File: PLN19-0206 (Monterey Road AT&T Wireless Facility)
Architecture and Site Approval

Summary: Architecture and Site Approval (ASA) for a wireless telecommunications facility at an existing winery facility. The project includes a new 80-foot tall mono-pine and a fenced equipment area, located within the footprint of the two (2) existing wireless towers. Grading is not proposed as part of the project.

Owner: 2 Youths LLC
Applicant: AT&T Mobility
Lot Size: 0.5-acre
APN: 728-24-008
Supervisory District: 1

Gen. Plan Designation: Agriculture Large Scale
Zoning: A-40Ac-sr
Address: 4350 Monterey Road, Gilroy
Present Land Use: Winery Facility
HCP: Area 3 (Not a Covered Project)

RECOMMENDED ACTIONS
A. Accept a Categorical Exemption under Section 15303(d) of the CEQA Guidelines, Attachment A.
B. Grant Architecture and Site Approval (ASA), subject to Conditions of Approval outlined in Attachment B.

ATTACHMENTS INCLUDED
Attachment A – Proposed CEQA Determination
Attachment B – Proposed Conditions of Approval
Attachment C – Location & Vicinity Map
Attachment D – Proposed Plans
Attachment E – Colors and Materials Board
Attachment F – Photo Simulations
Attachment H – Geotechnical Report (dated August 2, 2020)
PROJECT DESCRIPTION

The proposed project includes a request for an Architecture and Site Approval to allow the installation of a new 80-foot tall, unmanned wireless telecommunications facility, located at an existing winery on Monterey Rd. In addition to the mono-pine, the site has two (2) existing 35-foot tall wireless towers which will all be removed, along with three (3) antennas that will be relocated to the new mono-pine tower (from on top of the existing winery facility). A 23-foot by 11-foot (253 square feet) fenced equipment area is proposed to be located adjacent to the monopine and within the current footprint of one of the existing wireless towers. Grading is not proposed for the wireless mono-pine, however, the removal of a 12-inch non-native tree is required for installation of the equipment area.

The current property (Rapazzini Winery) obtained a 35-foot tall wireless tower installation in 1996 and an additional 50-foot tall wireless tower from Cingular in 2015. The proposed monopine will replace the existing towers with a new 80-foot tall mono-pine and equipment area from AT&T, with the antennas co-located to the proposed tower.

Setting/Location Information

The subject property is a 0.5 gross-acre parcel located off from Monterey Road, Gilroy, near Highway 101, in unincorporated Santa Clara County. The property abuts a single-family residence in the rear (owned by the same family) and is adjacent to an existing vineyard to the south. The existing building on the property is a tasting and retail store that sells the wine made from the adjacent vineyard, as well as local wine from the South County region.

The site is located within the Santa Clara Valley Habitat Plan (HCP) Area 3 and is not a covered project under HCP.

REASONS FOR RECOMMENDATIONS

A. Environmental Review and Determination (CEQA)

The proposed project qualifies for a Categorical Exemption under Section 15303 for new construction of utility extensions. As such, an Initial Study and further analysis under the CEQA was not required.

B. Architecture and Site Approval Findings:

Pursuant to Zoning Ordinance Section 4.10.400, a project defined under the New Facilities use classification shall be subject to Architecture and Site Approval. The ASA may only be approved by the Zoning Administration Hearing Officer if all the following findings listed in §5.40.040 of the County Zoning Ordinance can be made. Listed below are the individual findings in bold followed with a discussion relating to how the proposed project conforms to each respective finding in regular text:

1. Adequate traffic safety, on-site circulation, parking and loading areas, and insignificant effect of the development on traffic movement in the area;

As noted in the Project Description section of this report, the project includes a request to remove two existing wireless telecommunication mono-pole towers and install a new 80-foot tall mono-pine in the same general location. The new mono-pine...
will be an unmanned wireless telecommunication facility and will not produce additional traffic. There is an existing 10-foot wide utility and access easement that will be used by AT&T to access the leasehold area for maintenance, if necessary, in the future. Existing parking and loading areas are located at the front of the property, adjacent to Highway 101, and shall remain unchanged. As such, the project conforms with this finding.

2. **Appearance of proposed site development and structures, including signs, will not be detrimental to the character of the surrounding neighborhood or zoning district;**

The surrounding area includes large, rural residential properties and agricultural uses to the north, south, and east of the property with U.S. Highway 101, a scenic highway located to the west. The site has existing antennas that are mounted on the existing building used as a winery facility. There are also two (2) existing wireless towers that are 35 feet tall that will be removed and replace with the proposed 80-foot tall monopine. The proposed wireless will not be detrimental to the character of the surrounding neighborhood as the structure is a mono-pine to mimic the colors of a pine tree and the foliage will screen the proposed antennas. The surrounding area and neighborhood are mostly agriculture with occasional trees in the background and having the mono-pine instead of a monopole would be more consistent to the overall landscape of the agriculture environment.

In order to ensure that the new mono-pine and antennas will not be detrimental to the character of the surrounding neighborhood, and as required by the *Wireless Telecommunication Facilities Design Guidelines*, the antennas would be “stealthed” by grouping the antennas together and providing foliage to screen the antennas on the mono-pine. Additionally, all ground equipment that is visible from the fence line will be painted brown to match the color of the tree trunk of the mono-pine. A Condition of Approval to this effect has been included in Attachment B.

Pursuant to the *Wireless Telecommunication Facilities Design Guidelines*, a 12-foot tall, chained link fence is proposed to screen, and buffer equipment area located at the base of the tower. Areas of equipment that are visible from the fence will be painted brown to match the proposed trunk of the mono-pine. The ground-mounted equipment is not taller than 12 feet in height. Through the foliage color “stealthing” of the antennas and the fence concealment of the equipment area, the project’s effects on neighborhood aesthetics will be mitigated. Additionally, the existing building screens the first 30 feet of the leasehold area. For the reasons stated above, this finding can be made.

3. **Appearance and continued maintenance of proposed landscaping will not be detrimental to the character of the surrounding neighborhood or zoning district;**

There is landscaping proposed as part of this project scope. However, the mono-pine and its foliage will screen the proposed antennas and match with the overall
agricultural aesthetics of the neighborhood and zoning district. Although this finding is not applicable, as no “landscaping” is proposed, the synthetic foliage of the mono-pine will not be detrimental to the character of the neighborhood and this finding can be made.

4. **No significant, unmitigated adverse public health, safety and environmental effects of proposed development;**

There will not be any significant, unmitigated adverse public health, safety or environmental effects resulting from the proposed new mono-pine, as no known biological or environmental issues were identified on site. AT&T provided a Radio Frequency Emissions Compliance Report analyzing compliance to the Federal Communications Commission (FCC) guidelines as part of application submittal. The report concluded that the cumulative power density level at the location from all antennas is 2.1%, which is below the 5% limit of the FCC General Population limits. Furthermore, the report concluded that the proposed operation will not expose members of the General Public to hazardous levels of radio frequency (RF) energy and will not contribute to existing cumulative Maximum Permissible Exposure (MPE) levels on walkable surfaces at ground or in adjacent buildings by 5% of the General Population limits. As such, this finding can be made.

5. **No adverse effect of the development on flood control, storm drainage, and surface water drainage;**

The proposed project will not have any significant impact to flood control, storm drainage, and surface water drainage as the proposal was reviewed by Land Development Engineering to ensure that the design of the project does not create impacts. Runoff from the additional impervious surface area will be adequately managed and treated, as required through the Conditions of Approval placed on the project to address on-site drainage. As such, this finding can be made.

6. **Adequate existing and proposed fire protection improvements to serve the development;**

The proposed project was reviewed by the County Fire Marshal and the site access is in conformance with the Fire Marshal’s Office standards, subject to the Conditions of Approval in Attachment B.

7. **No significant increase in noise levels;**

The proposed project will not result in any significant increase of noise levels in the area, as there are existing wireless towers with antennas on the property.
8. **Conformance with zoning standards, unless such standards are expressly eligible for modification by the Zoning Administrator as specified in the Zoning Ordinance;**

   The proposed project satisfies all the required zoning standards, as stipulated in the County Zoning Ordinance. The zoning district for subject parcel is A-40ac-sr. No proposed modification to these standards are proposed or required. According to Note 5 of Table 2.20-2 of the Zoning Ordinance, “Wireless telecommunications facilities are exempt from the development standards listed in Table 2.20-3.” The Geology Report (Attachment H) submitted by the applicant and reviewed by the County Geologist, was accepted with the conditions (as outlined in Attachment B) that the applicant provide a geotechnical engineer's Plan Review Letter during the Building Permit process that confirms the plans conform with the recommendations. The applicant will also be required to submit a Construction Observations Letter that verifies the work was completed in accordance with the approved plans. As such (and as conditioned) this finding can be made.

9. **Conformance with the general plan and any applicable area or specific plan, or, where applicable, city general plan conformance for property located within a city’s urban service area;**

   The General Plan designation for subject parcel is Agriculture: Large Scale. The project does not conflict with the General Plan because there is no loss of agricultural lands and the proposed wireless telecommunications facility is an allowable, ancillary use. (See R-LU 11 for other allowable land uses on lands designated “Agriculture” in the General Plan). As such, this finding can be made.

10. **Substantial conformance with the adopted “Guidelines for Architecture and Site Approval” and any other applicable guidelines adopted by the County.**

   The proposal will be required to adhere to all conditions set forth in the staff report (Attachment B). The intent of the “Guidelines for Architecture and Site Approval” is to maintain the character and integrity of zoning districts by promoting quality development in harmony with the surrounding area, through consideration of all aspects of site configuration and design, and to generally promote the public health, safety and welfare. As the character of the proposal is in harmony with the existing utility infrastructure, and there is no significant effect on traffic or congestion, the proposal is consistent to the above finding. The proposed mono-pine also conforms to the Wireless Telecommunication Facilities Design Guidelines (as described in Section C of the staff report), as the structure the antennas are “stealthed” where it is appropriately screened behind the pine foliage. The equipment area is within the footprint of the tower and is screened behind a 12-foot tall, chained link fence. The structure is consistently to the overall agricultural environment of the neighborhood with similar trees located in the background. As such, this finding can be made.
C. **Wireless Telecommunication Facilities Design Guidelines – Review Criteria:**
The Wireless Telecommunication Facilities Design Guidelines (WTFDG), adopted by the Board of Supervisors, includes guidelines to minimize the visual impact of wireless telecommunication facilities and encourage colocation of those facilities. The guidelines “should be interpreted with flexibility by staff and are not rigorous requirements like adopted ordinance, but rather a means of adapting documentation and review needs to the scope of a particular facility request” (WTFDG, page 1). Additionally, “the primary goals of these guidelines are to ensure visually acceptable facility design, colocation of facilities, stealth design where appropriate and to provide a guide to preferred and acceptable design of wireless telecommunications facilities” (WTFDG, page 2). Listed below are the individual review guidelines in **bold**, followed by a discussion relating to how the proposed project conforms to each respective guideline in regular text:

1. **The proposal minimizes visual impact to the extent possible through design, screening and siting.**

   The proposed wireless tower is a mono-pine whereby the antennas are hidden behind the proposed synthetic pine foliage. Additionally, the antennas are “stealthed” where it is appropriately screened behind the pine foliage and is painted to match the tower. The equipment area is within the footprint of the tower and is screened behind a 12-foot tall, chained link fence. Any portions of the equipment area that can be seen above the fence are required to be painted brown to match the trunk of the monopine. Additionally, the existing building will screen and shield a significant portion of the leasehold area and a portion of the proposed mono-pine. As such, the project design meets this Guideline.

