BOARD MEMBERS

Brian Haren, Chairman John H. Culbreth, Sr., Vice-Chairman Danny England Al Gilbert Jim Graw

STAFF

Peter A. Frisina, Director of Community Services Chanelle Blaine, Zoning Administrator Chakevia Jones, Planning & Zoning Coordinator

AGENDA FAYETTE COUNTY PLANNING COMMISSION MEETING 140 STONEWALL AVENUE WEST October 5, 2017 7:00 pm

*Please turn off or turn to mute all electronic devices during the Planning Commission Meetings

1. Consideration of the Minutes of the meeting held on September 21, 2017.

PUBLIC HEARING

- 2. Consideration of Petition No. T-020-17, Verizon Wireless, Owner, and Jenna E. Lee, Agent, request a reduction of the requirements of Sec. 110-150. Standards for Telecommunications Antennas and Towers to develop a 185 foot Monopole Telecommunication Tower. The request is to reduce the tower separation requirement of one (1) statute mile to .7 miles. This property is located in Land Lot 129 of the 4th District and fronts on SR 85 and 85 Hwy Connector.
- 3. Consideration of Petition No. 1269-17, Michelle Camper, Patrick Camper, Howell Richardson, and Melissa Phillips, Owners, and Randy Boyd, Agent, request to rezone 8.935 acres from A-R to O-I to develop an Educational Facility for gymnastics, cheerleading & dance. This property is located in Land Lot 39 of the 7th District and fronts on SR 54.
- 4. Consideration of Petition No. PR-064-17, Michelle Camper, Patrick Camper, Howell Richardson, and Melissa Phillips, Owners, and Randy Boyd, Agent, request to revise the Final Plat of Survey for H.L Newton to change the use on the property. This property is located in Land Lot 39 of the 7th District and fronts on SR 54.
- 5. Consideration of amendments to Chapter 110. Zoning Ordinance, regarding Sec. 110-79. Accessory structures and uses.
- 6. Consideration of amendments to Chapter 110. Zoning Ordinance, regarding Sec. 110-149. Planned Unit Development concerning Planned Residential and Business Development-Planned Unit Development (PRBD-PUD) zoning district.

PETITION NO: T-020-17

LOCATION: 105 Hwy 85 Connector **TOWER OWNER:** Verizon Wireless **APPLICANT/AGENT:** Jenna E. Lee **PROPERTY OWNER:** William Porter

The applicant is requesting a reduction in the requirements of Sec. 110-105. Standards for Telecommunications Antennas and Towers to develop a 185 foot Monopole Telecommunication Tower. With the appurtenance (five foot lightning rod) the total height is 190 feet. The request is to reduce the tower separation requirement of one (1) statute mile to .7 miles. Such a request requires a reduction from the requirements of Sec. 110-105. Standards for Telecommunications Antennas and Towers, (e) *Supplemental requirements*, (1) d. which states:

All new towers, excluding alternative tower structures, located within the highway corridor that are 70 feet or greater in height shall not be located within one statute mile from any existing or planned towers (within any local government jurisdiction) that are 70 feet or greater in height. This minimum distance requirement shall not apply from existing governmentally owned towers where co-location is not permitted or from alternative tower structures.

Public hearings before the Planning Commission and Board of Commissioners are necessary to reduce or waive requirements of Sec. 110-105 Standards for Telecommunications Antennas and Towers.

