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Alternative Sites/Coverage Area Eagle Vines – Sprint Facility



5098 Foothills Blvd., STE 3-119, Roseville, CA 95747
916-918-9322 • Office@PrecisionSD.com

Project: Proposed 55' Sprint Monopine at 580 South Kelly Rd., American Canyon

Project Justification:

The proposed facility is required to maintain the services provided by the existing facility, including E-911 and wireless communications voice and data transmissions and receptions for the immediate surrounding area. The E-911 service is critical for the subject area due to the nearby major thoroughfares of Hwy. 12 & Hwy 29. Sprint previously had tower at this location (tower# SF13XC335), and currently has a temporary tower at this location (SF99XT336). This location is vital to the continued maintenance of Sprint's network.

Collocation:

It is Sprint's understanding that collocation is preferable in Napa county, however due to the nature of the local terrain and vegetation, along with the close proximity of Napa airport, collocation with AT&T would require a tower height of 87' which would be in conflict with the height restrictions required by the airport. A solution has been suggested to construct 2 lower towers as stealth monopines slightly differing in height, to ensure a more natural visual appearance, with a max overall height of 55' to provide the minimum coverage required for the terrain and keep below the safe height for airport traffic.

Prior Permits for the site that is being replaced (SF13XC335):

Approval issued June 1999 (#98229-UP) for the original installation and operation of a 55' tall wireless telecommunications facility consisting of four (6) panel antennas and a 600 square foot lease area.



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Site Design Justification

Sprint had a permanent antenna facility located approximately 500' South of the current proposed facility location. Approval was issued June 1999 (#98229-UP) for the original installation and operation of a 55' tall wireless telecommunications facility consisting of six (6) panel antennas and a 600 square foot lease area. AT&T also had an approved monopole on the same site. The property owner of that facility, PG&E, issued a Lease Termination notice to Sprint effective June 1st, 2016. The reason for the lease termination was due to expansion and redevelopment of the PG&E gas yard where the site was located.

It was subsequently proposed to construct a permanent site close to the maintenance area entrance, but this plan was rejected by Eagle Vines golf club owners due to its proximity to the golf course main entrance. The existing driving range poles were suggested as a possible alternative location. Proposals and drawings and photo-simulations were created to show the Sprint and AT&T wireless facilities occupying separate poles in order to achieve the required antenna heights. This proposed design was informally presented to the county for their input in 2017. The county requested that stealth elements be incorporated into the design beyond painting the antennas and equipment to match the poles. Being unable to adequately stealth the proposed driving range pole design to be 'effectively unnoticeable', the carriers proposed moving off the poles and installing two fully stealth monopine structures with a maximum antenna height of 55' in order to successfully blend in with the existing surrounding tree line height of 25' to 60', as per the survey conducted by Quiet River Land Services Inc. on 2/5/18; in addition to the tree heights contained in the recommendations of county planning report for the original site development showing "oak trees ranging in height from approximately 25 to 40' " and "eucalyptus trees ranging in height from approximately 50 to 75 feet". It was considered to be out of scale and obtrusive to construct a colocation monopole with height of 76', necessary for separation between carriers and to provide adequate coverage height to reach both the Sprint donor microwave site to the south west and the AT&T coverage gap to the east, given that the only location able to satisfy both of the carrier's objectives was at an elevation 10' to 20' higher than the location of the tallest eucalyptus trees, this would effectively mean that the top branches of the monopine would be at least 86' tall relative to the 75' height of the tallest eucalyptus tree further down the ridge near Greenwood road. This would stand above the height of the tallest trees in the vicinity and defeat the County's objective to successfully stealth the facility. The County's Telecommunication Ordinance requires towers to be screened in a manner so as to be 'effectively unnoticeable'. Two shorter monopines spaced on opposite sides of the

driving range with heights of 55' and 60' (top of monopine branches), would blend better into the existing tree line and be more in keeping with the scale and proportion of the existing vegetation; while at the same time achieving the different coverage objectives of both carriers. The visual impact from the golf course, nearby residence and the surrounding roads would also be lessened.

