENSIVE MEDICAL CARE
4-D	Pima	B	MULTIPLE RESIDENCES
5-D	Pima	B	MULTIPLE RESIDENCES
6-D	Pima	B	MULTIPLE RESIDENCES
7-D	Pima	B	MULTIPLE RESIDENCES
8-D	Pima	B	MULTIPLE RESIDENCES
9-D	Pima	B	MULTIPLE RESIDENCES

Green Alternative

Reciver I.D.	County	NAC Category	Description
10-D	Pima	B	MULTIPLE RESIDENCES
11-D	Pima	B	MULTIPLE RESIDENCES
12-D	Pima	B	MULTIPLE RESIDENCES
Vacant Land D			
209DPIMA	PIMA	B	RURAL RESIDENTIAL ZONE
212DPIMA	PIMA	B	SINGLE RESIDENCE HOME
215DPIMA	PIMA	B	RURAL RESIDENTIAL
216DPIMA	PIMA	C	BIOLOGICAL RURAL RECEIVING AREA
217DPIMA	PIMA	B	RURAL HOMESTEAD ZONE
218DPIMA	PIMA	B	RURAL HOMESTEAD ZONE
Option F			
Noise Sensitive Areas F			
1-F	Pima	B	MULTIPLE RESIDENCES
2-F	Pima	B	MULTIPLE RESIDENCES
3-F	Pima	B	MULTIPLE RESIDENCES
4-F	Pima	B	MULTIPLE RESIDENCES
5-F	Pima	B	MULTIPLE RESIDENCES
6-F	Pima	B	MULTIPLE RESIDENCES
7-F	Pima	B	MULTIPLE RESIDENCES
8-F	Pima	B	MULTIPLE RESIDENCES
9-F	Pima	B	MULTIPLE RESIDENCES
Vacant Land F			
206FPINAL	Pinal	B	RURAL HOMESTEAD ZONE
Vacant Land F			
206aFPIMA	Pima	B	RURAL HOMESTEAD ZONE
Option I2			
Noise Sensitive Areas I2			
1-I2	Pima	B	MULTIPLE RESIDENCES
2-I2	Pima	B	MULTIPLE RESIDENCES
3-I2	Pima	B	MULTIPLE RESIDENCES
4-I2	Pima	B	MULTIPLE RESIDENCES
5-I2	Pima	B	MULTIPLE RESIDENCES
6-I2	Pima	B	MULTIPLE RESIDENCES
Vacant Land I2			

Green Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
166fI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE
166gI2PINAL	Pinal	B	SINGLE RESIDENCE
166hI2PINAL	Pinal	E	LOCAL BUSINESS ZONE
166iI2PINAL	Pinal	E	GENERAL BUSINESS ZONE
166jI2PINAL	Pinal	F	CI-1 LIGHT INDUSTRIAL AND WAREHOUSE ZONE
166kI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE
166lI2PINAL	Pinal	B	GUEST RANCH
166mI2PINAL	Pinal	E	LOCAL BUSINESS ZONE
166nI2PINAL	Pinal	E	MULTIPLE-FAMILY ZONING DISTRICT WITH 1,000 SF MINIMUM PER DWELLING UNIT
166oI2PINAL	Pinal	B	SINGLE RESIDENCE ZONE
Option L			
Noise Sensitive Areas L			
1-L	Maricopa	B	MULTIPLE HOMES
2-L	Maricopa	B	MULTIPLE HOMES
3-L	Maricopa	B	MULTIPLE HOMES
4-L	Maricopa	C	MOBILE ELEMENTARY SCHOOL, GOOD YEAR FIRE DEPARMENT #187
5-L	Maricopa	B	MULTIPLE HOMES
Vacant Land L			
177ALMARICOPA	Maricopa	G	RURAL WITH 190,000 SF MINIMUM PER DWELLING UNIT
Option M			
Noise Sensitive Areas M			
1-M	Maricopa	B	MULTIPLE HOMES
Vacant Land M			
178AMMARICOPA	Maricopa	G	RURAL ZONING

Green Alternative

Reciver I.D.	County	NAC Category	Description
Option Q2			
Noise Sensitive Areas Q2			
1-Q2	Maricopa	B	MULTIPLE HOMES
2-Q2	Maricopa	B	MULTIPLE HOMES
Vacant Land Q2			
179Q2MARICOPA	MARICOPA	G	RURAL
189Q2MARICOPA	MARICOPA	B	RURAL RESIDENTIAL
190Q2MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
Option R			
Noise Sensitive Areas R			
1-R	Maricopa	B	MULTIPLE HOMES
2-R	Maricopa	B	MULTIPLE HOMES
3-R	Maricopa	B	MULTIPLE HOMES
4-R	Maricopa	B	MULTIPLE HOMES
5-R	Maricopa	B	MULTIPLE HOMES
6-R	Maricopa	B	MULTIPLE HOMES
7-R	Maricopa	B	MULTIPLE HOMES
8-R	Maricopa	B	MULTIPLE HOMES
9-R	Maricopa	B	MULTIPLE HOMES
10-R	Maricopa	B	MULTIPLE HOMES
11-R	Maricopa	B	MULTIPLE HOMES
12-R	Maricopa	B	MULTIPLE HOMES
13-R	Maricopa	B	MULTIPLE HOMES
14-R	Maricopa	C	ELLSWORTH PARK
15-R	Maricopa	B	MULTIPLE HOMES
16-R	Maricopa	B	MULTIPLE HOMES
17-R	Maricopa	B	MULTIPLE HOMES
Vacant Land R			
201aRMARICOPA	Maricopa	B	RURAL RESIDENTIAL
201bRMARICOPA	Maricopa	E	COMMUNITY COMMERCIAL
201cRMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
Option U			
Noise Sensitive Areas U			

Green Alternative			
Reciver I.D.	**County**	**NAC Category**	**Description**
1-U	Maricopa	B	MULTIPLE HOMES
2-U	Maricopa	B	MULTIPLE HOMES
Vacant Land U			
204UMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT

Orange Alternative

Reciver I.D.	County	NAC Category	Description
Option A			
Noise Sensitive Areas A			
1-AE	Santa Cruz	B	N OF MARIPOSA RD-W CONGRESS DR. VACANT LOT, OLD MOBILE HOME PARK
2-AE	Santa Cruz	C	N. MARIPOSA RD AND E CONGRESS DR. MANUEL TAPIA RECREATIONAL PARK
3-AE	Santa Cruz	C	LATTER DAYS SAINTS CHURCH
4-AE	Santa Cruz	B	N. MESQUITE PLACE DR. VALLE VERDE RESIDENTIAL AREA
5-AE	Santa Cruz	C	ST ANDREW'S EPISCOPAL CHURCH
6-AE	Santa Cruz	B	MULTIPLE RESIDENCES
7-AE	Santa Cruz	B	E OF I-19 FRONTAGE RD, MULTIPLE RESIDENTIAL UNITS
8-AE	Santa Cruz	E	FRESH PRODUCE ASSOCIATION
9-AE	Santa Cruz	E	BERNARDI & ASSOCIATES, INC
10-AE	Santa Cruz	C	CHURCH E I-19 FRONTAGE RD S-GARDEN VIEW DR
11-AE	Santa Cruz	B	E. MARTAN RD. RESIDENTIAL UNITS
12-AE	Santa Cruz	B	N. MARTAN RD. POCKET OF RESIDENTIAL UNITS
13-AE	Santa Cruz	B	E. FRONTAGE RD. W. OLD TUCSON HWY. SEVERAL RESIDENTIAL UNITS
14-AE	Santa Cruz	E	S. OLD TUCSON HWY. E. FRONTAGE RD. US FOREST SERVICES OFFICES
15-AE	Santa Cruz	B	RESIDENTIAL AREA; N. CALLE BARRIO DE TUBAC-S. SANTA GERTRUDIS LN
16-AE	Santa Cruz	C	CHRISTUS REX LUTHERAN CHURCH
17-AE	Santa Cruz	B	SANTA GERTRUDIS RANCH
18-AE	Santa Cruz	E	SANTA CRUZ CHILI AND SPICE
19-AE	Santa Cruz	C	TUMACACORI NATIONAL HISTORICAL PARK.
20-AE	Santa Cruz	E	W. FRONTAGE RD. RESTAURANT AND STORE. ABE'S OLD TUMACACORI BAR
21-AE	Santa Cruz	E	US POST OFFICE, TUMACACORI, AZ
22-AE	Santa Cruz	E	WISDOMS CAFÉ, TUMACACORI, AZ
23-AE	Santa Cruz	C	PUBLIC PARK, TUMACACORI, AZ
24-AE	Santa Cruz	B	RESIDENTIAL AREA: N. TRES DE MAYO RD. S. CALLE BARRIO DE TUBAC
25-AE	Santa Cruz	E	TUBAC COMMERCIAL DISTRICT: TUBAC MARKET, THE ITALIAN PEASANT, SHELBY'S BISTRO
26-AE	Santa Cruz	E	US POST OFFICE, EL MERCADO, MELIO'S TRATTORIA
27-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
28-AE	Santa Cruz	B	POCKET OF RESIDENCES, AMADO, AZ
29-AE	Santa Cruz	B	MULTIPLE RESIDENCES, STORES, OFFICES
30-AE	Santa Cruz	C	APOSTOLIC CHURC

Orange Alternative

Reciver I.D.	County	NAC Category	Description
31-AE	Santa Cruz	C	GREEN VALLEY CHURCH
32-AE	Santa Cruz	C	UNITARIAN UNIVERSALIST CONGREGATION
1-AW	Santa Cruz	C	NOGALES HIGH SCHOOL PARK.
Noise Sensitive Areas A			
2-AW	Santa Cruz	B	RESIDENTIAL COMPLEX N. FRANK REED RD. AND W. PLACITA RIVAS
3-AW	Santa Cruz	B	SINGLE RESIDENCE.
4-AW	Santa Cruz	B	SINGLE RESIDENCE. N. SAN LORENZO DR.
5-AW	Santa Cruz	E	GROUP OF SEVERAL OFFICES AND WAREHOUSES. BETWEEN BODEGA DR. AND N. COUNTRY CLUB
6-AW	Santa Cruz	B	MULTIPLE RESIDENCES. S. DEL REY DAVIS BLVD.
7-AW	Santa Cruz	E	GROUP OF OFFICES-WAREHOUSES: DEL CAMPO, KALIROY PRODUCE
8-AW	Santa Cruz	C	US DRUG ENFORCEMENT ADMINISTRATION
9-AW	Santa Cruz	B	STRIP OF LAND WITH MULTIPLE RESIDENCES. RIO RICO SUBDIVISION
10-AW	Santa Cruz	E	GARRETS IGA SUPERMARKET, NICK'S DINER
11-AW	Santa Cruz	B	GROUP OF SEVERAL RESIDENCES. SUB BELLA VISTA
12-AW	Santa Cruz	E	STRIP OF SEVERAL BUSINESS INCLUDING RESTAURANT LAS TANKA'S, RIO RICO PHARMACY, US POST OFFICE
13-AW	Santa Cruz	C	HILLTOP FELLOWSHIP CHURCH
14-AW	Santa Cruz	B	STRIP OF MULTIPLE RESIDENCES
15-AW	Santa Cruz	E	RIO RICO HAWK PIZZA, MANNY'S COWBOY BURGERS
16-AW	Santa Cruz	C	CALABASAS MIDDLE SCHOOL
17-AW	Santa Cruz	C	MOUNTAIN VIEW ELEMENTARY SCHOOL
18-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
19-AW	Santa Cruz	B	MULTIPLE RESIDENTIAL AREA
20-AW	Santa Cruz	C	AMADO BAPTIST CHURCH
21-AW	Pima	E	STRIP WITH RESTAURANT AND US POST OFFICE, AMADO, AZ
22-AW	Pima	B	MULTIPLE RESIDENCES
23-AW	Pima	B	MULTIPLE RESIDENCES
Vacant Land A			
1ASC	Santa Cruz	E	GENERAL COMMERCIAL
2ASC	Santa Cruz	E	GENERAL COMMERCIAL
3ASC	Santa Cruz	G	FEDERAL
4ASC	Santa Cruz	F	LIGHT INDUSTRIAL
5ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL
6ASC	Santa Cruz	F	LIGHT INDUSTRIAL
7ASC	Santa Cruz	B	MULTY FAMILY RESIDENTIAL

Orange Alternative

Reciver I.D.	County	NAC Category	Description
8ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
9ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
10ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
11ASC	Santa Cruz	F	LIGHT INDUSTRIAL
12ASC	Santa Cruz	B	SUBURBAN RANCH ZONING DISTRICT - 72,000 SQFT PER DWELLING
13ASC	Santa Cruz	G	GENERAL RURAL
14ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
Vacant Land A			
15ASC	Santa Cruz	F	LIGHT INDUSTRIAL
16ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
17ASC	Santa Cruz	G	GENERAL RURAL
18ASC	Santa Cruz	B	RESIDENTIAL (6,000 SQ FT)
19ASC	Santa Cruz	G	GENERAL RURAL
20ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
21ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
22ASC	Santa Cruz	B	MULTI-FAMILY RESIDENTIAL
23ASC	Santa Cruz	G	GENERAL RURAL
24ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
25ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
26ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
27ASC	Santa Cruz	G	GENERAL RURAL
28ASC	Santa Cruz	G	GENERAL RURAL
29ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
30ASC	Santa Cruz	E	NEIGHBORHOOD BUSINESS
31ASC	Santa Cruz	G	ARIZONA STATE LAND DEPARMENT
32ASC	Santa Cruz	G	GENERAL RURAL
33ASC	Santa Cruz	G	GENERAL RURAL
34ASC	Santa Cruz	F	LIGHT INDUSTRIAL
35ASC	Santa Cruz	G	GENERAL RURAL
36ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
37ASC	Santa Cruz	G	GENERAL RURAL
38ASC	Santa Cruz	B	SUBURBAN RANCH
39ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
40ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT

Orange Alternative

Reciver I.D.	County	NAC Category	Description
41ASC	Santa Cruz	B	SUBURBAN RANCH
42ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
43ASC	Santa Cruz	E	GENERAL BUSINESS ZONING DISTRICT
44APIMA	Pima	B	RURAL HOMESTEAD ZONE
45APIMA	Pima	B	RURAL HOMESTEAD ZONE
46APIMA	Pima	E	GENERAL BUSINESS ZONE
47APIMA	Pima	B	RURAL HOMESTEAD ZONE
Option B			
Noise Sensitive Areas B			
33-BE	Pima	B	MULTIPLE RESIDENCES
34-BE	Pima	B	MULTIPLE RESIDENCES
35-BE	Pima	C	GREEN VALLEY HOSPITAL
36-BE	Pima	B	MULTIPLE RESIDENCES
37-BE	Pima	E	US POST OFFICE, GREEN VALLEY
38-BE	Pima	E	LAVENDER RESTAURANT
39-BE	Pima	C	HAVEN GOLF COURSE
40-BE	Pima	B	MULTIPLE RESIDENCES
41-BE	Pima	E	DESERT DIAMOND CASINO
42-BE	Pima	B	RESIDENTIAL AREA - NW VALEMCIA RD. & SW OAHU LN
43-BE	Pima	C	SOUTHGATE ACADEMY - NW SANTA MARIA ST & SW VALENCIA RD
44-BE	Pima	B	MULTIPLE RESIDENCES AREA - DREXEL RD & SANTA PAULA ST.
45-BE	Pima	B	MULTIPLE RESIDENCES AREA - IRVINGTON & DREXEL RD.
46-BE	Pima	C	NEW HORIZON TEMPLE
47-BE	Pima	E	TEXAS ROAD HOUSE
48-BE	Pima	B	MULTIPLE RESIDENCES AREA
49-BE	Pima	E	MULTIPLE COMMERCIAL AREA: SANTA CRUZ PLAZA
50-BE	Pima	C	WORSHIP PLACE: CAPILLA DEL SENOR DE LOS MILAGROS
51-BE	Pima	C	PUEBLO HIGH SCHOOL CAMPGROUNDS
52-BE	Pima	C	MARSHAL HOME FOR MEN DAY CARE
53-BE	Pima	B	MULTIPLE RESIDENCES AREA.
54-BE	Pima	C	JULIAN WASH ARCHAEOLOGICAL PARK
55-BE	Pima	B	MULTIPLE RESIDENCES AREA.
56-BE	Pima	C	DIOCESE TUCSON ST. NICHOLAS
57-BE	Pima	C	TUCSON INTERNATIONAL MARIACHI

Orange Alternative

Reciver I.D.	County	NAC Category	Description
58-BE	Pima	C	LA FRONTERA MEDICAL CARE
59-BE	Pima	C	RADIO STATION: RADIO VIDA
60-BE	Pima	C	PAPAGOVILLE
61-BE	Pima	B	MULTIPLE RESIDENCES AREA
62-BE	Pima	B	MULTIPLE RESIDENCES AREA
63-BE	Pima	B	MULTIPLE RESIDENCES AREA
64-BE	Pima	B	MULTIPLE RESIDENCES AREA
65-BE	Pima	B	MULTIPLE RESIDENCES AREA
66-BE	Pima	C	SONORAN GLASS SCHOOL
67-BE	Pima	E	MULTIPLE BUSSINES & OFFICE SPACE
Noise Sensitive Areas B			
68-BE	Pima	E	MULTIPLE BUSSINES & OFFICE SPACE
69-BE	Pima	B	MULTIPLE RESIDENCES AREA
70-BE	Pima	B	MULTIPLE RESIDENCES AREA
71-BE	Pima	E	TUCSON FIRE DEPARMENT HEADQUARTERS
72-BE	Pima	B	MULTIPLE RESIDENCES AREA
73-BE	Pima	B	MULTIPLE RESIDENCES AREA
74-BE	Pima	E	US ATTORNEY GENERAL OFFICES, US DISTRICT COURT
75-BE	Pima	E	MULTIPLE OFFICES
76-BE	Pima	B	MULTIPLE RESIDENCES AREA
77-BE	Pima	B	MULTIPLE RESIDENCES AREA
78-BE	Pima	C	DAVIS BILINGUAL ELEMENTRY SCHOOL
79-BE	Pima	C	OURY PARK
80-BE	Pima	E	MULTIPLE BUSSINES & OFFICE SPACE
81-BE	Pima	B	MULTIPLE RESIDENCES AREA
82-BE	Pima	C	FRANCISCO ELIAS PARK
83-BE	Pima	B	MULTIPLE RESIDENCES AREA
84-BE	Pima	E	MULTIPLE BUSSINES & OFFICE SPACE
85-BE	Pima	C	TUCSON INDOOR SPORTS CENTER
86-BE	Pima	C	UNIVERSITY OF ARIZONA
87-BE	Pima	B	MULTIPLE RESIDENCES AREA
88-BE	Pima	C	PIMA COUNTY SUPERIOR COURTS
89-BE	Pima	C	NORTHSIDE FELLOWSHIP CHURCH
90-BE	Pima	B	MULTIPLE RESIDENCES AREA

Orange Alternative

Reciver I.D.	County	NAC Category	Description
91-BE	Pima	C	LAGUNA ELEMENTARY SCHOOL
92-BE	Pima	B	MULTIPLE RESIDENCES AREA
93-BE	Pima	B	MULTIPLE RESIDENCES AREA
94-BE	Pima	C	ALANON CLUB
95-BE	Pima	B	MULTIPLE RESIDENCES AREA
96-BE	Pima	C	THE PRACTICE GOLF LEARNING CENTER
97-BE	Pima	E	THE WAFFLE HOUSE
98-BE	Pima	E	MULTIPLE GENERAL BUSINESS ZONE
99-BE	Pima	E	JACK IN THE BOX
100-BE	Pima	E	MOTEL 6
101-BE	Pima	B	MULTIPLE RESIDENCES AREA
102-BE	Pima	B	MULTIPLE RESIDENCES AREA
103-BE	Pima	B	MULTIPLE RESIDENCES AREA
104-BE	Pima	B	MULTIPLE RESIDENCES AREA
Noise Sensitive Areas B			
105-BE	Pima	B	MULTIPLE RESIDENCES AREA
106-BE	Pima	B	MULTIPLE RESIDENCES AREA
107-BE	Pima	B	MULTIPLE RESIDENCES AREA
24-BW	Pima	B	MULTIPLE RESIDENCES AREA
25-BW	Pima	B	MULTIPLE RESIDENCES AREA
26-BW	Pima	C	WYNDHAM GREEN VALLEY CANOA RANCH RESORT
27-BW	Pima	B	MULTIPLE RESIDENCES AREA
28-BW	Pima	B	MULTIPLE RESIDENCES AREA
29-BW	Pima	B	MULTIPLE RESIDENCES AREA
30-BW	Pima	C	SAN IGNACIO GOLF COURSE
31-BW	Pima	B	MULTIPLE RESIDENCES AREA
32-BW	Pima	C	DESERT HILLS GOLF CLUB
33-BW	Pima	B	MULTIPLE RESIDENCES AREA
34-BW	Pima	E	CONTINENTAL SHOPPING PLAZA: MCDONALD'S, MAMA'S KITCHEN
35-BW	Pima	B	MULTIPLE RESIDENCES AREA
36-BW	Pima	C	GREEN VALLEY RECREATION
37-BW	Pima	E	BEST WESTERN GREEN VALLEY INN, CHINA VIEW, LA PLACITA RESTAURANT
38-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: COMFORT INN, ARIZONA FAMILY RESTAURANT
39-BW	Pima	B	MULTIPLE RESIDENCES AREA

Orange Alternative

Reciver I.D.	County	NAC Category	Description
40-BW	Pima	C	SAHAUARITA HOUSE OF WORSHIP
41-BW	Pima	B	SAHAUARITA MISION APARTMENTS
42-BW	Pima	C	ARBY'S, DAIRY QUEEN, HOLIDAY INN EXPRESS
43-BW	Pima	D	DESERT SKY CINEMA
44-BW	Pima	B	MULTIPLE RESIDENCES AREA
45-BW	Pima	C	ANAMAX RECREATION CENTER
46-BW	Pima	B	MULTIPLE RESIDENCES AREA
47-BW	Pima	C	PIMA DESERT VISTA CAMPUS
48-BW	Pima	C	PCC DESERT VISTA PARK
49-BW	Pima	E	HARKINS THEATRES, BEST BUY, RED LOBSTER, STARBUCKS, OLIVE GARDEN
50-BW	Pima	D	HARKINS THEATHERS
51-BW	Pima	B	MULTIPLE RESIDENCES AREA
52-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE
53-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: SILVERBELL INN, TRAVEL INN, REGAL INN, WAFFLE HOUSE
54-BW	Pima	B	MULTIPLE RESIDENCES AREA
55-BW	Pima	E	HOWARD JOHNSON INN, KETTLE, QUALITY INN, TRAVEL LODGE, MOTEL 6, CLARION INN
56-BW	Pima	C	SANTA CRUZ RIVER PARK
57-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: DAYS INN TUCSON CONVENTION CENTER, CARLS JR
Noise Sensitive Areas B			
58-BW	Pima	C	SANTA CRUZ RIVER PARK
59-BW	Pima	C	SANTA CRUZ RIVER PARK
60-BW	Pima	C	SANTA CRUZ RIVER PARK
61-BW	Pima	E	PIMA COMMUNITY COLLEGE, ARIZONA STATE UNIVERSITY SCHOOL OF SOCIAL WORK, CARRNGTON COLLEGE
62-BW	Pima	B	MULTIPLE RESIDENCES, ZONE RIO APARMENTS
63-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: SHELL, DENNY'S, RAMADA LIMITED, COUNTRY INN & SUITES
64-BW	Pima	C	SANTA CRUZ RIVER PARK
65-BW	Pima	C	SANTA CRUZ RIVER PARK
66-BW	Pima	C	ARIZONA STATE SCHOOLS FOR THE DEAF AND THE BLIND
67-BW	Pima	C	SANTA CRUZ RIVER PARK
68-BW	Pima	B	MULTIPLE RESIDENCES AREA.
69-BW	Pima	E	GRANT INN, HAMPTON INN
70-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: WAFFLE HOUSE
71-BW	Pima	C	SANTA CRUZ RIVER PARK
72-BW	Pima	B	MULTIPLE RESIDENCES: PRINCE OF TUCSON RV PARK

Orange Alternative

Reciver I.D.	County	NAC Category	Description
73-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: ARIZONA DEPARMENT OF ENVIROMENTAL QUALITY
74-BW	Pima	C	NORTHERN ARIZONA UNIVERSITY-TUCSON, CALVARY CHRISTIAN FELLOWSHIP
75-BW	Pima	C	NORTHERN ARIZONA UNIVERSITY
76-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: HOUSEHOLD HAZARDOUS WASTE PROGRAM
77-BW	Pima	C	SANTA CRUZ RIVER PARK
78-BW	Pima	C	SPORTS PARK
79-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: TUCSON AZ TRAVELODGE, BEST WESTERN, RED ROOF INN,
80-BW	Pima	B	MARANA GOLF CONTINENTAL RANCH, THE PINES
81-BW	Pima	C	MARANA GOLF CONTINENTAL FAIRWAYS
82-BW	Pima	B	MULTIPLE RESIDENCES & BUSSINES
83-BW	Pima	E	MULTIPLE GENERAL BUSINESS ZONE: ANASAZI STONE
84-BW	Pima	C	RILLITO VISTA PARK, US POSTAL OFFICE
85-BW	Pima	C	MARANA MIDDLE SCHOOL, MARJORIE W ESTES ELEMENTARY SCHOOL
86-BW	Pima	B	MULTIPLE HOMES
87-BW	Pima	B	MULTIPLE HOMES
Vacant Land B			
48BPIMA	Pima	B	RURAL HOMESTEAD ZONE
49BPIMA	Pima	B	RURAL HOMESTEAD ZONE
50BPIMA	Pima	B	MULTIPLE RESIDENCE ZONE
51BPIMA	Pima	E	GENERAL BUSINESS ZONE
52BPIMA	Pima	E	GENERAL BUSINESS ZONE
53BPIMA	Pima	B	RURAL HOMESTEAD ZONE
Vacant Land B			
54BPIMA	Pima	G	TRANSITIONAL ZONE
55BPIMA	Pima	B	SINGLE RESIDENCE ZONE
56BPIMA	Pima	E	LOCAL BUSINESS ZONE
57BPIMA	Pima	E	GENERAL BUSINESS ZONE
58BPIMA	Pima	B	SPECIFIC PLAN
59BPIMA	Pima	B	RURAL HOMESTEAD ZONE
60BPIMA	Pima	F	HEAVY INDUSTRIAL ZONE
61BPIMA	Pima	F	PARK INDUSTRIAL
62BPIMA	Pima	E	PLANNED AREA DEVELOPMENT
63BPIMA	Pima	B	RESIDENCE ZONE (R-1)
64BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)

Orange Alternative

Reciver I.D.	County	NAC Category	Description
66BPIMA	Pima	B	MOBILE HOME ZONE (MH-1)
67BPIMA	Pima	E	OFFICE ZONE
68BPIMA	Pima	B	RESIDENCE ZONE
69BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
70BPIMA	Pima	B	RESIDENCE ZONE
71BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
72BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
73BPIMA	Pima	E	COMMERCIAL ZONE
74BPIMA	Pima	F	PARK INDUSTRIAL
75BPIMA	Pima	B	RESIDENCE ZONE (RX-1)
76BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
77BPIMA	Pima	B	GR-1 RURAL RESIDENTIAL ZONE
78BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
79BPIMA	Pima	G	TRANSPORTATION CORRIDOR ZONE
80BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
81BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
82BPIMA	Pima	B	SH SUBURBAN HOMESTEAD ZONE
83BPIMA	Pima	B	SPECIFIC PLAN
84BPIMA	Pima	E	VILLAGE COMMERCIAL
85BPIMA	Pima	B	SPECIFIC PLAN: CONTINENTAL RANCH
86BPIMA	Pima	B	SPECIFIC PLAN: CASCADA
87BPIMA	Pima	B	SPECIFIC PLANS
88BPIMA	Pima	F	LIGHT INDUSTRIAL ZONE (I-1)
89BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
90BPIMA	Pima	B	GR-1 RURAL RESIDENTIAL ZONE
91BPIMA	Pima	G	LARGE LOT ZONE
Vacant Land B			
92BPIMA	Pima	E	SHOPS AT TANGERINE AND I-10 MOTORPLEX
93BPIMA	Pima	G	MEDIUM LOT ZONE
94BPIMA	Pima	E	VILLAGE COMMERCIAL
95BPIMA	Pima	B	THE VILLAGES OF TORTOLITA SPECIFIC PLAN
96BPIMA	Pima	B	SINGLE FAMILY RESIDENTIAL
97BPIMA	Pima	B	SANDERS GROVE
98BPIMA	Pima	B	THE VILLAGES OF TORTOLITA SPECIFIC PLAN

Orange Alternative

Reciver I.D.	County	NAC Category	Description
Option G			
Noise Sensitive Areas G			
1-GE	Pinal	B	MULTIPLE HOMES
2-GE	Pinal	B	MULTIPLE HOMES
3-GE	Pinal	E	AMERICAS BEST VALUE INN
4-GE	Pinal	B	MULTIPLE HOMES AREA + SILVERADO RV RESORT
5-GE	Pinal	E	MULTIPLE BUSSINES AREA: MCDONALD'S, CARL'S JR
6-GE	Pinal	E	MULTIPLE BUSSINES AREA: DAYS INN ELOY
7-GE	Pinal	B	MULTIPLE HOMES AREA
8-GE	Pinal	B	MULTIPLE HOMES AREA
9-GN	Pinal	B	MULTIPLE HOMES AREA
10-GN	Pinal	C	MOUNTAIN VIEW CEMENTERY
11-GN	Pinal	B	MULTIPLE HOMES AREA
1-GW	Pinal	C	ARIZONA VETERANS MEMORIAL CEMENTERY
2-GW	Pinal	B	MULTIPLE HOMES AREA
3-GW	Pinal	B	PICACHO PEAK RV RESORT
4-GW	Pinal	B	MULTIPLE HOMES AREA
5-GW	Pinal	C	FIRST BAPTIST CHURCH PICACHO
6-GW	Pinal	E	FRANKIE'S CHUCKWAGON
7-GW	Pinal	C	SAN MIGUEL GOLF CLUB
8-GW	Pinal	E	PIZZA HUT
9-GW	Pinal	B	MULTIPLE HOMES AREA
10-GW	Pinal	E	MULTIPLE BUSSINES AREA: MOTEL 6 CASA GRANDE
11-GW	Pinal	B	MULTIPLE HOMES AREA
12-GS	Pinal	B	MULTIPLE HOMES AREA
13-GS	Pinal	B	MULTIPLE HOMES AREA
14-GS	Pinal	E	TRANSPORTATION DEPARMENT HWY
15-GS	Pinal	B	MULTIPLE HOMES
16-GS	Pinal	B	MULTIPLE HOMES
Noise Sensitive Areas G			
17-GS	Pinal	B	MULTIPLE HOMES
19-GS	Pinal	B	MULTIPLE HOMES
Vacant Land G			
99GPINAL	Pinal	F	LIGHT INDUSTRY AND WAREHOUSE ZONE

Orange Alternative

Reciver I.D.	County	NAC Category	Description
100GPINAL	Pinal	F	INDUSTRIAL ZONE
101GPINAL	Pinal	B	MULTIPLE RESIDENCE ZONE
102GPINAL	Pinal	E	GENERAL BUSINESS ZONE
103GPINAL	Pinal	E	LOCAL BUSINESS ZONE
104GPINAL	Pinal	E	LOCAL BUSINESS ZONE
105GPINAL	Pinal	G	GENERAL RURAL ZONE
106GPINAL	Pinal	B	SUBURBAN RANCH ZONE
107GPINAL	Pinal	E	LOCAL BUSINESS ZONE
108GPINAL	Pinal	B	LIGHT INDUSTRY AND WAREHOUSE ZONE
109GPINAL	Pinal	B	MANUFACTURED HOME PARK ZONE
110GPINAL	Pinal	F	INDUSTRIAL ZONE
111GPINAL	Pinal	E	GENERAL BUSINESS ZONE
112GPINAL	Pinal	E	LOCAL BUSINESS ZONE
113GPINAL	Pinal	E	GENERAL BUSINESS ZONE
114GPINAL	Pinal	G	GENERAL RURAL ZONE
115GPINAL	Pinal	B	PARK MODEL & RECREATIONAL VEHICLE PARK ZONE
116GPINAL	Pinal	E	LOCAL BUSINESS ZONE
117GPINAL	Pinal	F	INDUSTRIAL ZONE
118GPINAL	Pinal	B	PARK MODEL & RECREATIONAL VEHICLE PARK ZONE
119GPINAL	Pinal	B	MANUFACTURED HOME ZONE
120GPINAL	Pinal	B	SINGLE RESIDENCE ZONE
121GPINAL	Pinal	E	COMMUNITY COMMERCIAL
122GPINAL	Pinal	B	MEDIUM DENSITY RESIDENTIAL
123GPINAL	Pinal	F	GENERAL INDUSTRIAL
124GPINAL	Pinal	B	ESTATE DENSITY RESIDENTIAL (43,560 SQ.FT)
125GPINAL	Pinal	F	LIGHT INDUSTRAIL
126GPINAL	Pinal	E	COMMUNITY COMMERCIAL
127GPINAL	Pinal	B	HIGH DENSITY RESIDENTIAL (24DU/ACRE)
128GPINAL	Pinal	F	LIGHT INDUSTRAIL
129GPINAL	Pinal	B	ESTATE DENSITY RESIDENTIAL (43,560 SQ.FT)
130GPINAL	Pinal	E	COMMUNITY COMMERCIAL
131GPINAL	Pinal	F	LIGHT INDUSTRAIL
132GPINAL	Pinal	F	GENERAL INDUSTRIAL

Orange Alternative

Reciver I.D.	County	NAC Category	Description
Vacant Land G			
133GPINAL	Pinal	F	LIGHT INDUSTRAIL
134GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
135GPINAL	Pinal	F	LIGHT INDUSTRAIL
136GPINAL	Pinal	B	HIGH DENSITY RESIDENTIAL (10DU/ACRE)
137GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
138GPINAL	Pinal	F	LIGHT INDUSTRAIL
139GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
140GPINAL	Pinal	B	MEDIUM DENSITY RESIDENTIAL (8.000 SQ.FT)
141GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
142GPINAL	Pinal	E	COMMUNITY COMMERCIAL
143GPINAL	Pinal	F	LIGHT INDUSTRAIL
144GPINAL	Pinal	G	RURAL ZONING
145GPINAL	Pinal	B	LOW DENSITY RESIDENTIAL
146GPINAL	Pinal	F	LIGHT INDUSTRAIL
147GPINAL	Pinal	G	RURAL ZONING
148GPINAL	Pinal	B	GUEST RANCH
149GPINAL	Pinal	E	GENERAL BUSINESS ZONE
150GPINAL	Pinal	B	MANUFACTURED HOME
151GPINAL	Pinal	E	GENERAL BUSINESS ZONE
152GPINAL	Pinal	B	GUEST RANCH
153GPINAL	Pinal	B	SUBURBAN RANCH ZONE
154GPINAL	Pinal	B	GUEST RANCH
155GPINAL	Pinal	B	GUEST RANCH
156GPINAL	Pinal	B	SUBURBAN RANCH ZONE
157GPINAL	Pinal	E	GENERAL BUSINESS ZONE
158GPINAL	Pinal	B	GUEST RANCH
159GPINAL	Pinal	E	GENERAL BUSINESS ZONE
160GPINAL	Pinal	B	SINGLE RESIDENCE ZONE
161GPINAL	Pinal	B	SINGLE RESIDENCE ZONE

Orange Alternative

Reciver I.D.	County	NAC Category	Description
Option H			
Noise Sensitive Areas H			
1-H	Pinal	B	MULTIPLE HOMES
2-H	Pinal	B	MULTIPLE HOMES
3-H	Pinal	C	PINAL COUNTY WEST PARK
4-H	Pinal	B	MULTIPLE HOMES
Vacant Land H			
162HPINAL	Pinal	B	GUEST RANCH
163HPINAL	Pinal	E	GENERAL BUSINESS ZONE
164HPINAL	Pinal	E	GENERAL BUSINESS ZONE
165HPINAL	Pinal	F	CI-1 LIGHT INDUSTRY AND WAREHOUSE ZONE
166HPINAL	Pinal	B	SUBURBAN RANCH ZONE
167HPINAL	Pinal	B	SINGLE RESIDENCE ZONE
168HPINAL	Pinal	B	GUEST RANCH
169HPINAL	Pinal	F	CI-1 LIGHT INDUSTRY AND WAREHOUSE ZONE
Option K			
Noise Sensitive Areas K			
1-K	Pinal	B	MULTIPLE HOMES
2-K	Pinal	B	MULTIPLE HOMES
3-K	Pinal	B	MULTIPLE HOMES
Vacant Land K			
170KMARICOPA	Maricopa	G	RURAL ZONING
171KMARICOPA	Maricopa	E	GENERAL BUSINESS ZONE
172KMARICOPA	Maricopa	B	MULTIFAMILY RESIDENCE
173KMARICOPA	Maricopa	F	GENERAL INDUSTRIAL
174KMARICOPA	Maricopa	E	GENERAL BUSINESS ZONE
175KMARICOPA	Maricopa	F	PLANNED INDUSTRIAL ZONING DISTRIC
176KMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
177KMARICOPA	Maricopa	F	SOLAR FIELD OVERLAY ZONE

Orange Alternative

Reciver I.D.	County	NAC Category	Description
Option Q1			
Noise Sensitive Areas Q1			
1-Q1	Maricopa	B	MULTIPLE HOMES
2-Q1	Maricopa	C	LEWIS PRISON
3-Q1	Maricopa	B	MULTIPLE HOMES
4-Q1	Maricopa	C	LEWIS CORRECTION DEPARTMENT
Vacant Land Q1			
178Q1MARICOPA	Maricopa	B	PLANNED COMMUNITY
182Q1MARICOPA	Maricopa	E	GENERAL BUSINESS ZONE
183Q1MARICOPA	Maricopa	E	GENERAL COMMERCIAL
184Q1MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
185Q1MARICOPA	Maricopa	G	RURAL
186Q1MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
187Q1MARICOPA	Maricopa	E	GENERAL COMMERCIAL
Vacant Land Q1			
188Q1MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
Option Q2			
Noise Sensitive Areas Q2			
1-Q2	Maricopa	B	MULTIPLE HOMES
2-Q2	Maricopa	B	MULTIPLE HOMES
Vacant Land Q2			
179Q2MARICOPA	Maricopa	G	RURAL
189Q2MARICOPA	Maricopa	B	RURAL RESIDENTIAL
190Q2MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
Option Q3			
Noise Sensitive Areas Q3			
1-Q3	Maricopa	B	MULTIPLE HOMES
Vacant Land Q3			
180Q3MARICOPA	Maricopa	B	PLANNED COMMUNITY
181Q3MARICOPA	Maricopa	B	MULTIPLE FAMILY RESIDENCE ZONE
191Q3MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
192Q3MARICOPA	Maricopa	E	COMMERCIAL CENTER
193Q3MARICOPA	Maricopa	B	PLANNED COMMUNITY

Orange Alternative

Reciver I.D.	County	NAC Category	Description
194Q3MARICOPA	Maricopa	E	COMMERCIAL CENTER
195Q3MARICOPA	Maricopa	B	RURAL RESIDENTIAL
196Q3MARICOPA	Maricopa	E	GENERAL COMMERCIAL
197Q3MARICOPA	Maricopa	B	RURAL RESIDENTIAL
198Q3MARICOPA	Maricopa	B	PLANNED COMMUNITY
199Q3MARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT
200Q3MARICOPA	Maricopa	E	COMMUNITY COMMERCIAL
201Q3MARICOPA	Maricopa	F	GENERAL INDUSTRIAL
Option S			
Noise Sensitive Areas S			
1-S	Maricopa	B	MULTIPLE HOMES
2-S	Maricopa	B	MULTIPLE HOMES
Vacant Land S			
203SMARICOPA	Maricopa	G	RURAL ZONING DISTRICT - 1 ACRE PER DWELLING UNIT

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Attachment 2

Receiver Location Figures

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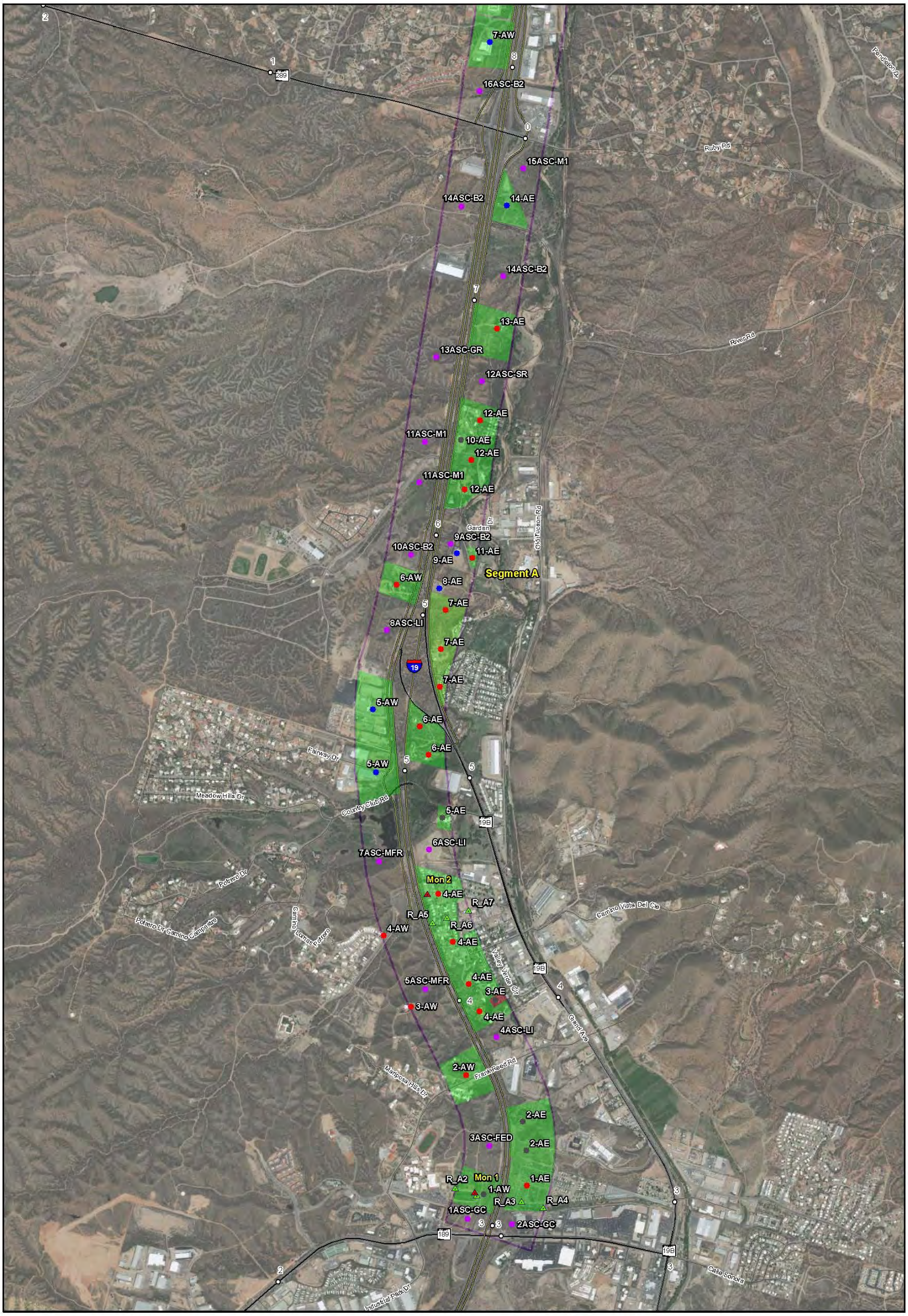


LEGEND

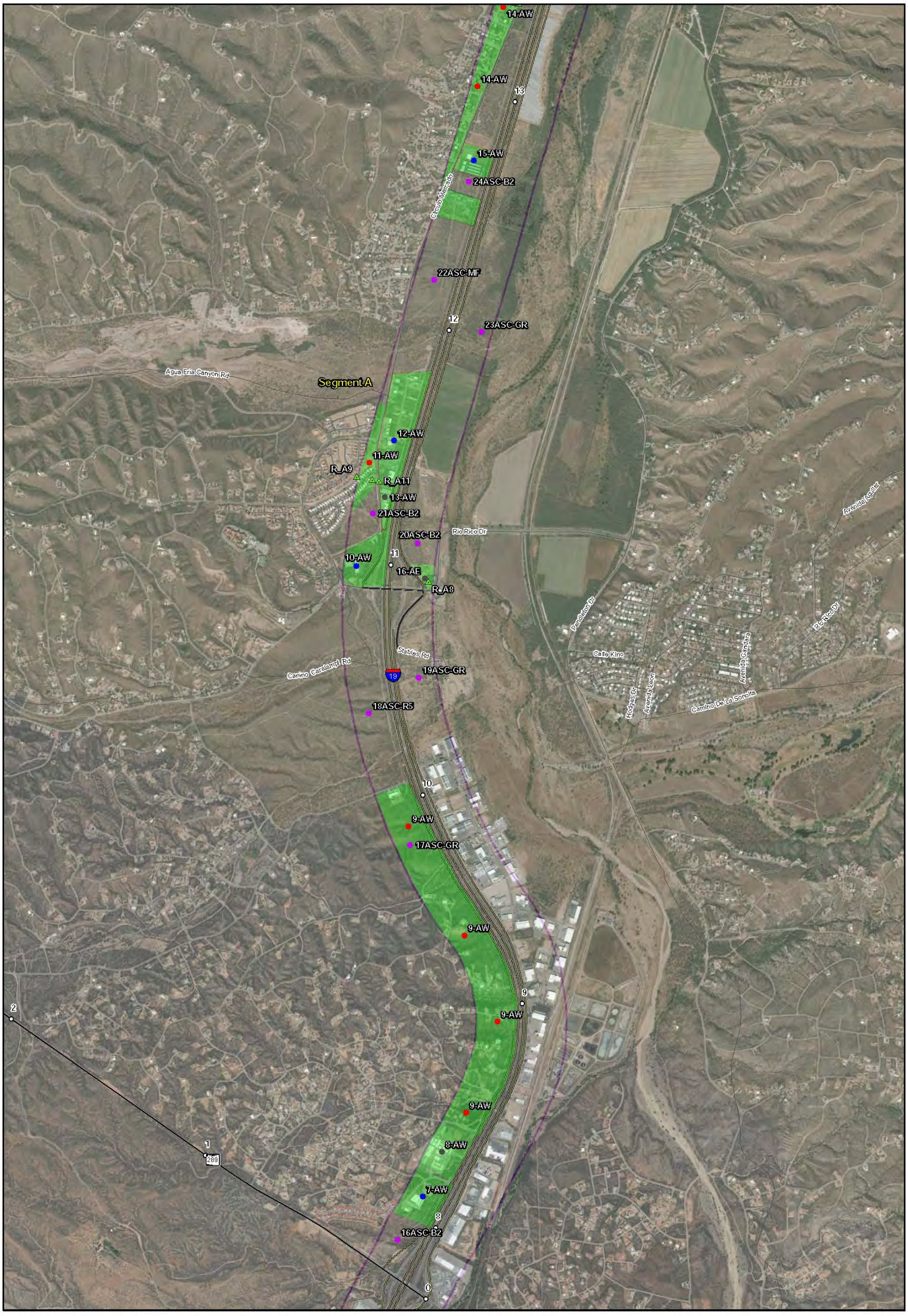
- Alternative Purple Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton Environmental Consulting, LLC



LEGEND

- Alternative Purple Study Area
- Mileposts
- Category B
- Category C
- Category D
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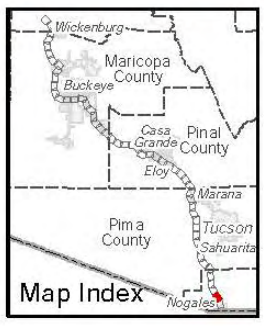
- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton Environmental Consulting, LLC



Rock Corral Rd
Santa Gertrudis Ln
Safero Rd
18
England Dr
30ASC-B1
31ASC-GR
17-AE
17
Josephine Canyon Rd
28ASC-GR
Segment A
Cayetano
Cayetano Rd
28ASC-GR
27ASC-GR
16
Cayetano
Cayetano Rd
19
Pablo Parado Rd
Pendleton Dr
15
14-AW
Peck Canyon Rd
R_A16
26ASC-B2
R_A18
Calabasa School Rd
R_A15
17-AW
Circulo Mercado
14
R_A14
25ASC-B2
Mon 3
R_A11a
14-AW
14-AW
13

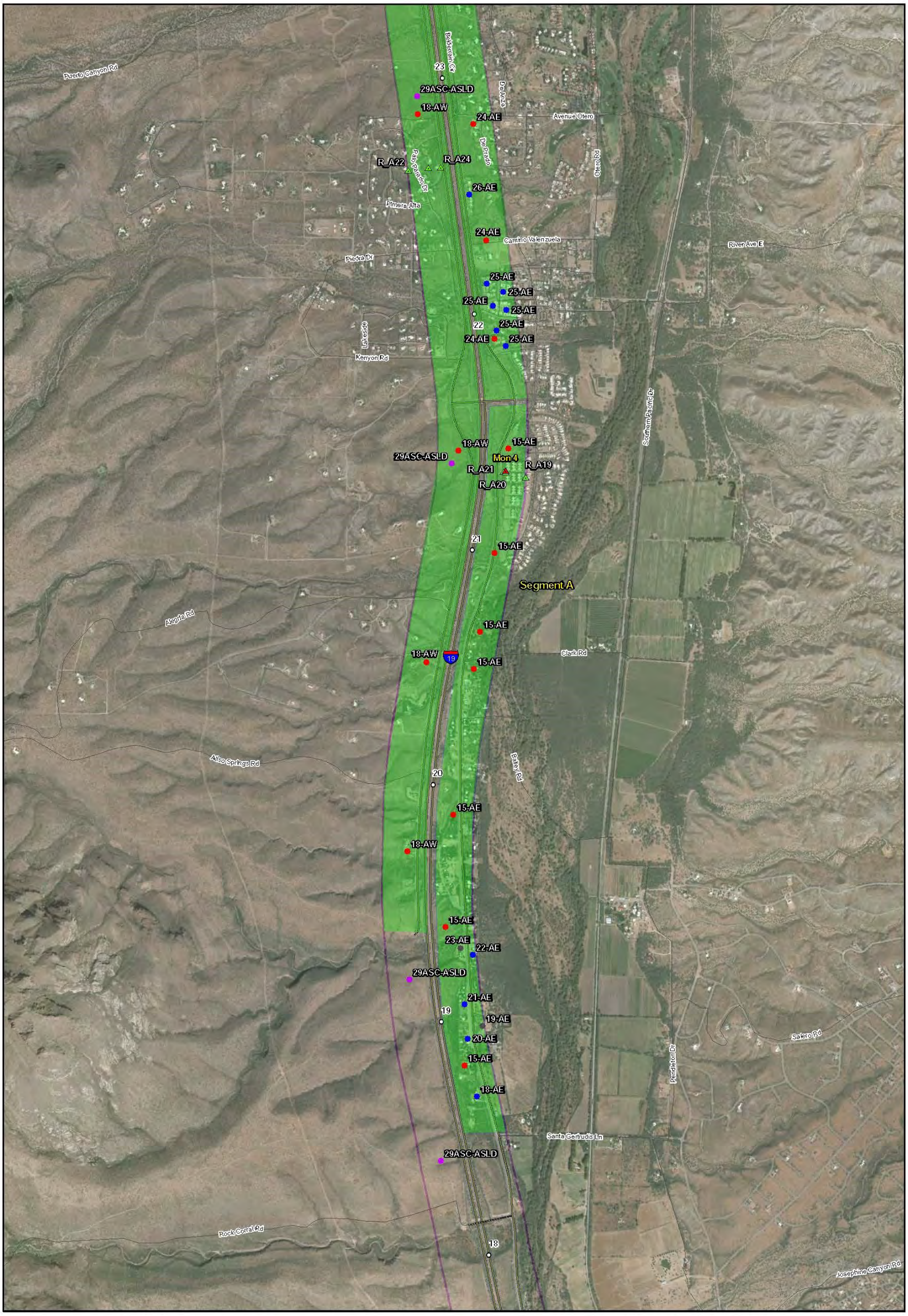
LEGEND

- Alternative Purple Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- Monitoring Site
- Noise Receiver

0 1000 2000
FEET

Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton
Environmental Consulting, LLC



LEGEND

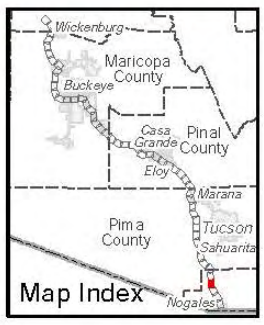
- Alternative Purple Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton Environmental Consulting, LLC



29-AE
28
19-AW
28-AE
Agua Caliente Rd
Gonzalez Dr
19-AW
38ASC-SR
27-AE
36ASC-B2
27
35ASC-GR
37ASC-GR
34ASC-M1
32ASC-GR
Southern Pacific Dr
26
Segment A
33ASC-GR
19
25
24-AE
31ASC-ASLD
Chavez Siding Rd
31ASC-ASLD
24
24-AE
Camino Esplendido
De Anza
De Anza
24-AE
Belderrain Cir
De Anza
Puerto Canyon Rd
Otero Rd
23
29ASC-ASLD
18-AW
24-AE
Avenue Otero

LEGEND

- Alternative Purple Study Area
- Mileposts
- Category B
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- Category G
- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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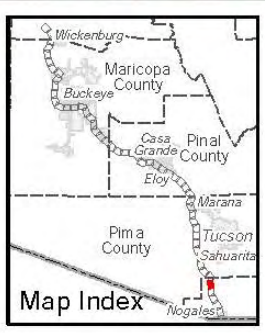

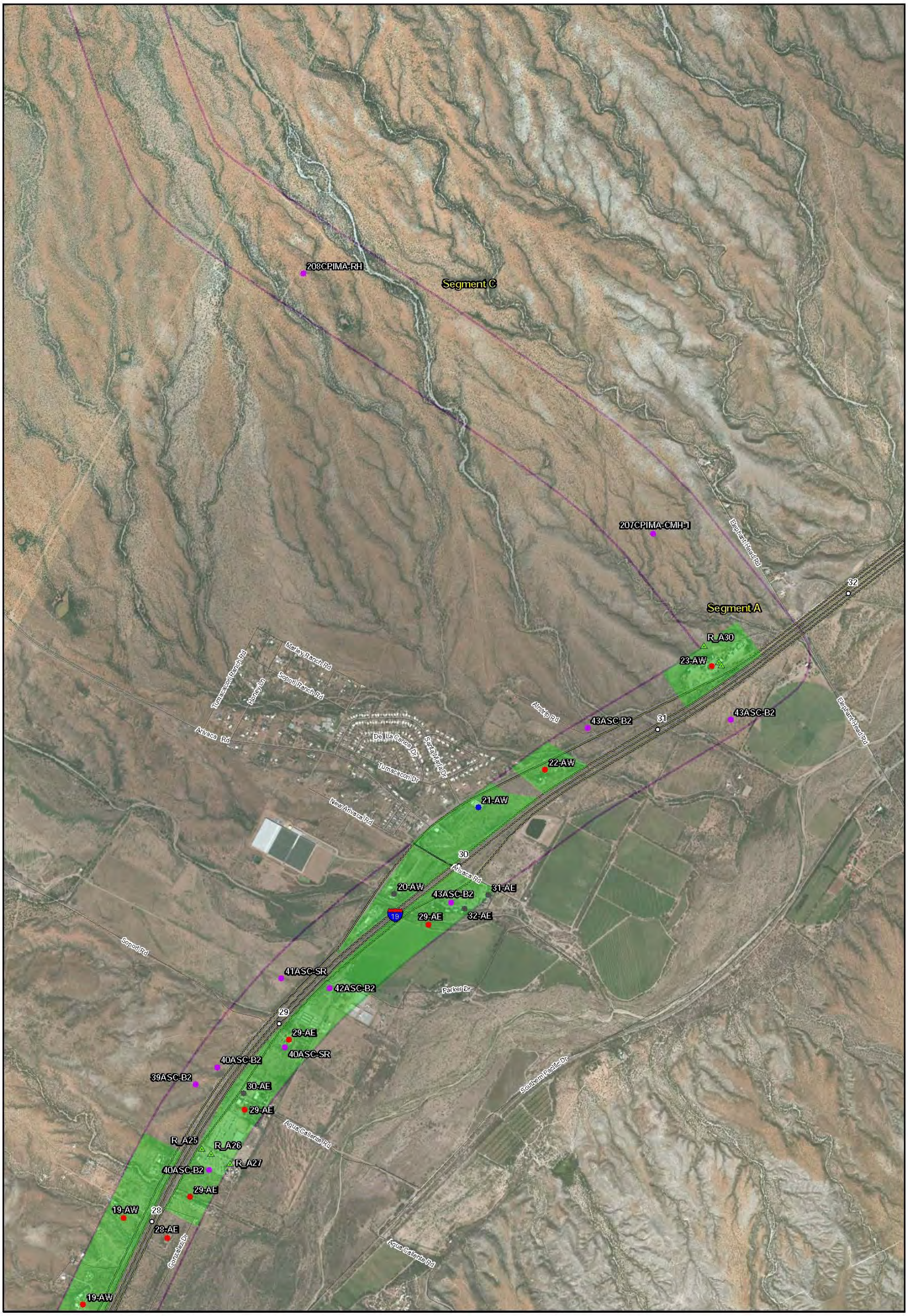

LEGEND

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0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton Environmental Consulting, LLC

208CPIMA-RH

208CPIMA-RH

Segment C

208CPIMA-RH

208CPIMA-RH

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0 1000 2000
FEET

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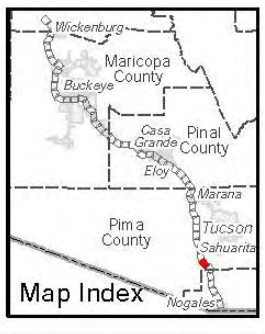

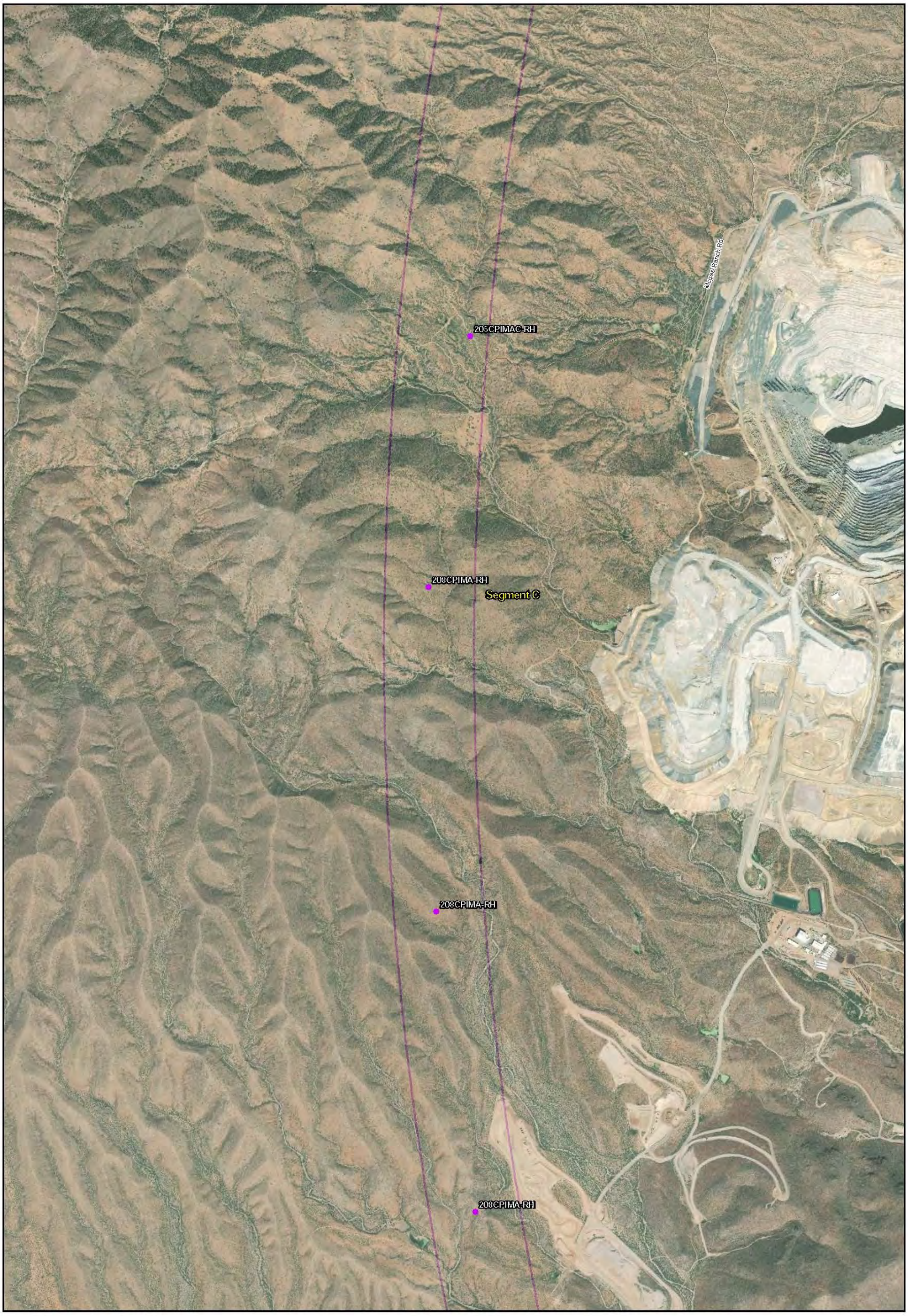

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SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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Environmental Consulting, LLC

