

**CITY OF DANA POINT  
PLANNING COMMISSION  
AGENDA REPORT**

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**DATE:** FEBRUARY 22, 2016

**TO:** DANA POINT PLANNING COMMISSION

**FROM:** COMMUNITY DEVELOPMENT DEPARTMENT  
URSULA LUNA-REYNOSA, DIRECTOR  
EVAN LANGAN, AICP, ASSOCIATE PLANNER

**SUBJECT:** ANTENNA USE PERMIT AUP15-0002 TO ALLOW THE INSTALLATION OF A COMMERCIAL WIRELESS TELECOMMUNICATION ANTENNA FACILITY TO THE EXTERIOR OF AN EXISTING CUPOLA AT THE ST. REGIS RESORT LOCATED AT 1 MONARCH BEACH RESORT

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**RECOMMENDATION:** That the Planning Commission adopt the attached resolution approving Antenna Use Permit Application AUP15-0002.

**APPLICANT/OWNER:** Monroe MBR, LLC

**OWNER'S AGENT:** Jacobs Engineering Group on behalf of Verizon Wireless

**REQUEST:** Approval of an Antenna Use Permit to allow the installation of 16 "Commercial Wireless Telecommunication Antennas" (cellular antennas) to the exterior of an existing cupola located at the St. Regis Resort.

**LOCATION:** 1 Monarch Beach Resort  
Assessor Parcel Number (APN): 672-621-01

**NOTICE:** The item was continued from the Planning Commission's regular meeting of February 8, 2016 and so no noticing is required.

**ENVIRONMENTAL:** Pursuant to the California Environmental Quality Act (CEQA), the project is Categorically Exempt per Section 15301 (Class 1 – Existing Facilities) in that it proposes nominal improvements to an existing structure.

**ISSUES:**

- Project consistency with the Dana Point General Plan, Zoning Code (DPZC) and Monarch Beach Resort Specific Plan (MBRSP).

- Project satisfaction with all findings required pursuant to the DPZC for approval of an Antenna Use Permit (AUP).
- Project compatibility with and enhancement of the site and surrounding neighborhood.

**BACKGROUND:** The subject project was originally scheduled for a hearing by the Planning Commission on February 8, 2016. At the request of the Applicant, the item was continued to the Commission's regular meeting of February 22, 2016 to allow time for review of the project's draft conditions of approval. There have not been any changes in terms of design or aesthetic features, therefore the plans contained in the February 8, 2016 staff report are still accurate. There have been some changes to the Conditions of approval, contained within the draft attached resolution (Action Document 1).

**DISCUSSION:** In order to facilitate the Planning Commission's review of the changes to the Conditions of Approval, a redline version of the draft resolution is attached as Supporting Document 2. Also, for the Planning Commission's reference, the February 8, 2016 staff report is attached as Supporting Document 3. The description of the project, plans, code analysis, etc. all remain the same and are outlined in the February 8, 2016 staff report. The Radio Frequency Report, attached as Supporting Document 4, and the Project Propagation Maps, attached as Supporting Document 5, were not included as supporting documents to the February 8, 2016 staff report.

The staff analysis to support the recommended action is all contained in the February 8, 2016 staff report and is hereby incorporated into this staff report by this reference.

The subject project has been found to comply with standards and location requirements enumerated in Section 9.07.020 of the DPZC as well as those of the MBRSP and staff's recommended findings to approve the AUP request are included in the project's draft resolution (Attachment 1).

**CORRESPONDENCE:** A single item of correspondence has been received for the project and is included herein as Attachment 6 (Public Correspondence).

**CONCLUSION:** Staff finds that the subject project is consistent with the policies and provisions of the City of Dana Point General Plan, Zoning Ordinance and the Monarch Beach Resort Specific Plan. As the project has been found to comply with all standards of development, staff recommends the Planning Commission adopt the attached resolution, approving AUP15-0002 subject to findings and conditions of approval.

  
Evan Langan, AICP  
Associate Planner

  
Ursula Luna-Reynosa, Director  
Community Development Department

**ATTACHMENTS:**

**Action Documents**

1. Draft Planning Commission Resolution No. 16-02-22-xx

**Supporting Documents**

2. Planning Commission Resolution No. 16-02-22-xx in redline format to show difference between February 8, 2016 version of the draft resolution and the one being considered by the Planning Commission with this action.
3. February 8, 2016 Planning Commission Staff Report
4. Radio Frequency Pre-Installation FCC Compliance Assessment
5. Project Propagation Maps
6. Public Correspondence



**RESOLUTION NO. 16-02-22-xx**

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF DANA POINT, CALIFORNIA, APPROVING ANTENNA USE PERMIT AUP15-0002 TO ALLOW THE INSTALLATION OF A COMMERCIAL WIRELESS TELECOMMUNICATION ANTENNA FACILITY TO THE EXTERIOR OF AN EXISTING CUPOLA AT THE ST. REGIS RESORT LOCATED AT 1 MONARCH BEACH RESORT**

The Planning Commission of the City of Dana Point does hereby resolve as follows:

WHEREAS, Monroe MBR, LLC (the "Applicant") is the owner of real property commonly referred to as 1 Monarch Beach Resort (APN 672-621-01) (the "Property"); and

WHEREAS, the Applicant filed a verified application for an Antenna Use Permit to allow the installation of 16 Commercial Wireless Telecommunication Antennas to the exterior of an existing cupola located at the Property; and

WHEREAS, said verified application constitutes a request as provided by Title 9 of the Dana Point Zoning Code; and

WHEREAS, pursuant to the California Environmental Quality Act ("CEQA"), the project is Categorically Exempt per Section 15301 (Class 1 – Existing Facilities) in that it proposes nominal improvements to an existing structure; and

WHEREAS, the Planning Commission did, on the 8<sup>th</sup> day of February, 2016 hold a duly noticed public hearing as prescribed by law to consider said requests; and

WHEREAS, at said public hearing, upon considering all testimony and arguments, if any, of all persons desiring to be heard, said Commission considered all factors relating to Antenna Use Permit AUP15-0002; and

WHEREAS, the Planning Commission did continue the item to its regularly scheduled meeting of February 22, 2016; and

WHEREAS, at said public hearing, upon considering all testimony and arguments, if any, of all persons desiring to be heard, said Commission considered all factors relating to Antenna Use Permit AUP15-0002; and

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Planning Commission of the City of Dana Point as follows;

- A. The above recitations are true and correct and incorporated herein.
- B. Based on the evidence presented at the public hearing, the Planning Commission adopts the following findings and approves AUP15-0002, subject to conditions:

Findings:

Antenna Use Permit AUP15-0002

1. That the proposed antenna facility will not create any significant or meaningful blockage to public views **in that existing public views through the subject property as viewed from public places would not be impacted by the addition of the facility.**
2. That the proposed antenna facility will be an enhancement to the City due to its ability to provide additional communication capabilities **in that propagation maps have been submitted and are on file with the City and which illustrate that the proposed antennas would provide improved cellular and data transfer services for private, commercial and emergency users.**
3. That the proposed antenna facility will be aesthetically integrated into its surrounding environment **in that all antennas will be fully screened within new enclosures mounted to the exterior of an existing cupola, designed, surfaced and painted to complement the structure and broader hotel. The proposed cellular antennas will not visible to the public and/or from public rights-of-way; all accessory/supporting equipment will be located at-grade and similarly screened from public view by existing development and landscaping.**
4. That the proposed antenna facility will not interfere with the reception or transmission of other wireless telecommunication signals within the surrounding community **in that documentation (specifically a radio frequency report) prepared by a licensed engineer has been submitted to the City and which demonstrates that proposed facilities will comply with Federal Communication Commission (FCC) standards as relate both to emissions as well as non-interference with other wireless telecommunication signals and facilities.**
5. That the proposed antenna facility will operate in compliance with all applicable Federal safety regulations for such facilities **in that a radio frequency (RF) report has been received by the City and stipulating compliance of proposed antennas with FCC and other applicable standards. After installation and prior to final inspection and sign-off of the project by City staff, installed antennas will be tested and verified once more as to compliance with these same standards.**

6. That the public need for the use of the antenna facility has been documented **in that evidence in the record illustrates a marked improvement in cellular coverage will occur with placement of the subject equipment – increasing or improving service to private, commercial and/or emergency cellular users.**

Conditions:

**A. General:**

1. Approval of this application permits the Approval of an Antenna Use Permit to allow the installation of 16 "Commercial Wireless Telecommunication Antennas" (cellular antennas) to the exterior of an existing cupola at located at 1 Monarch Beach Resort (the St. Regis Resort). Subsequent submittals for this project shall be in substantial compliance with the plans presented to the Planning Commission and in compliance with the applicable provisions of the Dana Point General Plan and Municipal Code.
2. Approval of this application is valid for a period of 24 months (two years) from the date of determination. If the development approved by this action is not established, or a building permit for the project is not issued within such period of time, the approval shall expire and shall thereafter be null and void.
3. The application is approved as a plan for the location and design of the uses, structures, features, and materials, shown on the approved plans. Any relocation, alteration, or addition to any use, structure, feature, or material, not specifically approved by this application, will nullify this approving action. If any changes are proposed regarding the location or alteration to the appearance or use of any structure, an amendment to this permit shall be submitted for approval by the Director of Community Development. If the Director of Community Development determines that the proposed change complies with the provisions and the spirit and intent of this approval action, and that the action would have been the same for the amendment as for the approved plot plan, he may approve the amendment without requiring a new public hearing.
4. Failure to abide by and faithfully comply with any and all conditions attached to the granting of this permit shall constitute grounds for revocation of said permit.

5. The applicant or any successor-in-interest shall defend, indemnify, and hold harmless the City of Dana Point ("CITY"), its agents, officers, or employees from any claim, action, or proceeding against the CITY, its agents, officers, or employees to attack, set aside, void, or annul an approval or any other action of the CITY, its advisory agencies, appeal boards, or legislative body concerning the project. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant or any successor-in-interest shall further protect, defend, indemnify and hold harmless the City, its officers, employees, and agents from any and all claims, actions, or proceedings against the City, its officers, employees, or agents arising out of or resulting from the negligence of the applicant or the applicant's agents, employees, or contractors. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant shall also reimburse the City for City Attorney fees and costs associated with the review of the proposed project and any other related documentation.

6. The applicant and applicant's successors in interest shall be fully responsible for knowing and complying with all conditions of approval, including making known the conditions to City staff for future governmental permits or actions on the project site.
7. The applicant and applicant's successors in interest shall be responsible for payment of all applicable fees along with reimbursement for all City expense in ensuring compliance with these conditions.
8. The construction site shall be posted with signage indicating that construction may not commence before 7:00 AM and must cease by 8:00 PM, Monday through Saturday, with no construction activity permitted on Sundays or Federal holidays.
9. The applicant, property owner or successor in interest shall submit a Waste Management Plan to the City's C&D Official per the Dana Point Municipal Code. A deposit will be required upon approval of the Waste Management Plan to ensure compliance.

10. During construction, the project shall implement and maintain all minimum construction Best Management Practices (BMPs), assigned by priority level and/or as required by the Director of Public Works or designee. Applicable minimum BMPs for the project's priority as determined by the Urban Runoff Threat Assessment Form may be found in the City's Construction Urban Runoff BMP Requirements Manuals.
11. During the construction phase, all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, managed, secured and disposed to prevent transport into the streets, gutters, storm drains, creeks and/or coastal waters by wind, rain, tracking, tidal erosion or dispersion.
12. At all times, other than during a 24-hour "cure period," the applicant shall not prevent the City of Dana Point from having adequate spectrum capacity on the City's 800 MHz radio frequency.
13. The applicant shall provide a 24-hour phone number to which interference problems may be reported, and will resolve all interference complaints within 24 hours.
14. Should it be determined that approved facilities are interfering with any City facilities, the Applicant, following a 24-hour "cure period," shall cease operation until the cause of the interference has been eliminated.
15. Subsequent amendments, additions or other modifications to antennas approved under this AUP shall not result in increased overall height of the St. Regis Resort from that originally approved or in an increase in height for any singular component of the structure housing existing or proposed antennas.
16. The subject project shall comply with all applicable Federal, State and local standards of development, including those enumerated in Section 9.07.020 of the Dana Point Zoning Code.

**B. Prior to Building Plan Check Submittal and/or issuance of any Building Permits:**

17. Building plan check submittal shall include three sets of the following construction documents:
  - a. *Building Plans*
  - b. *Structural Calculations*
18. All documents prepared by a professional shall be wet-stamped and signed.
19. The project applicant shall secure project approval from the Orange County Fire Authority (OCFA), and provide proof of such approval to the Planning Division.

**C. Prior to final inspection or approval of the project by City staff:**

20. Upon installation of approved antenna facilities, a Temporary Certificate of Occupancy will be issued. Once the site is operable, a radio frequency (RF) report shall be submitted within 45 days to demonstrate that the facility (post-installation) remains in compliance with government safety standards
21. The applicant shall provide a "single point of contact" in its Engineering and Maintenance Departments to ensure continuity on all interference issues. The name, telephone and fax numbers and e-mail address of that contact shall be provided to the Orange County Sheriff's Department.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission of the City of Dana Point, CA, held on this 22<sup>nd</sup> day of February, 2016 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

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April O'Conner, Chairperson  
Planning Commission

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Ursula Luna-Reynosa, Director  
Community Development Department

**RESOLUTION NO. 16-02-08-XX22-xx**

Forma

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF DANA POINT, CALIFORNIA, APPROVING ANTENNA USE PERMIT AUP15-0002 TO ALLOW THE INSTALLATION OF A COMMERCIAL WIRELESS TELECOMMUNICATION ANTENNA FACILITY TO THE EXTERIOR OF AN EXISTING CUPOLA AT THE ST. REGIS RESORT LOCATED AT 1 MONARCH BEACH RESORT**

The Planning Commission of the City of Dana Point does hereby resolve as follows:

WHEREAS, Monroe MBR, LLC (the "Applicant") is the owner of real property commonly referred to as 1 Monarch Beach Resort (APN 672-621-01) (the "Property"); and

WHEREAS, the Applicant filed a verified application for an Antenna Use Permit to allow the installation of 16 Commercial Wireless Telecommunication Antennas to the exterior of an existing cupola located at the Property; and

WHEREAS, said verified application constitutes a request as provided by Title 9 of the Dana Point Zoning Code; and

WHEREAS, pursuant to the California Environmental Quality Act ("CEQA"), the project is Categorically Exempt per Section 15301 (Class 1 – Existing Facilities) in that it proposes nominal improvements to an existing structure; and

WHEREAS, the Planning Commission did, on the 8<sup>th</sup> day of February, 2016 hold a duly noticed public hearing as prescribed by law to consider said requests; and

WHEREAS, at said public hearing, upon considering all testimony and arguments, if any, of all persons desiring to be heard, said Commission considered all factors relating to Antenna Use Permit AUP15-0002; and

WHEREAS, the Planning Commission did continue the item to its regularly scheduled meeting of February 22, 2016; and

WHEREAS, at said public hearing, upon considering all testimony and arguments, if any, of all persons desiring to be heard, said Commission considered all factors relating to Antenna Use Permit AUP15-0002.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Planning Commission of the City of Dana Point as follows;

- A. The above recitations are true and correct and incorporated herein.
- B. Based on the evidence presented at the public hearing, the Planning Commission adopts the following findings and approves AUP15-0002, subject to conditions:

Findings:

Antenna Use Permit AUP15-0002

1. That the proposed antenna facility will not create any significant or meaningful blockage to public views **in that existing public views through the subject property as viewed from public places would not be impacted by the addition of the facility.**
2. That the proposed antenna facility will be an enhancement to the City due to its ability to provide additional communication capabilities **in that propagation maps have been submitted and are on file with the City and which illustrate that the proposed antennas would provide improved cellular and data transfer services for private, commercial and emergency users.**
3. That the proposed antenna facility will be aesthetically integrated into its surrounding environment **in that all antennas will be fully screened within new enclosures mounted to the exterior of an existing cupola, designed, surfaced and painted to complement the structure and broader hotel. The proposed cellular antennas will not visible to the public and/or from public rights-of-way; all accessory/supporting equipment will be located at-grade and similarly screened from public view by existing development and landscaping.**
4. That the proposed antenna facility will not interfere with the reception or transmission of other wireless telecommunication signals within the surrounding community **in that documentation (specifically a radio frequency report) prepared by a licensed engineer has been submitted to the City and which demonstrates that proposed facilities will comply with Federal Communication Commission (FCC) standards as relate both to emissions as well as non-interference with other wireless telecommunication signals and facilities.**
5. That the proposed antenna facility will operate in compliance with all applicable Federal safety regulations for such facilities **in that a radio frequency (RF) report has been received by the City and stipulating compliance of proposed antennas with FCC and other applicable standards. After installation and prior to final inspection and sign-off of the project by City staff, installed antennas will be tested and verified once more as to compliance with these same standards.**
6. That the public need for the use of the antenna facility has been

**documented in that evidence in the record illustrates a marked improvement in cellular coverage will occur with placement of the subject equipment – increasing or improving service to private, commercial and/or emergency cellular users.**

Conditions:

**A. General:**

1. Approval of this application permits the Approval of an Antenna Use Permit to allow the installation of 16 "Commercial Wireless Telecommunication Antennas" (cellular antennas) to the exterior of an existing cupola at located at 1 Monarch Beach Resort (the St. Regis Resort). Subsequent submittals for this project shall be in substantial compliance with the plans presented to the Planning Commission and in compliance with the applicable provisions of the Dana Point General Plan and Municipal Code.
2. Approval of this application is valid for a period of 24 months (two years) from the date of determination. If the development approved by this action is not established, or a building permit for the project is not issued within such period of time, the approval shall expire and shall thereafter be null and void.
3. The application is approved as a plan for the location and design of the uses, structures, features, and materials, shown on the approved plans. Any relocation, alteration, or addition to any use, structure, feature, or material, not specifically approved by this application, will nullify this approving action. If any changes are proposed regarding the location or alteration to the appearance or use of any structure, an amendment to this permit shall be submitted for approval by the Director of Community Development. If the Director of Community Development determines that the proposed change complies with the provisions and the spirit and intent of this approval action, and that the action would have been the same for the amendment as for the approved plot plan, he may approve the amendment without requiring a new public hearing.
4. Failure to abide by and faithfully comply with any and all conditions attached to the granting of this permit shall constitute grounds for revocation of said permit.

5. The applicant or any successor-in-interest shall defend, indemnify, and hold harmless the City of Dana Point ("CITY"), its agents, officers, or employees from any claim, action, or proceeding against the CITY, its agents, officers, or employees to attack, set aside, void, or annul an approval or any other action of the CITY, its advisory agencies, appeal boards, or legislative body concerning the project. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant or any successor-in-interest shall further protect, defend, indemnify and hold harmless the City, its officers, employees, and agents from any and all claims, actions, or proceedings against the City, its officers, employees, or agents arising out of or resulting from the negligence of the applicant or the applicant's agents, employees, or contractors. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant shall also reimburse the City for City Attorney fees and costs associated with the review of the proposed project and any other related documentation.

6. The applicant and applicant's successors in interest shall be fully responsible for knowing and complying with all conditions of approval, including making known the conditions to City staff for future governmental permits or actions on the project site.
7. The applicant and applicant's successors in interest shall be responsible for payment of all applicable fees along with reimbursement for all City expense in ensuring compliance with these conditions.
8. The construction site shall be posted with signage indicating that construction may not commence before 7:00 AM and must cease by 8:00 PM, Monday through Saturday, with no construction activity permitted on Sundays or Federal holidays.
9. The applicant, property owner or successor in interest shall submit a Waste Management Plan to the City's C&D Official per the Dana Point Municipal Code. A deposit will be required upon approval of the Waste Management Plan to ensure compliance.

10. During construction, the project shall implement and maintain all minimum construction Best Management Practices (BMPs), assigned by priority level and/or as required by the Director of Public Works or designee. Applicable minimum BMPs for the project's priority as determined by the Urban Runoff Threat Assessment Form may be found in the City's Construction Urban Runoff BMP Requirements Manuals.
11. During the construction phase, all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, managed, secured and disposed to prevent transport into the streets, gutters, storm drains, creeks and/or coastal waters by wind, rain, tracking, tidal erosion or dispersion.
- ~~12. Approved antenna facilities, accessory equipment and the approved AUP and its conditions of approval shall be subject to review by the City every two years from the date of approval to determine if technology has changed such that the installation may be reduced in size or redesigned in a more "stealth" manner and to evaluate Radio-Frequency emissions. Should this review be deemed required/appropriate, the applicant shall submit a technology upgrade report and Radio-Frequency emission testing report for review by the Director of Community Development. Said report will not be required more than once within a twenty four (24) month period.~~
- ~~14.12.~~ At all times, other than during a 24-hour "cure period," the applicant shall not prevent the City of Dana Point from having adequate spectrum capacity on the City's 800 MHz radio frequency.
- ~~15.13.~~ The applicant shall provide a 24-hour phone number to which interference problems may be reported, and will resolve all interference complaints within 24 hours.

The applicant shall cease operation of this facility should

- ~~16.14.~~ Should it cause interference be determined that approved facilities are interfering with any City facilities immediately upon expiration of the Applicant, following a 24-hour "cure period," shall cease operation until the cause of the interference is has been eliminated.
- ~~17.15.~~ Subsequent amendments, additions or other modifications to antennas approved under this AUP shall not result in increased overall height of the St. Regis Resort from that originally approved or in an increase in height for any singular component of the structure housing

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existing or proposed antennas.

16. The subject project shall comply with all applicable Federal, State and local standards of development, including those enumerated in Section 9.07.020 of the Dana Point Zoning Code.

Forma  
at 0.4'

**B. Prior to Building Plan Check Submittal and/or issuance of any Building Permits:**

- ~~18.~~17. Building plan check submittal shall include three sets of the following construction documents:

- a. *Building Plans*
- b. *Structural Calculations*

- ~~19.~~18. All documents prepared by a professional shall be wet-stamped and signed.

- ~~20.~~19. The project applicant shall secure project approval from the Orange County Fire Authority (OCFA), and provide proof of such approval to the Planning Division.

**C. Prior to final inspection or approval of the project by City staff:**

- ~~21.~~20. Upon installation of approved antenna facilities, a Temporary Certificate of Occupancy will be issued. Once the site is operable, a radio frequency (RF) report shall be submitted within 45 days to demonstrate that the facility (post-installation) remains in compliance with government safety standards

- ~~22.~~ The applicant shall submit to a post-installation test to confirm that the facility does not interfere with the City of Dana Point's Public Safety radio equipment. This test will be conducted by the Communications Division of the Orange County Sheriff's Department or a Division approved contractor at the expense of the applicant. Proof of compliance shall be provided to the Director of Community

Development.

