

City of Powder Springs, Georgia
Telecommunications Site Review
New Support Structure

CityScape
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August 7, 2017

Ms. Tina Garver, AICP
Community Development Director
City of Powder Springs
4488 Pineview Drive
Powder Springs, GA 30127

RE: City of Powder Springs / PO#18-00067
Municipal Communications / Commodore (Verizon Wireless)

Dear Ms. Garver,

At your request, on behalf of the City of Powder Springs, Georgia (“City”), CityScape Consultants, Inc. (“CityScape”) in its capacity as telecommunications consultant for the City, has considered the merits of the above referenced application submitted by Municipal Communications, on behalf of Verizon Wireless (“Applicant”) to construct a new wireless telecommunications support structure and associated ground compound at 3215 New Macland Road, Powder Springs, *see Figure 1*.

This application is proposed to improve service in the immediate area and provide coverage and data service for wireless subscribers in vehicles and in buildings parallel to and around a portion of New Macland Road.

The proposal has been evaluated from the following perspectives:

- The proposed facility, as specified, is justified due to technological reasons and is essential for the Applicant to provide its telecommunications service; and,
- The proposed facility will follow the guidelines of the Telecommunications Act of 1996, the Powder Springs Ordinance and all other pertinent rules and regulations.

For the wireless communications facility to be justified, its need, location and height must be addressed. The application proposes to construct a new, one hundred seventy (170) foot *monopole* tower, *see Appendix, Exhibit A*. The proposed site is within the Applicant’s search ring.

City of Powder Springs Ordinance Requirements

§4-405: Purpose and Intentions

§4-410: Applicability and Exemptions

- a. Amateur radio exempt – Not Applicable
- b. Located on City, County or County Educational locations – Not Applicable
- c. Monopoles less than 100’ on electrical substations/transmission towers – Not Applicable

§4-415: Performance and Construction Standards

- a. Structural Design – To be addressed prior to permitting
- b. Placement Restrictions – Waiver of 40.1 feet from residentially zoned property west of the proposed tower is requested by Applicant
- c. Screening – No landscaping proposed and site does not meet 10-foot buffer at south edge of compound
- d. Fencing – 6’ chain link fence with barbed wire is proposed, but not black vinyl coated
- e. Height – Proposal is for 170’ monopole
- f. Illumination – FAA lighting not required
- g. Color and Material – Is not addressed by the Applicant
- h. Signs and Advertising – None is shown on site plan
- i. Co-location – 5 co-locations are proposed
- j. Noninterference – Statement by Applicant is missing

§4-420: Application Requirements

- a. Plat or Survey - Provided by Applicant
- b. Site Plan - Provided by Applicant but the existing building adjacent the southern property lines is shown inaccurately. The existing building is much larger and includes a parking lot and rear access drives.
- c. Elevation view, drawing or simulated photograph - Elevation drawings are provided.
- d. Engineering showing - Provided by Applicant
- e. Structural Integrity – Needs to be provided prior to permitting

§4-425: Application Processing

§4-430: Criteria to Consider in Acting upon Applications

§4-435: Not Applicable

The Applicant has demonstrated the need for a new facility in the area. The Applicant desires a 170-foot tower to support its top antennas at 160 feet (although the Verizon engineer is requesting 165 feet). Verizon has provided coverage maps showing that any significant deviation from the proposed search ring would result in lesser coverage and capacity than the proposed site.

It is noted that there is an existing 150-foot tower approximately 0.7 mile to the east with two antenna arrays on it. Verizon could go on this existing tower but the lower antenna mounting elevation coupled by the greater distance east of the proposed tower will considerably impact Verizon's coverage area objectives. Given the fact this existing tower is in close proximity to the proposed tower, it is unlikely that the proposed tower will have the need for 5 total antenna arrays. Three total tenants on the proposed tower is more reasonable with the other two service providers nearby. CityScape researched and did not find any alternate properties within the Applicant's search ring that are useable and meet the residential separation. The Compton Elementary school to the south was the best option, but the school will not allow a wireless tower site on its property.

The Ordinance requires towers over 160 feet in height to accommodate at least 5 tenants. To remain in compliance with this section, a reduction in proposed height by 10 feet (to 160 feet) should suffice the Applicant because a reduction in height of 10 feet in this case should not be significant enough to adversely affect the coverage for Verizon. The reduction in height by 10' would only require the tower be built for three tenants and would lower the visual impact from the residentially zoned properties view sheds by 10 feet.