The approval granted by the County (Use Permit #98229-UP) for the original Sprint 55' monopole in 1999, located approximately 500' from its current proposed location noted the following 'Special Information': "The project meets the majority of criteria for being processed administratively as a site plan approval including the fact that it is essentially unnoticeable, with the exception of undergrounding of new utility connections." That previous site which in the words of the County was unnoticeable, was a standard monopole located closer to the roadside. Also, utilities at that previous location were above ground due to underground gas utilities on site. This current proposed site should be even less noticeable being the same height, a monopine stealth design, further back from the main road and with utilities underground. The Initial Study in 1999, concluded "In terms of visual impact, the project site has very limited visibility from adjoining public roadways and properties" – this still holds true today as the topography and tree cover have changed little since that time, and the current proposed location is even further back from the roadside (See attached aerial views of the previous permanent and proposed site locations).

When applying for Federal Aviation Administration approval, it was determined that the proposed monopine at 60' (top of branches) would not be a hazard to aviation¹. Based on their evaluation, marking and lighting would not be necessary for aviation safety and simply requires an e-filed Notice of Actual Construction or Alteration within 5 days after the construction reaches its greatest height. A copy of this report dated October 8th, 2019, is enclosed in the project resubmittal package to Napa County Planning. However, when FAA approval was sought for the 80' crane to install the 60' monopine, a separate determination² found that at this height warning flags, painting and lighting would be necessary. Please find a copy of this study regarding the 80' crane, attached to this document.

Therefore, in conclusion, it can be assumed that a collocated joint 76' minimum height monopine with branches extended would most likely require, painting, (flags) and lighting, thus defeating the stealth nature of such a facility.

¹ *Aeronautical Study No. 2019-AWP-9762-OE, Issue date: October 8, 2019*

² *Aeronautical Study No. 2019-AWP-9763-OE, Issue date: October 9, 2019*



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2019-AWP-9763-OE

Issued Date: 09/10/2019

Christopher J Denney
Sprint Nextel
3433 Romana Avenue
Sacramento, CA 95826

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane SF25XC335N18B Hwy 12 South Kelly crane
Location:	American Canyon, CA
Latitude:	38-13-14.14N NAD 83
Longitude:	122-15-10.22W
Heights:	148 feet site elevation (SE) 80 feet above ground level (AGL) 228 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does exceed obstruction standards but would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (424) 405-7643, or karen.mcdonald@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-AWP-9763-OE

Signature Control No: 415124308-416927108

(TMP)

Karen McDonald
Specialist

Additional Condition(s) or Information for ASN 2019-AWP-9763-OE

Proposal: To construct and/or operate a(n) Crane to a height of 80 feet above ground level, 228 feet above mean sea level.

Location: The structure will be located 1.39 nautical miles east of APC Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Section 77.17 (a) (5) a height that affects an Airport Surface by penetrating:

Section 77.19 (a) Horizontal Surface by 43 feet as applied to APC.

Preliminary FAA study indicates that the above mentioned structure would:

have no effect on any existing or proposed arrival, departure, or en route instrument/visual flight rules (IFR/VFR) minimum flight altitudes.

not exceed traffic pattern airspace

have no physical or electromagnetic effect on the operation of air navigation and communications facilities.

have no effect on any airspace and routes used by the military.