24.21. The applicant shall provide a "single point of contact" in its Engineering and Maintenance Departments to ensure continuity on all interference issues. The name, telephone and fax numbers and e-mail address of that contact shall be provided to the Orange County Sheriff's Department.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission of the City of Dana Point, CA, held on this 8<sup>th</sup> 22<sup>nd</sup> day of February, 2016 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

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April O'Conner, Chairperson  
Planning Commission

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Ursula Luna-Reynosa, Director  
Community Development Department

**CITY OF DANA POINT  
PLANNING COMMISSION  
AGENDA REPORT**

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**DATE:** FEBRUARY 8, 2016

**TO:** DANA POINT PLANNING COMMISSION

**FROM:** COMMUNITY DEVELOPMENT DEPARTMENT  
URSULA LUNA-REYNOSA, DIRECTOR  
EVAN LANGAN, AICP, ASSOCIATE PLANNER

**SUBJECT:** ANTENNA USE PERMIT AUP15-0002 TO ALLOW THE INSTALLATION  
OF A COMMERCIAL WIRELESS TELECOMMUNICATION ANTENNA  
FACILITY TO THE EXTERIOR OF AN EXISTING CUPOLA AT THE ST.  
REGIS RESORT LOCATED AT 1 MONARCH BEACH RESORT

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**RECOMMENDATION:** That the Planning Commission adopt the attached resolution  
approving Antenna Use Permit Application AUP15-0002.

**APPLICANT/OWNER:** Monroe MBR, LLC

**OWNER'S AGENT:** Jacobs Engineering Group on behalf of Verizon Wireless

**REQUEST:** Approval of an Antenna Use Permit to allow the installation of  
16 "Commercial Wireless Telecommunication Antennas"  
(cellular antennas) to the exterior of an existing cupola located  
at the St. Regis Resort.

**LOCATION:** 1 Monarch Beach Resort  
Assessor Parcel Number (APN): 672-621-01

**NOTICE:** Notices of the Public Hearing were mailed to property owners  
within a 500-foot radius, published within a newspaper of  
general circulation and posted at Dana Point City Hall, the  
Dana Point and Capistrano Beach Branch Post Offices, as  
well as the Dana Point Library on January 28, 2016.

**ENVIRONMENTAL:** Pursuant to the California Environmental Quality Act (CEQA),  
the project is Categorically Exempt per Section 15301 (Class  
1 – Existing Facilities) in that it proposes nominal  
improvements to an existing structure.

**ISSUES:**

- Project consistency with the Dana Point General Plan, Zoning Code (DPZC) and Monarch Beach Resort Specific Plan (MBRSP).
- Project satisfaction with all findings required pursuant to the DPZC for approval of an Antenna Use Permit (AUP).
- Project compatibility with and enhancement of the site and surrounding neighborhood.

**BACKGROUND:** The subject property measures an approximate 620,438 square feet (14.25 acres) and is presently developed with the St. Regis Resort - a multi-story hotel constructed in the late 1990's. The property is located within the area of the Monarch Beach Resort Specific Plan (MBRSP), bordered to the north, south and east by residential development and to the west, the City's Sea Terrace Park. Pursuant to the MBRSP, the property is zoned "Visitor Recreation Commercial" (VRC) and is located both within the City's Coastal Overlay District (the California Coastal Zone) as well as the Appeals Jurisdiction of the California Coastal Commission.

**DISCUSSION:** The subject application proposes the addition of 16 cellular antennas to the exterior of an existing cupola located at the "South Wing" of the St. Regis Resort. The purpose of the new antennas would be to improve cellular and data transfer services for both public and private sector users within a prescribed radius around the subject property and would be the first commercial cellular antenna facility to be added to the site for the purposes of improving coverage in the surrounding community. The boundaries of the subject property are located approximately 70 feet from Niguel Road - a "Scenic Highway" as designated in the Circulation Element of the City's adopted General Plan. Pursuant to Section 9.07.020 (4)(K) of the DPZC, this proximity to both a Scenic Highway as well as to residentially zoned properties in the vicinity requires that a "Major" Antenna Use Permit (AUP) be approved by the Planning Commission.

The antennas would be installed around the perimeter (all four sides) of the cupola and completely housed within matching protrusions measuring 20 inches deep. The exterior of these protrusions would be surfaced and painted to match the exterior of the cupola and broader hotel and contain faux windows with louver inserts. No component of the antennas themselves would be exposed or visible to the public and no changes would result to the roof of the cupola or the overall height of the hotel with installation of proposed equipment. Supporting accessory cabinets, a generator and two global positioning system [GPS] units would be located at grade at the eastern side of the property (facing Niguel Road) and completely screened from public view by an existing wall and landscaping.

In compliance with Section 9.07.020 of the DPZC, propagation maps have been submitted to the City illustrating the improvement in service with placement of the new antennas. Finally, a radio frequency (RF) report (as prepared by a licensed engineer) has been submitted which shows that the proposed antennas will comply with all emission requirements per Federal Communications Commission (FCC) standards.

Section 9.07.020 (b)(6) of the DPZC stipulates the following six findings must be made in order to approve an AUP. Pursuant to the (Federal) Telecommunications Act of 1996, a local government may not regulate the placement or construction of cellular antenna facilities on the basis of environmental effects when such facilities are found to otherwise comply with FCC emission regulations.

- 1. That the proposed antenna facility will not create any significant or meaningful blockage to public views.*
- 2. That the proposed antenna facility will be an enhancement to the City due to its ability to provide additional communication capabilities.*
- 3. That the proposed antenna facility will be aesthetically integrated into its surrounding environment.*
- 4. That the proposed antenna facility will not interfere with the reception or transmission of other wireless telecommunication signals within the surrounding community.*
- 5. That the proposed antenna facility will operate in compliance with all applicable Federal safety regulations for such facilities.*
- 6. That the public need for the use of the antenna facility has been documented.*

The subject project has been found to comply with standards and location requirements enumerated in Section 9.07.020 of the DPZC as well as those of the MBRSP and staff's recommended findings to approve the AUP request are included in the project's draft resolution (Attachment 1).

**CORRESPONDENCE:** To date, no correspondence has been received concerning the subject project.

**CONCLUSION:** Staff finds that the subject project is consistent with the policies and provisions of the City of Dana Point General Plan, Zoning Ordinance and the Monarch Beach Resort Specific Plan. As the project has been found to comply with all standards of development, staff recommends the Planning Commission adopt the attached resolution, approving AUP15-0002 subject to findings and conditions of approval.

  
Evan Langan, AICP  
Associate Planner

  
Ursula Luna-Reynosa, Director  
Community Development Department

**ATTACHMENTS:**

**Action Documents**

1. Draft Planning Commission Resolution No. 16-02-08-xx

**Supporting Documents**

2. Vicinity Map
3. Site Photos
4. Project Plans (architectural only)
5. Photo Simulations of Proposed Antenna Installations

## **RESOLUTION NO. 16-02-08-XX**

### **A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF DANA POINT, CALIFORNIA, APPROVING ANTENNA USE PERMIT AUP15-0002 TO ALLOW THE INSTALLATION OF A COMMERCIAL WIRELESS TELECOMMUNICATION ANTENNA FACILITY TO THE EXTERIOR OF AN EXISTING CUPOLA AT THE ST. REGIS RESORT LOCATED AT 1 MONARCH BEACH RESORT**

The Planning Commission of the City of Dana Point does hereby resolve as follows:

WHEREAS, Monroe MBR, LLC (the “Applicant”) is the owner of real property commonly referred to as 1 Monarch Beach Resort (APN 672-621-01) (the “Property”); and

WHEREAS, the Applicant filed a verified application for an Antenna Use Permit to allow the installation of 16 Commercial Wireless Telecommunication Antennas to the exterior of an existing cupola located at the Property; and

WHEREAS, said verified application constitutes a request as provided by Title 9 of the Dana Point Zoning Code; and

WHEREAS, pursuant to the California Environmental Quality Act (“CEQA”), the project is Categorically Exempt per Section 15301 (Class 1 – Existing Facilities) in that it proposes nominal improvements to an existing structure; and

WHEREAS, the Planning Commission did, on the 8<sup>th</sup> day of February, 2016 hold a duly noticed public hearing as prescribed by law to consider said requests; and

WHEREAS, at said public hearing, upon considering all testimony and arguments, if any, of all persons desiring to be heard, said Commission considered all factors relating to Antenna Use Permit AUP15-0002.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Planning Commission of the City of Dana Point as follows;

- A. The above recitations are true and correct and incorporated herein.
- B. Based on the evidence presented at the public hearing, the Planning Commission adopts the following findings and approves AUP15-0002, subject to conditions:

Findings:

Antenna Use Permit AUP15-0002

1. That the proposed antenna facility will not create any significant or meaningful blockage to public views **in that existing public views through the subject property as viewed from public places would not be impacted by the addition of the facility.**
2. That the proposed antenna facility will be an enhancement to the City due to its ability to provide additional communication capabilities **in that propagation maps have been submitted and are on file with the City and which illustrate that the proposed antennas would provide improved cellular and data transfer services for private, commercial and emergency users.**
3. That the proposed antenna facility will be aesthetically integrated into its surrounding environment **in that all antennas will be fully screened within new enclosures mounted to the exterior of an existing cupola, designed, surfaced and painted to complement the structure and broader hotel. The proposed cellular antennas will not visible to the public and/or from public rights-of-way; all accessory/supporting equipment will be located at-grade and similarly screened from public view by existing development and landscaping.**
4. That the proposed antenna facility will not interfere with the reception or transmission of other wireless telecommunication signals within the surrounding community **in that documentation (specifically a radio frequency report) prepared by a licensed engineer has been submitted to the City and which demonstrates that proposed facilities will comply with Federal Communication Commission (FCC) standards as relate both to emissions as well as non-interference with other wireless telecommunication signals and facilities.**
5. That the proposed antenna facility will operate in compliance with all applicable Federal safety regulations for such facilities **in that a radio frequency (RF) report has been received by the City and stipulating compliance of proposed antennas with FCC and other applicable standards. After installation and prior to final inspection and sign-off of the project by City staff, installed antennas will be tested and verified once more as to compliance with these same standards.**

6. That the public need for the use of the antenna facility has been documented **in that evidence in the record illustrates a marked improvement in cellular coverage will occur with placement of the subject equipment – increasing or improving service to private, commercial and/or emergency cellular users.**

Conditions:

**A. General:**

1. Approval of this application permits the Approval of an Antenna Use Permit to allow the installation of 16 “Commercial Wireless Telecommunication Antennas” (cellular antennas) to the exterior of an existing cupola at located at 1 Monarch Beach Resort (the St. Regis Resort). Subsequent submittals for this project shall be in substantial compliance with the plans presented to the Planning Commission and in compliance with the applicable provisions of the Dana Point General Plan and Municipal Code.
2. Approval of this application is valid for a period of 24 months (two years) from the date of determination. If the development approved by this action is not established, or a building permit for the project is not issued within such period of time, the approval shall expire and shall thereafter be null and void.
3. The application is approved as a plan for the location and design of the uses, structures, features, and materials, shown on the approved plans. Any relocation, alteration, or addition to any use, structure, feature, or material, not specifically approved by this application, will nullify this approving action. If any changes are proposed regarding the location or alteration to the appearance or use of any structure, an amendment to this permit shall be submitted for approval by the Director of Community Development. If the Director of Community Development determines that the proposed change complies with the provisions and the spirit and intent of this approval action, and that the action would have been the same for the amendment as for the approved plot plan, he may approve the amendment without requiring a new public hearing.
4. Failure to abide by and faithfully comply with any and all conditions attached to the granting of this permit shall constitute grounds for revocation of said permit.

5. The applicant or any successor-in-interest shall defend, indemnify, and hold harmless the City of Dana Point ("CITY"), its agents, officers, or employees from any claim, action, or proceeding against the CITY, its agents, officers, or employees to attack, set aside, void, or annul an approval or any other action of the CITY, its advisory agencies, appeal boards, or legislative body concerning the project. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant or any successor-in-interest shall further protect, defend, indemnify and hold harmless the City, its officers, employees, and agents from any and all claims, actions, or proceedings against the City, its officers, employees, or agents arising out of or resulting from the negligence of the applicant or the applicant's agents, employees, or contractors. Applicant's duty to defend, indemnify, and hold harmless the City shall include paying the City's attorney's fees, costs and expenses incurred concerning the claim, action, or proceeding.

The applicant shall also reimburse the City for City Attorney fees and costs associated with the review of the proposed project and any other related documentation.

6. The applicant and applicant's successors in interest shall be fully responsible for knowing and complying with all conditions of approval, including making known the conditions to City staff for future governmental permits or actions on the project site.
7. The applicant and applicant's successors in interest shall be responsible for payment of all applicable fees along with reimbursement for all City expense in ensuring compliance with these conditions.
8. The construction site shall be posted with signage indicating that construction may not commence before 7:00 AM and must cease by 8:00 PM, Monday through Saturday, with no construction activity permitted on Sundays or Federal holidays.
9. The applicant, property owner or successor in interest shall submit a Waste Management Plan to the City's C&D Official per the Dana Point Municipal Code. A deposit will be required upon approval of the Waste Management Plan to ensure compliance.

10. During construction, the project shall implement and maintain all minimum construction Best Management Practices (BMPs), assigned by priority level and/or as required by the Director of Public Works or designee. Applicable minimum BMPs for the project's priority as determined by the Urban Runoff Threat Assessment Form may be found in the City's Construction Urban Runoff BMP Requirements Manuals.
11. During the construction phase, all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, managed, secured and disposed to prevent transport into the streets, gutters, storm drains, creeks and/or coastal waters by wind, rain, tracking, tidal erosion or dispersion.
12. Approved antenna facilities, accessory equipment and the approved AUP and its conditions of approval shall be subject to review by the City every two years from the date of approval to determine if technology has changed such that the installation may be reduced in size or redesigned in a more "stealth" manner and to evaluate Radio-Frequency emissions. Should this review be deemed required/appropriate, the applicant shall submit a technology upgrade report and Radio-Frequency emission testing report for review by the Director of Community Development. Said report will not be required more than once within a twenty four (24) month period.
13. At all times, other than during a 24-hour "cure period," the applicant shall not prevent the City of Dana Point from having adequate spectrum capacity on the City's 800 MHz radio frequency.
14. The applicant shall provide a 24-hour phone number to which interference problems may be reported, and will resolve all interference complaints within 24 hours.
15. The applicant shall cease operation of this facility should it cause interference with any City facilities immediately upon expiration of the 24-hour "cure period" until the cause of interference is eliminated.
16. Subsequent amendments, additions or other modifications to antennas approved under this AUP shall not result in increased overall height of the St. Regis Resort from that originally approved or in an increase in height for any singular component of the structure housing existing or proposed antennas.

**B. Prior to Building Plan Check Submittal and/or issuance of any Building Permits:**

17. Building plan check submittal shall include three sets of the following construction documents:
  - a. *Building Plans*
  - b. *Structural Calculations*
18. All documents prepared by a professional shall be wet-stamped and signed.
19. The project applicant shall secure project approval from the Orange County Fire Authority (OCFA), and provide proof of such approval to the Planning Division.

**C. Prior to final inspection or approval of the project by City staff:**

20. Upon installation of approved antenna facilities, a Temporary Certificate of Occupancy will be issued. Once the site is operable, a radio frequency (RF) report shall be submitted within 45 days to demonstrate that the facility (post-installation) remains in compliance with government safety standards
21. The applicant shall submit to a post-installation test to confirm that the facility does not interfere with the City of Dana Point's Public Safety radio equipment. This test will be conducted by the Communications Division of the Orange County Sheriff's Department or a Division approved contractor at the expense of the applicant. Proof of compliance shall be provided to the Director of Community Development.
22. The applicant shall provide a "single point of contact" in its Engineering and Maintenance Departments to ensure continuity on all interference issues. The name, telephone and fax numbers and e-mail address of that contact shall be provided to the Orange County Sheriff's Department.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission of the City of Dana Point, CA, held on this 8<sup>th</sup> day of February, 2016 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

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April O'Conner, Chairperson  
Planning Commission

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Ursula Luna-Reynosa, Director  
Community Development Department



City of Dana Point

**Antenna Use Permit AUP15-0002**

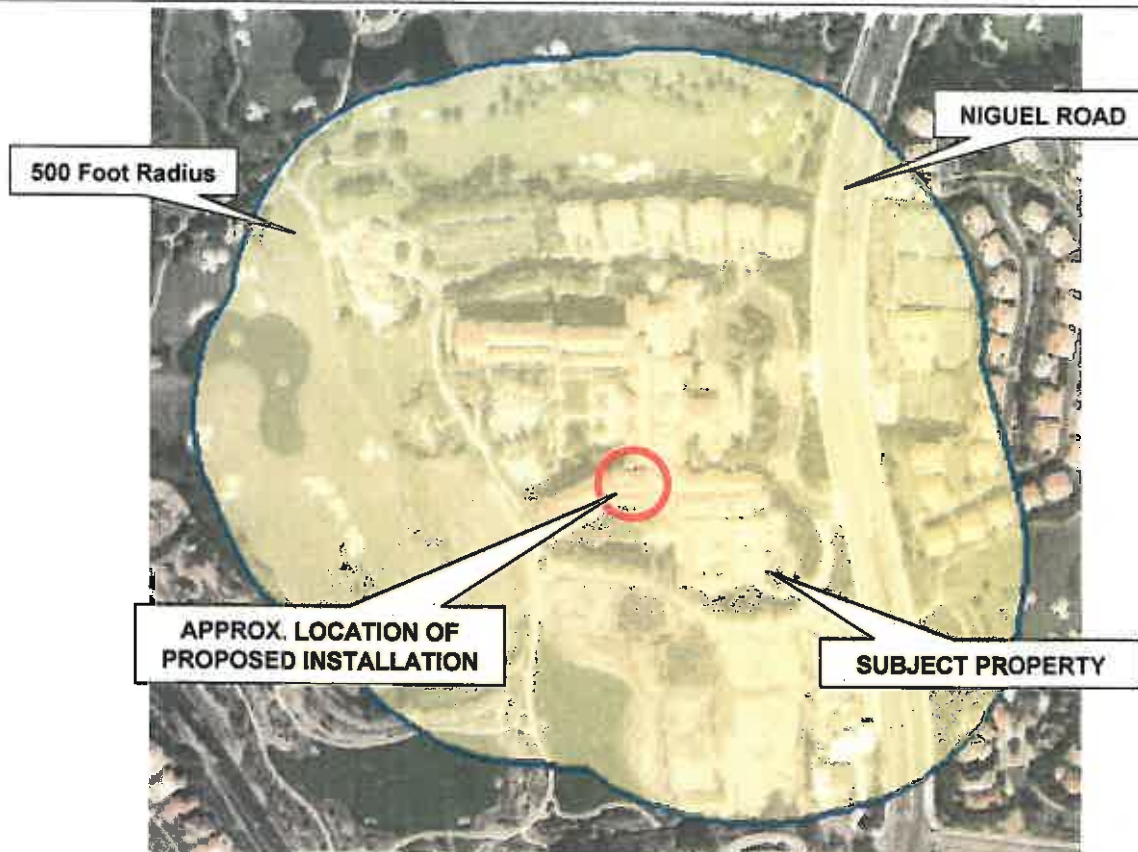
Evan Langan, AICP, Associate Planner

Community Development Department

33282 Golden Lantern

Dana Point, CA 92629-1805

## VICINITY MAP



**Project :** *AUP15-0002*

**Project Applicant's Agent:**

*Tracy Thomas (Jacobs on behalf of Verizon Wireless)*

**Location:** *1 Monarch Beach Resort*





Front Elevation of Proposed Site



Front Elevation of Properties to East/Directly Across the Street

**JACOBS**

3161 Michelson Avenue , Suite 500  
Irvine, CA 92612

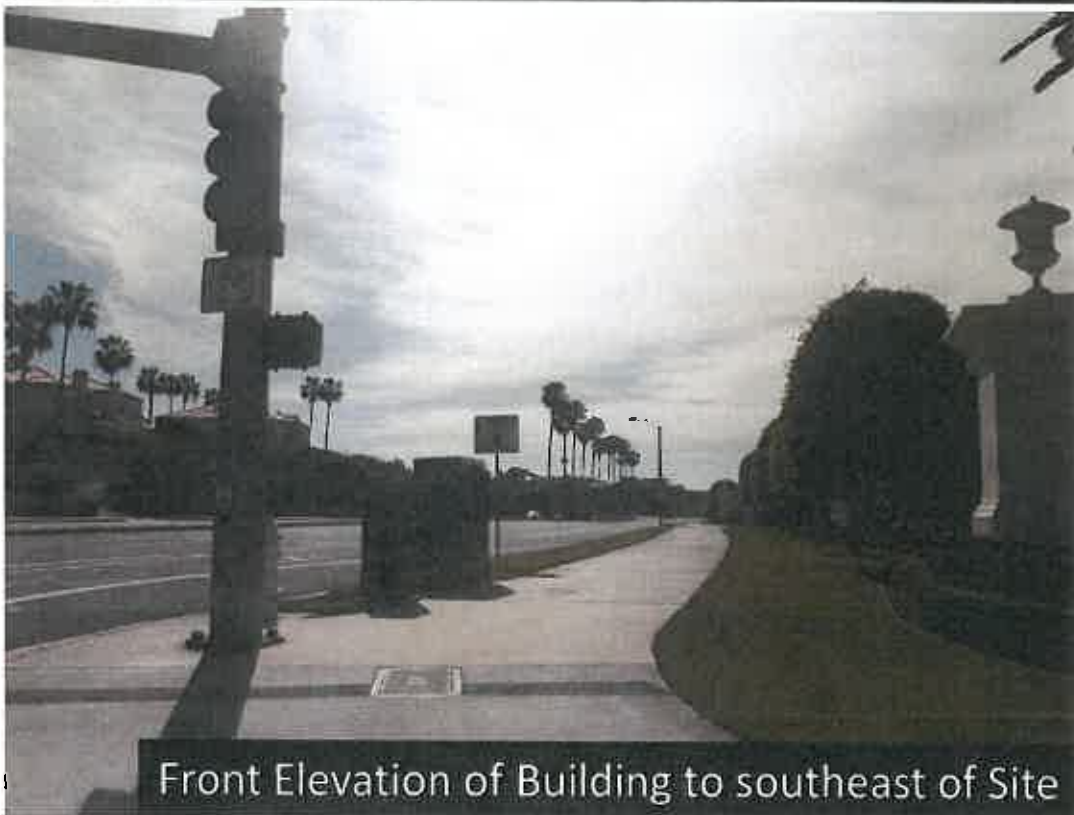
**Via Monarca**  
1 Monarch Beach Resort  
Dana Point, CA

**verizon**

15505 Sand Canyon Avenue  
Irvine, CA 92618



Front Elevation of Building to Northeast of Site



Front Elevation of Building to southeast of Site

**JACOBS™**

3161 Michelson Avenue , Suite 500  
Irvine, CA 92612

**Via Monarca**  
1 Monarch Beach Resort  
Dana Point, CA

**verizon**

15505 Sand Canyon Avenue  
Irvine, CA 92618



Rear Elevation of Project Site



Side Elevation of Building to South of Site

**JACOBS™**

3161 Michelson Avenue , Suite 500  
Irvine, CA 92612

**Via Monarca**  
1 Monarch Beach Resort  
Dana Point, CA

**verizon**

15505 Sand Canyon Avenue  
Irvine, CA 92618

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NOT FOR CONSTRUCTION  
DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS



OVERALL HEIGHT  
85'-0" A.G.L.  
(221'-0" A.M.S.L.)