2. **The proposal minimizes removal or modification of any site landscaping and provides appropriate replacement landscaping, if necessary.**

   No landscaping is proposed to be removed or modified as a result of the proposed project, as the only ground disturbances are within the footprint of the tower. As such, this guideline is not applicable.

3. **The request does not increase the height of the existing, approved facility.**

   The existing towers will be removed and replaced with a new 80-foot tall mono-pine. As noted in the ASA findings, the new mono-pine has been determined to not create new impacts as it is consistent to the overall agriculture atmosphere of the neighborhood where the mono-pine can blend with similar trees in the area. Although the height of the tower will increase, the foliage of pines will screen the antennas and the pole is painted and structured to mimic a tree, similar to the surrounding trees in the area.
4. **For façade-mounted facilities, the antenna and associated equipment is of a scale and design compatible with the building, is mounted to a building façade and does not project beyond 12 inches from the face of the building.**

No façade-mounted facilities are proposed. The proposed mono-pine is located to the side rear of the existing building. As such, this guideline is not applicable.

5. **The proposal will blend with and/or complement the color, design, and/or character of the surrounding context, whether natural backdrop, building or existing facility.**

The proposed mono-pine will have synthetic pine foliage to screen the antennas and would be “stealthed” by painting the antennas to match the color of the tower pole (tree trunk) and the foliage of the mono-pine. Additionally, the mono-pine would be consistent to the overall agricultural aesthetics of the existing winery and neighborhood. As such, as the new wireless telecommunication improvements will include a new tower that appears as a tree that blend with the surroundings, this guideline is met.

6. **No exterior, artificial lighting is proposed unless required for safety purposes by State or Federal Law.**

No lighting is proposed. As such, this guideline is not applicable.

7. **Ground equipment and vertical elements have been screened/buffered using landscaping and fencing to the extent possible.**

Ground equipment is fully screened with a 12-foot tall, chained link fence. Areas of equipment that are visible from the fence will be painted brown to match the proposed trunk of the monopine. Additionally, the mono-pine will have pine foliage to screen the antennas and would be “stealthed” by painting them to match the color of the tower and the foliage of the mono-pine. Additionally, the mono-pine would be consistent to the overall agricultural aesthetics of the existing winery and neighborhood. As such, this guideline is met.

8. **Facility incorporates stealth/aesthetic designs such as public art, clock towers, flagpoles or other appropriate visual forms, if possible.**

The proposed mono-pine will have pine foliage to screen the antennas and would be “stealthed” to match the color of the tower and the foliage of the mono-pine. Additionally, the mono-pine would be consistent to the overall agricultural aesthetics of the existing winery and neighborhood. As such, this guideline is met.
9. **No guy wires are used on the structure.**

Guy wires are not proposed as part of the project. As such, this guideline is not applicable.

10. **Facility, tower and/or antenna-mounted signage is limited to warning and informational signs.**

Conditions of Approval limit signage to warning and informational signs only. As such, this guideline is being met.

11. **The facility has been designed to discourage unauthorized access.**

A perimeter chain link fence protects the site from unauthorized access. As such, this guideline is being met.

12. **Facilities have been collocated where feasible.**

The site has two (2) existing 35-foot tall wireless towers which will all be removed along with two (2) antennas mounted on existing winery facility that will be relocated to the new mono-pine tower. The applicant is reducing the number of towers on the property, and replacing the multiple towers with one, taller tower. As noted in the ASA Findings above, the new tower is sufficient and meets the intent of this guideline.

13. **Ridgeline/hilltop siting has been avoided or the related visual impacts have been eliminated through design and landscaping.**

The project site is in the valley floor and there are no visual impacts to ridgelines or hilltops. As such, this guideline is being met.

In conclusion, based on the findings of facts described in the body of this report and the *Wireless Telecommunication Facilities Design Guidelines*, staff can make the required findings pursuant to Zoning Ordinance Section 5.40.040. The proposed 80-foot tall mono-pine at an existing winery facility will not create a detrimental impact to the property and/or surrounding neighborhood, as there are multiple wireless towers on site which will be removed and replaced with one (1) mono-pine that is designed to be consistent with the agricultural environment and surrounding trees in the vicinity. Therefore, staff recommends that the Zoning Administration Hearing Officer accept the CEQA exemption and grant the Architecture and Site Approval (ASA) for the wireless facility mono-pine with antennas.

**BACKGROUND**

On October 4, 2019, an application for the project was submitted by Crown Castle, which is a representative of AT&T. The application was reviewed and subsequently deemed incomplete on November 4, 2019. Crown Castle representatives met with Planning Staff to discuss process and
address incomplete items from the application. After submitting all required information, the application was deemed complete on December 23, 2020.

On January 20, 2021, a public notice was mailed to all property owners within a 300-foot radius of the project and was also published in the Post Records on January 25, 2021 for the Zoning Administration Hearing date.

STAFF REPORT REVIEW
Prepared by: Lara Tran, Associate Planner
Reviewed by: Leza Mikhail, Zoning Administrator/Principal Planner.
ATTACHMENT A
Proposed CEQA Determination
# ATTACHMENT A

## STATEMENT OF EXEMPTION
from the California Environmental Quality Act (CEQA)

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<td>841-32-010</td>
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<tr>
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<td>2 Youths LLC</td>
<td>Crown Castle/AT&amp;T Mobility</td>
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**PROJECT LOCATION**
4350 Monterey Road, Gilroy

**PROJECT DESCRIPTION**
Architecture and Site Approval (ASA) for a wireless telecommunications facility at an existing winery facility. Included in the project is a new 80-foot tall mono-pine and a fenced equipment area located within the footprint of the two (2) existing wireless towers. Grading is not proposed as part of the project.

All discretionary development permits processed by the County Planning Office must be evaluated for compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended). Projects which meet criteria listed under CEQA may be deemed exempt from environmental review. The project described above has been evaluated by Planning Staff under the provisions of CEQA and has been deemed to be exempt from further environmental review per the provision(s) listed below.

**CEQA (GUIDELINES) EXEMPTION SECTION**
Categorically Exempt – Section 15303 of a new 80-foot tall wireless mono-pine for utility purposes.

**COMMENTS**
The project proposes to remove one (1) non-native tree for the leasehold area. Areas of equipment that are visible from the fence will be painted brown to match the proposed trunk of the mono-pine. The ground-mounted equipment will not be taller than 12 feet in height.

**APPROVED BY:**
Lara Tran, Associate Planner

[Signature]
1/28/2021

[Approved by]
ATTACHMENT B
Proposed Conditions of Approval
ATTACHMENT B
PRELIMINARY CONDITIONS OF APPROVAL
ARCHITECTURE AND SITE APPROVAL

Date: February 4, 2021
Owner/Applicant: 2 Youths LLC. / Crown Castle/AT&T Mobility
Location: 4350 Monterey Road, Gilroy, CA (APN: 841-32-010)
File Number: PLN19-0206
CEQA: Categorically Exempt – Section 15303, Class 3
Project Description: Architectural and Site Approval (ASA) for a new wireless telecommunications facility at an existing winery facility. Included in the project is a new 80-foot tall mono-pine and a fenced equipment area located within the footprint of two (2) existing wireless towers. Proposed work will include removal of the two (2) 35-foot existing towers and removal of three (3) existing antennas mounted on the existing winery facility. Grading is not proposed as part of the project.

Development is not a covered project under the Santa Clara Valley Habitat Conservation Plan (HCP).

For any question regarding the following preliminary conditions of approval, contact the person listed for that agency. S/he represents a specialty and can provide details about the conditions of approval.

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<tr>
<td>Planning</td>
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<tr>
<td>Building Inspection</td>
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<td>(408) 299-5700</td>
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STANDARD CONDITIONS OF APPROVAL

Building Inspection
1. For detailed information about the requirements for a Building Permit, obtain a Building Permit Application Instruction handout from the Building Inspection Office or visit the website at www.sccbuilding.org.

Planning
2. Development must take place in substantial conformance with the submitted plans on November 23, 2020 and the approved Conditions of Approval. Any changes to the
proposed project may result in additional environmental review, pursuant to the California Environmental Quality Act, or additional Planning review and a public hearing.

3. All painted, or otherwise treated, surfaces of the antenna and fence shall be maintained at all times. If the antenna or fence is improperly maintained, the approval may be revoked and subject to violation and fines.

4. The permittee shall keep the project site free of graffiti. “Graffiti” means any unauthorized inscription, writing, lettering, word, figure, mark, design or other inscribed material that is written, marked, etched, scratched, drawn, painted or otherwise placed on any structures, fences, or other permanent or temporary surfaces.

5. All telecommunications equipment installed on-site shall comply with the standards of the Federal Communications Commission (FCC) for health, safety, and other pertinent requirements.

6. No signs are approved at this time except for (1) an informational sign that provides phone numbers to be used in case of an emergency, and (2) a bilingual NIER hazard warning sign posted at the outer perimeter of the project site. These signs must be in compliance with FCC rules regarding required telecommunication facility signage. Such signs shall be limited to an area of one square foot.

7. Flags, banners, streamers, or other devices are not approved and may not be attached to the tower, antennas, fence enclosure, or any supporting structures.

8. All developed areas shall be continuously maintained in compliance with the conditions of approval and County Ordinances.

9. The driveway and any access easement will be adequate for monthly service and any non-scheduled emergency maintenance personnel accessing the proposed facility. Maintenance of these improvements is the responsibility of the property owner.

10. All telecommunications related equipment shall be removed from the site within six (6) months of cessation of use. This shall require obtaining a demolition permit from the Santa Clara County Building Division.

Environmental Health

11. All construction activities shall be in conformance with the Santa Clara County Noise Ordinance Section B11-154 and prohibited between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays for the duration of construction.
CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO BUILDING AND/OR GRADING PERMIT ISSUANCE

Planning

12. **Prior to issuance of any permits**, the applicant shall pay all reasonable costs associated with the work by the Department of Planning and Development.

13. Ensure the GPS coordinates of the center of the tower are listed on the title page of the plans submitted for Building Permits.