The City's zoning standards promotes the use the concealment of new wireless infrastructure. CityScape considered the possibility of a concealed monopine, but does not believe a monopine of this height would be ideal, considering it is twice the height of the surrounding trees. However, the City could require the applicant to paint the tower, antenna and coaxial cables a dark brown or deep green to blend more with the nearby tree canopy.

Finally, if the height of the monopole is reduced to 160 feet then the thickness of the pole can be reduced because it will not be required to have the 5 co-locations and this too will provide less visual impact (less thick and with only three arrays.) The reduction of height, steel thickness and number of co-locations should also reduce foundational costs and require a smaller ground compound, with the need for only 3 providers instead of 5.

Non-compliance Items

The proposed site does not meet the required 300-foot setback with respect to residentially zoned properties. There is residentially zoned property west of the proposed towers across New Macland Road (3216 New Macland Road), which is about 259.9 feet from the proposed tower so the Applicant needs a variance from the 300-foot setback standard. The proposed tower is more than 300 feet from all other surrounding residentially zoned parcels.

CityScape inquired to see if the proposed tower could be shifted on the proposed property to eliminate this issue, but shifting away from the 3216 parcel would create spacing issues with other residential parcels in the other direction.

With the recommended height of 160 feet in height and the nearest property edge being 32.6 feet to the south, CityScape recommends the Applicant install *breakpoint* technology such that should the tower fail structurally, it will not encroach any adjacent properties. This breakpoint should be no more than 30 feet below the top of the tower (just below the lowest future antenna array).

The Applicant is requesting a waiver of the landscape requirements because the Applicant intends to use the existing trees surrounding the compound to meet the planting requirements. However, the Applicant does not provide a grading plan or tree preservation plan to identify which trees are to be removed and saved around the compound. The aerial photography provided by the Applicant shows some trees along the southern property line where the access drive is proposed to be built by the Applicant. If these trees are removed then the ground compound will be visible from the roadway. CityScape recommends the Applicant install an “s-curve” in the access drive with either a different entrance at the compound or at New Macland Road to remove the direct visibility of the compound from the road and especially the residences along the road. In addition to the entrance road modification, it may be necessary to install one or more trees to make the road shift effective.

The southern side of the compound may not be visible from the surrounding public roads or residential properties, but is located behind an existing commercial building. It is also only 7.5 feet in width, not the 10-foot minimum required by §4-415(c) of the Ordinance. However,

with the recommended reduction in tower tenants (to three) and likely reduction in needed ground compound size, the Applicant should be able to shift the fencing away from this property by 2.5 feet to avoid the need for a Variance. If adequate plantings do not remain after construction, the Applicant should be required to install appropriate landscaping along this 10-foot southern buffer.

The proposal specifies an adequate 6-foot chain linked fence with barbed wire, but it does not specify the required black vinyl coating the Ordinance states. The Applicant also has the choice of installing a wall.

It is noted that during finalization of this report, it was made known that the Application is now planning on purchasing the land where the ground compound will be located, instead of leasing it, per the plans provided. CityScape does not review such purchase contracts and this information has no impact on the content of Cityscape's review of the existing application.

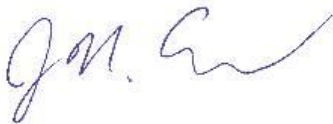
CityScape Consultants, as the wireless expert for the County, recommends this Application for approval with the following conditions:

1. Entrance road shall be modified to add an "s-curve" and appropriate tree plantings on western edge to hide any view of ground compound from New Macland Road; and,
 2. Ground compound fencing shall be revised to avoid encroachment within 10 feet of any adjacent properties and a 10-foot landscaping buffer (with appropriate plantings if existing natural buffering is removed) shall be installed on the southern side of the ground compound between the proposed compound and the WCP Equities LLC property; and,
 3. Ground compound fence shall incorporate black vinyl coating on the chain links, as required in the Ordinance.
 4. Monopole should be designed such that structural breakpoint not more than 30 feet below the top; and,
 5. All feed lines shall be installed within the support structure and antenna ports shall be sealed in a manner to prevent access by birds and any other wildlife; and,
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6. At time of permitting, the Applicant shall provide a structural analysis for the proposed monopole with three total arrays of like design, based on ANSI-TIA-222-G (as amended) and sealed by a Georgia Professional Engineer; and,
7. Proposed tower shall be galvanized and not painted any other color without approval of the City. Ground equipment must remain neutral in color (galvanized, gray or white); and,
8. Prior to permitting, the Applicant shall provide approval from SHPO/NEPA offices for the new structure; and,
9. Applicant shall provide notice of compliance with FCC's rules regarding RF exposure and interference to other sources; and,
10. Should surrounding areas be developed in the future, removing the natural camouflage, the Applicant shall install appropriate landscaping on the remaining sides of the compound at such later date.