214CPIMA-RH

214CPIMA-RH

Segment C

213CPIMA-CR-1

R_C3

R_C1

1-C

Mcgee Ranch Rd

White Tibbs Loop

Mcgee Ranch Rd

213CPIMA-CR-1

Mcgee Ranch Rd

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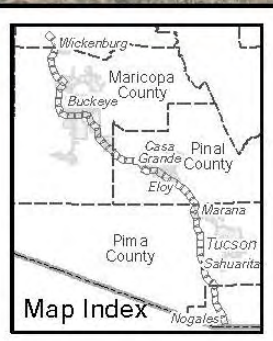

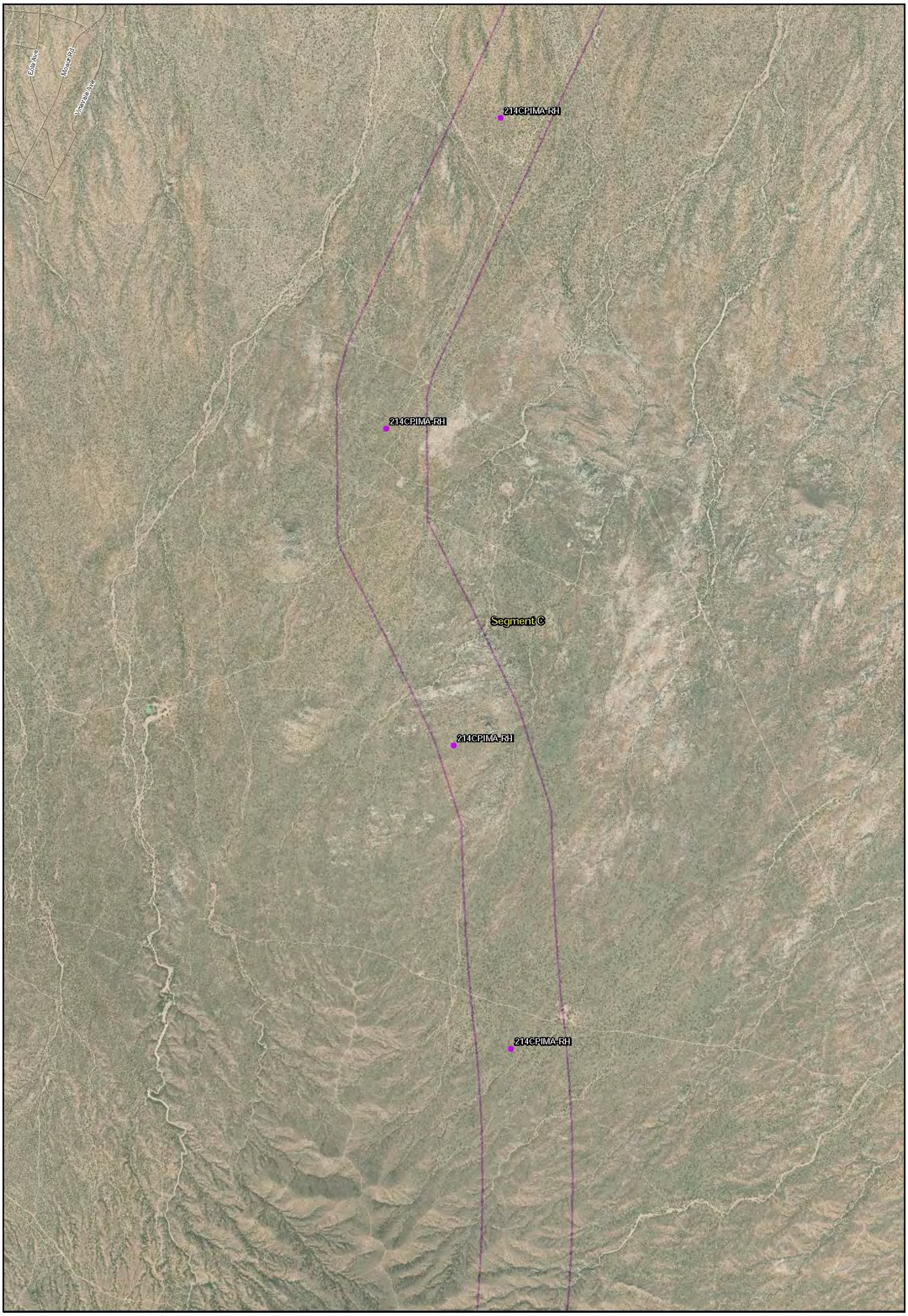

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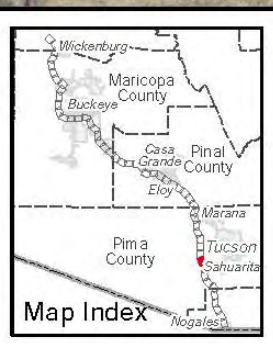

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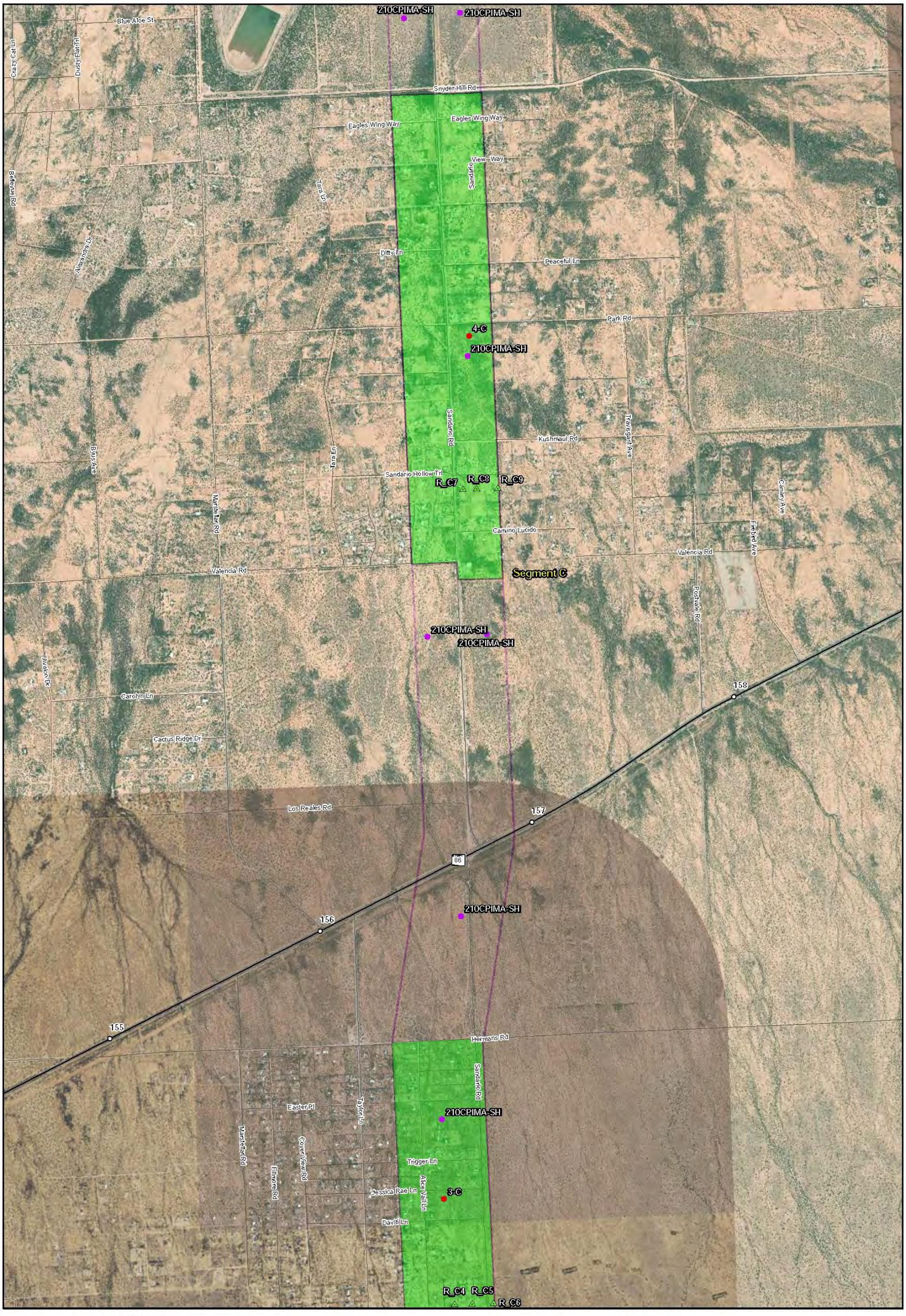
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210CPIMA-SH
Blue Aloe St
Crazy Cat Ln
Dusty Flat Trl
Snyder Hill Rd
Eagles Wing Way
Eagles Wing Way
Sandario View Way
Tara Ln
Bilmar Rd
Alexandra Dr
Ditty Ln
Peaceful Ln
Park Rd
4-C
210CPIMA-SH
Sandario Rd
Kushmaul Rd
Travisgant Ave
Canary Ave
Firebird Ave
Byus Ave
Tara Ln
Sandario Hollow Trl
R_C7
R_C8
R_C9
Marsteller Rd
Camino Lucido
Valencia Rd
Valencia Rd
Segment C
Postvale Rd
210CPIMA-SH
210CPIMA-SH
Avalon Dr
Carolyn Ln
Cactus Ridge Dr
158
Los Reales Rd
157
86
210CPIMA-SH
156
155
Hermans Rd
Easter Pl
Taylor Ln
Sandario Rd
210CPIMA-SH
Marsteller Rd
Fillmore Rd
Cover View Rd
Trigger Ln
Alice Vail Ln
Jessica Rae Ln
3-C
Daviti Ln
R_C4
R_C5
R_C6
LEGEND
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Noise Receiver
0
1000
2000
FEET
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newton
Environmental Consulting, LLC
Wickenburg
Maricopa County
Buckeye
Casa Grande
Pinal County
Eloy
Marana
Pima County
Tucson
Sahuarita
Nogales
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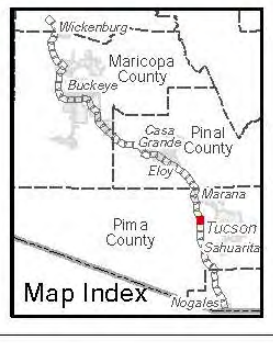

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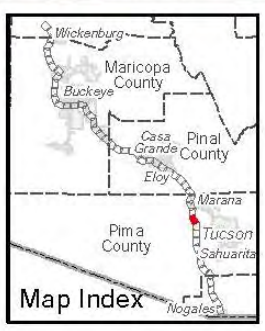

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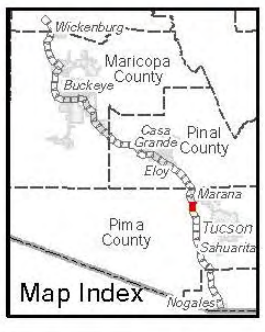

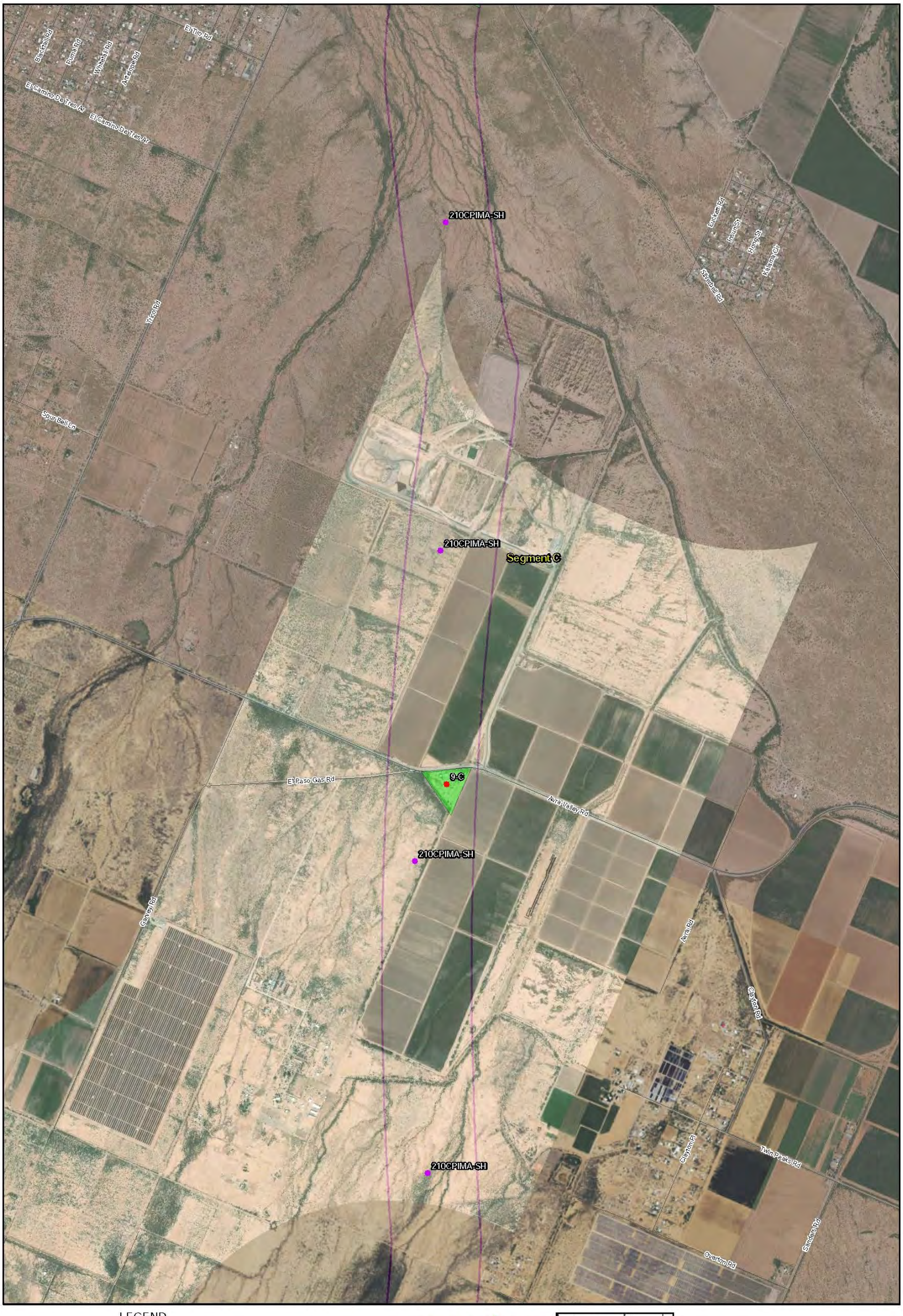

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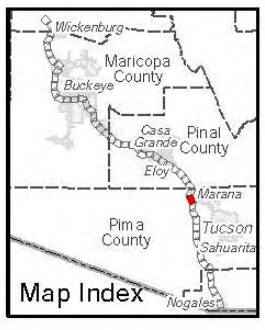

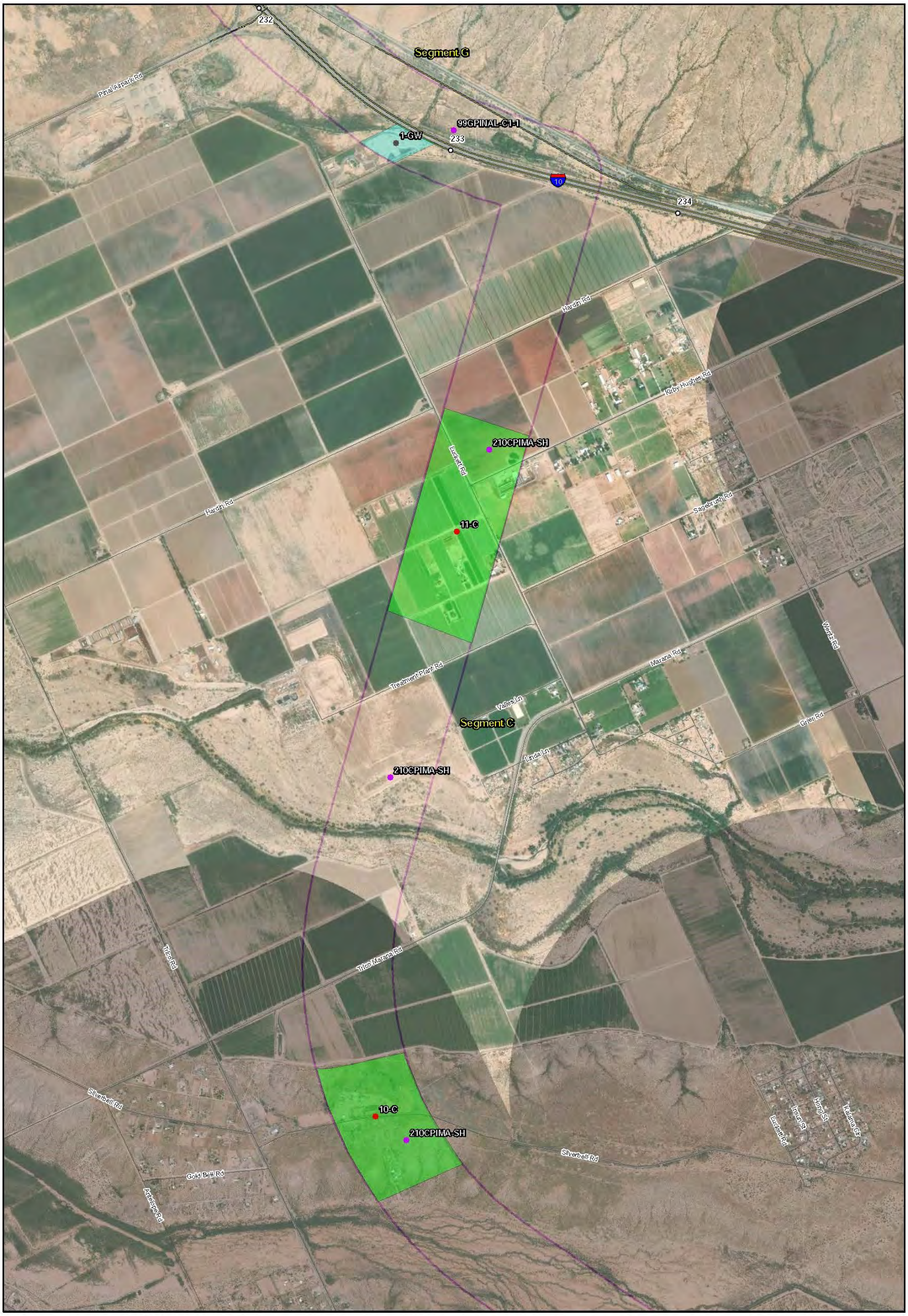

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99GPINAL-C1-1
99GPINAL-C1-1
228
229
99GPINAL-C1-1
99GPINAL-C1-1
Segment G
I-10 E Frontage Rd
230
10
99GPINAL-C1-1
99GPINAL-C1-1
231
Pinal Airpark Rd
99GPINAL-C1-1
99GPINAL-C1-1
232
1-GW

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105GPINAL-GR
223
105GPINAL-GR
224
105GPINAL-GR
Park Link Dr
Segment G
105GPINAL-GR
225
I-10 E Frontage Rd
10
103GPINAL-CB-1
104GPINAL-CB-2
2-GW
226
Sasco Rd
102GPINAL-CB-2
100GPINAL-CI-1
101GPINAL-CR-4
227
99GPINAL-C1-1
99GPINAL-C1-1

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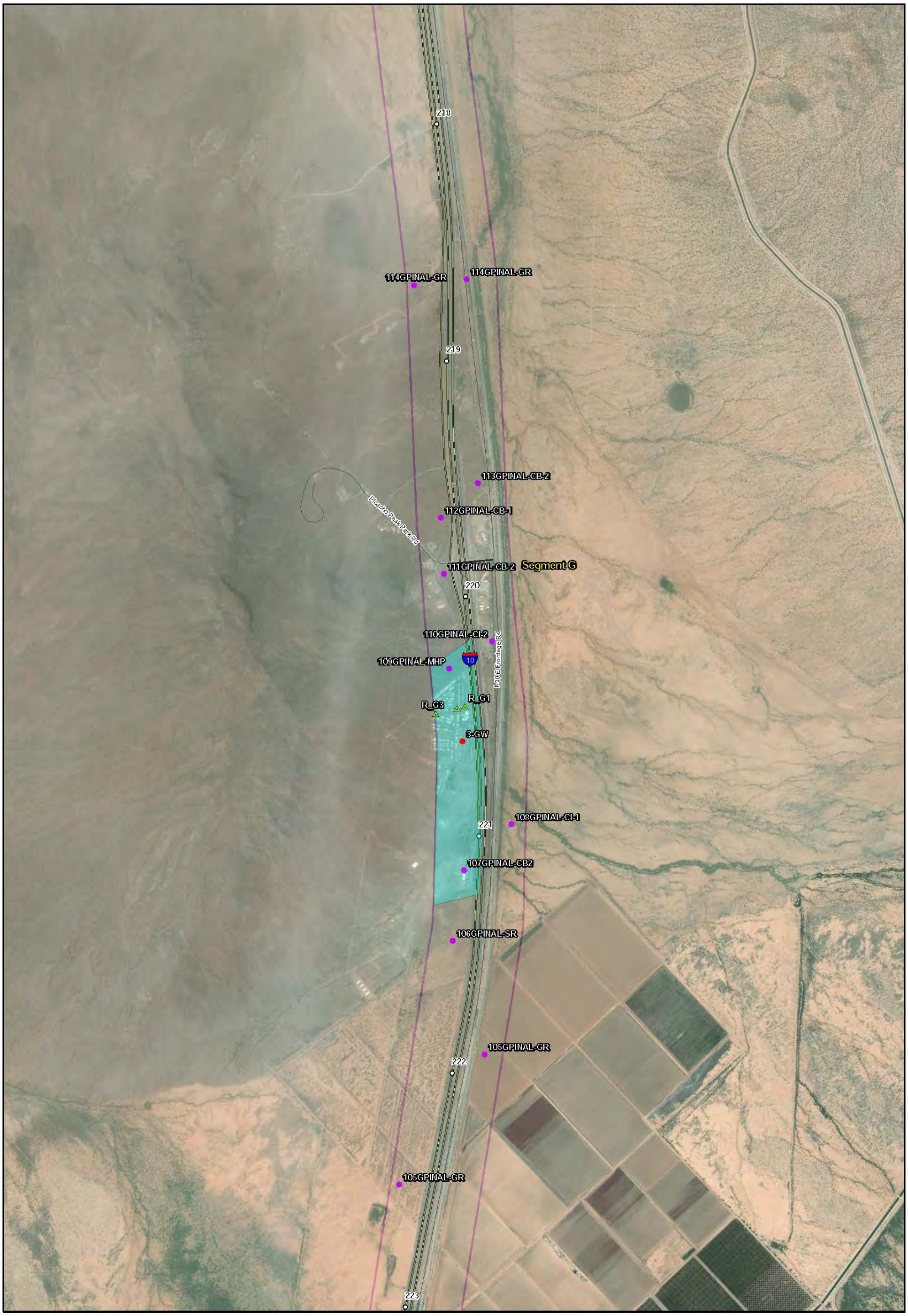

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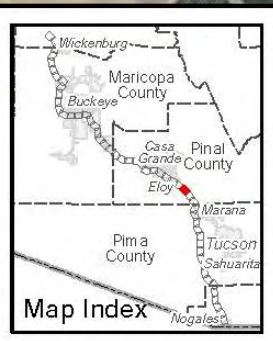

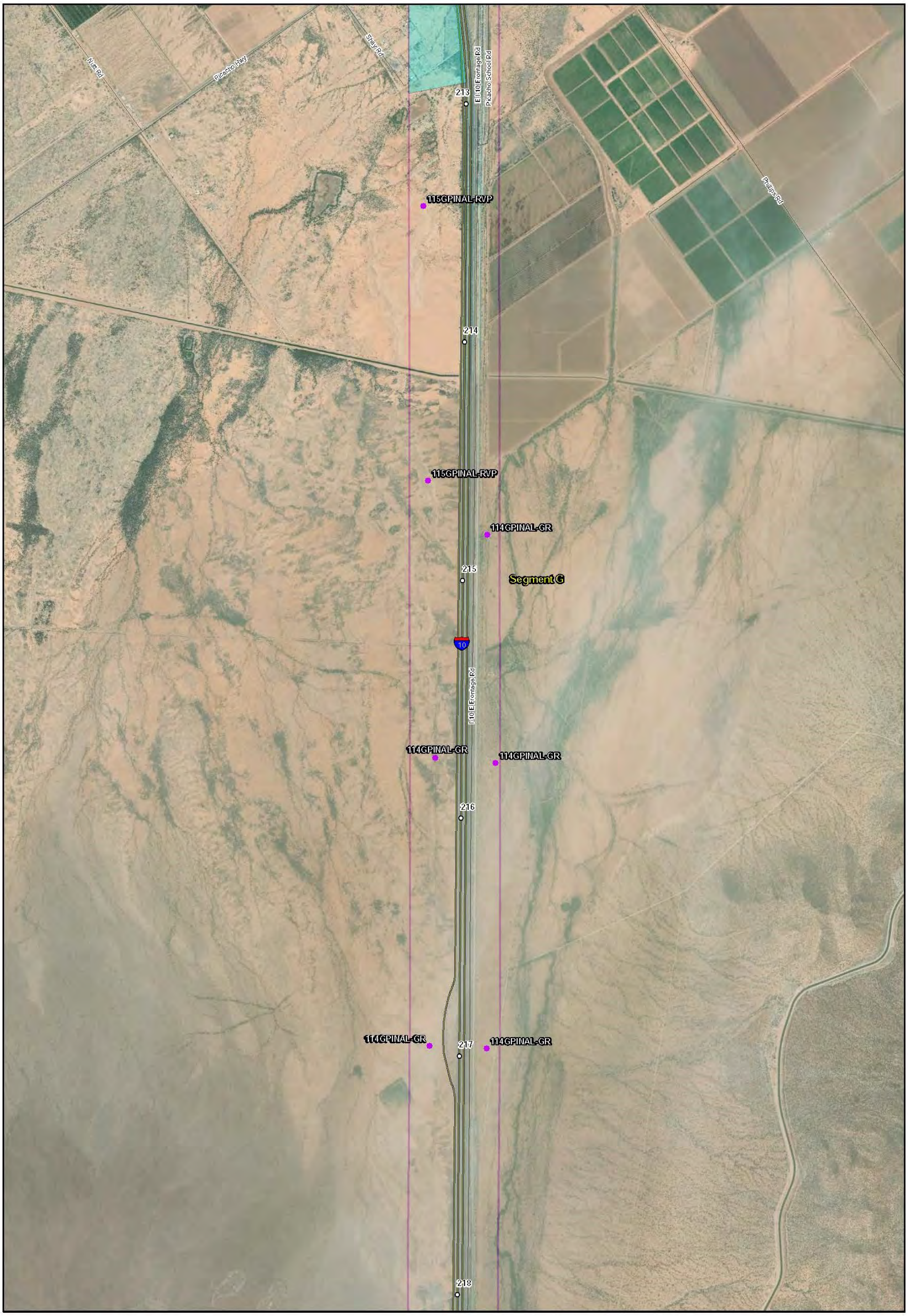

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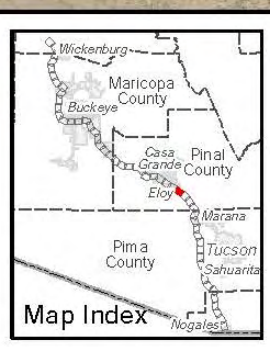

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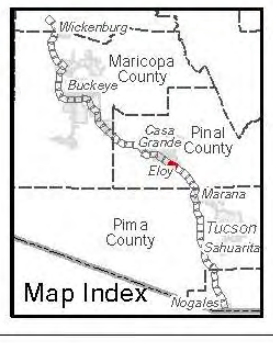

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Mon 37
4-GE
R_G6
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5-GE
5-GE
5-GE
5-GE
134GPINAL-R1-12
133GPINAL-I-1
204
3-GE
8-GW
131GPINAL-I-1
132GPINAL-I-2
7-GW
130GPINAL-C-2
205
Segment G
128GPINAL-I-2
10
128GPINAL-I-2
206
129GPINAL-R1-43
128GPINAL-I-2
124GPINAL-R1-43
125GPINAL-L-1
207
126GPINAL-C-2
127GPINAL-R-4
2-GE
125GPINAL-L-1
208
125GPINAL-L-1
Pantano Valley Rd
Beverly Dr
Yolo Dr
Portola Dr
Maywood Dr
George Dr
Butterfield Dr
Country Club Rd
Supai Dr
Cortaro Dr
Topawa Dr
Houser Rd
Toltec Buttes Rd
Tom St
Toltec Buttes Rd
Wagon Wheel Way
Gun Play Rd
Buckaroo Ln
Arizona Way
Toltec Hwy
Curry Rd
Tweedy Rd
Alsdorf Rd
Toltec Hwy
Curry Rd
Tumbleweed Rd
Tweedy Rd
Batanglia Dr
Eleven Mile Corner Rd
Milligan Rd
Eleven Mile Corner Rd
La Brea St
Oro Dr
Bush St
Tomo Rd
Coolidge Dr
Wunatka Dr
Walnut Dr
Orten Dr
Houser Rd
Casa Grande Pinacho Hwy
Houser Rd
Giles St
Main
Shira St
Cameron Dr
Cameron Dr
Arizona St
Golden St
Mescalero St
Cibola Cir
Valley Rd
Azteca Rd
Roble Cir
Monarch Dr
Catalina Dr
Del Monte Dr
Turquoise Dr
Tamarax Dr
Palm Cir
Estrella Rd
Kiowa Dr
Siesta Dr
Kiowa Dr
Zapotec Ave
San Carlos Dr
Hohokam Dr
Kiami Dr
Chaco Dr
Maya Rd
Tonto Rd
Cocopa Dr
Algodon Dr
Juniper Dr
Mateo Dr
Bandelier Dr
Manu Dr
Corez Dr
Frontier St
Phoenix Ave
Adams St
Curiel St
Washington St
2nd St
3rd St
4th St
Main St
Myers Blvd
Sunshine Blvd
Stuart Blvd
Santa Cruz St
D St
0 1000 2000 FEET
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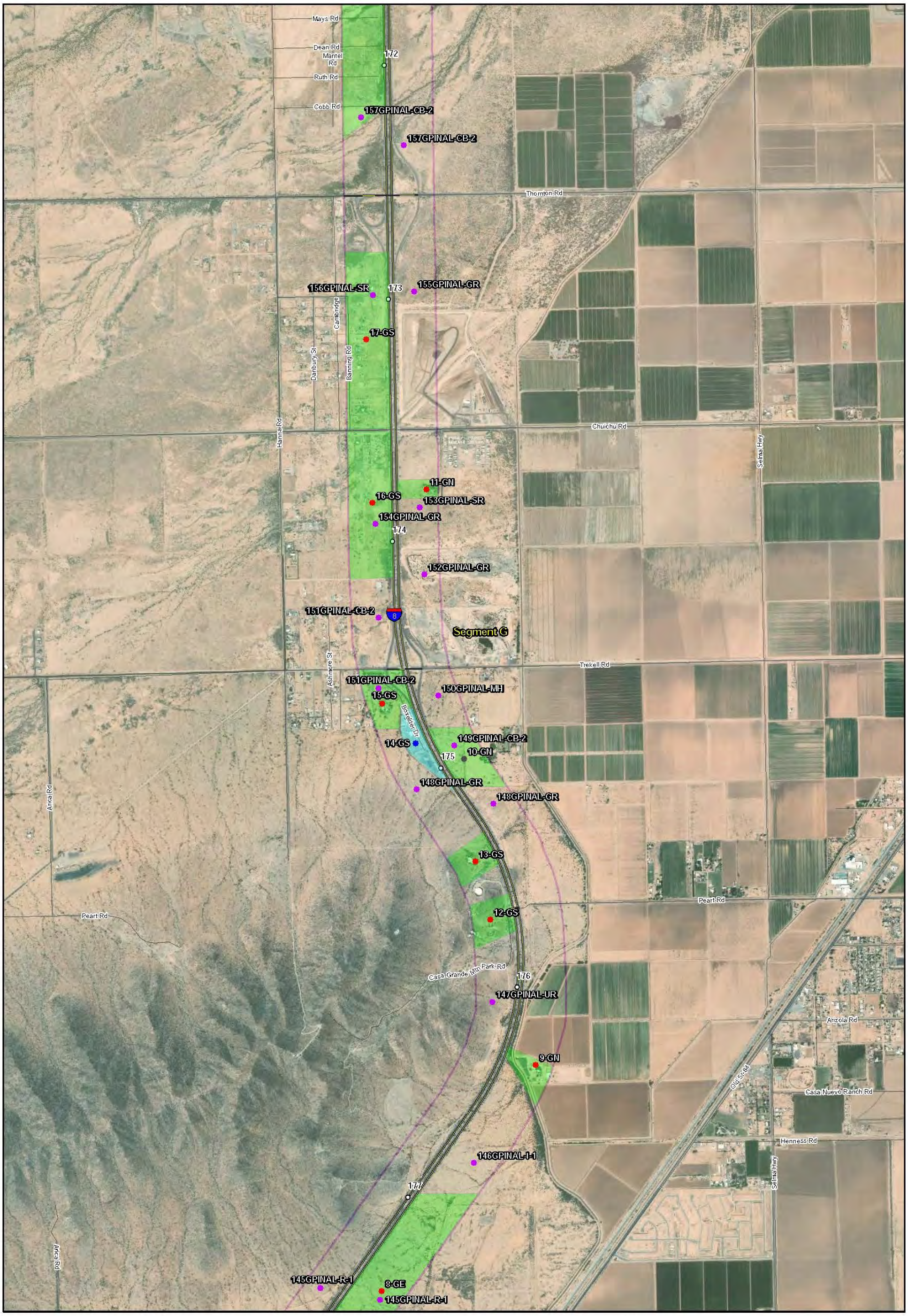

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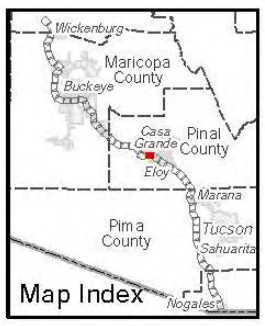

Segment I1
Segment G
Midway Rd
Mammoth Rd
Montgomery Rd
Pepper Tree Ln
Carmel Blvd
Blanco Rd
Ethington Rd
Wilson Rd
Wagner Rd
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Shires Rd
Sewell Rd
Bender Rd
Chance Rd
Mays Rd
Dean Rd
Ruth Rd
Cobb Rd
Burris Rd
Thornton Rd
Shedd Rd
Marner Rd
Terry Rd
Grove Rd
Thiker Rd
Hartman Rd
Arthur Rd
Cornman Rd
Selma Hwy
Peters Rd
Saddlerock Ln
Adobe
Bonita
Chantle
Pecos Dr
Monarch Dr
Willow Dr
Inca Dr
Alamo Rd
Desert Crest
Cactus Wren
167
168
169
170
171
172
3-I1
6-I1
2-I1
166c-I1-PINAL-MH
Mon 38
1-I1
5-I1
166b-I1-PINAL-RVP
4-I1
166a-I1-PINAL-CB-2
160GPINAL-CR-2
161GPINAL-CR-2
159GPINAL-CB-2
19-GS
158GPINAL-GR
158GPINAL-GR
158GPINAL-GR
158GPINAL-GR
18-GS
157GPINAL-CB-2
157GPINAL-CB-2
8

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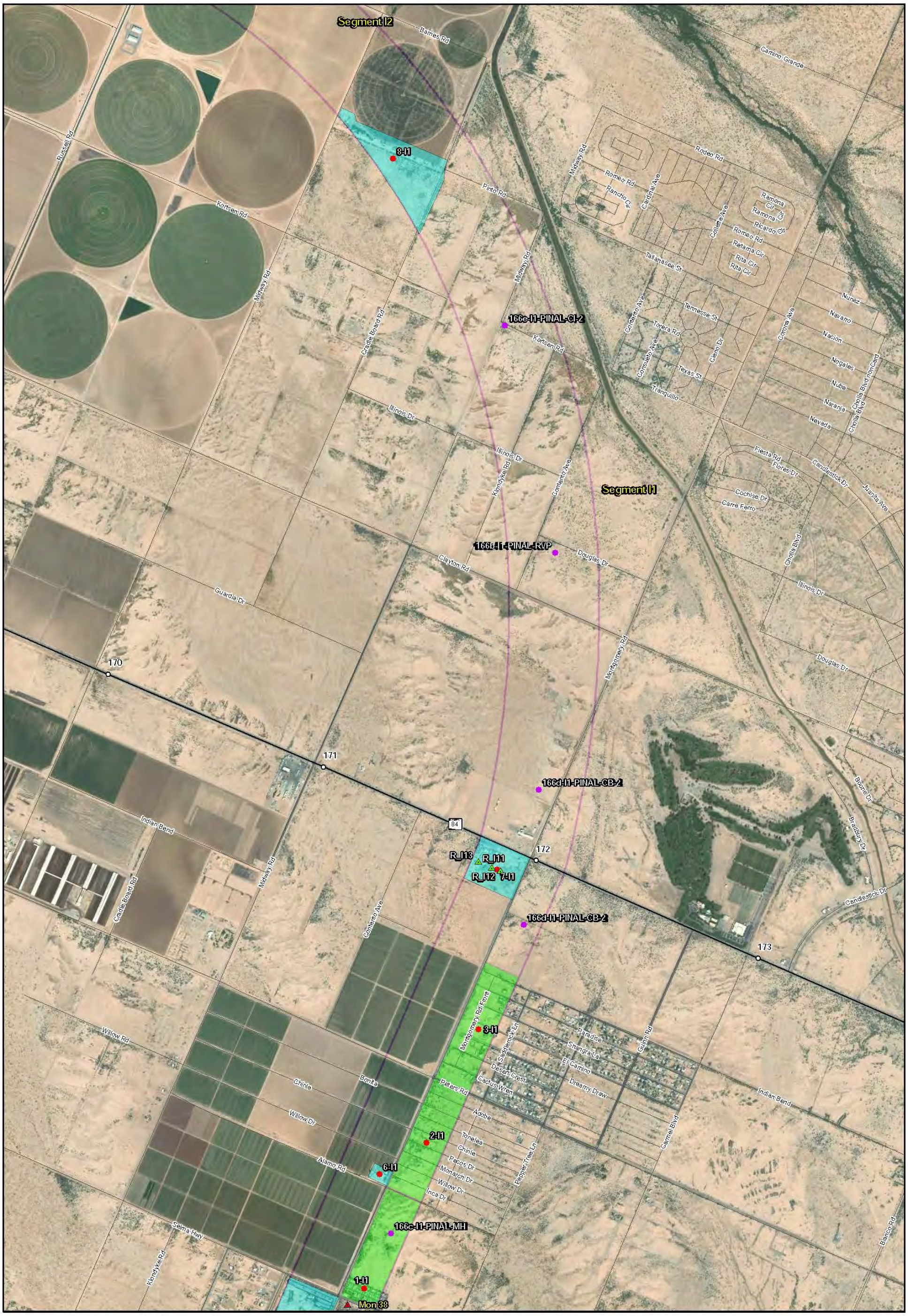

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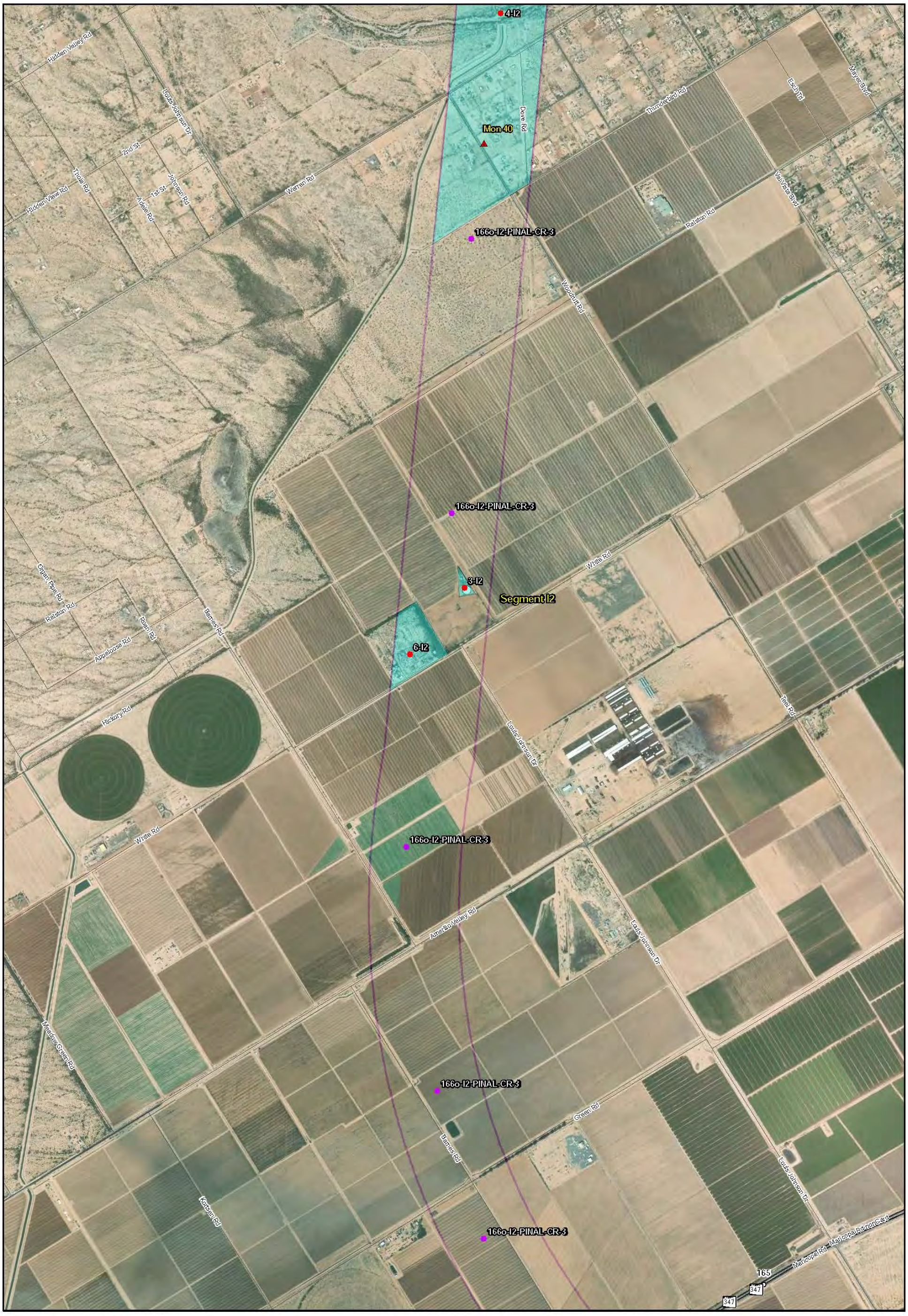

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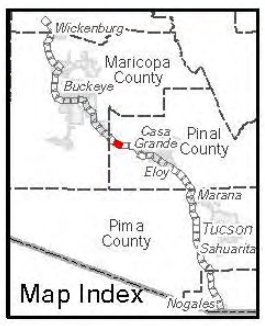

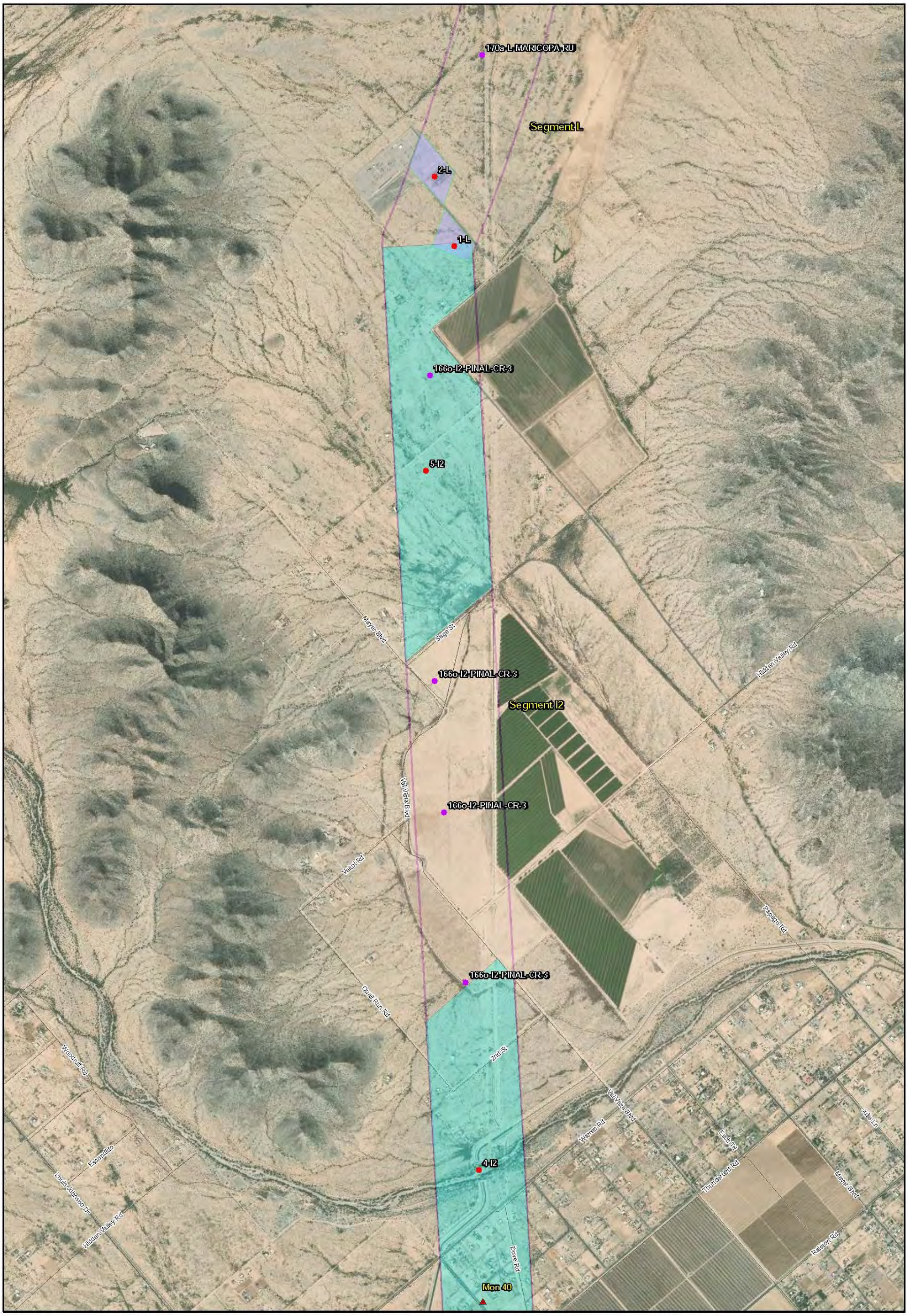

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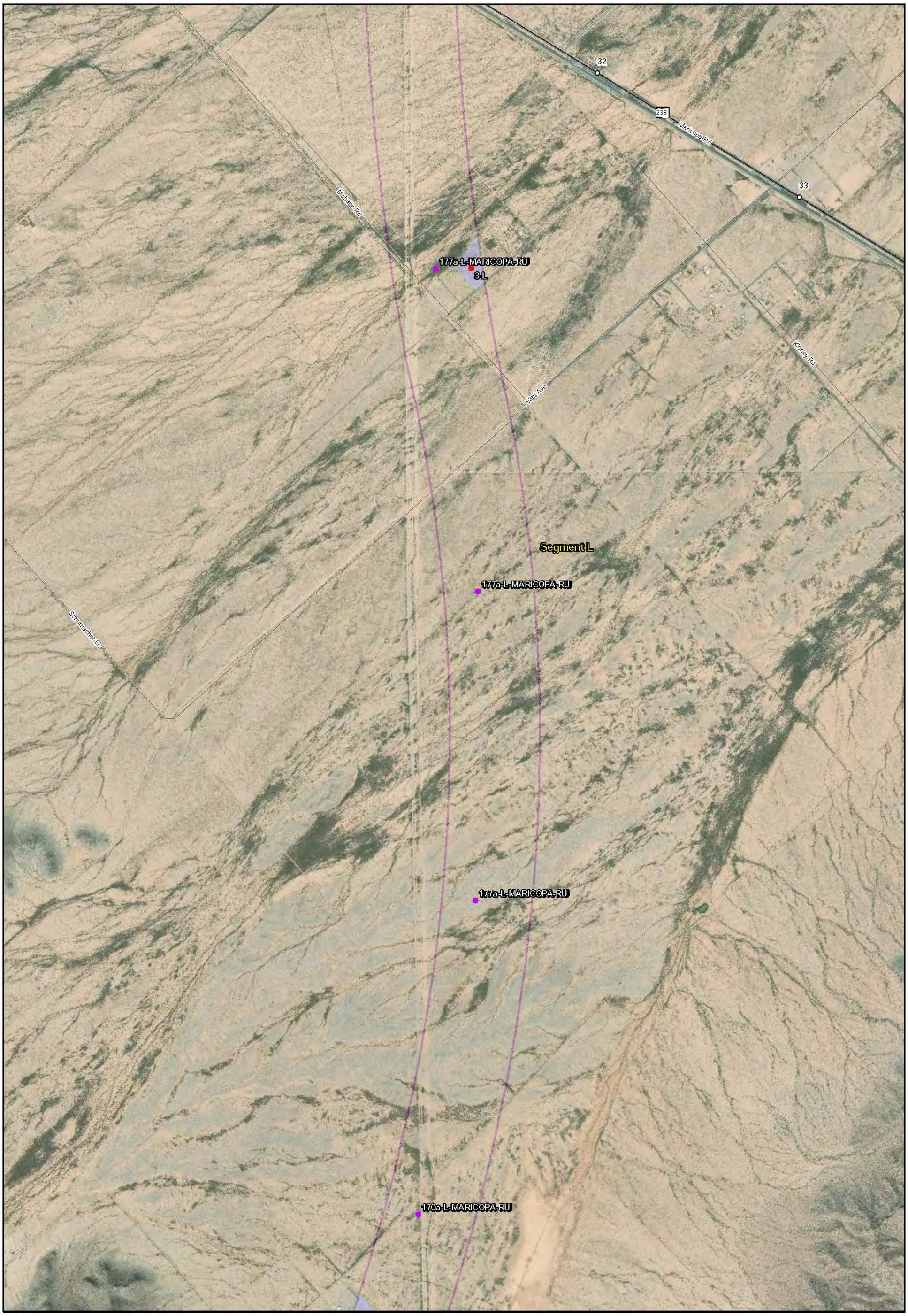

LEGEND

- Alternative Purple Study Area
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0 1000 2000
FEET

Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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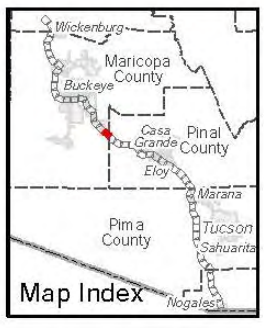
Environmental Consulting, LLC



177a-L-MARICOPA-RU

177a-L-MARICOPA-RU

Segment L

177a-L-MARICOPA-RU

177a-L-MARICOPA-RU

4-L

Komatke Rd

Schrader Ln

99th Ave

Butterfield Stage Rd

Arrowhead Rd

Shusham Rd

Powhatan Rd

91st Ave

Maricopa Rd

Connely Well Rd

Mahalia Rd

83rd Ave

29

30

31

32

238

LEGEND

Alternative Purple Study Area

Mileposts

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Category G

Monitoring Site

Noise Receiver

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Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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Wickenburg
Maricopa County
Buckeye
Casa Grande
Pinal County
Eloy
Marana
Pima County
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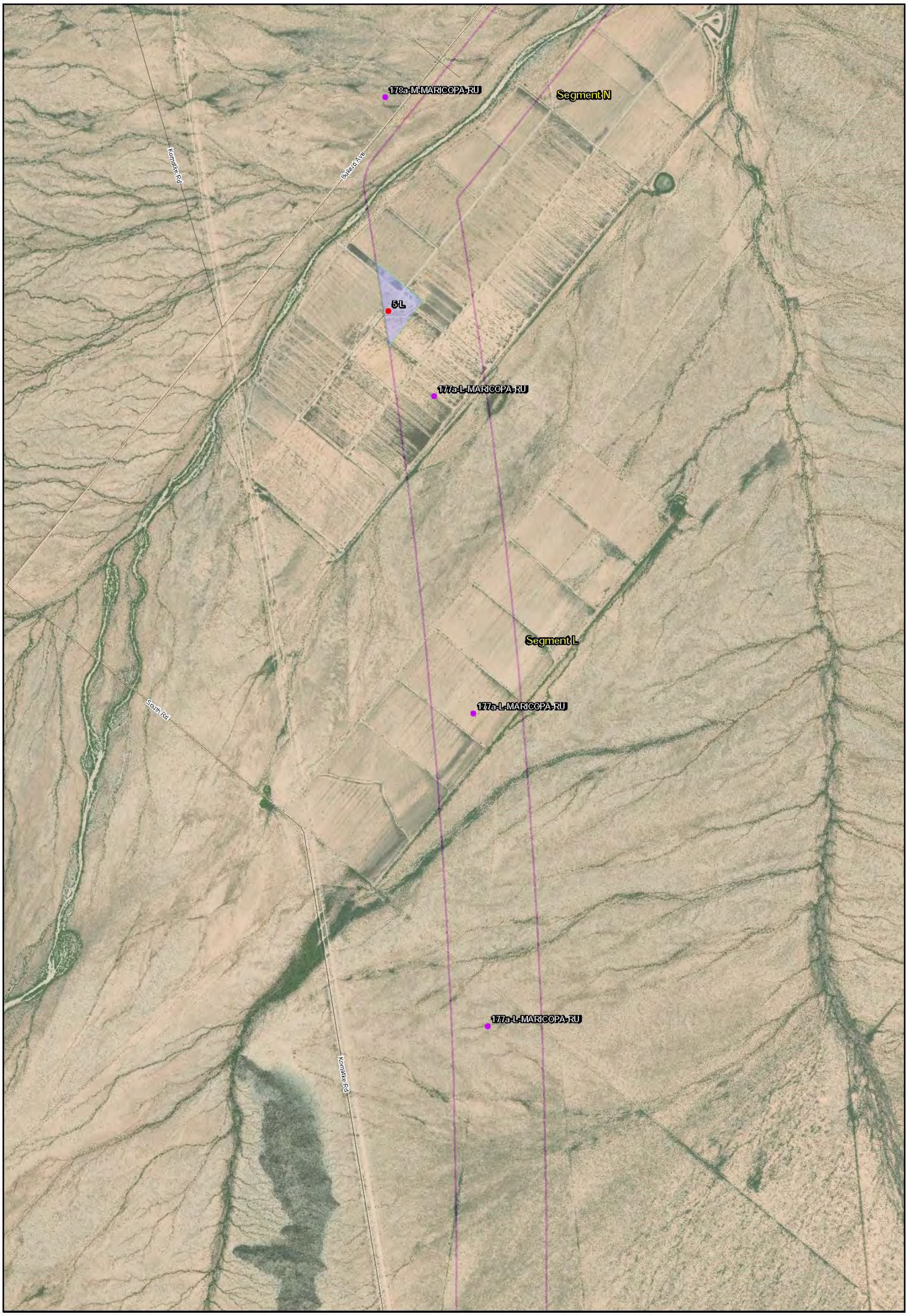

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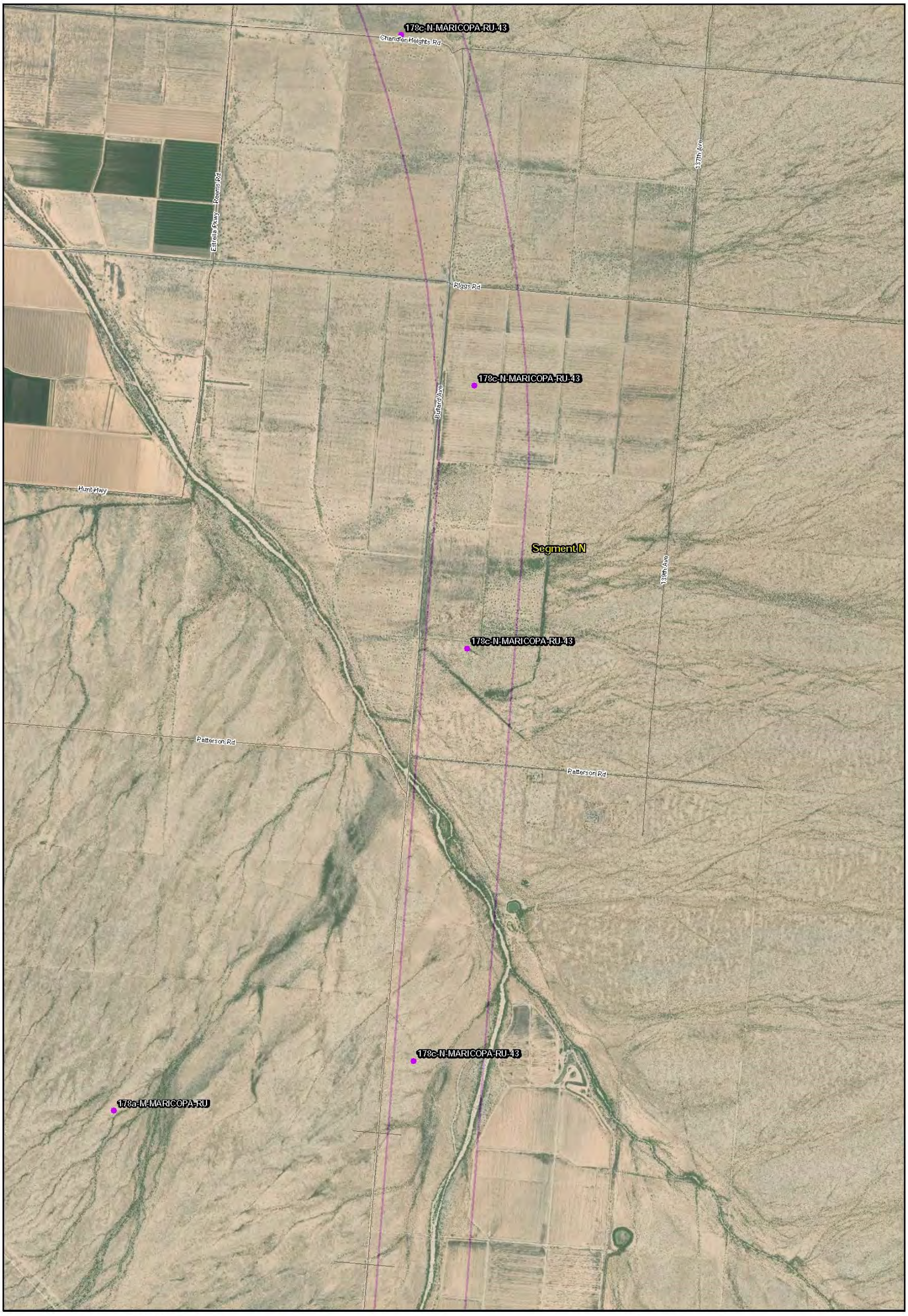