14. **Prior to issuance of a building permit**, submit paint color samples for the tower, fence enclosure, and any mechanical or electrical equipment visible above the fence. The color for the fence enclosure must blend with the adjacent landscape and improvements. The color of any visible tower-based or ground-based mechanical or electrical equipment must match the color of the existing tower. The color samples shall include the name, number, and manufacturer of the proposed color(s). Show the color sample information on the Building Permit plans.

Geology

15. **Prior to issuance of grading or building permits**, submit a Geotechnical Engineer's Plan Review Letter that confirms the plans conform with the recommendations presented in the Tower Engineering Professionals' Subsurface Exploration Report (dated 8-7-2020).

Land Development Engineering (LDE)

16. Survey monuments shall be shown on the building plans to provide sufficient information to locate the proposed improvements and the property lines. Existing monuments must be exposed, verified and noted on the grading plans. Where existing monuments are below grade, they shall be field verified by the surveyor and the grade shall be restored and a temporary stake shall be placed identifying the location of the found monument. If existing survey monuments are not found, temporary staking delineating the property line may be placed prior to construction and new monuments shall be set prior to final acceptance of the improvements. The permanent survey monuments shall be set pursuant to the State Land Surveyor’s Act. The Land Surveyor / Engineer in charge of the boundary survey shall file appropriate records pursuant to Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the County Surveyor.

17. Existing and set permanent survey monuments shall be verified by inspectors prior to final acceptance of the improvements by the County. Any permanent survey monuments damaged or missing shall be reset by a licensed land surveyor or registered civil engineer authorized to practice land surveying and they shall file appropriate records pursuant to Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the County Surveyor.

18. The building plans shall include an Erosion and Sediment Control Plan that outlines seasonally appropriate erosion and sediment controls during the construction period.

19. All applicable easements affecting the parcel(s) with benefactors and recording
information shall be shown on the improvement plans.

20. The project is in a Special Flood Hazard Area; therefore, all improvements shall be in accordance with the County’s Floodplain Management Ordinance (SCC code C12-800 – C12-826).

21. Submit a No Rise Certificate, No Adverse Impact Certificate and corresponding documentation and calculations demonstrating a no impact to the floodplain prepared by a licensed Civil Engineer.

22. Property owner is responsible for the adequacy of any drainage facilities and for the continued maintenance thereof in a manner that will preclude any hazard to life, health, or damage to adjoining property.

23. All new on-site utilities, mains and services shall be placed underground and extended to serve the proposed development. All extensions shall be included in the building plans. Off-site work should be coordinated with any other undergrounding to serve other properties in the immediate area.

24. The improvement plans shall include at a minimum, one of the Low Impact Development site design measures. These measure include directing roof runoff into; cisterns or rain barrels for reuse, onto vegetated areas and; directing runoff from sidewalks, walkways, patios, driveways and uncovered parking onto vegetated areas; and constructing sidewalks, walkways, patios, driveways with permeable surfaces.

Environmental Health

25. Prior to issuance of building permit, submit a completed Hazardous Materials Clearance Form (available at www.EHinfo.org/hazmat) to the Hazardous Materials Compliance Division of the Department of Environmental Health. This is a separate submittal to DEH and additional fees may apply.

26. Prior to issuance of building permit, submit plans and associated documentation and required fees to the Hazardous Materials Compliance Division (HMCD) of the Department of Environmental Health at 1555 Berger Drive, Suite 300, San Jose, CA 95112-2716. Contact HMCD at (408) 918-3400 to ensure all necessary materials are included in the plan submittal. This is a separate submittal to DEH and additional fees may apply.

Fire Marshal’s Office

27. Prior to building permit issuance, submit a detail of how many batteries will be installed and the quantities of flooded lead-acid, nickel cadmium, valve-regulated lead-acid and lithium ion/metal polymer for each battery. Installation of any stationary lead-acid battery system shall comply with 2020 Edition, California Fire Code Section 608. A permit will be required if electrolyte capacity exceeds 50 gallons.
28. A separate permit is required from the Fire Marshal’s Office for any fuel storage in excess of exempt amounts, including integral tanks for equipment, such as generators. NOTE: Storage of fuel on site may also require permits from the Building Division and the County Hazardous Material Compliance Division of the County Department of Environmental Health. Additional requirements will be made when a complete set of construction drawings is submitted for Building Permit application.

Roads and Airport
29. **Prior to Building Permit issuance**, obtain a Santa Clara County Roads and Airports Department (RAD) Encroachment Permit for the following required improvement:
   A. Installation of the driveway approach on Barnard Road to County Standard B/4.

30. The process for obtaining an Encroachment Permit and the forms that are required can be found at: [www.countyroads.org](http://www.countyroads.org) > Services > Apply for Permits > Encroachment Permit.

31. Demonstrate that the post-development maximum flow rate into the County Road right-of-way is equal-to or less-than the pre-development corresponding storm event flow rate per the County Drainage Manual. Provide engineered plans and drainage calculations for any detention or retention system necessary to satisfy this requirement.

**CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO OCCUPANCY OR ONE YEAR FROM THE DATE OF THE LAND DEVELOPMENT AGREEMENT, WHICHERSOEVER COMES FIRST.**

Planning
32. **Prior to final inspection**, apply for a demolition permit to remove the two (2) 35 -foot wireless towers.

33. **Prior to final inspection**, contact Lara Tran in the Planning Division, at least two (2) weeks in advance to schedule a site visit to verify the approved exterior colors have been installed as approved.

Geology
34. Submit a Construction Observations Letter that verifies the work was completed in accordance with the approved plan (note to that effect should be stamped on the plans).

Land Development Engineering
35. Construct all the improvements. Construction staking is required and shall be the responsibility of the developer.
ATTACHMENT C
Location & Vicinity Map
This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
ATTACHMENT D
Proposed Plans
NOTES:
1. No grading or permanent construction shall occur upon land of which any part is located within the drip line of a tree that is to remain without arborist approval.
2. Prior to construction, general contractor to contact DigAlert to mark out existing underground utilities. In the event of conflicts, contractor to contact PDC.

THIS IS NOT A SITE SURVEY

Site Type: Monopine/Outdoor Cabinets

1.16.2020

90% CDS

JPB/TWG

18-29025

MEP

CCL01924

4350 Monterey Rd
Gilroy, California 95020

5001 Executive Parkway
San Ramon, California 94583

Prepared for:

Rev Description

Date

Sheet Title:

Sheet Number:

Checked by:

Drawn by:

POD Project No:

Overall Site Plan

Vendor:

AT&T Site ID:

Licensor:

Issued For:

AT&T Site No:

11490 Bluegrass Pkwy
Louisville, KY 40299

502-437-5252

Power of Design

A03/08/19

90% CDS

827822

Crown Castle Bu:

B04/01/19

90% CDS

C

B

D

E

F

G

H

J

K

L

M

9/26/19

9/18/19

2/19/2020

3/20/2020

5/29/2020

6/3/2020

6/4/2020

11/16/2020

90% CDS

11/16/2020

OVERALL SITE PLAN

SITE TYPE: MONOPINE/OUTDOOR CABINETS
(E) EQUIPMENT TO BE PLACED ON (N) MONOPINE
(E) MONOPOLE TO BE REMOVED

(N) GENERAC DIESEL GENERATOR WITH
(N) GPS UNIT
(N) POWER PLANT CABINET WITH (2) STRING OF BATTERIES

NORTH 200 75'-0" PROPOSED SITE PLAN
A 30 CIRCUIT LOAD CENTER / AUTOMATIC TRANSFER SWITCH
MONOPINE (DESIGNED BY OTHERS)

92 GAL

OF DIESEL TO BE STORED

BE PAINTED BROWN TO MATCH THE COLOR OF THE MONOPINE TRUNK

ALL GROUND EQUIPMENT VISIBLE AROUND COMPOUND FENCE LINE IS TO
BRANCHES OUTLINE AROUND AT&T PLATFORM

3/8" = 1'-0"

SS SS SS SS SS SS SS SS SS SS SS SS SS SS SS SS SS

REV POD PROJECT NO: 03/08/19 09/18/19 5/29/2020 11/16/2020

SHEET TITLE: PROPOSED SITE PLAN

San Ramon, California 94583 LOUISVILLE, KY 40299

90% CDS

DOCUMENT.

11/16/2020 90% C26

PROPOSED SITE PLAN

0 3'-6" 6'-8" 6'-8" 6'-8" 6'-8" 6'-8" 6'-8" 6'-8" 6'-8"

2'-0" 8'-0" 10'-0" 15'-0" 20'-0" 25'-0"

1'-3" 2'-0" 3'-9" 4'-0" 4'-4" 4'-2" 5" 5'-0"

3FT CLEARANCE

CCL01924
EXISTING ELEVATION (FACING WEST)

PROPOSED ELEVATION (FACING WEST)

SITE TYPE: MONOPOLE/OUTDOOR CABINETS

EXISTING AND PROPOSED ELEVATION

GRADE = 0'-0" ± EL.

RAD CENTER OF BOTTOM OF (N) AT&T ANTENNAS = 67'-0" ± EL. 237'-8"

(N) (3) AT&T ANTENNAS PER SECTOR FOR A TOTAL OF (9)

(N) (5) AT&T RRUS PER SECTOR FOR A TOTAL OF (15)

(N) AT&T OUTDOOR CABINETS

(N) GENERAC DIESEL GENERATOR WITH 92GAL OF DIESEL TO BE STORED

(C-5) 5-19

1

C-5.2

(N) FEEDLINES:

(3) FIBER TRUNKS - 110'

(9) POWER TRUNKS - 110'

(N) CABLE TRAY

E-4

19

(N) (3) RAYCAP DC-9 SURGE SUPPRESSION (SQUID) ON (N) PIPE MOUNT

(2)(N) T-ARM MOUNTS PER SECTOR, AND (2) COLLAR MOUNTS

TOP OF TOWER = 34'-9" ± EL. 205'-5"

RAD CENTER OF (E) ANTENNAS = 33'-0" ± EL. 203'-8"

(E) ANTENNAS RAD CENTER = 33'-0" ± EL. 203'-8"

(E) RELOCATED ANTENNAS (TYP)

(E) BUILDING

(E) 12" DIAM TREE TO BE REMOVED

TOP OF PROPOSED MONOPINE = 75'-0" ± EL. 245'-8"

TOP OF BRANCHES = 80'-0" ± EL. 250'-8"

RAD CENTER OF (N) AT&T ANTENNAS = 70'-0" ± EL. 240'-8"

(E) BUILDING

(E)ANTENNAS TO BE REMOVED AND PLACED ON (N) MONOPINE (TYP)

(E) 34'-9" MONOPOLES TO BE REMOVED (TYP)

