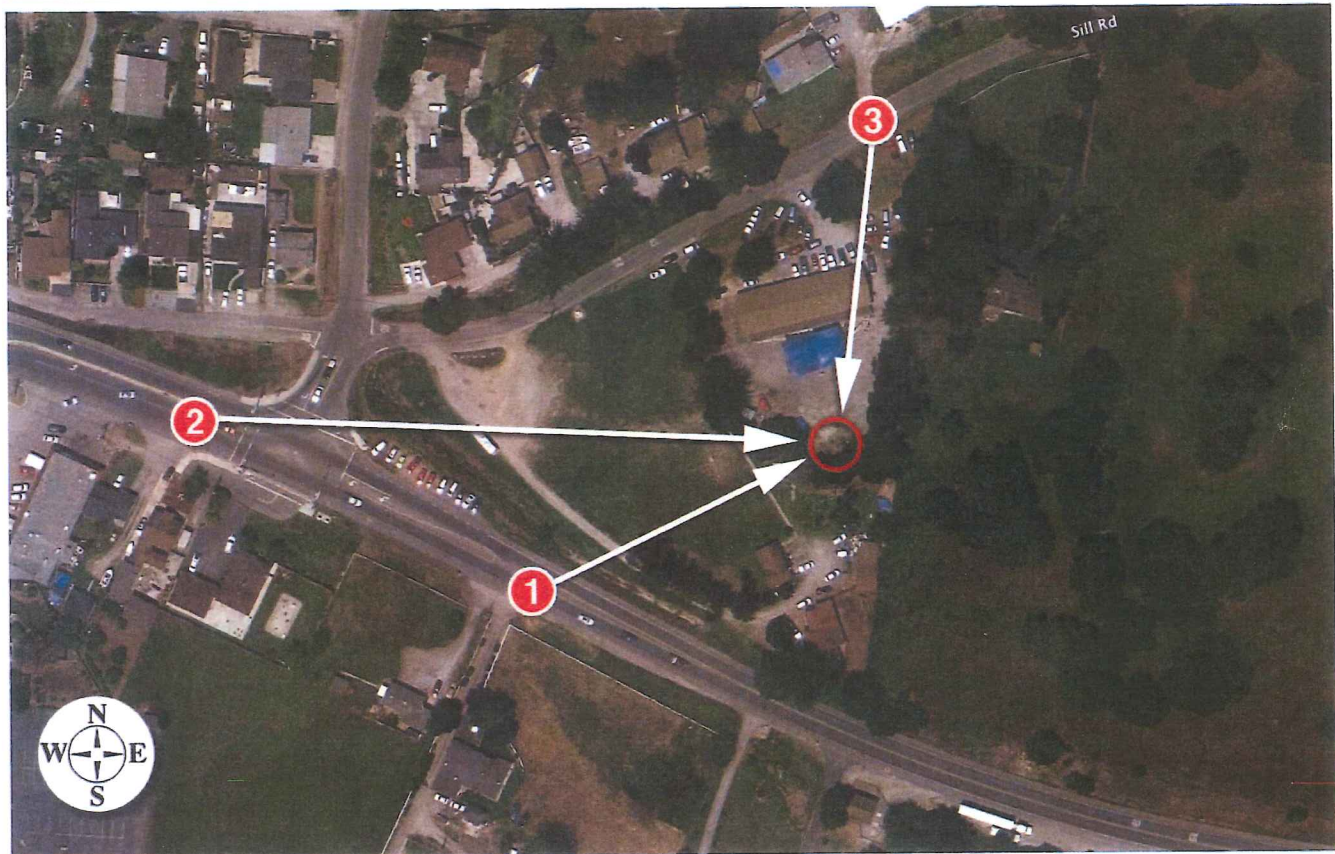
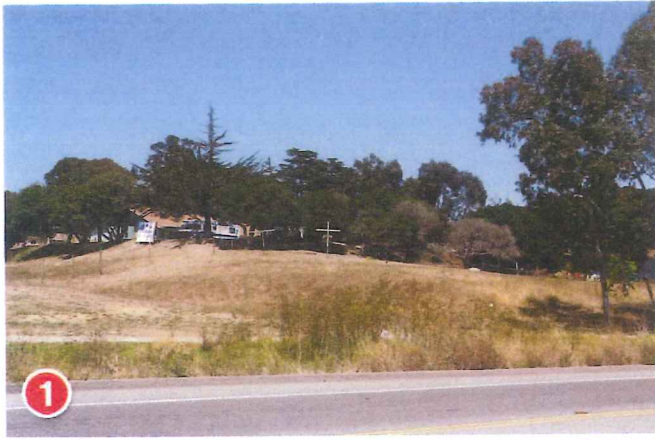


Attachment D  
Technical Report:  
Photo Simulations  
(Monopine and Plain Antenna)  
And  
Alternative Site Analysis