VIA MONARCA  
PROPOSED MCE SITE  
1 MONARCH BEACH RESORT  
DANA POINT, CA 92629

PROJECT APPROVAL

LANDLORD: \_\_\_\_\_  
PROJECT MANAGER: \_\_\_\_\_  
CONSTRUCTION MANAGER: \_\_\_\_\_  
RF ENGINEER: \_\_\_\_\_  
SITE ACQUISITION: \_\_\_\_\_  
ZONING MANAGER: \_\_\_\_\_  
UTILITY COORDINATOR: \_\_\_\_\_

PREPARED FOR:



18805 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.258.7900

PREPARED BY:



3161 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
PHONE: 949-250-1815  
FAX: 949-254-7981

ENGINEER SEAL:

DESIGN REVISION:

NO.	DATE	REVISIONS	BY
2	07/24/15	100% ZD	RU
1	07/01/15	ISSUED FOR ZONING	RU
0	08/03/15	ISSUED FOR ZONING	JNR

NOT VALID WITHOUT SIGNATURE AND DATE

VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EU601C02  
DATE: 08/03/15

DRAWING NAME:

TITLE SHEET

DRAWING NUMBER:

T1

VICINITY MAP



DRIVING DIRECTIONS

FROM VERIZON WIRELESS CORPORATE OFFICE IN IRVINE, CA.  
HEAD SOUTHWEST ON IRVINE RANCH WATER DISTRICT TOWARD WATERWORKS WAY; TURN RIGHT ONTO WATERWORKS WAY; TURN LEFT ONTO SAND CANYON AVE; TURN RIGHT TO MERGE ONTO I-405 S TOWARD SAN DIEGO; MERGE ONTO I-405 S; MERGE ONTO I-5 S; TAKE EXIT 86 FOR CROWN VALLEY PKWY; TURN RIGHT ONTO CROWN VALLEY PKWY; TURN LEFT ONTO NIGUEL RD; TURN RIGHT TOWARD MONARCH BEACH RESORT N; ARRIVE AT THE DESTINATION ON THE RIGHT

GENERAL CONTRACTOR NOTES

CONTRACTOR SHALL VERIFY ALL PLANS WITH EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

PROJECT DIRECTORY

BUILDING OWNER: MONROE MBR, LLC  
CONTACT: DAN MOORE  
1 MONARCH BEACH RESORT  
DANA POINT, CALIFORNIA 92629  
PHONE: (949) 234-3283  
  
APPLICANT: VERIZON WIRELESS  
15505 SAND CANYON DRIVE  
BUILDING "D" 1st FLOOR  
IRVINE, CALIFORNIA 92618  
  
PREPARED BY: JACOBS ENGINEERING GROUP, INC.  
3161 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
  
SITE ACQUISITION: RACHAEL DAVIDSON  
JACOBS ENGINEERING GROUP, INC.  
3161 MICHELSON DRIVE, SUITE 500  
IRVINE, CALIFORNIA 92612  
MOBILE: (619) 729-2294

SITE SUMMARY

SITE TYPE: ROOFTOP  
BUILDING HEIGHT: 85'-0" A.G.L. (221.0' A.M.S.L.)  
ZONING JURISDICTION: CITY OF DANA POINT  
ZONING CLASSIFICATION: SPO ZONE  
PARCEL ID: 672-621-01 & 02  
POWER COMPANY: SOUTHERN CALIFORNIA EDISON  
TELEPHONE COMPANY: AT&T  
TOTAL VERIZON LEASE AREA: 718 SQ. FT.  
EQUIPMENT LEASE AREA: 608 SQ. FT.  
ANTENNA LEASE AREA: 110 SQ. FT.

PROJECT DESCRIPTION

VERIZON WIRELESS IS SUBMITTING AN APPLICATION FOR ZONING APPROVALS AND OTHER RELATED APPROVALS FOR THE FOLLOWING:

INSTALL (16) PANEL ANTENNAS, (16) RADIO REMOTE UNITS (RRUs), (4) RAYCAPS MOUNTED BEHIND PROPOSED FRP SCREEN BOXES ON EXISTING ROOFTOP; INSTALL & ROUTE CABLE TRAY FROM EQUIPMENT TO ANTENNAS ON ROOFTOP; INSTALL DAS EQUIPMENT, (2) MCE CABINETS, (1) GENERATOR & (2) GPS UNITS ON GROUND LEVEL WITH CONNECTIONS FOR POWER AND TELCO SERVICES.

CODE COMPLIANCE

CALIFORNIA STATE CODE COMPLIANCE:

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- 2013 CALIFORNIA ADMINISTRATIVE CODE (INCL. TITLES 24 & 25)
- 2013 CALIFORNIA BUILDING CODES
- 2013 CALIFORNIA ELECTRICAL CODES
- 2013 CALIFORNIA MECHANICAL CODES
- 2013 CALIFORNIA PLUMBING CODES
- 2013 CALIFORNIA FIRE CODES
- 2013 CALIFORNIA ENERGY CODES
- TIA-222-G CODES
- LOCAL BUILDING CODES
- CITY/COUNTY ORDINANCES

FCC NOTE

THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION HANDICAP ACCESS IS NOT REQUIRED.

PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER.

DIG ALERT



Know what's below.  
Call before you dig.

UNDERGROUND SERVICE  
ALERT OF SOUTHERN  
CALIFORNIA  
TOLL FREE 1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

PART 1 – GENERAL CONDITIONS:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:

1.1. GENERAL CONTRACTOR – TBD

1.2. SUBCONTRACTOR – TBD

1.3. OWNER – VERIZON WIRELESS
2. THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
3. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
4. REFERENCES:

4.1. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE. THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS MODIFIED BY THE REQUIREMENT SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISION OF THESE PUBLICATIONS.

4.2. 1. ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)

4.3. 2. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)

4.4. 3. ICE (INSULATED CABLE ENGINEERS ASSOCIATION)

4.5. 4. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)

4.6. 5. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)

4.7. 6. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)

4.8. 7. UL (UNDERWRITERS LABORATORIES. INC.)

5. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.

8. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER / ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

9. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOWN DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.

10. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

11. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER / ARCHITECT PRIOR TO PROCEEDING.

12. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.

13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.

14. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT, THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF A NEW TOWER.
15. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, PROPOSED CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.

16. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.

17. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN AND THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.

19. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE SPECIFICATIONS AND TOWER DRAWINGS/ANALYSIS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL.

20. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL PROPOSED UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.

21. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.

22. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.

23. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN THE WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.

24. PERMITS: THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, FEES AND INSPECTIONS, ETC.

25. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

26. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.

27. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.

28. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.

29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.

30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.

31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.

32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).

33. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.

34. NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
- PART 2 – PRODUCTS
1. GENERAL:

1.1. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW, AND FREE FROM DEFECTS.

1.2. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.

1.3. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF
- APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

1.4. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELEC

2. MATERIALS AND EQUIPMENT:

1. CONDUIT:

1.1. RIGID METAL CONDUIT (RMC) SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.

2. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.

2.1. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE. GROUNDING BUSHINGS WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.

2.2. NONMETALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 80 PVC. INSTALL USING SOLVENT-CEMENT-TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.

3. CONDUCTORS AND CABLE:

3.1. CONDUCTORS AND CABLE SHALL BE FLAME-RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN-2, 600 VOLT, SIZE AS INDICATED, 12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR USED.

3.2. 10 AWG AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND 8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.

3.3. SOLDERLESS, COMPRESSION-TYPE CONNECTORS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.

3.4. STRAIN-RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELLEMS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS.

3.5. ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J-BOXES, EQUIPMENT AND CABINETS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BRADY, OR APPROVED EQUAL).

4. DISCONNECT SWITCHES:

4.1. 1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE-D OR APPROVED EQUAL.

5. SYSTEM GROUNDING:

5.1. ALL GROUNDING COMPONENTS SHALL BE TINNED AND GROUNDING CONDUCTOR SHALL BE 2 AWG BARE, SOLID, TINNED, COPPER. ABOVE GRADE GROUNDING CONDUCTORS SHALL BE INSULATED WHERE NOTED.

5.2. GROUNDING BUSES SHALL BE BARE, TINNED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION. STANDARD BUS BARS MGB, SHALL BE FURNISHED AND INSTALLED BY THE SUBCONTRACTOR. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY WAY OF STENCILING OR DESIGNATION PLATE.

5.3. CONNECTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED. USE TWO-HOLE COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS.

5.4. EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.

5.5. GROUND RODS SHALL BE COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 5/8"x10'-0". ALL GROUNDING RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES.

5.6. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.

6. OTHER MATERIALS:


6.1. THE SUBCONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.

6.1. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

7. PANELS AND LOAD CENTERS:


7.1. ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

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ENGINEER SEAL:

DESIGN REVISION:

2	07/24/15	100% ZD	RU
1	07/01/15	ISSUED FOR ZONING	RU
0	06/09/15	ISSUED FOR ZONING	JNR
NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EUB01C02  
DATE: 06/03/15

DRAWING NAME:

GENERAL NOTES  
AND  
SPECIFICATIONS

DRAWING NUMBER:

SP1

PART 3 – EXECUTION

1.

GENERAL:
- 1.1.

ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS.
- 1.1.

EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.
2.

LABOR AND WORKMANSHIP:
- 2.1.

ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED WIREMEN, IN A NEAT AND WORKMAN–LIKE MANNER.
- 2.2.

ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE SUBCONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.
- 2.3.

UPON COMPLETION OF WORK, THE SUBCONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.
3.

COORDINATION:
- 3.1.

THE SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER–FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.
4.

INSTALLATION:
- 4.1.

CONDUIT:
- 4.1.1.

ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH TRADE SIZE.
- 4.1.2.

PROVIDE RIGID PVC SCHEDULE 80 CONDUITS FOR ALL RISERS, RMC OTHERWISE NOTED. EMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
- 4.1.3.

THE INSTALLATION OF SCHEDULE 80 PVC AND RMC CONDUITS SHALL BE 24 INCHES MINIMUM DEPTH. ALL 90 DEGREE BENDS SHALL BE RMC. EXPANSION JOINTS ARE REQUIRED ON ALL CONDUIT RISERS.
- 4.1.4.

USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUID TIGHT, FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORT TO ALLOW FOR EXPANSION AND CONTRACTION.
- 4.1.5.

A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER–BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BENDER OR FACTORY 90 DEGREE ELBOWS MAY BE USED.
- 4.1.6.

FIELD FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH INSIDE SURFACE.
- 4.1.7.

PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.
- 4.1.8.

SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENINGS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. SUBCONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
- 4.1.9.

ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE INSTALLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBRIS.
- 4.1.10.

INSTALL PULL STRINGS IN ALL CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.
- 4.1.11.

INSTALL 2" HIGHLY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUCTORS.
- 4.1.12.

CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.
- 4.1.13.

PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RACEWAYS AND CABLES TO BE ROUTED THROUGH THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOPS AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.
5.

CONDUCTORS AND CABLE:
- 5.1.

ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:
- |             |                          |
|-------------|--------------------------|
| DESCRIPTION | 208/240/120 VOLT SYSTEMS |
| PHASE A     | BLACK                    |
| PHASE B     | RED                      |
| PHASE C     | BLUE                     |
| NEUTRAL     | WHITE                    |
| GROUNDING   | GREEN                    |
- 5.2.

SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONDULETS APPROVED FOR THIS PURPOSE.

- 5.3.

PULLING LUBRICANTS SHALL BE UL APPROVED. SUBCONTRACTOR SHALL USE NYLON OR HEMP ROPE FOR PULLING CONDUCTOR OR CABLES INTO THE CONDUIT.
- 5.4.

CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES & EQUIPMENT TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OR TERMINALS. CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE SUBCONTRACTOR’S EXPENSE.
6.

DISCONNECT SWITCHES:
- 6.1.

INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED.
7.

GROUNDING:
- 7.1.

ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, VERIZON WIRELESS MOBILITY GROUNDING STANDARD ND–00071, ND–00135, AND THE NATIONAL ELECTRICAL CODE.
- 7.2.

PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
- 7.3.

ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
- 7.4.

BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE SUBCONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 AWG COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).
- 7.5.

TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER’S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER’S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- 7.6.

SUBCONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE–IN–POINTS TO THE EXISTING GROUNDING SYSTEM. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS.
- 7.7.

ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
- 7.8.

APPLY CORROSION–RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE KOPR–SHIELD ANTI–OXIDATION COMPOUND ON ALL COMPRESSION GROUNDING CONNECTIONS.
- 7.9.

A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
- 7.10.

BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE #6 AWG GROUNDING CONDUCTOR TO A GROUND BUS.
- 7.11.

DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE THE GREATER OF THE TWO DISTANCES.
- 7.12.

ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 80 PVC CONDUIT.
- 7.13.

SUBCONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE SUBCONTRACTORS EXPENSE.
8.

ACCEPTANCE TESTING:
- 8.1.

CERTIFIED PERSONNEL USING CERTIFIED EQUIPMENT SHALL PREFORM REQUIRED TESTS AND SUBMIT WRITTEN TEST REPORTS UPON COMPLETION.
- 8.2.

WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NONCOMPLYING ITEMS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER RECEIPT OF NOTICE FOR NON–COMPLIANCE.
9.

TEST PROCEDURES:
- 9.1.

ALL FEEDERS SHALL HAVE INSULATION TESTED AFTER INSTALLATION, BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS. TESTING SHALL BE FOR ONE MINUTE USING 1000V DC. PROVIDE WRITTEN DOCUMENTATION FOR ALL TEST LISTED TO SUBCONTRACTOR.

- 9.2.

PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.
- 9.3.

MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE CONDUCTORS AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES
- 9.4.

PERFORM GROUNDING TEST TO MEASURE GROUNDING RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3–POINT "FALL–OF–POTENTIAL" METHOD. PROVIDE PLOTTED TEST VALUES AND LOCATION SKETCH. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.

METALS

PART 1 – GENERAL

1.

SECTION INCLUDES:
- 1.1.

STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS, THREADED STRUCTURAL FASTENERS, ANTENNA SUPPORT ASSEMBLIES, GRATING, STEEL PLATFORMS AND PEDESTAL SUPPORTS, AND GROUTING UNDER BASE PLATES.
2.

QUALITY ASSURANCE
- 2.1.

FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- 2.2.

PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

PART 2 – PRODUCTS

1.

MATERIALS:
- A. STRUCTURAL STEEL MEMBERS:

ASTM A572, GRADE 50
- B. STRUCTURAL TUBING:

ASTM A500, GRADE B
- C. PIPE:

ASTM A53, TYPE E OR S, GRADE B
- D. BOLTS, NUTS, AND WASHERS:

ASTM A325
- E. ANCHOR BOLTS:

ASTM A307
- F. WELDING MATERIALS:

AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED
- G. GROUT:

NON–SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTIZIER ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.
- H. SHOP AND TOUCH–UP PRIMER:

SSPC 15 TYPE 1, RED OXIDE
2.

TOUCH–UP PRIMER FOR GALV. SURFACES:
- 2.1.

ZINC RICH TYPE
3.

FABRICATION:
- 3.1.

CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS.
4.

FINISH:
- 4.1.

GRIND EXPOSED WELDS SMOOTH.
- 4.2.

PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP–1 TO SP–10 PROCEDURES.
- 4.3.

STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

PART 3 – EXECUTION

1.

EXAMINATION AND PREPARATION:
- 1.1.

VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE TO PERFORM THE WORK.
2.

ERECTION:
- 2.1.

ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
- 2.2.

NO UNAUTHORIZED WELDING SHALL BE PERFORMED ON CROWN CASTLE USA, INC TOWERS. ALL OTHER WELDING SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY AWS 01.1 STRUCTURAL STEEL WELDING CODE–STEEL WELD ELECTRODES SHALL BE E70XX.
- 2.3.


DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
- 2.4.

AFTER ERECTION, TOUCH–UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH ZINC RICH PAINT (ALL EXISTING AND NEW AREAS).
3.

FIELD QUALITY CONTROL:
- 3.1.


FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND BOLT / NUT TORQUE.

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ENGINEER SEAL:

DESIGN REVISION:

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VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EUG01C02  
DATE: 06/03/15

DRAWING NAME:

GENERAL NOTES  
AND  
SPECIFICATIONS

DRAWING NUMBER:

SP2

GENERAL ELECTRICAL NOTES:

1.

ALL ELECTRICAL MATERIALS, EQUIPMENT AND INSTALLATION PROCEDURES TO CONFORM WITH VERIZON WIRELESS SPECIFICATIONS.
2.

CONTRACTOR SHALL PERFORM ALL VERIFICATION TESTS AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3.

ALL MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NFPA, AND 'UL' LISTED.
4.

THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED PER THE NEC, AND ALL APPLICABLE LOCAL CODES.
5.

ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE A MINIMUM INTERRUPTING RATING OF 42,000 AIC.
6.

FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO VENDOR PRINTS PROVIDED BY VERIZON WIRELESS FOR BTS CABINET.
7.

PATCH, REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
8.

PROVIDE VERIZON WIRELESS WITH ONE SET OF COMPLETE ELECTRICAL 'AS-BUILT' DRAWINGS AT THE COMPLETION OF THE JOB SHOWING ACTUAL ROUTINGS AND WIRING CONNECTIONS.
9.

ALL EQUIPMENT PUNCH OUTS AND CONDUITS (USED AND SPARE) TO BE RODENT PROOFED WITH CAPS, STEEL MESH, AND/OR FOAM FILL BY CONTRACTOR AS NEEDED.
10.

ALL CONTRACTOR FURNISHED MATERIALS AND EQUIPMENT SPECIFIED ON THE PROJECT SHALL BE NEW AND UNUSED, OF CURRENT MANUFACTURE AND OF THE HIGHEST GRADE.
11.

ALL EQUIPMENT, MATERIAL AND THE INSTALLATION METHODS SPECIFIED ON THE PROJECT DRAWINGS SHALL BE DESIGNED AND FABRICATED IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS, AND APPROPRIATE INDUSTRIAL CONSENSUS STANDARDS AND CODES INCLUDING ANSI, IEEE, NEMA, NFPA AND UL, ALL AS REVISED AS OF THE DATE OF THIS WORK PACKAGE.
12.

ALL ELECTRICAL ITEMS BOTH CONTRACTOR AND OWNER FURNISHED SHALL BE CHECKED FOR AGREEMENT WITH THE PROJECT DRAWINGS AND SPECIFICATIONS AND SHALL BE VISUALLY INSPECTED TO ENSURE THAT EQUIPMENT IS UNDAMAGED AND IS IN PROPER ALIGNMENT, INSTALLED PER MANUFACTURER'S INSTRUCTIONS, ELECTRICAL CONNECTIONS ARE TIGHT AND PROPERLY INSULATED WHERE REQUIRED, FUSES ARE OF THE PROPER TYPE AND SIZE, AND ELECTRICAL ENCLOSURES ARE OF THE PROPER NEMA TYPE.
13.

THE EQUIPMENT AND MATERIALS SHALL BE FURNISHED AND INSTALLED TO OPERATE SAFELY AND CONTINUOUSLY WITH NO PROTECTION FROM THE WEATHER.
14.

ELECTRICAL WORK REPRESENTED ON THE PROJECT DRAWINGS IS SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS AND ELEVATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD AND VERIFIED WITH THE OWNER'S REPRESENTATIVE.
15.

CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPPORTS FOR EQUIPMENT INSTALLED AS PART OF THIS PROJECT. SUPPORTS SHALL CONSIST OF GALVANIZED STEEL FRAMES, PLATES, BRACKETS, RACKS AND OTHER SHAPES OF ADEQUATE SIZE AND FASTENED WITH BOLTS, SCREWS OR BY WELDING TO PROVIDE RIGID SUPPORT.

GENERAL RACEWAY NOTES:

1.

CONDUIT AND CONDUIT FITTINGS SHALL MEET ANSI AND NEC STANDARDS FOR MATERIAL AND WORKMANSHIP AND SHALL BE UL LISTED.
2.

EMT CONDUIT ELECTRIC METALLIC TUBING SHALL CONFORM TO ANSI C803 AND THE REQUIREMENTS OF NEC, PARAGRAPH 348 AND BE PROTECTED ON EXTERIOR WITH A ZINC COATING AND ON INTERIOR SURFACES WITH EITHER A ZINC COATING OR LACQUER ENAMEL. FITTINGS SHALL BE ZINC COATED STEEL.
3.

MINIMUM CONDUIT SIZE SHALL BE 3/4", SIZES NOT SHOWN ON DRAWINGS SHALL BE PER NEC.
4.

ALL SPARE CONDUITS SHALL HAVE A METALLIC PULL WIRE.
5.

CONDUIT SUPPORTS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND IN ACCORDANCE WITH THE NEC.

GENERAL CONDUCTOR NOTES:

1.

ALL POWER, CONTROL AND COMMUNICATION WIRING SHALL MEET NEMA-WC, ASTM, UL, AND NEC STANDARDS FOR MATERIAL AND WORKMANSHIP UNLESS OTHERWISE SPECIFIED.
2.