NEW 12FT TALL WOODEN FENCE WITH PRIVACY SLATS TO BE INSTALLED AROUND COMPOUND

12'-0" FENCE

9'-8" TOP OF GENERATOR

11'-3" TOP OF PLATFORM

14'-0" TOP OF CHAINLINK FENCE

15'-0" TOP OF WOODEN FENCE

TOP OF BRANCHES = 80'-0" ± EL. 250'-8"

TOP OF MONOPINE TRUNK = 75'-0" ± EL. 245'-8"

TOP OF PROPOSED MONOPINE = 75'-0" ± EL. 245'-8"

TOP OF BRANCHES = 80'-0" ± EL. 250'-8"

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TOP OF PROPOSED MONOPINE = 75'-0" ± EL. 245'-8"

TOP OF BRANCHES = 80'-0" ± EL. 250'-8"
EXISTING AND PROPOSED ELEVATION

SITE TYPE: MONOPINE/OUTDOOR CABINETS

TOP OF TOWER = 34'-9" ± EL. 205'-5"
RAD CENTER OF (E) ANTENNAS = 33'-0" ± EL. 203'-8"
TOP OF BRANCHES = 80'-0" ± EL. 250'-8"
RAD CENTER OF (N) AT&T ANTENNAS = 70'-0" ± EL. 240'-8"
(E) ANTENNAS RAD CENTER = 33'-0" ± EL. 203'-8"
(E) ANTENNAS TO BE REMOVED AND PLACED ON (N) MONOPINE (TYP)
(E) BUILDING

ALL GROUND EQUIPMENT VISIBLE AROUND COMPOUND FENCE LINE IS TO BE PAINTED BROWN TO MATCH THE COLOR OF THE MONOPINE TRUNK

(N) AT&T OUTDOOR CABINETS
(N) GENERAC DIESEL GENERATOR WITH 92 GAL OF DIESEL TO BE STORED
(N) BOLLARDS
(N) AT&T COVERED RAISED PLATFORM (MIN. 2.5FT ABOVE GROUND LEVEL)
(N) (3) AT&T ANTENNAS PER SECTOR FOR A TOTAL OF (9)
(N) (5) AT&T RRUS PER SECTOR FOR A TOTAL OF (15)
(N) (3) RAYCAP DC-9 SURGE SUPPRESSION (SQUID) ON (N) PIPE MOUNT
(2)(N) T-ARM MOUNTS PER SECTOR, AND (2) COLLAR MOUNTS

TOP OF CHAINLINK FENCE = 5'-0" ± EL. 175'-8"
TOP OF WOODEN FENCE = 8'-0" ± EL. 178'-8"
9'-8" TOP OF GENERATOR
11'-3" TOP OF PLATFORM
2'-6"
...

NEW 12FT TALL FENCE WITH PRIVACY SLATS TO BE INSTALLED AROUND COMPOUND
12'-0" FENCE
3'-12" FENCE

1/16" = 1'-0"

PROPOSED ELEVATION (FACING NORTH)
EXISTING ELEVATION (FACING NORTH)
**CONSTRUCTION DETAILS - EQUIPMENT**

**THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.**

**GPS UNIT**

1/2" COAX TYP UNO

P1000 UNISTRUT WALL ATTACHMENT MIN 24' LONG.

LAG SCREW OR MOLLY BOLT TO EXISTING FRAMING AT EA END. SEAL PENETRATIONS

BUILDING WALL PIPE CLAMP ALTERNATE WHERE ATTACHING TO POST IN LIEU

NOTES:

3/4"=1'-0" GPS MOUNT DETAIL

NOT TO SCALE

**EMERSON OUTDOOR NETSURE 512 POWER PLANT**

3"

66.90"

62.90"

39.02"

FRONT VIEW

LEFT SIDE VIEW

72.06" 31.81" 120° 31.77" 4.46" 22.84" 3.86" 10.86" 21.73" 32.20" 34.16" 7.14" 3.5" 17.50" ℄ ℄ ℄ ℄ ℄ ℄ 3.0"Ø (6 TYP) 1.0"Ø (6 TYP) AC UTILITY OSP CABLES OPTIONAL PLINTH 4"

**CABINET ANCHORAGE DETAIL**

WEIGHT PER CABINET:

- EMPTY W/ BLANK DOOR = 80lbs
- EMPTY W/ HEAT EXCHANGER = 120lbs
- EQUIPMENT (VARIES) = 400/lbs MAX
- CABINET TOTAL (MAX) = 600lbs

NOTES:

1. DOOR HINGE MAY BE REVERSED
2. MINIMUM ANCHOR SIZE MUST BE 1/2" DIA.
3. AN ISOLATOR BASE IS REQUIRED WHEN MOUNTING CABINET DIRECTLY ON CONCRETE PAD.
4. PURCELL STACKED CABINET MOUNTING KIT, PN 2000001398.

**STACKED PURCELL FLX16WS CABINET**

**ERICSSON 4415 REMOTE RADIO UNIT**

**ERICSSON E2 REMOTE RADIO UNIT**

**GPS MOUNT DETAIL**

**EMERSON OUTDOOR NETSURE 512 POWER PLANT**
**STANDARD PLATFORM**

**Same Platform with Two Different Mounting Options**
Each Mounting Option has a Separate NEQ.

Helical Piers
Concrete Extensions

**STANDARD PLATFORM**

**Helical Foundation Option**

The helical foundation consists of four 10" diameter x 10" long helicals. Helicals are installed leaving 15 inches above grade for the stairs to work. This platform will accommodate a DC power cabinet, two stacks of radio cabinets, and a generator. The PTLC is mounted on the outside rail next to the stairs. Each platform ships fully configured with cabinets, generator, Raycaps, light kit, conduits and cables, etc. from WWT directly to the site. See page 9 for helical installation accessories.

Order NEQ 20312 and NEQ 20314

**STANDARD PLATFORM**

**Concrete Pier/Pad Foundation Option**

The concrete foundation consists of four extensions: 10" diameter x 15 inches long. Extensions are anchored to the concrete pier or pad. Anchors can be anything between 5/8" and 1". This platform will accommodate a DC power cabinet, two stacks of radio cabinets, and a generator. The PTLC is mounted on the outside rail next to the stairs. Each platform ships fully configured with cabinets, generator, Raycaps, light kit, conduits and cables, etc. from WWT directly to the site.

Order NEQ 20312 and NEQ 20315

**ON THE GROUND (GRAVITY MOUNT) PLATFORMS**

**Same Platform With and Without Expanded Metal Canopy**

The gravity mount platforms are designed to set on the ground or gravel. Each of the 8 feet are adjustable utilizing single bolt leveling. There is an option without a canopy but having a canopy is preferred. The gravity mount platforms will accommodate a DC power cabinet, two stacks of radio cabinets, and a generator. The PTLC is mounted on the outside rail next to the stairs. Each platform ships fully configured with cabinets, generator, Raycaps, light kit, conduits and cables, etc. from WWT directly to the site.

**ON THE GROUND (GRAVITY MOUNT) PLATFORMS**

**Platform With Expanded Metal Canopy**

The expanded metal canopy is required with gravity mount platforms to reduce the "ball" affect of the standard canopy and survive the 150mph ATT wind spec. In addition the expanded metal canopy protects the equipment and personnel from falling ice off the tower.

Order NEQ 20577
MC-K10L-B

Monopole Co-location T-Frame Kit, 30 in to 60 in OD, 10 ft face, pipe ordered separately

Product Classification

Product Type: Monopole T-frame kit

Dimensions

- Face Width: 3.2 m | 10.5 ft
- Mounting Diameter, maximum: 152.4 mm | 60 in
- Mounting Diameter, minimum: 76.2 mm | 30 in
- Pipe Outer Diameter: 60.3 mm | 2.368 in
- Height: 254.0 mm | 10.0 in
- Length: 914.4 mm | 36.0 in
- Weight: 376.9 kg | 830.9 lb
- Width: 3200.4 mm | 126.0 in

Environmental Specifications

- EPA with 1/2 in (12 mm) radial ice: 1.2 m² | 12.7 ft²
- EPA without ice: 0.9 m² | 9.6 ft²
- Man Rating: 250 lb vertical man load at 15 mph BWS
- Wind Rating: 120 mph (BWS) at 150 ft AGL, | 140 mph (8-second gust) at 150 ft AGL using Exposure D per RFC
- Wind Rating Criteria: Four 72 in x 8 in panel antennas per sector
- Wind Rating Test Method: TM5B-222

General Specifications

- Pipe: quantity: 0
- Includes: Cellular pipe frames | Ring mount | Stand-off arms
- Material Type: Hot dip galvanized steel
- Mounting: Monopole, 762–1224 mm (30–60 in) OD
- Package Quantity: 1
- Sectors, quantity: 3
- Stand-off Distance: 914.4 mm | 36.0 in

Regulatory Compliance/Certifications

- Classification: Designed, manufactured and/or distributed under this quality management system

Included Products

- MT-216-1000 — Cellular Pipe Frame, 10 ft face
- MT-183 — Single Support Arm, 36 in, includes pipe
- MC-IMX0002 — Universal Ring Mount, 30 in to 60 in OD

* Footnotes
10. Power and control wiring, not in tubing or conduit, shall be light vehicle traffic or encased in reinforced concrete in areas of use in accordance with NEMA, UL, ANSI/IEEE and NEC.

1. Stranded copper conductors with greenground conductor. Stranded copper conductors with green

Cabinets, boxes and wireways shall be listed or labeled for

Conduit and tubing fittings shall be threaded or compression

Cables shall not be routed through ladder-style cable tray rungs.

For 90°C (wet and dry) operation, listed or labeled for

terminating by BTS equipment manufacturer.

installing by BTS equipment manufacturer.

780 (LATEST EDITION), AND MANUFACTURER SPECIFICATION.

7. The entire electrical system installed under this contract shall be delivered in

3. The extent of the work is indicated by the drawings, schedules, and

5. Workmanship and neat appearance shall be as important as the operation.

8. Any error, omission or design discrepancy on the drawings shall be

4. Minimum required isodrafts, as needed, are mentioned or shown which is necessary for successful operation of all

3. Grounding at PPC cabinet shall be vertically installed.

7. Exothermic Weld ground connection to fence post: Treat with a cold

6/4/2020

08/30/19

11/15/19

POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

GROUNDING CONDUCTORS SHALL BE USED WHERE REQUIRED TO ENSURE SAFETY OF PERSONNEL AND PROTECT ELECTRICAL EQUIPMENT.