Central Coast Baptist Association  
(Verizon Wireless)  
PLN120492





Existing



Proposed



Las Lomas and Hall Road

Site # 249640

Looking Northeast from Hall Road

7/17/12

45 Sill Road  
Las Lomas, CA 95076

View #1

Applied Imagination 510 914-0500



Existing



Proposed

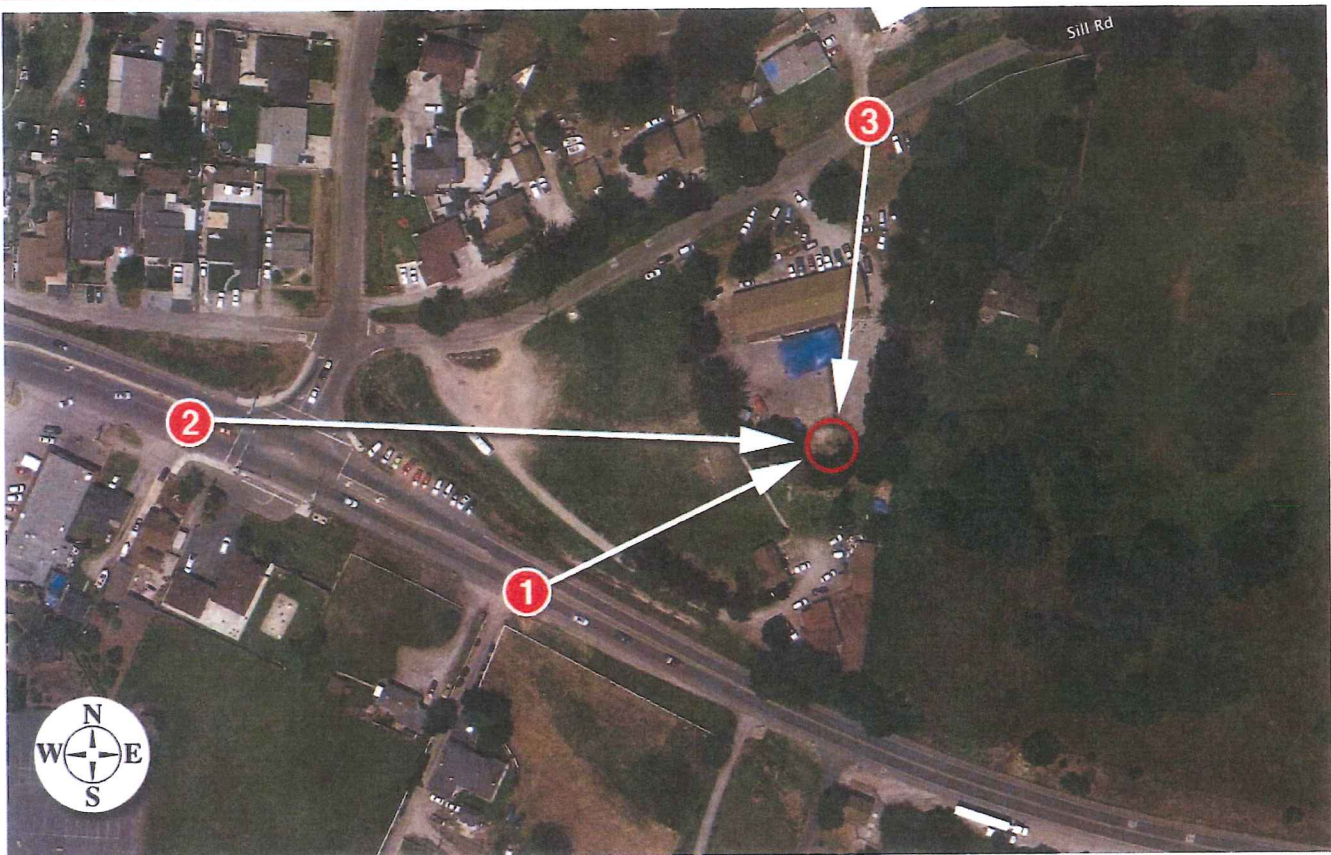
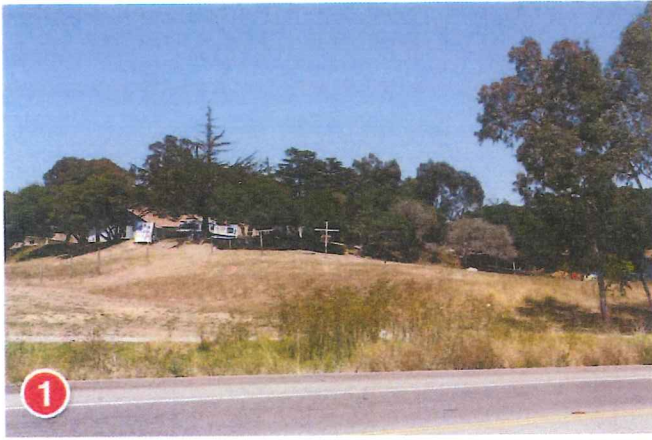