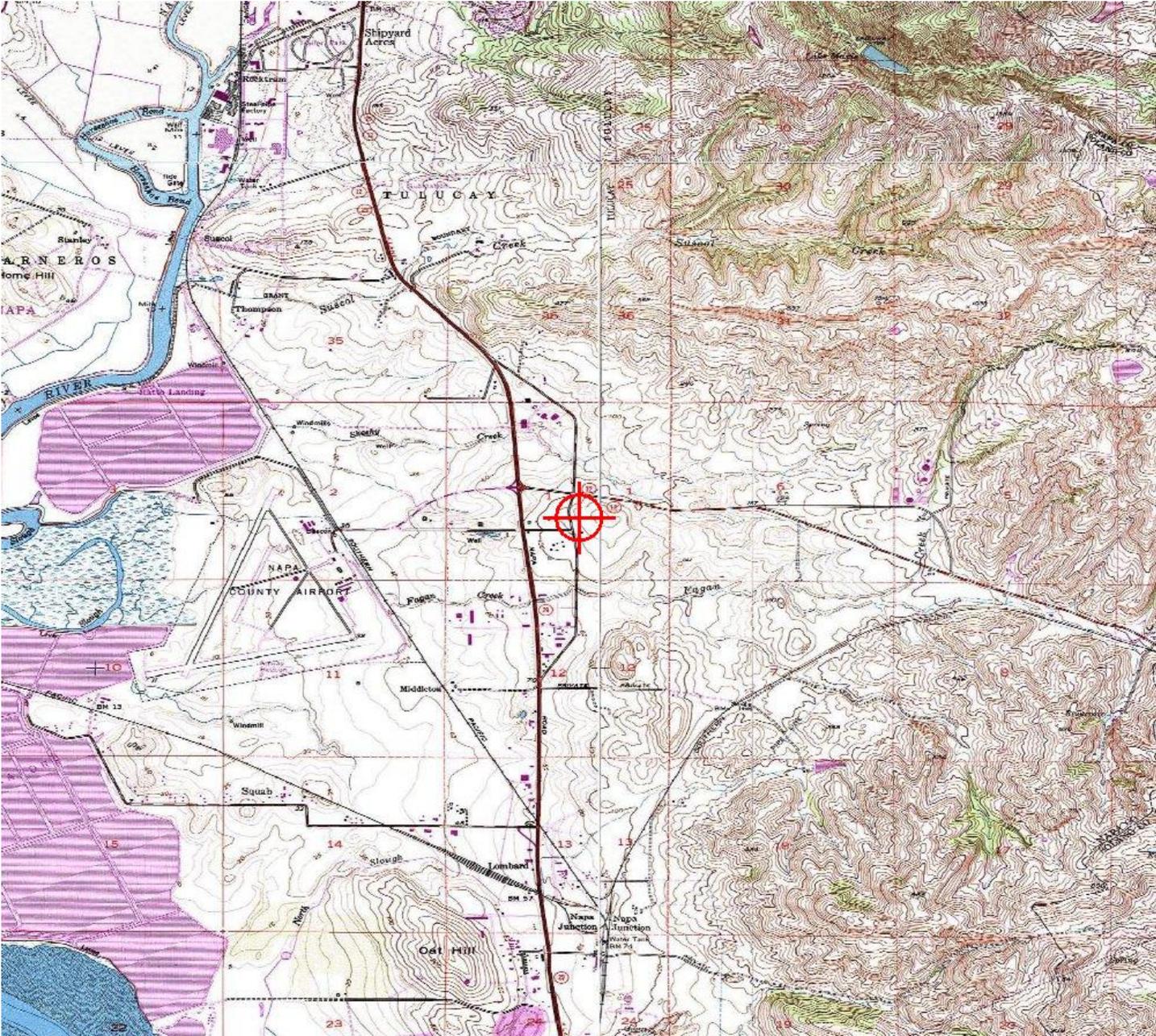
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, flags/red lights - Chapters 3(Marked),4,5(Red),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

This determination expires on 03/10/2021 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





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Project: Proposed 55' Sprint Monopine at 580 South Kelly Rd., American Canyon

Alternative Site Analysis

Sprint had a permanent antenna facility located approximately 125' North of the current temporary facility location. Approval was issued June 1999 (#98229-UP) for the original installation and operation of a 55' tall wireless telecommunications facility consisting of six (6) panel antennas and a 600 square foot lease area. The property owner of that facility, PG&E, issued a Lease Termination notice to Sprint effective June 1st, 2016. The reason for the lease termination was due to expansion and redevelopment of the PG&E gas yard where the site was located.

The current proposed facility consists of 55' monopine located approximately 500' to the northeast of the previous facility. The antenna mast matches the height of the previous Sprint facility which also had an overall height of 55'. The installation includes (3) panel antennas, (1) 12" diameter microwave dish, and (1) FAA tower light. Continuing coverage at this location is vital to the Sprint network and local emergency services as this site provides coverage to the intersection of Hwy. 12 & Hwy 29, and the surrounding areas. This site would adhere to Napa County ordinances contained in Chapter 18.119 - Telecommunication facilities, and the county general plan.