1. Grounding notes:

5. Any area under the building, both above and below ground level.

6. All metal conduit shall be threaded or compression

3. All wire and cable shall be copper, 600 volt, #12 AWG minimum unless

D) Conduit runs may be surface mounted in ceiling or walls unless

1. No substitutions are allowed

2. Ground wire shall be copper, 600 volt, #12 AWG minimum unless

3. The extent of the work is indicated by the drawings, schedules, and

4. Any error, omission or design discrepancy on the drawings shall be

5. Workmanship and neat appearance shall be as important as the operation.

8. Any error, omission or design discrepancy on the drawings shall be

4. Minimum required isodrafts, as needed, are mentioned or shown which is necessary for successful operation of all

installing by BTS equipment manufacturer.

installing by BTS equipment manufacturer.

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installing by BTS equipment manufacturer.

installing by BTS equipment manufacturer.
E.D.P.M. SEALANT or PVC MICROFLECT 25756 OR EQUAL
ROOFING COOPER B-LINE DB30 (FOR 24" TRAY)
TRAY SUPPORT. INSTALL @ 4'-0" O.C.
4 X 4 X 12 FOR 6" TRAY
4 X 4 X 18 FOR 12" TRAY
4 X 4 X 30 FOR 24" TRAY

ALTERNATE:

NOTE:
CONDITIONS. THIS INCLUDES CONNECTOR TYPE AND SPACING.
WITH MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS FOR 'HIGH WIND'
WHEN CABLE TRAY COVERS ARE SPECIFIED, THEY SHALL BE INSTALLED IN ACCORDANCE

19

RUNGS @ 9" O.C., 4" LOADING
TIE-WRAPS OR STAINLESS
PROVIDE SOLID BOTTOM

3/4" = 1'-0"
HORIZONTAL CABLE TRAY

ALL EXPOSED EDGES
TRAY AT GRADE
PER PLAN

NOTES:

PROVIDE HURRICANE / WIND CLAMPS EACH
USING HOLD DOWN CLIPS. SHEET METAL
RUN #2 AWG BCW GROUND CONDUCTOR
SIDE, EACH SUPPORT BLOCK
SCREWS ARE NOT ACCEPTABLE.
CABLES. COVERS SHOULD BE FASTENED
OBJECTS AND BURRS WHICH COULD INJURE
CABLE TRAYS SHALL BE FREE OF SHARP
AND GROUNDING AT BOTH ENDS
ALONG OUTSIDE OF CABLE TRAY PER ELEC.
CONNECTIONS WITH
JUMPER. CONNECT TO
#2 AWG GREEN
ALL CABLE TRAY
FASTENED TO
HURRICANE /
MACHINE BOLTS
UNISTRUT WITH
PIPE/CONDUIT CLAMPS
DIAMETER PIPE. METAL CHANNEL
CONDUIT
SCHEDULED PIPE OR
3/4" = 1'-0"
UTILITY TRENCH DETAIL
VERTICAL CONDUIT AT WALL
3" MIN.
24" MIN.
3" MIN.

HORIZONTAL CABLE TRAY

3/4" = 1'-0"

15

LEGEND
P = COMMUNICATION
M = POWER
# = ELECTRICAL
- = FIRE DETAIL
= ISOLATED GROUND
= DEDICATED GROUND
= CONDUIT GROUND
= MOTION DETECTOR
= PHOTOCELL

COLOR CODE:
· = RED
· = GREEN

BO = RED
GROUND = GREEN

NOTES:

7.
8.
6.
5.
3.
2.
1.

AT&T TELCO PULL CAN
24" X 24" X 8" BOX MOUNTED NEXT TO OR BELOW EQUIPMENT
BACKBOARD LOCATION.
CONDUIT PORTS, STUBS SHOULD BE 10 TO 12 INCHES IN LENGTH.
STUB OUT FLEX CONDUIT FROM TOP OF BOX TO MATCH 3931
FUSE SHOULD BE LEFT IN BOX PRIOR TO TURN UP
AND POP IN FUSE
TERMINATION BLOCK.  AT&T WILL TERMINATE ON THEIR SIDE,
AND POP IN FUSE
TERMINATION BLOCK.  AT&T WILL TERMINATE ON THEIR SIDE,
AND POP IN FUSE
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AND POP IN FUSE
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AND POP IN FUSE
TERMINATION BLOCK.  AT&T WILL TERMINATE ON THEIR SIDE,
### BATTERY INFORMATION

<table>
<thead>
<tr>
<th>BATTERY MODEL</th>
<th>TOTAL # OF UNITS INSTALLED</th>
<th>TOTAL ELECTROLYTE VOLUME (GAL)</th>
<th>TOTAL ELECTROLYTE VOLUME (LB)</th>
<th>% SULFURIC ACID BY VOL.</th>
<th>ACID VOLUME (GAL)</th>
<th>TOTAL ACID WEIGHT (LB)</th>
<th>% SULFURIC ACID BY WEIGHT</th>
<th>ACID VOLUME (LB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB1 INDUSTRIAL POWER MARATHON M12V180FT</td>
<td>8 UNITS</td>
<td>2.17 GAL</td>
<td>23.80 LB</td>
<td>29.0%</td>
<td>0.65 GAL</td>
<td>17.80 LB</td>
<td>29.95%</td>
<td>79.84 LB</td>
</tr>
</tbody>
</table>

**Power Source:**
- **Model Number:** M12V180FT
- **Electrolyte Volume:** 2.17 GAL
- **Total Acid Weight:** 17.80 LB
- **Sulfuric Acid by Weight:** 29.95%

**Applications:**
- **High Performance Applications:**
  - **Utility:**
  - **Communications:**
  - **Industrial:**

**High Performance MARATHON® Features:**
- Advanced Design and Manufacturing Techniques
- Enhanced Reliability and Durability
- Optimized Battery Performance

**From the World Leader in VR&LA Battery Technology**

**Batteries for Commercial, Industrial, and Utility Applications, by the Leading Brand in Core Terminal Electrical Power, MARATHON®**

**Sizing and Selection Guide:**
- **Battery Capacity:**
  - **Single Unit:**
  - **Series Connection:**

**BATTERY SPECIFICATIONS**

**BATTERY MODEL:**
- **GB1 INDUSTRIAL POWER MARATHON M12V180FT**

**TOTAL # OF UNITS INSTALLED:**
- **8 UNITS**

**TOTAL ELECTROLYTE VOLUME (GAL):**
- **2.17 GAL**

**TOTAL ELECTROLYTE VOLUME (LB):**
- **23.80 LB**

**% SULFURIC ACID BY VOL.:**
- **29.0%**

**ACID VOLUME (GAL):**
- **0.65 GAL**

**TOTAL ACID WEIGHT (LB):**
- **17.80 LB**

**% SULFURIC ACID BY WEIGHT:**
- **29.95%**

**ACID VOLUME (LB):**
- **79.84 LB**
ATTACHMENT E
Color and Materials Board
Lara,

Please find attached the color samples for the tree (trunk/pole/equipment, foliage). Let me know if you need more detail or if this will suffice.

Thank you!

Christian
Larson Base Brown

Larson Base Brown for trunk/pole/equipment
Larson Standard Dark Green for foliage

Larson Standard Light Green for foliage
On Aug 31, 2020, at 9:03 AM, Tran, Lara <lara.tran@pln.sccgov.org> wrote:

Thanks for the update, Christian.

Warm regards,

LARA TRAN
Associate Planner

Department of Planning and Development
Lara,
The fees were paid today (receipt attached). I hope to have the tree color samples early next week.

Thank you,
Christian

On Aug 24, 2020, at 5:48 PM, Tran, Lara <lara.tran@pln.sccgov.org> wrote:

Hello Christian,

Attached is the invoice for the geology review fee of the geotechnical report for PLN19-0206. Please have the invoice paid as soon as possible.

The applicant can pay online by creating an account on the County Public Portal website. Please visit and review the instructions for payment online. If online payment is not an option, the applicant can pay in person on the 7th floor at 70 W. Hedding Street, San Jose, CA 95110.

Let me know if you have any questions.
Warm regards,

LARA TRAN
Associate Planner

Department of Planning and Development
County of Santa Clara
70 W. Hedding Street | 7th Floor | East Wing
San Jose | CA 95110
Phone: (408) 299-5759
lara.tran@pln.sccgov.org

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Please visit our website.
Click here to look up unincorporated property zoning information.
Questions on the status of a building permit? Please e-mail: PLN-PermitCenter@pln.sccgov.org

<Invoice for PLN19-0206 (4350 Monterey Road, Gilroy).pdf>
ATTACHMENT F
Photo Simulations
ATTACHMENT G
Radio Frequency Emissions Compliance Report
Compliance Statement
Based on information provided by AT&T Mobility and predictive modeling, the SF829 Highways 25 & 101 installation proposed by AT&T Mobility will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310. RF alerting signage and restricting access to the Monopine to authorized climbers that have completed RF safety training is required for Occupational environment compliance. The proposed operation will not expose members of the General Public to hazardous levels of RF energy and will not contribute to existing cumulative MPE levels on walkable surfaces at ground or in adjacent buildings by 5% of the General Population limits.

Certification
I, David H. Kiser, am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commission (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC’s OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

General Summary
The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure (“MPE”) limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.
Table 1: FCC Limits

<table>
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<th>Frequency (MHz)</th>
<th>Limits for General Population/ Uncontrolled Exposure</th>
<th>Limits for Occupational/ Controlled Exposure</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Power Density (mW/cm²)</td>
<td>Averaging Time (minutes)</td>
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<tr>
<td>30-300</td>
<td>0.2</td>
<td>30</td>
</tr>
<tr>
<td>300-1500</td>
<td>f/1500</td>
<td>30</td>
</tr>
<tr>
<td>1500-100,000</td>
<td>1.0</td>
<td>30</td>
</tr>
</tbody>
</table>

f=Frequency (MHz)

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any location given the spatial orientation and operating parameters of multiple RF sources. The power density in the Far Field of an RF source is specified by OET-65 Equation 5 as follows:

\[ S = \frac{EIRP}{4\pi R^2} \text{ (mW/cm}^2\text{)} \]

where EIRP is the Effective Radiated Power relative to an isotropic antenna and R is the distance between the antenna and point of study. Additionally, consideration is given to the manufacturers’ horizontal and vertical antenna patterns as well as radiation reflection. At any location, the predicted power density in the Far Field is the spatial average of points within a 0 to 6-foot vertical profile that a person would occupy. Near field power density is based on OET-65 Equation 20 stated as

\[ S = \left( \frac{180}{\theta_{BW}} \right) \cdot \frac{100 \cdot P_{in}}{\pi \cdot R \cdot h} \text{ (mW/cm}^2\text{)} \]

where \( P_{in} \) is the power input to the antenna, \( \theta_{BW} \) is the horizontal pattern beamwidth and \( h \) is the aperture length.

Some antennas employ beamforming technology where RF energy allocated to each customer device is dynamically directed toward their location. In the analysis presented herein, predicted exposure levels are based on all beams at full utilization (i.e. full power) simultaneously focused in any direction. As this condition is unlikely to occur, the actual power density levels at ground and at adjacent structures are expected to be less than the levels reported below. These theoretical results represent worst-case predictions as all RF emitters are assumed to be operating at 100% duty cycle.