Existing



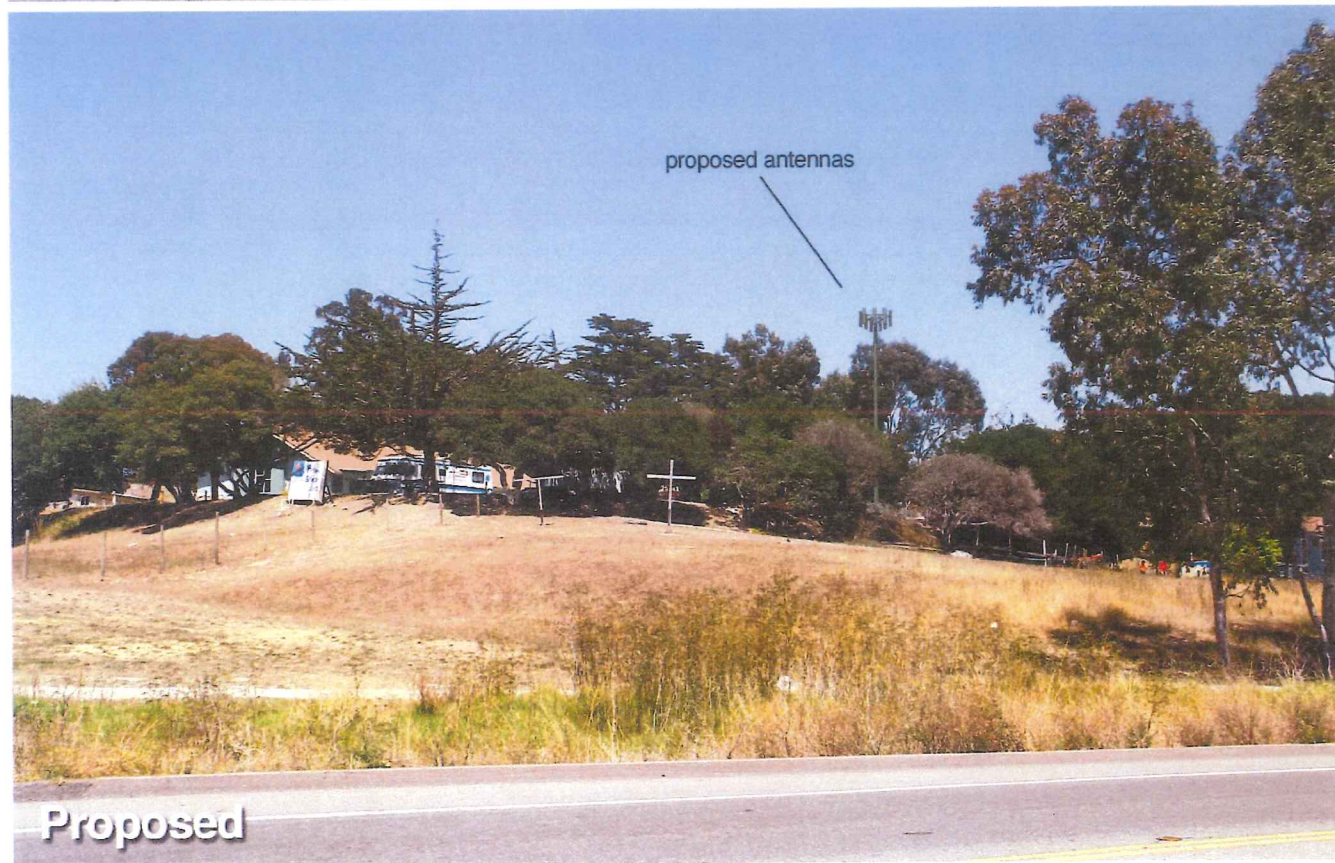
proposed treepole

Proposed





Existing



Proposed







Existing



proposed antennas

Proposed



Las Lomas and Hall Road

Site # 249640

Looking South from Sill Road

8/21/12

45 Sill Road  
Las Lomas, CA 95076

View #3

Applied Imagination 510 914-0500

# Alternative Analysis

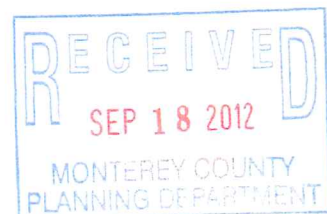


## Verizon Wireless Telecommunications Facility "Las Lomas and Hall Rd."

Monopine Telecommunications Tower  
45 Sill Rd., Las Lomas, CA 95076

Monterey County APN: 119-153-002

Summary of Site Selection and Technical Evidence  
Conducted by On Air, LLC (agents for Verizon Wireless)



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## **I. Coverage Objective**