Property Site: The subject property is a 21.7 acre tract located at 105 Hwy 85 Connector in Land Lot 129 of the 4th District. The subject property is split zoned A-R and R-20. The tower site is in a Highway Corridor as the tower is within 1,000 feet of SR 85 South. The Subject Property is bound by the following adjacent zoning districts and uses:

Direction	Acreage	Zoning	Use		
Northwest (across SR 85)	17.4	A-R	County water system property – Starr's Mill		
Northwest	1.5	A-R	Single-Family Residence		
West	3.87	R-20	Single-Family Residence		
	4.2	R-20	Undeveloped		
	4.7	R-20	Single-Family Residence		
	5.12 R-20		Single-Family Residence		
South	6.96	R-20	Single-Family Residence		
East	6.3	R-20	Single-Family Residence		
Northeast (across Hwy	2.4	A-R	Undeveloped		
85 Connector)			-		

Balloon Test: A balloon test was conducted for this proposed tower on September 9, 2017 from 9:00am to 1:00pm per Sec. 110-105. Standards for Telecommunications Antennas and Towers, (f) Public *Hearings Required to Reduce or Waive Requirements.* (1), c. and d. which states:

- c. A balloon test shall be conducted prior to the public hearings. The balloon shall be flown for a minimum of four (4) daylight hours from the location of the proposed tower, at the requested height. The application shall include the date and time of the balloon test and an alternative date, in case of inclement weather. The initial balloon test shall be held on a Saturday and the alternative date may be held on any day of the week. A sign announcing the dates of the balloon test shall be posted on the property by the County a minimum of five (5) calendar days prior to the initial balloon test; and
- d. The applicant shall submit a visual simulation, based on the balloon test, a minimum of seven (7) calendar days prior to the Planning Commission public hearing. Failure to meet this deadline will postpone the tower application to the next scheduled cycle of public hearings. The visual simulation shall consist of color photographs of the proposed site with the existing view and with a depiction of the proposed tower, from a minimum of four (4) distinct quadrants (generally north, east, south, and west), to demonstrate the visual impact on surrounding properties and streets. An Affidavit certifying that the correct location and height of the tower were utilized in the balloon test shall be submitted with the visual simulation photographs.

See the attached Affidavit, photo-simulations and report. The photo-simulations indicate only one (1) location where the tower is visible (see page 3.)

Factors to be Considered: Sec. 110-105. Standards for Telecommunications Antennas and Towers., (f) *Public Hearings Required to Reduce or Waive Requirements.*, (2) *Factors Considered in Public Hearing Applications*. The following factors shall be considered when evaluating a tower application:

a. Height of the proposed tower;

The proposed monopole tower is 185 feet tall with an appurtenance of five (5) feet (lightning rod.)

b. Distance of the tower to residential structures and residential zoning district boundaries;

The required setback to an off-site residence is three times the tower height which in this case is 555 feet (3 x 185 = 555). The site plan submitted with this application indicates that the proposed tower meets the distance requirements to off-site residences (see attached site plan).

The proposed tower meets the distance requirements to adjoining properties zoned residential or A-R. The required setback to adjoining properties zoned residential or A-R is the height of the tower

plus 10 feet (185 + 10 = 195). The site plan submitted with this application indicates that the proposed tower meets the distance requirements to adjoining properties zoned residential or A-R (see attached site plan).

c. Nature of uses on adjacent and nearby properties;

Adjacent and nearby properties are a mix of agricultural and residential uses (see table above).

d. Topography of the site and its effect on the efficiency of the tower in terms of coverage;

The applicant has indicated that this site improves the efficiency of the tower in terms of coverage.

e. Surrounding tree coverage and foliage and its effect on the efficiency of the tower in terms of coverage, as well as, its effect on the visual impact of the tower on surrounding properties and streets;

The applicant has not indicated any effect on the efficiency of the tower in terms of coverage based on the tree coverage and foliage of the site. In terms of the visual impact of the tower on surrounding properties and streets see the attached visual simulation photographs from the balloon test.

f. Design of the tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness;

See the attached visual simulation photographs from the balloon test.

g. Proposed ingress and egress; and

Ingress and egress is through a driveway on Hwy 85 Connector.

h. The degree of the tower's compliance with the one (1) statute mile separation (inside the Highway Corridor) or one and one-half (1.5) statute mile separation (outside the Highway Corridor.)