For any area in excess of 100% General Population MPE, access controls with appropriate RF alerting signage must be put in place and maintained to restrict access to authorized personnel. Signage must be posted to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Controls such as physical barriers to entry imposed by locked doors, hatches and ladders or other access control mechanisms may be supplemented by alarms that alert the individual and notify site management of a breach in access control. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with all wireless tenants.
Analysis

AT&T Mobility proposes the following installation at this location:

- Install (9) new panel antennas
- Install (15) new RRUs

The antennas will be mounted on a 75-foot monopine with centerlines 70 feet above ground level. The antennas will be oriented towards 70, 180 and 330 degrees. The radio equipment to be operated at this location is capable of a maximum of 40W per 4G channel at 700 MHz, 40W per 4G channel at 850 MHz, 40W per 4G channel at 1900 MHz, 40W per 4G channel at 2100 MHz, and 25W per 4G channel at 2300 MHz. Other appurtenances such as GPS antennas, RRUs and hybrid cable below the antennas are not sources of RF emissions. Panel antennas have been installed at this site by other wireless operators. Assumed operating parameters for these antennas are listed in Appendix A.

Figure 1: Antenna Locations
Power density decreases significantly with distance from any antenna. The panel-type antennas to be employed at this site are highly directional by design and the orientation in azimuth and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front of the antennas. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 1.7638% of the FCC General Population limits. Based on the operating parameters in Appendix A, the cumulative power density level at this location from all antennas is 2.1404% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 1.4203% of the FCC General Population limits. Based on the operating parameters in Appendix A, the cumulative power density level at this location from all antennas is 1.6276% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy and will not contribute to existing cumulative MPE levels on walkable surfaces at ground or in adjacent buildings by 5% of the General Population limits.

Waterford Consultants, LLC recommends posting RF alerting signage with contact information (Caution 2B) at the base of the monopine to inform authorized climbers of potential conditions near the antennas. These recommendations are depicted in Figure 2.
### Appendix A: Assumed Parameters for Antennas Installed by Other Operators

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</table>
ATTACHMENT H
Geotechnical Report by Tower Engineering Professionals, Inc.
(dated August 2, 2020)
Subject: Subsurface Exploration Report

Date: August 7, 2020

Brian Leegwater
Crown Castle
One Park Place, Suite 300
Dublin, CA 94568
Office: (925) 737-1016

Tower Engineering Professionals, Inc.
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
Geotech@tepgroup.net

Dear Brian Leegwater,

Tower Engineering Professionals, Inc. (TEP) is pleased to submit this “Subsurface Exploration Report” to evaluate subsurface conditions in the tower area as they pertain to providing support for the tower foundation.

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions in this report are based on the applicable standards of TEP’s practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

The analyses and recommendations submitted herein are based, in part, upon the data obtained from the subsurface exploration. The soil conditions may vary from what is represented in the boring log. While some transitions may be gradual, subsurface conditions in other areas may be quite different. Should actual site conditions vary from those presented in this report, TEP should be provided the opportunity to amend its recommendations as necessary.

We at Tower Engineering Professionals, Inc. appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.


Respectfully submitted by:

William H. Martin, P.E.
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   5.3) Subsurface Water
   5.4) Frost

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    Aerial Layout
    Topographic Layout
    Boring Layout

14) APPENDIX B
    Laboratory Testing Summary

15) APPENDIX C
    Boring Log
1) PROJECT DESCRIPTION

Based on the preliminary drawings, it is understood a monopine communications tower will be constructed at the referenced site. The structure loads will be provided by the tower manufacturer.

2) PREVIOUS EXPLORATION

A previous subsurface exploration was not available at the time of this report.

3) SITE EXPLORATION

The field exploration included the performance of one soil test boring (B-1) to the planned depth of 51.5 feet (bgs) approximately 30 feet north of the proposed monopine tower. The boring was performed by a truck mounted drill rig using continuous flight hollow stem augers to advance the hole. Split-spoon samples and Standard Penetration Resistance Values (N-values) were obtained in accordance with ASTM D 1586 at a frequency of three samples in the top 10 feet and two samples every 10 feet thereafter.

The Split-spoon samples were transported to the TEP laboratory where they were classified by a Geotechnical Engineer in general accordance with the Unified Soil Classification System (USCS), using visual-manual identification procedures (ASTM D 2488). Additional laboratory testing included the performance of Soil Water Content (ASTM D 2216), Atterberg Limits (ASTM D 4318), Percent Finer than #200 Sieve (ASTM D 1140), Sieve Particle-Size Gradation (ASTM D 6913) tests, Pocket Penetrometer, and Torvane testing.

A Boring Location Plan showing the approximate boring location, a Boring Log presenting the subsurface information obtained and a brief guide to interpreting the boring log are included in the Appendix.

4) SITE CONDITIONS AND REGIONAL GEOLOGY

The site is located at 4350 Monterey Rd. in Gilroy, Santa Clara County, California. The proposed tower and compound are located at a winery. The ground topography is relatively level.

The project site is located within the Pacific Border physiographic province in California. Near surface materials in this area are generally comprised of alluvium and marine from the Pleistocene to Holocene epochs. A study of area soils from the available literature (USDA Web Soil Survey) shows that the near surface material consists of Yolo loam (YaA). Adjacent soils near surface materials consist of Campbell silty clay loam (Ca).
5) SUBSURFACE CONDITIONS

The following description of subsurface conditions is brief and general. For more detailed information, the individual Boring Log contained in Appendix C - Boring Log may be consulted.

5.1) Soil

The USCS classification of the materials encountered in the boring include GW, CL, GP, CL-ML, and CH. The Standard Penetration Resistance ("N" Values) recorded in the materials ranged from 2 to 20 blows per foot of penetration.

5.2) Rock

Rock was not encountered in the boring. Refusal of auger advancement was not encountered in the boring.

5.3) Subsurface Water

Subsurface water was encountered at a depth of 10 feet (bgs) in the boring at the time of drilling. It should be noted the subsurface water level will fluctuate during the year, due to seasonal variations and construction activity in the area.

5.4) Frost

The TIA frost depth for Santa Clara County California is 5 inches.
6) TOWER FOUNDATION DESIGN

Based on the boring data, it is the opinion of TEP that a single drilled shaft can be used to support the new tower. If the drilled shaft foundation option is utilized, design of the foundation should be adjusted to terminate in a known material. The following presents TEP’s conclusions and recommendations regarding the foundation types.

Due to the presence of submerged soils with low blow counts, the site is likely to be subject to liquefaction during a seismic event. Liquefaction is the loss of a soil’s shear strength due to the increase in pore water pressure resulting from seismic vibrations. During this loss in shear strength deep foundations at this site have the potential to experience problems such as a loss of skin friction in liquefiable layers and downdrag forces as a result of subsidence/settlement of soils overlying liquefiable layers.

A preliminary liquefaction induced settlement in excess of almost 4 inches was calculated based on the peak ground acceleration (PGA) of 0.661g, a maximum earthquake magnitude (M\text{max}) of 7.08, as well as the results of the subsurface exploration. Several clay-containing layers were not considered liquefiable based on plasticity of the soils.

Potentially liquefiable layers were identified at the site from a depth of 10 to 20 feet (bgs). The peak ground acceleration (PGA) of 0.661g, a maximum earthquake magnitude (M\text{max}) of 7.08, as well as the results of the subsurface exploration.

6.1) Shallow Foundation

Shallow foundation parameters are not being provided as they are not recommended as part of a design due to the proximity of the structure. Drilled shaft design parameters may be found in Section 6.2. Shallow foundation construction considerations have been provided in Section 9 should they be necessary for the installation of auxiliary and equipment structure foundations, should they be needed.
6.2) Drilled Shaft Foundation

The following values may be used for analysis of a drilled shaft foundation. TEP recommends the side frictional and lateral resistance values developed in the top section of the caisson for a depth equal to half the diameter of the caisson or the frost depth, whichever is greater, be neglected in the calculations. The values are based on the current ground surface elevation.

Due to the liquefaction potential of soils from depths of 10 to 20 feet (bgs) it is recommended the foundation bear below 25 feet (bgs) to avoid excessive settlements. A smooth walled permanent casing may be used to help isolate soils from downdrag effects. Side frictional resistance values provided below may be reduced by 50 percent for the depths where casing is installed.

**Table 1 – Drilled Shaft Foundation Analysis Parameters**

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<th>Ultimate Side Frictional Resistance² (psf)</th>
<th>Cohesion (psf)</th>
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Notes:
1) The bearing values provided are gross ultimate. If the bearing depth of the foundation is less than 5 diameters below the ground surface the bearing values listed in Table 1 – Shallow Foundation Analysis Parameters should be utilized.
2) The side frictional resistance values provided are ultimate.
3) Total unit weights provided. Effective unit weights can be achieved by subtracting unit weight of water from the total unit weight below the subsurface water level of 10.0 feet (bgs).
4) The identified layer may be subject to liquefaction. During a seismic event this layer may lose shear strength and subsidence of overlying layers may generate negative skin friction on deep foundations. To account for seismic conditions, post liquefaction residual shear strength values have been provided in the identified layers.

6.3) Modulus of Subgrade Reaction

A vertical modulus of subgrade reaction and a horizontal modulus of subgrade reaction may be derived using the following equations and soil parameters for analysis of foundations.

\[
k_{sv} = 12 \text{ (SF)} \frac{Q_a}{B}
\]

\[
k_{sh} = k_{sv} B
\]

\[
Q_a = \text{Allowable Bearing Capacity (ksf)}
\]

SF = Factor of Safety

B = Base width (ft), use 1 if B<1ft.

\[
k_{sv} = \text{Vertical Modulus of Subgrade Reaction (ksf)}
\]

\[
k_{sh} = \text{Horizontal Modulus of Subgrade Reaction (ksf)}
\]
7) SEISMIC DESIGN CONSIDERATIONS AND GEOLOGIC HAZARDS

The following sections were assembled to provide site-specific seismic design parameters, and address potential site seismic hazards and/or geologic hazards identified.

7.1) Seismic Design Parameters

The Site Class per Table 1613.5.2, of the 2016 California Building Code (2019 CBC) based on the site soil conditions is Site Class F. The following seismic design parameters were obtained from the US Seismic Hazard Design Maps available through the USGS. A risk category of I – III was assumed.

\[
\begin{align*}
\text{PGA:} & \quad 0.661g \\
S_S & \quad 1.528g \\
S_1 & \quad 0.615g \\
F_a & \quad \text{N/A} \\
F_v & \quad \text{N/A} \\
S_{DS} & \quad \text{N/A} \\
S_{D1} & \quad \text{N/A}
\end{align*}
\]

Ground motion values provided above are in accordance with the 2016 ASCE-7 Standard.