Other sites were studied included collocation on an existing monopole at Camino Oruga, but this was rejected after an RF engineer study concluded the low height and position of the site would be insufficient for Sprint to provide the necessary coverage for both Highway 12 and Highway 29. Other commercial sites in the immediate vicinity were considered, such as 185 Greenwood Drive, American Canyon but property owners did not agree to host a wireless facility.

Sites further west were not considered due to the limitations imposed by the proximity of the airport. See attached map for the alternative site locations mentioned above.



Precision Site Development
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Alternative Site Location Map

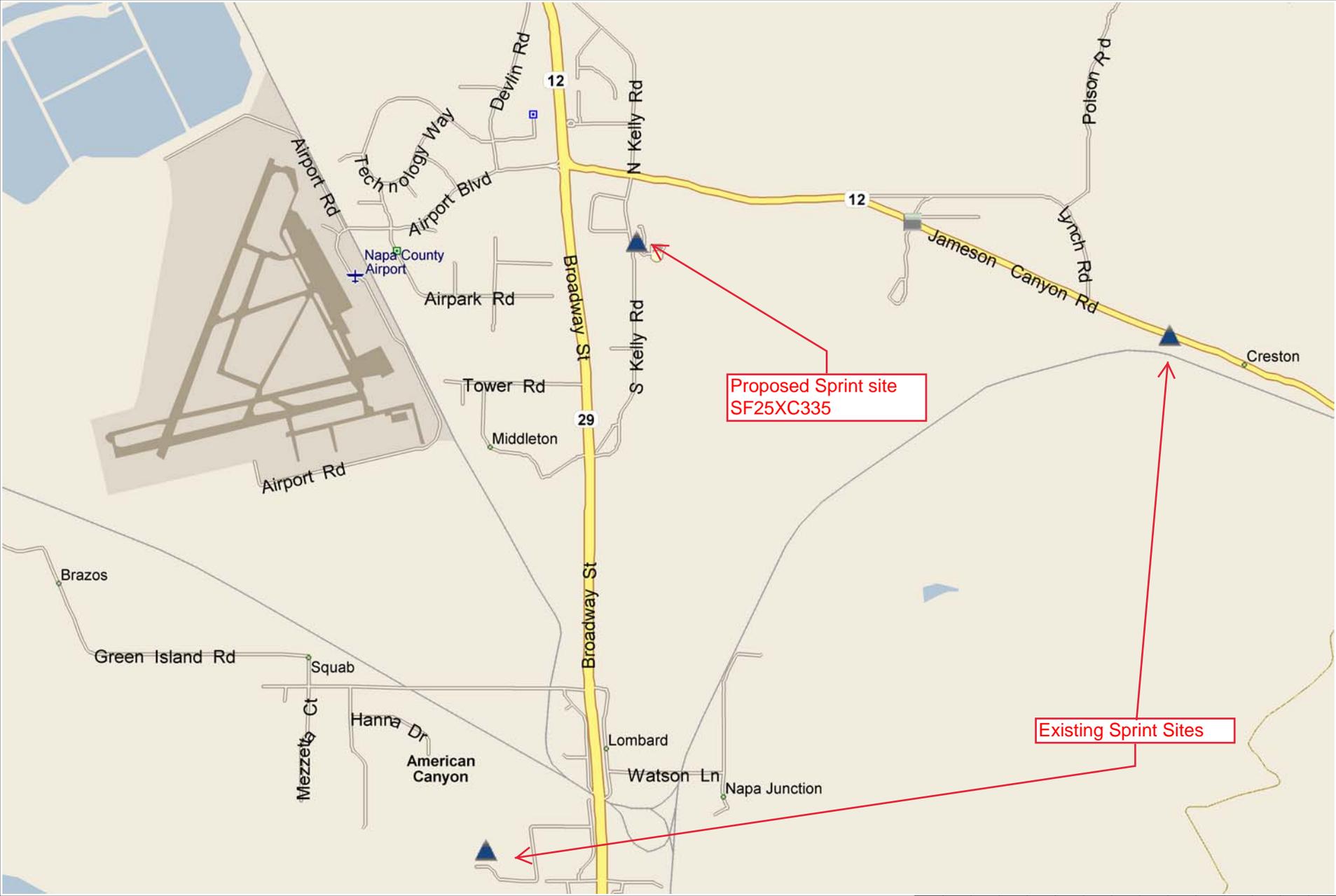
SF25XC335

P19-00337-UP: Eagle Vines Sprint Telecommunication Facility

580 South Kelly Road; APN 057-060-007



Map of existing/ proposed Sprint network sites



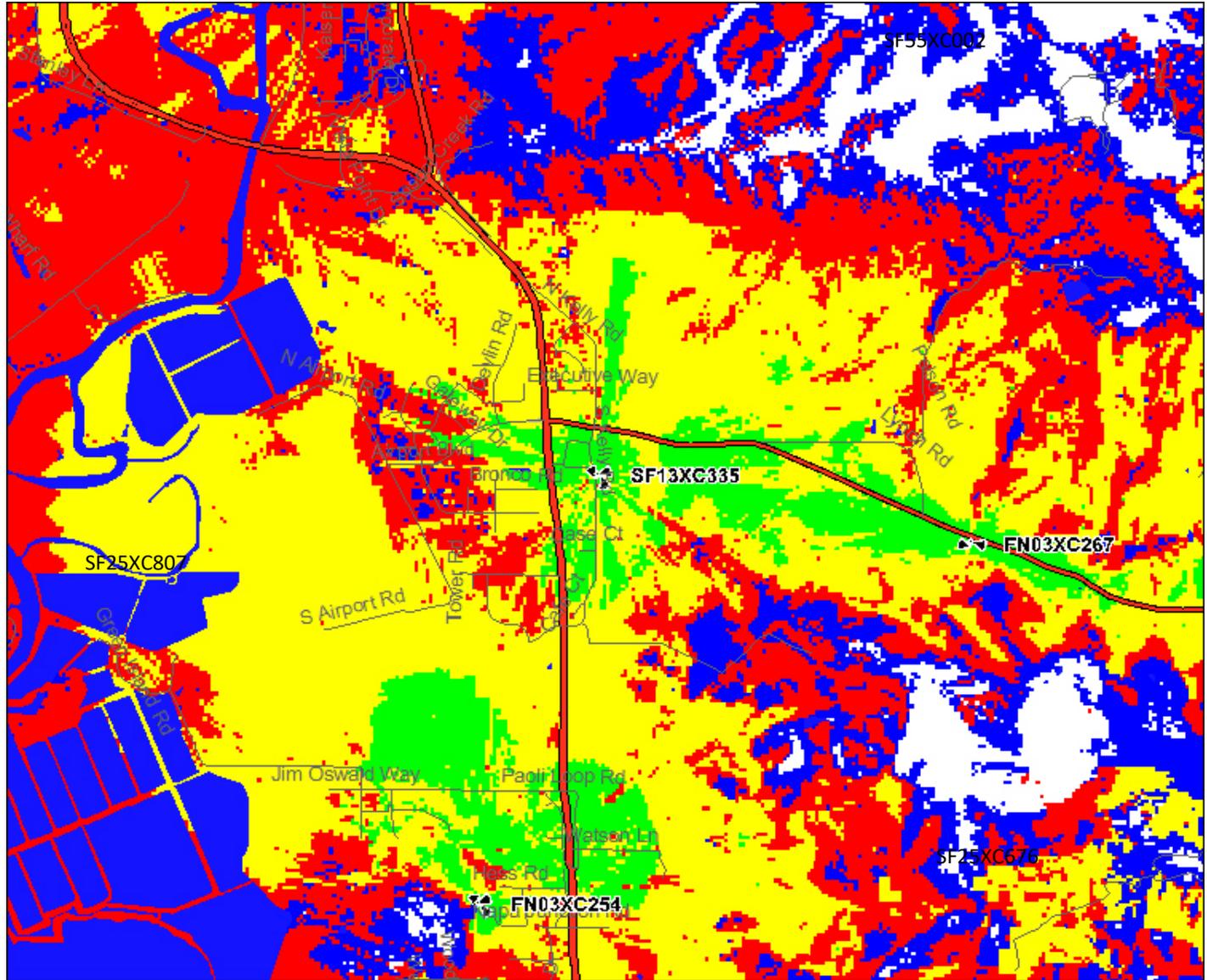
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SF25XC335 Cellsite Relocation