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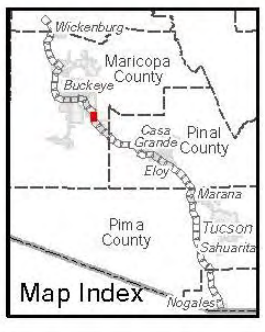

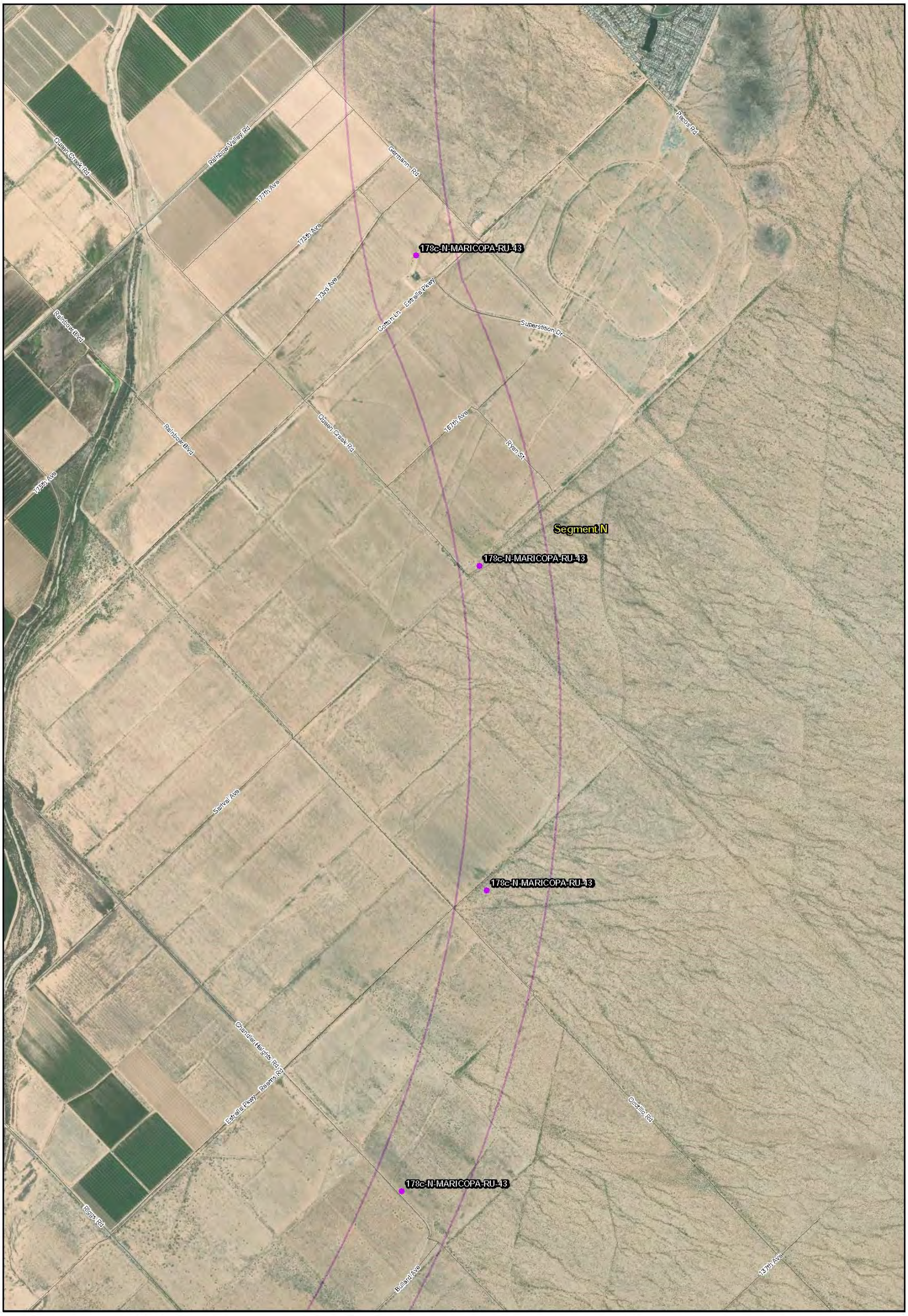

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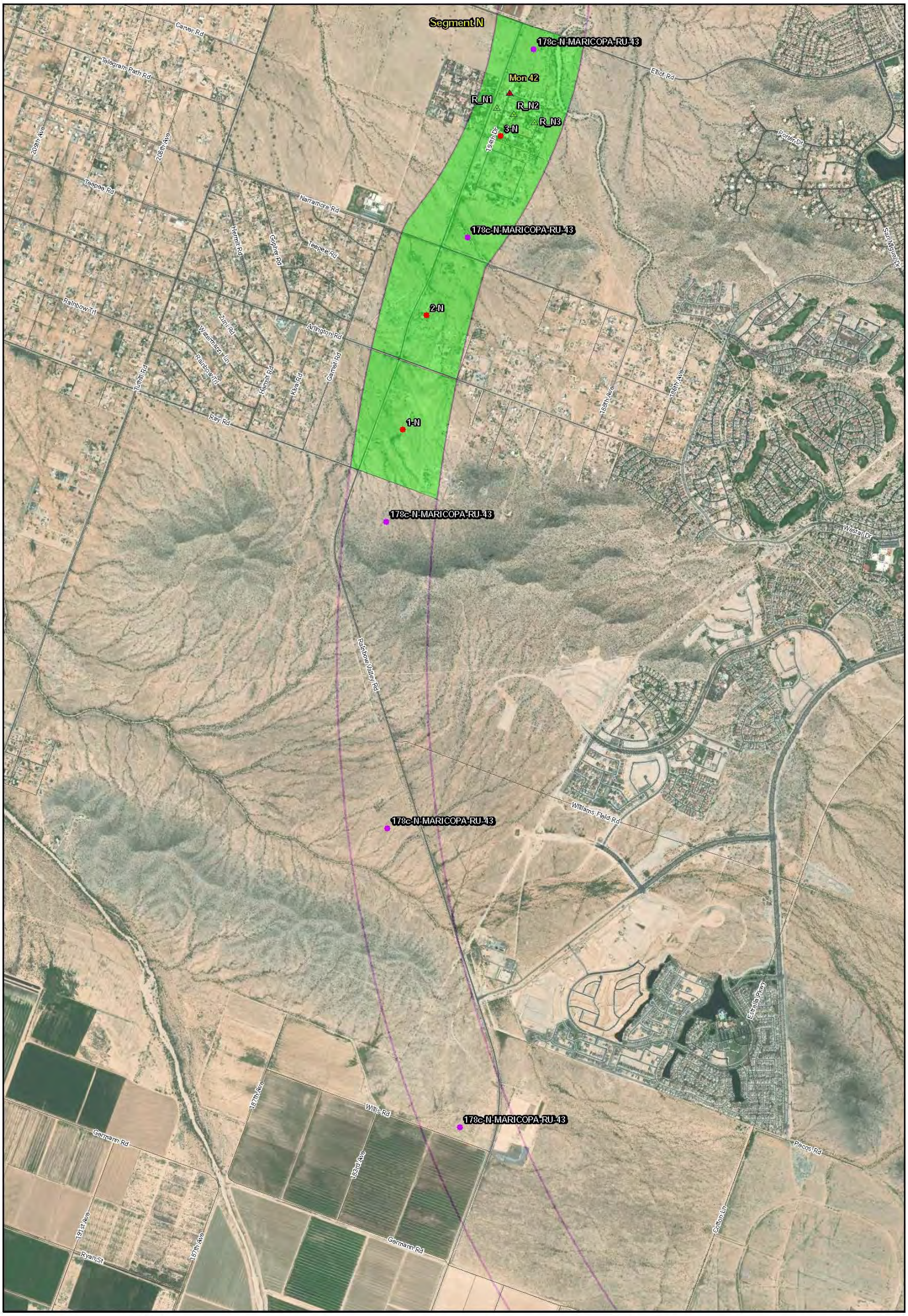
Segment N
178c-N-MARICOPA-RU-43
Mon 42
R_N1
R_N2
R_N3
3-N
2-N
1-N
178c-N-MARICOPA-RU-43
178c-N-MARICOPA-RU-43
178c-N-MARICOPA-RU-43
Carver Rd
Telegram Path Rd
Elliot Rd
Porter Dr
San Miguel Dr
Teepee Rd
Narramore Rd
Hermit Rd
Gopher Rd
Rainbow Trl
Zuni Rd
Watermelon Ln
Arlington Rd
Turhill Rd
Rainbow Trl
Hermit Rd
Kiva Rd
Camel Rd
Ray Rd
Rainbow Valley Rd
Williams Field Rd
Estrella Pkwy
Cotton Ln
Pecos Rd
Wistar Dr
Willis Rd
Germann Rd
Ryan St
Germann Rd
204th Ave
205th Ave
194th Dr
184th Ave
186th Ave
187th Ave
193rd Ave
191st Ave
187th Ave
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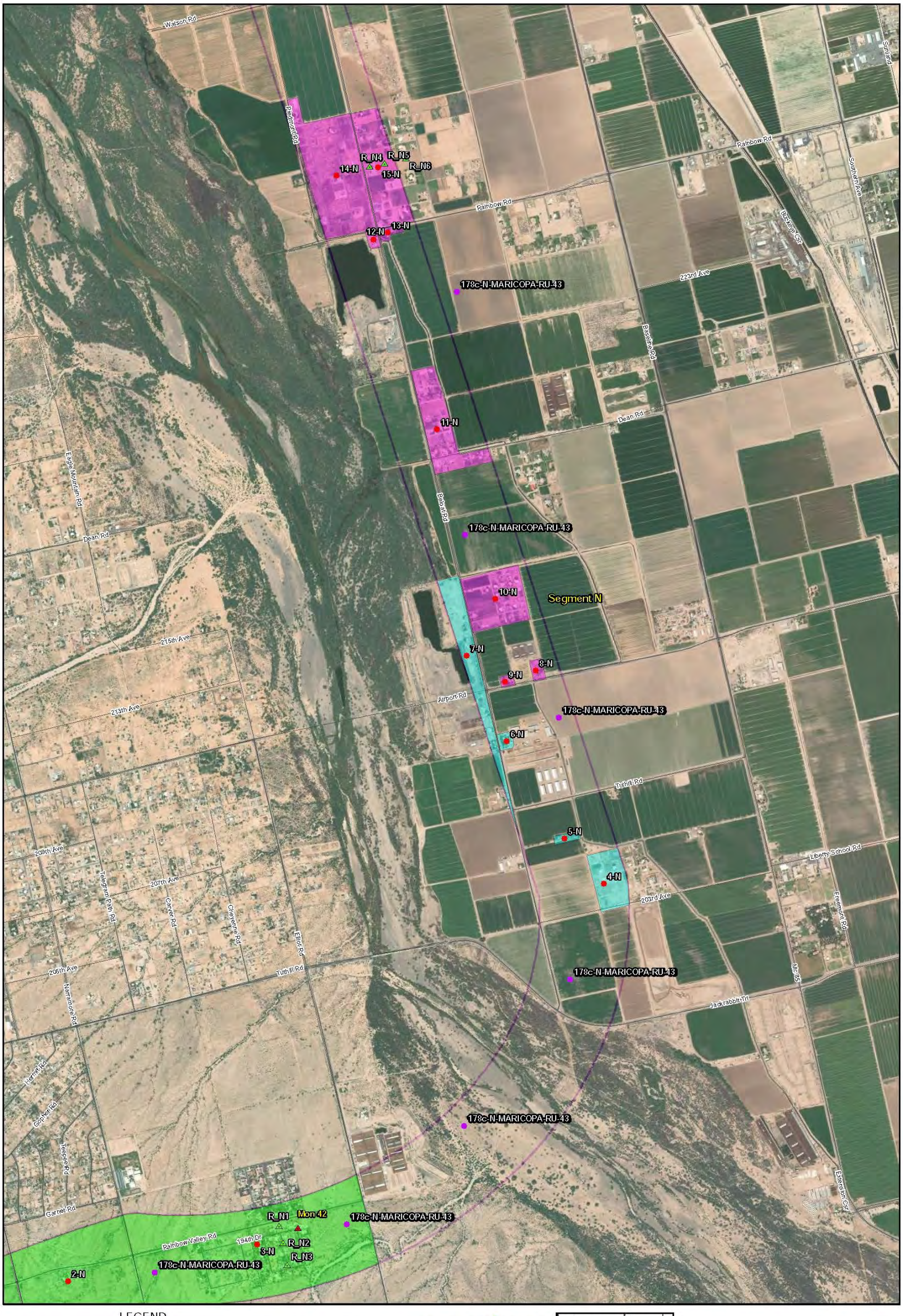

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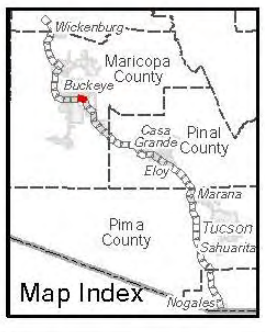

Segment R
1-R
201b-R-MARICOPA-C-2
201a-R-MARICOPA-RR
Old Us 80
Buckeye Canal Csr
148
149
150
151
85
18-N
178c-N-MARICOPA-RU-43
178b-N-MARICOPA-GC
Oglesby Rd
Hazen Rd
178d-N-MARICOPA-RR
Rooks Rd
Buckeye Rd
Beloat Rd
17-N
Baseline Rd
Private Rd
Miller Rd
Segment N
1st St
2nd St
3rd St
4th St
5th St
7th St
8th St
9th St
Clanton Ave
Jackson Ave
Roosevelt Ave
Edison Ave
Marrampre Ave
Centre Ave
Monroe Ave
Eason Ave
Main St
Norton Dr
Sunrise Dr
Coronado St
5th Ave W
4th Ave W
3rd Ave W
2nd Ave W
Alameda Blvd
Central Blvd
3rd Ave
4th Ave
5th Ave
Pima St
Maricopa Rd
Buckeye Csr
Apache Rd
16-N
Monroe Ave (B)
239th Ave
Watson Rd
Piedmont Rd
Eagle Mountain Rd

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SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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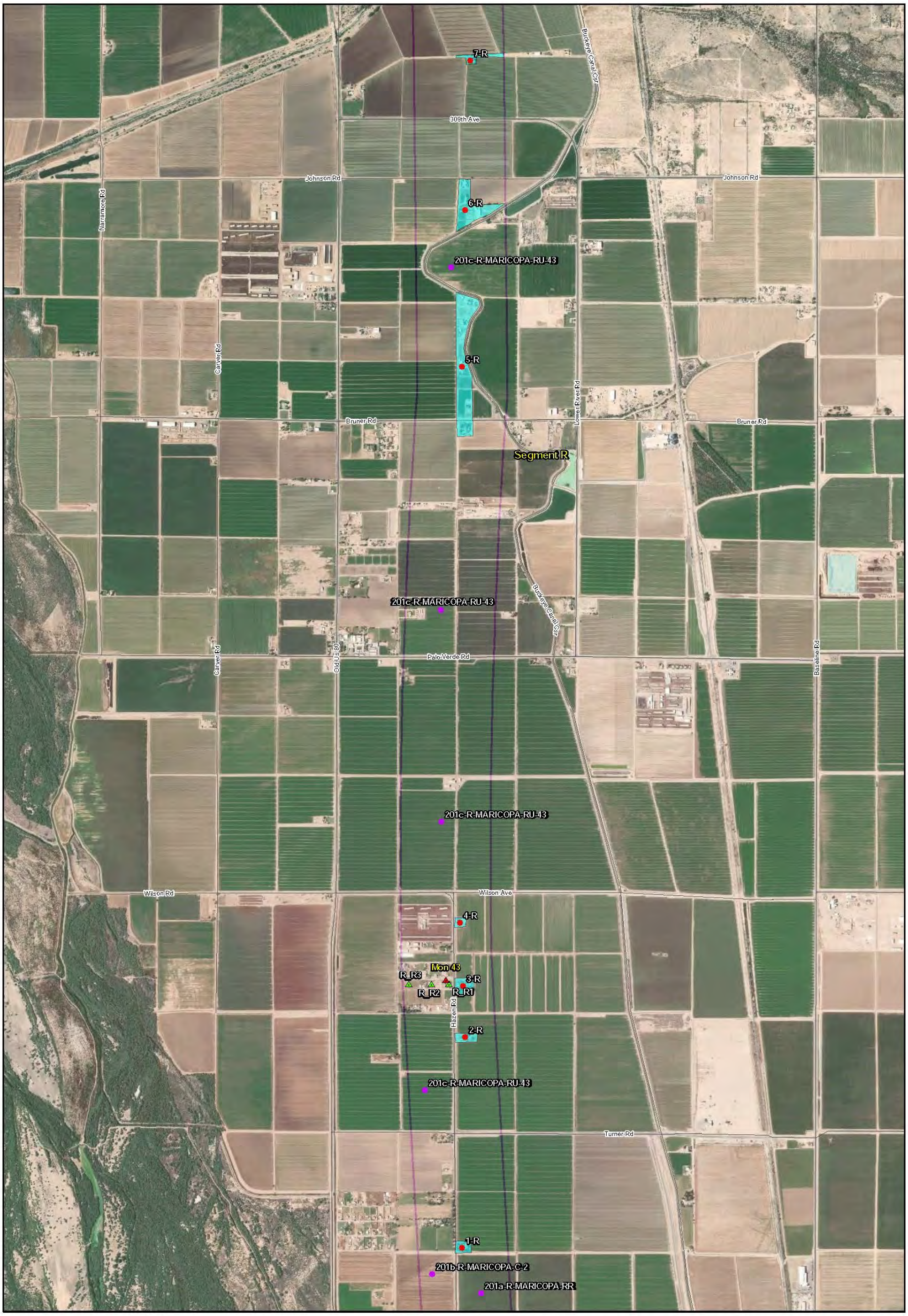
Map Index: Wickenburg, Maricopa County, Buckeye, Casa Grande, Pinal County, Eloy, Marana, Pima County, Tucson, Sahuarita, Nogales



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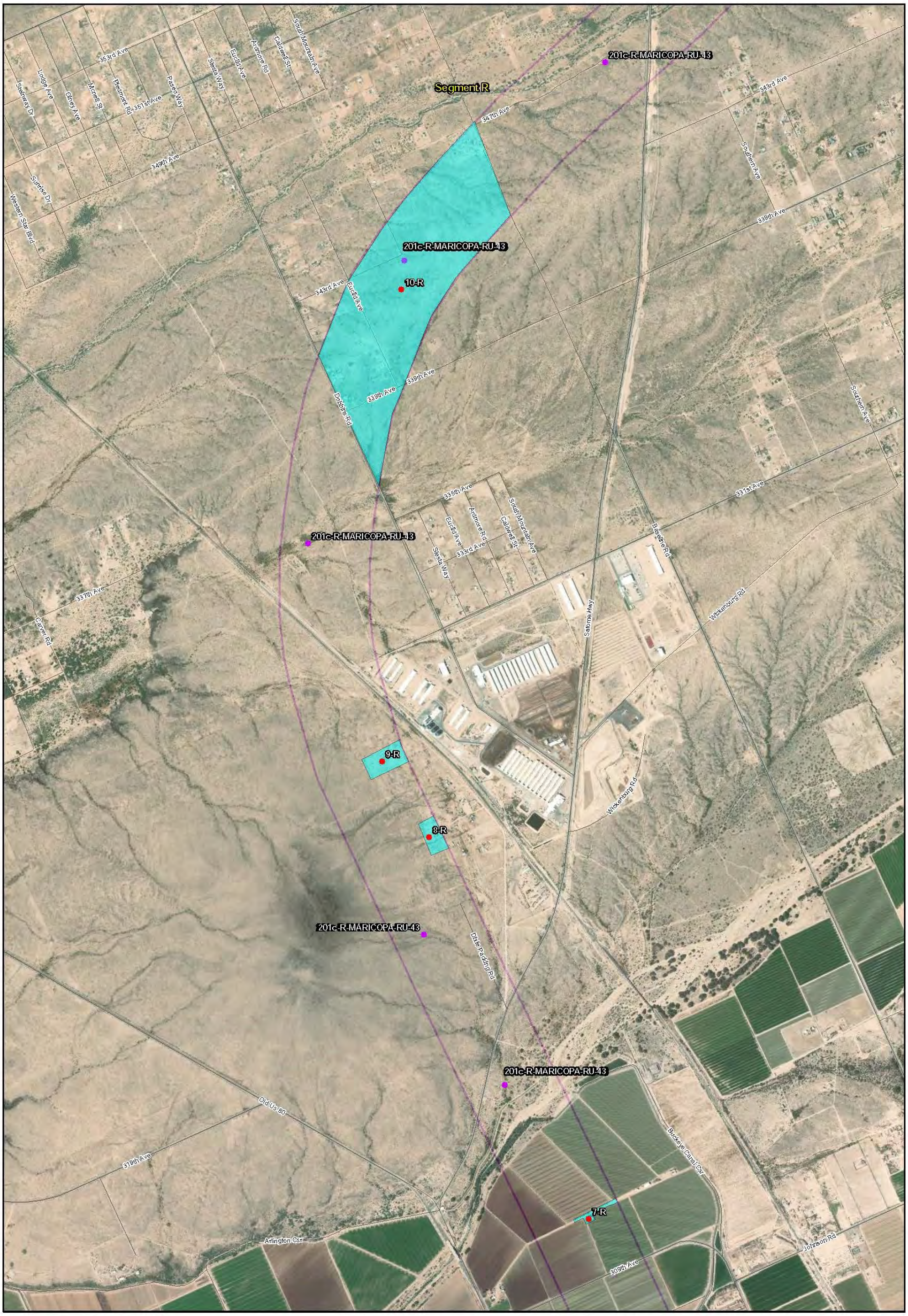

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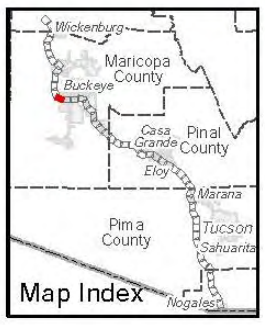

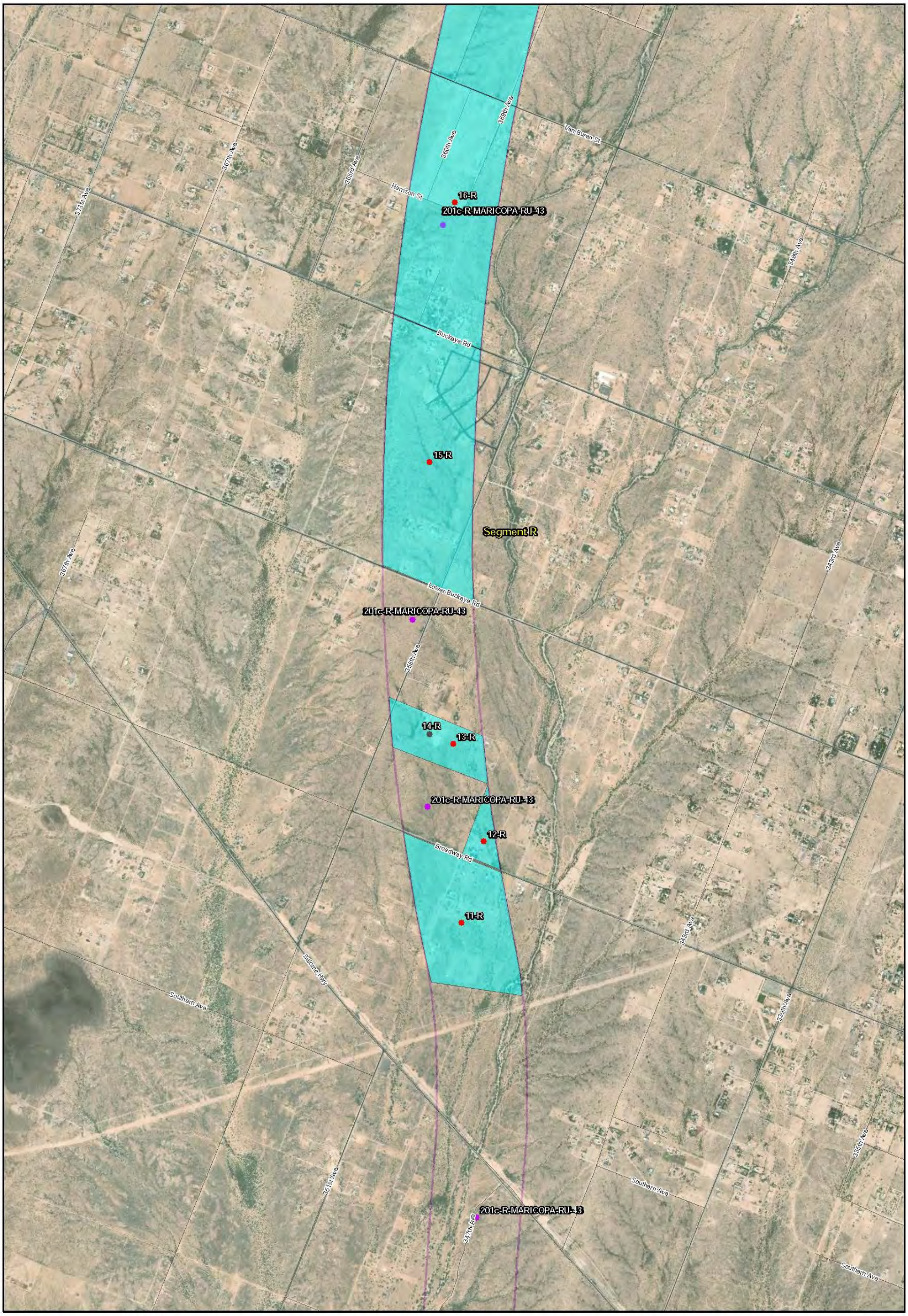

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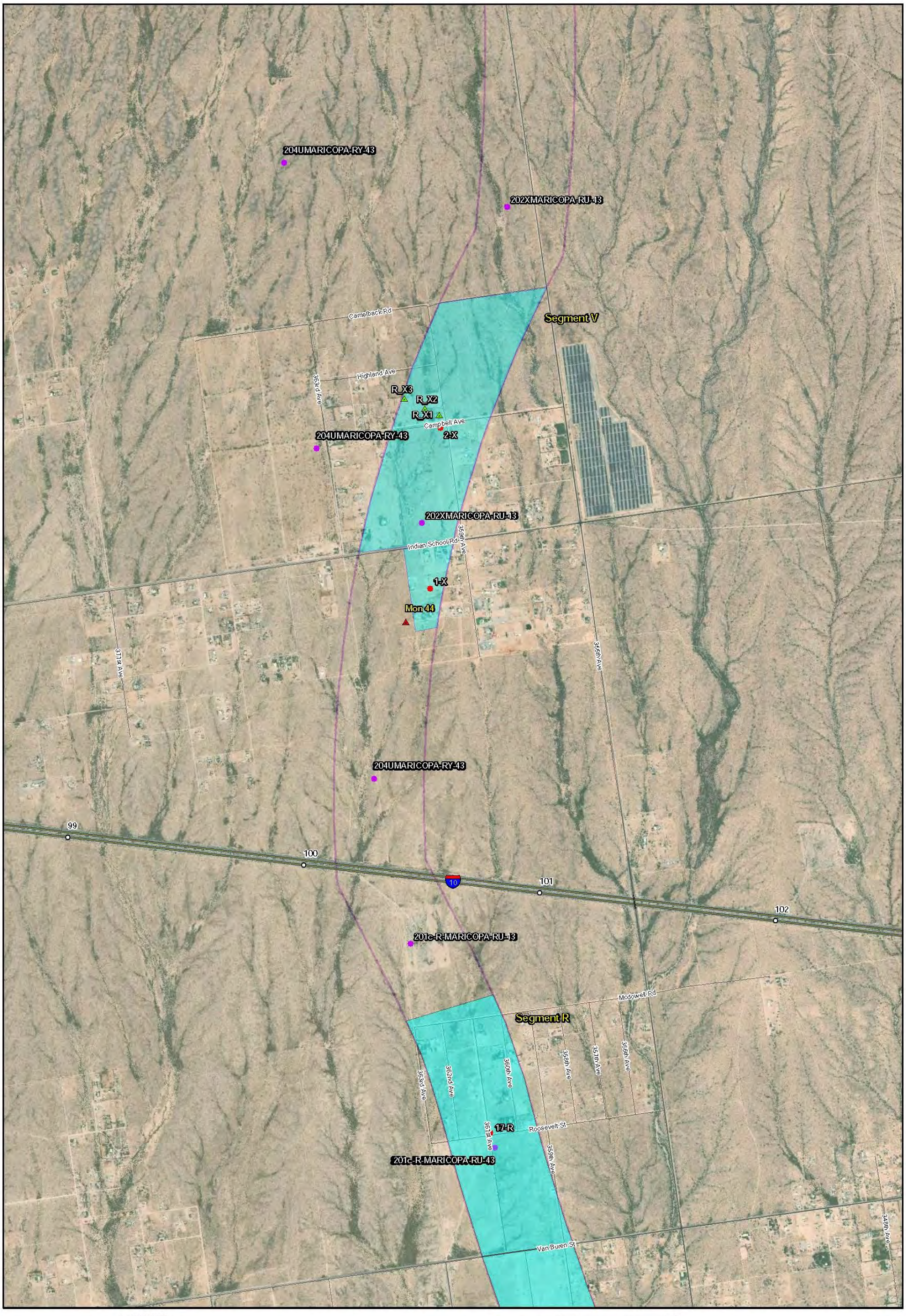

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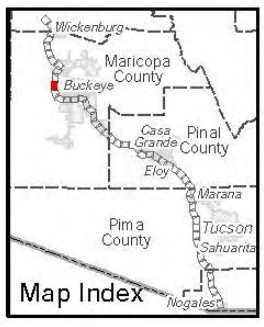

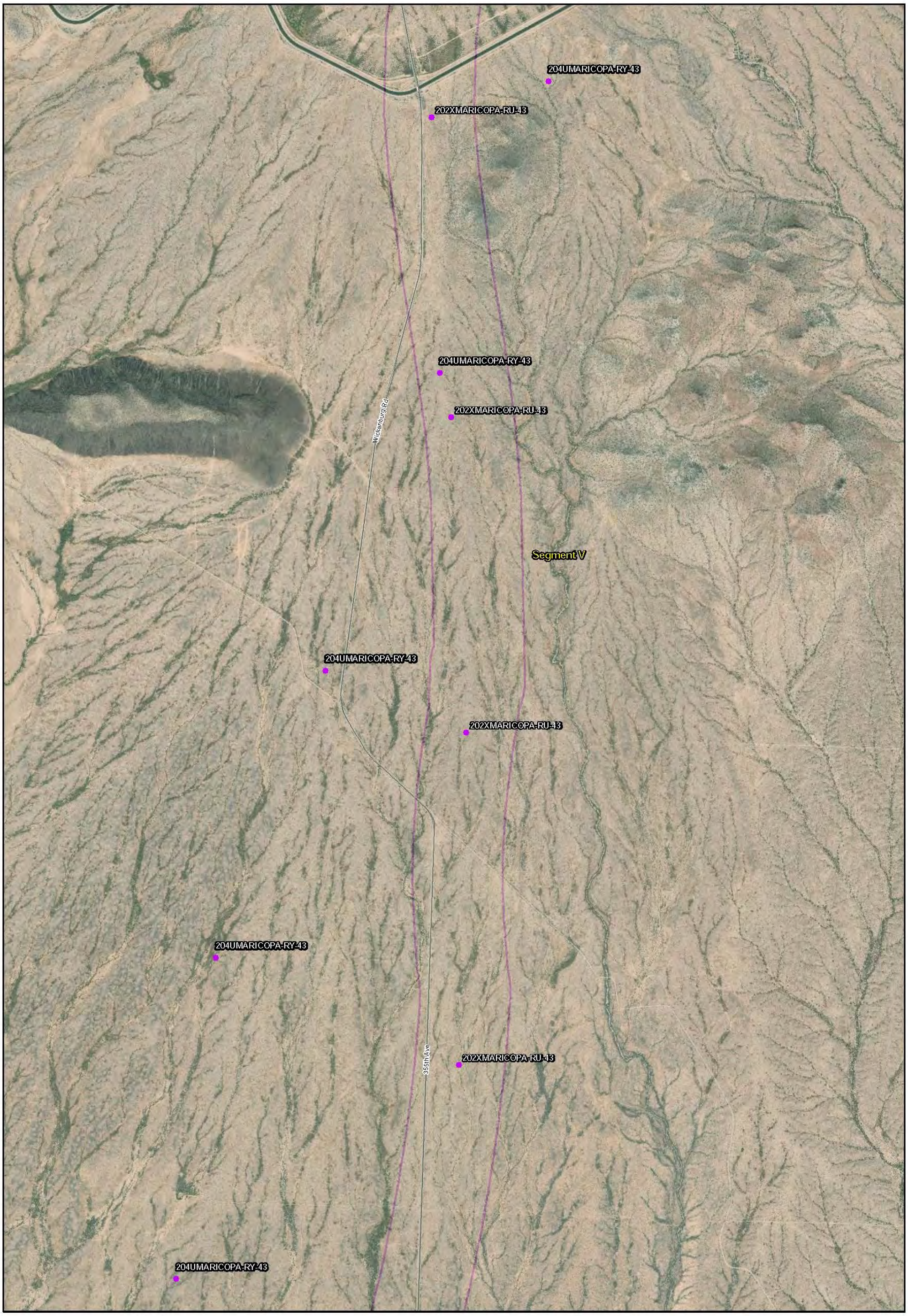

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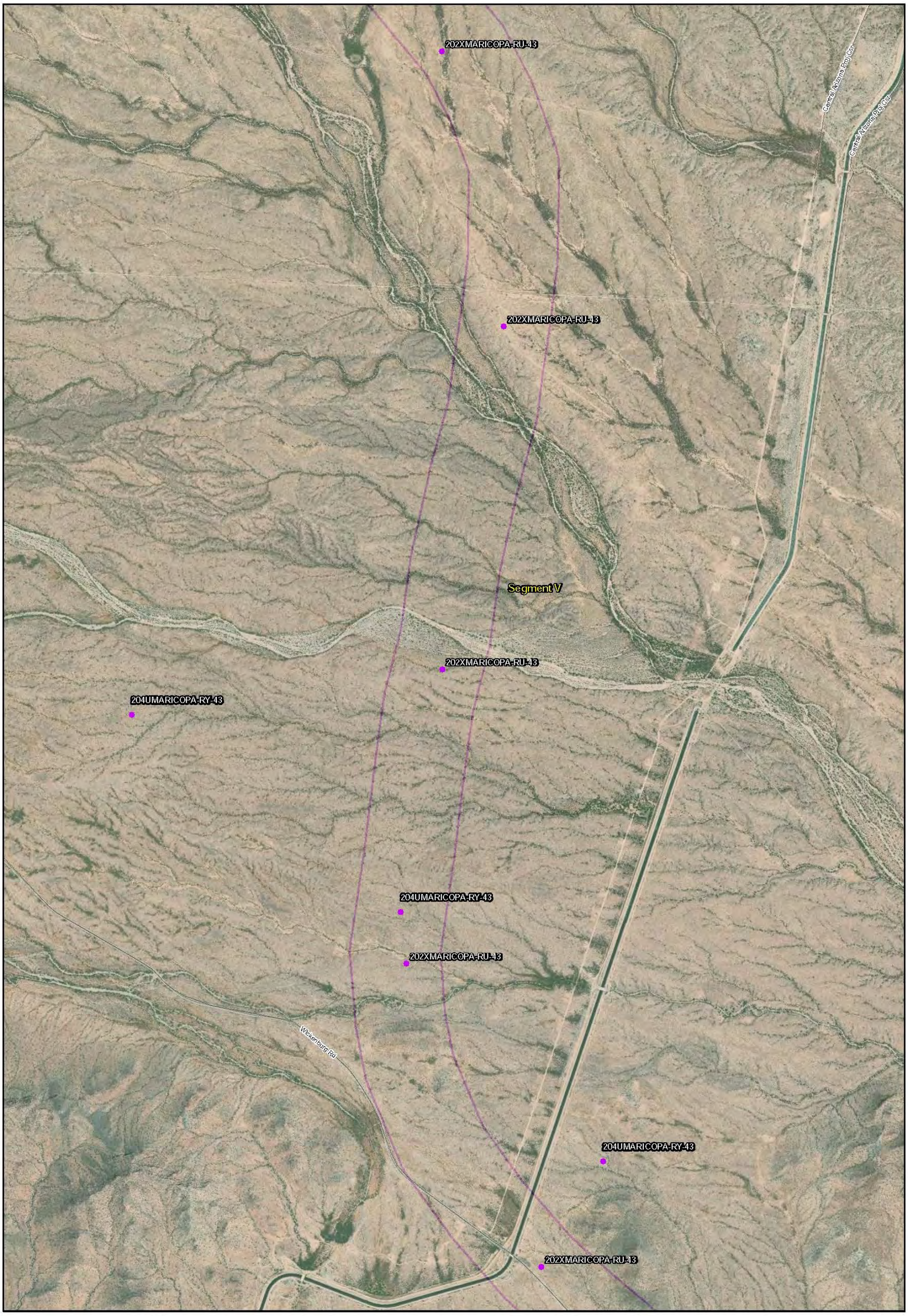

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Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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202XMARICOPA-RU-43

202XMARICOPA-RU-43

Segment V

202XMARICOPA-RU-43

202XMARICOPA-RU-43

202XMARICOPA-RU-43

202XMARICOPA-RU-43

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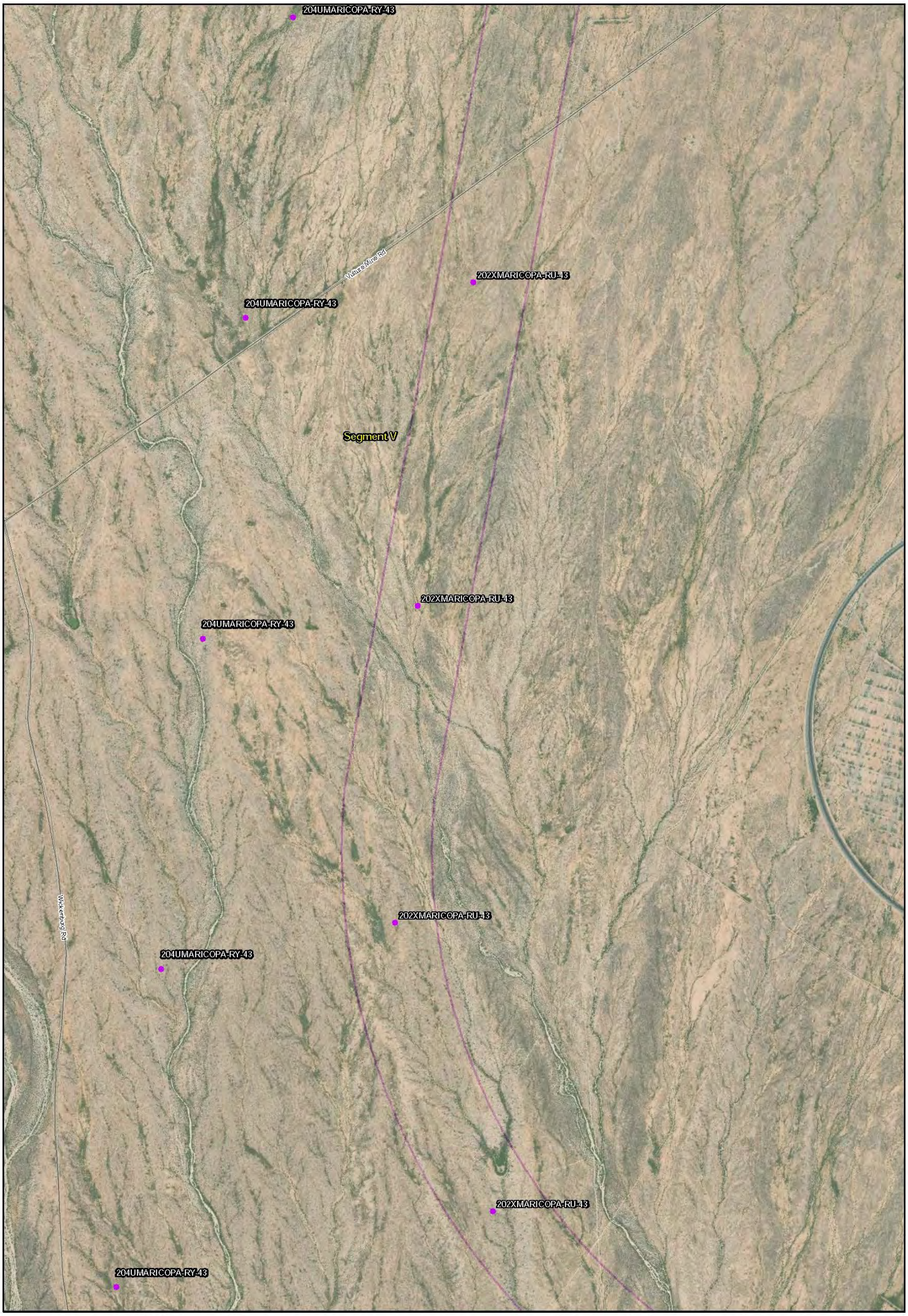

LEGEND

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0 1000 2000
FEET

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Environmental Consulting, LLC

202XMARICOPA-RU-43

202XMARICOPA-RU-43

Segment V

202XMARICOPA-RU-43

Vulture Mine Rd

202XMARICOPA-RU-43

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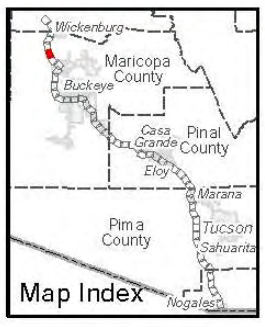

202XMARICOPA-RU-43

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Segment V

202XMARICOPA-RU-43

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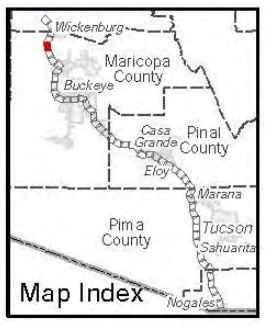

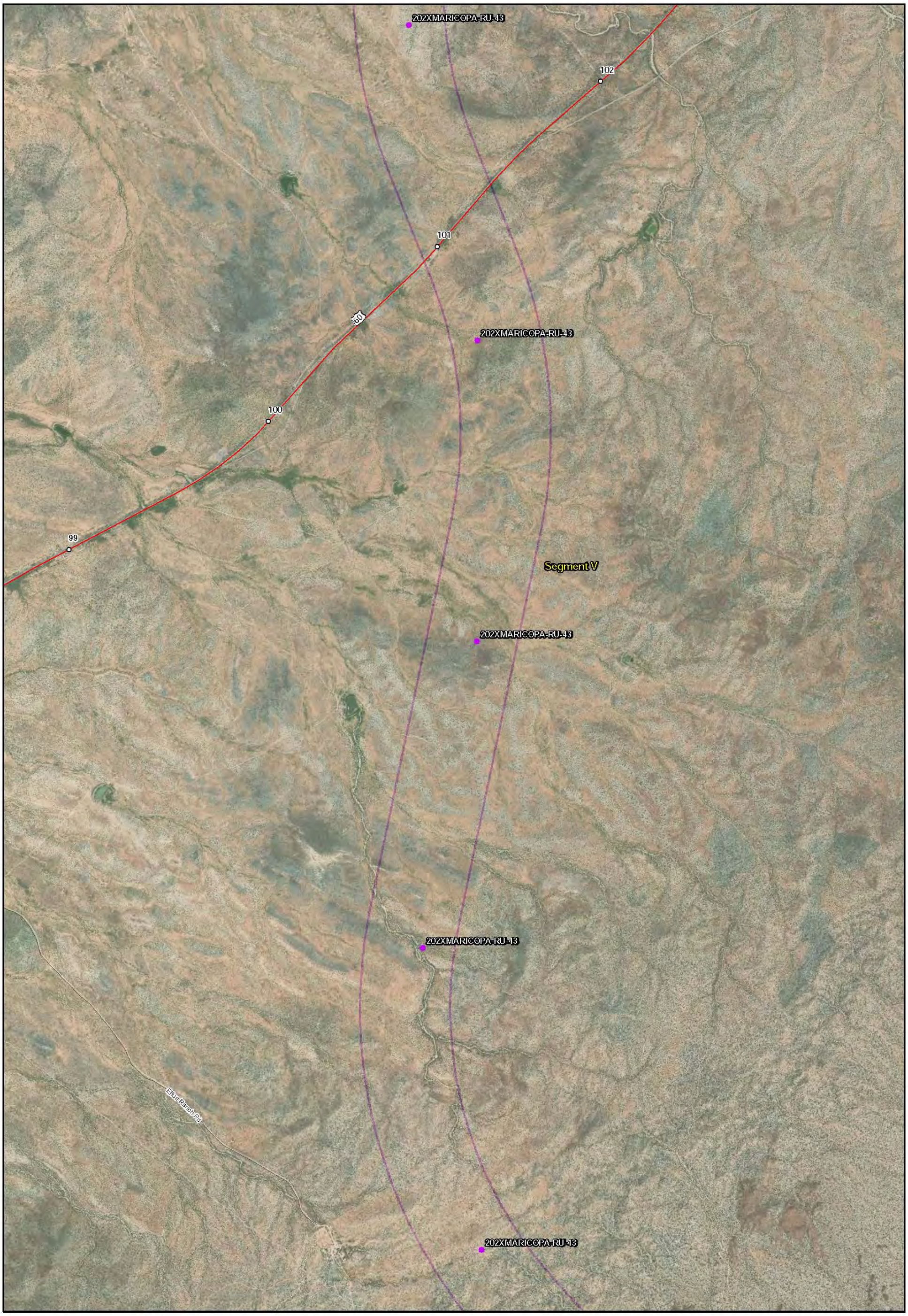

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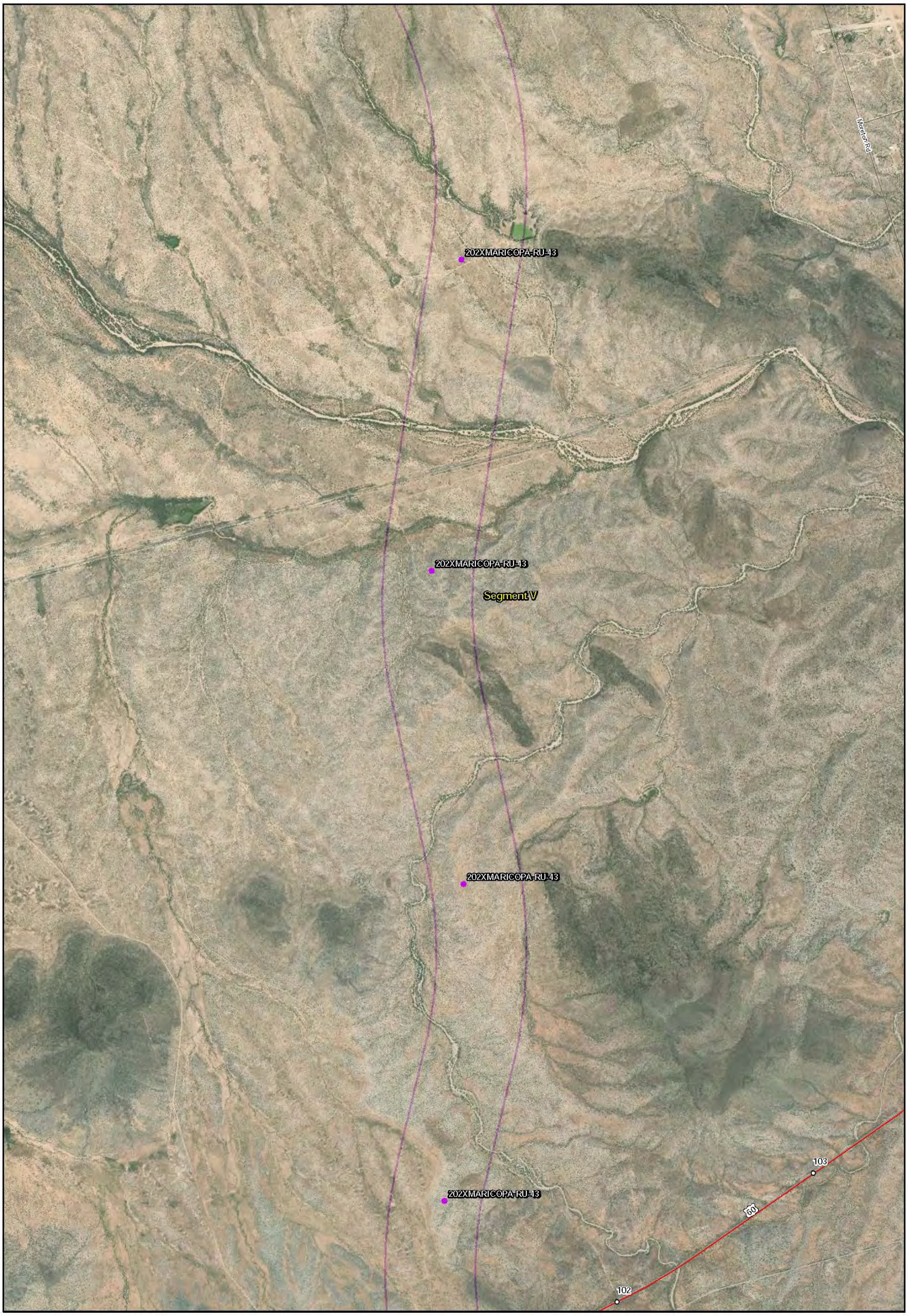

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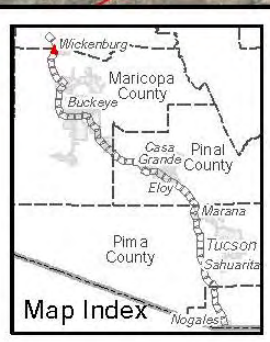

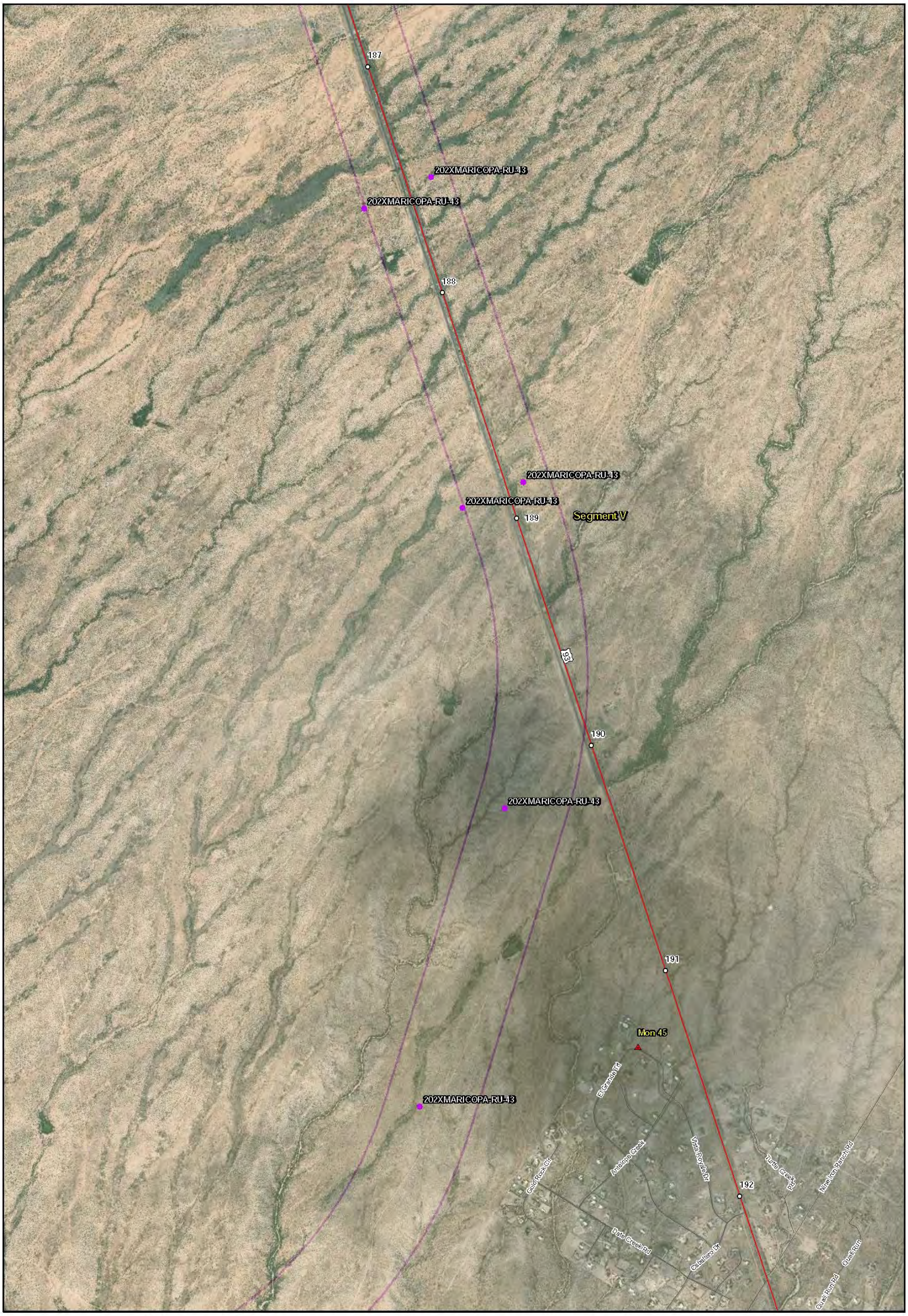

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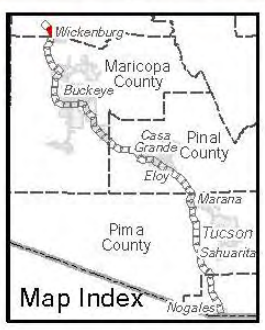

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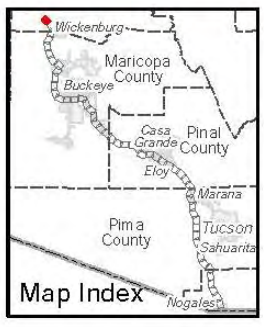

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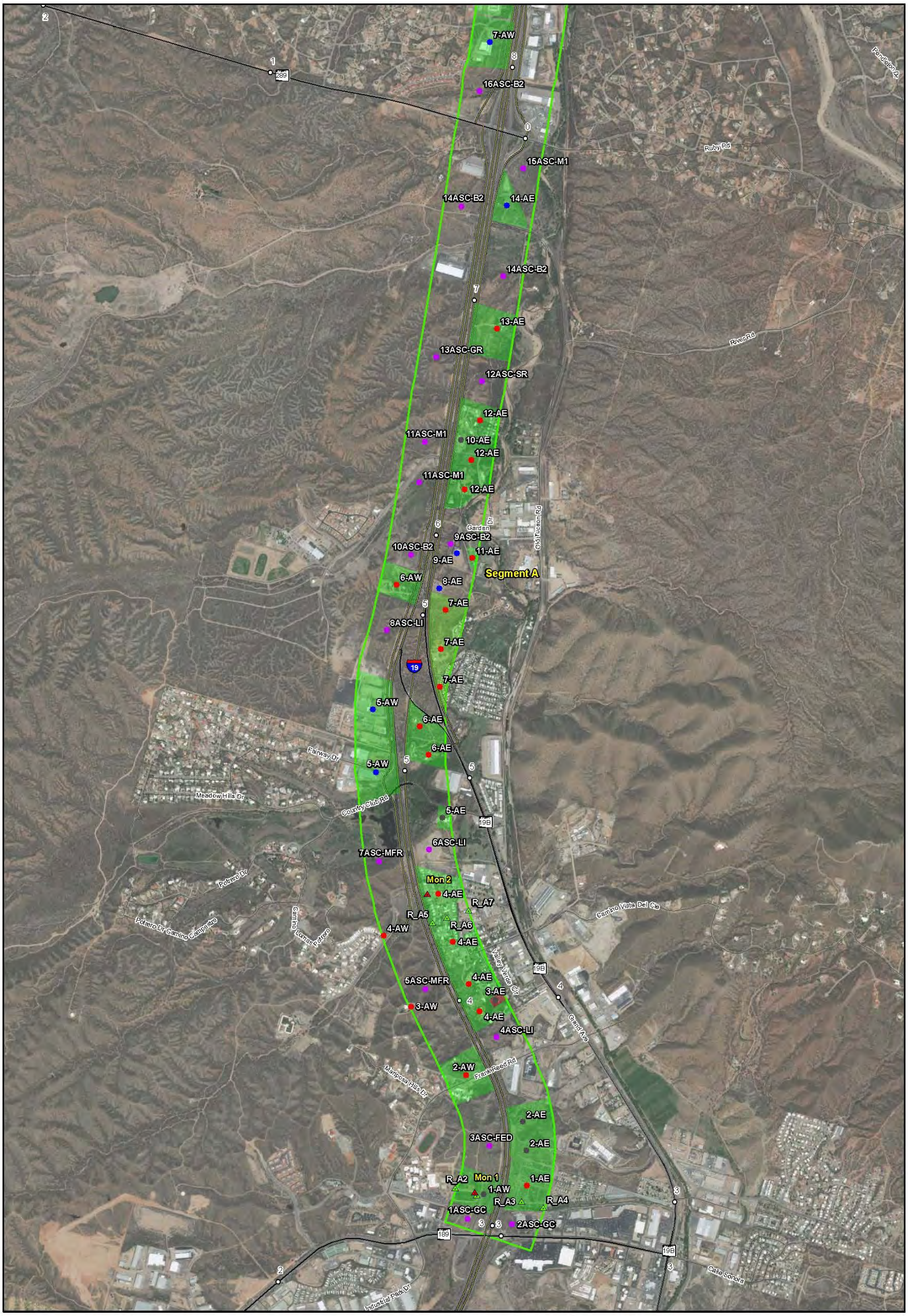

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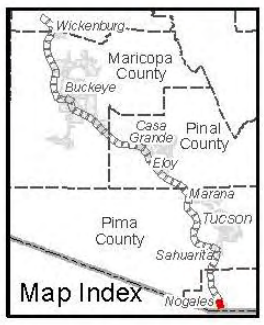