7.2) Seismic Hazard Review

Seismic hazards were reviewed in accordance with California Geological Survey’s Special Publication 117A Guidelines for Evaluating and Mitigating Seismic Hazards in California 2008. Based on information available from Caltrans ARS Online (http://dap3.dot.ca.gov/ARS_Online/), faults were mapped in the vicinity of the project site. Below is a selection of the 5 closest faults identified.

<table>
<thead>
<tr>
<th>Fault Name</th>
<th>Distance (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sargent fault zone (Southeastern Section)</td>
<td>1.39</td>
</tr>
<tr>
<td>Calaveras fault zone (Southern Calaveras Section)</td>
<td>3.98</td>
</tr>
<tr>
<td>Calaveras fault zone (Central Calaveras Fault Section)</td>
<td>4.51</td>
</tr>
<tr>
<td>San Andreas fault zone (Santa Cruz Mountains Section)</td>
<td>5.01</td>
</tr>
<tr>
<td>Zayante-Vergeles fault zone</td>
<td>9.49</td>
</tr>
</tbody>
</table>

Due to the presence of loose submerged sands at the site, it was determined that a site-specific liquefaction potential analysis was necessary at this project location. The ground surrounding the tower site can be described as being relatively level. Considering the site topography and that loose to medium dense materials were encountered, it is not likely that the site should be considered susceptible to landslides or flows. Additionally the site is not located within an area identified as being prone to faulting per CGS maps, in accordance with the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

Based upon our evaluations, the existing tower and associated lightly loaded structures are acceptable from a geotechnical engineering standpoint. It appears that the grading and existing structures will be safe from land slide, settlement, and slippage under the anticipated design loadings and conditions. The existing tower and associated lightly loaded structures should not impose any adverse effect on existing adjacent land or structures.
7.3) Geologic Hazard Review

Based on the subsurface exploration, site specific geologic hazards including, but not limited to shrink/swell soils, collapsible soils, problematic shales, karst, and indicators of potential slope failures were not encountered in the boring. As noted in Section 6 of this report, potentially liquefiable soils were encountered between the depths of 10 and 20 feet (bgs). As is customary, any known geologic hazards identified during exploration and subsequent analysis will be noted in the report.

8) SOIL RESISTIVITY, pH, SULFATE, AND CHLORIDE

Soil resistivity was performed at the site utilizing a Miller 400A – 4 pin resistance meter in accordance with ASTM G57-06 (Standard Test Method for Measurement of Soil Resistivity Using the Wenner Four-Electrode Method). Soil resistivity testing was performed adjacent to the centerline of the proposed tower. Representative lines showing the approximate location and orientation of the resistivity tests can be found in the Boring Layout in Appendix A.

Table 3 - Soil Resistivity Test Results

<table>
<thead>
<tr>
<th>Post Spacing (ft)</th>
<th>North - South Resistivity (ohm-cm)</th>
<th>East - West Resistivity (ohm-cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5,700</td>
<td>4,200</td>
</tr>
<tr>
<td>4</td>
<td>7,300,000</td>
<td>9,900</td>
</tr>
<tr>
<td>8</td>
<td>1,600</td>
<td>2,200</td>
</tr>
<tr>
<td>16</td>
<td>-</td>
<td>6,100</td>
</tr>
</tbody>
</table>

Soil resistivity was performed at the TEP laboratory in accordance with ASTM G187-05 (Standard Test Method for Measurement of Soil Resistivity Using the Two Electrode Soil Box Method). Test results indicated a result of 130,000 ohms-cm. The pH testing was performed at the TEP laboratory utilizing a Hanna Instruments Direct Soil pH Meter. Test results indicated a pH of 6.79. Sulfate and chloride testing was performed at the TEP laboratory utilizing chemical analysis. Test results indicate a sulfate content of 50 ppm and a chloride content of 25 ppm.
9) CONSTRUCTION CONSIDERATIONS - SHALLOW FOUNDATION

9.1) Excavation

The boring data indicates excavation to the expected subgrade level for the shallow foundation will extend through gravel and clay. A large tracked excavator should be able to remove the materials with minimal to moderate difficulty.

Excavations should be sloped or shored in accordance with local, state and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. It is the responsibility of the contractor for site safety. This information is provided as a service and under no circumstance should TEP be assumed responsible for construction site safety.

9.2) Foundation Evaluation/Subgrade Preparation

After excavation to the design elevation for the footing, the materials should be evaluated by a Geotechnical Engineer or a representative of the Geotechnical Engineer prior to reinforcement and concrete placement. This evaluation should include probing, shallow hand auger borings and dynamic cone penetrometer testing (ASTM STP-399) to help verify that suitable residual material lies directly under the foundation and to determine the need for any undercut and replacement of unsuitable materials. Loose surficial material should be compacted in the excavation prior to reinforcement and concrete placement to stabilize surface soil that may have become loose during the excavation process. TEP recommends a 6-inch layer of compacted crushed stone be placed just after excavation to aid in surface stability.

9.3) Fill Placement and Compaction

Backfill materials placed above the shallow foundation to the design subgrade elevation should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. To be considered for use, backfill materials should have a maximum dry density of at least 100 pounds per cubic foot as determined by standard Proctor (ASTM D 698), a Liquid Limit no greater than 40, a Plasticity Index no greater than 20, a maximum particle size of 4 inches, and 20 percent or less of the material having a particle size between 2 and 4 inches. Because small handheld or walk-behind compaction equipment will most likely be used, backfill should be placed in thin horizontal lifts not exceeding 6 inches (loose).

Fill placement should be monitored by a qualified Materials Technician working under the direction of a Geotechnical Engineer. In addition to the visual evaluation, a sufficient amount of in-place field density tests should be conducted to confirm the required compaction is being attained.

9.4) Reuse of Excavated Soil

The gravel and clay that meets the above referenced criteria can be utilized as backfill based on dry soil and site conditions at the time of construction.
10) CONSTRUCTION CONSIDERATIONS - DRILLED SHAFTS

Based on TEP’s experience a conventional drilled shaft rig (Hughes Tool LDH or equivalent) can be used to excavate to the termination depth of TEP’s boring. An earth auger can typically penetrate the materials encountered to the termination depth of the boring with minimal to moderate difficulty. Special excavation equipment may be necessary for a shaft greater that 60-inches in diameter. If hole collapse is encountered during construction, the design and geotechnical engineers should be contacted immediately to make any necessary adjustments.

Due to the subsurface water and the gravel, the contractor should utilize the “slurry” method for shaft construction. The following are general procedure recommendations in drilled shaft construction using the “slurry” method:

1) Slurry drilled shafts are constructed by conventional caisson drill rigs excavating beneath a drilling mud slurry. Typically, the slurry is introduced into the excavation after the groundwater table has been penetrated and/or the soils on the sides of the excavation are observed to be caving-in. When the design shaft depth is reached, fluid concrete is placed through a tremie pipe at the bottom of the excavation.

2) The slurry level should be maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the subsurface water level.

3) Inspection during excavation should include verification of plumbness, maintenance of sufficient slurry head, monitoring the specific gravity, pH and sand content of the drilling slurry, and monitoring any changes in the depth of the excavation between initial approval and prior to concreting.

4) A removable steel casing should be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Loose soils in the bottom of the shaft should be removed.

5) The specific gravity or relative density of the drilling mud slurry should be monitored from the initial mixing to the completion of the excavation. An increase in the specific gravity or density of the drilling slurry by as much as 10 percent is indicative of soil particles settling out of the slurry onto the bottom of the excavation. This settling will result in a reduction of the allowable bearing capacity of the bottom of the drilled shaft.

6) After approval, the drilled shaft should be concreted as soon as practical using a tremie pipe.

7) For slurry drilled shafts, the concrete should have a 6 to 8 inch slump prior to discharge into the tremie. The bottom of the tremie should be set at about one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie should be used, or a sliding plug introduced into the tremie before the concrete, to reduce the potential for the concrete being contaminated by the slurry. The bottom of the tremie must be maintained in concrete during placement, which should be continuous.

8) The protective steel casing should be extracted as concrete is placed. A head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the casing.

9) Additional concrete should be placed via the tremie causing the slurry to overflow from the excavation in order to reduce the likelihood of slurry pockets remaining in the drilled shaft.

If variability in the subsurface materials is encountered, a representative of the Geotechnical Engineer should verify that the design parameters are valid during construction. Modification to the design values presented above may be required in the field.
11) SITE PHOTOGRAPHS

<table>
<thead>
<tr>
<th>Proposed Boring Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Resistivity</td>
</tr>
</tbody>
</table>
12) SAMPLE PHOTOGRAPHS

Jar Samples

Jar Samples
<table>
<thead>
<tr>
<th>Jar Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jar Samples</td>
</tr>
</tbody>
</table>
APPENDIX A

AERIAL LAYOUT,
TOPOGRAPHIC LAYOUT,
& BORING LAYOUT
AERIAL LAYOUT

APPROXIMATE LOCATION OF THE PROPOSED 75 FOOT MONOPINE.
APPENDIX B

LABORATORY TESTING SUMMARY
### Laboratory Results Summary

<table>
<thead>
<tr>
<th>Boring</th>
<th>Sample ID</th>
<th>Depth [ft]</th>
<th>Moisture Content [%]</th>
<th>Liquid Limit</th>
<th>Plastic Limit</th>
<th>Plasticity Index</th>
<th>Percent Fines [%]</th>
<th>USCS Soil Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>S1</td>
<td>2.5</td>
<td>15.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>Well graded gravel (GW), with sand</td>
</tr>
<tr>
<td>B-1</td>
<td>S2</td>
<td>5</td>
<td>25.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S3</td>
<td>7.5</td>
<td>16.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.8</td>
<td>Poorly graded gravel (GP), with sand</td>
</tr>
<tr>
<td>B-1</td>
<td>S4</td>
<td>10</td>
<td>11.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S5</td>
<td>15</td>
<td>28.6</td>
<td>28</td>
<td>21</td>
<td>7</td>
<td>79.7</td>
<td>Silty clay (CL-ML), with sand</td>
</tr>
<tr>
<td>B-1</td>
<td>S6</td>
<td>20</td>
<td>36.4</td>
<td>56</td>
<td>22</td>
<td>34</td>
<td>88.7</td>
<td>Fat clay (CH)</td>
</tr>
<tr>
<td>B-1</td>
<td>S7</td>
<td>25</td>
<td>29.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S8</td>
<td>30</td>
<td>29.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S9</td>
<td>35</td>
<td>35.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S10</td>
<td>40</td>
<td>33.7</td>
<td>-</td>
<td>-</td>
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<td>B-1</td>
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<td>45</td>
<td>28.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B-1</td>
<td>S12</td>
<td>50</td>
<td>30.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Particle Size Analysis Results
ASTM D 6913