ALL CONDUCTOR ACCESSORIES INCLUDING CONNECTORS, TERMINATIONS, INSULATING MATERIALS, SUPPORT GRIPS, MARKER AND CABLE TIES SHALL BE FURNISHED AND INSTALLED SUPPLIER'S INSTALLATION INSTRUCTIONS SHALL BE OBTAINED FOR CABLE ACCESSORIES. THESE INSTRUCTIONS SHALL BE IN THE POSSESSION OF THE CRAFTSMAN WHILE INSTALLING THE ACCESSORIES AND SHALL BE AVAILABLE TO THE COMPANY FOR REFERENCE.
3.

WHERE POSSIBLE, NO. 6 AWG AND SMALLER WIRE SHALL BE COLORED CODED BY THE COLOR OF THE INSULATION COVERING. COLOR CODING OF WIRE LARGER THAN NO. 6 AWG MAY BE BY MEANS OF SELF-ADHESIVE WRAP AROUND TYPE MARKERS, PER NEC.
4.

TERMINAL CONNECTOR FOR CONDUCTORS 8 AWG AND LARGER SHALL BE PRESSURE OR BOLTED CLAMP TYPE BURNDY QUIKBUG, VARILUG OR ACCEPTABLE EQUAL: OR

- COMPRESSION TYPE, BURNDY TYPE YAV OR YA (LONG BARREL), PANDUIT TYPE LCA OR LCC, OR ACCEPTABLE EQUAL. ACCEPTABLE CONNECTORS INCLUDED WITH COMPANY-FURNISHED EQUIPMENT MAY BE USED.
5.

TERMINATION PROVISIONS OF EQUIPMENT FOR CIRCUITS RATED 100 AMPERES OR LESS OR MARKED FOR NOS. 14 THROUGH 1 CONDUCTORS, SHALL BE USED ONLY FOR CONDUCTORS RATED 66°C (140°F). CONDUCTORS WITH HIGHER TEMPERATURE RATINGS SHALL BE PERMITTED, PROVIDED THE AMPACITY OR THE CONDUCTOR SIZE USED.
6.

TERMINAL CONNECTORS FOR CONDUCTORS SMALLER THAN 8 AWG SHALL BE COMPRESSION TYPE CONNECTORS SIZED FOR THE CONDUCTOR AND THE TERMINAL. THE CONNECTORS SHALL BE CONSTRUCTED OF FINE GRADE HIGH CONDUCTIVITY COPPER IN ACCORDANCE WITH QQ-C-516 AND SHALL BE TIN-PLATED IN ACCORDANCE WITH MIL-T-10727. THE INTERIOR SURFACE OF THE CONNECTOR WIRE BARREL SHALL BE SERRATED AND THE EXTERIOR SURFACE OF THE CONNECTOR WIRE BARREL SHALL BE PROVIDED WITH CRIMP GUIDES.

GENERAL GROUNDING NOTES:

1.

ALL WORK SHALL COMPLY WITH THE LATEST VERIZON WIRELESS GROUNDING SPECIFICATIONS AND REQUIREMENTS.
2.

ALL METALLIC COMPONENTS ON THE SITE MUST BE GROUNDED TO THE GROUND RING. THIS INCLUDES STEEL CONDUITS USED TO DELIVER THE TELCO AND POWER UTILITY LINES TO THE SITE OR USED TO PROVIDE ACCESS BY UTILITIES OR CONTRACTORS TO THE VARIOUS CABINETS.
3.

THE CONTRACTOR MUST VERIFY THAT NEW GROUNDING SYSTEM RESISTANCE IS EQUAL TO OR LESS THAN FIVE (5) OHMS PER VERIZON WIRELESS SPECIFICATIONS.
4.

RUN ALL GROUND WIRES IN AN ORGANIZED MANNER, AVOID CROSSING OF WIRES WHEREVER POSSIBLE. DO NOT RUN WIRES OVER CONCRETE SLAB.
5.

INSTALL ALL GROUND WIRES IN A DOWNWARD SLOPE FOR MAXIMUM LIGHTNING PROTECTION.
6.

MAINTAIN ALL MINIMUM BENDING RADII OF THE GROUNDING WIRES.
7.

DO NOT REMOVE MORE INSULATION FROM THE GROUND WIRES THAN NECESSARY WHEN CADWELDING OR CRIMPING IF EXCESS INSULATION IS REMOVED, THE CONNECTION WILL BE CONSIDERED UNACCEPTABLE AND WILL BE CORRECTED PER THE VERIZON WIRELESS REPRESENTATIVES'S DIRECTION.
8.

DOWN LEAD FOR ANTENNA SECTORS MUST BE CONNECTED DIRECTLY TO THE GROUND RING.
9.

ALL BASE TRANSCEIVER SITE EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE INTERNATIONAL ELECTRICAL CODE (NEC), AND THE LATEST EDITION OF LIGHTNING PROTECTION CODE NFPA 780 AND VERIZON WIRELESS STANDARDS.
10.

ALL GROUNDING CONNECTIONS, INTERIOR AND EXTERIOR, MADE THROUGHOUT THIS DOCUMENT SHALL BE MADE USING AN ANTI-OXIDATION COMPOUND, THE ANTI-OXIDATION COMPOUND SHALL BE 'THOMAS AND BETTS' KOPR-SHIELD (TM OF JET LUBE, INC.) THERE IS NO EQUIVALENT FOR THIS PRODUCT: NO OTHER COMPOUND WILL BE ACCEPTED. COAT ALL WIRES BEFORE LUGGING. COAT ALL SURFACES BEFORE CONNECTING.
11.

ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT PRIOR TO CADWELD, GALVANIZING SHALL BE REMOVED BY GRINDING SURFACE TO BARE METAL 'SLAG' FROM CADWELD MUST BE REMOVED AND WELD SHALL BE SPRAYED WITH COLD GALVANIZE AFTER COMPLETION.
12.

FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED. CLIPS OF THE FOLLOWING MATERIALS AND TYPES MAY BE USED TO SUPPORT GROUNDING CONDUCTORS.
- 12.1.

PLASTIC CLIPS
- 12.2.

STAINLESS STEEL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
- 12.3.

FERROUS METAL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
13.

ALL HARDWARE, BOLTS, NUTS, WASHERS, AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL. EVERY CONNECTION SHALL BE (BOLT-FLATWASHER-BUSS-LUG-FLATWASHER -LOCKWASHER-NUT), IN THAT EXACT ORDER WITH NUT FACING OUTWARD, BACK TO BACK LUGGING SHALL BE (BOLT-FLATWASHER-LUG-FLATWASHER-LUG- BUSS-LUG-FLATWASHER-LOCK WASHER-NUT), IN THAT EXACT ORDER IS ACCEPTED WHERE NECESSARY TO CONNECT MANY LUGS TO A BUSS BAR. STACKING OF LUGS, BUS-LUG-LUG, IS NOT ACCEPTABLE.
14.

THE COMPRESSION GROUND LUG FOR #2 AWG BARE SOLID GROUNDING CONDUCTORS SHALL BE BURNDY TYPE YA3C-2TC.
15.

THE ANTENNA CABLES SHALL BE GROUNDED AT THE TOP AND BOTTOM OF THE VERTICAL RUN. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUS AT THE LOWEST POINT OF THE VERTICAL RUN. THE ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE BTS. GROUNDING KITS ON CABLE SHALL HAVE A MINIMUM BEND OF 6" AND SHALL BE KEPT AS CLOSE TO VERTICAL AS POSSIBLE. FLAT WASHER SUPPLIED WITH GROUND KITS MUST BE REPLACED WITH SMALLER STAINLESS STEEL FLAT WASHERS, WASHERS MUST REMAIN FLAT AGAINST GROUND BAR, ALL FASTENERS MUST BE STAINLESS STEEL AND KOPR-SHIELD MUST BE USED ON BOTH SIDES OF THE GROUND BAR.

PREPARED FOR:

verizon

15505 SAND CANYON AVENUE  
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IRVINE, CALIFORNIA 92615  
949.286.7800

PREPARED BY:

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ENGINEER SEAL:

DESIGN REVISION:

2	07/24/15	100% ZD	RU
1	07/01/15	ISSUED FOR ZONING	RU
0	08/03/15	ISSUED FOR ZONING	JNR
NO.	DATE	REVISIONS	BY
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VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY:

DESIGNED BY:

PROJECT NO:

DATE:

DMS

RU

EU001002

08/03/16

DRAWING NAME:

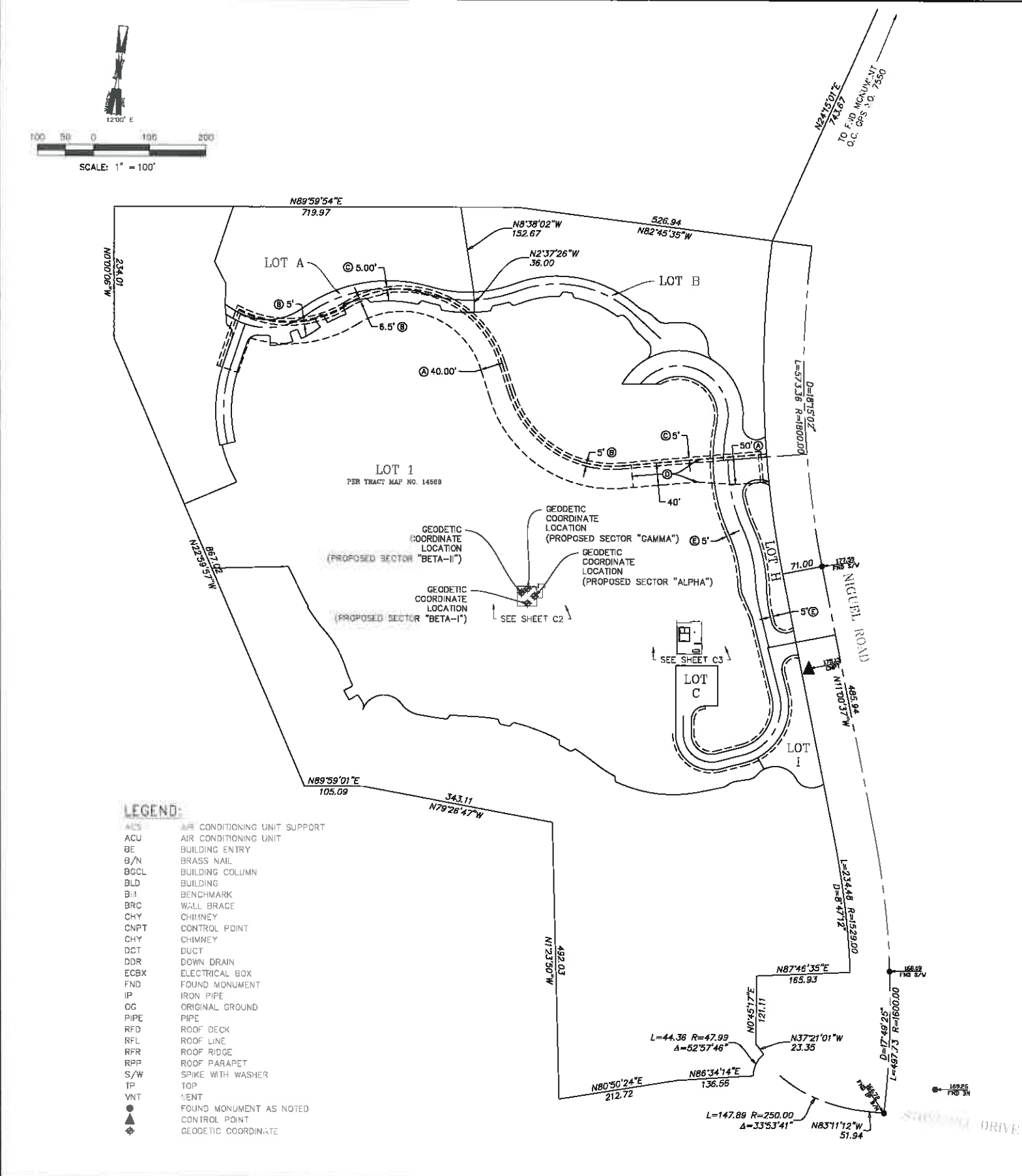
GENERAL NOTES  
AND  
SPECIFICATIONS

DRAWING NUMBER:

SP3

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GEODETIC COORDINATES:

PROPOSED SECTOR "ALPHA"	PROPOSED SECTOR "BETA-I"
LATITUDE 33° 28' 54.55" N	LATITUDE 33° 28' 54.42" N
LONGITUDE 117° 42' 57.16" W	LONGITUDE 117° 42' 57.31" W
PROPOSED SECTOR "BETA-II"	PROPOSED SECTOR "GAMMA"
LATITUDE 33° 28' 54.61" N	LATITUDE 33° 28' 54.68" N
LONGITUDE 117° 42' 57.44" W	LONGITUDE 117° 42' 57.32" W

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CENTERLINE OF NIGUEL ROAD BEING NORTH 11°00'37" WEST PER TRACT MAP NO. 14589, M.M. BOOK 790 PAGES 4 THROUGH 14. DISTANCES SHOWN ARE GRID DISTANCES. TO OBTAIN GROUND DISTANCES MULTIPLY BY A COMBINED SCALE FACTOR OF 1.0000454478.

BENCHMARK REFERENCE:

DESCRIPTION: ALUMINUM BENCHMARK DISK "3MM-5-78R86" AS PUBLISHED IN THE ORANGE COUNTY SURVEY DATA SHEETS.

ELEVATION: 169.256' (NAVD88)

ASSESSOR'S IDENTIFICATION:

ORANGE COUNTY A.P.N. 672-621-01

AREA:

14.24± ACRES PER ORANGE COUNTY ASSESSOR

EASEMENT NOTES:

- AN EASEMENT IN FAVOR OF SOUTH COAST WATER DISTRICT FOR PUBLIC WATER OR SEWER LINE AND INCIDENTAL PURPOSES RECORDED JUNE 24, 1996, AS INSTRUMENT NO. 19960320839 OF OFFICIAL RECORDS.
- AN EASEMENT IN FAVOR OF PACIFIC BELL FOR EITHER OR BOTH UNDERGROUND LINES, CONDUITS AND INCIDENTAL PURPOSES, INCLUDING ABOVE-GROUND APPURTENANT FIXTURES, RECORDED OCTOBER 16 1996, AS INSTRUMENT NO. 19960524465 OF OFFICIAL RECORDS.
- AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA GAS COMPANY FOR PIPELINES AND INCIDENTAL PURPOSES RECORDED NOVEMBER 21, 1996, AS INSTRUMENT NO. 19960587379 OF OFFICIAL RECORDS.
- AN EASEMENT IN FAVOR OF THE CITY OF DANA POINT FOR INGRESS AND EGRESS PURPOSES RECORDED MAY 8, 1998, AS INSTRUMENT NO. 19980283676 OF OFFICIAL RECORDS.
- AN EASEMENT TO THE CITY OF DANA POINT FOR PUBLIC UTILITY PURPOSES

LEGAL DESCRIPTION:

TRACT NO. 14589, LOT 1 PORTION OF LOT & PORTION OF LOTS A & B

DATE OF SURVEY:

MAY 13, 2015

PREPARED FOR:  
**verizon**wireless  
15505 BAND CANYON AVENUE  
BLOS. 0, FIRST FLR  
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ENGINEER SEAL:  
**PRELIMINARY**

DESIGN REVISION:			
A	05/20/15	80% REVIEW 2D	RU
NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

VERIZON SITE ID:  
**VIA MONARCA**  
1 MONARCH BEACH  
RESORT SOUTH  
DANA POINT, CA. 92629

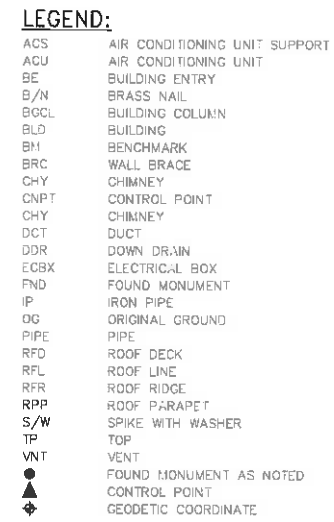
TOWER OWNER SITE ID:

PREPARED BY:  
APPROVED BY: TBD  
DESIGNED BY: RU  
PROJECT NO: EUB01C02  
DATE: 05/20/15

DRAWING NAME:  
**TOPOGRAPHIC SURVEY**

DRAWING NUMBER:  
**C-1**

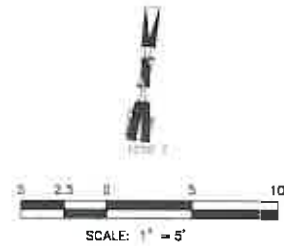
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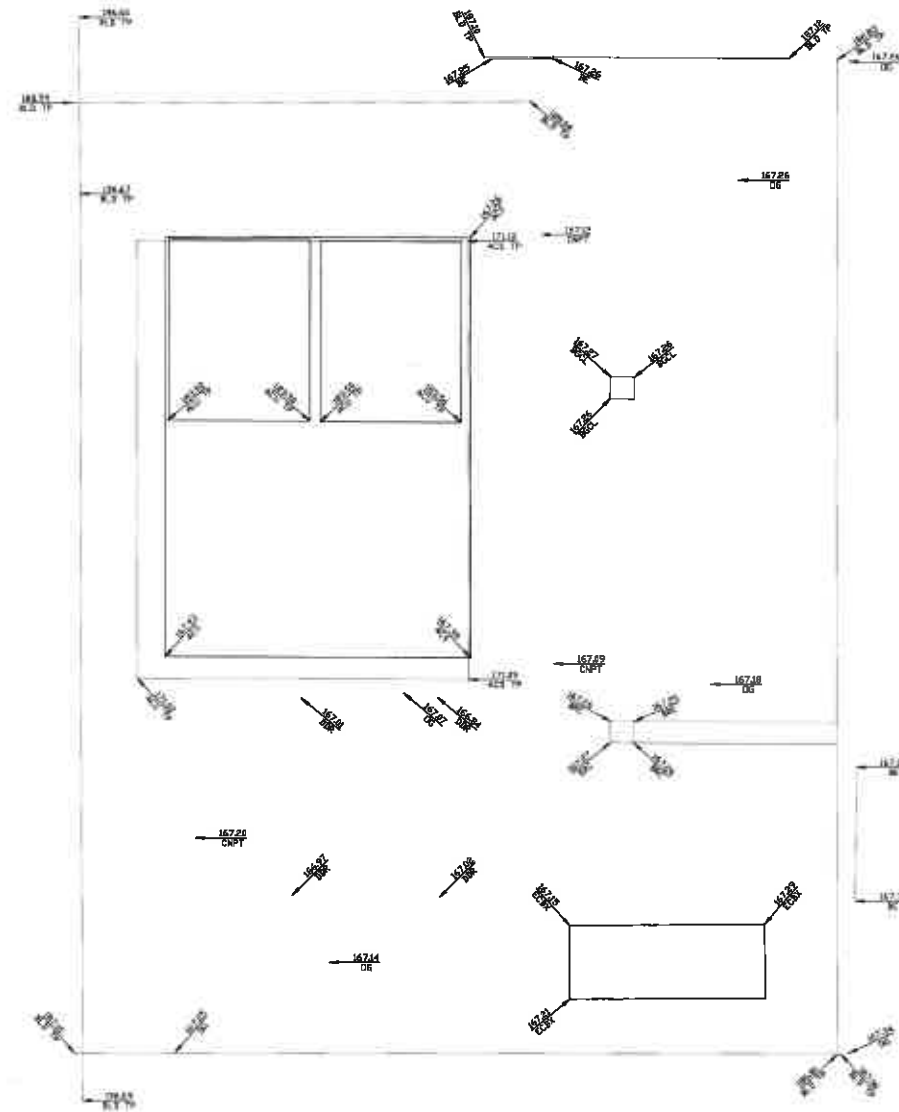
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## PROPOSED EQUIPMENT LOCATION



LEGEND:

- |      |                         |         |
|------|-------------------------|---------|
| ACS  | AIR CONDITIONING UNIT   | SUPPORT |
| ACU  | AIR CONDITIONING UNIT   |         |
| BE   | BUILDING ENTRY          |         |
| B/N  | BRASS NAIL              |         |
| BCCL | BUILDING COLUMN         |         |
| BLD  | BUILDING                |         |
| BM   | BENCHMARK               |         |
| BRC  | WALL BRACE              |         |
| CHY  | CHIMNEY                 |         |
| CNPT | CONTROL POINT           |         |
| CHY  | CHIMNEY                 |         |
| DCT  | DUCT                    |         |
| DDR  | DOWN DRAIN              |         |
| ECBX | ELECTRICAL BOX          |         |
| FMS  | FOUND MONUMENT          |         |
| IP   | IRON PIPE               |         |
| OG   | ORIGINAL GROUND         |         |
| PIP  | PIPE                    |         |
| RD   | ROOF DECK               |         |
| RL   | ROOF LINE               |         |
| RR   | ROOF RIDGE              |         |
| RPR  | ROOF PARAPET            |         |
| S/W  | SPIKE WITH WASHER       |         |
| TP   | TOP                     |         |
| VENT | VENT                    |         |
|      | FOUND MONUMENT AS NOTED |         |
|      | CONTROL POINT           |         |
|      | GEODETIC COORDINATE     |         |