November 28, 2018



SF99XT336 On Air

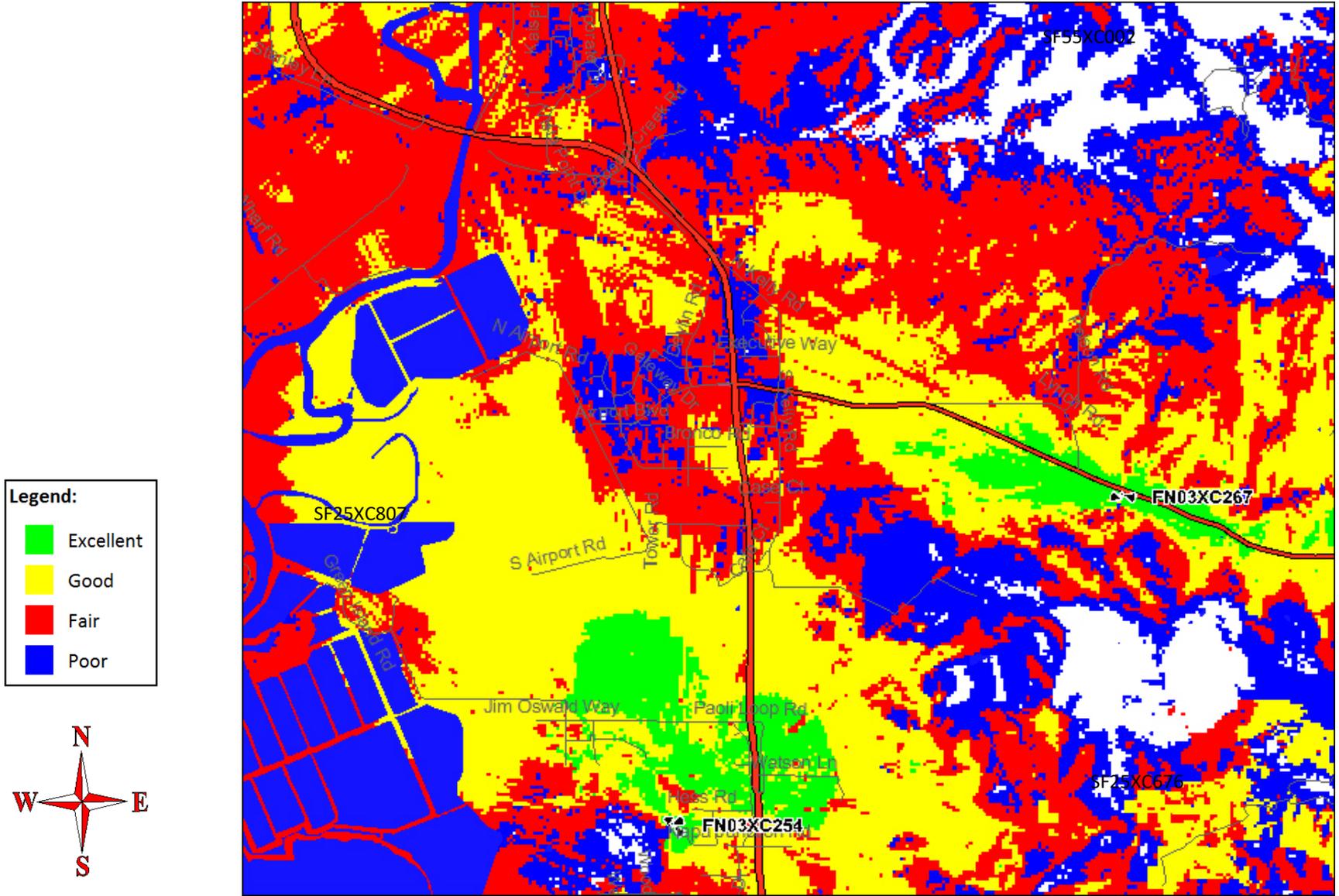


Legend:

- Excellent
- Good
- Fair
- Poor



SF99XT336 Off Air



SF25XC335 On Air