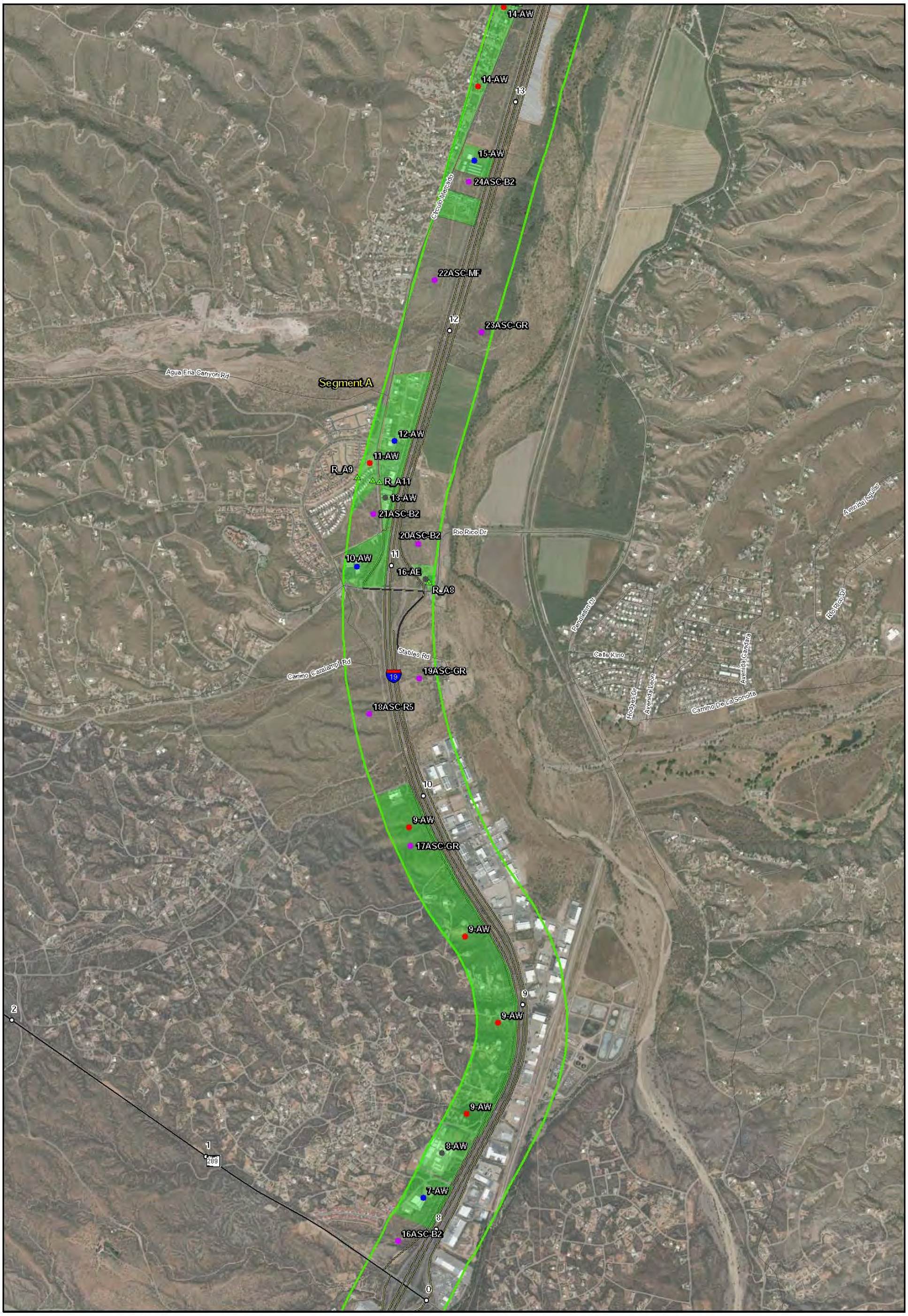

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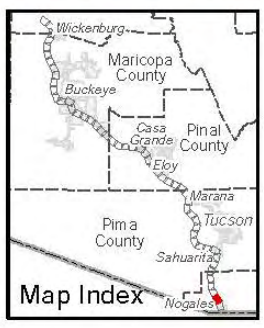

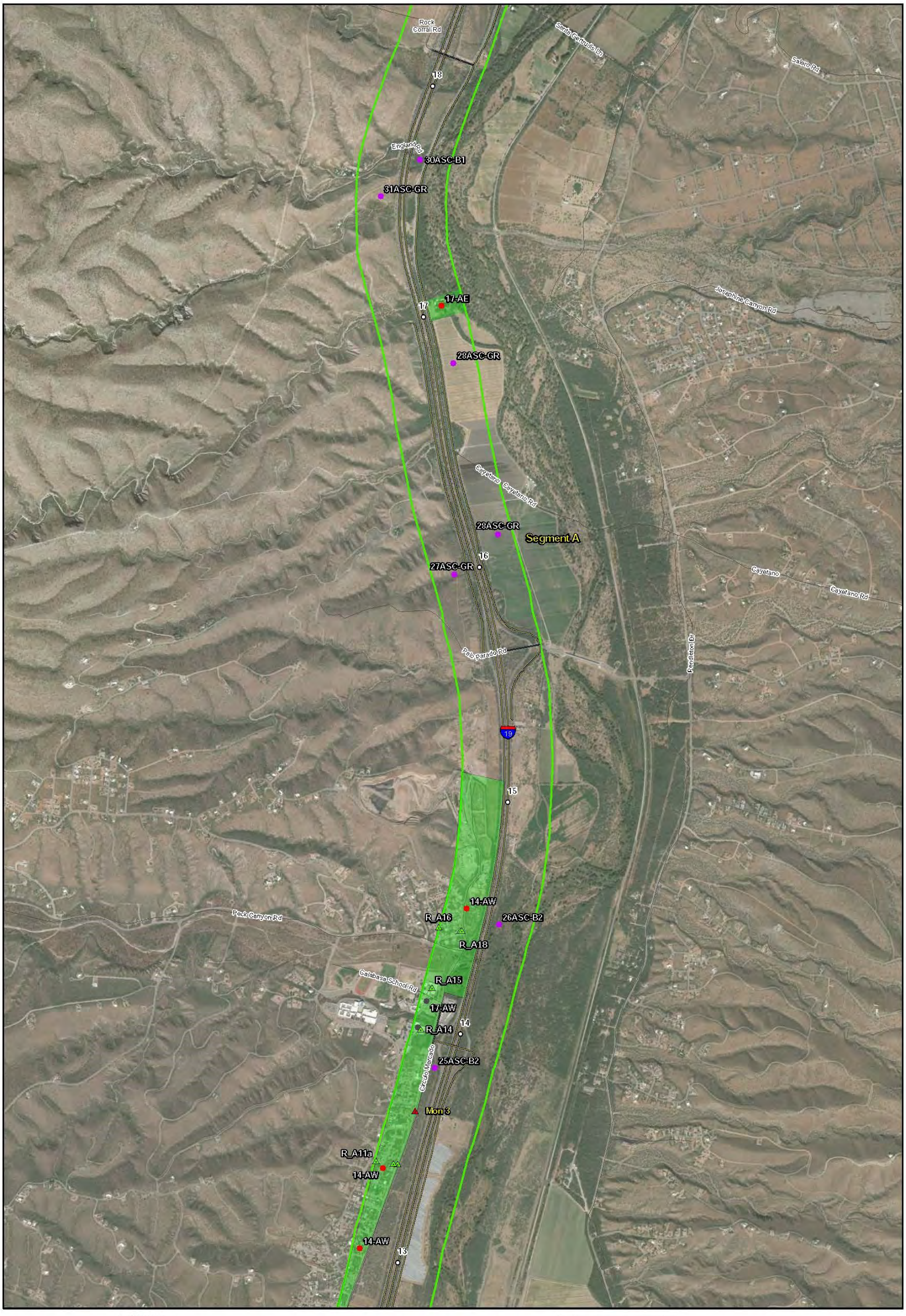

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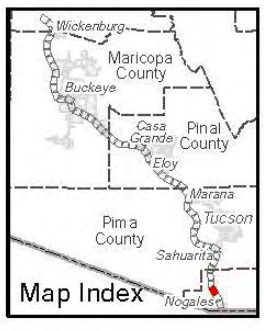

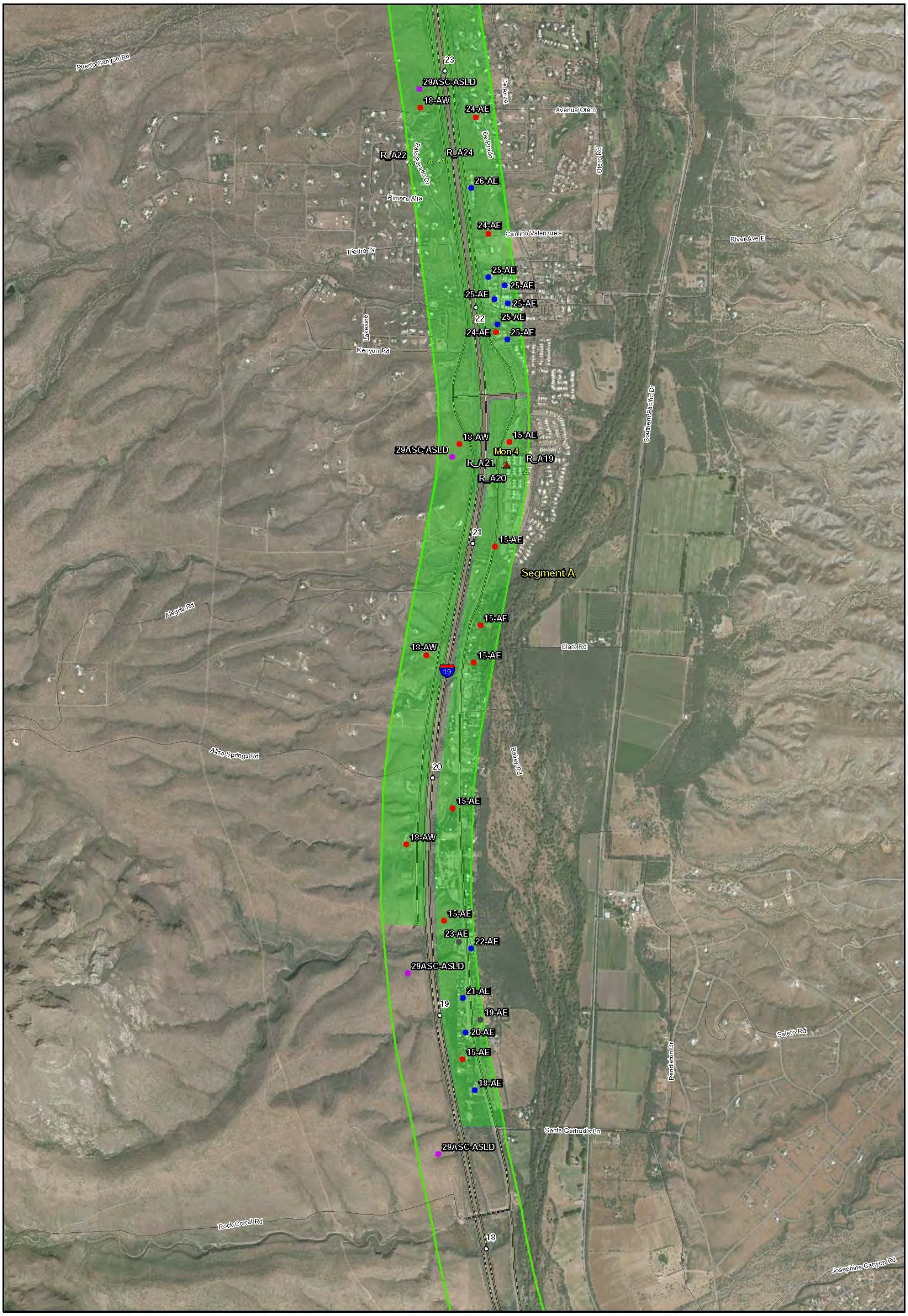

LEGEND

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- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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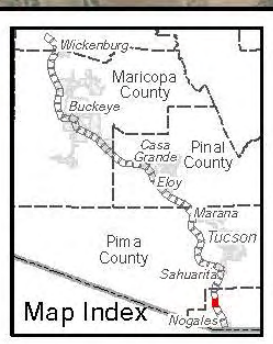

29-AE
28
19-AW
28-AE
Agua Caliente Rd
Gonzalez Dr
19-AW
38ASC-SR
27-AE
36ASC-B2
27
35ASC-GR
37ASC-GR
34ASC-M1
32ASC-GR
Southern Pacific Dr
26
Segment A
33ASC-GR
19
25
24-AE
31ASC-ASLD
Chavez Siding Rd
24
24-AE
Camino Esplendido
De Anza
De Anza
24-AE
Belderrain Cyn
De Anza
Puerto Canyon Rd
Otero Rd
23
29ASC-ASLD
18-AW
24-AE
Avenue Otero

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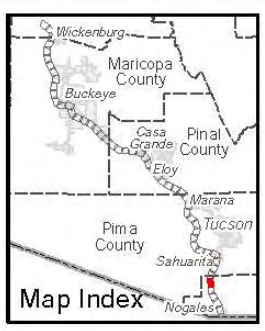

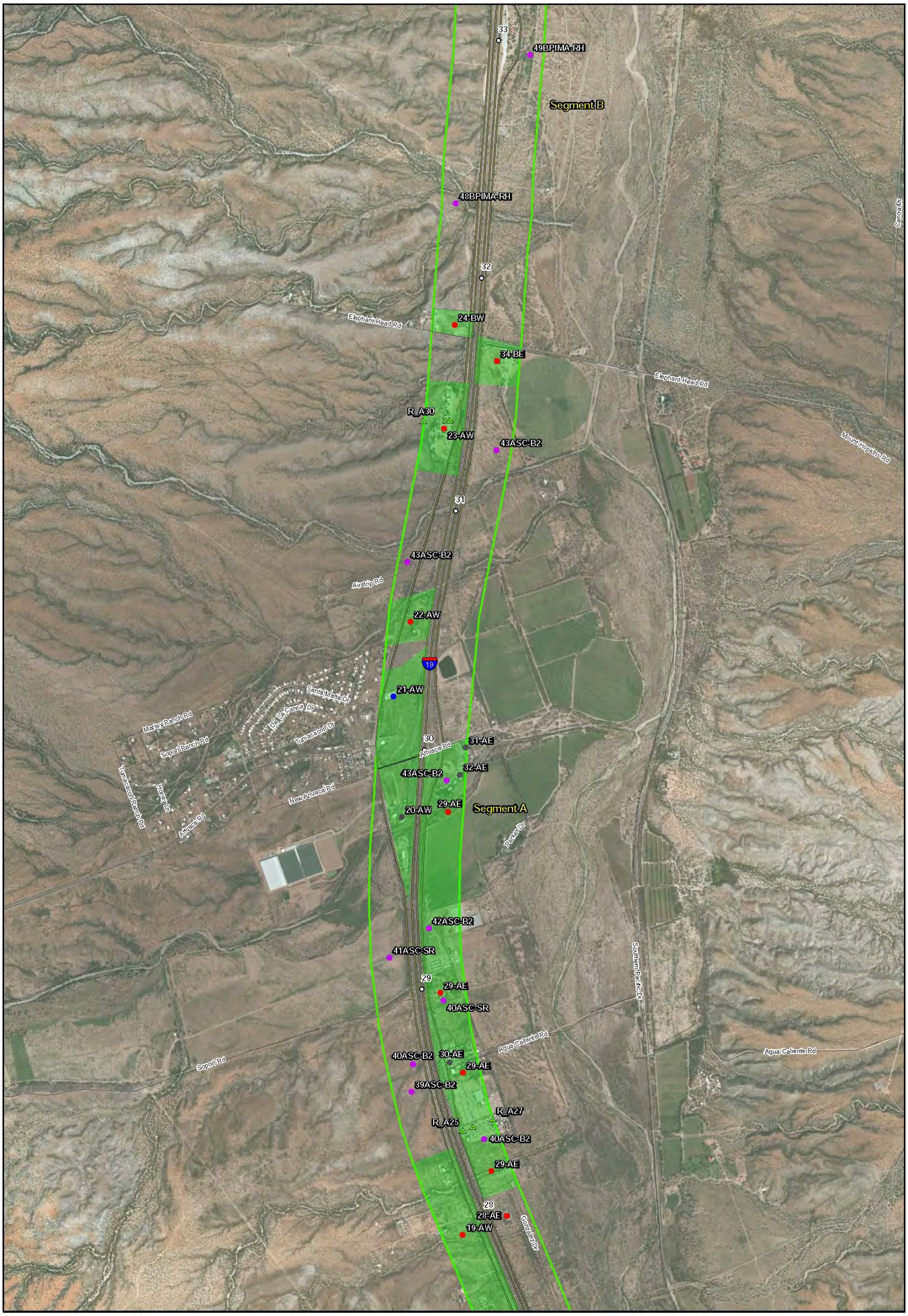

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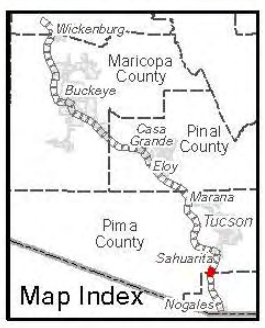


38
39-BE
32-BW
32-BW
R_B17
R_B16
Abrego Dr
Desert Hills Dr
Desert Jewel Dr
53BPIMA-RH
36-BE
Camino Encanto
31-BW
54BPIMA-TR
Reforma De Anza
Camino Urbano
Vuelta Del Yaba
R_B15
39-BE
R_B14
39-BE
37
R_B13
Camino Del Pato
Camino De La Oca
31-BW
36-BE
Camino Del Golfista
Camino De La Canoa
Via De La Gloria
Mon 5
Camino Del Arbolante
Camino Estelar
R_B12
51BPIMA-CB-2
Camino De Rondo
Marquita St
29-BW
Via Del Picamaderos
Camino Del Sol
R_B11
R_B10
Desert Jewel Dr
35-BE
Via Nuevo Leon
30-BW
Via De Febrero
30-BW
36
Calle Uno
28-BW
R_B8
Segment B
R_B9
Vista Ridge Dr
51BPIMA-CB-2
Calle Dos
R_B7
Calle Tres
R_B4
R_B6
Casas Lindas
R_B5
Calle Guatamote
27-BW
Calle Quatro
Calle Ceja
Calle Cacillo
35
33-BE
Via Cielo Azul
19
Canoa Rd
51BPIMA-CB-2
Calle Cinco
Via Montana Vista
Canoa Ranch Dr
25-BW
R_B3
R_B1
Calle Seis
51BPIMA-CB-2
26-BW
Calle Siete
25-BW
26-BW
34
26-BW
U50BPIMA-CR-5
Canoa Dr
33
49BPIMA-RH
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Mileposts
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Monitoring Site
Noise Receiver
0
1000
2000
FEET
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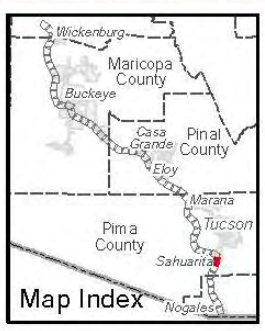

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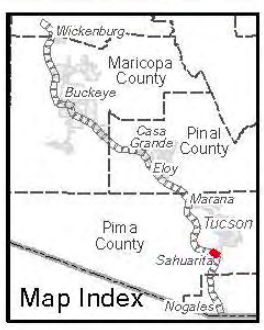

206PIMAD-RH

206PIMAD-RH

Calle Quiavo

Avenida Kaye

Calle Dos

Calle Quiavo

Avenida Greene

4-D

Avenida Haley

Lone Saguaro Rd

Horse Hollow Trl

Indian Kitchen Rd

Skyharbor Way

Ontario Way

Heathrow Way

Wright Brothers Way

Ocotillo Ranch Rd

Segment D

Dogtown Rd

217DPIMA-RH

216DPIMA-BIO
RURAL

Mission Rd

Ruby Star Rd

Avenida Uno

Helmet Peak Rd

216DPIMA-BIO
RURAL

Camino Del Tigre

Camino Del Paloma

Curly Horn Rd

Camino Del Yucca

Avenida Dos

Twin Buttes Rd

Avenida Tres

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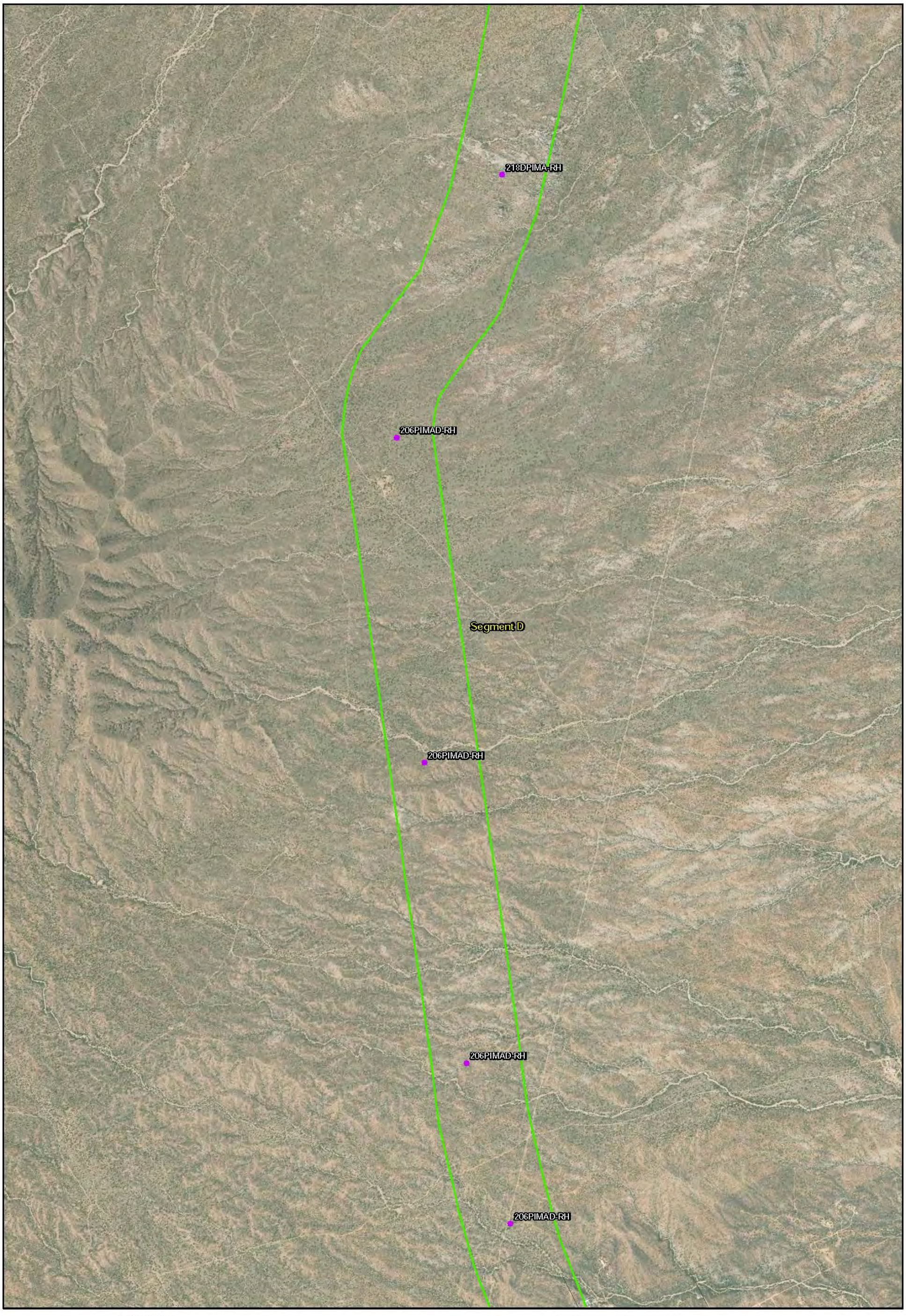

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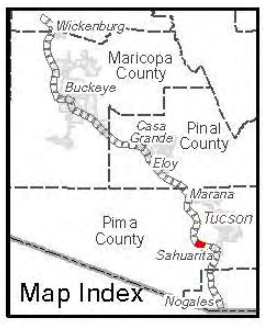

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218DPIMA-RH
218DPIMA-RH
8-D
218DPIMA-RH
Segment D
7-D
218DPIMA-RH
218DPIMA-RH
6-D
Bopp Rd
Rena Rd
Ierne Blvd
Donaldson Ranch Rd
Brandi Rd
Nebraska St
Snyder Hill Rd
Continental Rd
Eagles Wing Way
Eagles Wing Way
View Way
Sandario Rd
Peaceful Ln
Park Rd
Tara Ln
Dirty Ln
Alexandra Dr
Kushmaul Rd
Travisgard Ave
Canary Ave
Firebird Ave
Valencia Rd
Sandario Hollow Trl
Tara Ln
Camino Lucido
Postvale Rd
Byus Ave
Marsellar Rd
Valencia Rd
158
86
157
Aviation Dr
Carolyn Ln
Cactus Ridge Dr
Los Reales Rd
Sandario Rd
Hermans Rd

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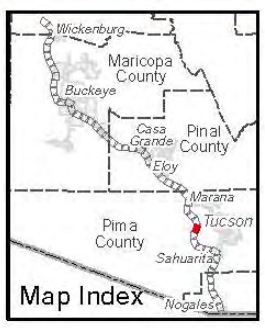

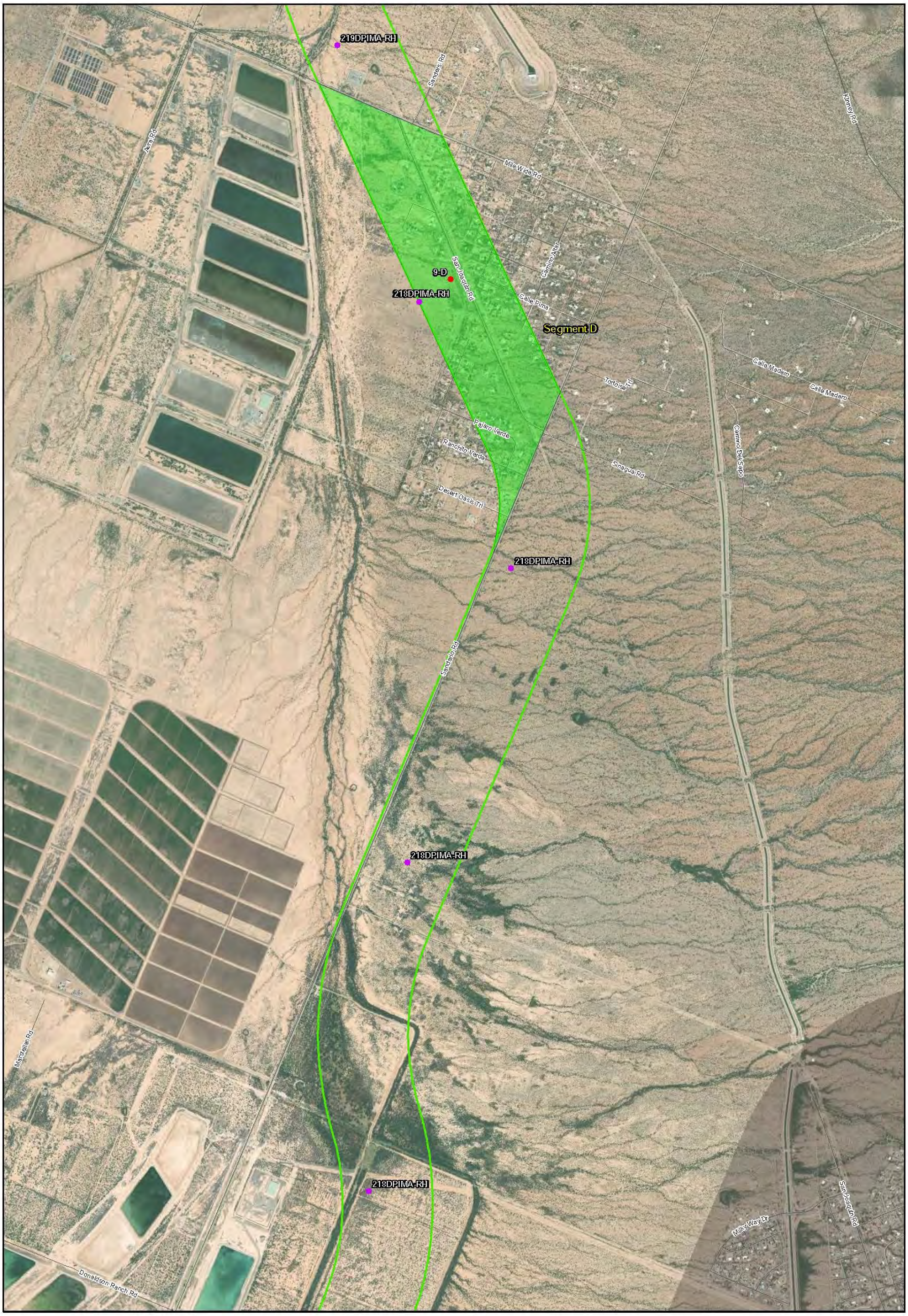

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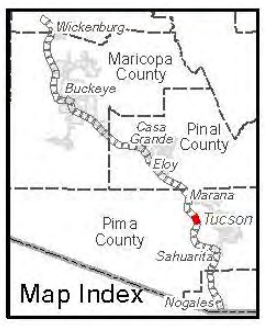

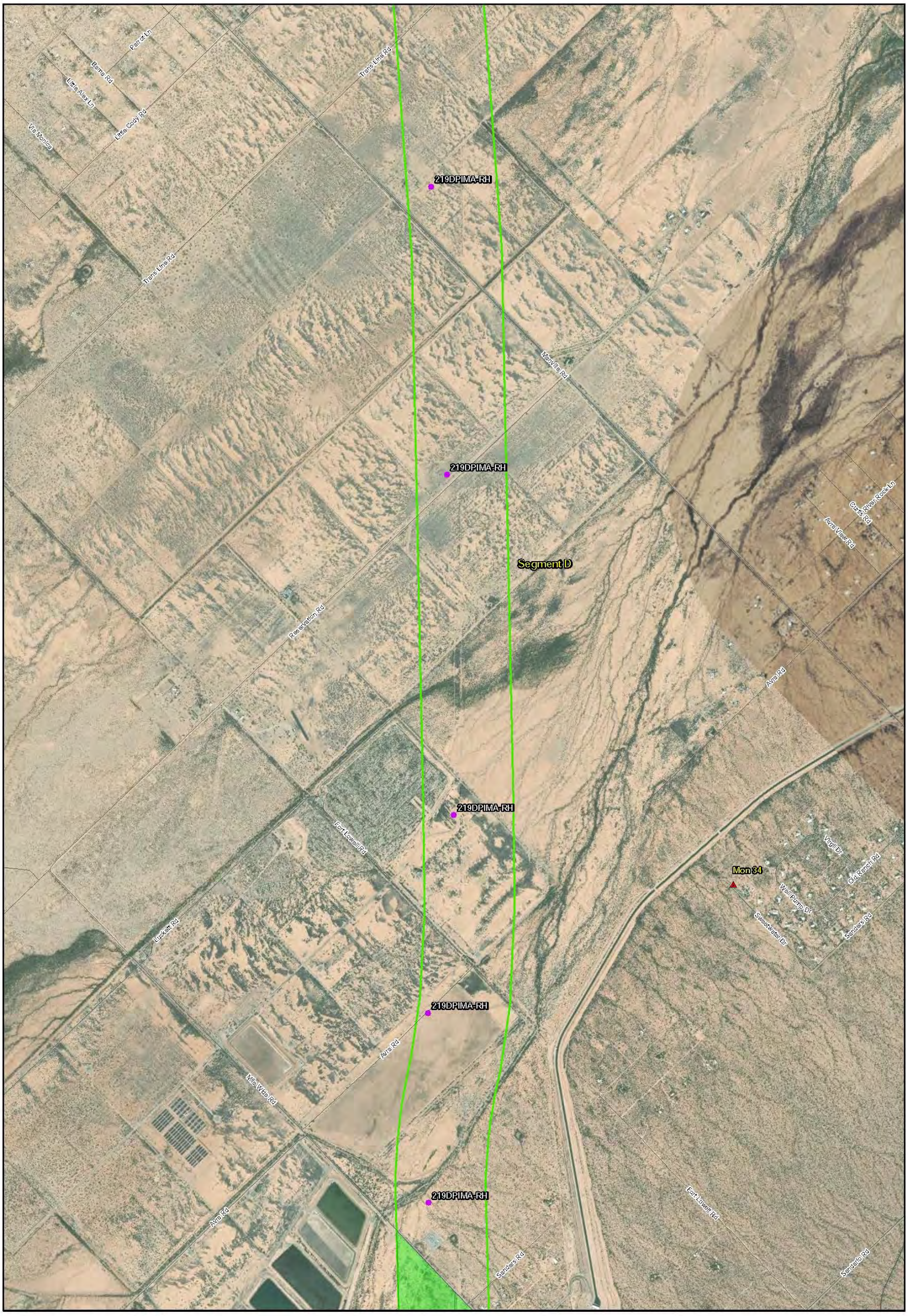

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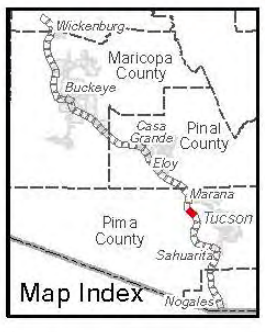

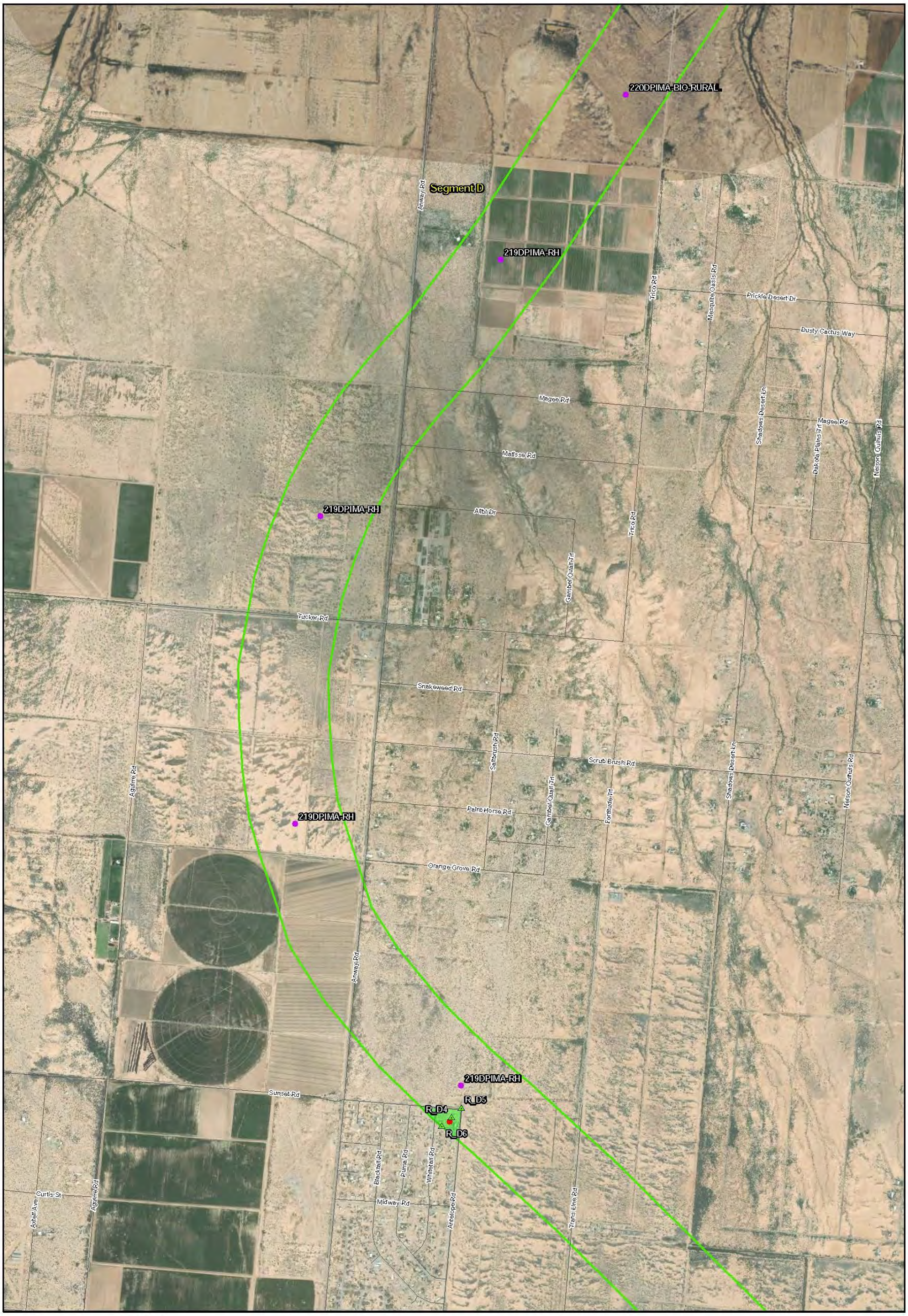

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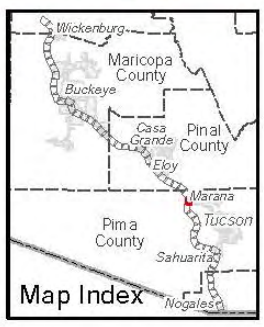

206-F-PINAL-RH
206a-F-PIMA-RH
Segment F
206a-F-PIMA-RH
206a-F-PIMA-RH
1-F
Segment D
Aguirre Rd
Hardin Rd
Gosio Rd
Marana Rd
Babocomari Ln
S Verbel Rd
Hardin Rd
Tisco Rd
Musket Rd
Sharps Rd
Catlin Rd
Weatherby Rd
Dorrigo Rd
Single Stick Rd
Moore Rd
Flintlock Rd
Springfield Rd
Antelope Rd
Gail Bell Rd
Arkay Rd
El Tiro Rd
Sandy St
Blackstall Rd
Purna Rd
Tisco Marana Rd
Treatment Plant Rd
Marana Rd
Linda Ln
Silverbell Rd

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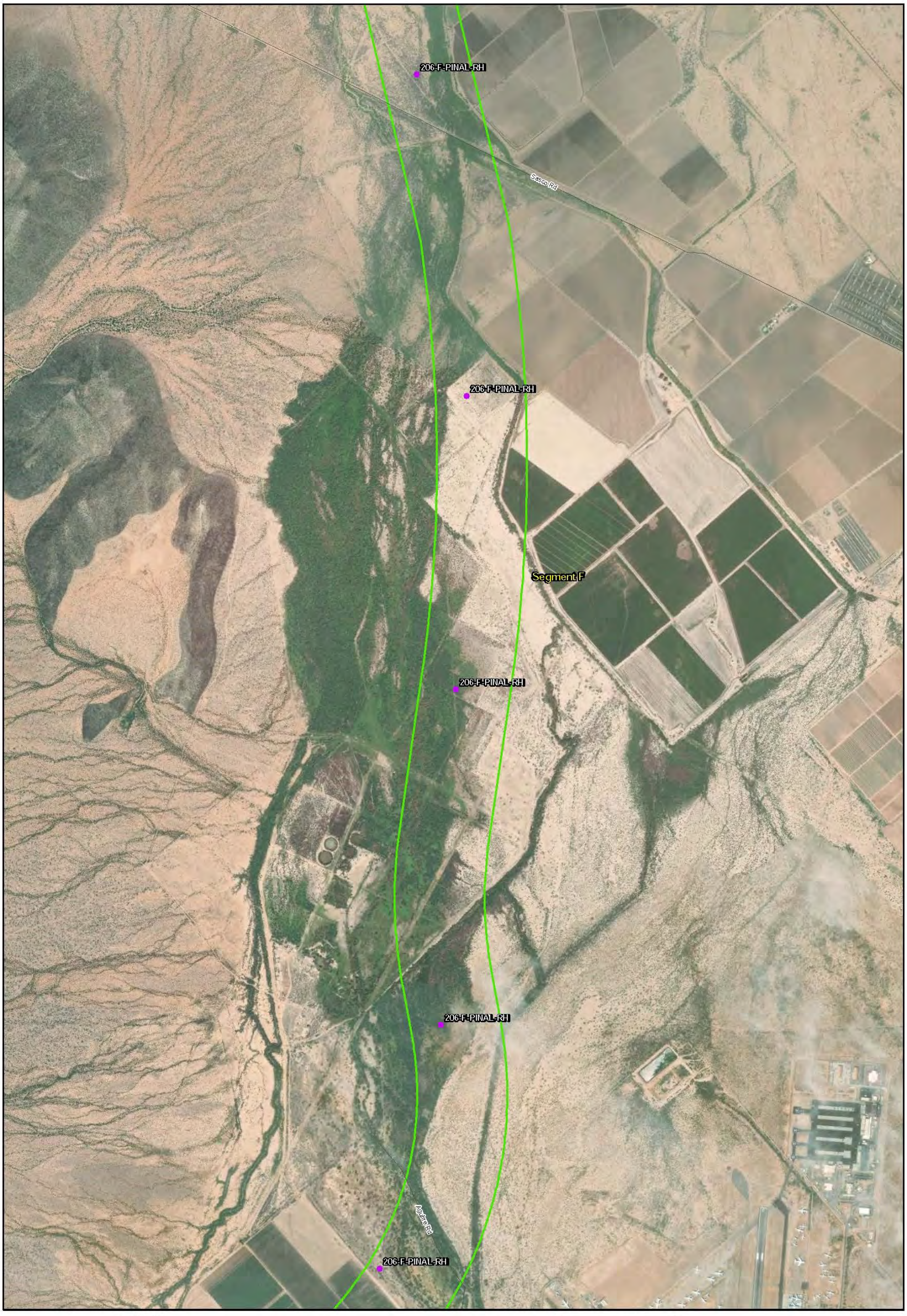

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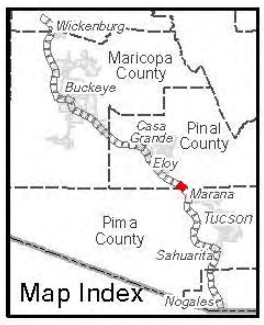

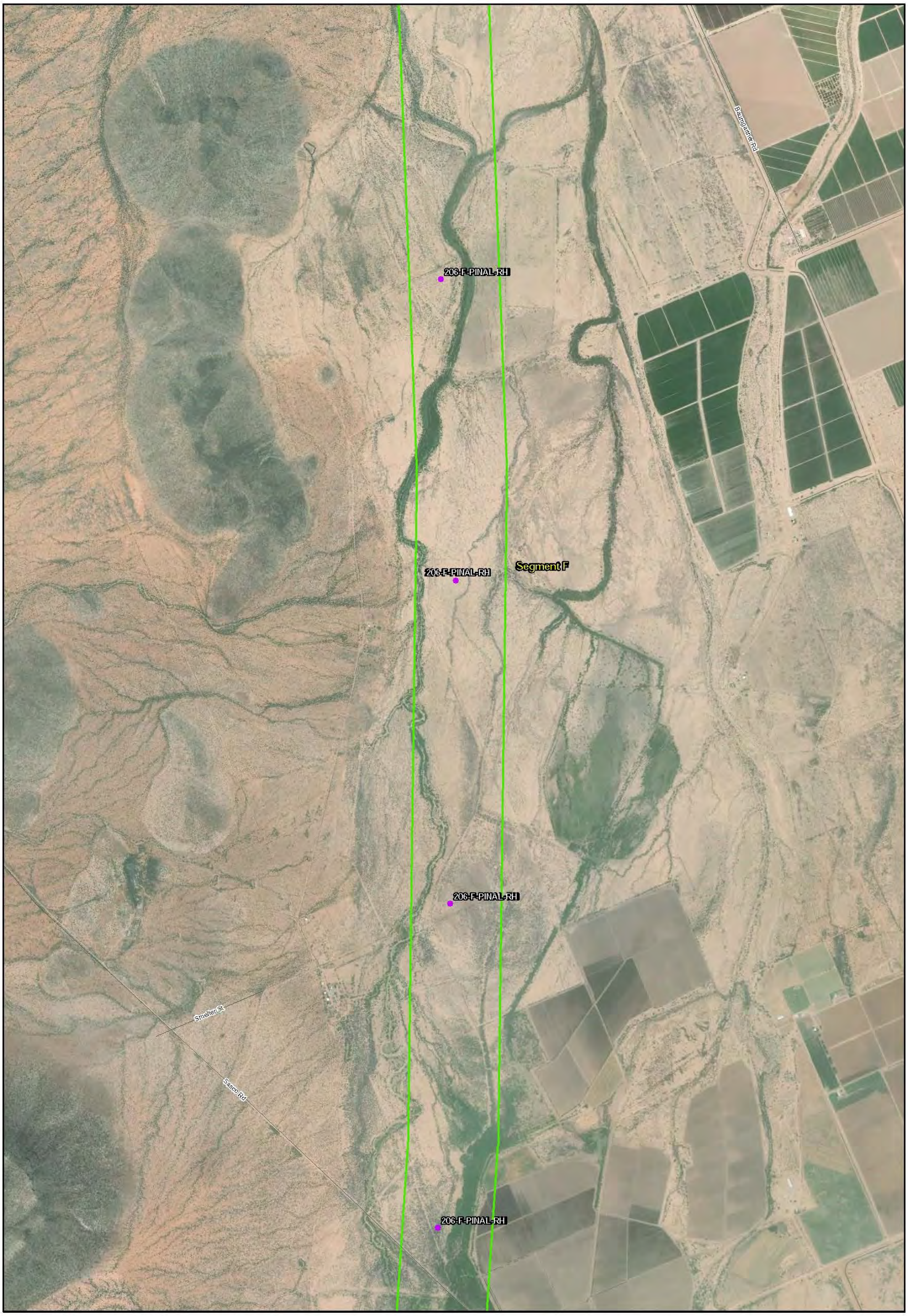

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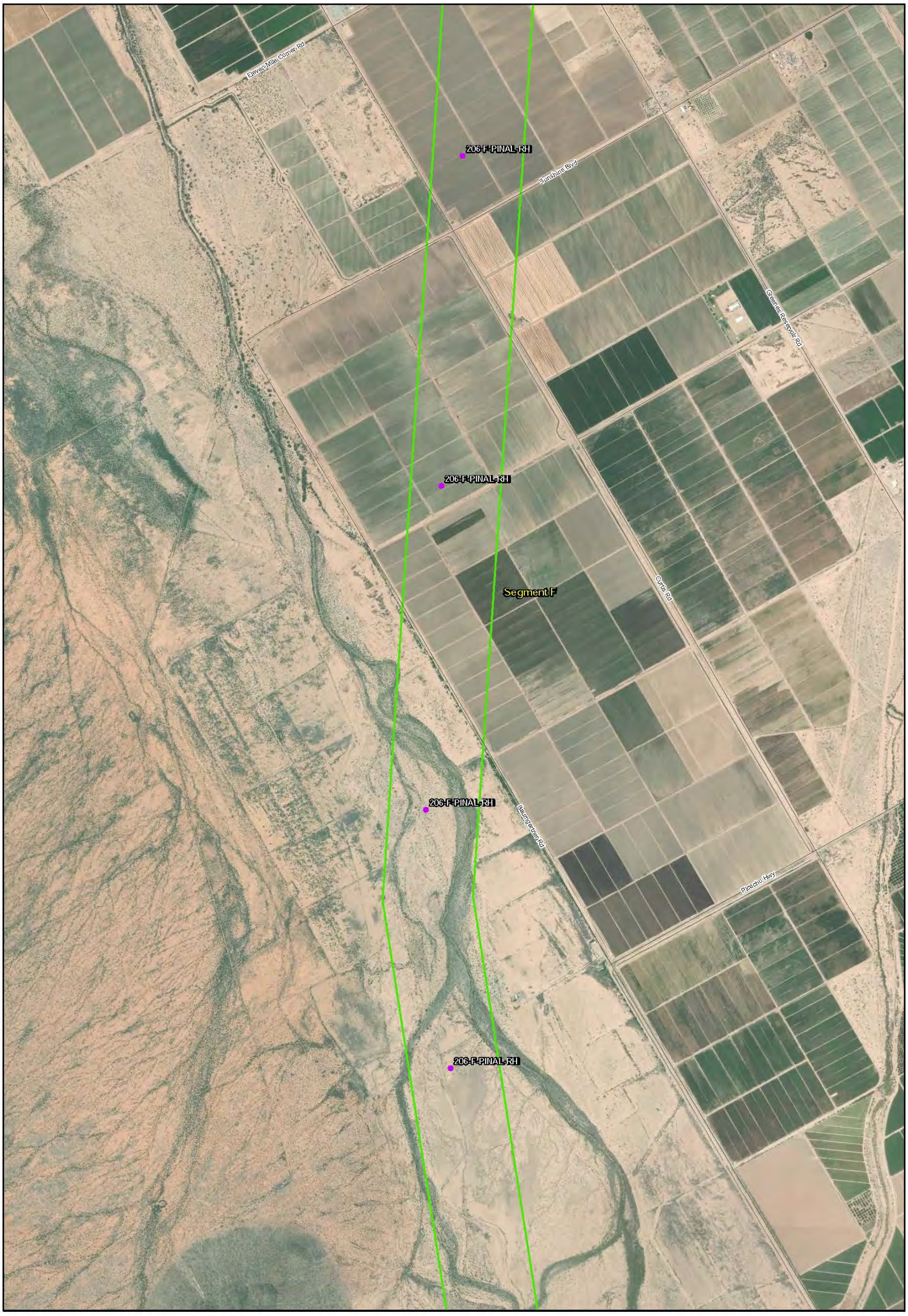

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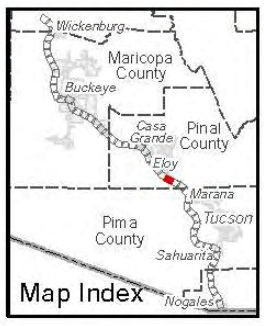

206-F-PINAL-RH
206-F-PINAL-RH
206-F-PINAL-RH
Segment F
206-F-PINAL-RH
206-F-PINAL-RH
Tokee Buttes Rd
Tokee Hwy
Curry Rd
Hotes Rd
Pretzer Rd
Curry Rd
Tweedy Rd
Greenes Reservoir Rd
Eleven Mile Corner Rd
Curtis Rd
Sunshine Blvd
Baumgartner Rd

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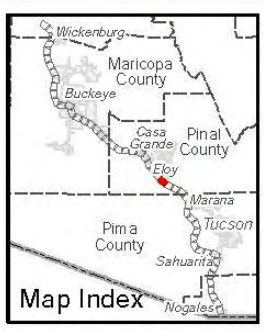

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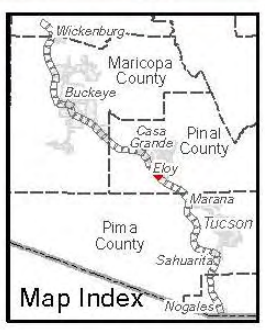

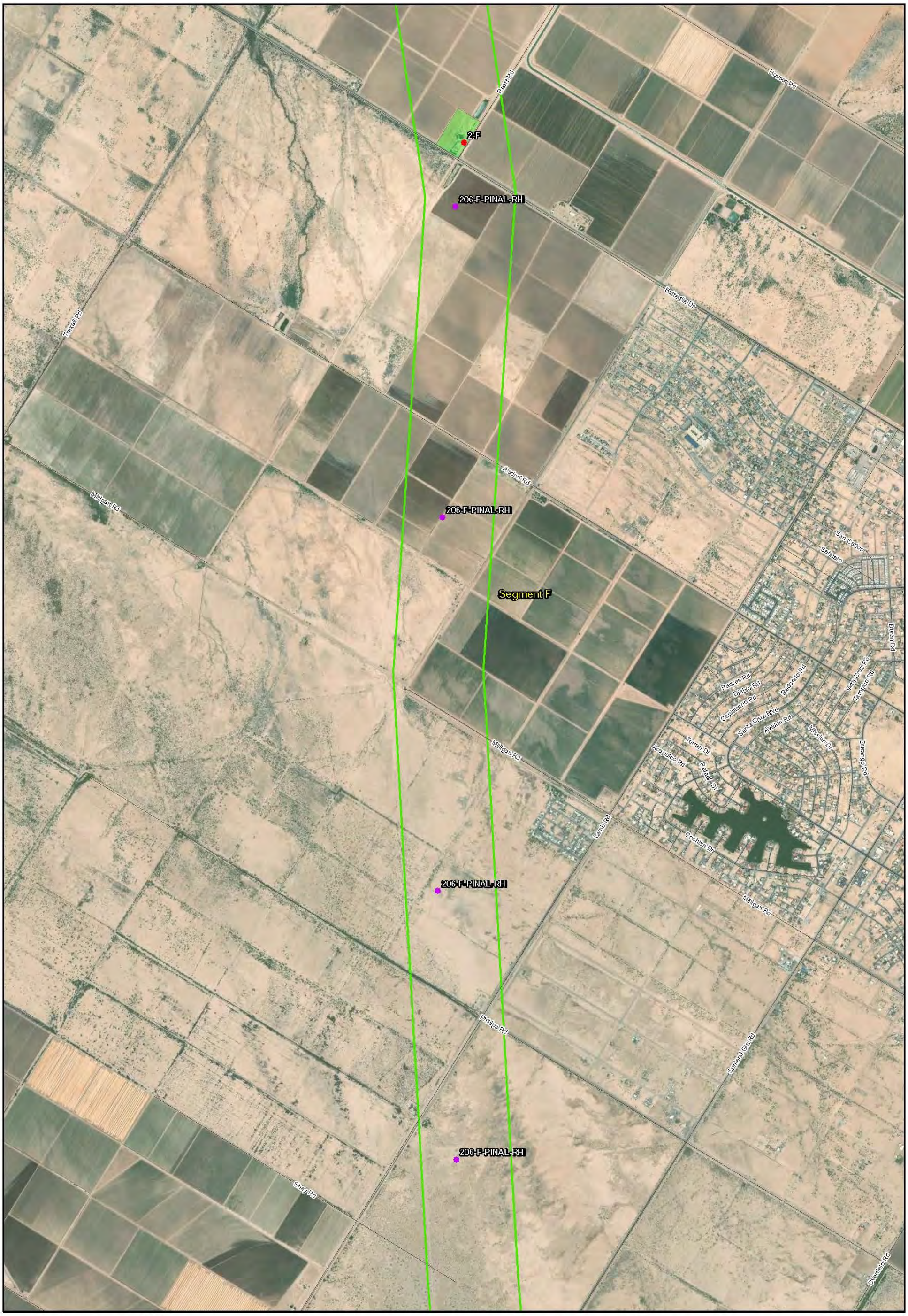

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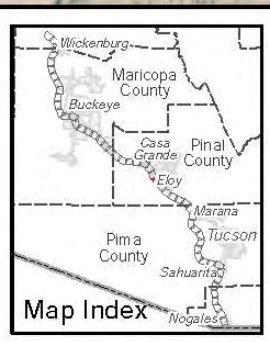

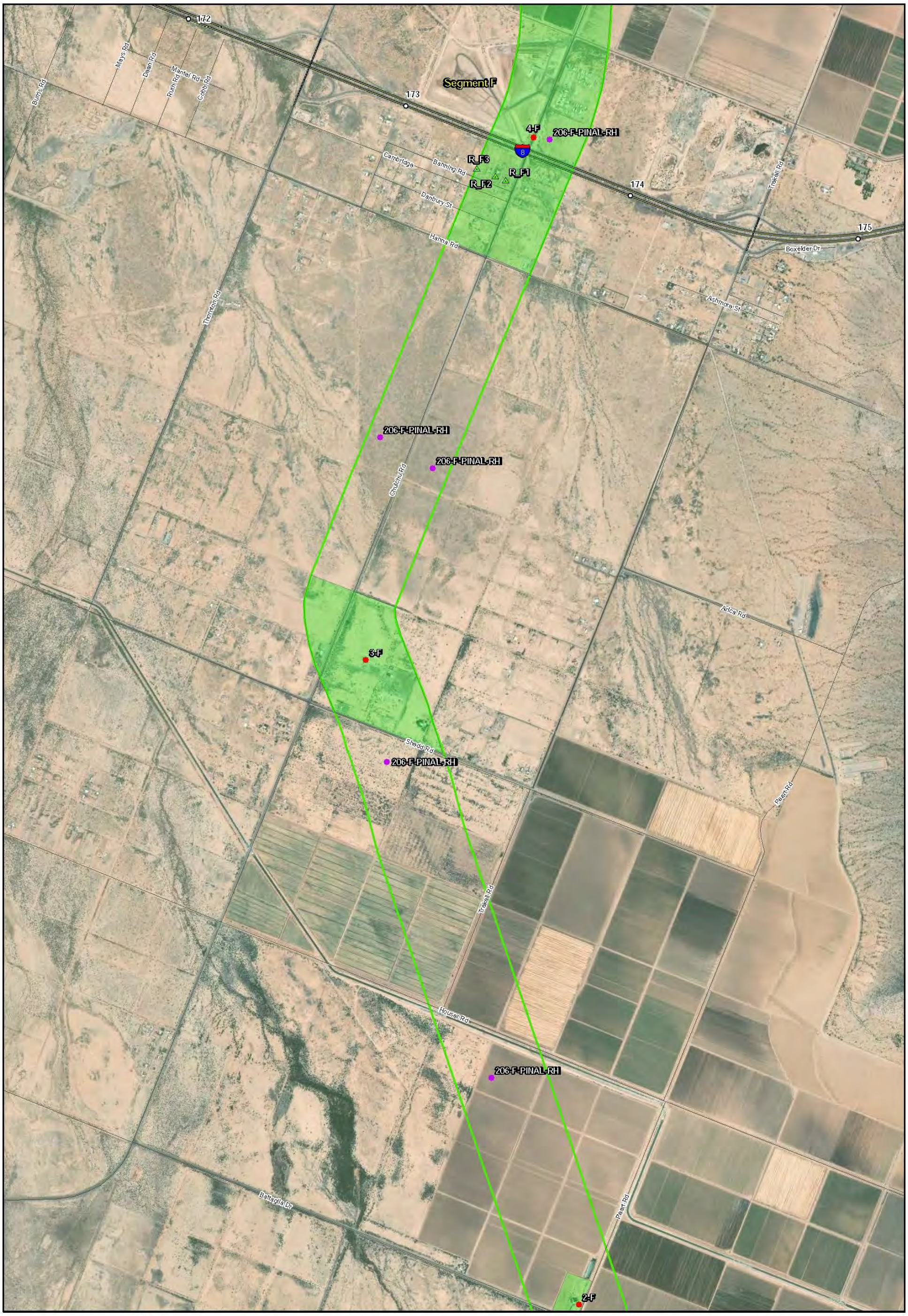

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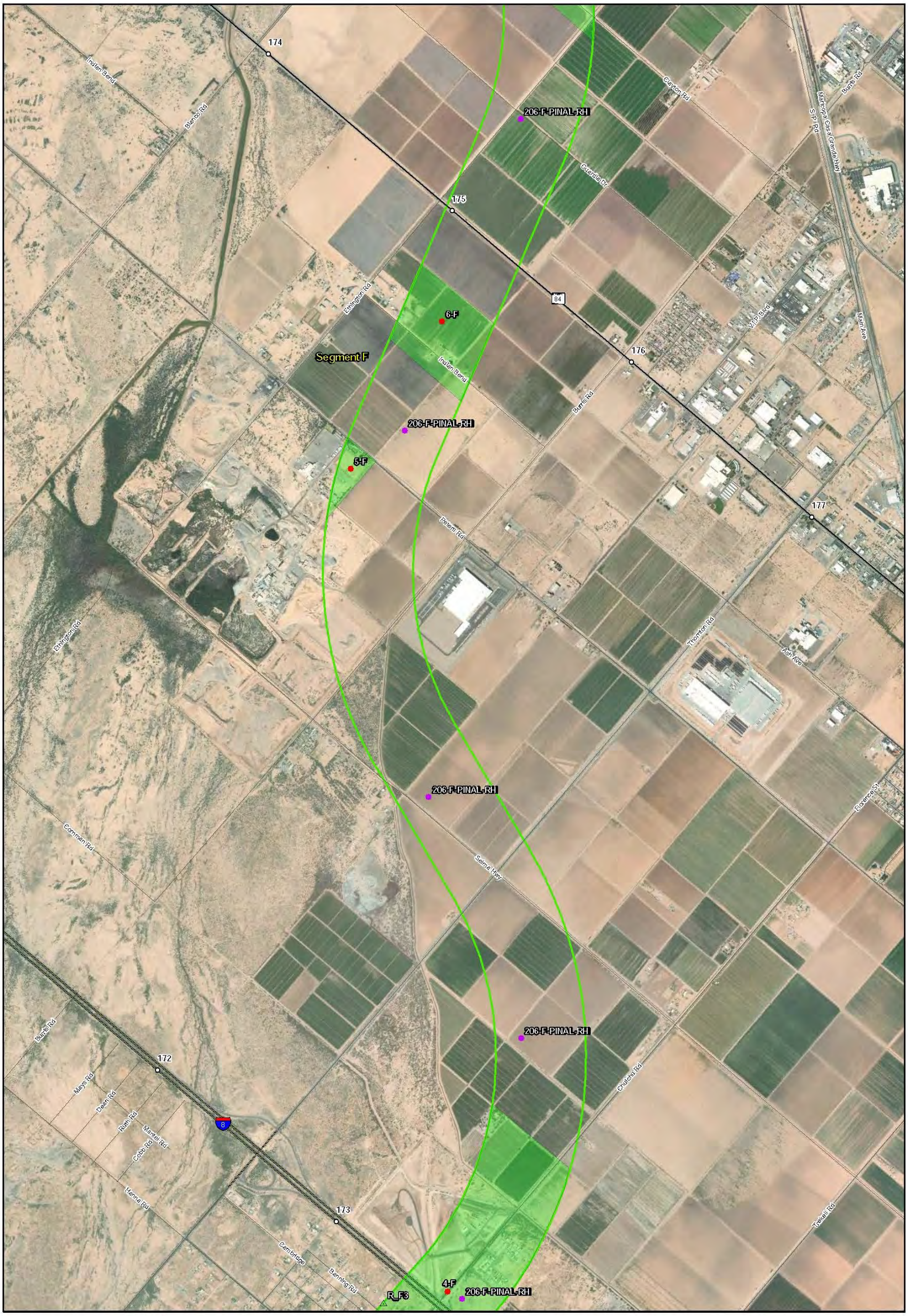