Boring B-1
Sample S-1
Depth 2.5

<table>
<thead>
<tr>
<th>Sieve Number</th>
<th>Percent Passing [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>100.0</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>56.0</td>
</tr>
<tr>
<td>4</td>
<td>44.6</td>
</tr>
<tr>
<td>10</td>
<td>33.0</td>
</tr>
<tr>
<td>20</td>
<td>24.5</td>
</tr>
<tr>
<td>40</td>
<td>17.3</td>
</tr>
<tr>
<td>60</td>
<td>12.2</td>
</tr>
<tr>
<td>100</td>
<td>8.1</td>
</tr>
<tr>
<td>140</td>
<td>5.8</td>
</tr>
<tr>
<td>200</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Gravel
D_{60} = 9.916 mm
D_{50} = 7.007 mm
D_{30} = 1.595 mm
D_{10} = 0.196 mm
Cu = 50.9
Cc = 1.3

Sand
D_{60} = 12.712 mm
D_{50} = 8.907 mm
D_{30} = 3.867 mm
D_{10} = 0.206 mm
Cu = 61.6
Cc = 5.7

Boring B-1
Sample S-3
Depth 7.5

<table>
<thead>
<tr>
<th>Sieve Number</th>
<th>Percent Passing [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>75.0</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>52.4</td>
</tr>
<tr>
<td>4</td>
<td>33.7</td>
</tr>
<tr>
<td>10</td>
<td>22.2</td>
</tr>
<tr>
<td>20</td>
<td>18.0</td>
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<tr>
<td>40</td>
<td>15.2</td>
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<tr>
<td>60</td>
<td>11.6</td>
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<tr>
<td>100</td>
<td>7.9</td>
</tr>
<tr>
<td>140</td>
<td>5.7</td>
</tr>
<tr>
<td>200</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Gravel
D_{60} = 9.916 mm
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Sand
D_{60} = 12.712 mm
D_{50} = 8.907 mm
D_{30} = 3.867 mm
D_{10} = 0.206 mm
Cu = 61.6
Cc = 5.7

Fines
APPENDIX C

BORING LOG
## Description and Classification

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Sample Length (Inches)</th>
<th>Blow Counts (N)</th>
<th>REC% / RQD%</th>
<th>Elevation (Feet)</th>
<th>Depth (Feet)</th>
<th>Sample Graphic</th>
<th>Description and Classification</th>
<th>Remarks</th>
<th>Pocket Pen TPS</th>
<th>Unconfined Strength (PSF)</th>
<th>Unit Weight (PCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>18</td>
<td>7-6-6 (12)</td>
<td></td>
<td>0.0-5.0</td>
<td>0</td>
<td>0.0-5.0</td>
<td>0.0-5.0: Medium dense, gray, fine to coarse, well graded GRAVEL (GW), with sand, moist</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>18</td>
<td>2-2-2 (4)</td>
<td></td>
<td>5.0-7.5</td>
<td>5</td>
<td>5.0-7.5</td>
<td>5.0-7.5: Soft, brown, lean CLAY (CL), trace sand, moist</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>18</td>
<td>4-6-12 (18)</td>
<td></td>
<td>7.5-10.0</td>
<td>10</td>
<td>7.5-10.0</td>
<td>7.5-10.0: Medium dense, brown, poorly graded GRAVEL (GP), with sand, moist</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S4</td>
<td>18</td>
<td>4-10-10 (20)</td>
<td></td>
<td>10.0-15.0</td>
<td>15</td>
<td>10.0-15.0</td>
<td>10.0-15.0: wet</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S5</td>
<td>18</td>
<td>1-1-1 (2)</td>
<td></td>
<td>15.0-20.0</td>
<td>20</td>
<td>15.0-20.0</td>
<td>15.0-20.0: Very soft, brown, silty CLAY (CL-ML), with sand, wet</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S6</td>
<td>18</td>
<td>2-2-3 (5)</td>
<td></td>
<td>20.0-40.0</td>
<td>30</td>
<td>20.0-40.0</td>
<td>20.0-40.0: Medium stiff, gray, fat CLAY (CH), trace sand, wet</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S7</td>
<td>18</td>
<td>1-1-4 (5)</td>
<td></td>
<td>30.0-40.0</td>
<td>40</td>
<td>30.0-40.0</td>
<td>30.0-40.0: to stiff</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S8</td>
<td>18</td>
<td>2-2-3 (5)</td>
<td></td>
<td>40.0-45.0</td>
<td>45</td>
<td>40.0-45.0</td>
<td>40.0-45.0: to stiff</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S9</td>
<td>18</td>
<td>1-2-3 (5)</td>
<td></td>
<td>45.0-50.0</td>
<td>50</td>
<td>45.0-50.0</td>
<td>45.0-50.0: to medium stiff</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S10</td>
<td>18</td>
<td>2-4-6 (10)</td>
<td></td>
<td>50.0-51.5</td>
<td>55</td>
<td>50.0-51.5</td>
<td>50.0-51.5: to stiff</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S11</td>
<td>18</td>
<td>4-4-4 (6)</td>
<td></td>
<td></td>
<td></td>
<td>4-4-4</td>
<td>51.5: Boring Terminated TV = Pocket Torvane Shear Test</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S12</td>
<td>18</td>
<td>2-5-5 (10)</td>
<td></td>
<td></td>
<td></td>
<td>2-5-5</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE-GRAINED SOILS (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

Descriptive Terms | SPT Blow Count
--- | ---
Very Loose | < 4
Loose | 4 to 10
Medium Dense | 11 to 30
Dense | 31 to 50
Very Dense | > 50

FINE-GRAINED SOILS (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

Descriptive Terms | SPT Blow Count
--- | ---
Very Soft | < 2
Soft | 2 to 4
Medium Stiff | 5 to 8
Stiff | 9 to 15
Very Stiff | 16 to 30
Hard | > 30

GENERAL NOTES
1. Classifications are bases on the Unified Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.
2. Surface elevations are based on topographic maps and estimated locations and should be considered approximate.
3. Descriptions on these boring logs apply only at the specific boring locations and at the time the borings were made. They are not guaranteed to be representative of subsurface condition at other locations or times.

<table>
<thead>
<tr>
<th>Group Symbols</th>
<th>Typical Names</th>
<th>Sampler Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW</td>
<td>Well-graded gravels, gravel-sand mixtures, little or no fines</td>
<td>Split Spoon</td>
</tr>
<tr>
<td>GP</td>
<td>Poorly-graded gravels, little or no fines/sands</td>
<td>Standard Penetration Test (SPT)</td>
</tr>
<tr>
<td>GM</td>
<td>Silty gravels, gravel-sand-silt mixtures</td>
<td>Pushed Shelby Tube</td>
</tr>
<tr>
<td>GC</td>
<td>Clayey gravels, gravel-sand-silt mixtures</td>
<td>Auger Cuttings</td>
</tr>
<tr>
<td>SW</td>
<td>Well-graded sands, gravelly sands, little or no fines</td>
<td>Grab Sample</td>
</tr>
<tr>
<td>SP</td>
<td>Poorly-graded sands, little or no fines/sands/gravels</td>
<td>Dynamic Cone Penetrometer</td>
</tr>
<tr>
<td>SM</td>
<td>Silty sands, sand-silt mixtures</td>
<td>Hand Auger</td>
</tr>
<tr>
<td>SC</td>
<td>Clayey sands, sand-clay mixtures</td>
<td>Rock Core</td>
</tr>
<tr>
<td>ML</td>
<td>Inorganic silts and very fine sands, rock floor, silty or clayey fine sands or clayey silts with slight plasticity</td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td>Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays</td>
<td></td>
</tr>
<tr>
<td>OL</td>
<td>Organic silts and organic silty clays of low plasticity</td>
<td></td>
</tr>
<tr>
<td>MH</td>
<td>Inorganic silts, micaceous or distomaceous fine sandy or silty soils, elastic silts</td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>Inorganic clays of high plasticity, fat clays</td>
<td></td>
</tr>
<tr>
<td>OH</td>
<td>Organic clays of medium to high plasticity, organic silts</td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>Peat and other highly organic soils</td>
<td></td>
</tr>
</tbody>
</table>

Log Abbreviations
ATD - At Time of Drilling
AD - After Drilling
EOD - End of Drilling
RMR - Rock Mass Rating
WOH - Weight of Hammer
WOR - Weight of Rod
REC - Rock Core Recovery
RQD - Rock Quality Designation
Information Regarding This
Subsurface Exploration Report

The information contained in this report has been specifically tailored to the needs of the client at the time the report was provided, for the specific purpose of the project named in this report. The attached report may not address the needs of contractors, civil engineers, or structural engineers. Anyone other than the named client should consult with the geotechnical engineer prior to utilizing the information contained in the report.

It is always recommended that the full report be read. While certain aspects of the report may seem unnecessary or irrelevant; just as each project and site are unique, so are the subsurface investigation reports and the information contained in them. Several factors can influence the contents of these reports, and the geotechnical engineer has taken into consideration the specific project, the project location, the client’s objectives, potential future improvements, etc. If there is any question about whether the attached report pertains to your specific project or if you would like to verify that certain factors were considered in the preparation of this report, it is recommended that you contact the geotechnical engineer.

Geotechnical subsurface investigations often are prepared during the preliminary stages of a project and aspects of the project may change later on. Some changes may require a report revision or additional exploration. Some changes that often need to be brought to the attention of the geotechnical engineer include changes in location, size and/or type of structure, modifications to existing structures, grading around the project site, etc. Some naturally occurring changes can also develop that impact the information contained in this geotechnical report such as earthquakes, landslides, floods, subsurface water levels changing, etc. It is always recommended that the geotechnical be informed of known changes at the project site.

Subsurface exploration reports are generated based on the analysis and professional opinions of a geotechnical engineer based on the results of field and laboratory data. Often subsurface conditions can vary – sometimes significantly – across a site and over short distances. It often is helpful to retain the geotechnical engineer’s services during the construction process. Otherwise, the geotechnical cannot assume responsibility or liability for report recommendations which may have needed to change based on changing site conditions or misinterpretation of recommendations.

Geotechnical engineers assemble testing and/or boring logs based on their interpretation of field and laboratory data. Testing and/or boring logs should always be coupled with the subsurface exploration report. The geotechnical engineer and Tower Engineering Professionals cannot be held reliable for interpretations, analyses, or recommendations based solely on the testing and/or boring log if it is independent of the prepared report.

The scope of the subsurface exploration report does not include an assessment or analysis of environmental conditions, determination of the presence or absence of wetlands or hazardous or toxic materials on or below the ground surface. Any notes regarding odors, fill, debris, or anything of that nature are offered as general information for the client, often to help identify or delineate natural soil boundaries.

For additional information, please contact the geotechnical engineer named in the attached report.