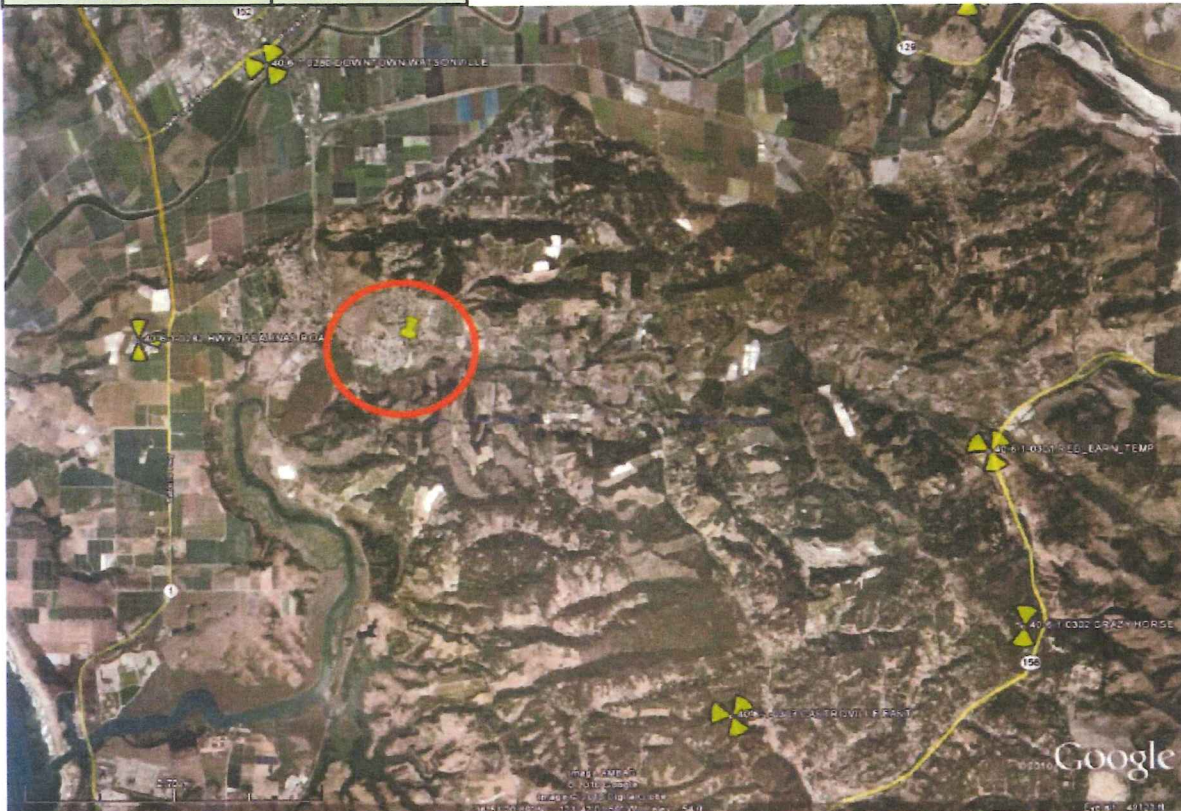
In October of 2010 On Air, LLC was contracted by Verizon Wireless to find an appropriate site location that would provide coverage to the town of Las Lomas, the surrounding neighborhoods, and Hall Rd. aka County Rd. G12, as it passes through town.

This area is a part of Verizon Wireless' advertised coverage area yet has very poor service coverage. Las Lomas is a historically underserved community by wireless communications providers. Verizon Wireless has received numerous "trouble tickets" and customer complaints from residents in the area prompting them to initiate a new wireless facility. Coverage in the area is primarily outdoor service only with very little in-building penetration.

On Air investigated several other potential site locations including co-locations. After an extensive search of the area for co-locatable towers it was determined that a new tower site must be developed in order to adequately provide service to Verizon Wireless customers in the area. The proposed site beat meets the coverage objectives while minimizing the impact to the community. Additionally, a new tower site will provide co-location opportunities for other wireless carriers who also desire to provide their customers with wireless services in the same area.

## II. Published Search Ring Information

Lat (Decimal NAD 83)	Long (Decimal NAD 83)
36.865166	-121.732389



### **III. Significant Service Gap Summary**

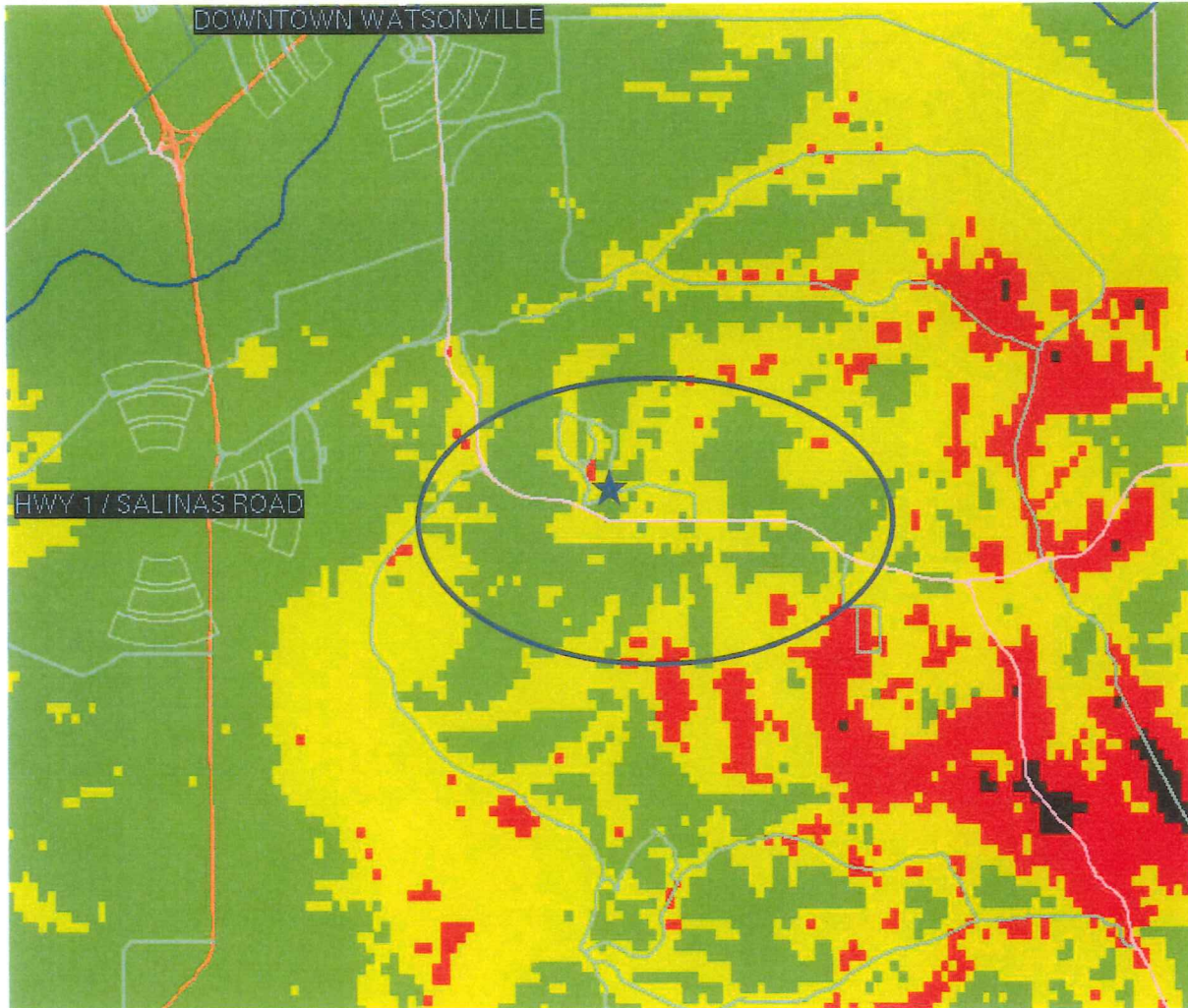
Verizon Wireless has identified a significant gap in both coverage and capacity in the Las Lomas area. Hall Road is a well-travelled connector from Hwy 1 to the communities to the west such as Royal Oaks and beyond. These roadways are also lack adequate coverage. Consistent wireless communications service on major roadways is a primary objective of Verizon Wireless. Current coverage in the area is provided by the following sites:

Hwy 1 and Salinas Rd. 2.35 miles to the west.  
The downtown Watsonville site 3 miles to the north.  
The Red Barn site 5.4 miles to the east.  
The Castroville East site 4.75 miles to the southeast.

These sites are too far away from Las Lomas to provide adequate coverage to the residents there. In addition, since any coverage in the area comes from the outlying facilities, the result is that call volume in the Las Lomas area tends to overload the surrounding sites thereby diminishing their service potential as well.

The proposed site will provide customers in the Las Lomas community strong outdoor and in-building coverage including voice, data, and streaming services. Cellular coverage along roadways enhances public safety by reducing emergency services. Increased service in the rural areas outside of Las Lomas will also enhance public safety.

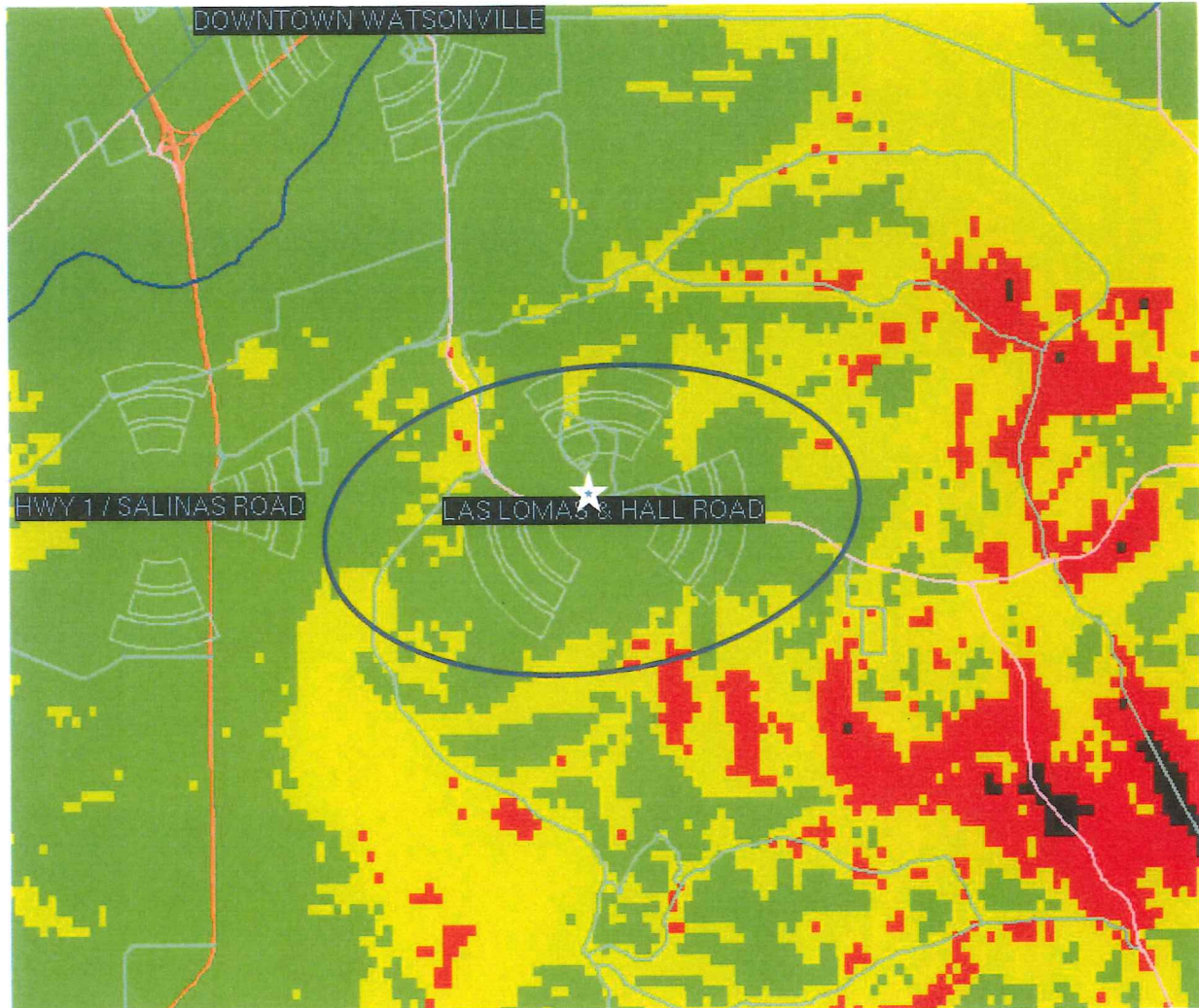
## Gap in Service



In the depiction above:

- \* The star indicates the proposed site location.
- \* The oval is the coverage objective.
- \* The Green areas indicate in-building service.
- \* The Yellow indicates weak outdoor coverage only.
- \* The Red indicates no coverage.

## Proposed Coverage



In the depiction above:

- \* The star indicates the proposed site location.
- \* The oval is the newly covered area.
- \* The Green areas indicate in-building service.
- \* The Yellow indicates weak outdoor coverage only.
- \* The Red indicates no coverage.

What the above illustration does not show is the resultant “off-loading” of the surrounding four sites. A site’s coverage area is determined by the traffic running through that site. In other words, a site in a densely populated area with a lot of call volume will cover a smaller area than the same site in an area with lower call volume.