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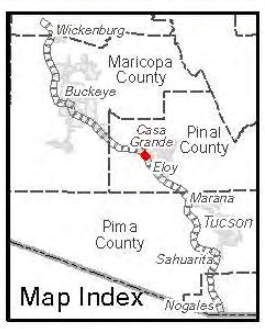

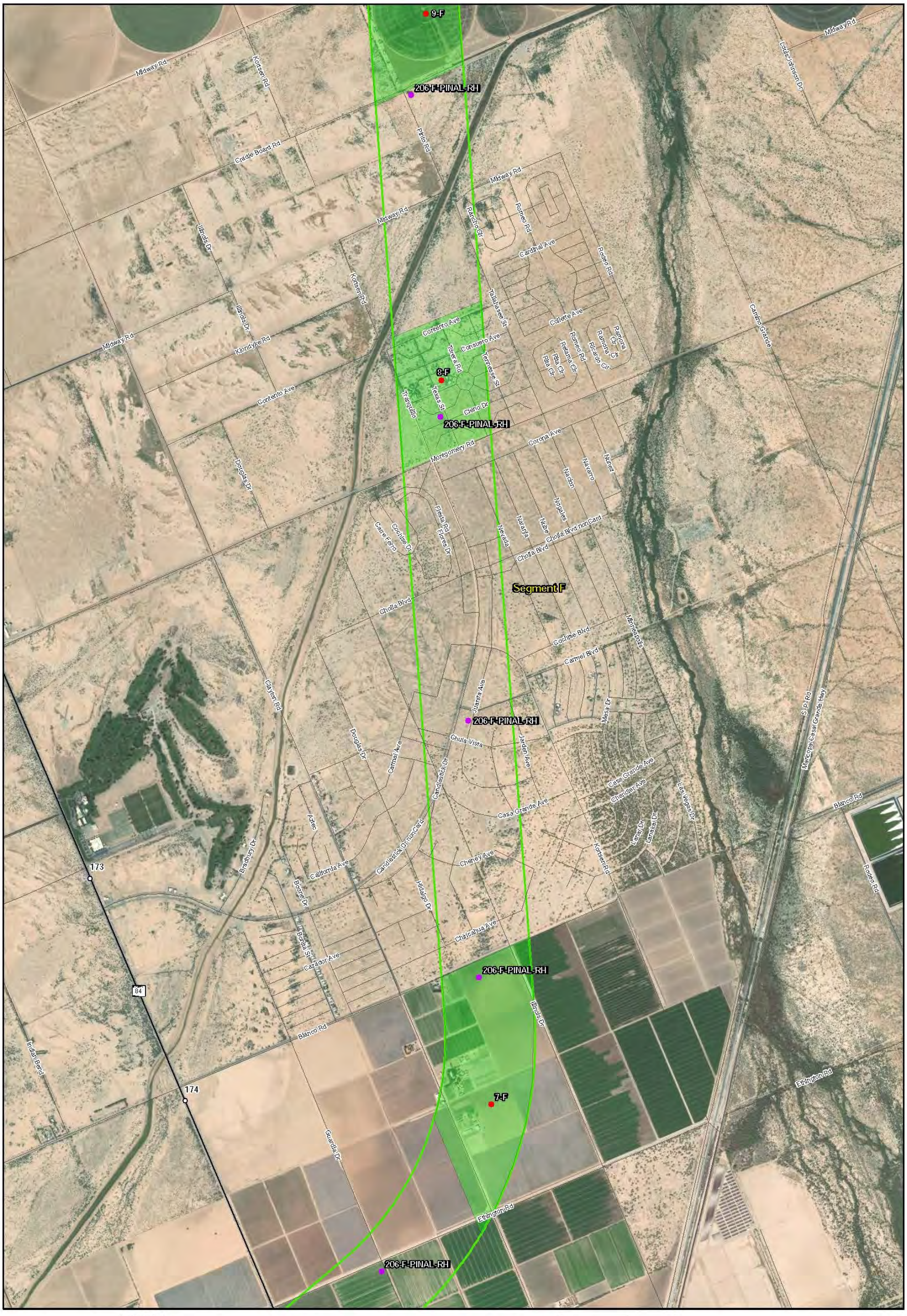

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0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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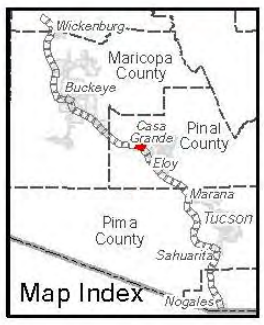

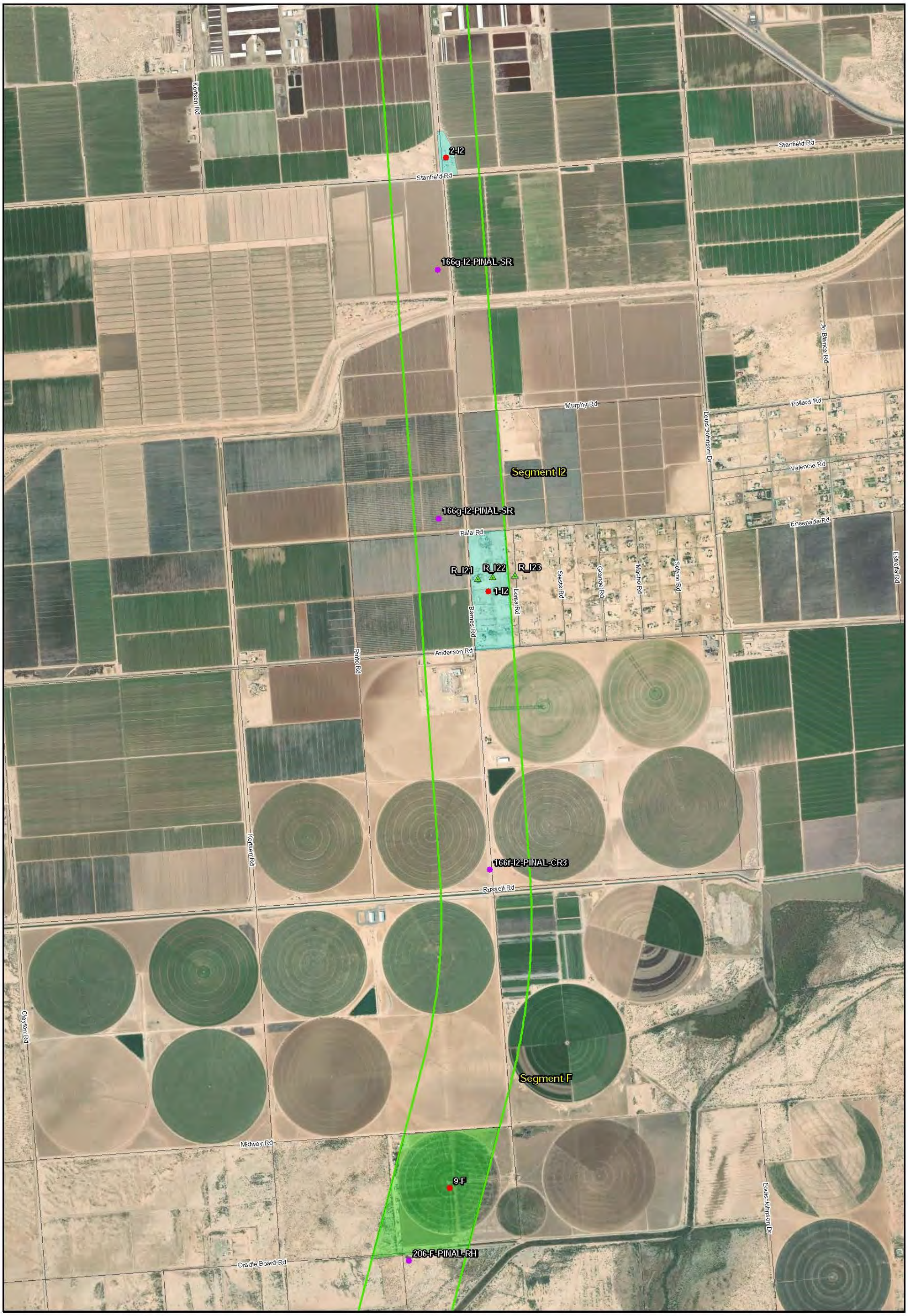

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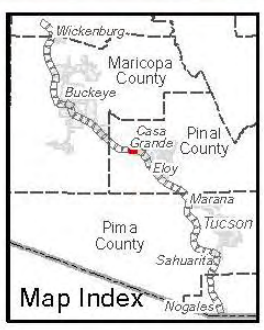

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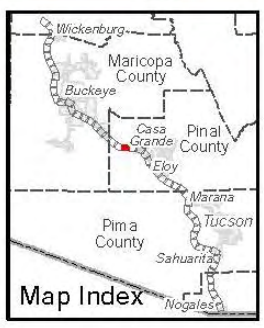

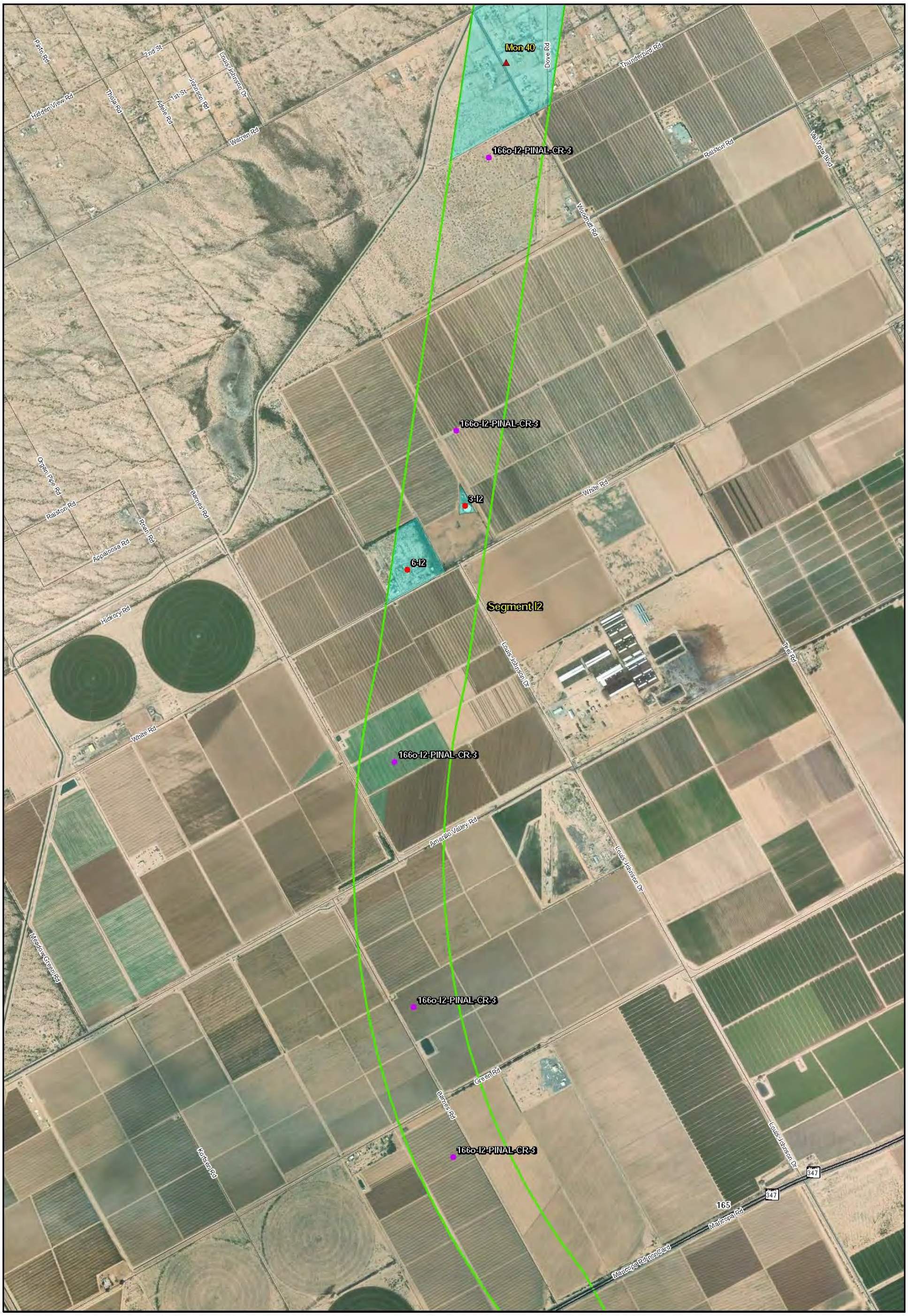

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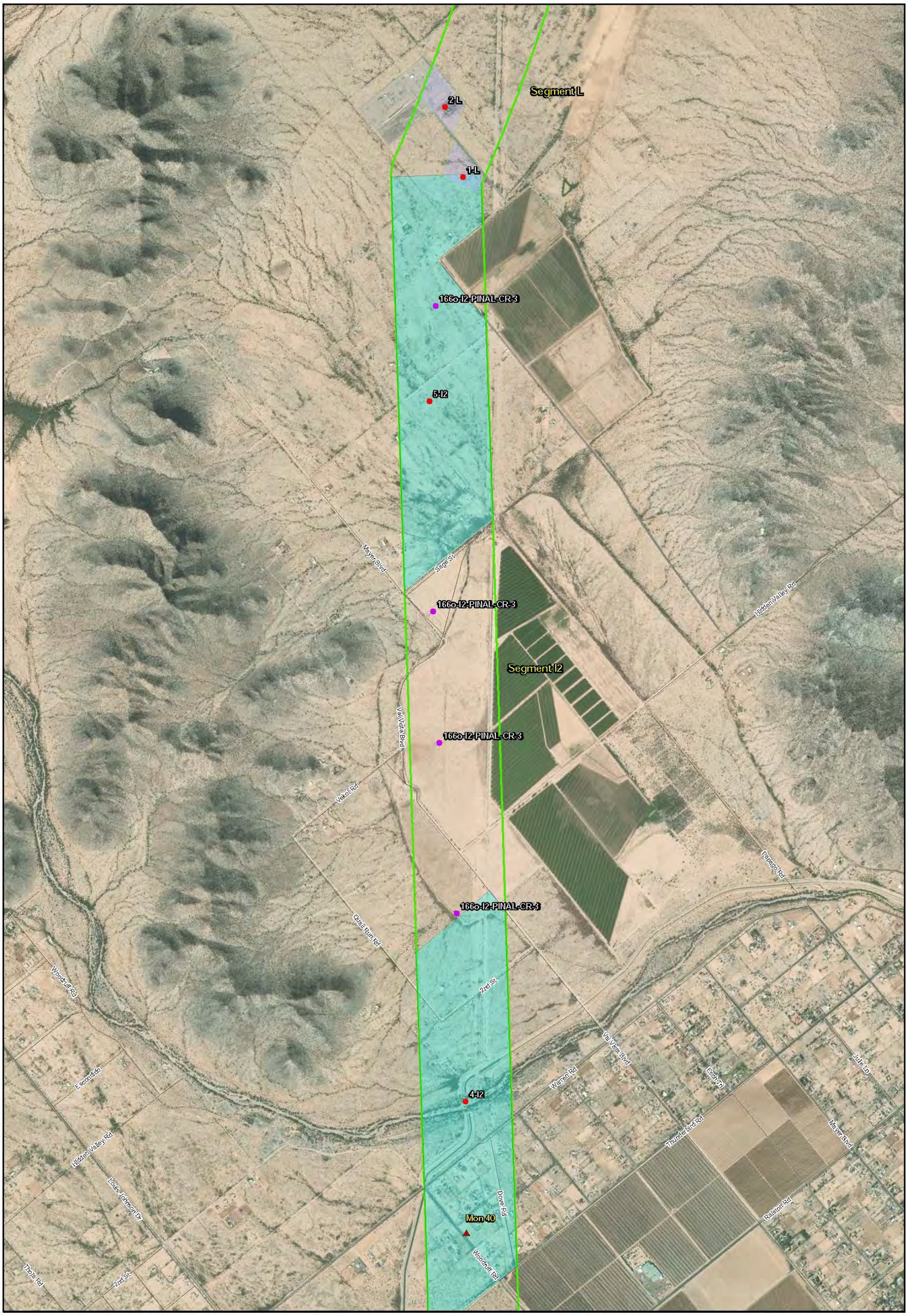

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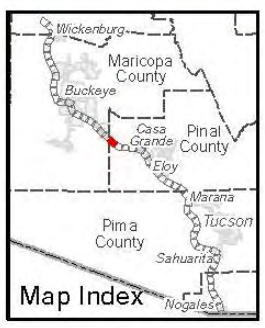

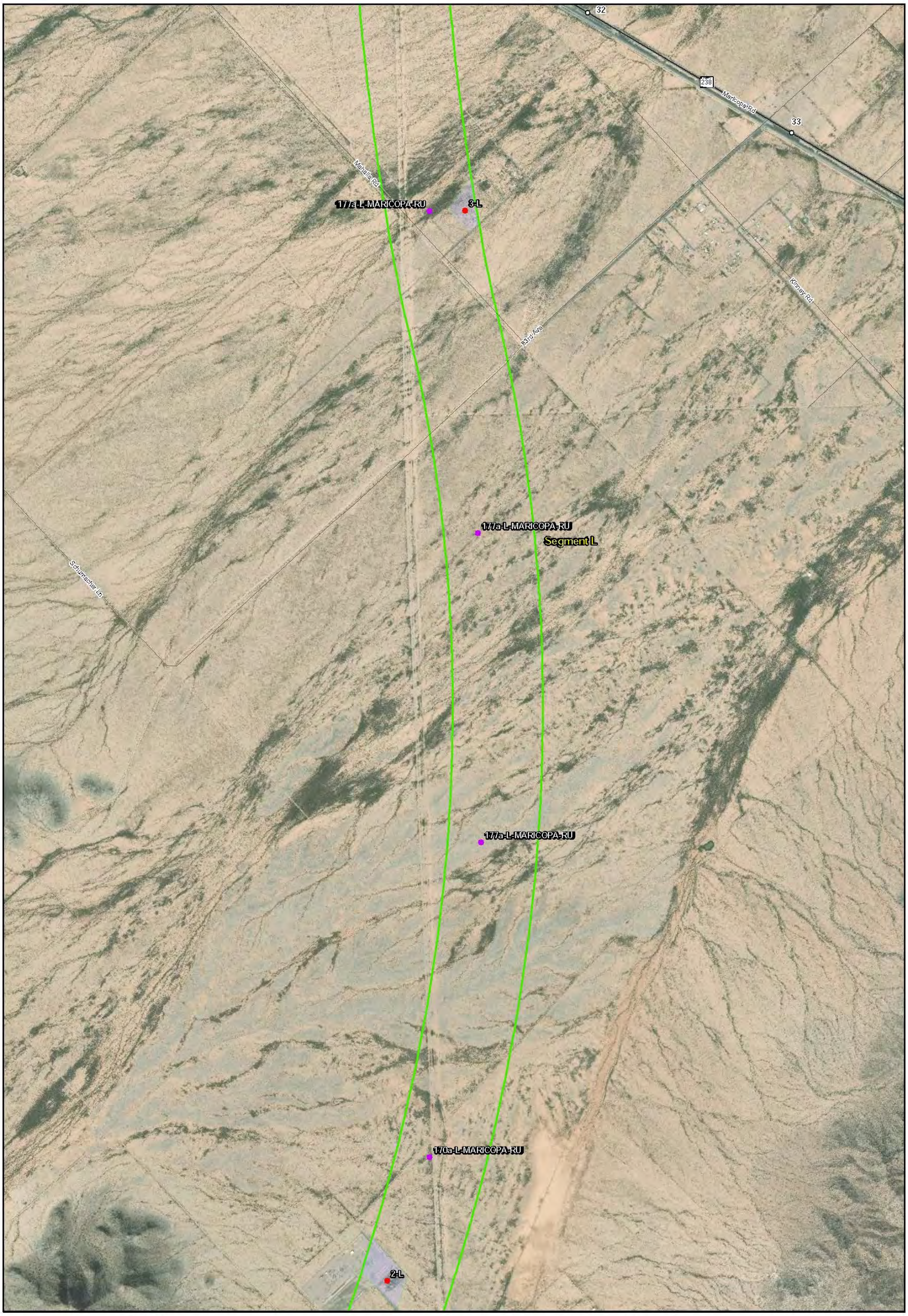

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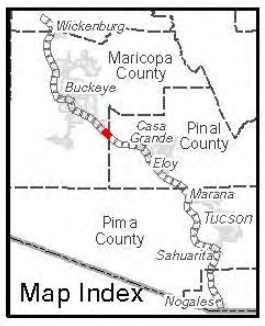

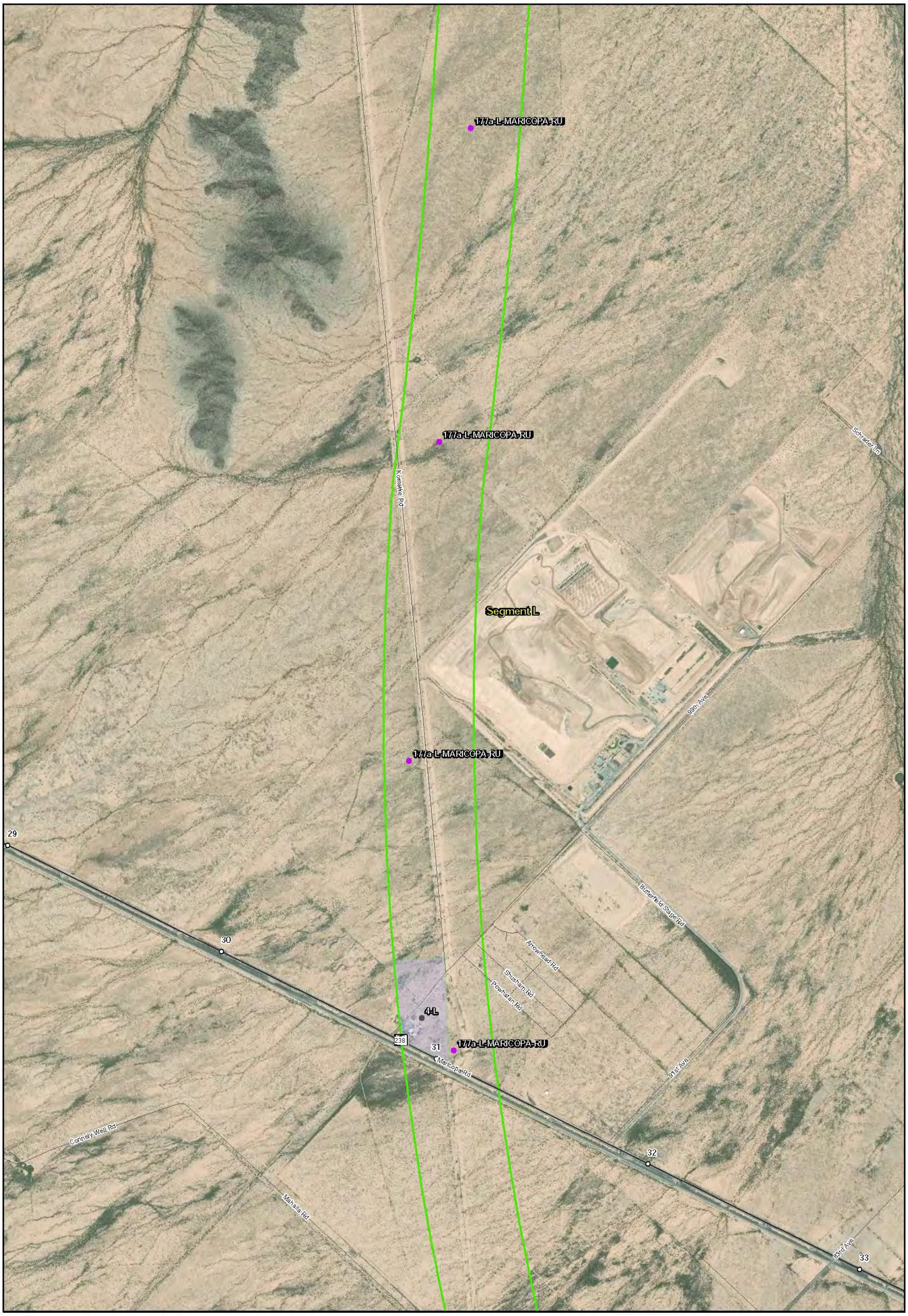

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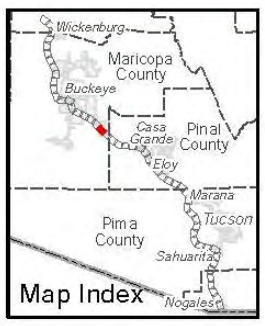

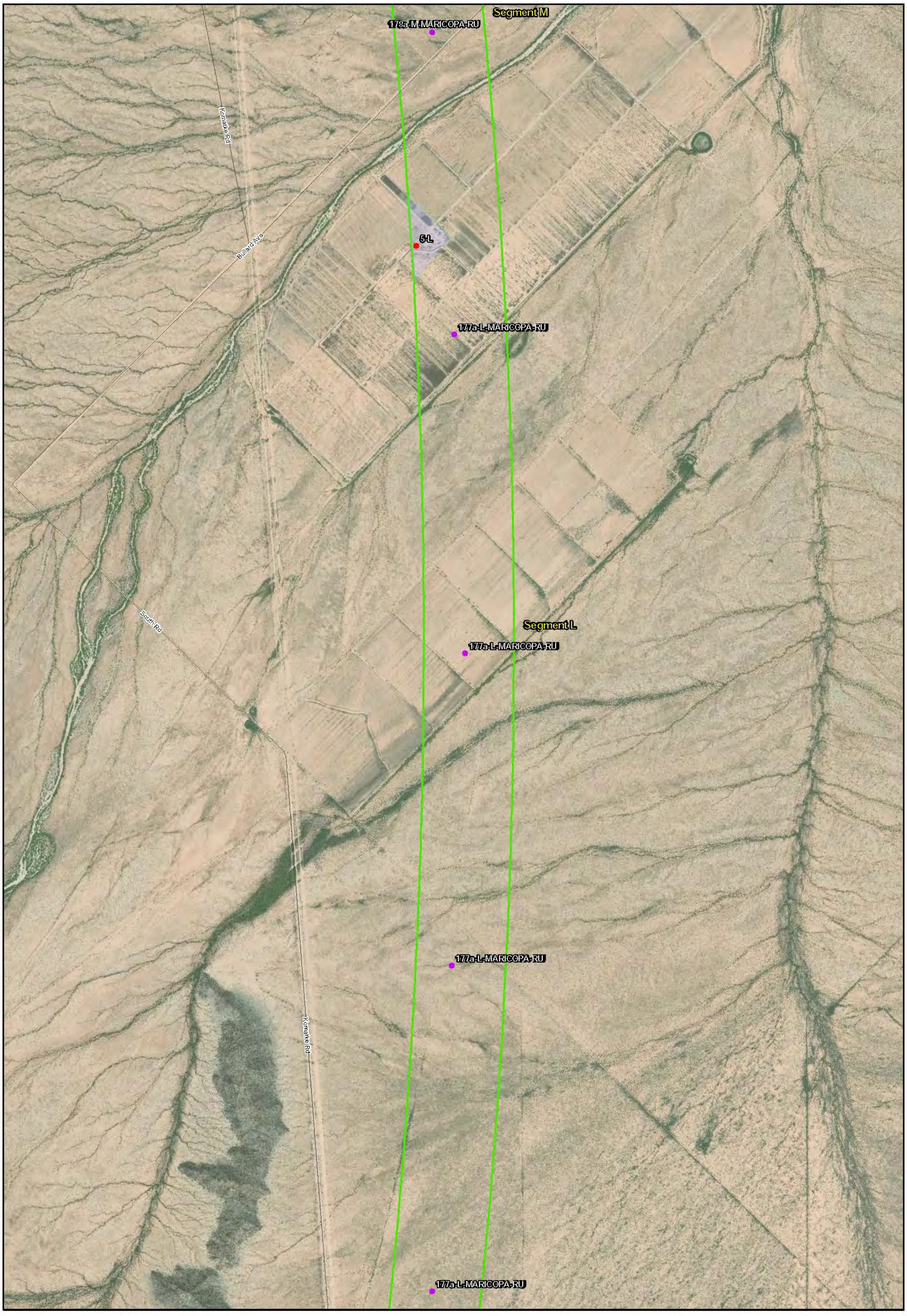

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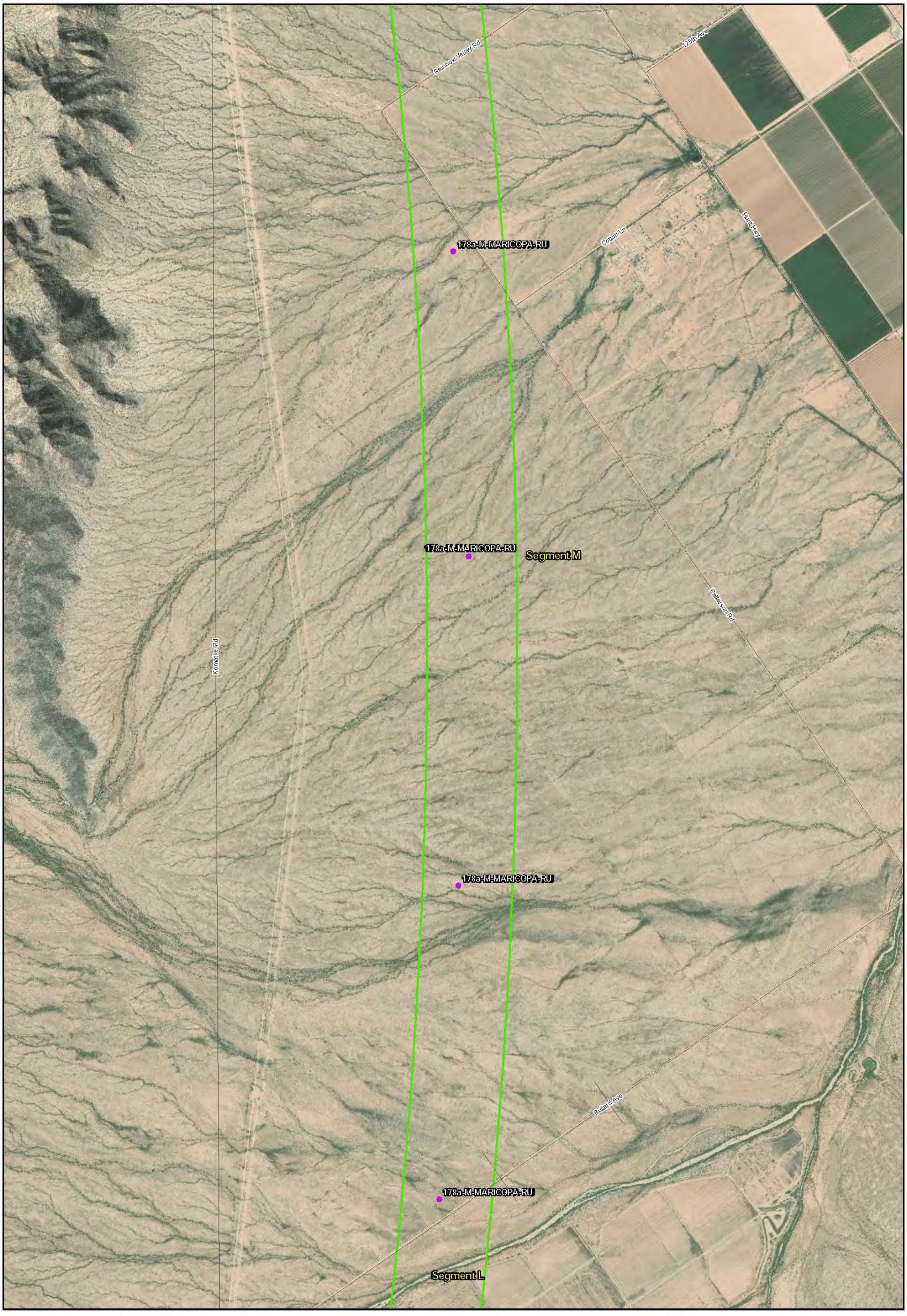

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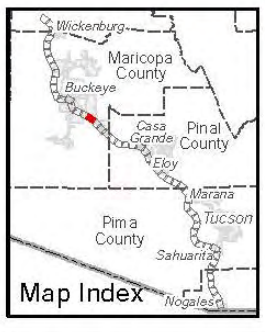

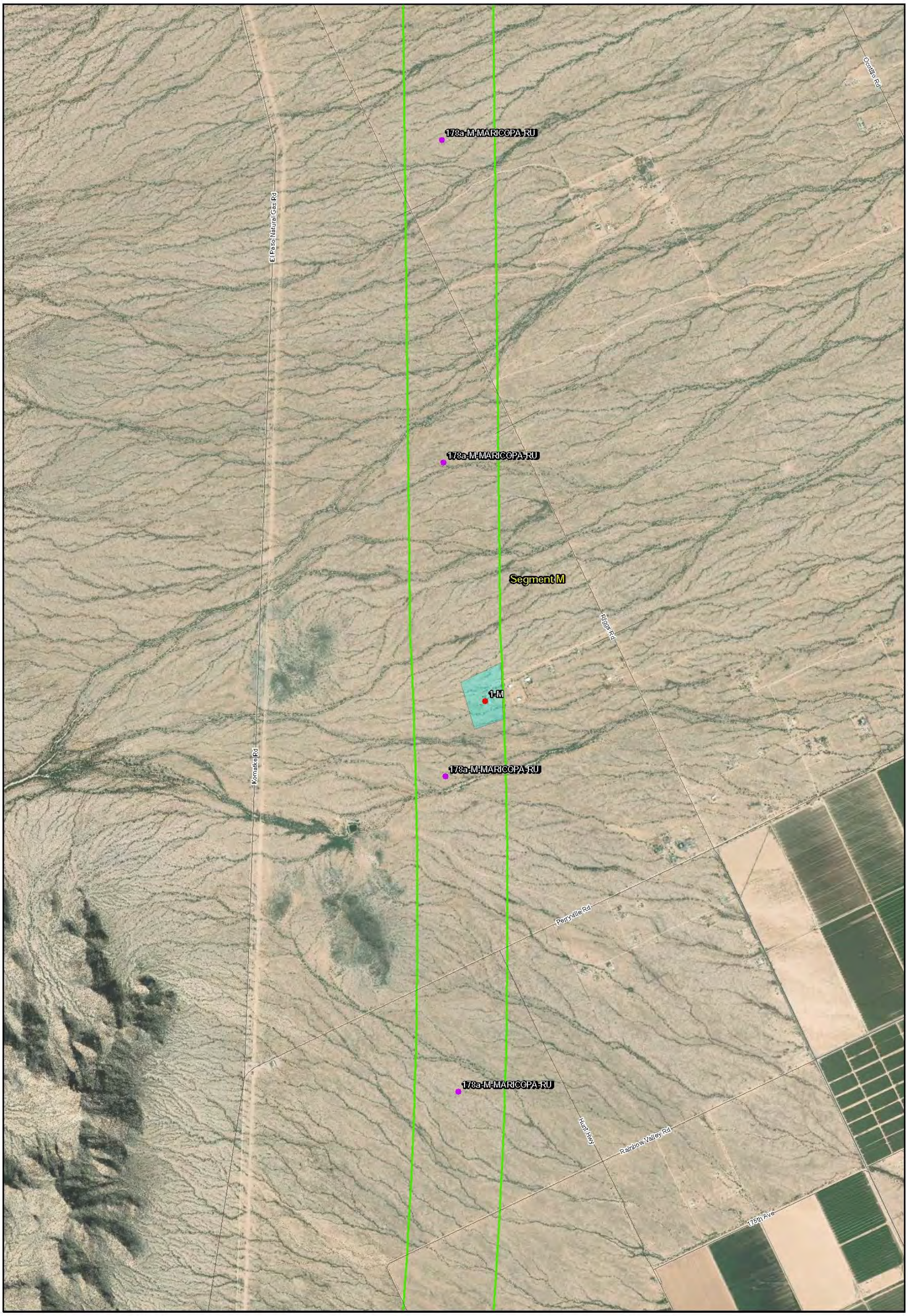

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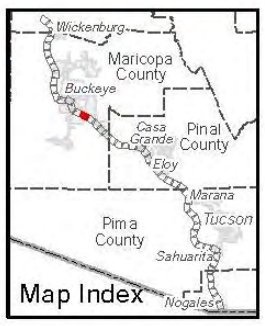

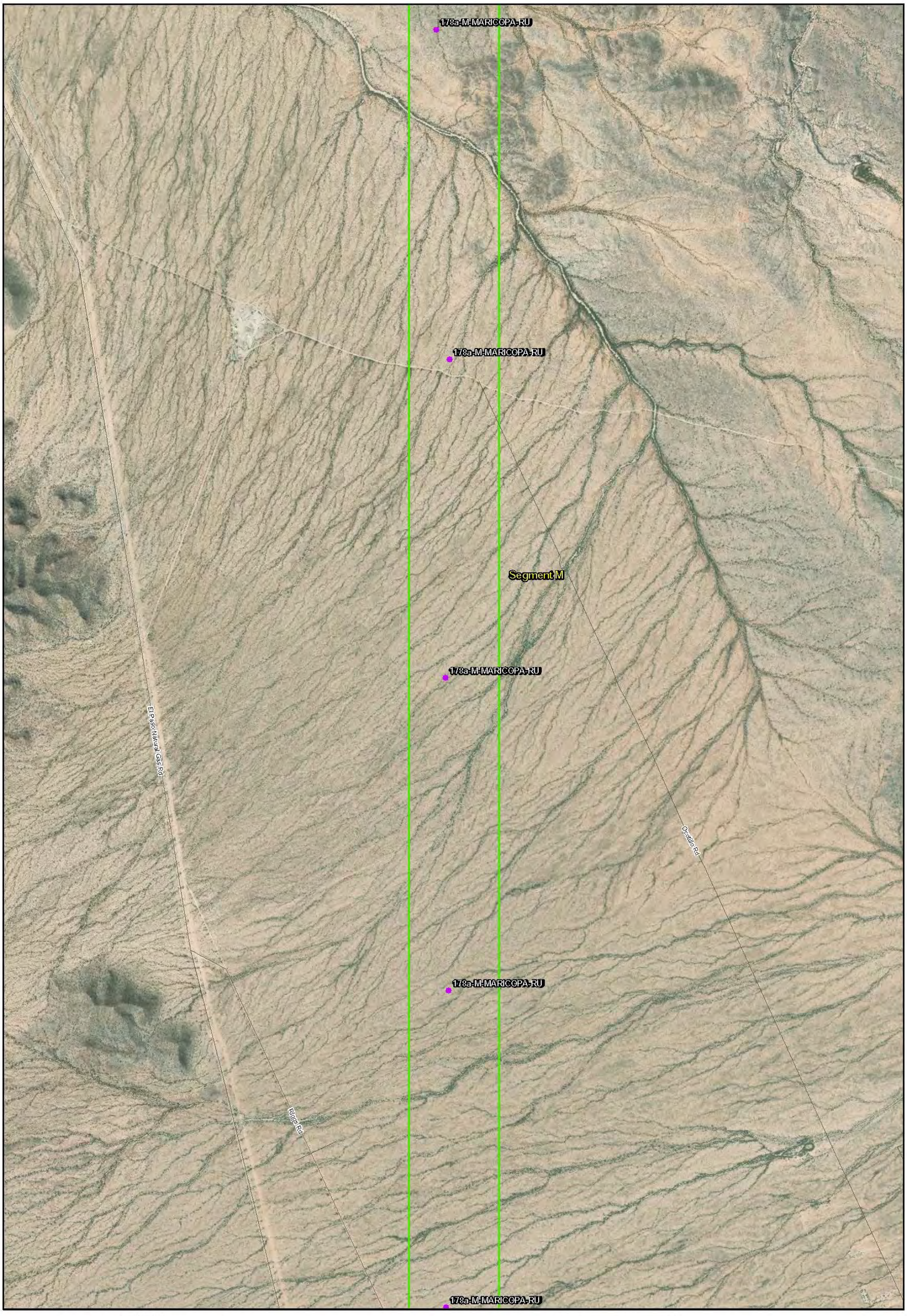

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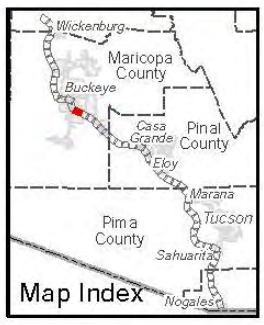

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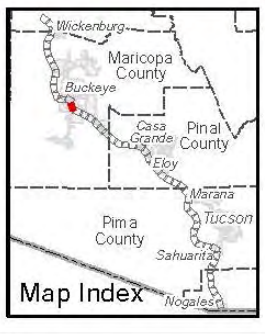

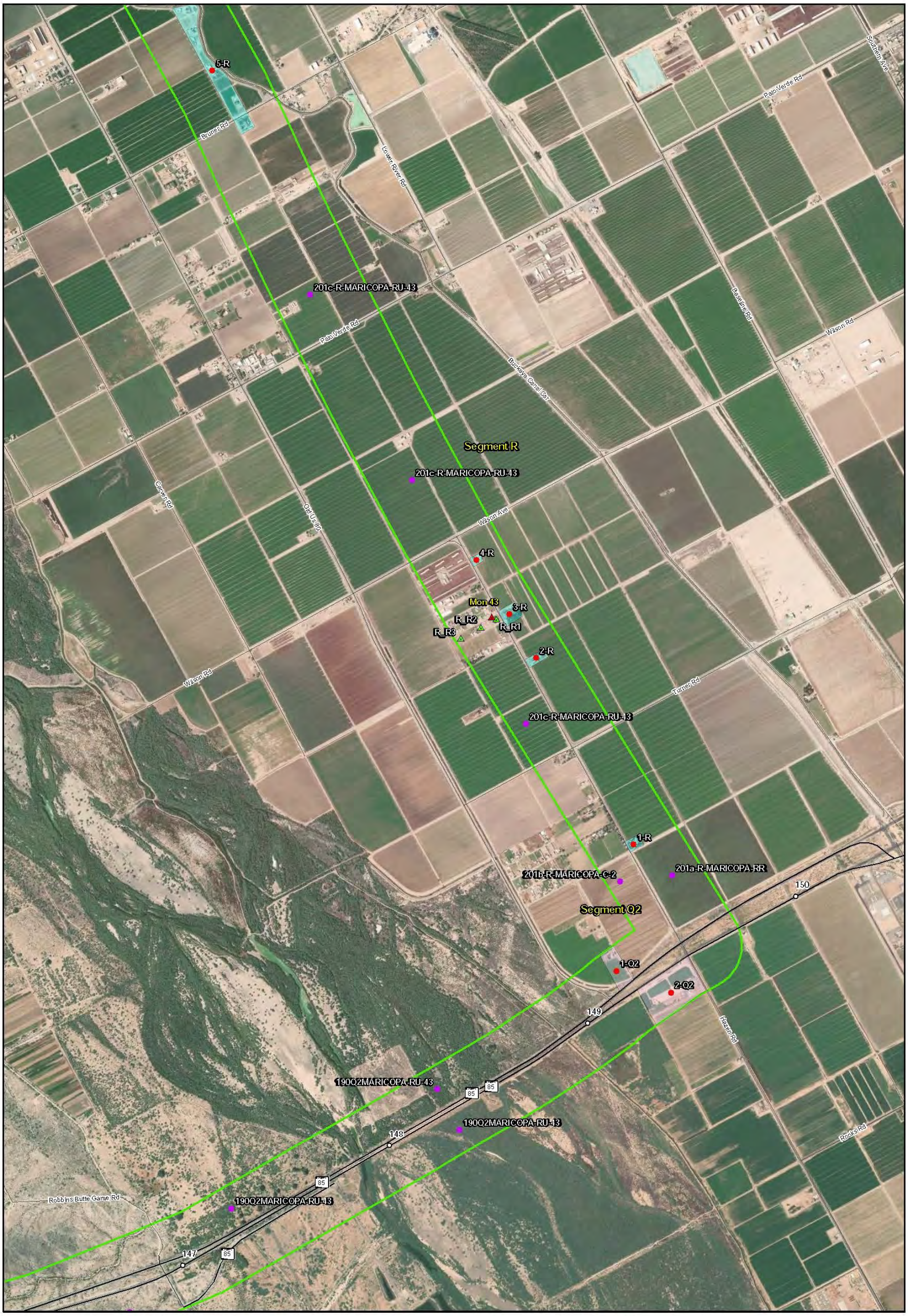

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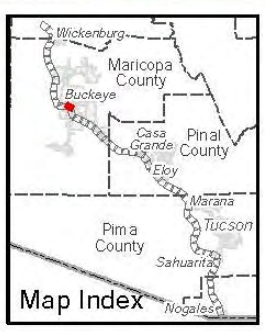

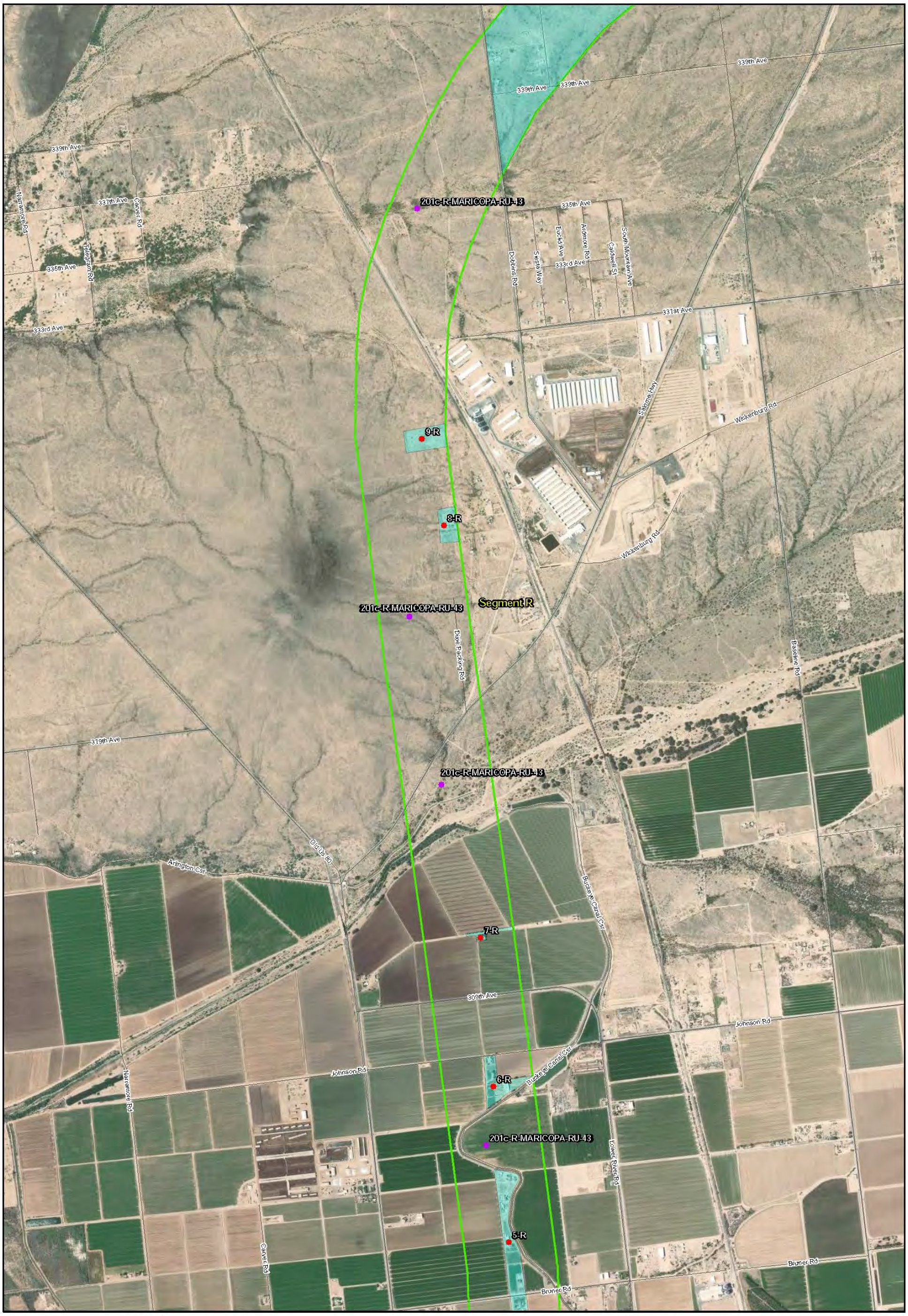

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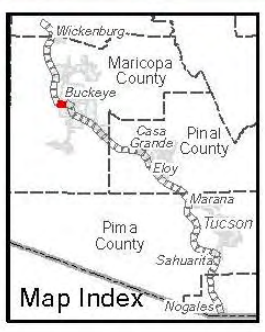

15-R
201c-R-MARICOPA-RU-43
14-R
13-R
201c-R-MARICOPA-RU-43
12-R
11-R
Segment R
201c-R-MARICOPA-RU-43
201c-R-MARICOPA-RU-43
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Lower Buckeye Rd
Broadway Rd
Southern Ave
Baseline Rd
Dobbins Rd
Euclid Ave
Salome Hwy
Piedmont Rd
Paseo Way
Siesta Way
Ardmore Rd
Caldwell St
South Mountain Ave
Sunland Ave
Wickenburg Rd
Sunrise Dr
Lodge Ave
Olney Ave
Mcneil St
Paloverde 4 Enp
367th Ave
355th Ave
351st Ave
347th Ave
343rd Ave
339th Ave
335th Ave
331st Ave
353rd Ave
349th Ave

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R_U2
R_U3
204UMARICOPA-RY-43
2-U
Campbell Ave
Segment U
Indian School Rd
371st Ave
359th Ave
1-U
Mon 44
99
204UMARICOPA-RY-43
100
10
101
201c-R-MARICOPA-RU-43
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Mcdowell Rd
363rd Ave
362nd Ave
361st Ave
360th Ave
358th Ave
357th Ave
356th Ave
17-R
201c-R-MARICOPA-RU-43
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359th Ave
Van Buren St
360th Ave
348th Ave
363rd Ave
Harrison St
16-R
201c-R-MARICOPA-RU-43
367th Ave
373rd Ave
371st Ave
Buckeye Rd
15-R
Lower Buckeye Rd

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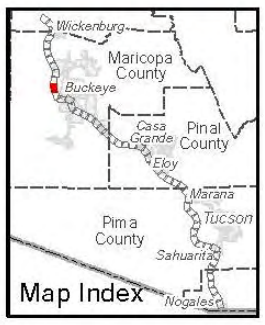

Segment U

204UMARICOPA-RY-43

204UMARICOPA-RY-43

204UMARICOPA-RY-43

204UMARICOPA-RY-43

R_U1

R_U2

R_U3

2-U

Wickenburg Rd

355th Ave

Camelback Rd

Highland Ave

363rd Ave

Campbell Ave

359th Ave

Indian School Rd

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Map Index

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204UMARICOPA-RY-43

204UMARICOPA-RY-43 Segment U

Wickenburg Rd

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204UMARICOPA-RY-43

204UMARICOPA-RY-43

Segment U

Wickenburg Rd

204UMARICOPA-RY-43

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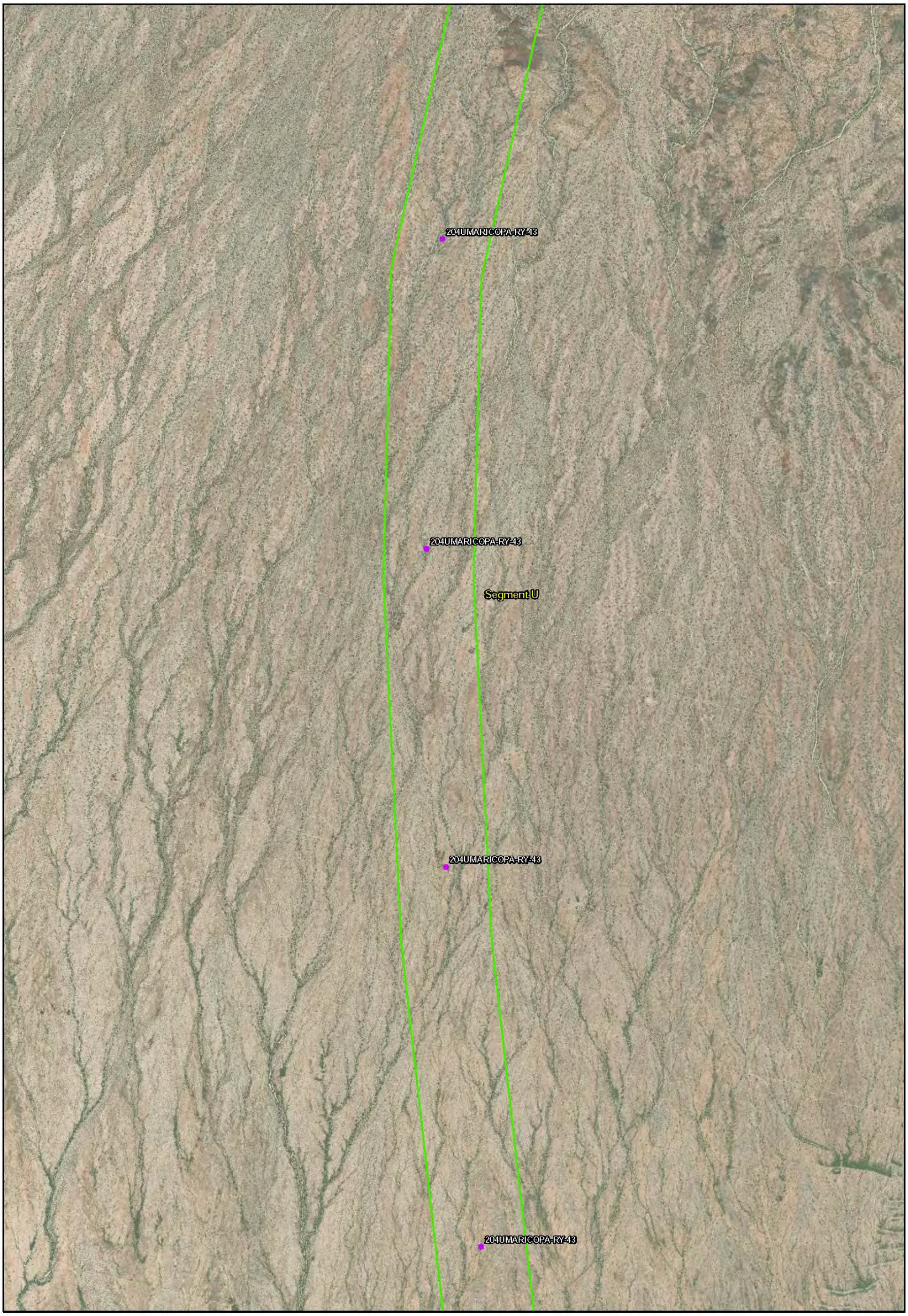

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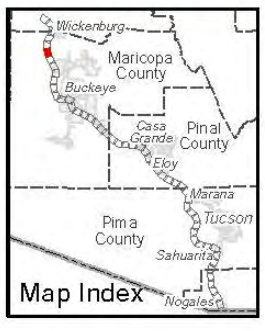

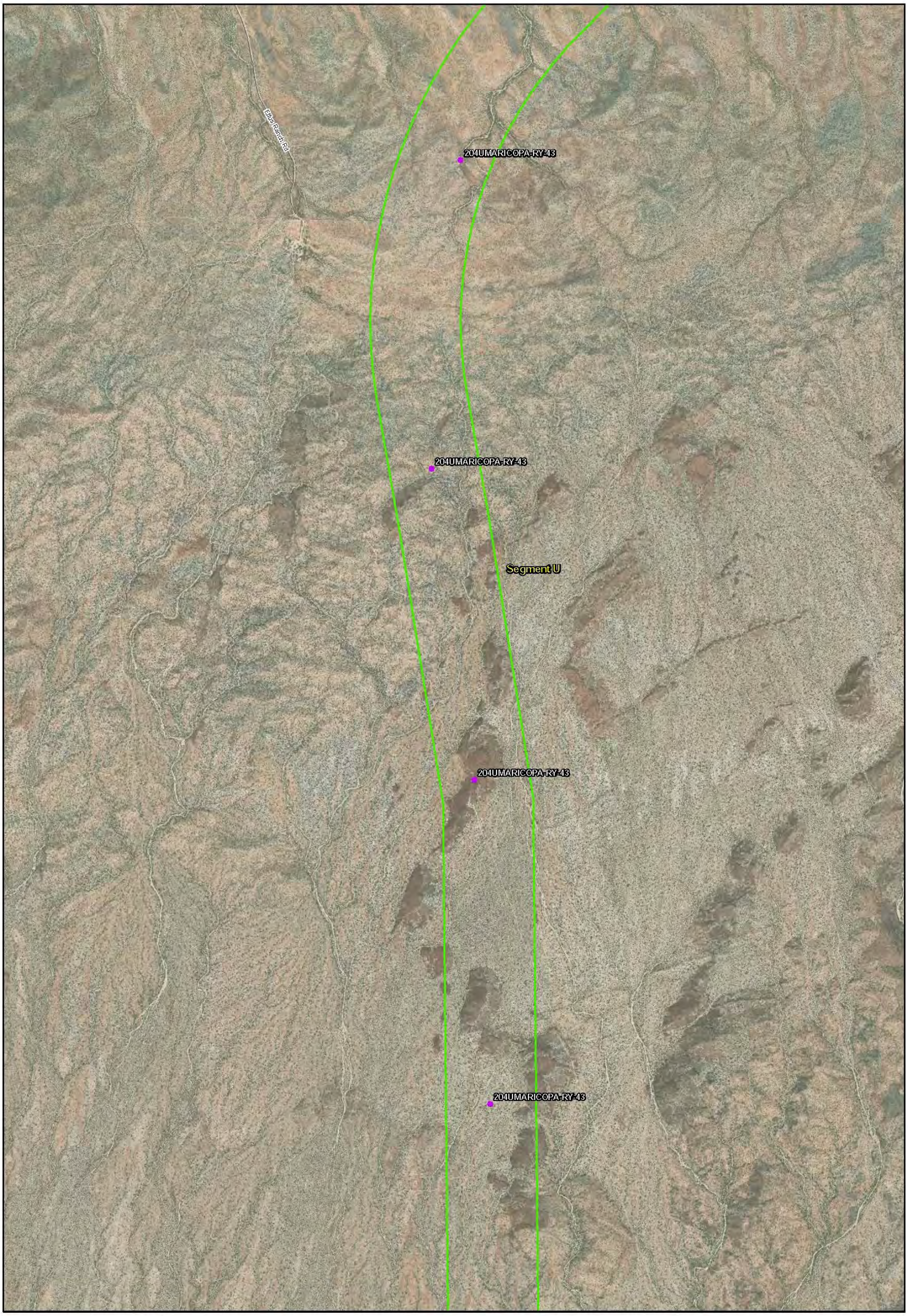

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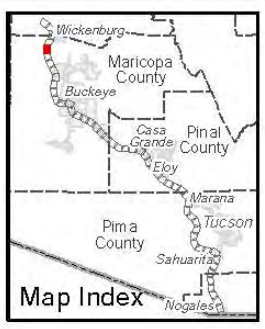