PREPARED FOR: —



PREPARED BY: \_\_\_\_\_



—ENGINEER SEAL:—

**PRELIMINARY**

DESIGN REVISION: \_\_\_\_\_


A	05/20/15	90% REVIEW ZD	AU
NO.	DATE	REVISIONS	BY
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VERIZON SITE ID:—

**VIA MONARCA  
1 MONARCH BEACH  
RESORT SOUTH  
DANA POINT, CA. 92629**

TOWER OWNER SITE ID: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_

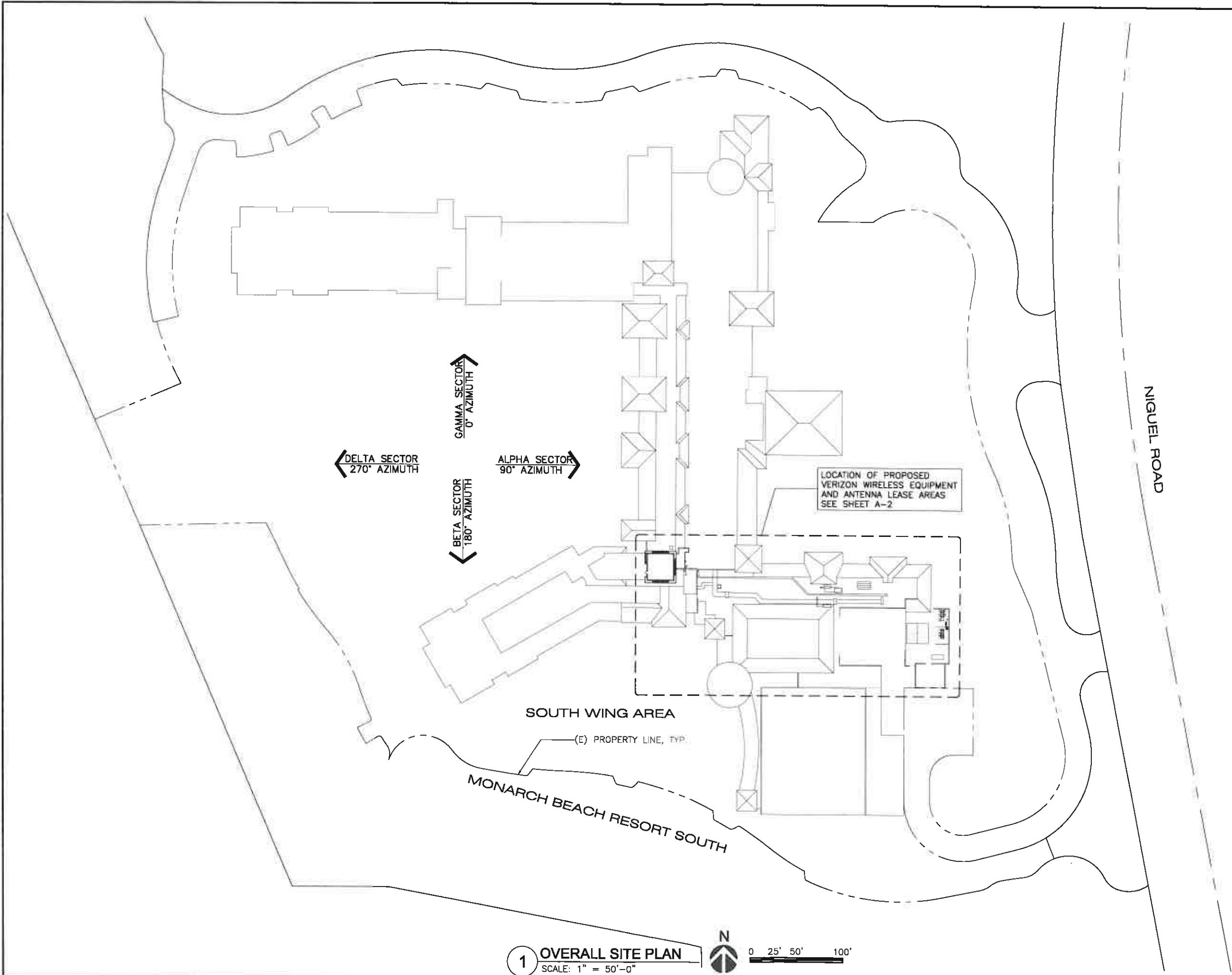
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DESIGNED BY: RU  
PROJECT NO: EU801C02  
DATE: 05/20/15

DRAWING NAME: —

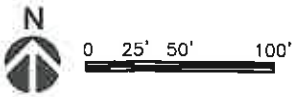
TOPOGRAPHIC  
SURVEY

**DRAWING NUMBER:** \_\_\_\_\_

**C-3**



1 OVERALL SITE PLAN  
SCALE: 1" = 50'-0"



PREPARED FOR:

**verizon**

15585 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
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ENGINEER SEAL:

DESIGN REVISION:

2	07/24/15	100% ZD	RU
1	07/01/15	ISSUED FOR ZONING	RU
0	08/03/15	ISSUED FOR ZONING	JNR

NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

VERIZON SITE ID:

**VIA MONARCA**  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

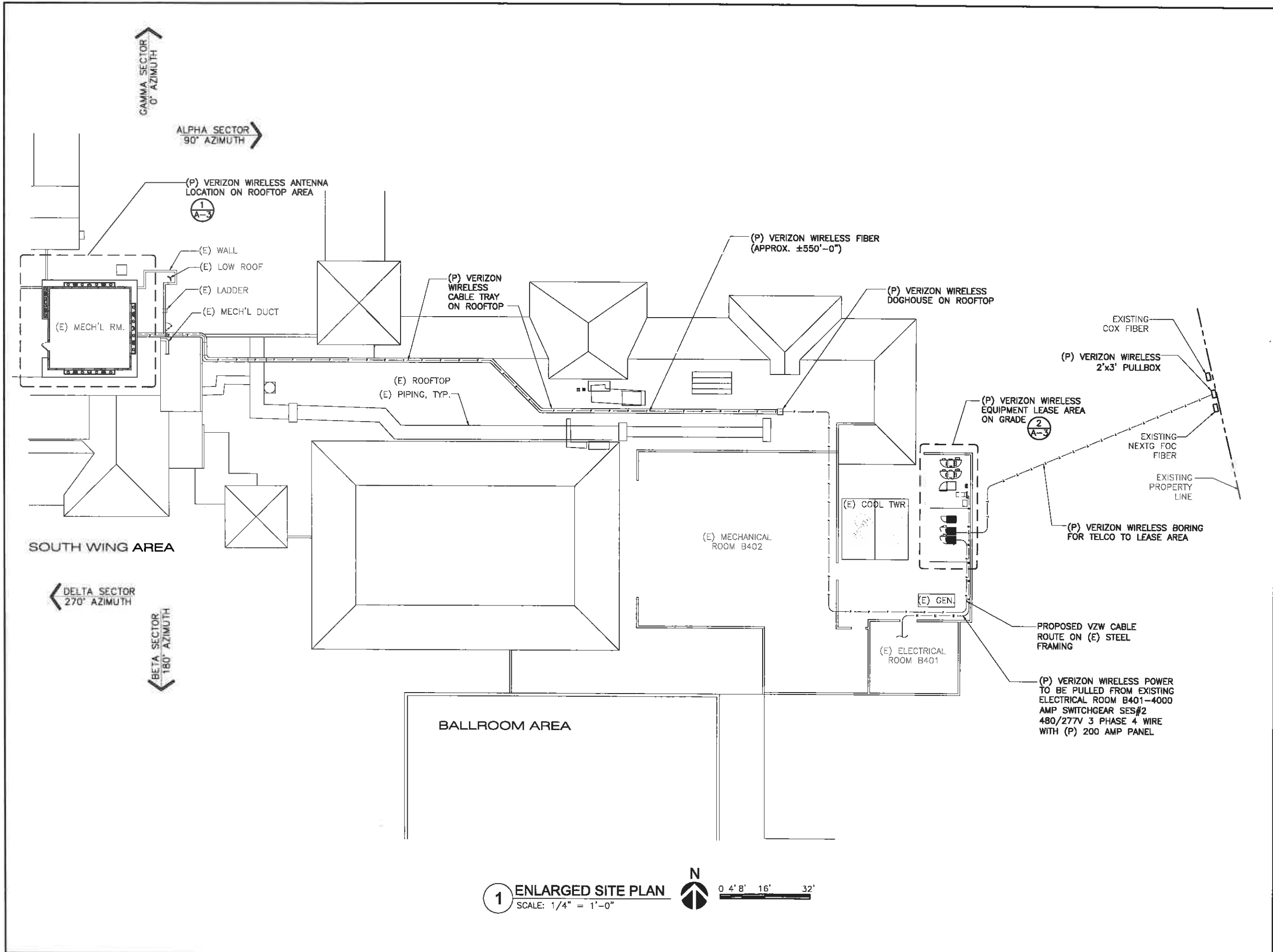
APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EU601C02  
DATE: 08/03/15

DRAWING NAME:

**OVERALL  
SITE PLAN**

DRAWING NUMBER:

**A1**



PREPARED FOR:

15505 SAND CANYON AVENUE  
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ENGINEER SEAL:

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VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

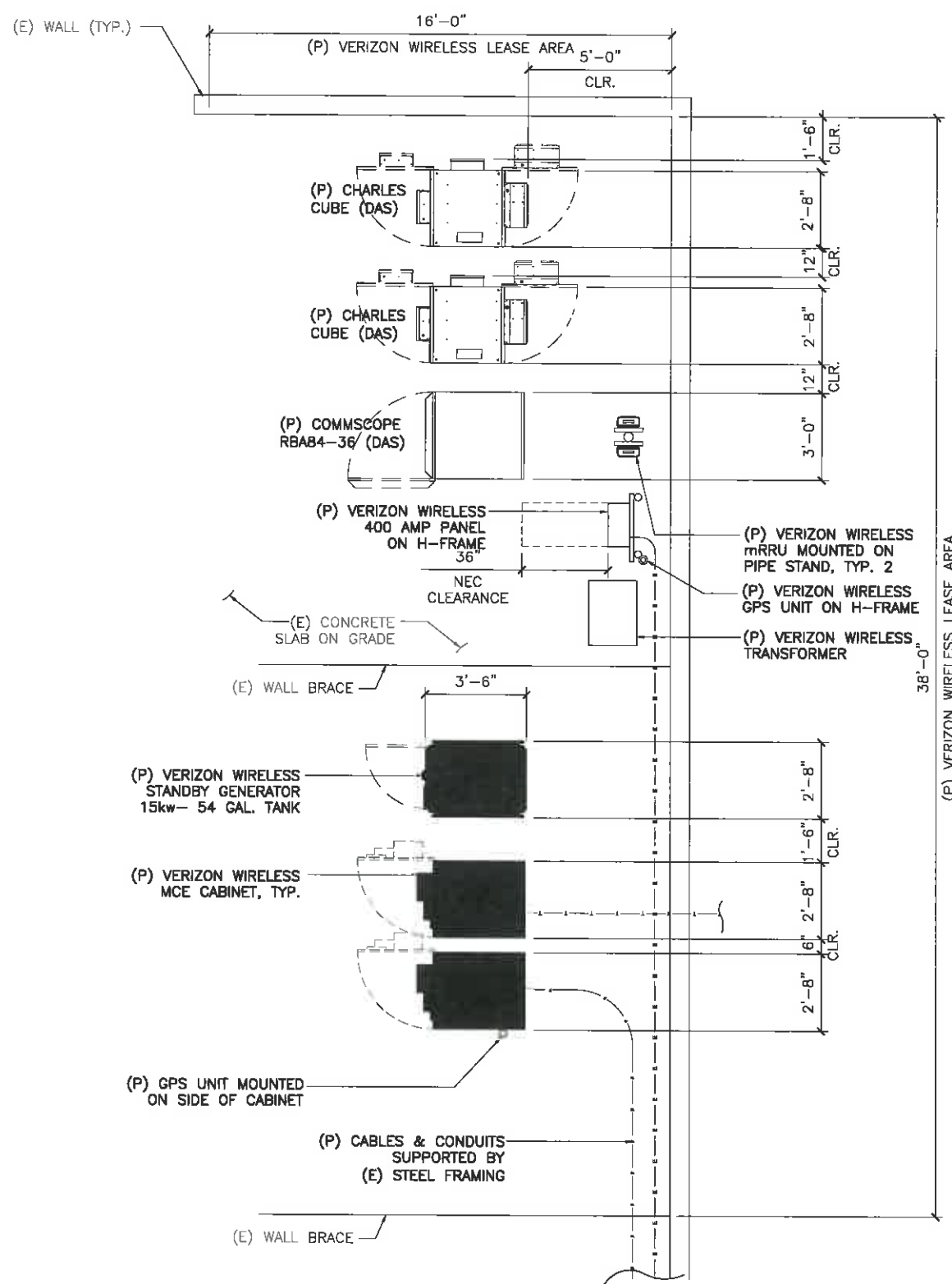
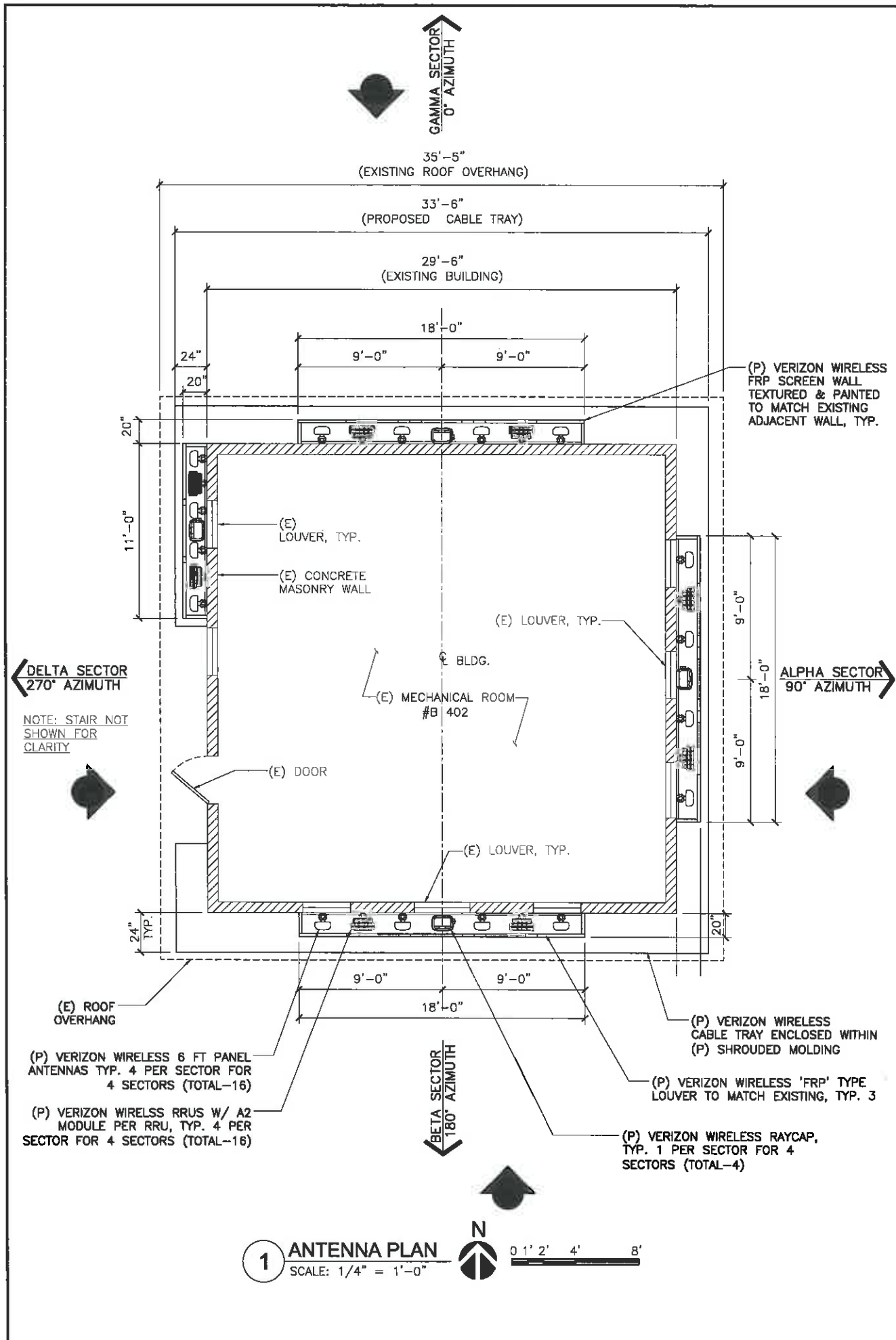
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DESIGNED BY: RU  
PROJECT NO: EJB01C02  
DATE: 06/03/15

DRAWING NAME:

ENLARGED  
SITE PLAN

DRAWING NUMBER:

A2



PREPARED FOR:

**verizon**

15505 SAND CANYON AVENUE  
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FAX: 949-224-7501

ENGINEER SEAL:

DESIGN REVISION:

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VERIZON SITE ID:

**VIA MONARCA**  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EUB01C02  
DATE: 06/03/15

DRAWING NAME:

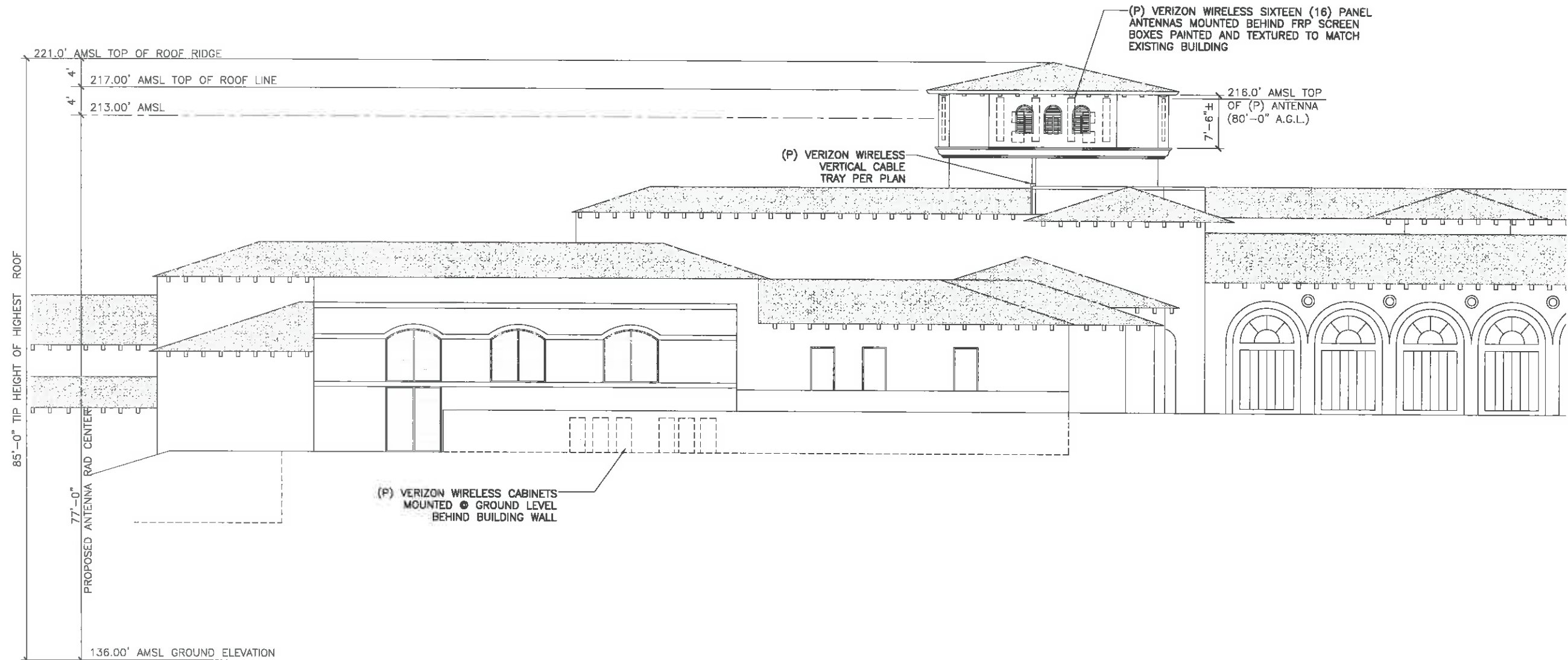
**ANTENNA PLAN & EQUIPMENT PLAN**

DRAWING NUMBER:

**A3**

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DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS

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1 ENLARGED EAST ELEVATION  
SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16'

PREPARED FOR:

**verizon**

15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
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ENGINEER SEAL:

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0	08/03/15	ISSUED FOR ZONING	JNR
NO.	DATE	REVISIONS	BY
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VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EU601C02  
DATE: 08/03/15

DRAWING NAME:

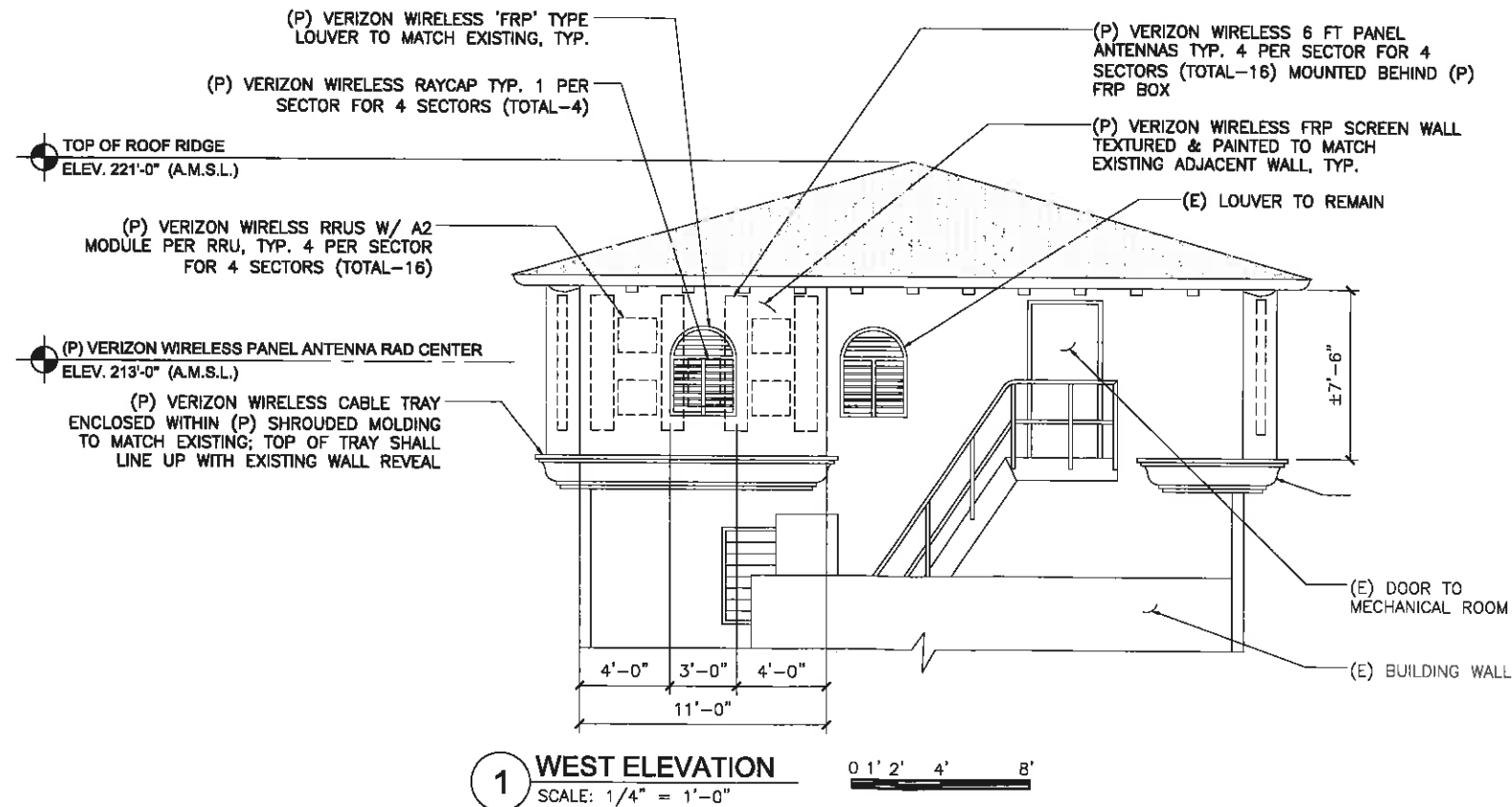
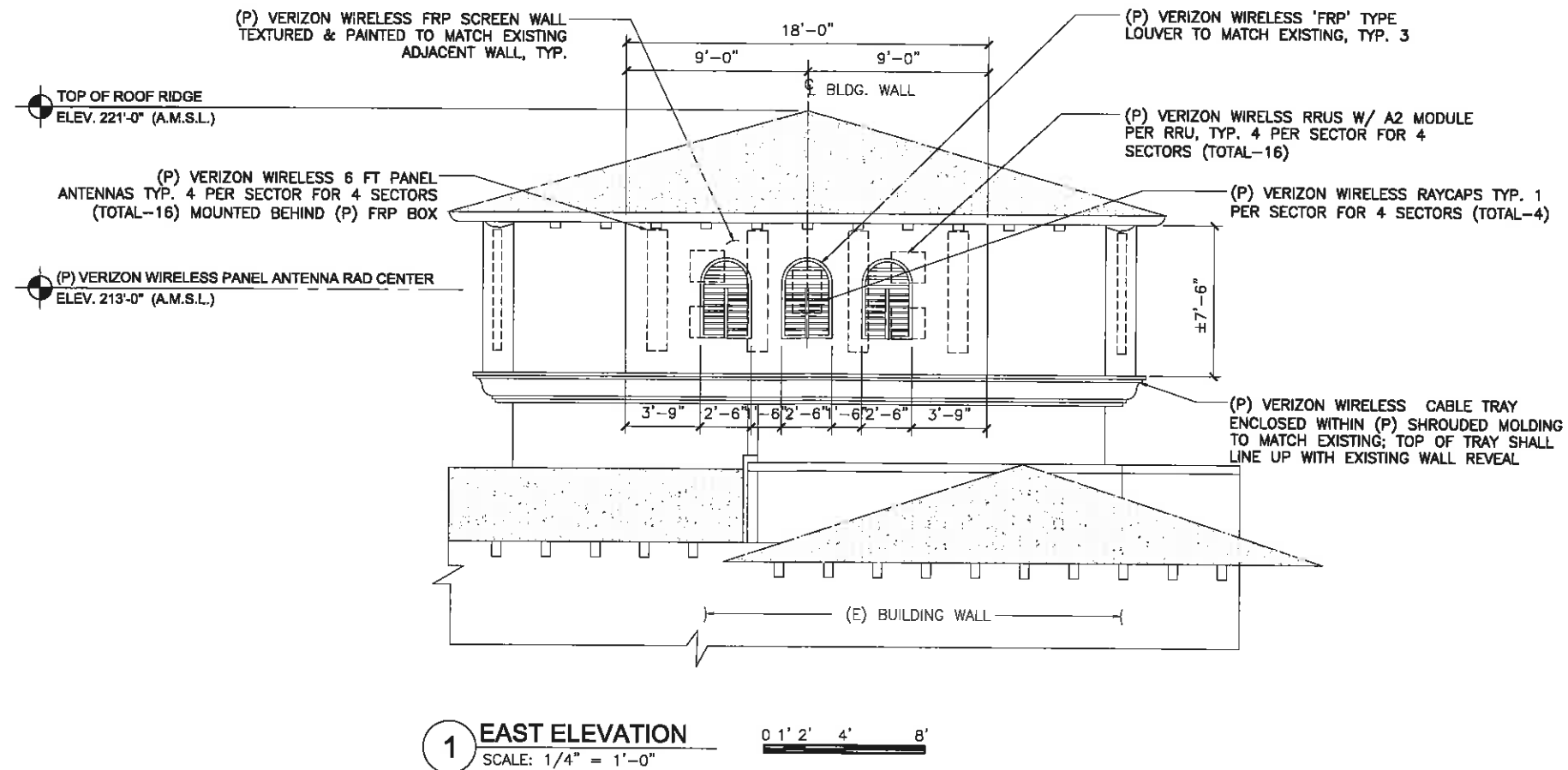
ENLARGED EAST  
ELEVATION

DRAWING NUMBER:

A4

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PREPARED FOR:

**verizon**

16605 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
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949.286.7000

PREPARED BY:

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ENGINEER SEAL:

DESIGN REVISION:				
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0	06/03/15	ISSUED FOR ZONING	JNR	
NO.	DATE	REVISIONS	BY	
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VERIZON SITE ID:

**VIA MONARCA**  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EUB01C02  
DATE: 08/03/15

DRAWING NAME:

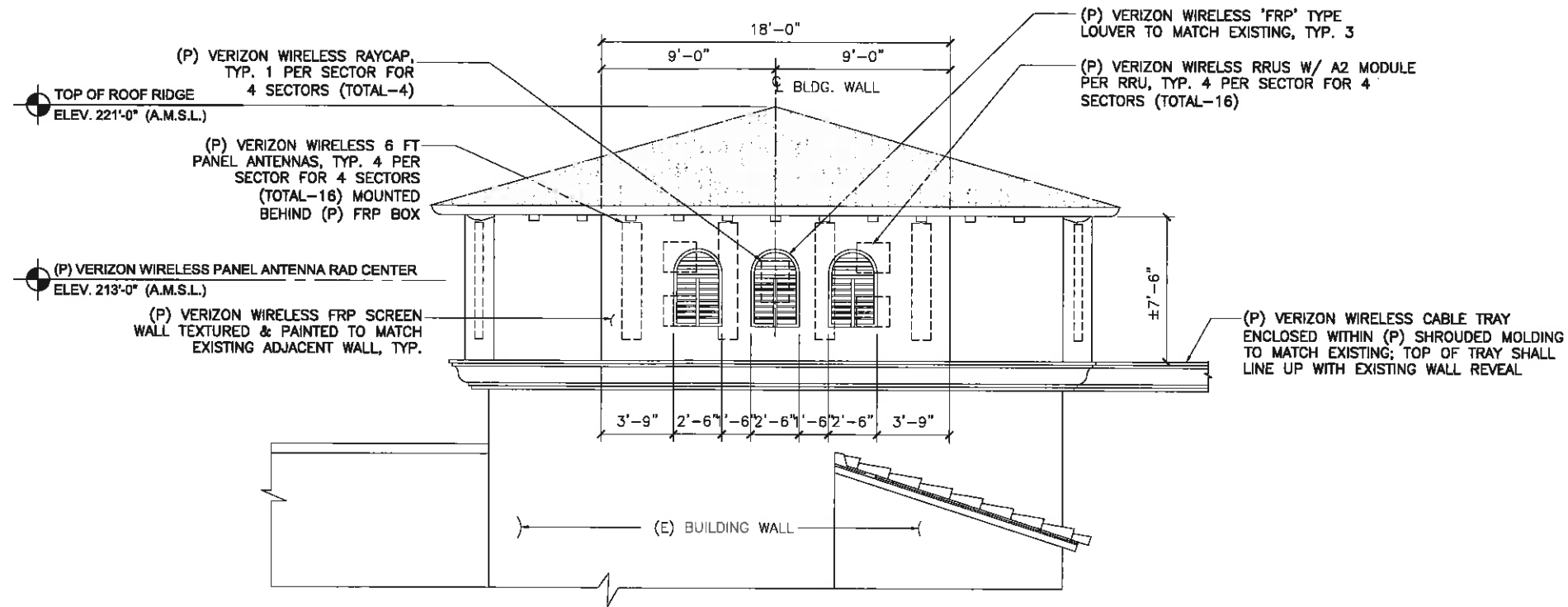
**BUILDING ELEVATIONS**

DRAWING NUMBER:

**A5**

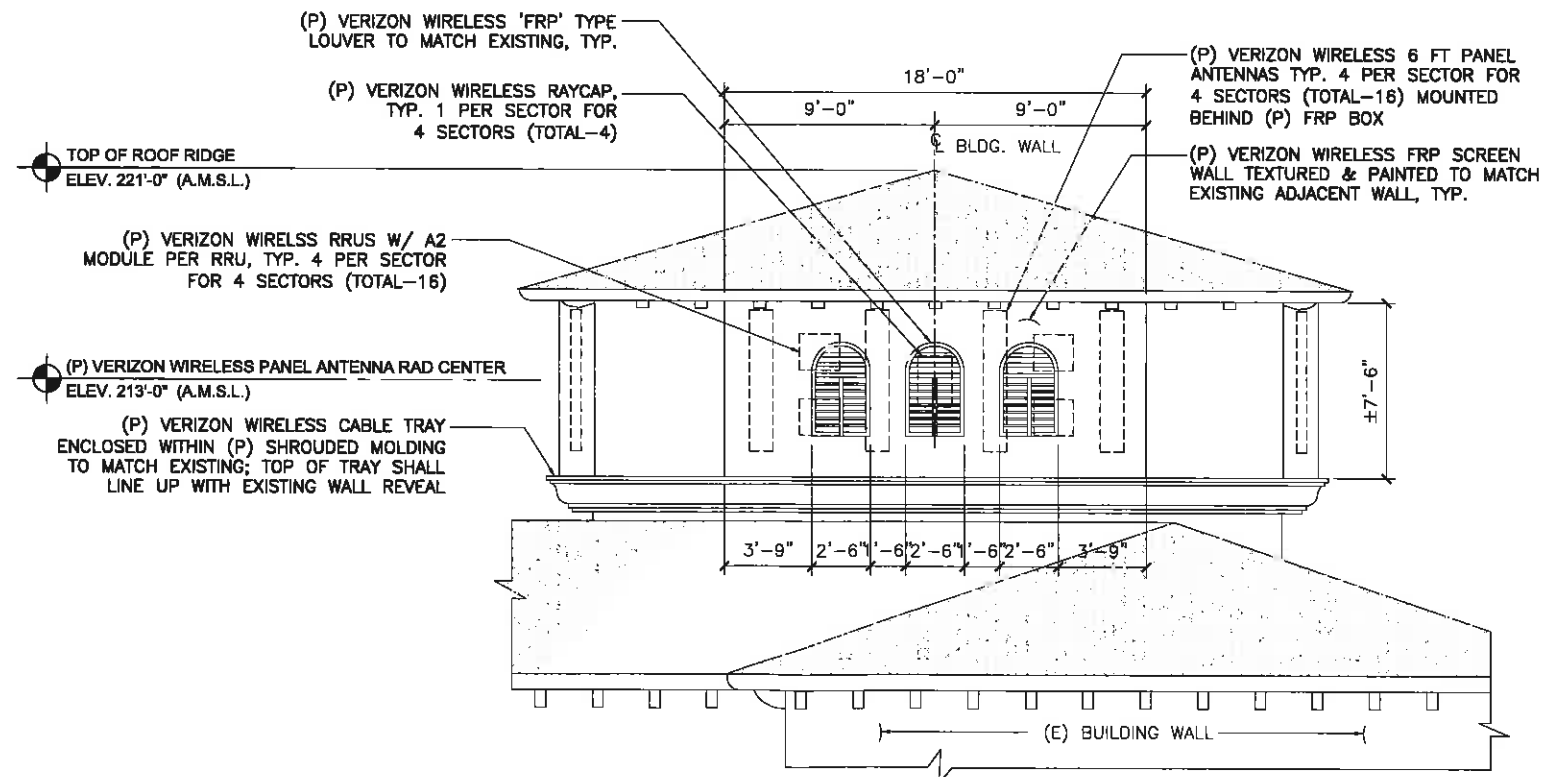
NOTICE: THIS DRAWING AND THE DESIGN SHOWN ARE THE PROPERTY OF JACOBS ENGINEERING GROUP, INC. THE REPRODUCTION, COPYING, OR USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED AND ANY INFRINGEMENT WILL BE SUBJECT TO LEGAL ACTION.

NOT FOR CONSTRUCTION  
DRAWINGS PLOTTED TO SCALE ON 24x36 SHEETS



1 NORTH ELEVATION  
SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8'



1 SOUTH ELEVATION  
SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8'

PREPARED FOR:

**verizon**

15505 SAND CANYON AVENUE  
BLDG. D, FIRST FLR.  
IRVINE, CALIFORNIA 92618  
949.256.7000

PREPARED BY:

**JACOBS**  
Jacobs Engineering Group, Inc.

3161 MICHELSON DRIVE, SUITE 300  
IRVINE, CALIFORNIA 92612  
PHONE: 949-250-1818  
FAX: 949-224-7581

ENGINEER SEAL:

DESIGN REVISION:

2	07/24/15	100% ZD	RU
1	07/01/15	ISSUED FOR ZONING	RU
0	06/03/15	ISSUED FOR ZONING	JNR
NO.	DATE	REVISIONS	BY
NOT VALID WITHOUT SIGNATURE AND DATE			

VERIZON SITE ID:

VIA MONARCA  
1 MONARCH BEACH RESORT  
DANA POINT, CA. 92629

TOWER OWNER SITE ID:

VIA MONARCA #316293

PREPARED BY:

APPROVED BY: DMS  
DESIGNED BY: RU  
PROJECT NO: EU001C02  
DATE: 06/03/15

DRAWING NAME:

BUILDING  
ELEVATIONS

DRAWING NUMBER:

A6

Existing



Proposed



view from Niguel Road looking west at site

Existing



Proposed



view from Pacific Coast Highway looking east at site

Existing



Proposed



Proposed Verizon  
Installation

view from Niguel Road looking northwest at site





RECEIVED  
**WATERFORD**  
COMPLIANCE...FROM START TO SIGNAL

## Radio Frequency Exposure Pre – Installation FCC Compliance Assessment



Site Specific Information			
Site Name	Via Monarca	Categorically Excluded?	No
Street Address	1 Monarch Beach Resort	5% Contributor To Areas Requiring Mitigation?	No
City, State, Zip	Dana Point, CA 92629		
Multi-Licensee Facility	No	Max % MPE (Predictive)*	17.7803% Occupational
Structure Type	Rooftop	Max % MPE (Measured)	N/A
Broadcast Equipment	No	Assessment Date	September 09, 2015
# of Access Points	1	Assessment Purpose	Modification
Compliance Status	This site will be compliant based on the mitigation requirements listed below		

Verizon Wireless Contribution:

\* Walking Surfaces

<input checked="" type="checkbox"/>	Worst-case RF power density levels are BELOW the MPE for General Population/Uncontrolled Environments in accessible areas.
<input type="checkbox"/>	Worst-case RF power density levels are ABOVE the MPE for General Population/Uncontrolled Environments but BELOW the MPE for Occupational/Controlled environments.
<input type="checkbox"/>	Worst-case RF power density levels are ABOVE the MPE for Occupational/Controlled Environments but BELOW 10x the MPE for Occupational/Controlled environments.
<input type="checkbox"/>	Worst-case RF power density levels are ABOVE 10x the MPE for Occupational/Controlled environments.

Compliance Requirements						
	Guidelines	Notice	Caution	Warning	NOC Information	Demarcation
Access Point	<input checked="" type="checkbox"/> [1]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input checked="" type="checkbox"/> [1]	<input type="checkbox"/>
Alpha	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
Beta	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
Gamma	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
Delta	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>

### Additional Compliance Requirement(s):

Waterford Consultants, LLC recommends coordinating with all transmitting licensees before performing services around RF emitters.

Consultant Legal Name:	Waterford Consultants, LLC	Phone/Fax:	703.596.1022
Address:	201 Loudoun Street Southeast Suite 300, Leesburg, Virginia 20175		

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Supporting Doc #4

## Table of Contents

1. Executive Summary.....	3
2. Proposed Site Characteristics .....	4
a. Structure .....	4
b. Antenna Inventory .....	5
3. Analysis .....	6
a. Predictive Model: All Transmitters.....	6
b. Predictive Model: Significant Contribution of Verizon Wireless .....	8
4. Conclusion.....	11
a. Conclusion Narrative .....	11
b. Compliance Requirements .....	12
5. Appendix A: RF Consultant Certifications.....	14
a. Prepare Certification .....	14
b. Reviewer Certification .....	14
6. Appendix B: Reference Information.....	15
a. FCC Rules & Regulations .....	15
b. Occupational Safety and Health Administration (OSHA) Requirements .....	15
c. RF Signage .....	16
d. Barriers .....	16
7. Appendix C: Roofmaster™ .....	17
8. Appendix D: Qualifications of Waterford Consultants, LLC .....	18
9. Appendix E: Statement of Limiting Conditions.....	19

## 1. Executive Summary

Verizon Wireless has contracted with Waterford Consultants, LLC, an independent Radio Frequency consulting firm, to conduct a Radio Frequency Exposure (RFE) Compliance **Pre-Installation Assessment** of the Via Monarca cell site. The following report contains a detailed summary of the Radio Frequency environment as it relates to Federal Communications Commission (FCC) and Occupational Safety & Health Administration (OSHA) Rules and Regulations for all individuals.

The **Verizon Wireless antenna data** was provided by:

<b>Name:</b>	Vinh Vuong
<b>Title:</b>	RF Engineer
<b>Date:</b>	August 25, 2015
<b>Region:</b>	West

This **Pre-Installation** compliance assessment and the report has been prepared and reviewed by:

	<b>Preparer</b>	<b>Reviewer</b>
<b>Name:</b>	Jeffrey Schwartz	Thomas Tessier
<b>Title:</b>	RF Technical Analyst	Technical Staff Engineer
<b>Date:</b>	September 9, 2015	September 10, 2015

This report utilizes the following for predictive modeling of the ambient RF environment:

**MPE Modeling Program:** Roofmaster™ (See Section 7)


**Required Modeling Assumptions:** 100% Duty Cycle and Maximum Total Power Output.

### **Additional Modeling Assumptions:**

Antenna radiation pattern files that characterize directivity and energy suppression values have been utilized to model each RF emitter at this location. If a manufacturer's antenna pattern is not available or the actual antenna model is unknown, Waterford Consultants, LLC has utilized a generic antenna pattern from a library of panel, omnidirectional, microwave and broadcast patterns that are representative of the actual antenna. Similarly, the effective radiated power values for each antenna, if not provided, has been assumed based on antenna type, carrier and region. Refer to the antenna inventory table for a listing of the emitter properties utilized in this report.

2. Proposed Site Characteristics

a. Structure

Physical Description		
Site Latitude (NAD 83)	33.48239	
Site Longitude (NAD 83)	-117.71535	
Site Elevation (AMSL)	136'	
Structure Height (AGL)	85'	
Overall Structure Height	221'	

## b. Antenna Inventory

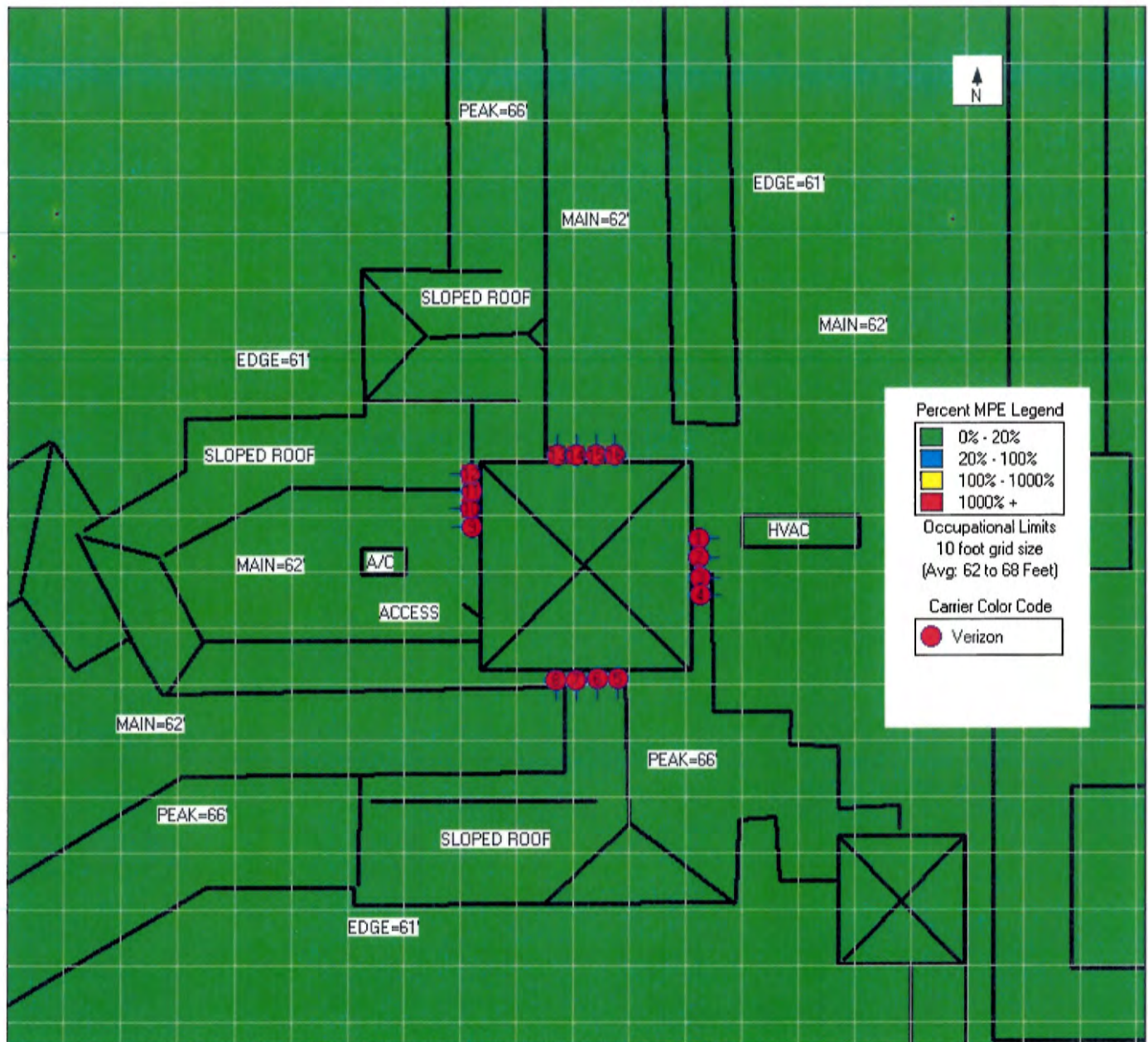
Roof Master™ Antenna Inventory

Ant #	Operator	Antenna Make	Antenna Model	Type	Frequency (MHz)	Az (deg)	Downtilt (deg)	Horizontal Beam width	Ant (ft)	Antenna Gain (dBd)	Total ERP (watts)	Total EIRP (watts)	X (ft)	Y (ft)	Antenna Centerline Main Level (ft)
1	Verizon Wireless	ANDREW	SBNHH-1D65B-04DT	Panel	700	90	0	62	6.1	12.40	1859	3050	83	68	76.0
2	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	2100	90	0	63	6.1	18.20	9418	15451	83	65	76.0
3	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	1900	90	0	66	6.1	17.90	8790	14420	83	61	76.0
4	Verizon Wireless	ANDREW	SBNHH-1D65C-00DT	Panel	2300	90	0	58	8.0	15.74	0	0	83	58	76.0
5	Verizon Wireless	ANDREW	SBNHH-1D65B-04DT	Panel	700	180	0	62	6.1	12.40	1859	3050	69	43	76.0
6	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	2100	180	0	63	6.1	18.20	9418	15451	65	43	76.0
7	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	1900	180	0	66	6.1	17.90	8790	14420	61	43	76.0
8	Verizon Wireless	ANDREW	SBNHH-1D65C-00DT	Panel	2300	180	0	58	8.0	15.74	0	0	57	43	76.0
9	Verizon Wireless	ANDREW	SBNHH-1D65B-04DT	Panel	700	270	0	62	6.1	12.40	500	820	42	70	76.0
10	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	2100	270	0	63	6.1	18.20	9418	15451	42	73	76.0
11	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	1900	270	0	66	6.1	17.90	8790	14420	42	77	76.0
12	Verizon Wireless	ANDREW	SBNHH-1D65C-00DT	Panel	2300	270	0	58	8.0	15.74	0	0	42	80	76.0
13	Verizon Wireless	ANDREW	SBNHH-1D65B-04DT	Panel	700	0	0	62	6.1	12.40	1859	3050	58	83	76.0
14	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	2100	0	0	63	6.1	18.20	9418	15451	61	83	76.0
15	Verizon Wireless	ANDREW	SBNHH-1D65B-02DT	Panel	1900	0	0	66	6.1	17.90	8790	14420	65	83	76.0
16	Verizon Wireless	ANDREW	SBNHH-1D65C-00DT	Panel	2300	0	0	58	8.0	15.74	0	0	68	83	76.0