#### **IV. Site Design**

The proposed site will consist of a co-locatable 60' monopine, an 11'6"x16' equipment shelter, and a diesel powered stand-by generator within a 20'x40' lease area. Nine panel antennas will be mounted at the 55' level.

A stealth monopine was chosen to lessen the visual impact of the site and to best comply with the Development Standards contained in the County's ordinance. The position of the pole itself was chosen as the least visually obtrusive location with a stand of eucalyptus trees adjacent to the pole. The site will not significantly impact the public's views to the ocean. Additionally, by virtue of its location, the ground equipment will be screened from public view to the maximum extent feasible.

#### **V. Benefits to the Community**

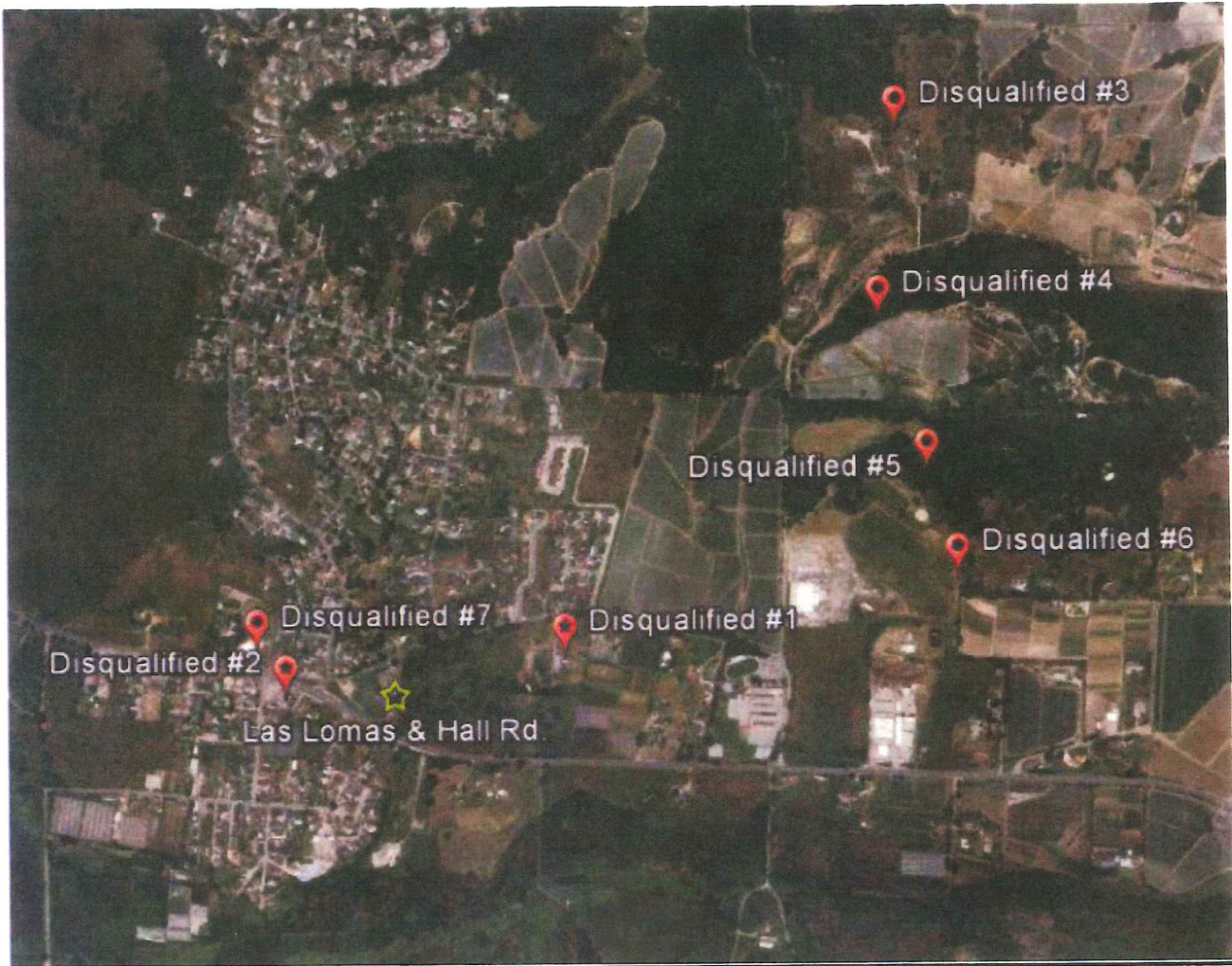
1. Most emergency communications are initiated on hand held devices. The proposed site will provide emergency wireless communication services to the residents of Las Lomas and the surrounding community as well as travelers along the covered roadways.
2. The proposed stand-by generator will keep the site operational during a power outage enhancing public safety by maintaining emergency communications in the event of natural disaster or other serious emergencies.
3. Provide the unincorporated areas of Las Lomas and its local business owners and their customers with reliable in-building voice, high-speed data, and internet service capabilities so that they can better conduct their business.
4. The new tower will allow for co-location opportunities that may attract other wireless carriers to this location providing enhanced coverage from multiple carriers.