The proposed tower is in the Highway Corridor, within 1,000 feet of SR 85. The proposed tower does not meet the tower separation requirement of one (1) statute mile. The applicant is requesting a reduction of the tower separation requirement to .7 miles. The following is required when the tower separation cannot be met:

(1) Inventory of existing or planned tower sites. When a proposed tower cannot meet the separation requirements between towers, an inventory of existing or planned tower sites shall be required to sufficiently demonstrate that no existing or planned tower can accommodate the proposed antenna. Each applicant for a new tower shall contact the owners of all existing and planned tower sites, including those located within all adjacent municipalities and counties that are within the search area of the applicant's

proposed tower location. The inventory shall be prepared by a radio frequency engineer. The inventory shall include the following information:

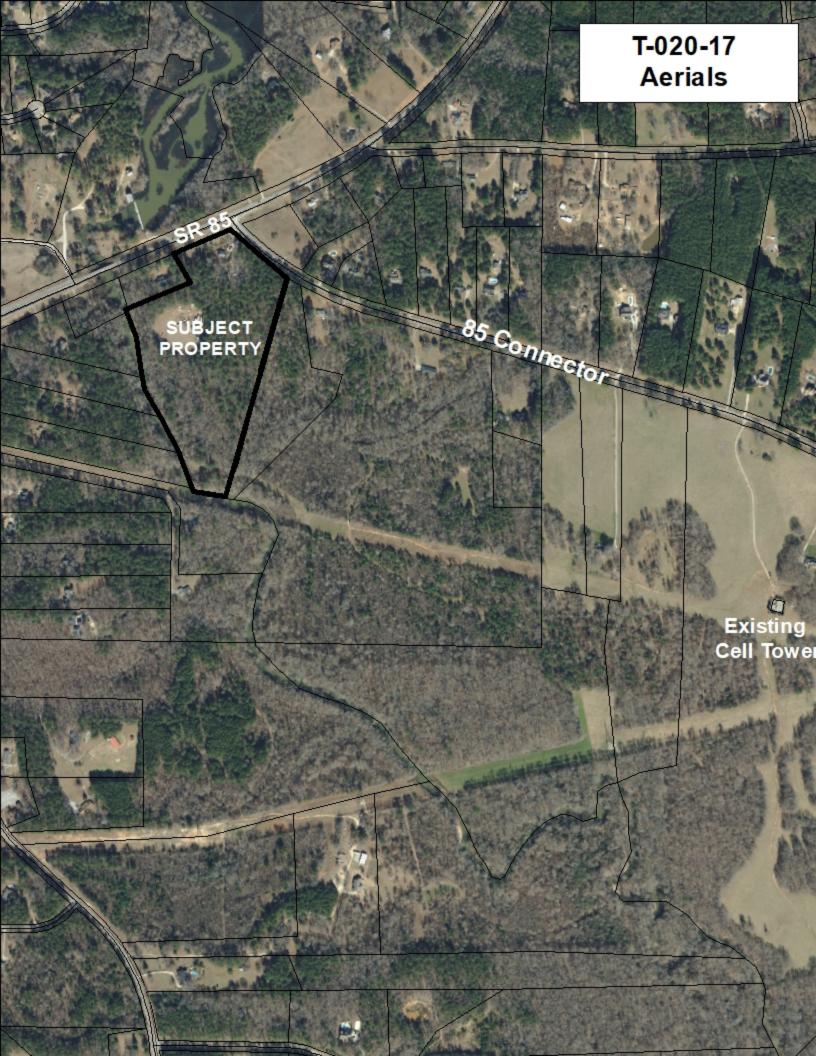
- a. All tower owners and the number of carriers for each tower site;
- b. The site location, total height, and design type of each tower;
- c. Details of all existing and planned towers or structures located within the search area and the ability of such to meet the applicant's engineering requirements, including, but not limited to: sufficient height, structural support strength, and electromagnetic interference with antennas on the existing towers or structures;
- d. Other limiting factors that render existing towers and structures unsuitable; and
- e. Letters of rejection for requests to co-locate on all existing and planned towers within the search area of the proposed tower.