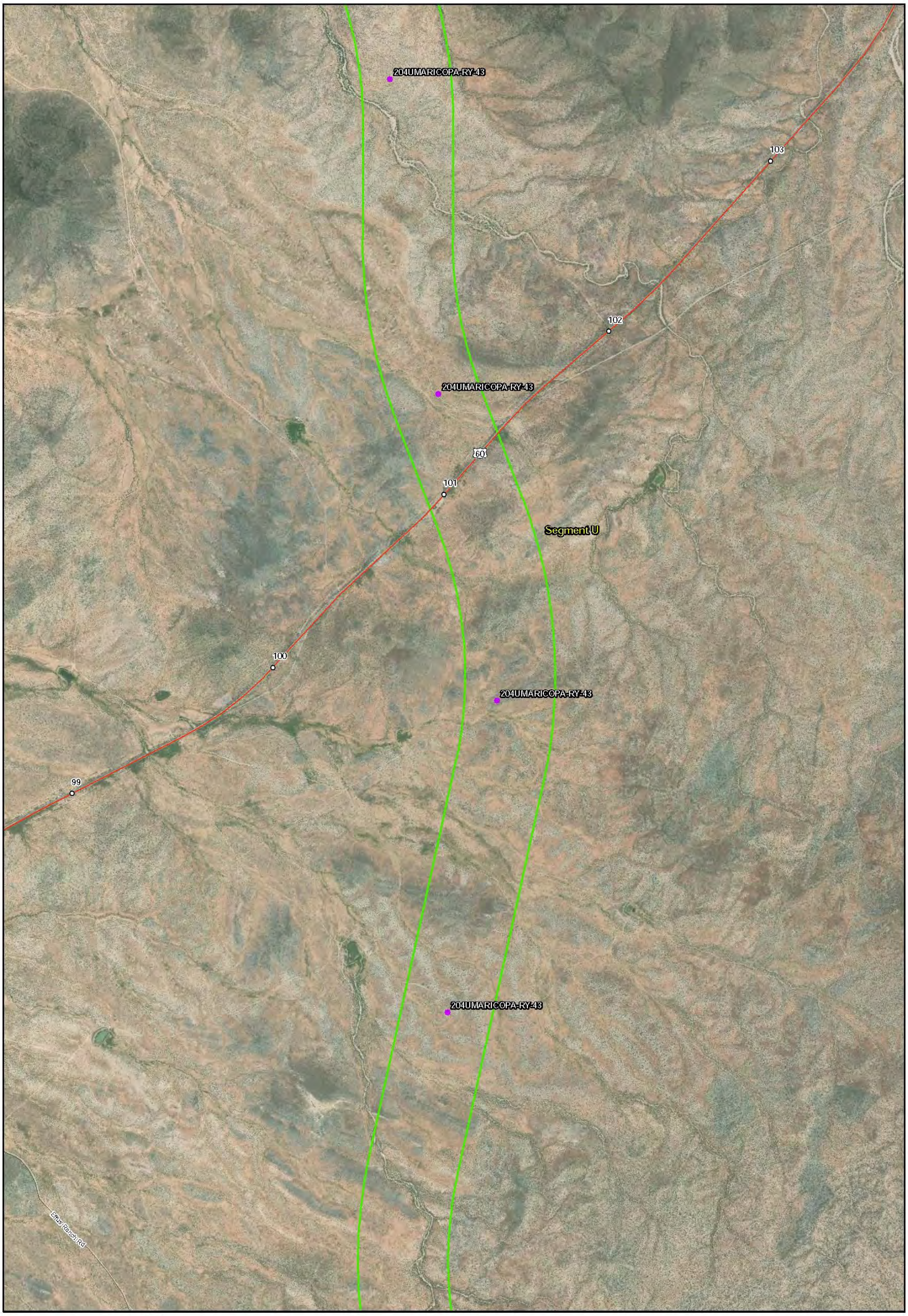

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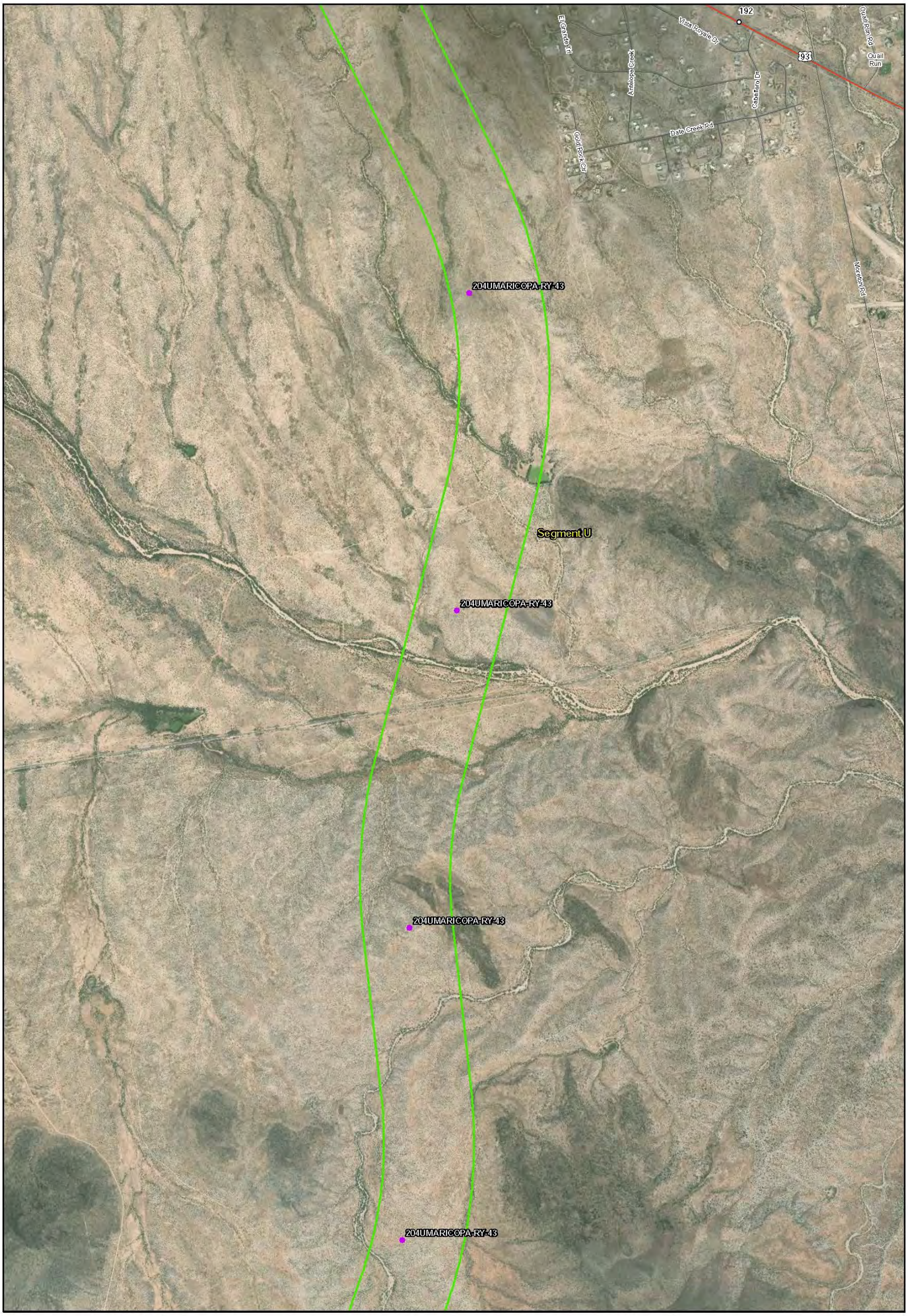

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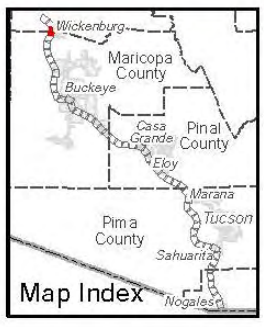

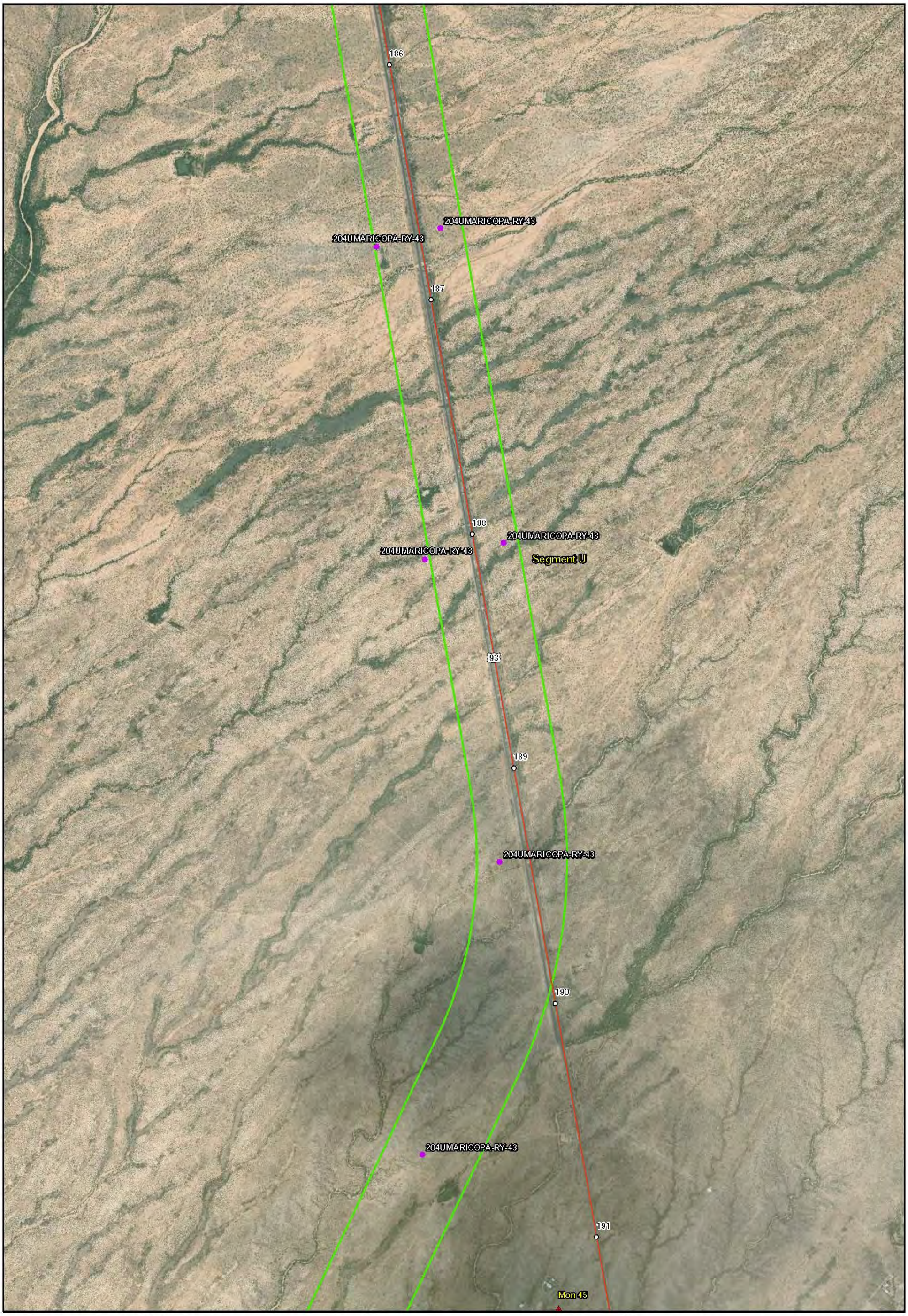

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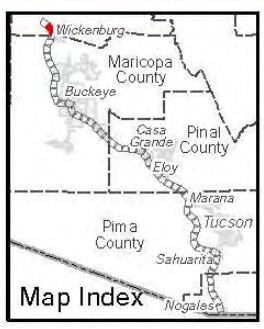

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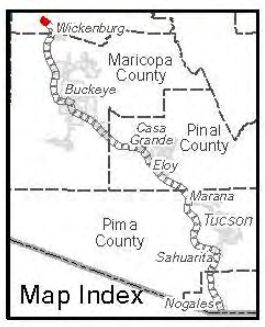
- Monitoring Site
- Noise Receiver

0 1000 2000
FEET

Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton
Environmental Consulting, LLC



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LEGEND

- Alternative Orange Study Area
- Mileposts
- Category B
- Category C
- Category D
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- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

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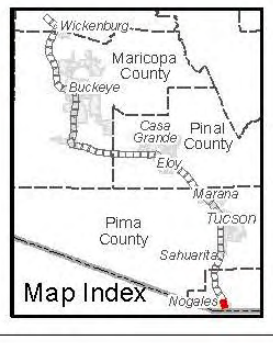

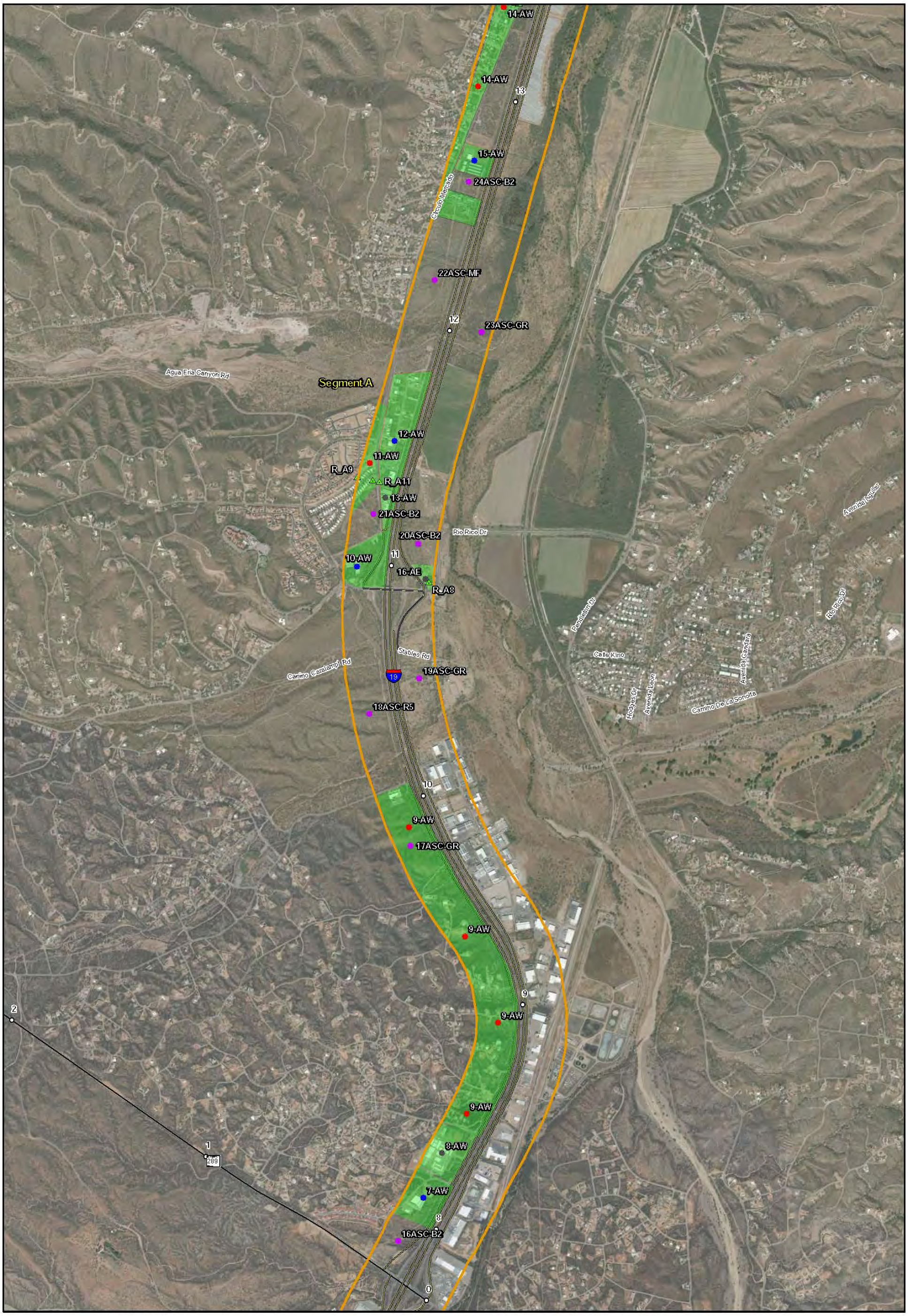

LEGEND

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0 1000 2000
FEET

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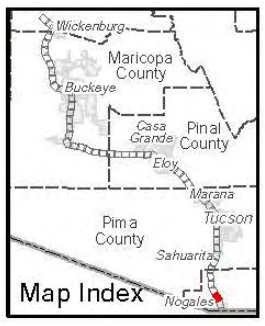
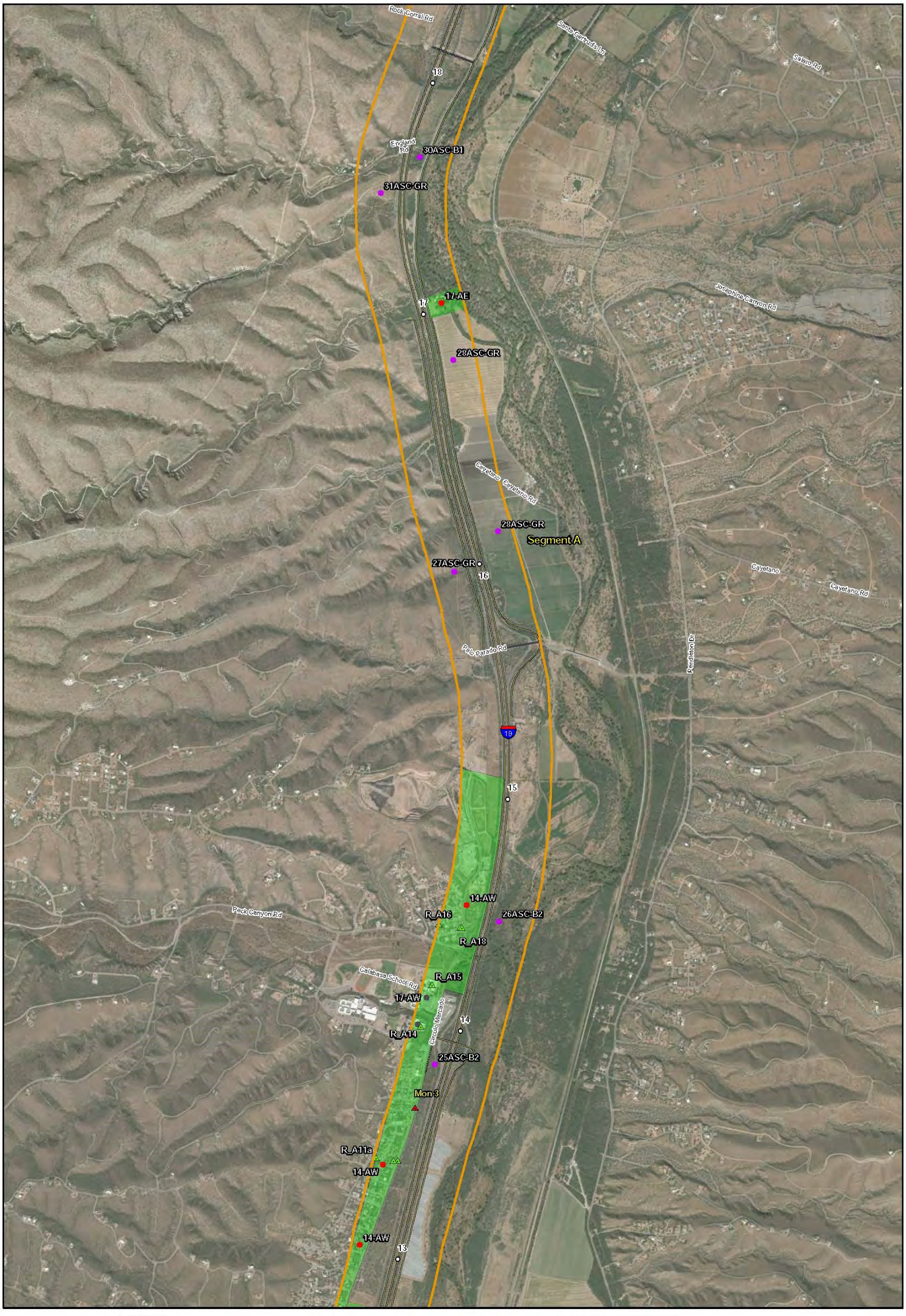


I-11 Corridor Project – Alternative Orange



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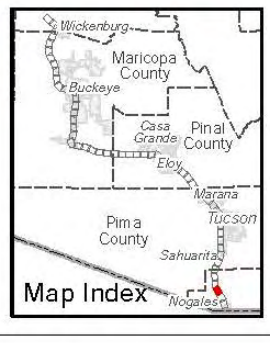

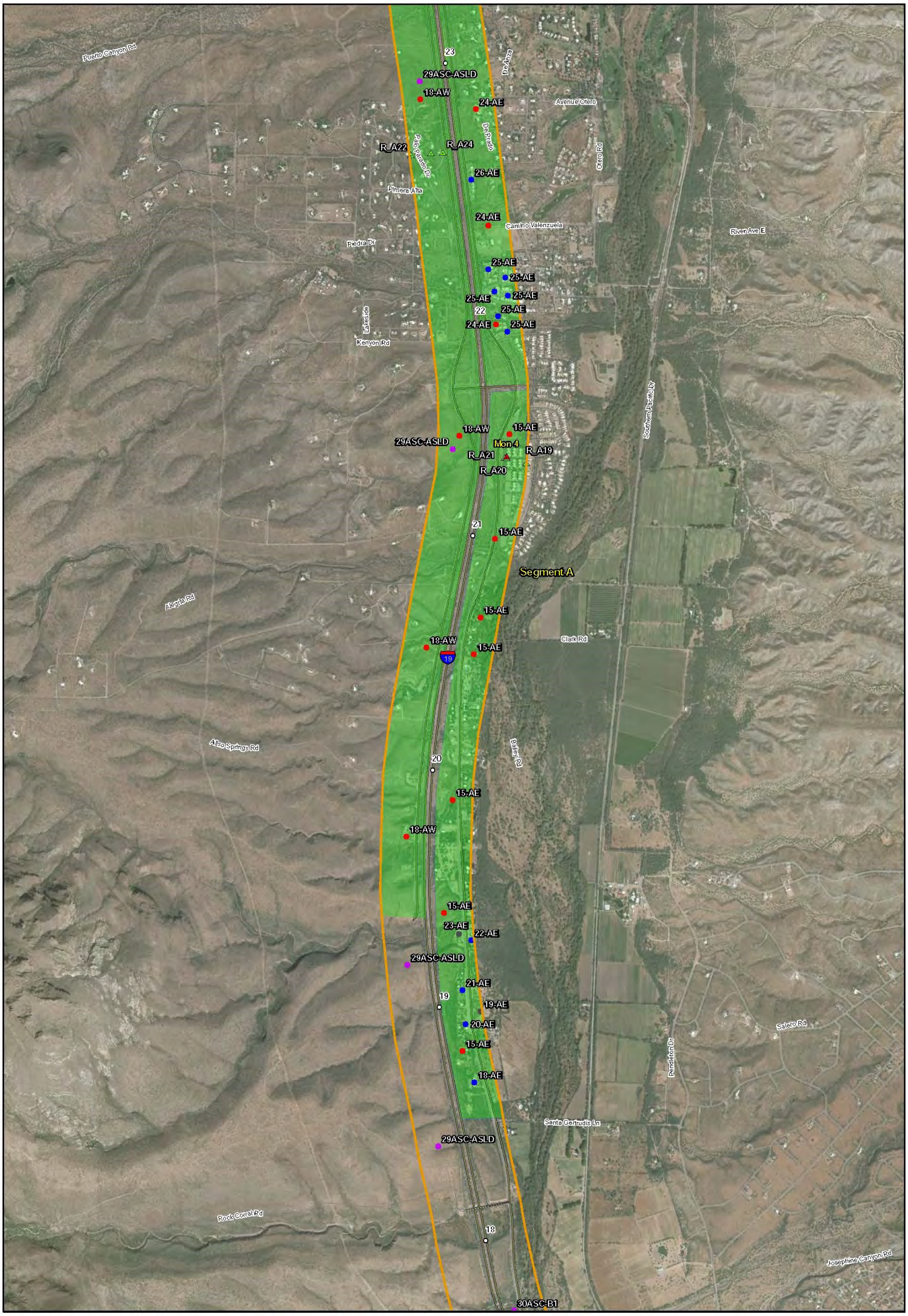

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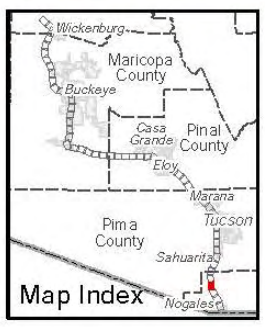

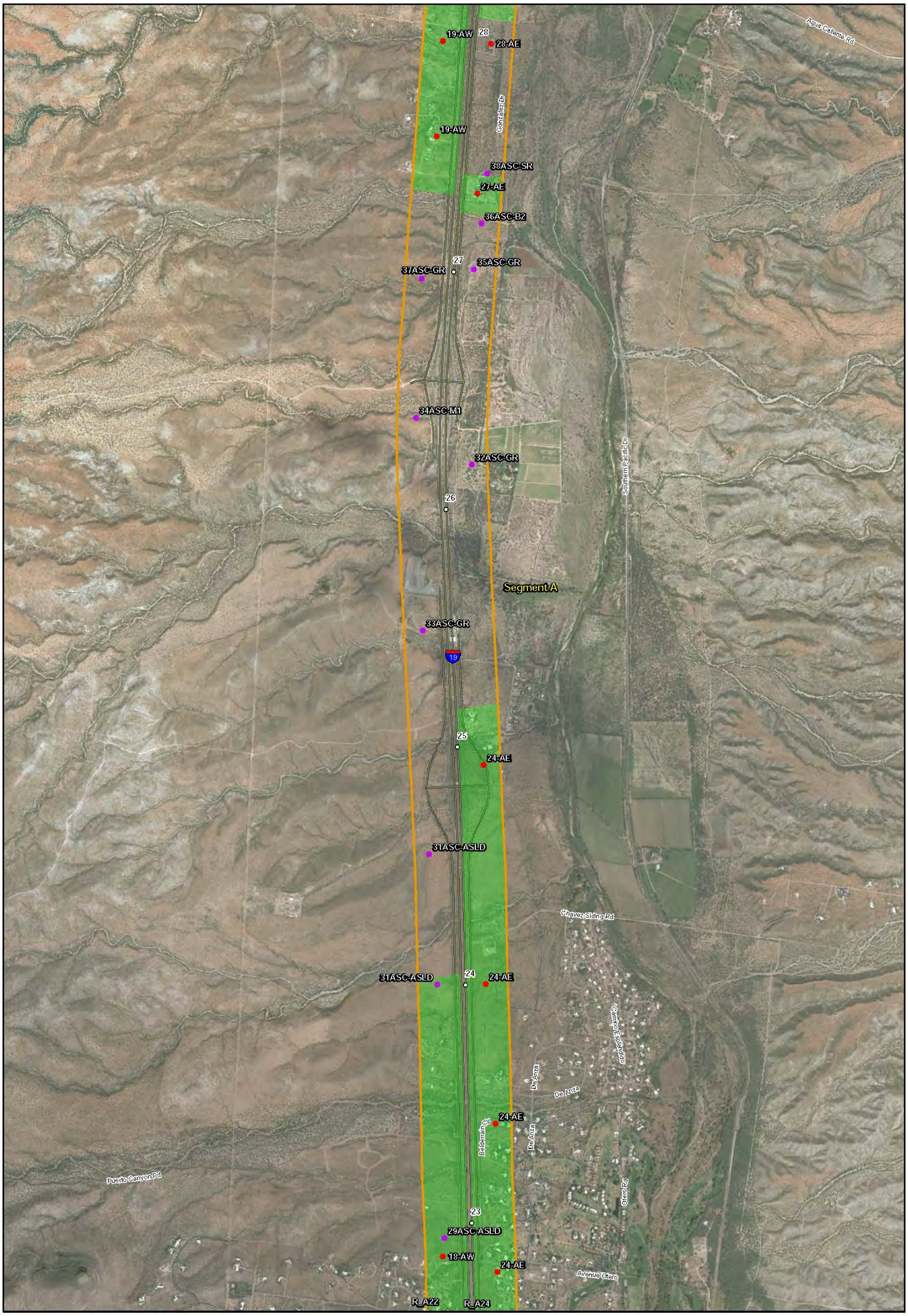

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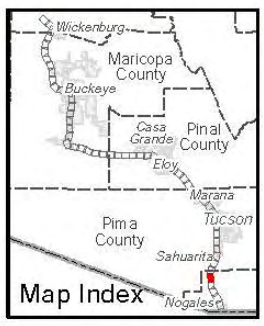

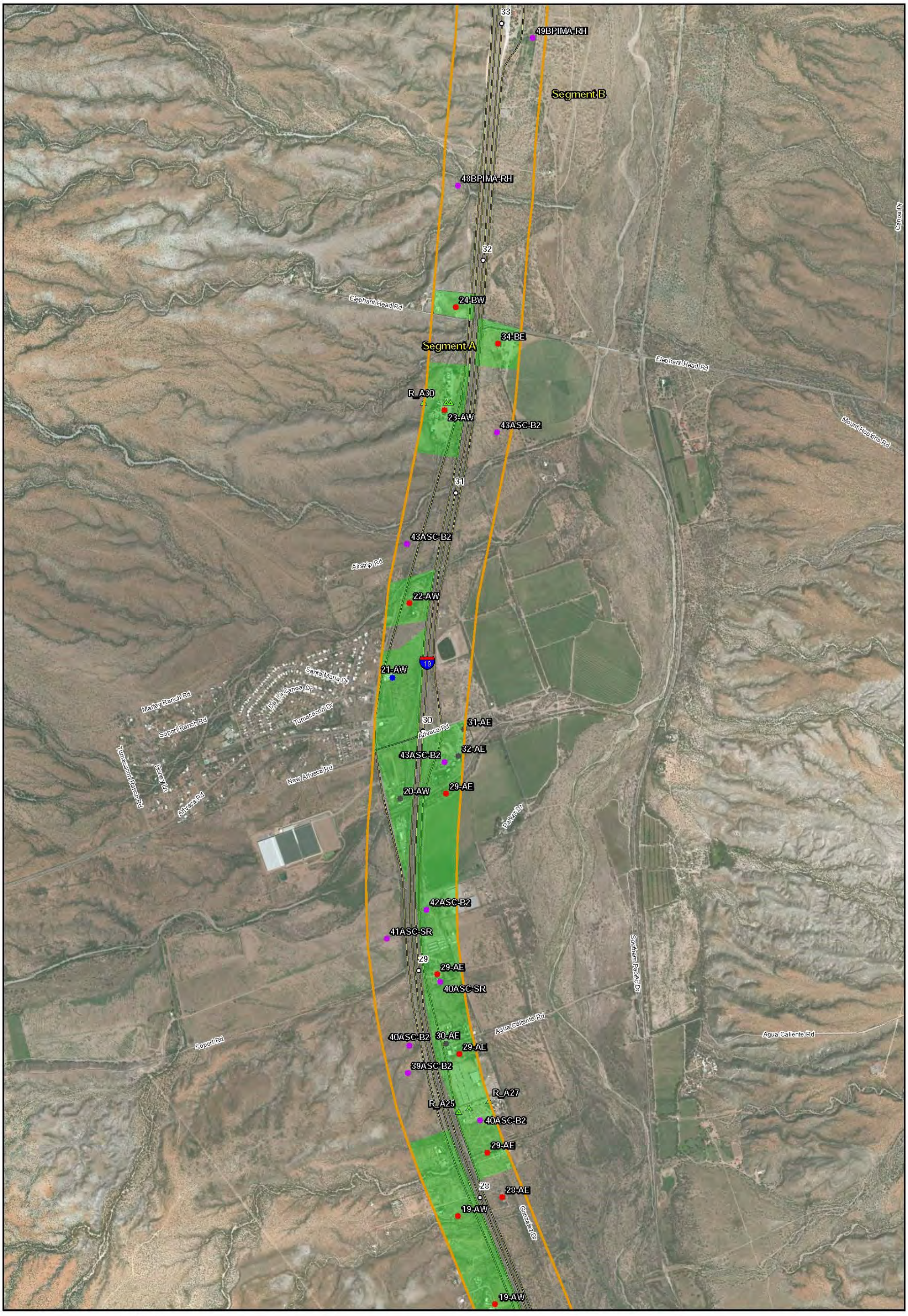

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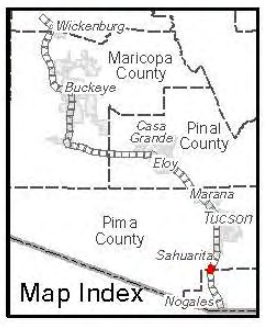


32-BW
38
39-BE
32-BW
R_B17
R_B16
Desert Ridge Dr
Abrego Dr
53BPIMA-RH
36-BE
Camino Encanto
31-BW
54BPIMA-TR
Retorno De Anza
R_B15
39-BE
Camino Urbano
Vuelta Del Yeba
R_B14
39-BE
37
R_B13
Camino Urbano
Camino Del Pato
31-BW
36-BE
Camino De La Oca
Camino Del Golfista
Camino De La Canoa
Via De La Gloria
Mon 5
Camino Del Huarache
Camino Estelar
R_B12
51BPIMA-CB-2
Camino De Rondo
Marquita St
29-BW
Via Del Picamaderos
R_B11
R_B10
35-BE
Camino Del Sol
Desert Jewel Loop
Via Nuevo Leon
30-BW
Segment B
30-BW
36
Via De Febrero
19
Camino De Rancho Ven
Calle Uno
28-BW
R_B8
R_B9
Vista Ridge Dr
51BPIMA-CB-2
Calle Dos
R_B7
Calle Tres
R_B4
R_B6
Casas Lindas
R_B5
Calle Guatamote
27-BW
Calle Quatro
35
33-BE
Calle Ceja
Calle Cacillo
Via Cielo Azul
Canoa Rd
51BPIMA-CB-2
Calle Cinco
Canoa Ranch Dr
Via Montana Vista
25-BW
R_B3
R_B1
Calle Seis
51BPIMA-CB-2
26-BW
Calle Siete
25-BW
26-BW
34
26-BW
U50BPIMA-CR-5
Canoa Dr
33
49BPIMA-RH
LEGEND
Alternative Orange Study Area
Mileposts
Category B
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Category G
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1000
2000
FEET
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newton
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Sahuarita
Nogales
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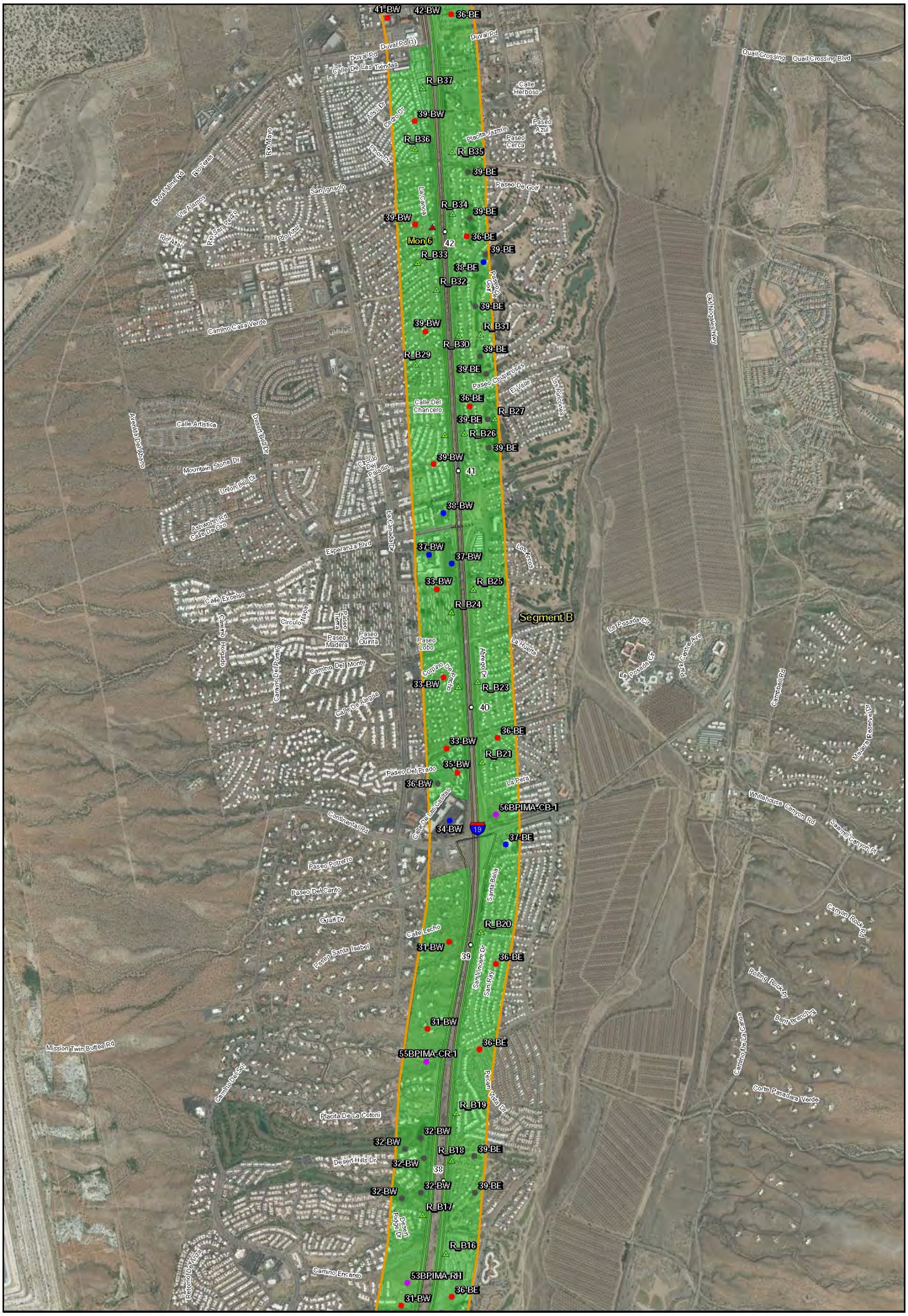

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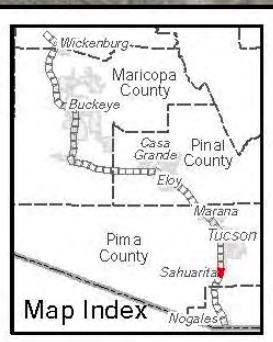

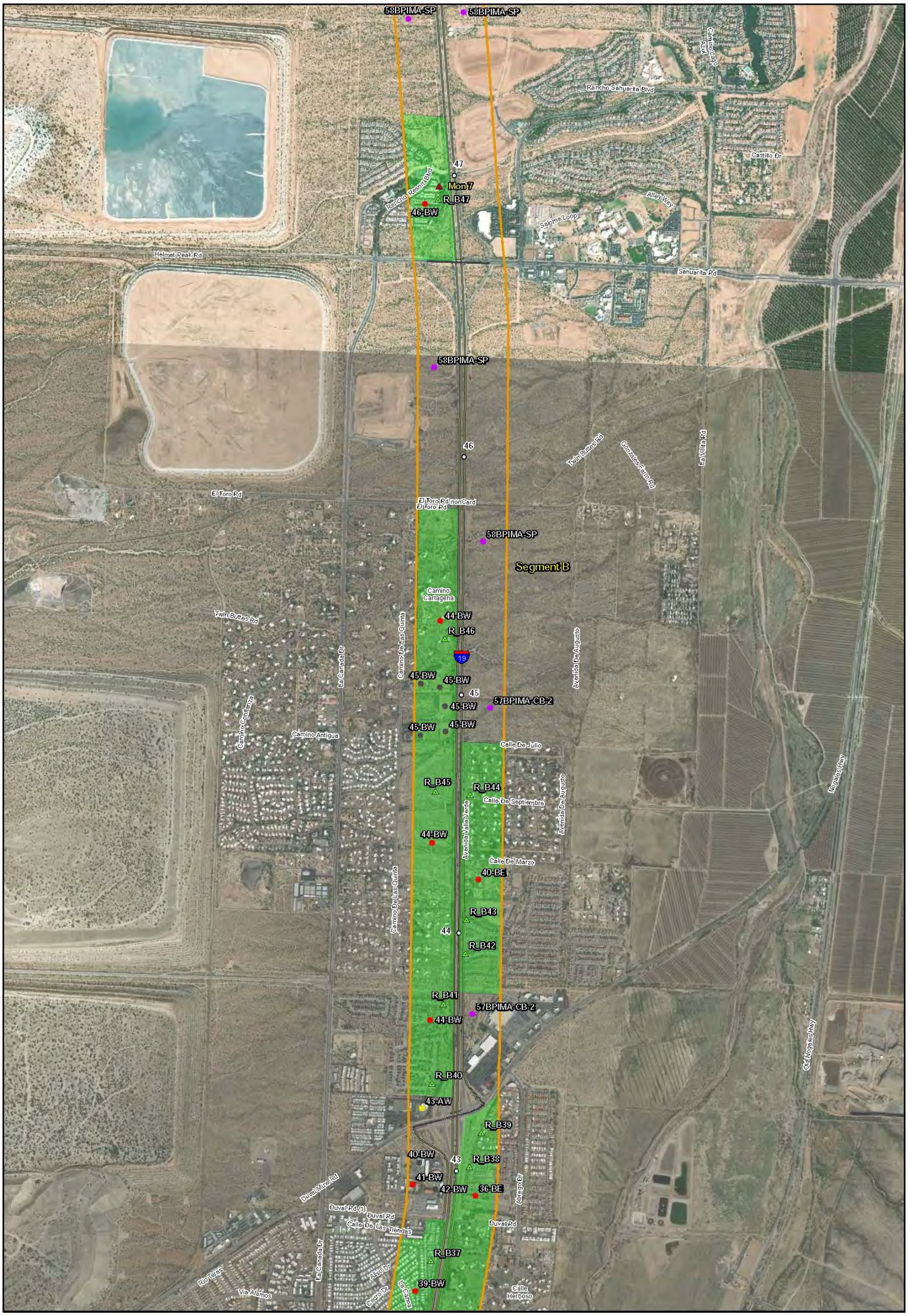

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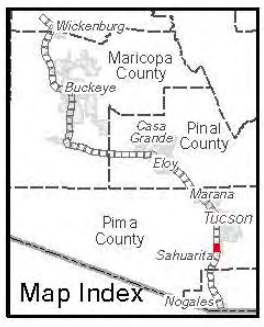

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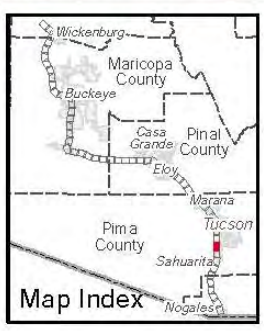

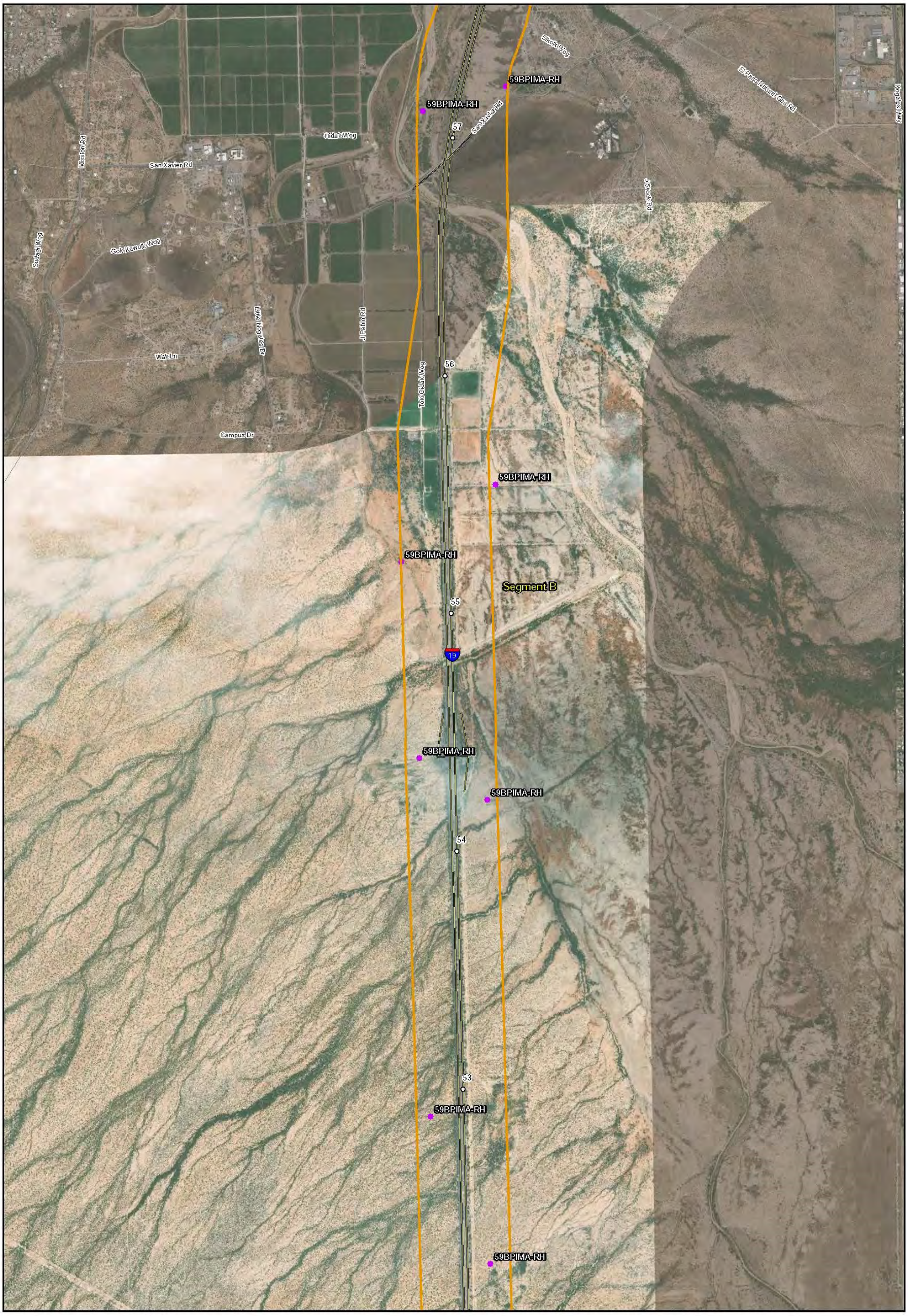

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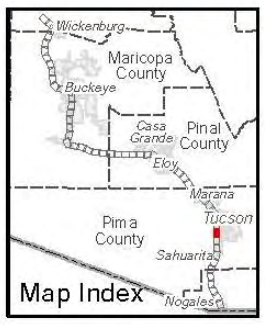


53-BE
52-BE
R_B62
63BPIMA-R-1-2
51-BE
50-BE
66BPIMA-MH-1
49-BE
62
171
Mon 18
Mon 17
Mon 16
Mon 15
R_B60
Mon 13
Mon 14
51-BW
R_B59
R_B58
48-BE
Mon 12
Mon 11
Mon 10
R_B57
Mon 9
62BPIMA-PAD
61
47-BE
Segment B
R_B56
45-BE
49-BW
46-BE
R_B55
50-BW
45-BE
R_B54
60
49-BW
61BPIMA-P-1
R_B53
47-BW
44-BE
48-BW
Mon 8
61BPIMA-P-1
44-BE
R_B51
59
43-BE
R_B50
R_B49
Calle Aragon
Calle Colado
42-BE
60BPIMA-I-2
R_B48
58
59BPIMA-RH
59BPIMA-RH
Ajo Way
nonCard
Irvington Rd
Valencia Rd
Los Reales Rd
Drexel Rd
Mission Rd
Midvale Park Rd
Calle Santa Cruz
Calle Pinta
Lamar Ave
Elizabeth Dr
Kostka Ave
Valley Rd
16th Ave
12th Ave
Ajo Way
Veterans Blvd
Irvington Pl
Sindle Pl
Nebraska St
Dakota St
Canada St
Maplewood Dr
Chardonnay Dr
Cheney Rd
Elvira St
Valley Indian Agency Rd
Acadia Dr
Lightstar Cir
Calle Garcia
Calle Margarita
Calle Antonia
Santa Maria St
Santa Rosa St
Santa Clara Ave
Calle Lerdo
Calle Castile
Calle Medina
Aragon Rd
Elvira Rd
San Fernando Rd
Corona Rd
Elvado Rd
Teton Rd
Lerdo Rd
Medina Rd
Mossman Rd
Bilby Rd
Hatfield St
Santa Paula St
Nogales Hwy
Missoondale Rd
Fontana Ave
Dunton Ave
6th Ave
Southland Blvd
Morris Blvd
Orchid Ave
Park Ave
Minorka Rd
Bantam Rd
Alaska St
Fletcher Ave
1st Ave
Wyoming St
Utah St
Nebraska St
Virginia St
Liberty Ave
Champion Stra
Annapolis Dr
Nevada St
Ohio St
Missouri St
Tennessee St
Oklahoma St
Kentucky St
Illinois St
Michigan Dr
Pennsylvania Dr
Columbia St
Aviation Dr
Fair St
Palmdale St
President St
Lincoln St
District St
Lundy Ave
Belmar Ave
Clark Ave
Evans Blvd
Ranson Hwy
Romany Rd
44th St
Calle Guadalajara
Freedom Dr
Los Santos
Cottonwood Ln
La Cholla Blvd
Circle B Dr
Circle A Dr
Probasco Dr
Via Ravenna
Calle Toledo
Valley Rd
Springbrook Dr
Birchwood Dr
Oak Tree Dr
Burkin Dr
Commerce Cir
Headley Rd
Rosepine Rd
Cantaloupe Hills Dr
Deacon Dr
Forrest Ave
Midvale Ave
Westover Ave
Ghaak Wog
Sikolik Wog
San Xavier Rd
El Paso Natural Gas Rd
Gomababi St
J Stock Rd
Calle Garcia
Calle Margarita
Calle Antonia
Santa Maria St
Santa Rosa St
Santa Clara Ave
Calle Lerdo
Calle Castile
Calle Medina
Aragon Rd
Elvira Rd
San Fernando Rd
Corona Rd
Elvado Rd
Teton Rd
Lerdo Rd
Medina Rd
Mossman Rd
Bilby Rd
Hatfield St
Santa Paula St
Nogales Hwy
Missoondale Rd
Fontana Ave
Dunton Ave
6th Ave
Southland Blvd
Morris Blvd
Orchid Ave
Park Ave
Minorka Rd
Bantam Rd
Alaska St
Fletcher Ave
1st Ave
Wyoming St
Utah St
Nebraska St
Virginia St
Liberty Ave
Champion Stra
Annapolis Dr
Nevada St
Ohio St
Missouri St
Tennessee St
Oklahoma St
Kentucky St
Illinois St
Michigan Dr
Pennsylvania Dr
Columbia St
Aviation Dr
Fair St
Palmdale St
President St
Lincoln St
District St
Lundy Ave
Belmar Ave
Clark Ave
Evans Blvd
Ranson Hwy
Romany Rd
44th St
Calle Guadalajara
Freedom Dr
Los Santos
Cottonwood Ln
La Cholla Blvd
Circle B Dr
Circle A Dr
Probasco Dr
Via Ravenna
Calle Toledo
Valley Rd
Springbrook Dr
Birchwood Dr
Oak Tree Dr
Burkin Dr
Commerce Cir
Headley Rd
Rosepine Rd
Cantaloupe Hills Dr
Deacon Dr
Forrest Ave
Midvale Ave
Westover Ave
Ghaak Wog
Sikolik Wog
San Xavier Rd
El Paso Natural Gas Rd
Gomababi St
J Stock Rd
10
19
86
262
170
171
LEGEND
Alternative Orange Study Area
Mileposts
Category B
Category C
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Category E
Category G
Monitoring Site
Noise Receiver
0 1000 2000
FEET
Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)
newton
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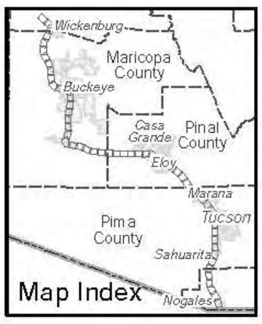

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81-BW
81-BW
Mon 30
R_B81
246
80-BW
81-BW
103-BE
Mon 29
81-BW
81BPIMA-I-1
Mon 28
R_B80
247
83BPIMA-SH
79-BW
Mon 27
102-BE
R_B79
81BPIMA-I-1
83BPIMA-SH
101-BE
79-BW
R_B78
248
Segment B
Mon 26
80BPIMA-R-36
R_B77
79-BW
100-BE
98-BE
99-BE
97-BE
249
78-BW
79BPIMA-E
96-BE
250
78BPIMA-L1
77-BW
77BPIMA-GR-1
251
77BPIMA-GR-1
95-BE
Continental Reserve Loop
Pima Reserve Dr
Ward Rd
Sombrero Peak Dr
Quail Ridge Dr
Via Laguna Nigel
Via Atascadero
Cortaro Rd
Continental Links Dr
Arizona Pavilions Dr
Joplin Ln
Shady Grove Dr
Cortaro Crossing Dr
Gordon Shea
Business Park Dr
Massingale Rd
Sant Patrick Rd
Pima Farms Rd
Bobcat Ridge Pl
Bloom Tail Dr
Shady Way
Moyopass Rd
Silverbell Rd
Arlington Rd
Belmont Rd
Abington Rd
Tucson Mountain Dr
Desert Foothills Dr
Desert Willow Dr
Panorama Dr
Sunray Dr
Killdeer Dr
Mallow Ln
Sunset Rd
Camino De La Tierra
Camino De Oeste
Petzinek Rd
Walker Rd
Ina Rd
River Rd
Sunset Rd
Shumaker Dr
Quail Ln
Sumter Dr
Linda Vista Blvd
Albatross Dr
Eaglestone Loop
Nighthawk Way
Overton Rd
Hartman Ln
Condor Dr
Red Wolf Dr
Snow Leopard Dr
Bald Eagle Ave
Camino De Oeste
Lessing Ln
Hardy Rd
Star Grass Dr
Cortaro Farms Rd
Burke Dr
Plantation St
Gentlewater Dr
Bayou Dr
Suwannee Dr
Rockwood Dr
Pyracantha Dr
Bartlue Dr
Roundstone Dr
Oldfather Rd
Magee Rd
Mars St
North Aire Ave
Wesleyan Dr
Eunice St
Rasmussen Ave
Massingale Rd
Meredith Blvd
Regency Plaza St
Thornydale Rd
Camino Manito
Northlight Dr
Patriot Dr
Costco Dr
Horizon Hills Dr
Sheridans Dr
Raintree Dr
De Chelly Loop
Camino De La Tierra
Avenida Adella
Treeline Dr
Orange Grove Rd
Postiano Way
Shannon Rotano Way
Perugia Way
Prato Way
Wildwood Dr
Cinnamon Dr
Coriander Dr
Mendes Dr
Monaleta Rd
Camino De La Armonia
Camino De Oeste
Petzinek Rd

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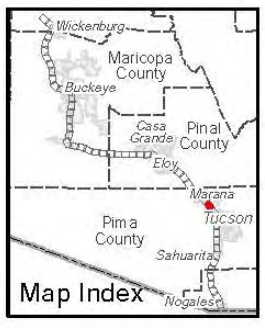

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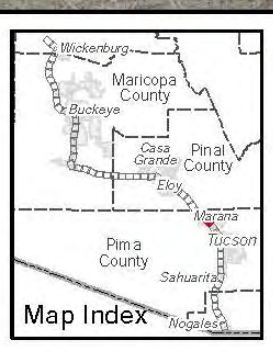

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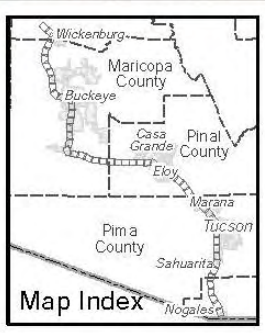