I certify that to the best of my knowledge all the information included herein is accurate at the time of this report. CityScape only works for local governments and has an unbiased opinion; all recommendations are based on technical merits per prevailing laws and codes.

Respectfully submitted,



Jonathan N. Edwards, P.E.
CityScape Consultants, Inc.

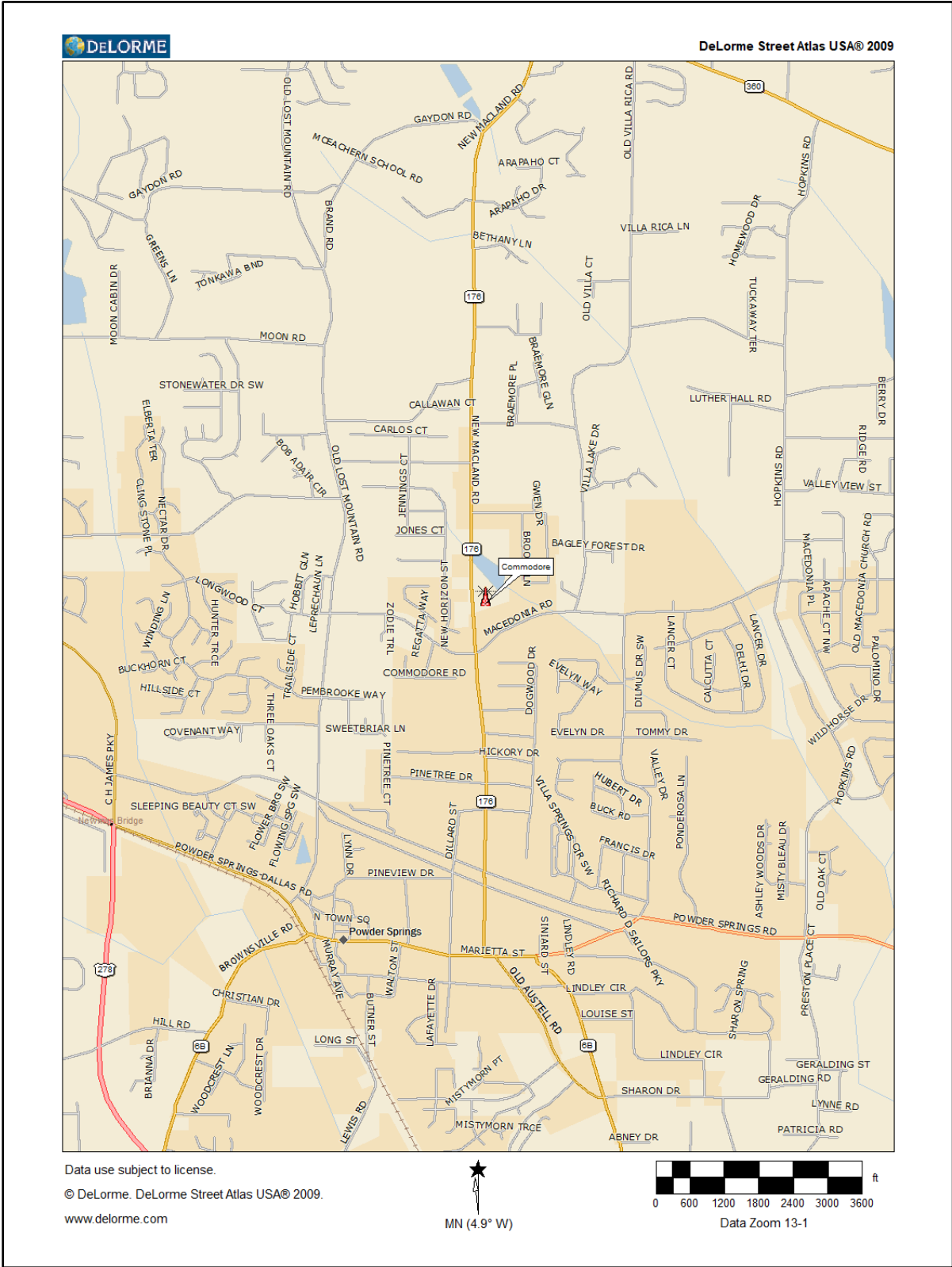