The county will engage an independent expert review of the inventory of existing and planned tower sites. If the actual cost to the county for independent expert review of the document is greater than the application fee, the applicant shall be billed for the difference and payment shall be made prior to the hearing before the board of commissioners. An inventory of existing and planned tower sites which is lacking of the information above, as determined by the independent expert, shall require a resubmittal of the lacking information and postpone the tower application to the next scheduled cycle of public hearings. The inventories of existing or planned tower sites are available as an information source to assist other applicants applying for approval under this chapter, provided; however, that the planning and zoning department is not, by sharing such information, in any way representing or warranting that such sites are available or suitable.

The applicant indicates that there are no towers within the Search Area (see attached Starr's Pond Propagation Map & Report – pages 6&7). The applicant indicates that the tower which is located .7 miles from the proposed tower site is not suitable to provide the needed coverage due to topography and terrain (see attached Starr's Pond Propagation Map & Report – page 7).

The County's independent expert (Commdex) concurs with the applicant that there are no other towers within the search area and that the tower located .7 miles from the proposed tower site cannot provide the necessary coverage due to terrain. The County's independent expert also concurs that the proposed tower provides the needed additional capacity in the target area (see attached Commdex report dated 7/14/17).

In granting its approval to waive or reduce requirements, the County, through the Board of Commissioners or its designee, may impose conditions that are necessary to minimize the adverse effect of a proposed tower or antenna on adjoining property.





1875 Old Alabama Rd. Suite #1008 Roswell, GA 30076 (678) 990.2338

towersourceinc.com

September 11, 2017

RE:

Starr's Pond

185' Balloon Test

Mr. Edward Coachman,

Towersource was hired to perform a "185-foot Balloon Test" at Verizon's Starr's Pond site on Highway 85 Connector, in Brooks, Ga. A balloon test is a visual reference of how tall a proposed structure would appear if constructed. A five-foot weather balloon is filled and raised above the proposed site on a measured line to the height of the proposed structure. The balloon is then anchored to the ground and flown for a designated amount of time determined by the county. All dates and times were advertised prior to the balloon test date.

On Saturday, September 9, 2017 at approximately 8:45 am the balloon was raised to a height of 185 feet and anchored to the ground. The weather was clear and sunny. The winds were light in the morning and picked up throughout the day. The balloon was left to hover until approximately 1:00 pm. Pictures were taken to depict any potential visual impact.

This report includes a site photography map denoting the location of the proposed tower and the locations of the photographs. This report also includes photo simulations and a log of visitors. If you need any additional information, please don't hesitate to call me at (678) 990-2338.