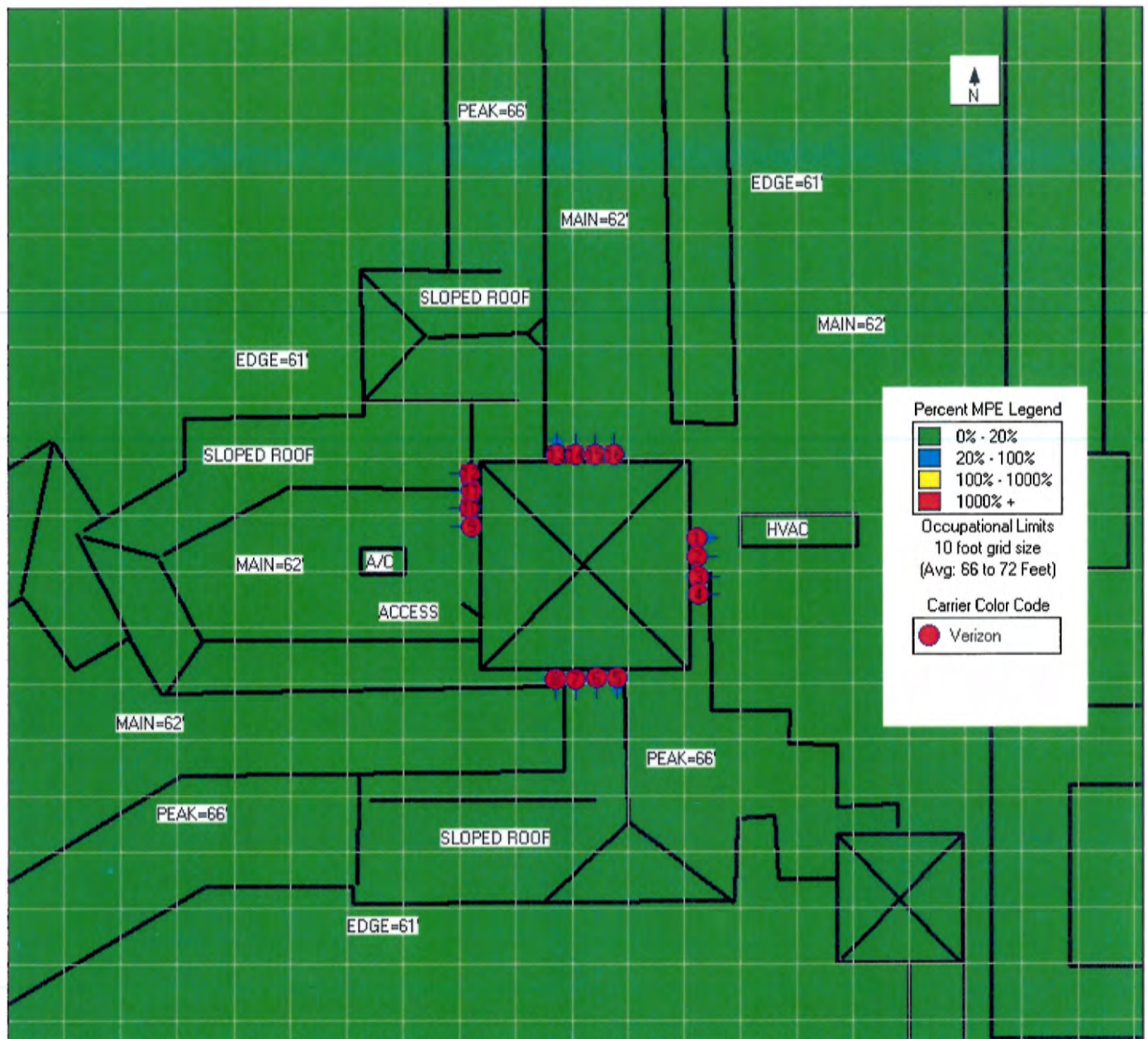
Note: As indicated in Section 1, "Additional Modeling Assumptions", Waterford Consultants has assumed transmission parameters for Unknown RF emitters based on similar installations found at other radio communications sites. Generic antenna models have been used where existing antenna part numbers or radiation patterns are not available. The frequencies presented in this table may have been assumed in order to represent the approximate band of operation and to support a worst-case calculation of power density.

### 3. Analysis

#### a. Predictive Model: All Transmitters

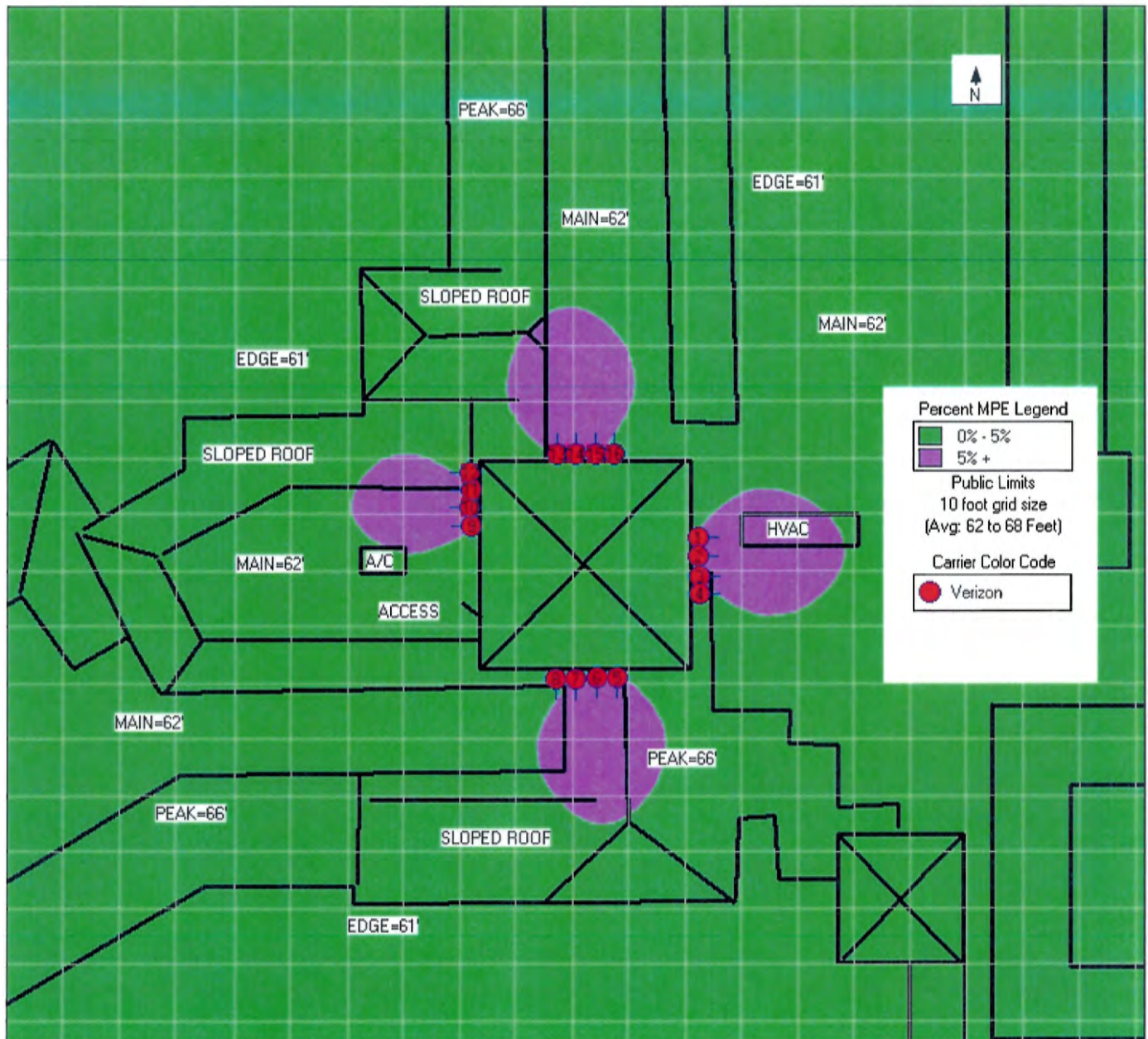


The reference plane for the plot is the main level – Verizon Wireless Only

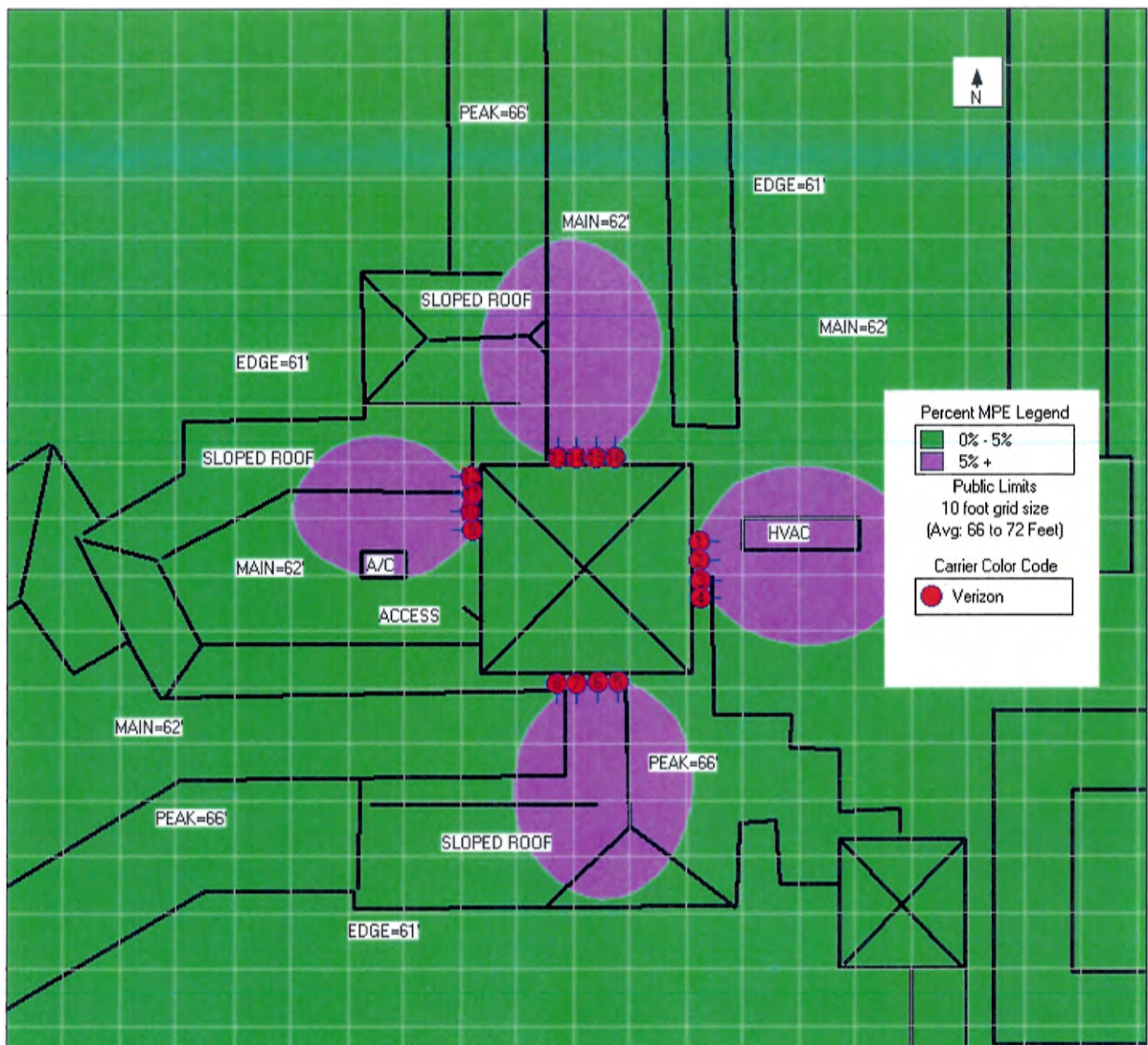


The reference plane for the plot is the roof peak level – Verizon Wireless Only

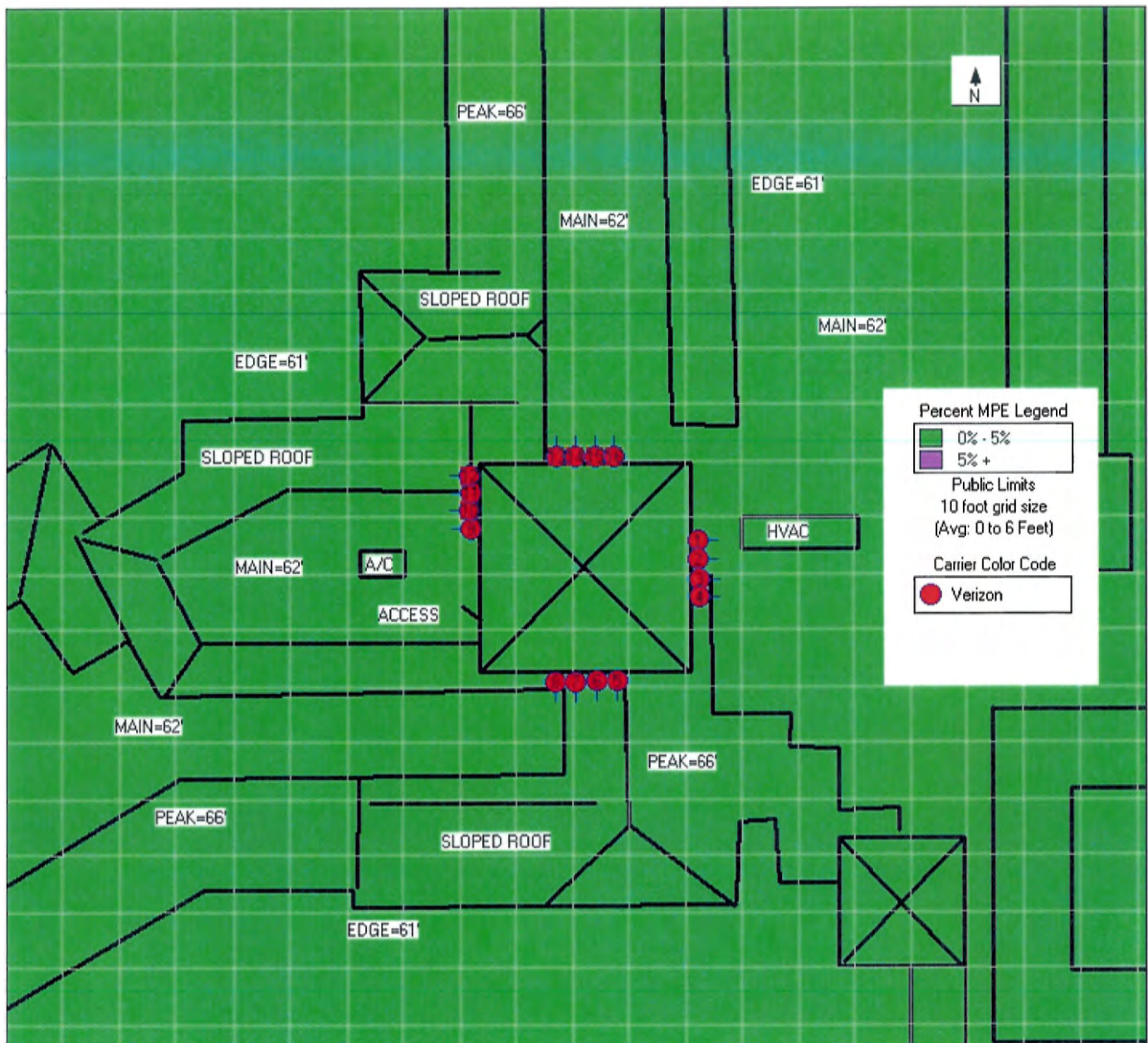
**b. Predictive Model: Significant Contribution of Verizon Wireless**



The reference plane for the plot is the main level.



The reference plane for the plot is the roof peak level.



The reference plane for the plot is ground level.

#### **4. Conclusion**

##### **a. Conclusion Narrative**

##### **Description of MPE – Limit Exceeding Areas:**

##### **Main Level Assessment**

- Below General Population limits

##### **Roof Peak Level Assessment**

- Below General Population limits

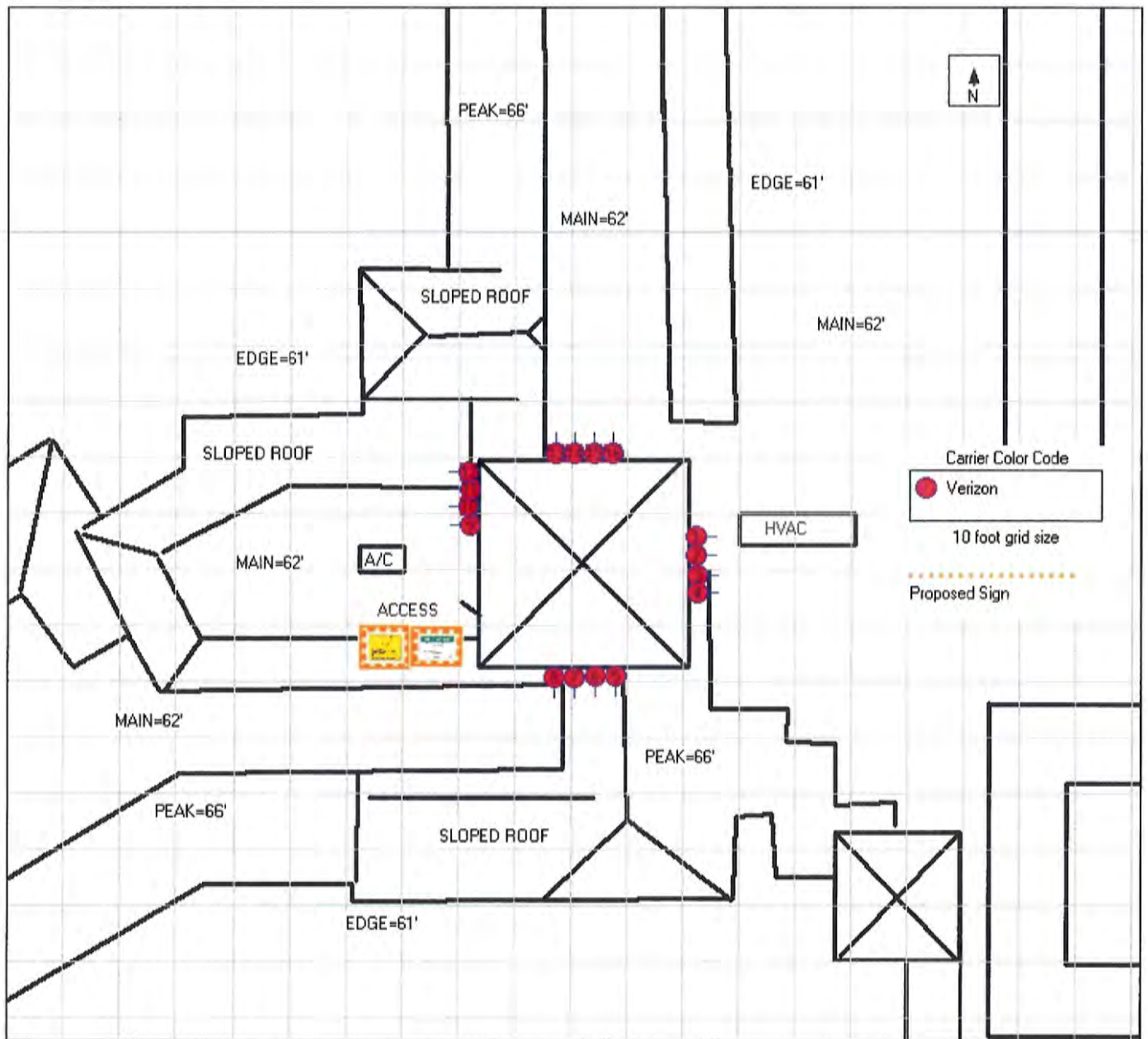
##### **Verizon Significant Contribution Areas:**







No accessible areas are predicted to exceed the General Population MPE limits.