#### **VI. Methodology**

On Air and Verizon Wireless always looks to the local zoning codes and general plans to identify the sites that will have the least impact to the community while still providing the wireless communication services that the public desires. Visual impact is a primary concern, and Verizon Wireless always cooperates with the local jurisdiction and the community to mitigate a site's impact through stelling techniques and careful site selection. In addition to these considerations a viable site candidate must have a willing land owner, feasibility of construction, road access, and available telephone and electrical utilities.

In selecting site candidates On Air first looked to possible co-location opportunities that would meet Verizon Wireless' coverage objective. In this case the only co-location opportunity was disqualified due to its inability to meet the coverage objective. Turning the search to new build site On Air looked for locations with the least amount of impact to the community. Some candidates were discarded due to lack of meeting the coverage objective and others were disqualified due to lack of interest on the part of the land owners to lease their land. The following is a map of disqualified candidates and a description of why each candidate was eventually disqualified.

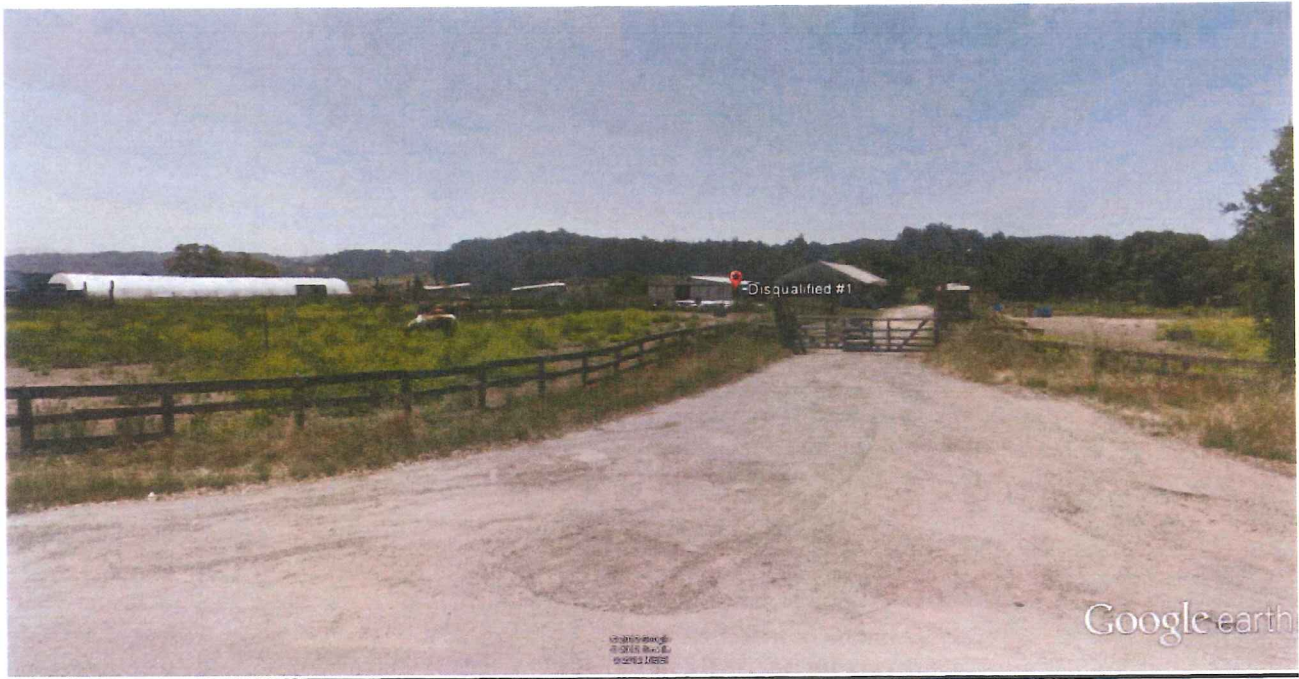
## Map of Disqualified Sites



These candidates were inspected and analyzed but found unacceptable:

1. 100 Sill Road, Las Lomas.
2. Las Lomas Market, 182 Hall Road, Las Lomas.
3. PGE Tower at  $36^{\circ} 52' 35.18''$  N,  $121^{\circ} 43' 12.78''$  W
4. PGE Tower at  $36^{\circ} 52' 22.31''$  N,  $121^{\circ} 43' 13.61''$  W
5. PGE Tower at  $36^{\circ} 52' 11.90''$  N,  $121^{\circ} 43' 08.99''$  W
6. PGE Tower at  $36^{\circ} 52' 04.51''$  N,  $121^{\circ} 43' 06.09''$  W
7. The parcel across from the Las Lomas Market which would not work for Zoning.

## Disqualified Candidate #1



### 100 Sill Rd. Watsonville

This was to be a new treepole with equipment on the ground. The LL was pursued for 6 months with no response. Additionally, because of the lack of pine trees in the parcel sufficient screening would be difficult. A monopine installation would stand out as out of place.

## **Disqualified Candidate #2**



### **182 Sill Rd., Las Lomas**

This site was to be a new treepole with equipment on the ground. The LL was not interested. Additionally because of the lack of natural screening it was determined that a site at this location would be more visually intrusive than the one being submitted.

### Disqualified Candidate #3



### PGE Tower at 36° 52' 35.18" N, 121° 43' 12.78" W

This would have been a top-hat structure on the top of the PG&E lattice tower with radio equipment on the ground and within the PG&E easement. The site was disqualified by the Radio Engineer due to its distance from the coverage objective and a hill just west of the tower obstructed the signal from reaching the northern portion of the town of Las Lomas as well as a significant part of County Road G 12.

## Disqualified Candidate #4



PGE Tower at 36° 52' 22.31" N, 121° 43' 13.61" W

This would have been a top-hat structure on the top of the PG&E lattice tower with radio equipment on the ground and within the PG&E easement. The site was disqualified by the Radio Engineer due to its low Above Mean Sea Level (AMSL) elevation. The signal was obstructed by the surrounding terrain from reaching the majority of the town of Las Lomas.

## Disqualified Candidates #5 and #6



PGE Tower at 36° 52' 11.90" N, 121° 43' 08.99" W  
and  
PGE Tower at 36° 52' 04.51" N, 121° 43' 06.09" W

This would have been a top-hat structure on the top of the PG&E lattice tower with radio equipment on the ground and within the PG&E easement. These sites are .75 miles outside of the published search ring. Both were disqualified by the Radio Engineer as being too far outside the search ring. Additionally the access to each of these would be difficult because of the terrain.

**Disqualified Candidate #7**



**121 Hall Rd.**

Planning did not prefer this candidate due to its high visibility from the roadways and the community.



## **VII. Conclusion:**

The tower was designed to accommodate the antennas of at least two additional carriers as is desired by the County. Towers are structurally designed for co-location and take into account the antenna centerlines that are expected to be necessary for future co-locators to service their desired coverage objective. Each prospective co-locating carrier will need to evaluate their antenna centerline requirements to determine if the available tower space will meet their needs.

The location of the proposed site is almost dead center of the search ring and is positioned on a slight rise in terrain from Hall Rd. Because of this all that is required to provide the necessary coverage for Verizon Wireless a relatively low height of 60 feet to the top of the branches of the proposed monopine tower is.

Adjacent to the monopine is a stand of eucalyptus trees that are about the same height as the proposed monopine. These trees provide a visual back drop of more trees so that from the most publicly viewable locations along Hall Rd. the new monopine will be less visible than if the backdrop behind the monopine was only sky. This is one of the most desirable conditions for effective screening. Views 1 and 2 of the included photo simulations show how this backdrop serves to hide the monopine in front.

It is expected that the ground equipment will be mostly hidden from view as well. From Sill Rd. the views of the ground equipment and the base of the tower are blocked by the church building as can be seen in View 3 of the photosims. Oaks trees just below the site are between the site and Hall Road effectively screening the view of the ground equipment and the base of the tower from that area as well.

This facility is believed to have the least impact to the community possible while offering future opportunity for co-location. On Air and Verizon Wireless are confident that there are no less obtrusive alternatives existing that would fulfill all of the objectives mentioned in this report.

Once operational the site will provide the convenience and safety of reliable voice, data, and internet services for the benefit of the community. Public safety will be enhanced and these services will stay operational during extended power outages. We are confident that the benefits to the community far outweigh the inconvenience of construction and the slight visual impact of the site.

Thank you for your consideration.