Sincerely,

Raven Madison



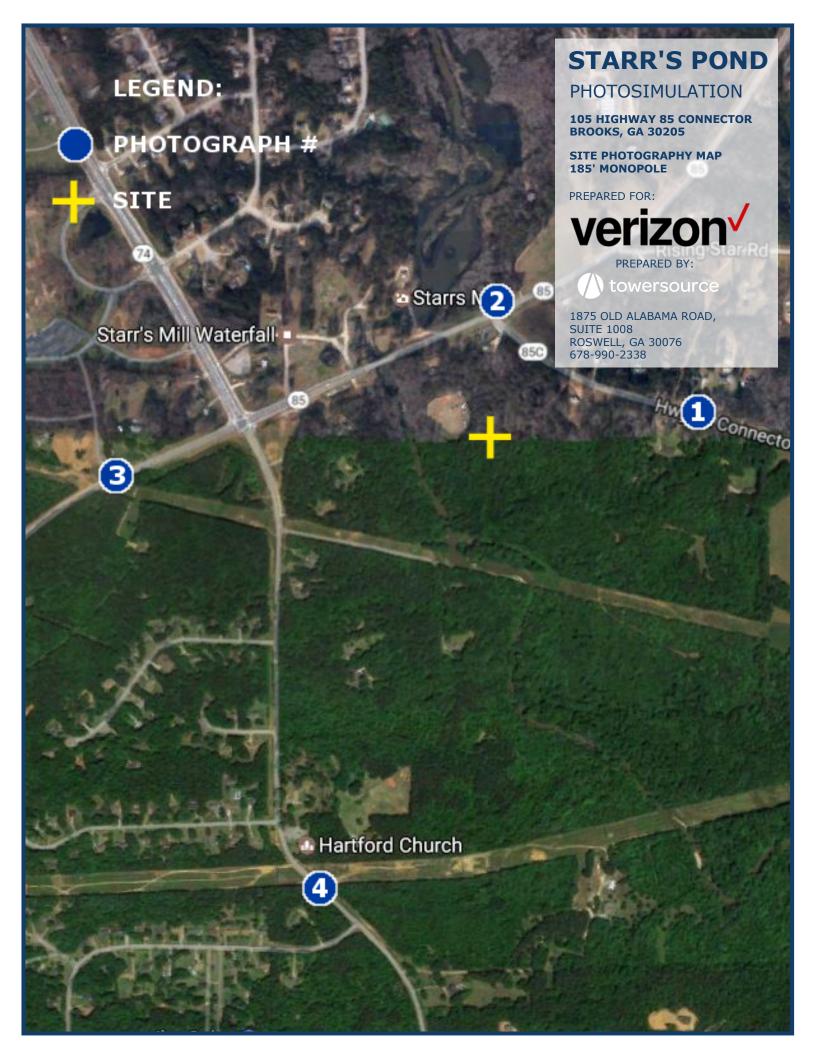
1875 Old Alabama Rd. Suite #1008 Roswell, GA 30076 (678) 990.2338