Figure 1 – Site Location

Appendix

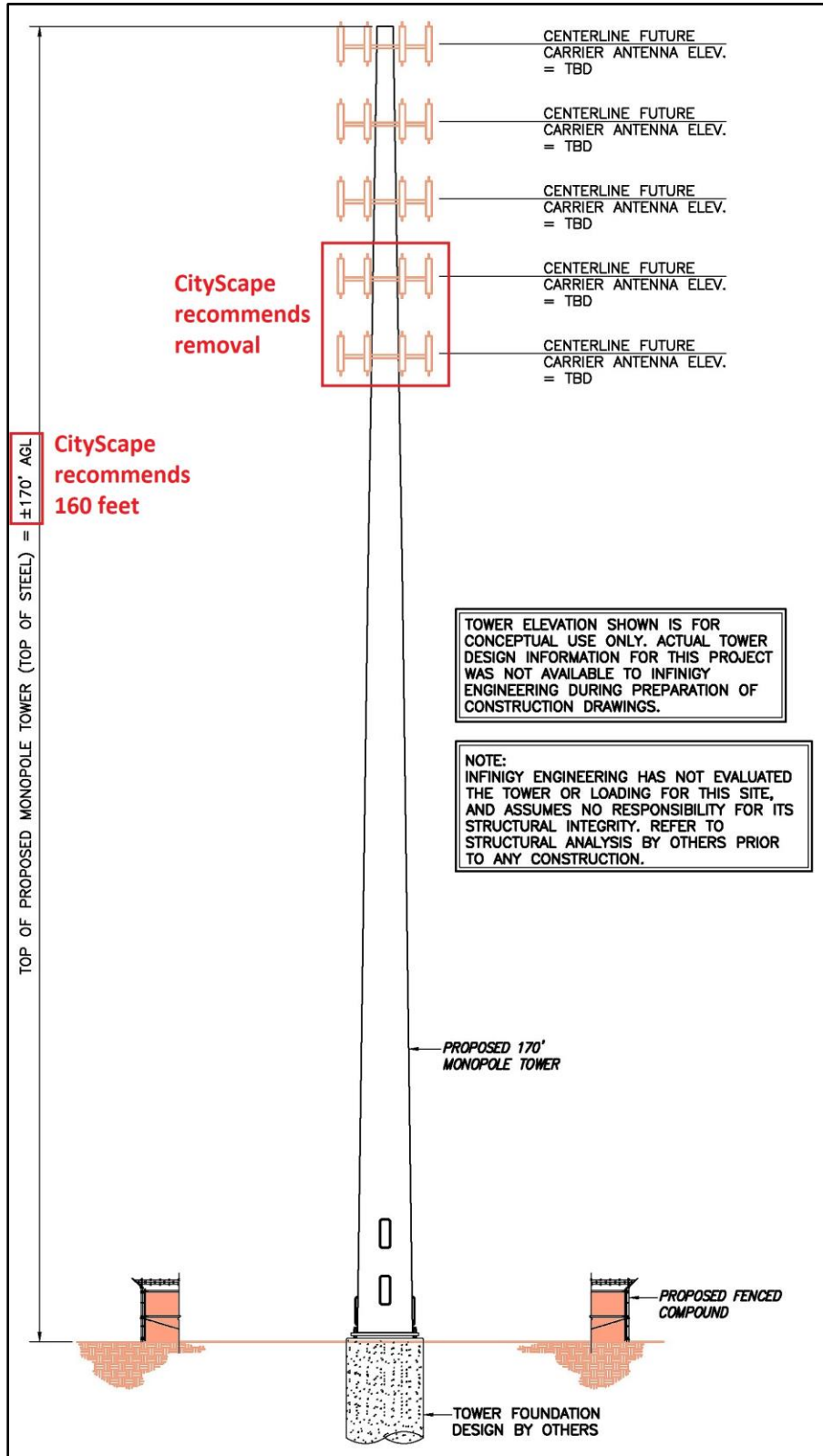


Exhibit A - Proposed Support Structure

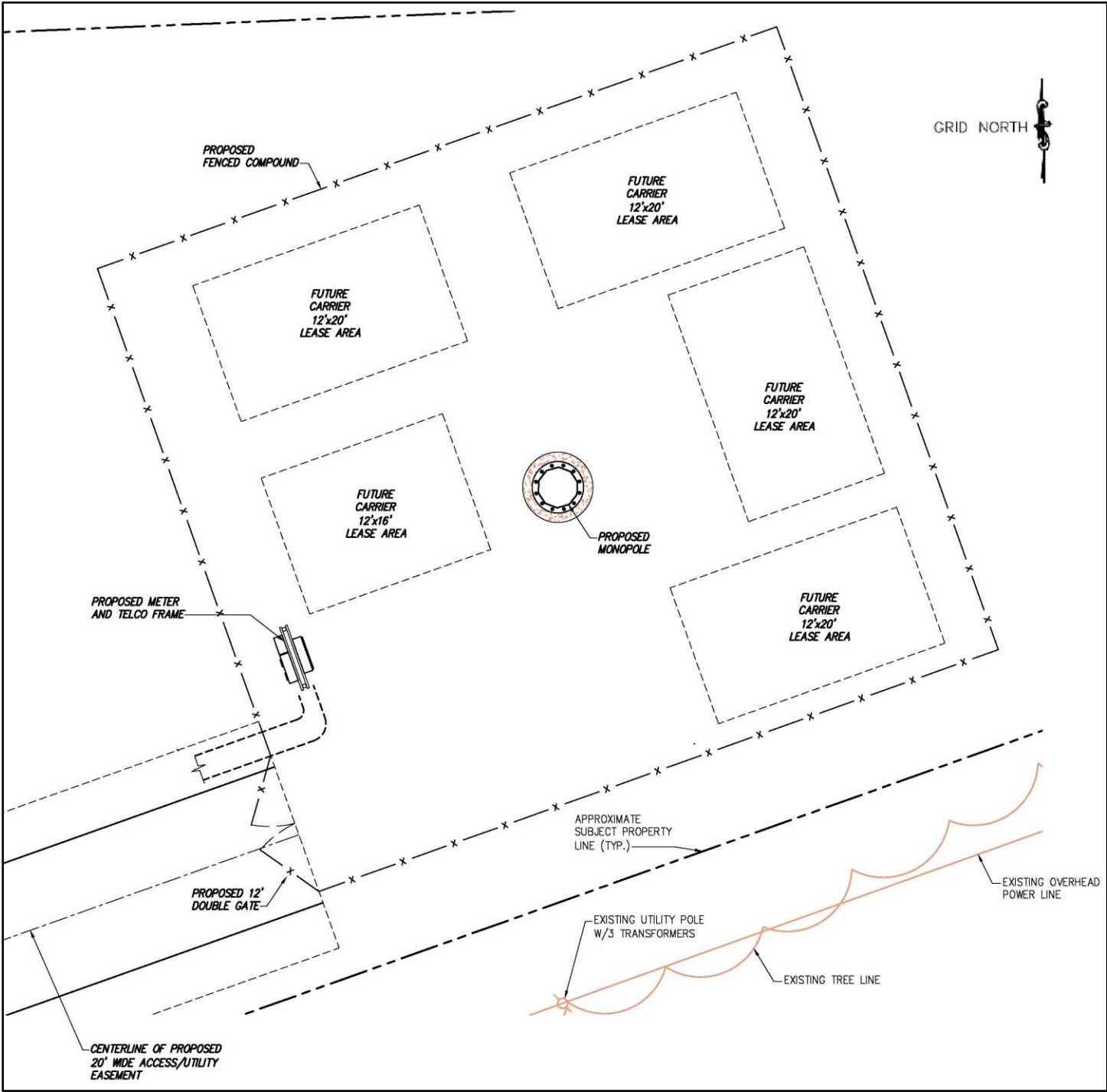


Exhibit B – Proposed Ground Compound