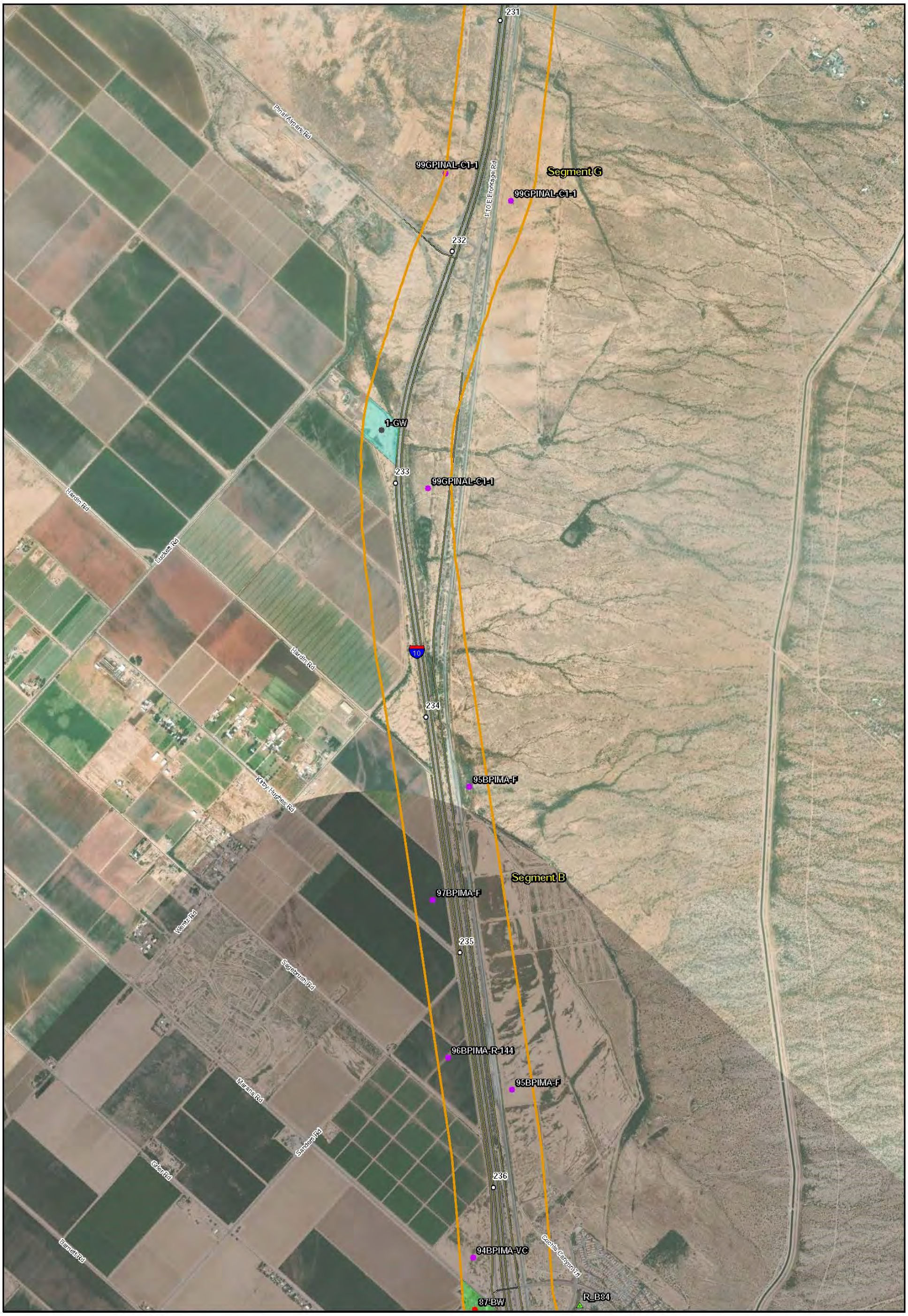

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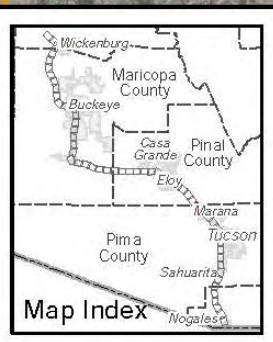
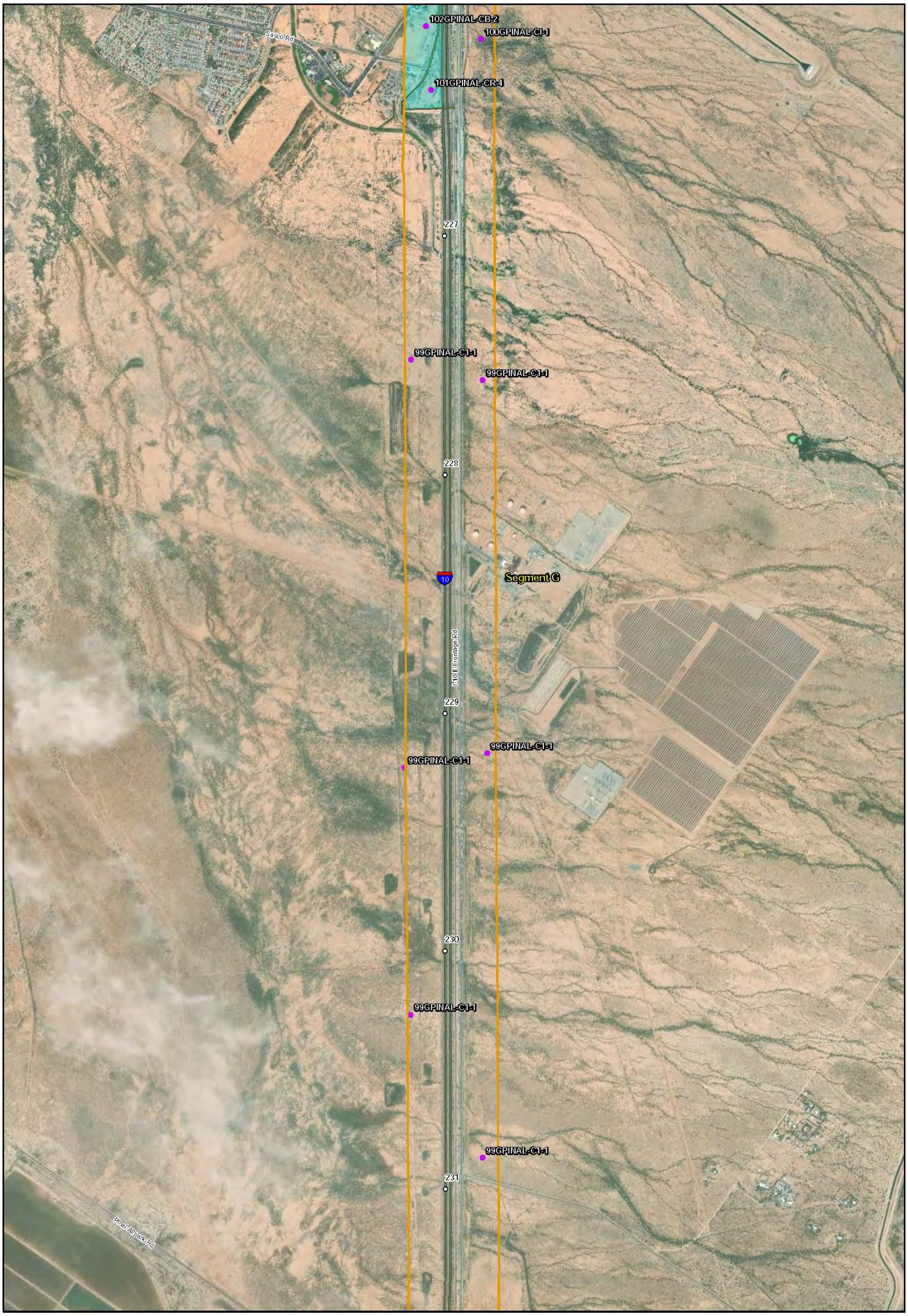
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

newton Environmental Consulting, LLC





LEGEND

- Alternative Orange Study Area
- Mileposts
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FEET

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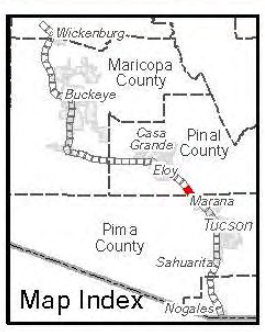

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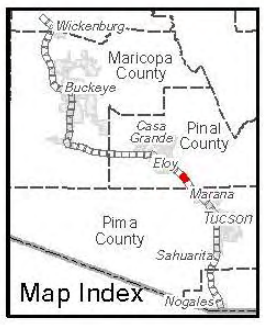

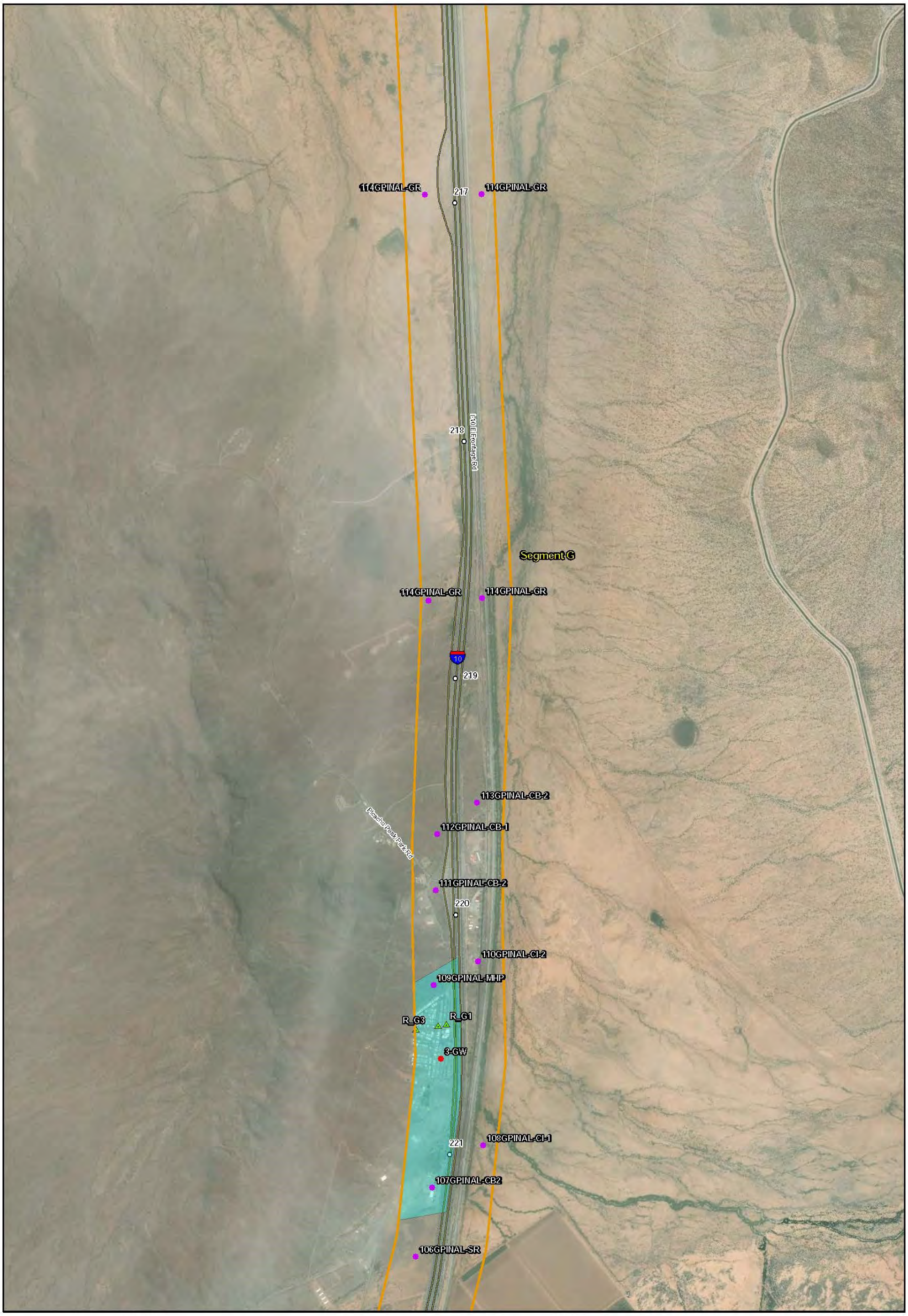

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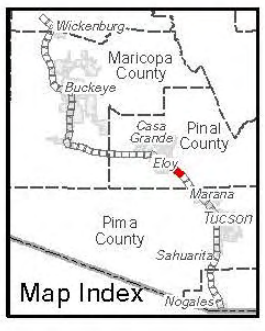

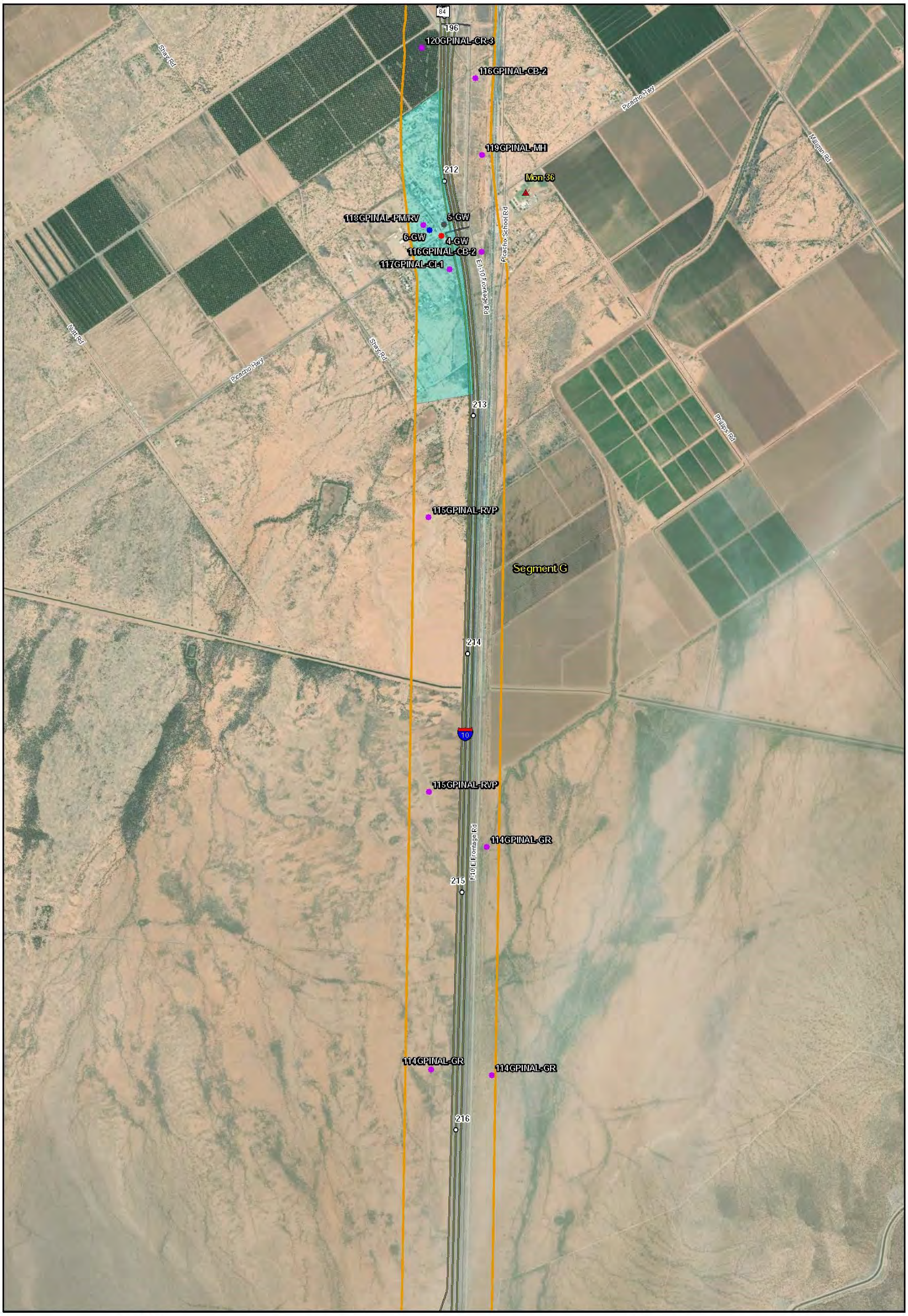

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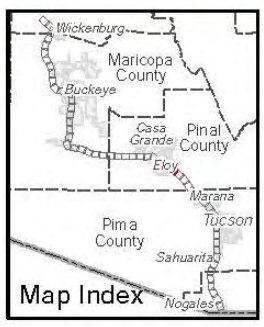

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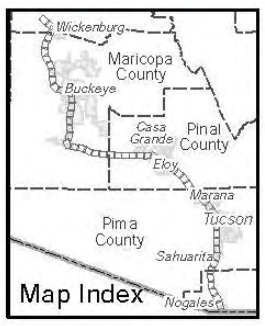

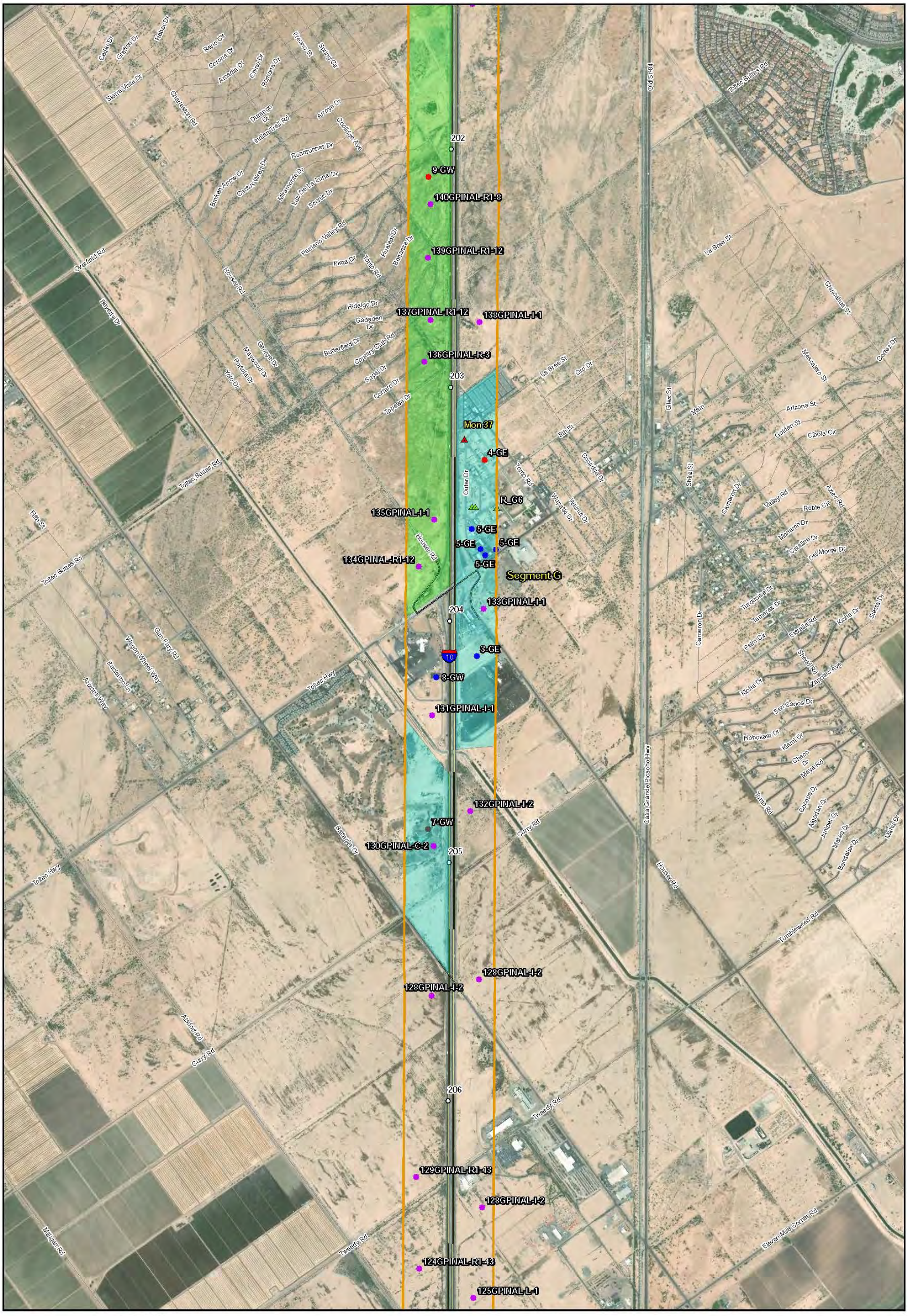

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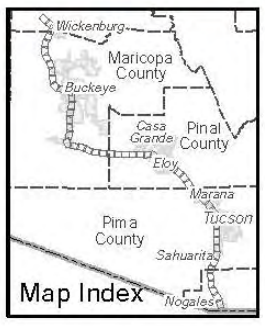

13-GS
12-GS
176
147GPINAL-UR
9-GN
146GPINAL-I-1
177
197
8-GE
145GPINAL-R-1
145GPINAL-R-1
198
Segment G
144GPINAL-UR
178
199
178
11-GW
143GPINAL-CI-2
R_G8
R_G9
142GPINAL-C-2
6-GE
200
10-GW
R141GPINAL-R1-12
201
138GPINAL-I-1
Hanna Rd
Casa Grande Mtn Park Rd
Casa Nuevo Ranch Rd
Hennes Rd
Sierra Hwy
Pearl Rd
Cox Rd
Old S-84
Gox Rd
Hilltop Dr
Arica Rd
Paradise Ln
Cactus Dr
John Jacob Astor Ave
Sunland Gin Rd
Benson Dr
Cedar Dr
Alpine Dr
Heber Dr
Delta Dr
Reno Cir
Jenson Dr
Grafton Dr
Shield Rd
Avalon St
Spring Dr
Coolidge Ave
Fresno St
Tonto Rd
Charleston Rd
Sierra Vista Dr
Corona Dr
Arcadia Dr
Chino Dr
Pomona Dr
Housel Rd
Durango Dr
Indian Trail Rd
Arroya Dr
Cactus Wren Dr
Roadrunner Dr
Tohac Bunes Rd

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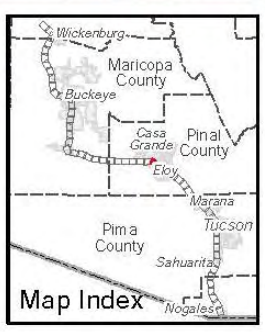

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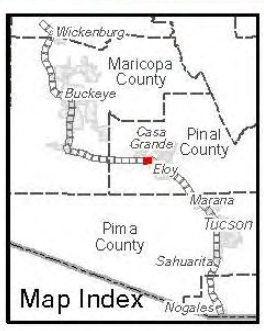

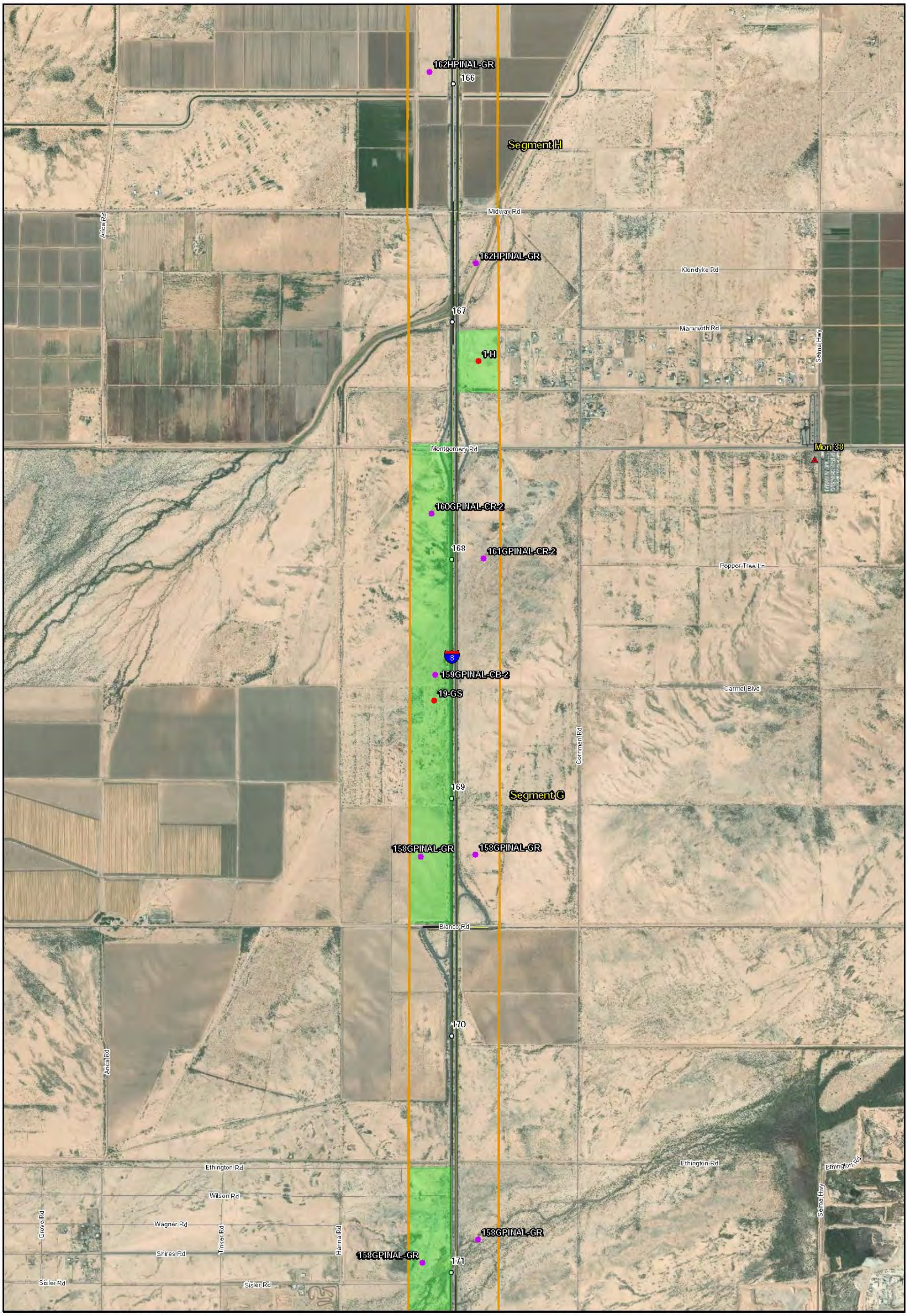

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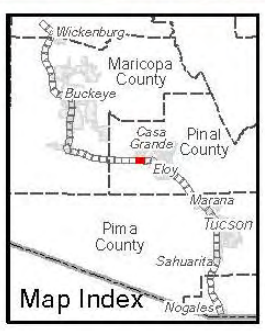

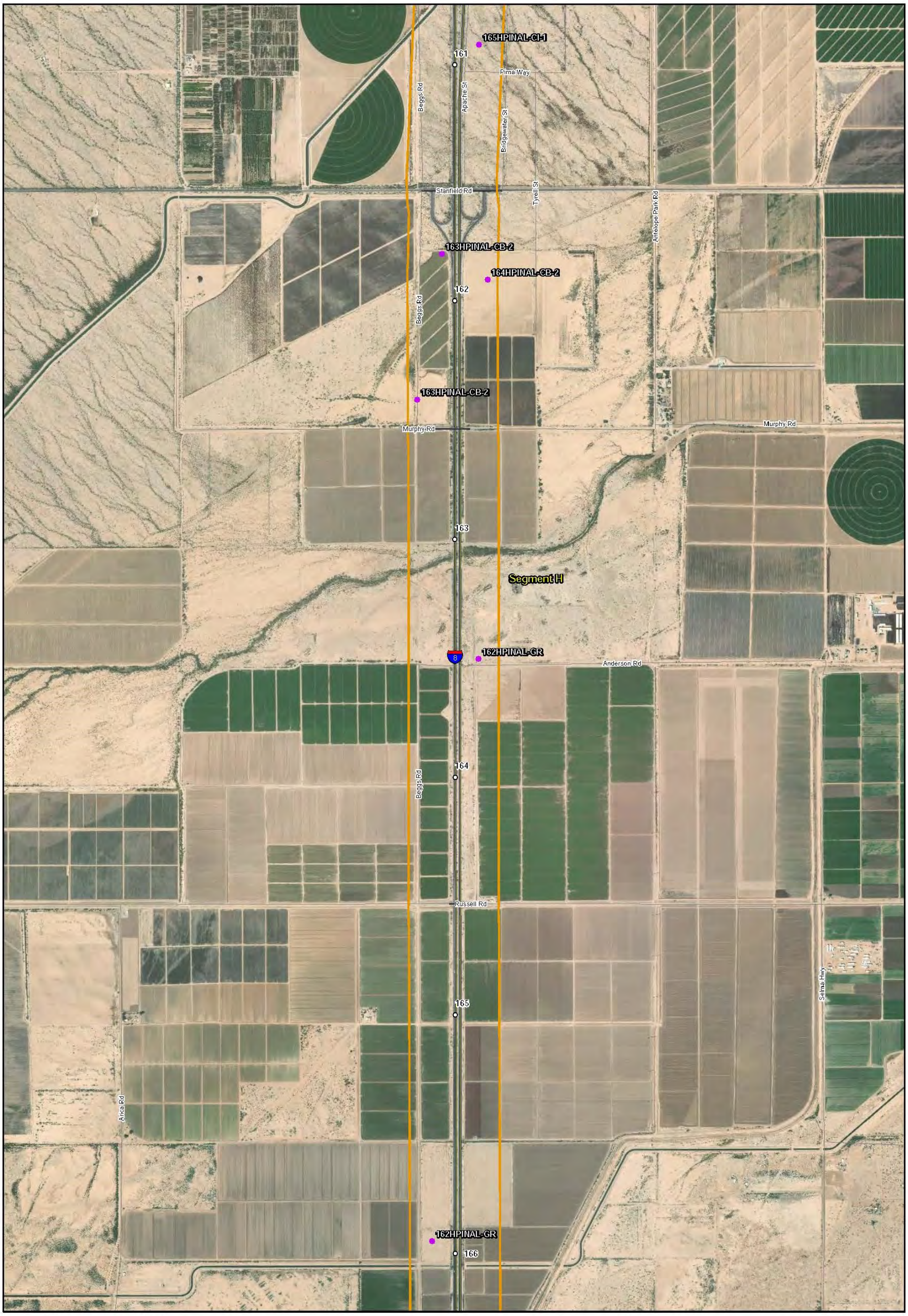

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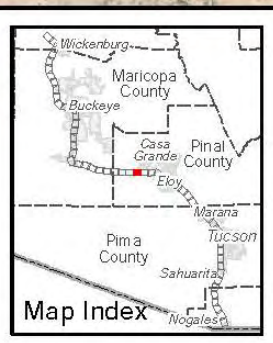

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167HPINAL-CR-3
167HPINAL-CR-3
Maricopa Rd
157
Sanchez Rd
167HPINAL-CR-3
167HPINAL-CR-3
Smith Rd
158
Segment H
8
159
167HPINAL-CR-3
167HPINAL-CR-3
White And Parker Rd
166HPINAL-SR
160
Bergs Rd
166HPINAL-SR
Fuque Rd
Fuque Rd
Fuque Rd
2-H
Apache St
Apache Ln
Hopi Ln
Antelope Park Rd
165HPINAL-CH-1
161
Pima Way

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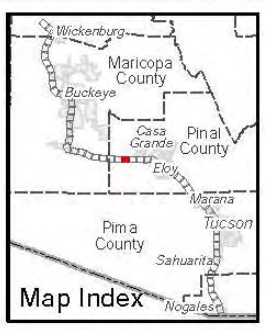

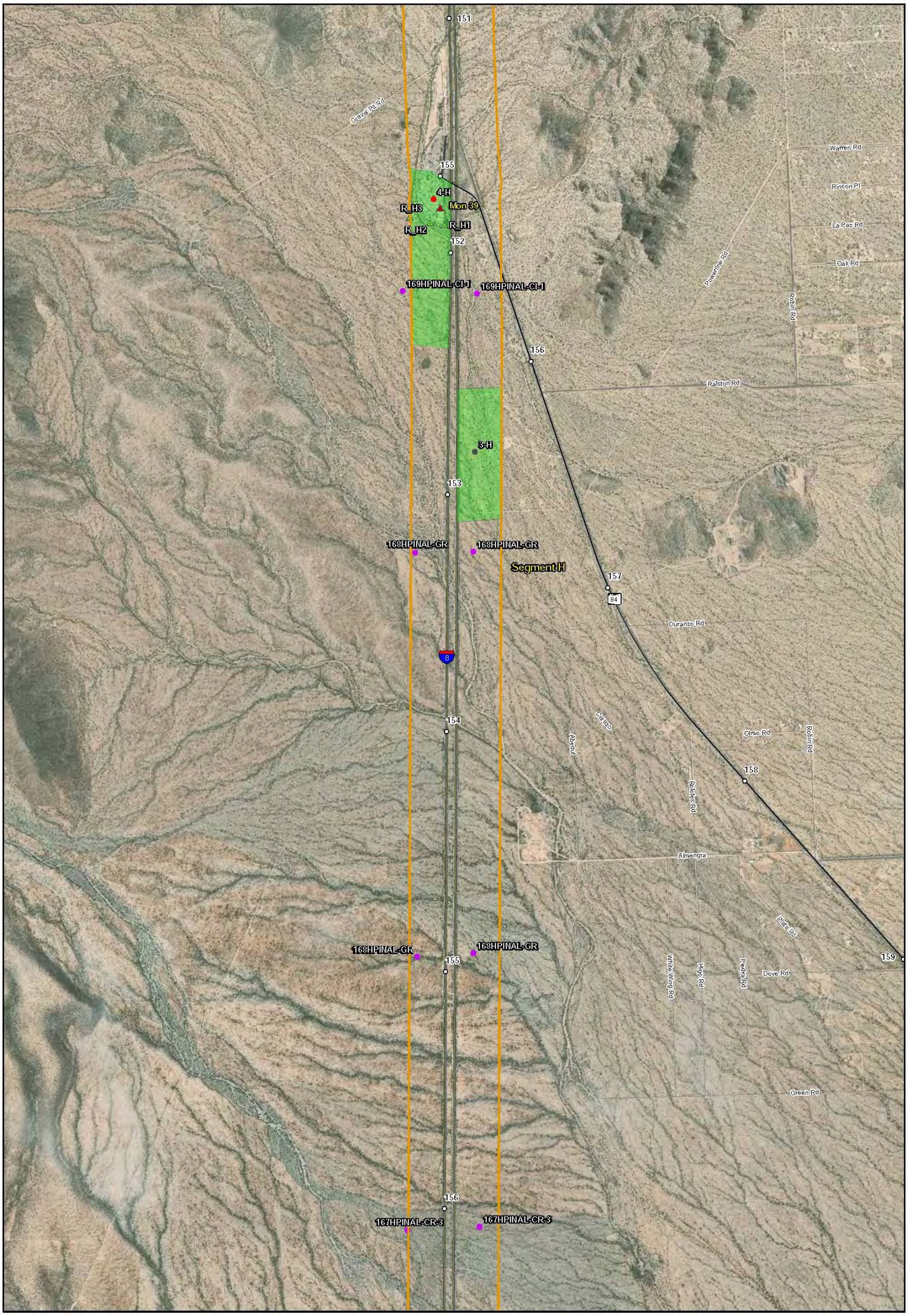
151
155
152
156
153
154
155
156
157
158
159
4-H
Mon 39
R_H3
R_H2
R_H1
169HPINAL-CI-1
169HPINAL-CI-1
3-H
168HPINAL-GR
168HPINAL-GR
168HPINAL-GR
168HPINAL-GR
167HPINAL-CR-3
167HPINAL-CR-3
Segment H
Gravel Pit Rd
Warren Rd
Rincon Pl
La Paz Rd
Oak Rd
Powerline Rd
Robin Rd
Ralston Rd
Durango Rd
Cerezo
Abedul
Olmo Rd
Robin Rd
Rolodes Rd
Almengra
Piedra Rd
White Wing Rd
Higo Rd
Piedra Rd
Dove Rd
Green Rd
8
84
LEGEND
Alternative Orange Study Area
Mileposts
Category B
Category C
Category D
Category E
Category G
Monitoring Site
Noise Receiver
0 1000 2000
FEET
Revised: 12/4/2018
SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)
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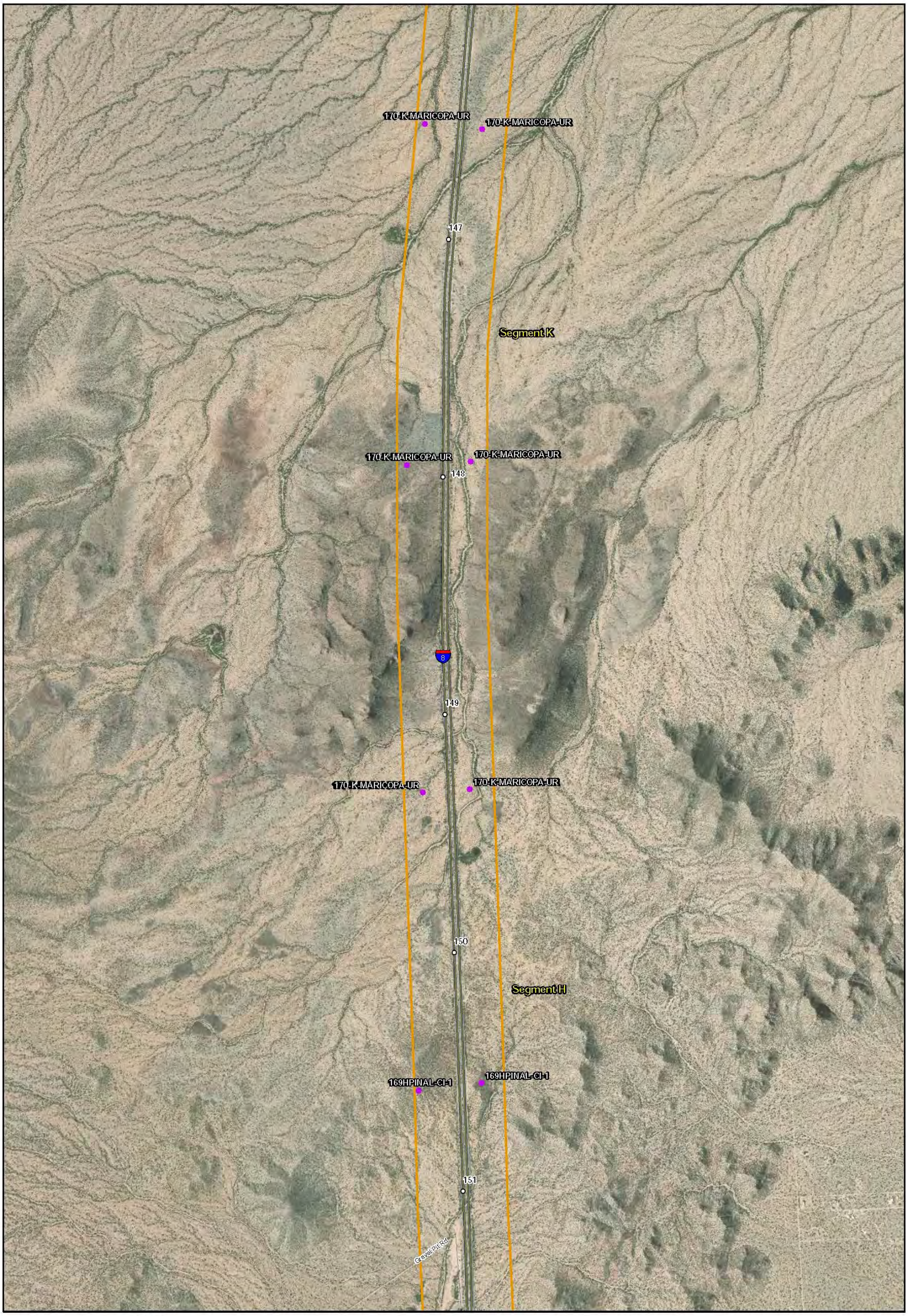
Wickenburg
Maricopa County
Buckeye
Casa Grande
Pinal County
Eloy
Marana
Tucson
Pima County
Sahuarita
Nogales
Map Index



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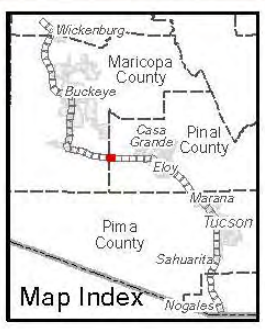

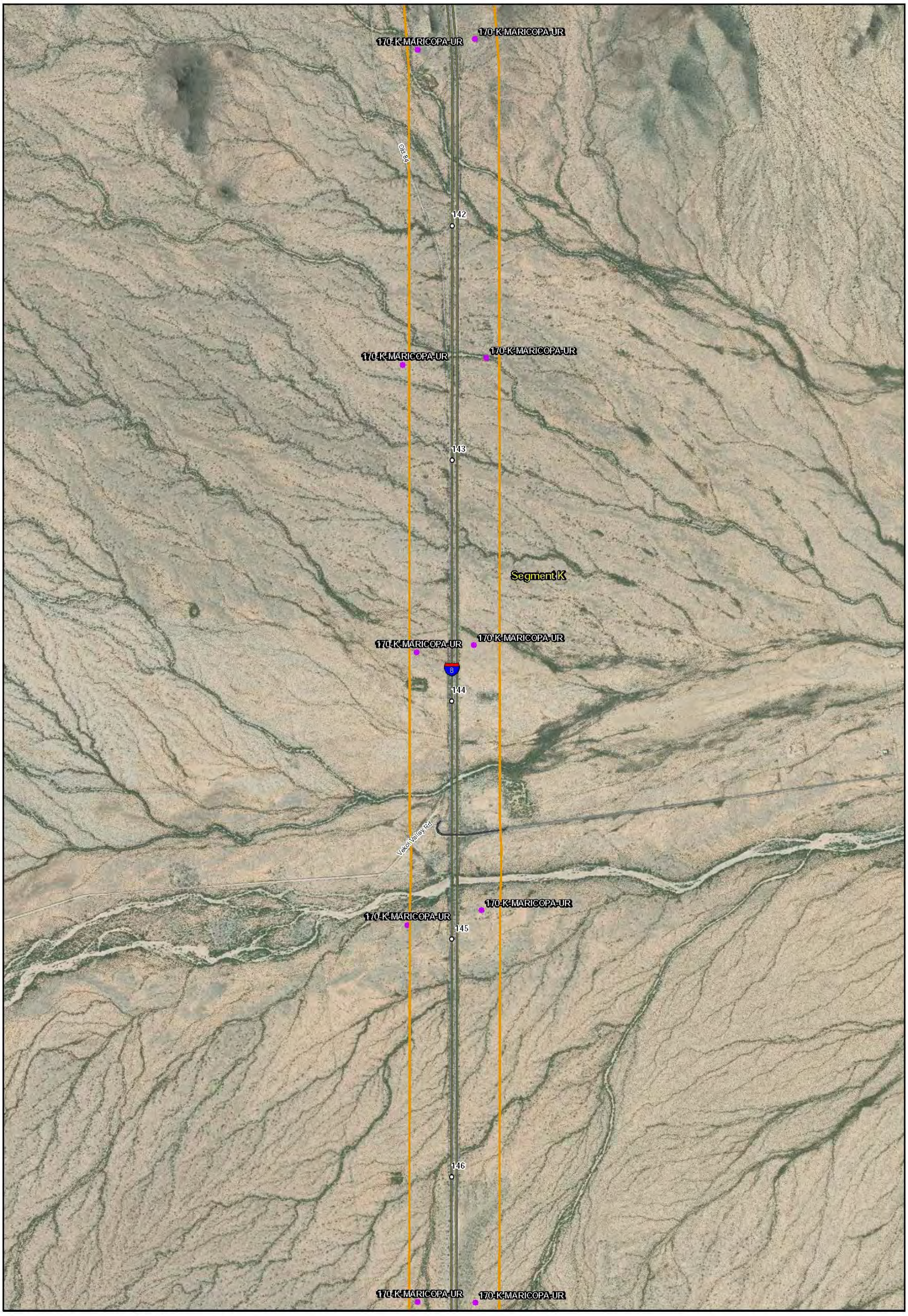

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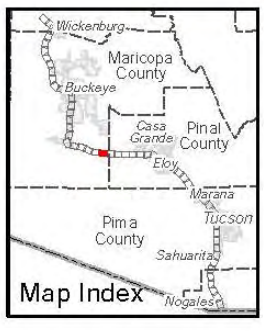

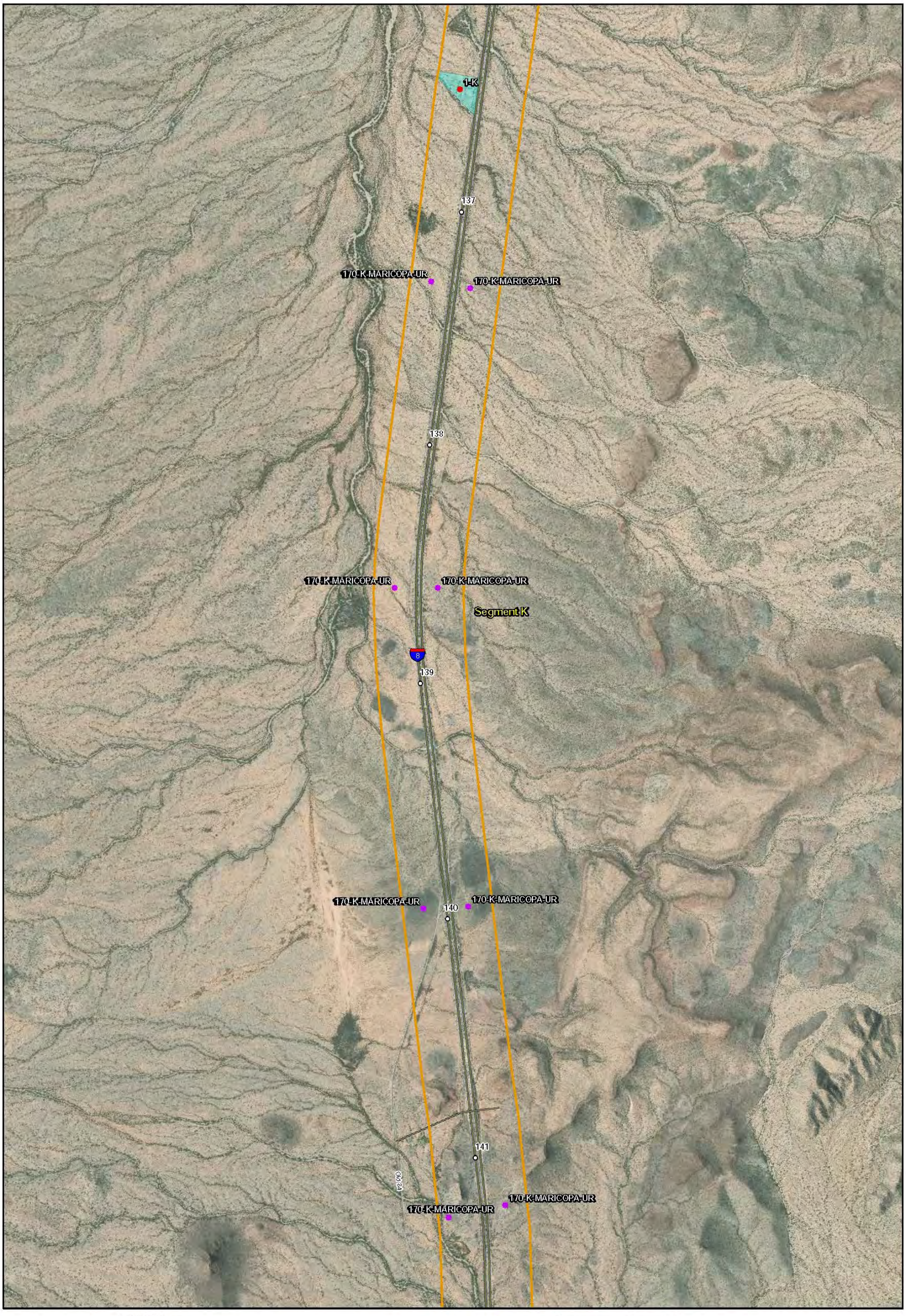

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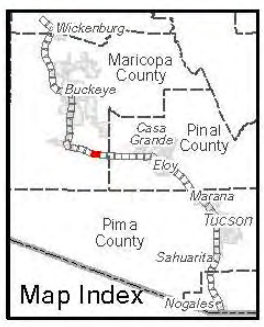

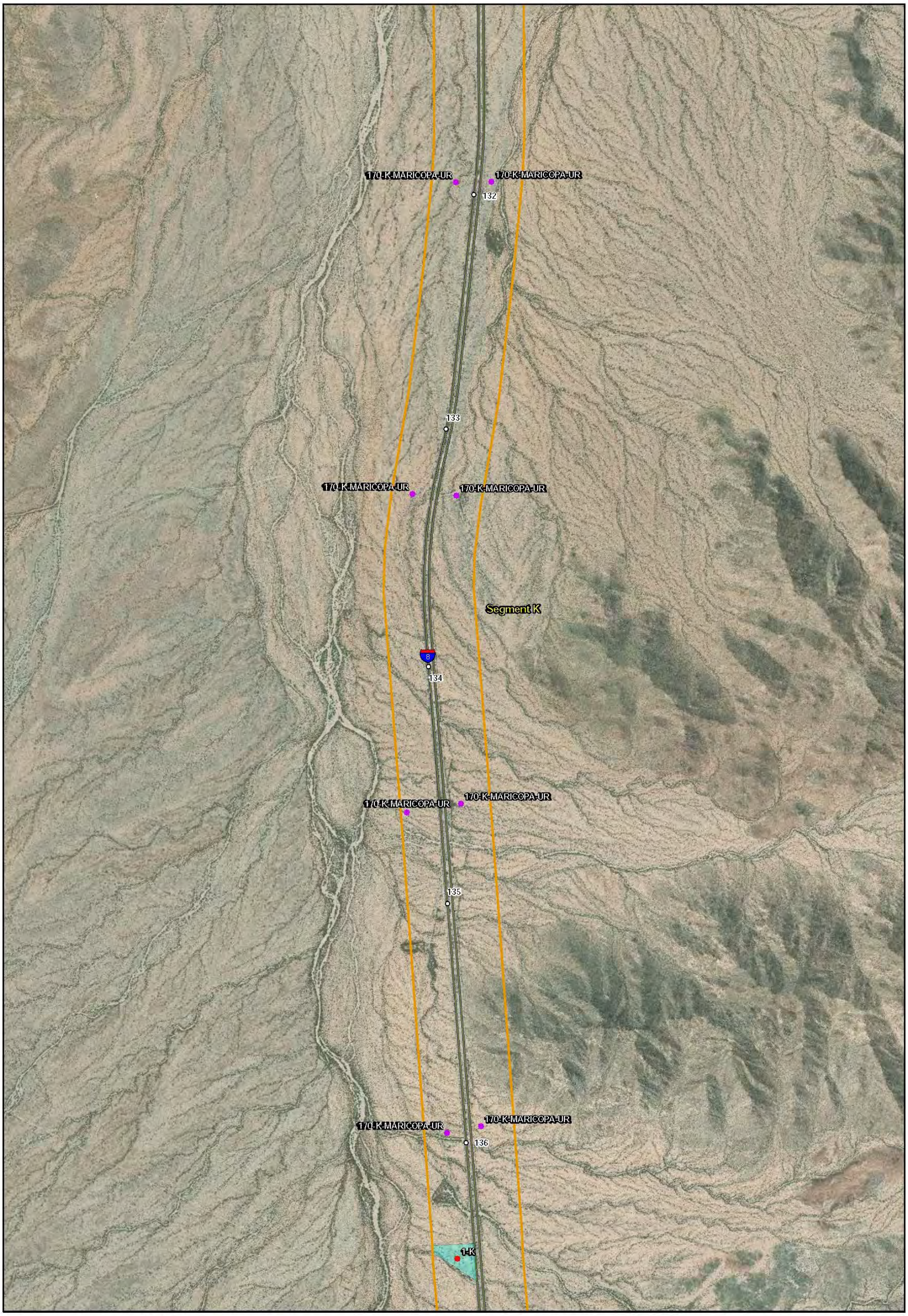

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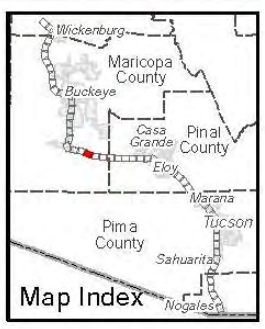

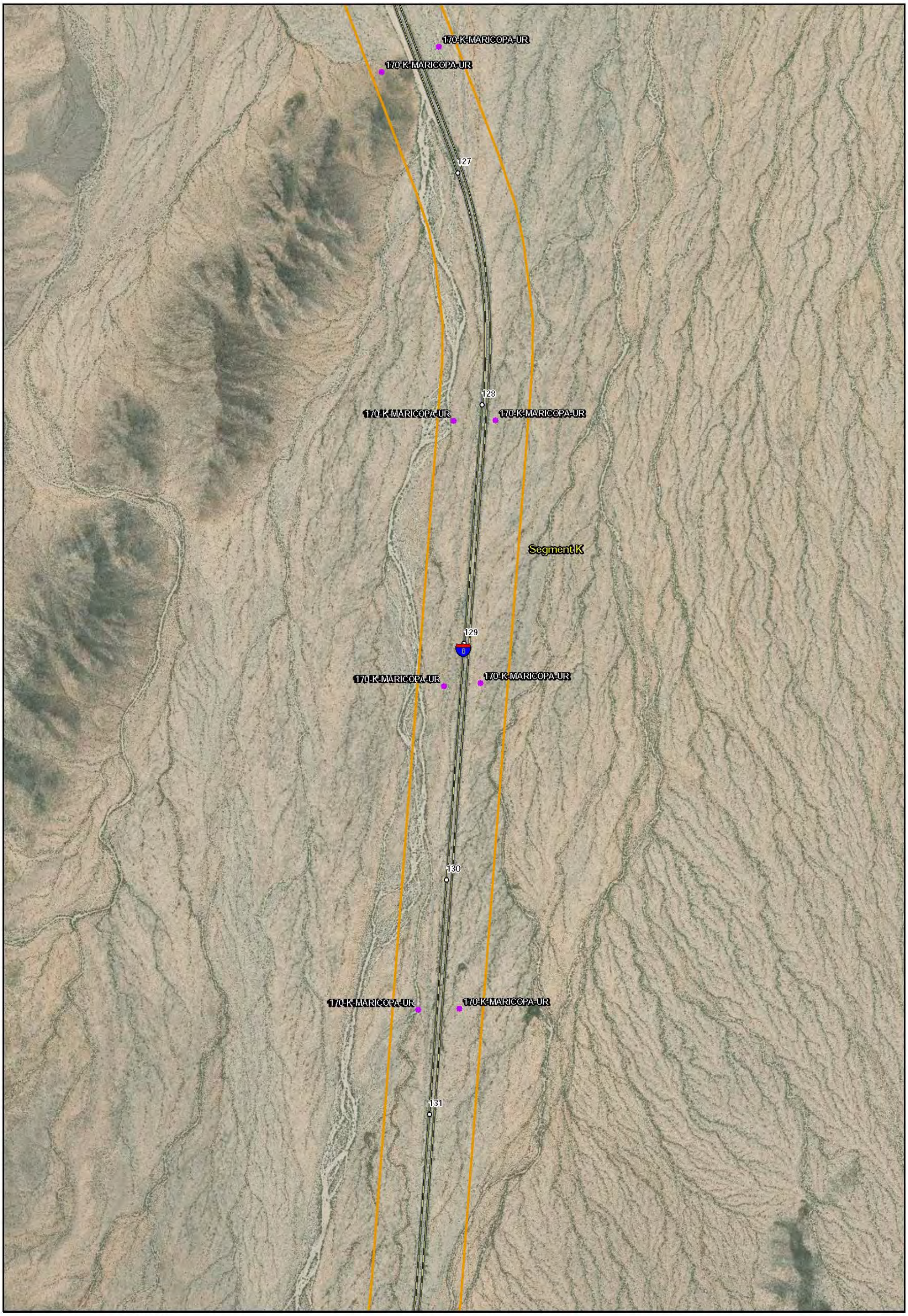

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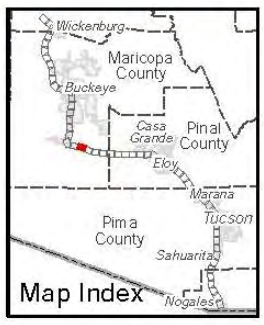

122
170-K-MARICOPA-UR
170-K-MARICOPA-UR
123
170-K-MARICOPA-UR
170-K-MARICOPA-UR
Segment K
124
8
125
170-K-MARICOPA-UR
170-K-MARICOPA-UR
126
170-K-MARICOPA-UR
170-K-MARICOPA-UR

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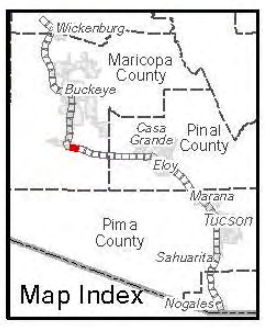

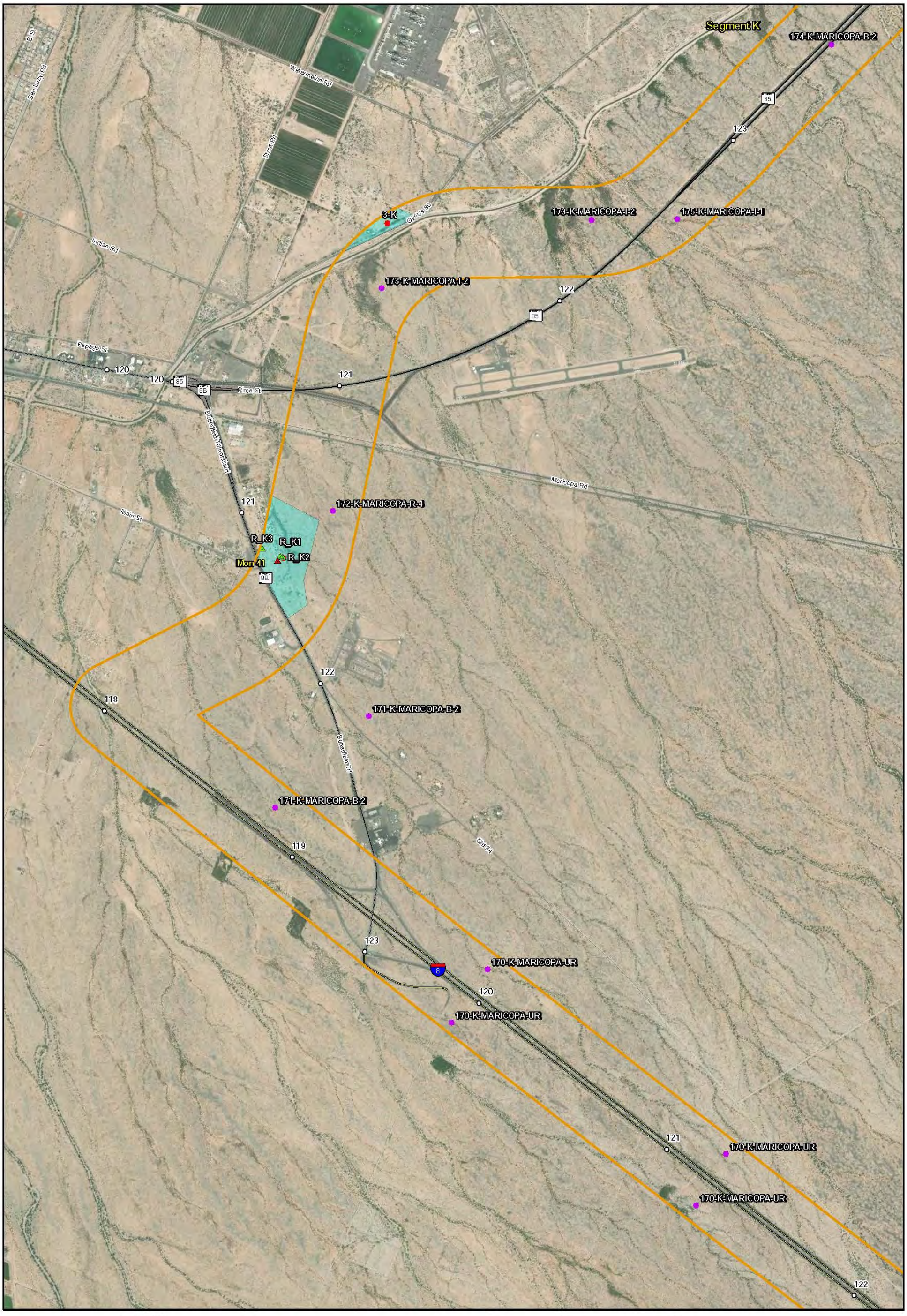

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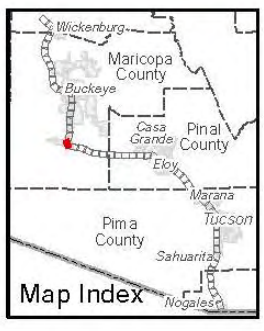

177-K-MARICOPA-SFOZ
177-K-MARICOPA-SFOZ
128
Gila Mountain Rd
Gila Mountain Rd
177-K-MARICOPA-SFOZ
127
177-K-MARICOPA-SFOZ
Segment K
126
176-K-MARICOPA-RU-43
85
85
Old US 80
176-K-MARICOPA-RU-43
125
174-K-MARICOPA-B-2
174-K-MARICOPA-B-2
124
174-K-MARICOPA-B-2

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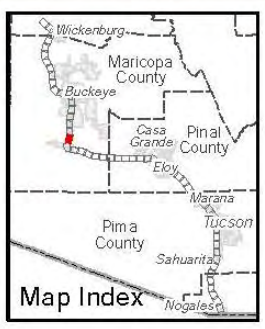

133
180MARICOPA-PC
180MARICOPA-PC
132
Segment Q1
Pierpoint Rd
Old US 80
179MARICOPA-AG
131
179MARICOPA-AG
85
178Q1MARICOPA-PC
130
178Q1MARICOPA-PC
85
129
Segment K
177-K-MARICOPA-SFOZ
177-K-MARICOPA-SFOZ
128

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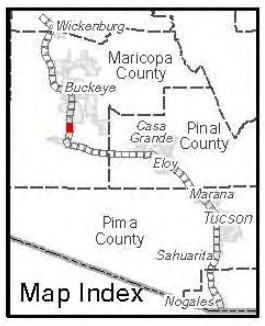