##### **Co – Locator Significant Contribution Areas:**

N/A

**b. Compliance Requirements  
Signage/Barrier Diagrams**



<b>Compliance Requirements</b>						
	<b>Guidelines</b>	<b>Notice</b>	<b>Caution</b>	<b>Warning</b>	<b>NOC Information</b>	<b>Demarcation</b>
<b>Access Point</b>	<input checked="" type="checkbox"/> [1]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input checked="" type="checkbox"/> [1]	<input type="checkbox"/>
<b>Alpha</b>	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
<b>Beta</b>	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
<b>Gamma</b>	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>
<b>Delta</b>	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/> [#]	<input type="checkbox"/>

### **Signage/Barrier Installation Detail**

#### **Site Access Point**

- NOC Information sign required
- RF Guidelines sign required

#### **Verizon Wireless Alpha Sector**

- No action required

#### **Verizon Wireless Beta Sector**

- No action required

#### **Verizon Wireless Gamma Sector**

- No action required

#### **Verizon Wireless Delta Sector**

- No action required

## **5. Appendix A: RF Consultant Certifications**

### **a. Prepare Certification**

I, Jeffrey Schwartz, the preparer of this report, am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I am also fully aware of and familiar with the Verizon Wireless Signage & Demarcation Policy. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

*Jeffrey Schwartz*

### **b. Reviewer Certification**

I am the reviewer and approver of this report, am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I am also fully aware of and familiar with the Verizon Wireless Signage & Demarcation Policy. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

David Hamilton Kiser, P.E. 2015.09.10 09:28:27 -04'00'

## 6. Appendix B: Reference Information

### a. FCC Rules & Regulations

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards "incorporate prudent margins of safety." The following represents explanations of the most applicable information:

#### Two Classifications for Exposure Limits

<b>Occupational</b> – Applies to situations in which persons are "exposed as a consequence of their <i>employment</i> " and are " <i>fully aware</i> of the potential for exposure and can <i>exercise control</i> over their exposure".	<b>General Population</b> – Applies to situations in which persons are "exposed as a consequence of their employment <i>may not be made fully aware</i> of the potential for exposure or <i>cannot exercise control</i> over their exposure". Generally speaking, those without significant and documented RF Safety & Awareness training would be in the General Population classification.
--	--

#### Environment Classification

<b>Controlled</b> – Applies to environments that are restricted or "controlled" in order to prevent access from members of the General Population classification.	<b>Uncontrolled</b> – Applies to environments that are unrestricted or "uncontrolled" that allow access from members of the General Population classification.
---	--

<b>Limits for Occupational/Controlled Exposure</b>		
Frequency Range (MHz)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> , or S (minutes)
300-1500	f/300	6
1500-100,000	5	6
<b>Limits for General Population/Uncontrolled Exposure</b>		
Frequency Range (MHz)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> , or S (minutes)
300-1500	f/1500	30
1500-100,000	1	30
<i>f = frequency in MHz</i>		

#### Significant Contribution to the RF Environment

Any carrier contributing an aggregate MPE percentage of 5 or more (to the applicable RF Environment Classification) is defined as a significant contributor. This means that if any area is determined to be out of compliance with FCC rules, all significant contributors are jointly responsible for correcting any deficiencies.

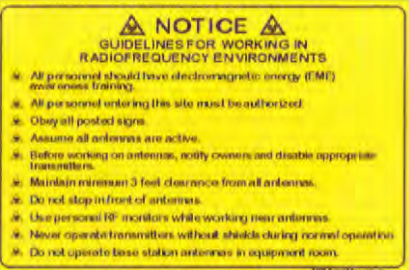



### b. Occupational Safety and Health Administration (OSHA) Requirements


A formal adopter of FCC Standards, OSHA stipulates that those in the Occupational classification must complete training in the following: RF Safety, RF Awareness, and Utilization of Personal Protective Equipment. OSHA also provides options for Hazard Prevention and Control:

Hazard Prevention	Control
<ul style="list-style-type: none"> <li>Utilization of good equipment</li> <li>Enact control of hazard areas</li> <li>Limit exposures</li> <li>Employ medical surveillance and accident response</li> </ul>	<ul style="list-style-type: none"> <li>Employ Lockout/Tag out</li> <li>Utilize personal alarms &amp; protective clothing</li> <li>Prevent access to hazardous locations</li> <li>Develop or operate an administrative control program</li> </ul>

### c. RF Signage

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines. These areas must be demarcated by conspicuously posted signage that identifies the potential exposure. Signage **MUST** be viewable regardless of the viewer's position.

Guidelines	Notice	Caution	Warning
Used anytime hazard signage is employed to achieve FCC compliance. This sign will inform visitors of the basic precautions to follow when working around radiofrequency equipment.	Used to distinguish the boundary between the General Population /Uncontrolled and the Occupational/Controlled areas. The limits associated with this notification must be less than the Occupational/Controlled MPE.	Identifies RF controlled areas where RF exposure can exceed the Occupational /Controlled MPE but below 10 x the Occupational/Controlled MPE.	Denotes the boundary of areas with RF levels substantially above the FCC limits, normally defined as those greater than ten (10) times the Occupational /Controlled MPE.
			

Information Sign
Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number.


### d. Barriers

A barrier is any physical demarcation employed as a preventative and/or notification measure that one is entering into an area with RF power density levels greater than the General Population/Uncontrolled limit.



## 7. Appendix C: Roofmaster™

RoofMaster™ is the software package that Waterford Consultants created to model RF environments associated with multiple emitters where the potential exists for human exposure. Based on the computational guidelines set forth in OET Bulletin 65 from the Federal Communications Commission (FCC), RoofMaster™ considers the operating parameters of specified RF sources to predict the overall Maximum Permissible Exposure possible at a given location. These theoretical results represent worst-case predictions as emitters are assumed to be operating at 100% duty cycle.

From the FCC document:

*"The revised OET Bulletin 65 has been prepared to provide assistance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) fields adopted by the Federal Communications Commission (FCC). The bulletin offers guidelines and suggestions for evaluating compliance."*

[http://transition.fcc.gov/Bureaus/Engineering\\_Technology/Documents/bulletins/oet65/oet65.pdf](http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf)



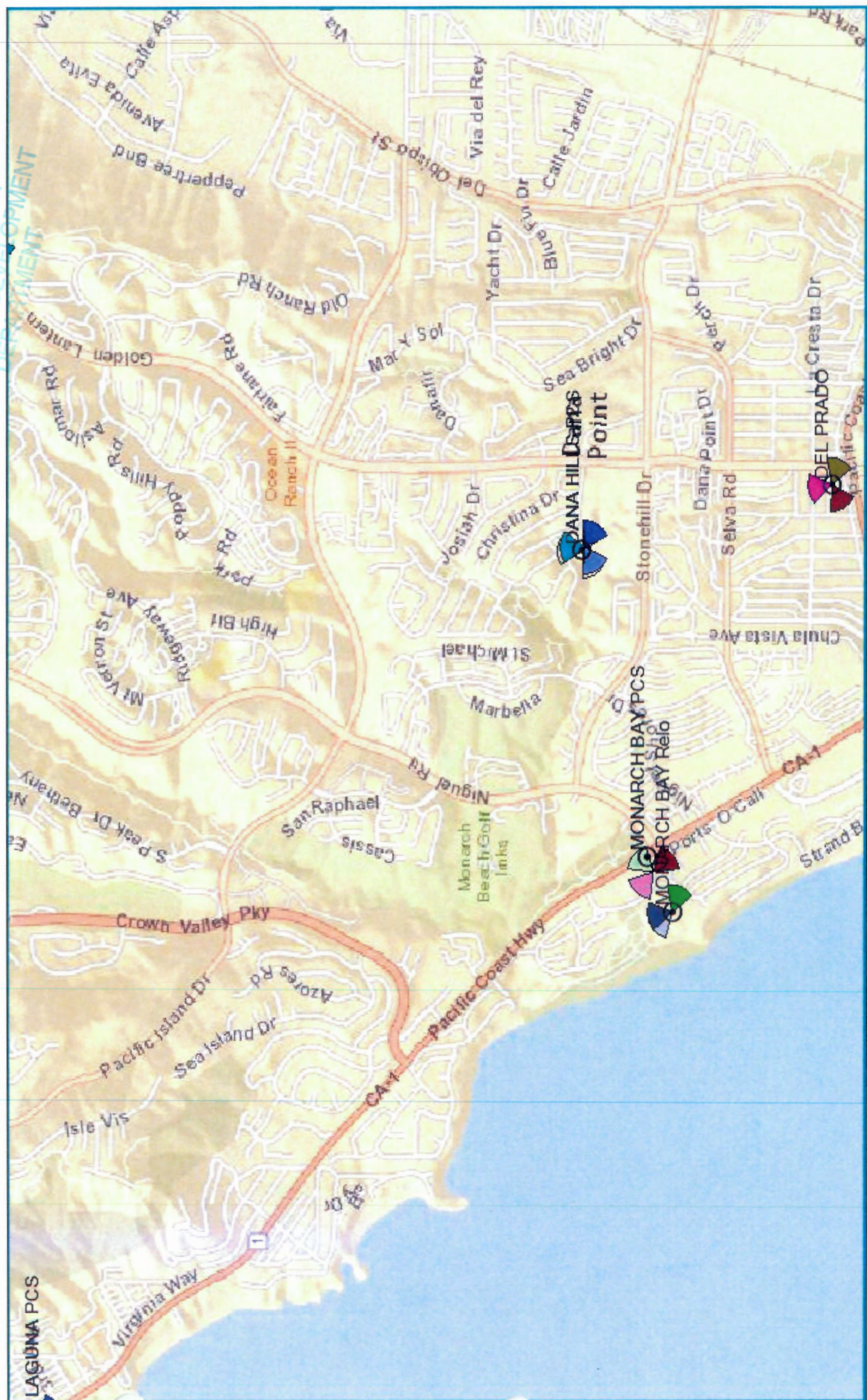


RECEIVED

SEP 28 2015

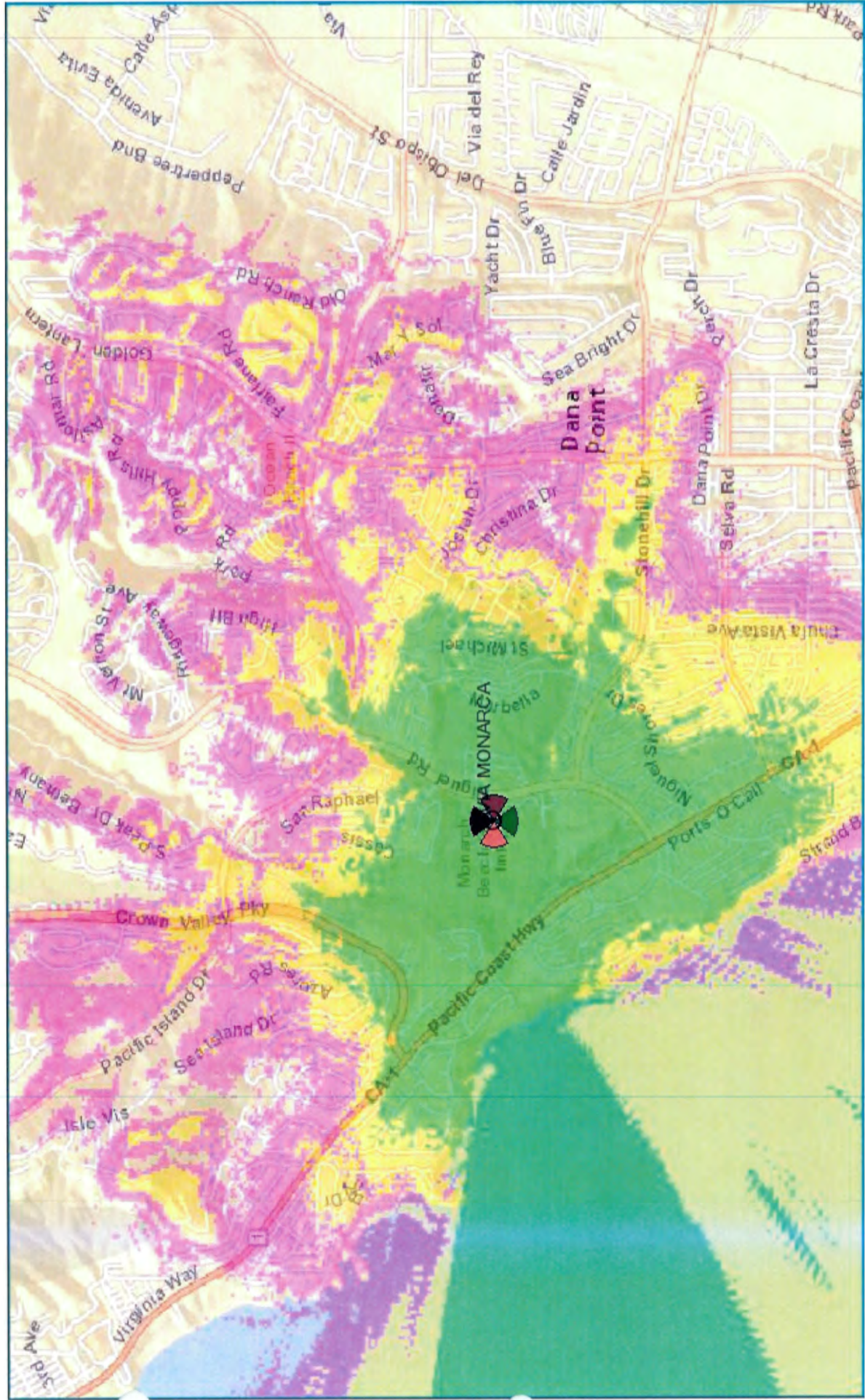
CITY OF DANA POINT  
COMMUNITY DEVELOPMENT  
DEPARTMENT

# Surrounding On-Air Sites



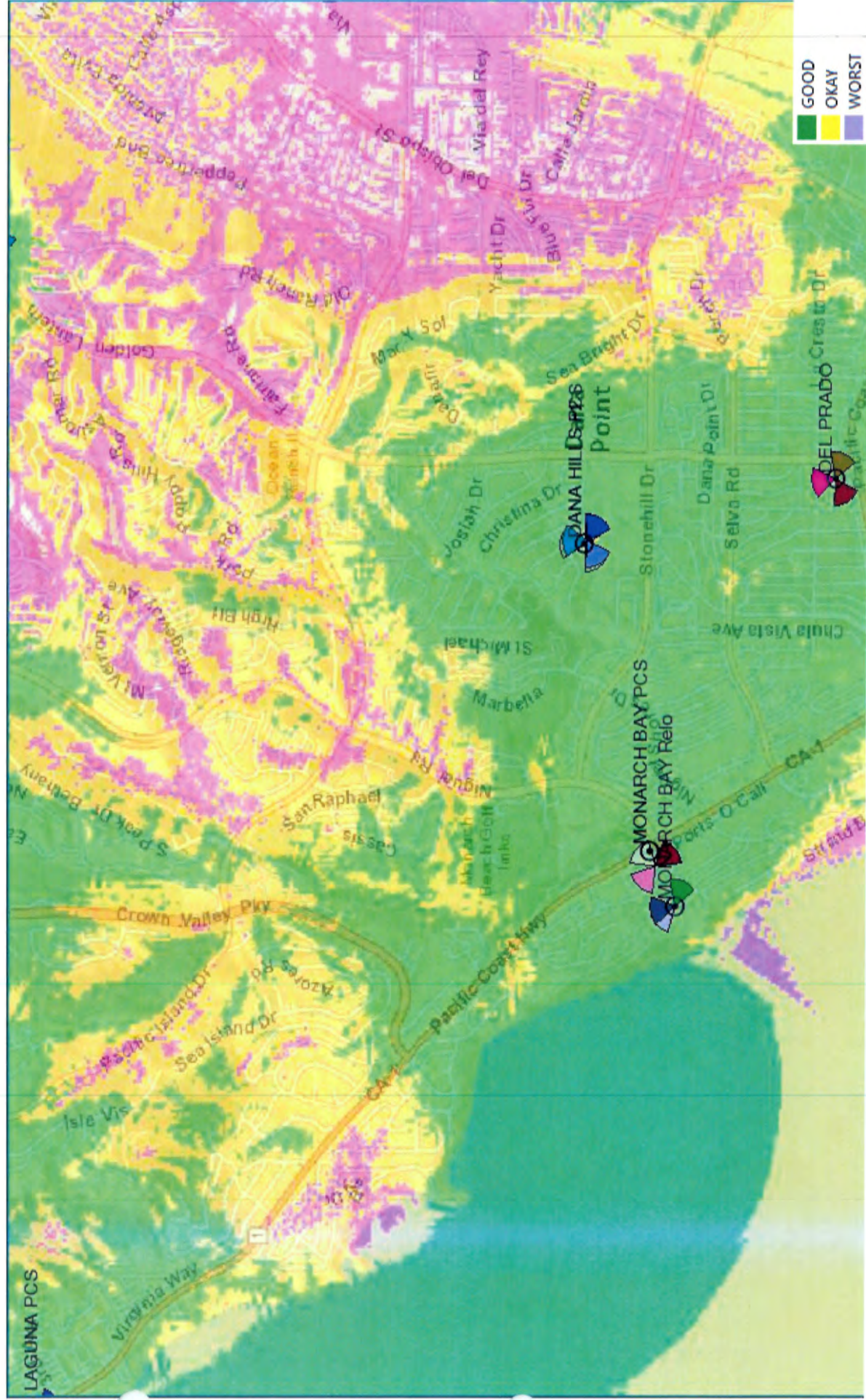


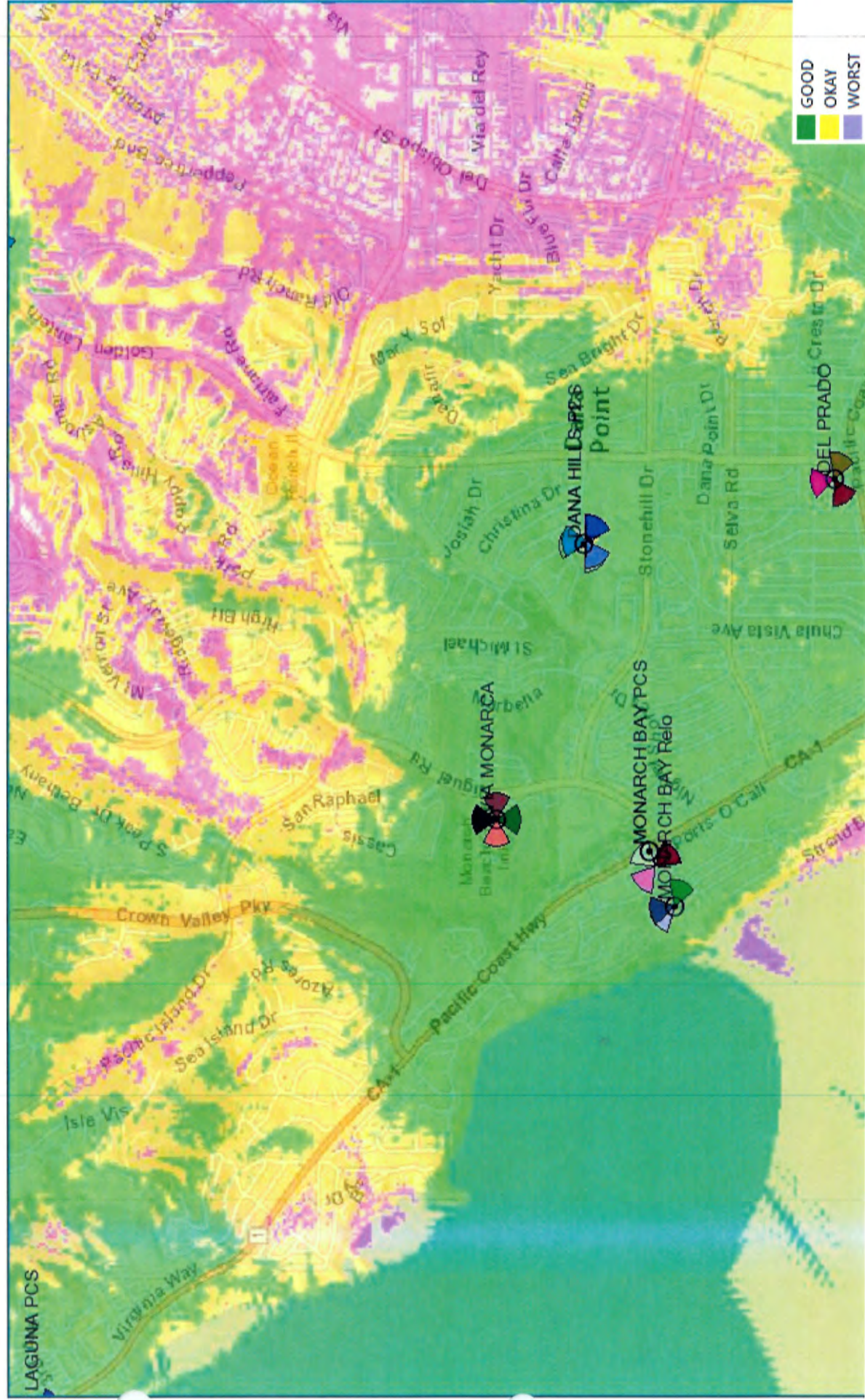
# Via Monarca Only





# Existing Verizon Coverage





City of Dana Point  
Evan Langan  
Community Development  
33282 Golden Lantern  
Dana Point, Ca 92629-1805

February 9, 2016

Subject: Notice AUP15-0002

Ms Evan

Your recent notice does not provide enough information to agree or disagree with the proposed actions. I would need the following additional information.

- 1) Level of radiation emanated from this Verizon Wireless transmitter at the edges of the 500 foot radius area.
- 2) California Environmental Quality Act radiation standards for near-by communities.
- 3) Height of the proposed installation.

Thank you for your concern for the health and sight line views of the neighboring communities.

Donald Pallia (owner)  
6832 Estrella De Mar Road  
Carlsbad, CA.

RECEIVED  
FEB 10 2016  
CITY OF DANA POINT  
COMMUNITY DEVELOPMENT  
DEPARTMENT