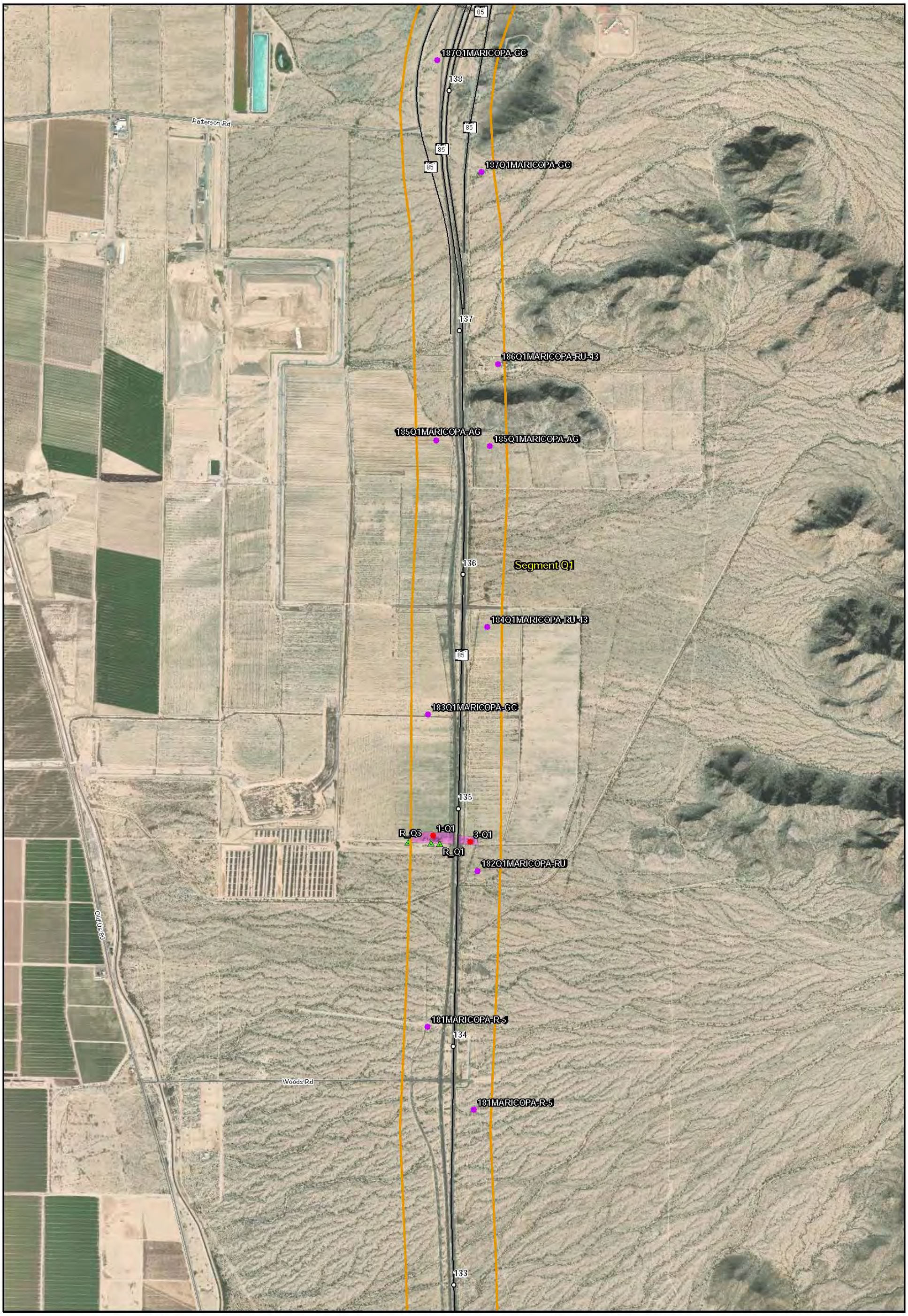

LEGEND

- Alternative Orange Study Area
- Mileposts
- Category B
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- Monitoring Site
- Noise Receiver

0 1000 2000 FEET

Revised: 12/4/2018

SOURCE: ADOT ATIS; AECOM (2017); World Imagery (2017)

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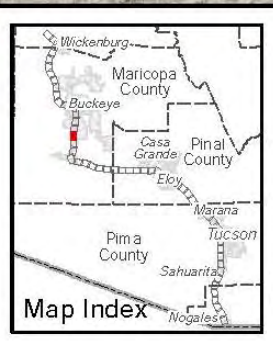

188Q1MARICOPA-RU-43
188Q1MARICOPA-RU-43
143
85
142
187Q1MARICOPA-GC
187Q1MARICOPA-GC
141
Segment Q1
85
187Q1MARICOPA-GC
Komatke Rd
187Q1MARICOPA-GC
140
187Q1MARICOPA-GC
2-Q1
139
4-Q1
85
85
85
85
187Q1MARICOPA-GC
138

LEGEND

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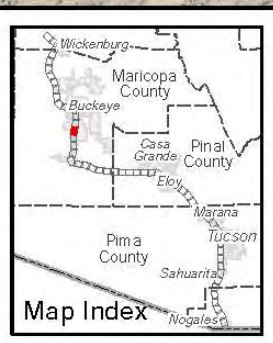

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Private Rd
190Q2MARICOPA-RU-43
85
147
Segment Q2
190Q2MARICOPA-RU-43
Robbins Butte Game Rd
146
189Q2MARICOPA-RR
189Q2MARICOPA-RR
85
85
Robbins Rd
County Circle E
County Circle W
145
188Q1MARICOPA-RU-43
188Q1MARICOPA-RU-43
Buckeye Hills Rec Rd
Segment Q1
144
85
Target Rd
188Q1MARICOPA-RU-43
188Q1MARICOPA-RU-43
143

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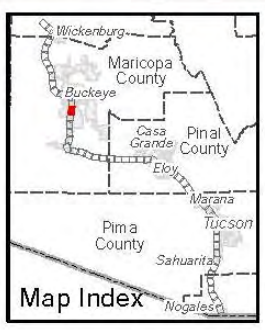

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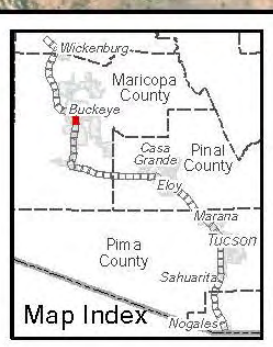

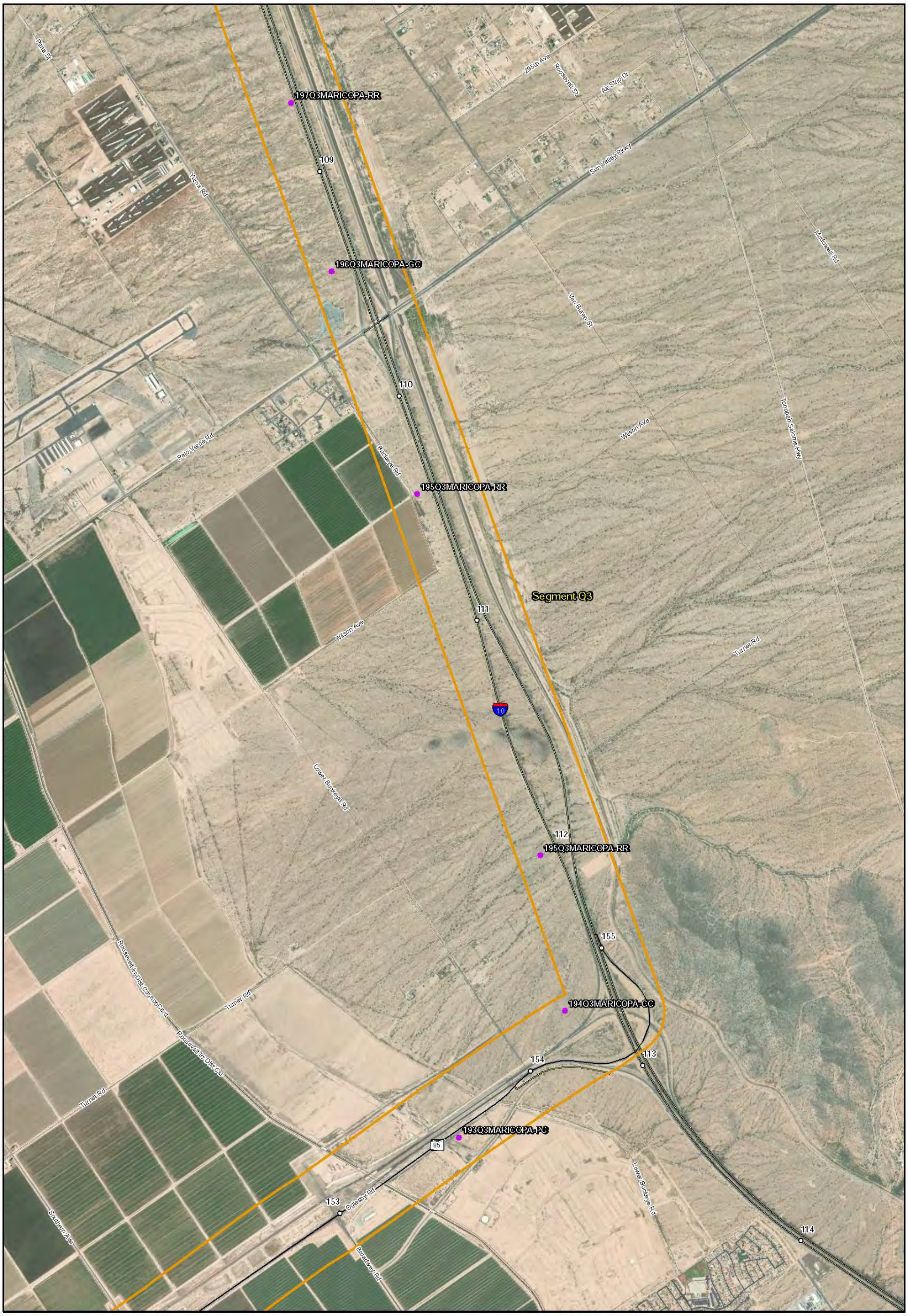

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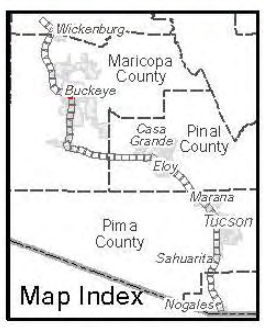

339th Ave
Van Buren St
Buckeye Rd
331st Ave
104
105
199Q3MARICOPA-RU-43
Segment Q3
106
10
Powers Butte Rd
Maricopa St
Hadley St
Grant St
Buchanan St
Buckeye Rd
Buckeye Hills Rd
107
199Q3MARICOPA-RU-43
311th Ave
308th Ave
Taylor St
Tompah Salome Hwy
198Q3MARICOPA-PC
Johnson Rd
Yuma Rd
Pierce St
McKinley St
Roosevelt St
Portland St
Latham St
Belview St
Lynwood St
Mcdowell Rd
303rd Ave
108
Lower Buckeye Rd
Pima St
302nd Ave
Van Buren St
Melvin St
300th Ave
Bruner Rd
197Q3MARICOPA-RR
295th Ave

LEGEND

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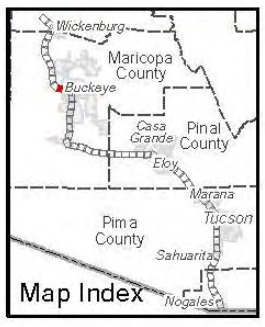

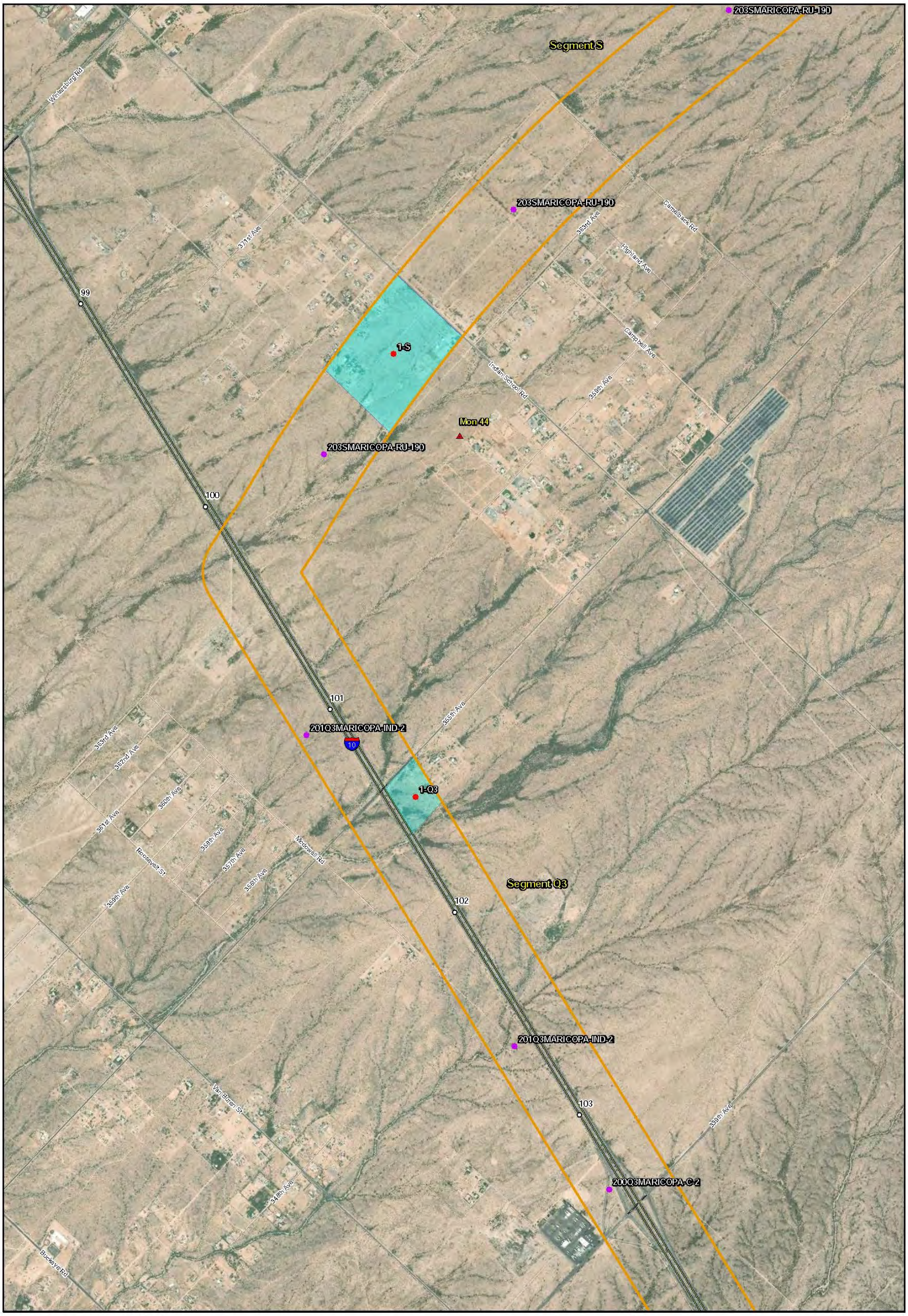

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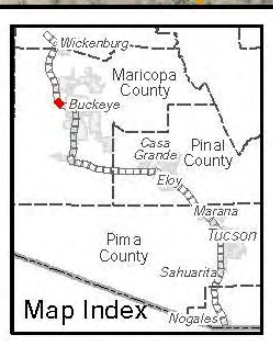

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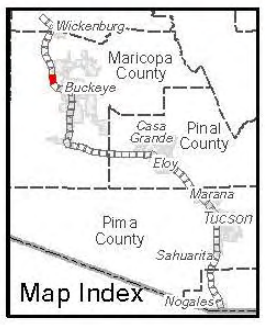

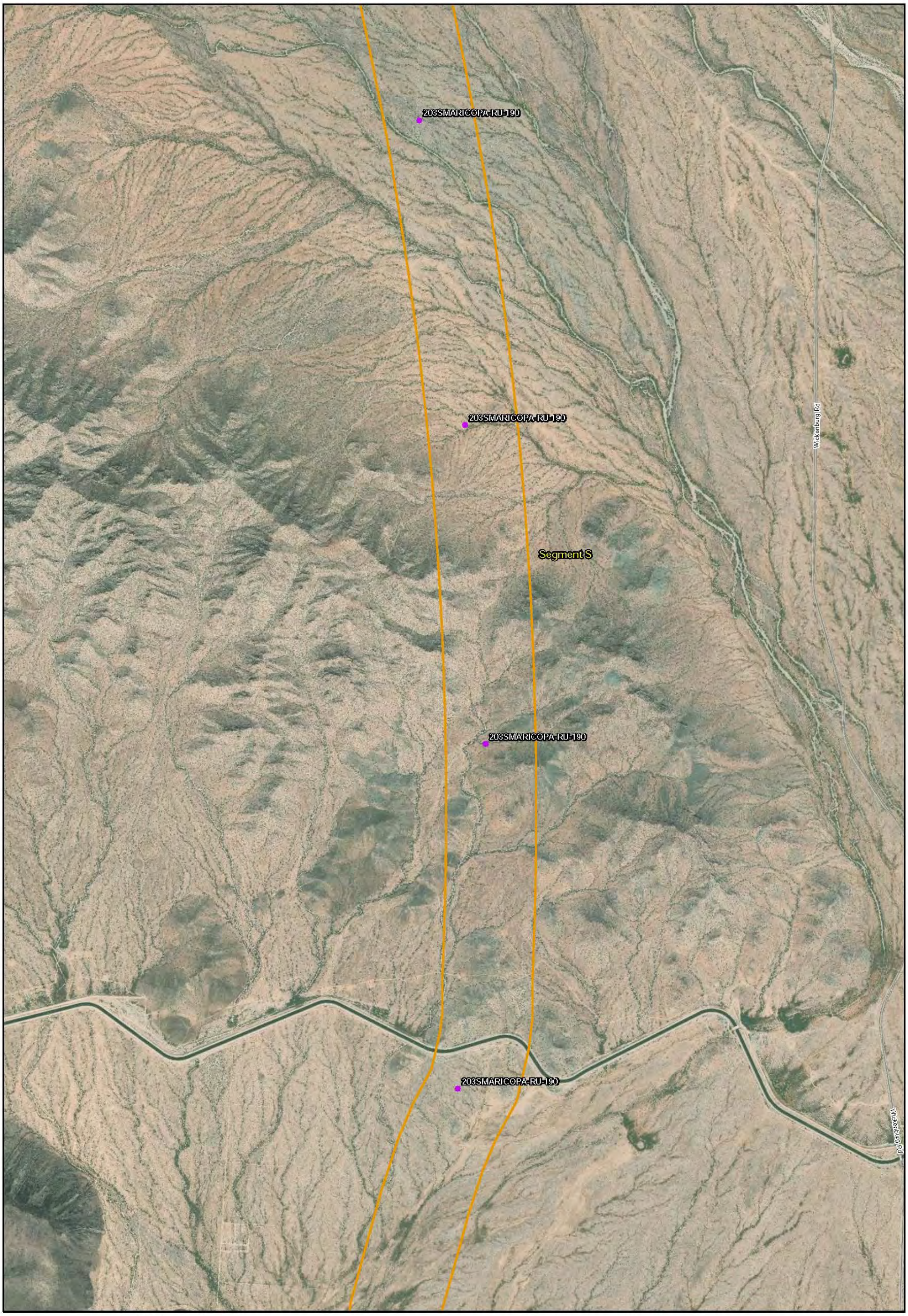

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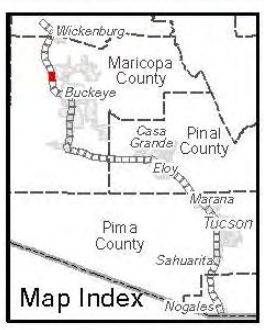

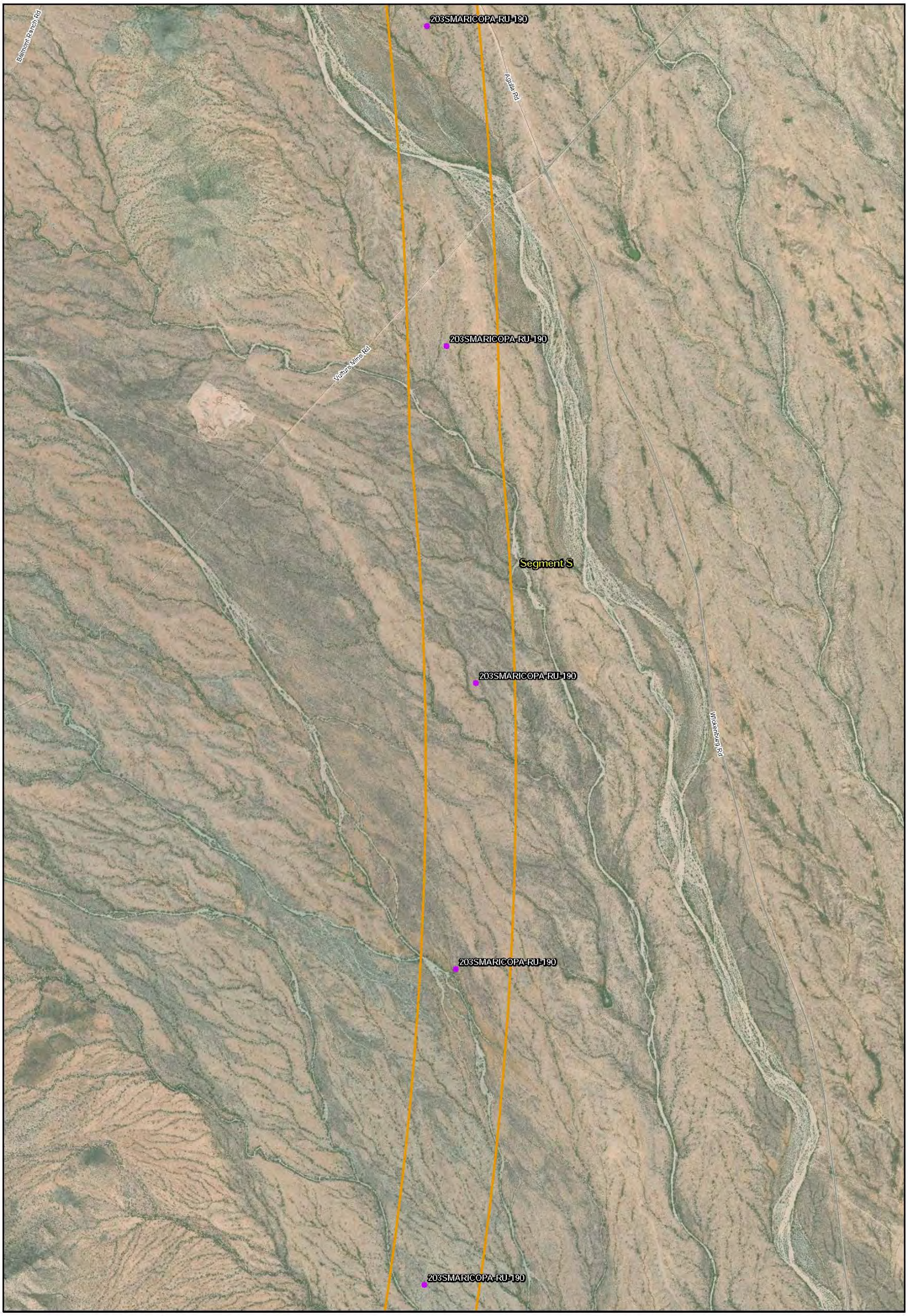

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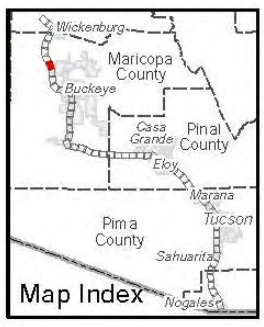

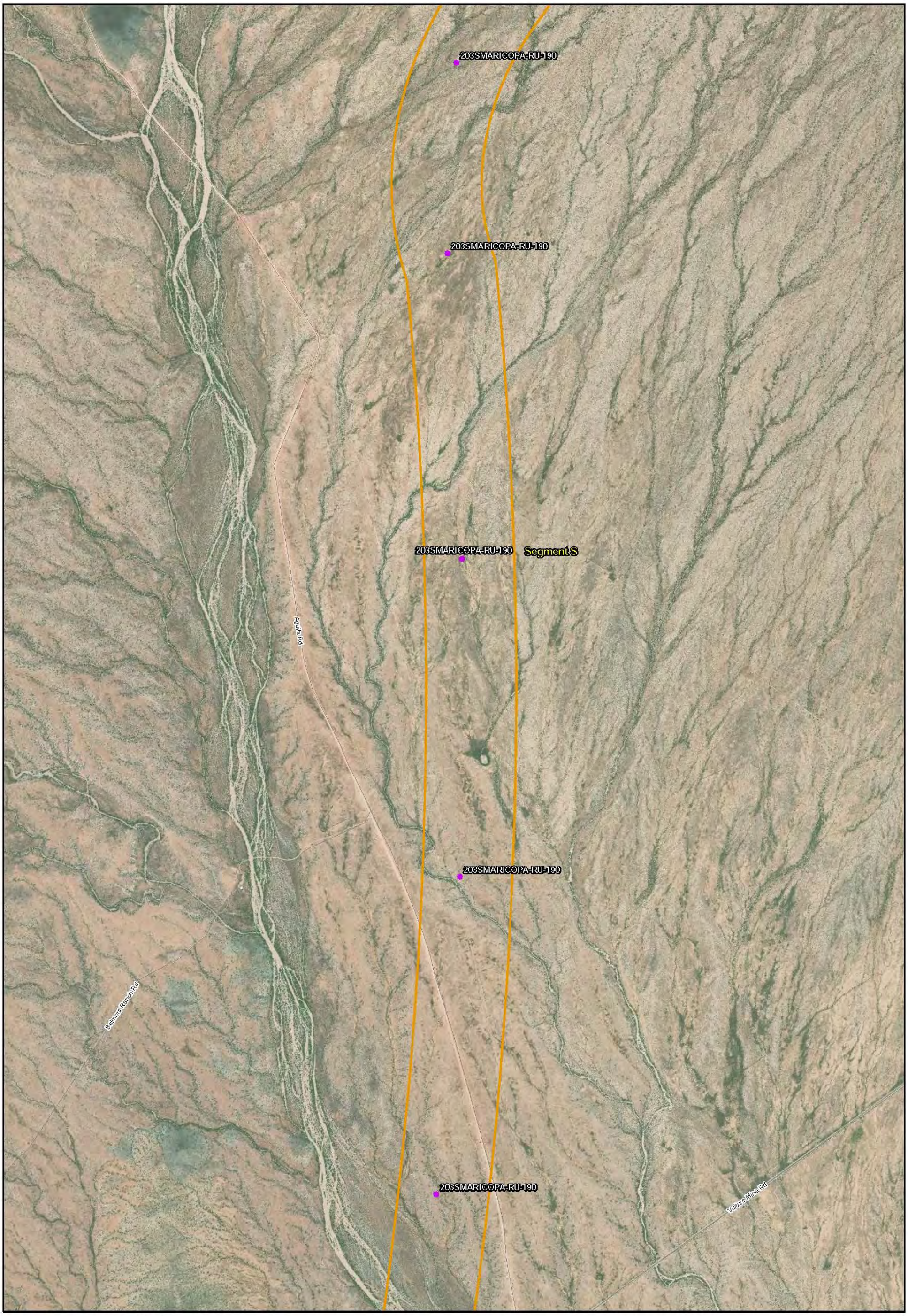

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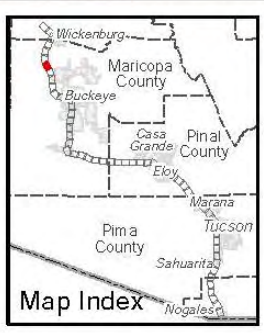

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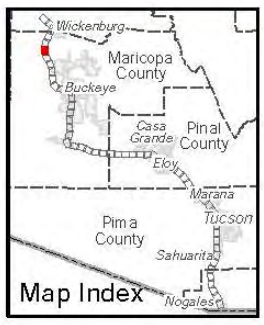

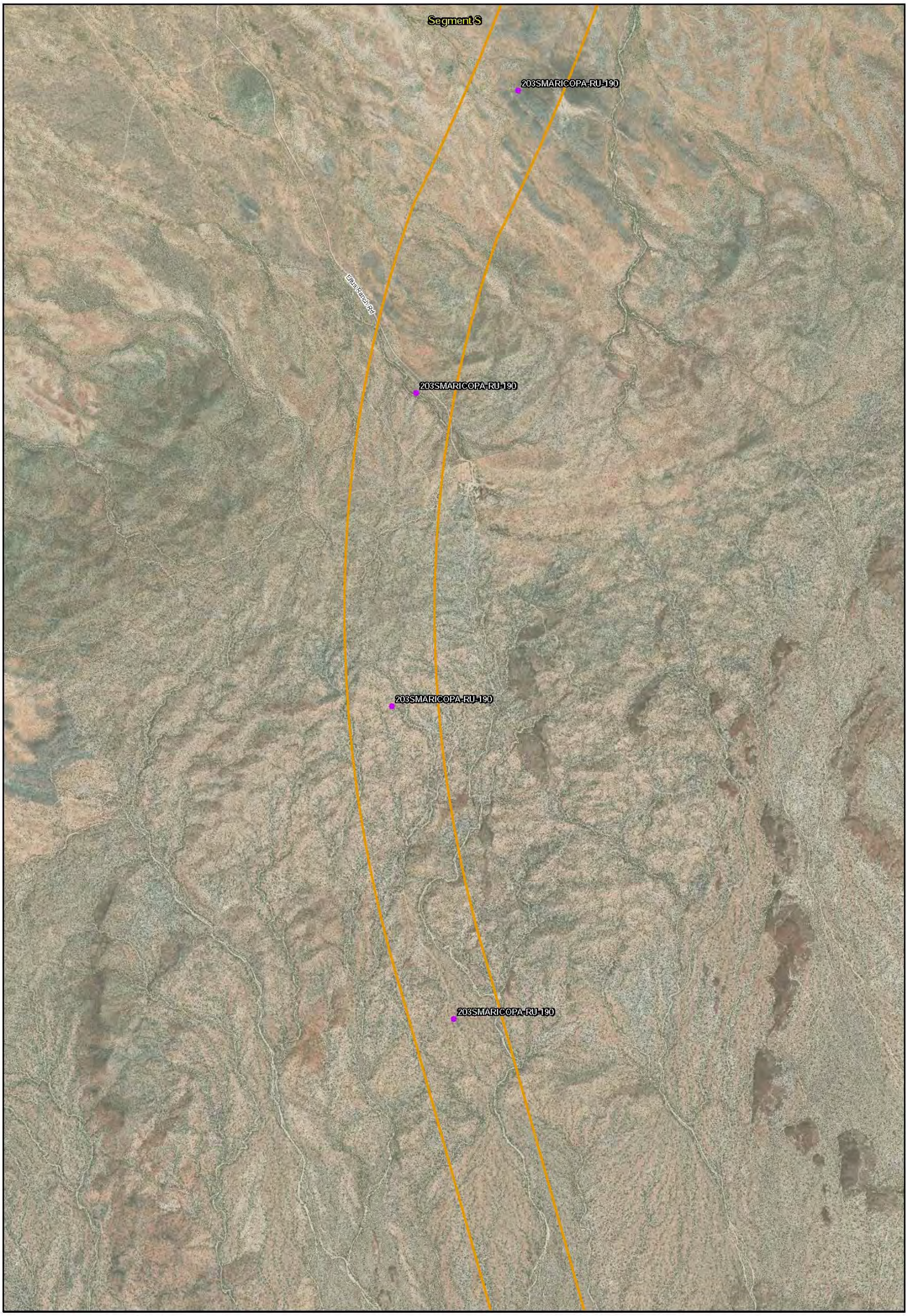

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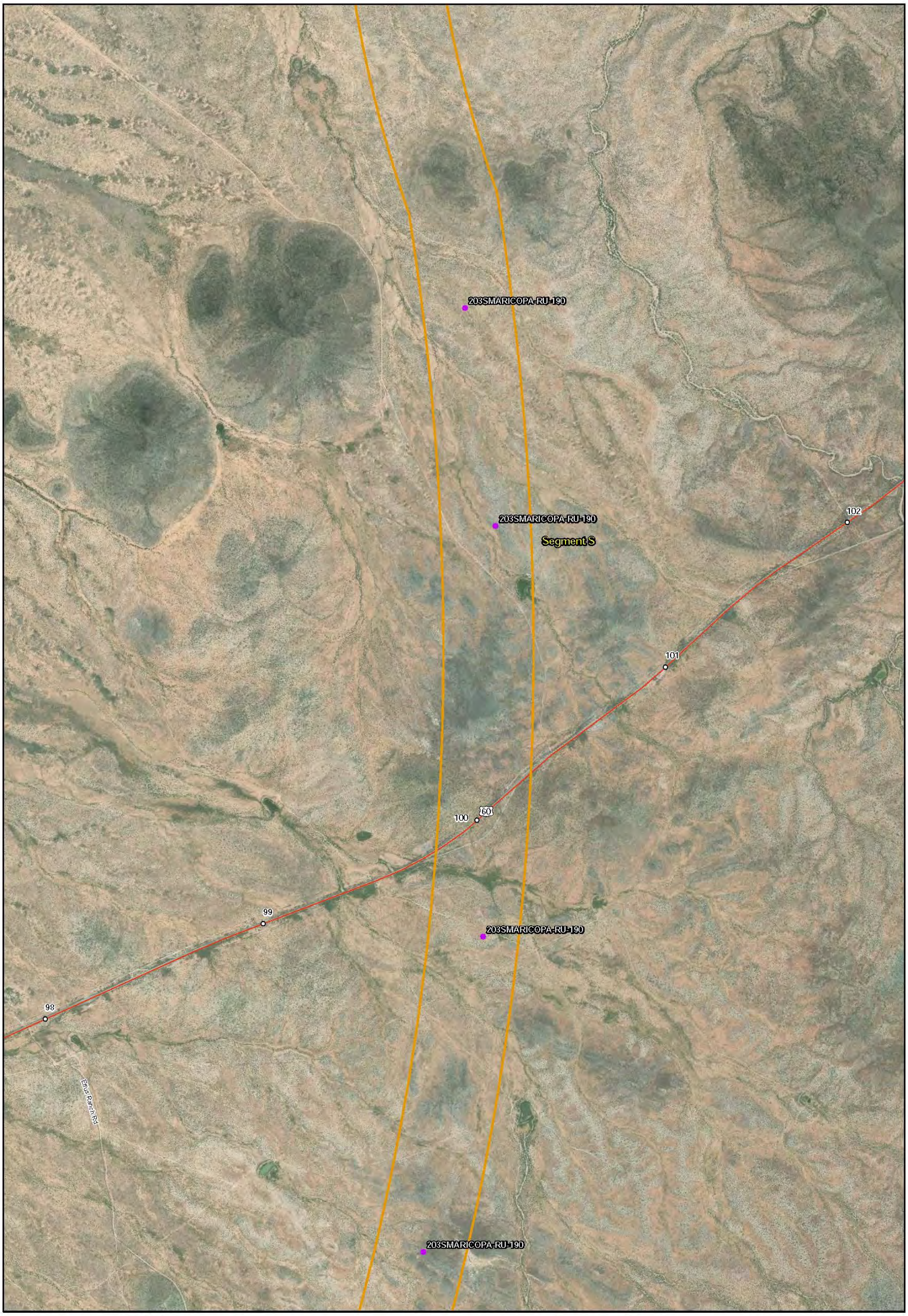

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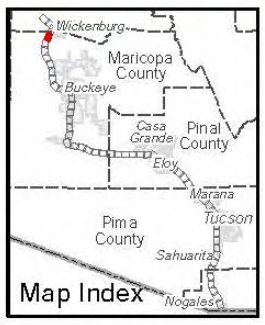

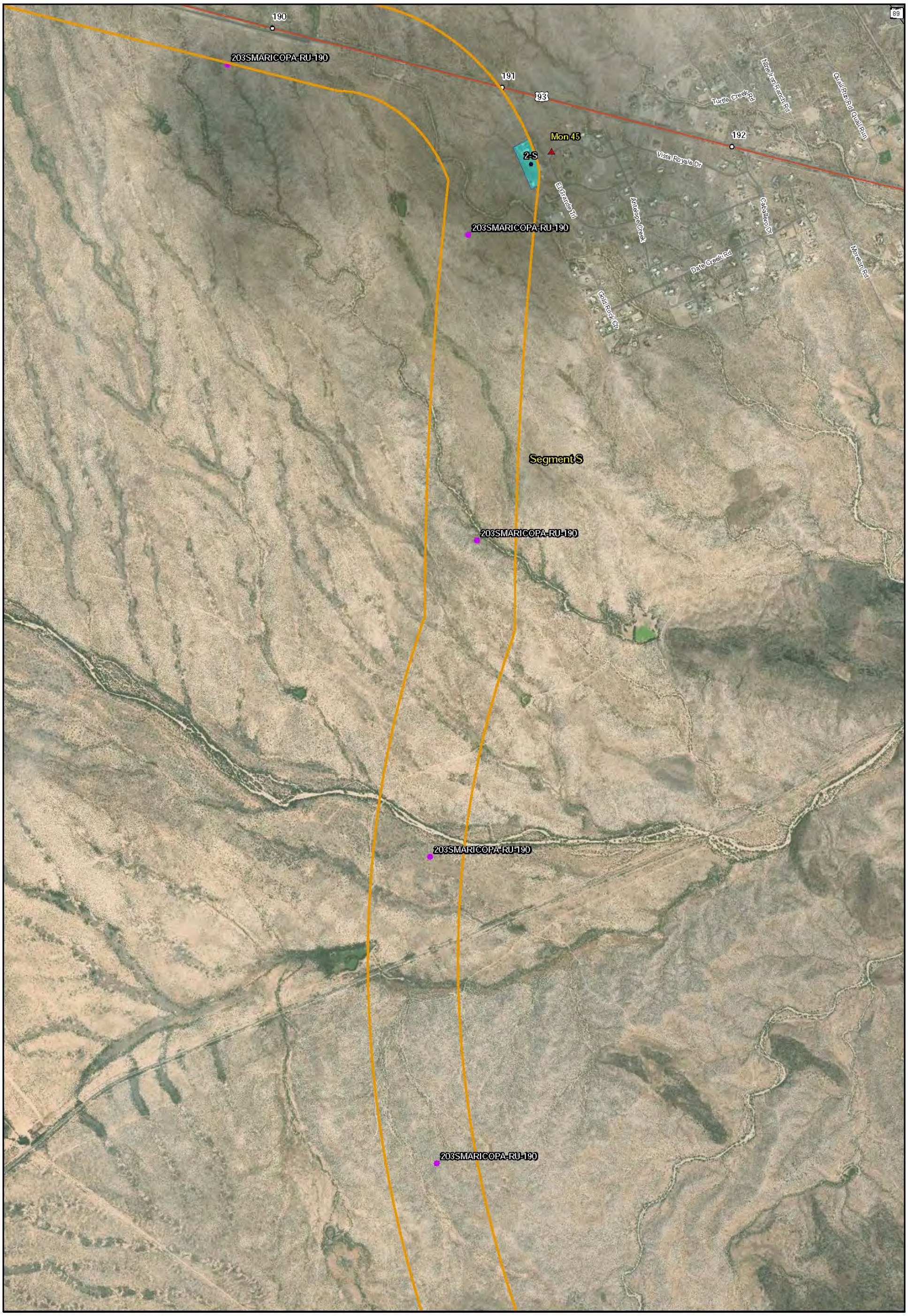

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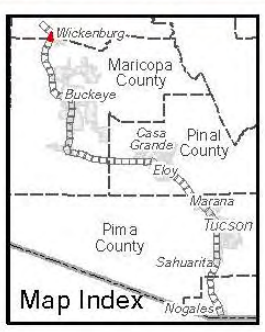

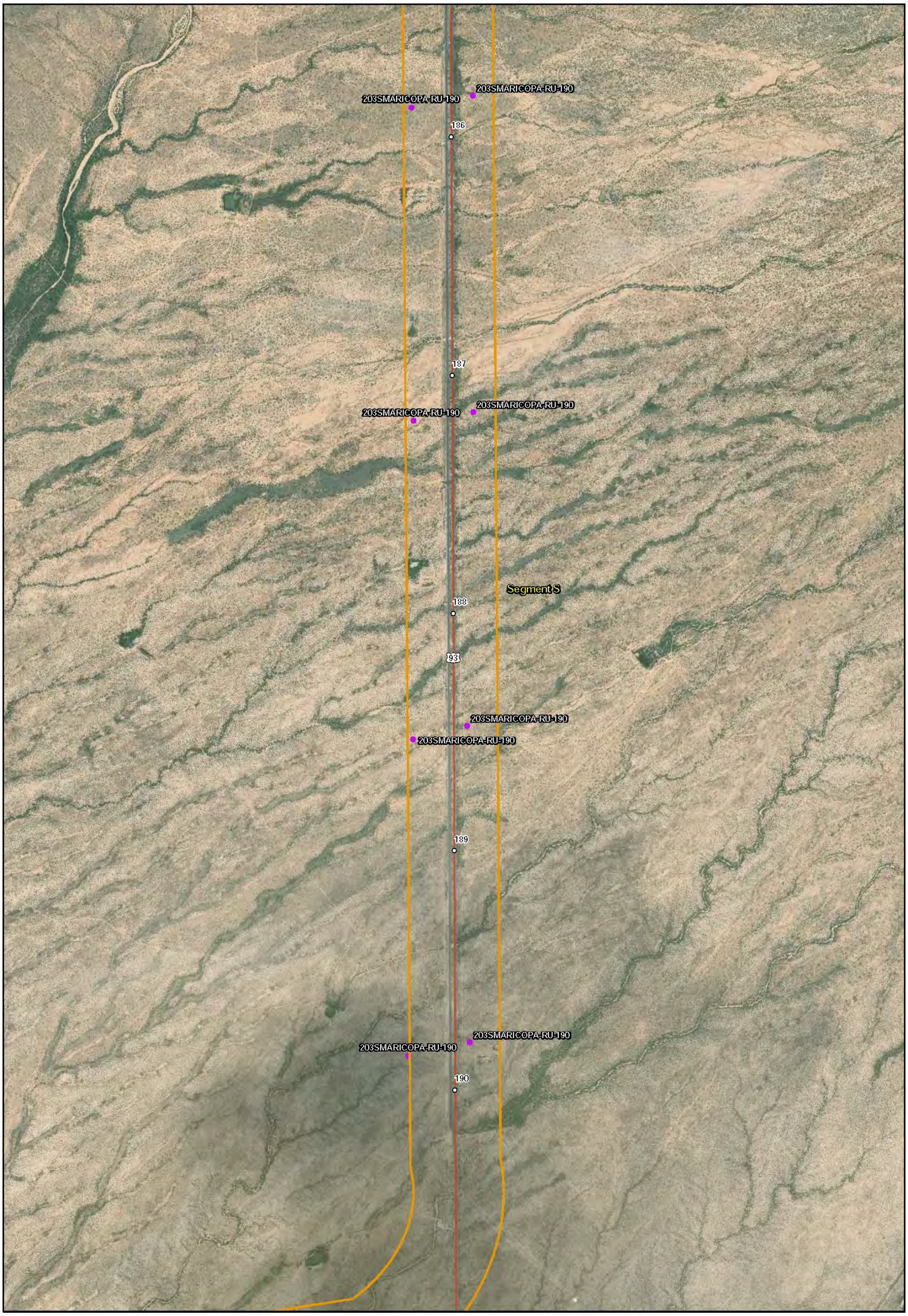

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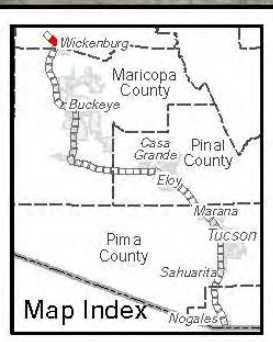

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182
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203SMARICOPA-RU-190
185
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186

LEGEND

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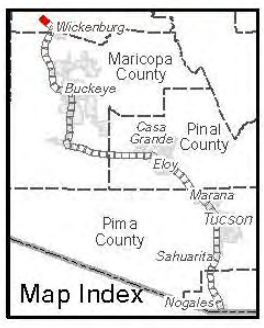

Attachment 3

Traffic Data

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I 11 (Purple Alternative) 2040 Traffic Volumes													
I 11 Alternative Option	From	To	Speed	GP Lanes	Total Auto	Peak Hour Autos	% Auto	Total Medium Truck	Peak Hour Medium Truck	% Medium Truck	Total Heavy Truck	Peak Hour Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	13758	1376	73%	1649	165	9%	3389	339	18%
C (New Road) Pima County													
C	Arivaca Rd	McGee Ranch Rd	75	8	3883	388	48%	1144	114	14%	3023	302	38%
C	McGee Ranch Rd	SR 86 (Ajo Hwy)	75	8	4978	498	54%	1186	119	13%	3003	300	33%
C	SR 86 (Ajo Hwy)	Pinal County Line	75	4	4978	498	54%	1186	119	13%	3003	300	33%
G (New Road) Pinal County													
G	Pinal County Line	Houser Rd	75	6	32456	3246	67%	3917	392	8%	12175	1218	25%
G	Houser Rd	I-8	75	6	40458	4046	75%	3688	369	7%	9559	956	18%
I-8 Pinal County													
G	I-10	Montgomery Rd	75	4	7928	793	40%	2286	229	12%	9445	945	48%
I (New Road) Pinal County													
I1	I-8	Indian Valley Rd	75	4	9032	903	48%	2044	204	11%	7801	780	41%
I2	Indian Valley Rd	Maricopa County Line	75	4	3681	368	29%	1758	176	14%	7419	742	58%
L (New Road) Maricopa County													
L	Maricopa County Line	Bulard Ave	75	4	3999	400	45%	1017	102	11%	3936	394	44%
N (New Road) Maricopa County													
N	Komatke Rd	S. 203rd Ave	75	4	9827	983	50%	1842	184	9%	7922	792	40%
N	S. 203rd Ave	SR 85	75	4	21746	2175	67%	2111	211	7%	8436	844	26%
R (New Road) Maricopa County													
R	SR 85	I-10	75	4	14270	1427	60%	1766	177	7%	7797	780	33%
X (New Road) Maricopa County													
X	I-10	Arizona Canal	75	4	5401	540	89%	108	11	2%	536	54	9%
X	Arizona Canal	US 60	75	4	737	74	70%	60	6	6%	251	25	24%
U (New Road) Yavapai County													
U	Yavapai County Line	Sun Valley Parkway	75	4	687	69	75%	57	6	6%	171	17	19%

I 11 (Green Alternative) 2040 Traffic Volumes													
I 11 Alternative Option	From	To	Speed	GP Lanes	Total Auto	Peak Hour Autos	% Auto	Total Medium Truck	Peak Hour Medium Truck	% Medium Truck	Total Heavy Truck	Peak Hour Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	13758	1376	73%	1649	165	9%	3389	339	18%
I-19 to D (New Road) Pima County													
B	Arivaca Rd	Twin Buttes Rd	65	4	20352	2035	78%	1652	165	6%	4165	417	16%
D	Twin Buttes Rd	Silverbell Rd	75	4	1383	138	89%	47	5	3%	119	12	8%
F (New Road) Pinal County													
F	Silverbell Rd	Houser Rd	75	4	879	88	89%	75	8	8%	29	3	3%
F	Houser Rd	Gila Bend Hwy	75	4	4816	482	34%	1718	172	12%	7571	757	54%
F	Gila Bend Hwy	Indian Valley Rd	75	4	10870	1087	63%	1562	156	9%	4728	473	28%
I2	Indian Valley Rd	SR 347	75	4	10870	1087	63%	1562	156	9%	4728	473	28%
I2	SR 347	Maricopa County Line	75	4	4758	476	33%	1879	188	13%	7849	785	54%
L (New Road) Maricopa County													
L	Maricopa County Line	Bullard Ave	75	4	3485	349	41%	989	99	12%	4017	402	47%
M	Bullard Ave	Buckeye Hills Dr	75		2862	286	37%	923	92	12%	3996	400	51%
SR 85 Maricopa County													
Q2	Buckeye Hills Dr	Gila River	75	4	6069	607	38%	1856	186	12%	7957	796	50%
Q2	Gila River	Hazen Rd	75	6	6069	607	38%	1856	186	12%	7957	796	50%
R (New Road) Maricopa County													
R	Hazen Rd	I-10	75	4	13274	1327	72%	979	98	5%	4272	427	23%
U (New Road) Maricopa County													
U	I-10	Camelback Rd	75	4	7169	717	84%	313	31	4%	1074	107	13%
U	Camelback Rd	Yavapai County Line	75	4	3131	313	75%	189	19	5%	876	88	21%
U (New Road) Yavapai County													
U	Yavapai County Line	Sun Valley Parkway	65	4	2349	235	77%	172	17	6%	528	53	17%

I 11 (Orange Alternative) 2040 Traffic Volumes													
I 11 Alternative Option	From	To	Speed	GP Lanes	Total Auto	Peak Hour Autos	% Auto	Total Medium Truck	Peak Hour Medium Truck	% Medium Truck	Total Heavy Truck	Peak Hour Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	13758	1376	73%	1649	165	9%	3389	339	18%
I-19 Pima County													
B	Arivaca Rd	Duval Mine Rd	65	4	19718	1972	76%	1820	182	7%	4491	449	17%
	Duval Mine Rd	Valencia Rd	65	4	29965	2997	79%	2135	214	6%	5695	570	15%
B	Valencia Rd	I-10	65	8	40298	4030	83%	2141	214	4%	5999	600	12%
I-10 Pima County													
B	I-19	Prince Rd	65	12	93079	9308	80%	5594	559	5%	18311	1831	16%
B	Prince Rd	Ruthrauff Rd	65	10	93079	9308	80%	5594	559	5%	18311	1831	16%
B	Ruthrauff Rd	Sunset Rd	65	10	72186	7219	80%	4722	472	5%	13639	1364	15%
B	Sunset Rd	Ina Rd	65	10	59706	5971	78%	4485	449	6%	12439	1244	16%
B	Ina Rd	Cortaro Farms Rd	65	10	56703	5670	76%	4416	442	6%	13742	1374	18%
B	Cortaro Farms Rd	Twin Peaks Rd	65	10	56703	5670	76%	4416	442	6%	13742	1374	18%
B	Twin Peaks Rd	Avra Valley Rd	65	8	42361	4236	72%	3949	395	7%	12547	1255	21%
B	Avra Valley Rd	Tangerine Rd	65	6	42361	4236	72%	3949	395	7%	12547	1255	21%
B	Tangerine Rd	Marana Rd	65	6	37237	3724	69%	3965	397	7%	12423	1242	23%
I-10 Pinal County													
B	Marana Rd	Pinal Air Park Rd	75	6	32955	3296	72%	3509	351	8%	9299	930	20%
G	Pinal Air Park Rd	I-8	75	6	40105	4011	75%	3641	364	7%	9548	955	18%
I-8 Pinal County													
G	I-10	Montgomery Rd	75	4	6575	658	68%	733	73	8%	2348	235	24%
H,K	Montgomery Rd	SR 84	75	4	3870	387	57%	626	63	9%	2241	224	33%
I-8 Maricopa County													
K	SR 84	Butterfield Trail	75	4	737	74	23%	496	50	15%	1996	200	62%
SR 85 Maricopa County													
K	Butterfield Trail	Fornes Rd	75	4	9171	917	92%	194	19	2%	567	57	6%
Q1	Fornes Rd	Lewis Prison Rd	75	4	11608	1161	90%	373	37	3%	979	98	8%
Q2	Lewis Prison Rd	Gila River	75	4	16,525	1653	89%	486	49	3%	1495	150	8%
Q2	Gila River	Hazen Rd	75	6	16,525	1653	89%	486	49	3%	1495	150	8%
Q3	Hazen Rd	MC 85	75	6	23,328	2333	75%	1483	148	5%	6312	631	20%
Q3	MC 85	Broadway Rd	75	6	33910	3391	79%	1672	167	4%	7301	730	17%
Q3	Broadway Rd	I-10	75	6	36521	3652	63%	4553	455	8%	16980	1698	29%
New Road North of I-10 Maricopa County													
S	I-10	US 60	75	4	4961	496	80%	292	29	5%	977	98	16%
S	US 60	US 93	75	4	3007	301	77%	166	17	4%	719	72	18%

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Attachment 4

Consideration of Noise Effects on Saguaro National Park

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CONSIDERATION OF NOISE EFFECTS ON SAGUARO NATIONAL PARK

All corridors are 2000 ft wide and two segments (C, D) come closest approximately within 2000 ft to the west boundary of the Saguaro National Park, between the Sweetwater Dr and W Fort Lowell Rd. Compared to the Segment C, Segment D comes closer to the Parks boundary in the northern section but the distances are significantly higher than 2000 ft, and meaningful effects at those distances to the Park are highly unlikely. Irrespective of Scenario selected, based on the design year traffic volumes, the noise levels at 2000 ft from the highway are highly unlikely to reach 60 dBA at any point in the Park, the noise level the masking studies provided as an overall noise level guideline for continuous noise. The segment B is following the existing alignment of I-10 and would not result in any meaningful changes to the Park that would require additional analysis.

There is a scarceness of information on the wildlife's response to noise, particularly taking into consideration the levels likely to be encountered along roads, and it is difficult to determine if any potential is to be eventually attributed to the physical presence of the road itself, or to the highway noise. The frequencies, magnitudes, and durations of acceptable levels of unnatural sound may vary throughout a park, and are generally greater in developed areas, the areas which are adjacent to the observed corridors. Additionally, some animals may become habituated to noise, even thrive, but that does not mean that it does not have a potential for an impact. It is also important to note that the other studies, that reviewed an extensive number of species, found some to be negatively affected by the presence of roads, but most species were neutral and a few species to increase in numbers presumably due to food or habitat provided by rights-of–way. The two documents predominantly used are the *Synthesis of Noise Effects on Wildlife Populations* (FHWA-HEP-06-016) and *Protecting National Park Soundscapes* issued by the National Academy of Engineering of the National Academies in cooperation with the National Park Service and the John A. Volpe National Transportation Systems Center.

Determination of soundscape

The roads have definite effects on wildlife populations for a variety of reasons. In many cases it appears that noise may have a significant effect on both numbers of individuals, species diversity and breeding. Parks may have been already exposed to the variety of motorized equipment, including visitor vehicles, administrative, staff vehicles and equipment, and that may include the activities within the adjoining developments and aircraft operations.

In addition to their natural values, natural sounds may form a valued part of the visitor experience. Conversely, the sounds of motor vehicle traffic, an electric generator, or construction equipment can greatly diminish the solemnity of a visit to a national memorial, the effectiveness of a park interpretive program, or the ability of a visitor to hear a bird singing its territorial song. Additionally, culturally appropriate sounds are important elements of the national park experience in many parks, and soundscape resources and values of the parks are fundamental components of the purposes and values for which the parks were established.

Park's natural soundscape resources encompass all the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds and the interrelationships

among park natural sounds of different frequencies and volumes. Natural sounds occur within and beyond the range of sounds that humans can perceive, and they can be transmitted through air, water, or solid materials. Some natural sounds in the natural soundscape are also part of the biological or other physical resource components of the park. Examples of such natural sounds include

- sounds produced by birds, frogs, or katydids to define territories or aid in attracting mates
- sounds produced by bats or porpoises to locate prey or navigate
- sounds received by mice or deer to detect and avoid predators or other danger
- sounds produced by physical processes, such as wind in the trees, claps of thunder, or falling water.

General approach in analyzing noise effects on wildlife

The frequencies, magnitudes, and durations of acceptable levels of unnatural sound may vary throughout a park, being generally greater in developed areas. Some animals may become habituated to noise, even thrive, but that does not mean that it does not have a potential for an impact. It is also important to note that the other studies that review an extensive number of species found some to be negatively affected by the presence of roads, but most species were neutral and a few species to increase in numbers presumably due to food or habitat provided by rights-of–way.

The endangered species often get analyzed in the same approach as other species in considering the effects of noise, but the biology of each species must be taken into account. It is not clear whether animals interpret the noise as a threat or are simply reacting to the environmental degradation caused by noise. One experiment with collared elk found that they would move away from the sound of vehicles up to a kilometer away, but they were more likely to move when they were on a trail or road than if they were off the trail, which suggests that they were reacting to a perceived threat rather than the irritation of the noise. Mountain goats may react to the sound of helicopters, which are often used in tagging the goats for wildlife research. An aircraft flying at low altitudes can disrupt behavior in ducks and other species for up to two hours afterward.

Although sparse, the studies that have looked at the response of fish would suggest that normal traffic noise would not be sufficiently great to disturb those species.

Roads do provide a barrier to the movement of reptiles and amphibians; however the effect of noise is far less clear. Tortoises, for example, may respond more to ground-borne vibration than to noise itself.

The most comprehensive experimental studies on the subject demonstrate that many (although not all) species of small breeding birds in both grassland and forest habitats appear to avoid areas in proportion to the traffic noise and volume at distances up to 1.8 miles. Road noise would appear an unlikely impediment to species that are able to successfully breed so close to the source. A summary of some of the major findings with respect to birds shows little, if any

contradiction in results, rather some species are negatively affected and others occur more frequently nearer roads due factors such as prey availability or vegetation type.

Research has largely focused on the aversive reactions of wildlife to very loud noises. But chronic noise is also an issue around roadways to determine what the impact might be. Some animals have hearing thresholds at or below the quietest measured levels. Therefore, it is essential to discuss the necessity of finding an appropriate metric when conducting noise research. The most commonly employed metrics use A-frequency weighting, which is a standard weighting curve generally representative of human hearing. But for some measurements, sampling should be limited to the frequencies most often produced by a particular source. In other cases, animals may have hearing sensitivities that differ from those of humans.

There are many variables that could be involved in potential effects of highway noise on birds and without taking each of these potential variables into consideration, appropriate correlations between road noise and bird behavior cannot be made.

Mitigation strategies

It is essential to minimize all noise that through frequency, magnitude, or duration affects the natural soundscape or other park resources or values, or that exceeds levels that have been identified as being acceptable to or appropriate at the sites, including the course of construction activities.

Each analysis should consider the following noise abatement measures.

- Acquisition of ROW to provide a Buffer Zone
- Change to Horizontal (shifting highway away from the park) or Vertical Alignment (breaking line of sight between highway and noise sensitive land sites)
- Traffic Management Measures
    - Control Devices (reduce speed at sections of concern)
    - Traffic/Vehicle Restrictions
- Noise Barriers
    - Noise Walls
    - Noise Berms
    - Combination Wall/Berm

Construction noise mitigation

Construction noise programs need to include both proactive avoidance of noise and the reactive ability to control noise if it becomes problematic.

Proactive measures include “buy quiet” programs using product and vendor guidance sheets or lists of acceptable equipment along with soundscape management plans and contractor noise control plans. Reactive measures include use of a noise control plan to observe and inspect the work, enforce limits, and hold contractors accountable.

A comprehensive noise specification provides control over the amount of noise generated. It can include definitions, time and equipment restrictions, source emission limits, receptor limits, a noise control plan, penalties, and incentives.

The proposed list of measures is focused on the source controls, path controls, and receiver controls.

- Time constraints by prohibition of work during sensitive hours for humans and/or wildlife (e.g., dawn, dusk, nighttime, nesting season)
- Scheduling the performance of noise intensive activities during less sensitive time periods
- Equipment restrictions on the type of equipment that can be used
- Specialty products, including special purpose pads, liners, and enclosures that reduce noise
- Noise emission limits by establishing specification of equipment noise limits
- Enclosure, shielding, or encasing of localized and stationary noise sources
- Increased distance by moving location of noisy activities farther from receivers or offsite
- Stakeholder meetings and open dialogue to involve the affected stakeholders and share information
- Noise complaint process with a capacity to log and respond to noise complaints