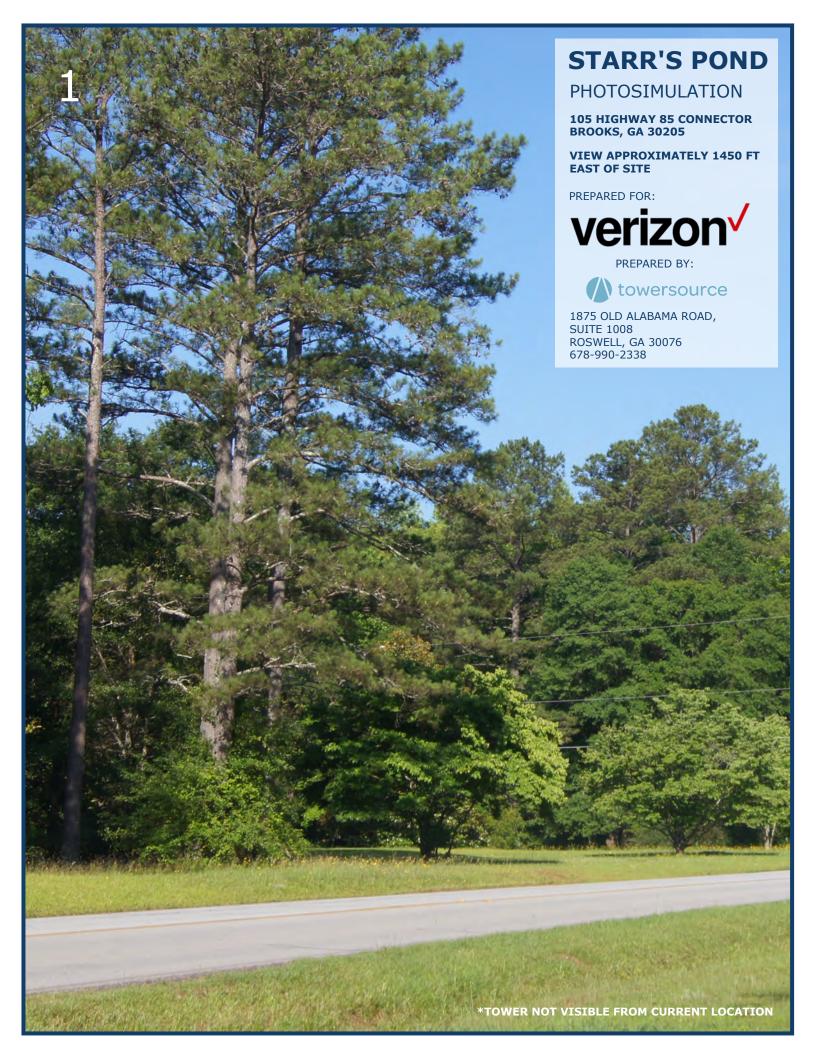
towersourceinc.com

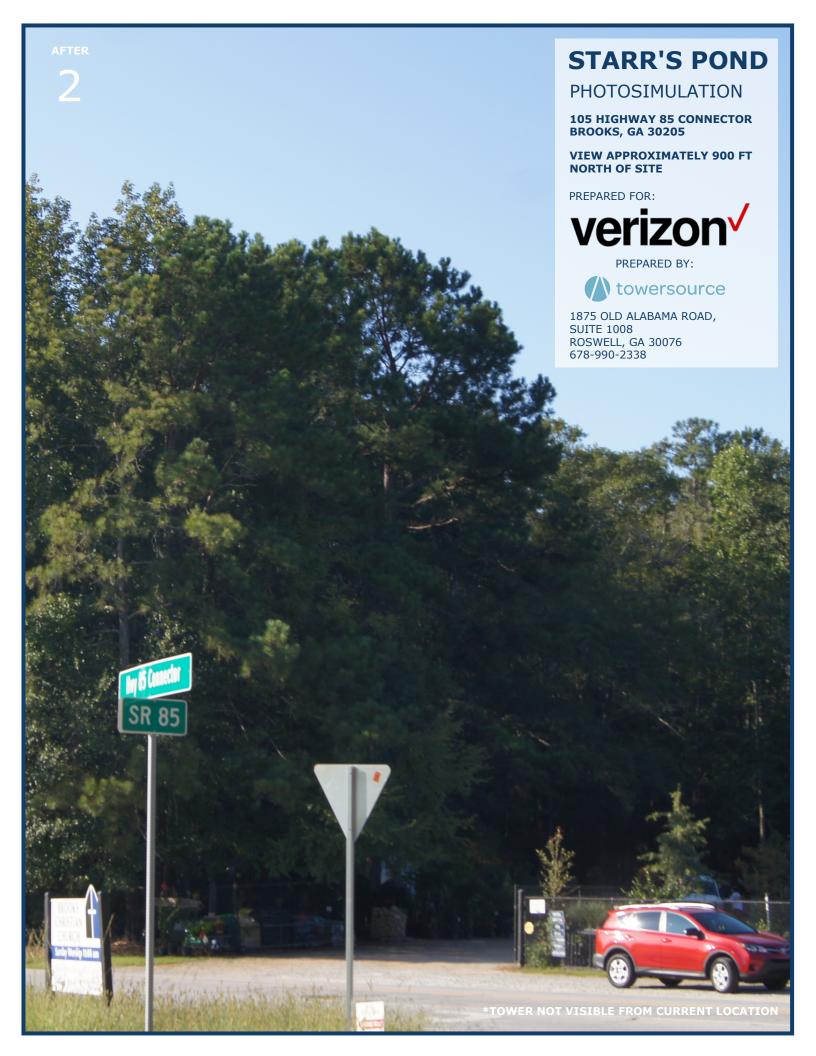
Site Name	Starr's Pond
Address	105 Hwy 85 (onn, Brook GA3005
Day & Date	Saturday, 09/09/17
Time of Balloon Test	9am - 1 pm

Weather Conditions	
Morning	Clear Sky, light wind
Midday	clear sky, wind picked up
Afternoon	Same

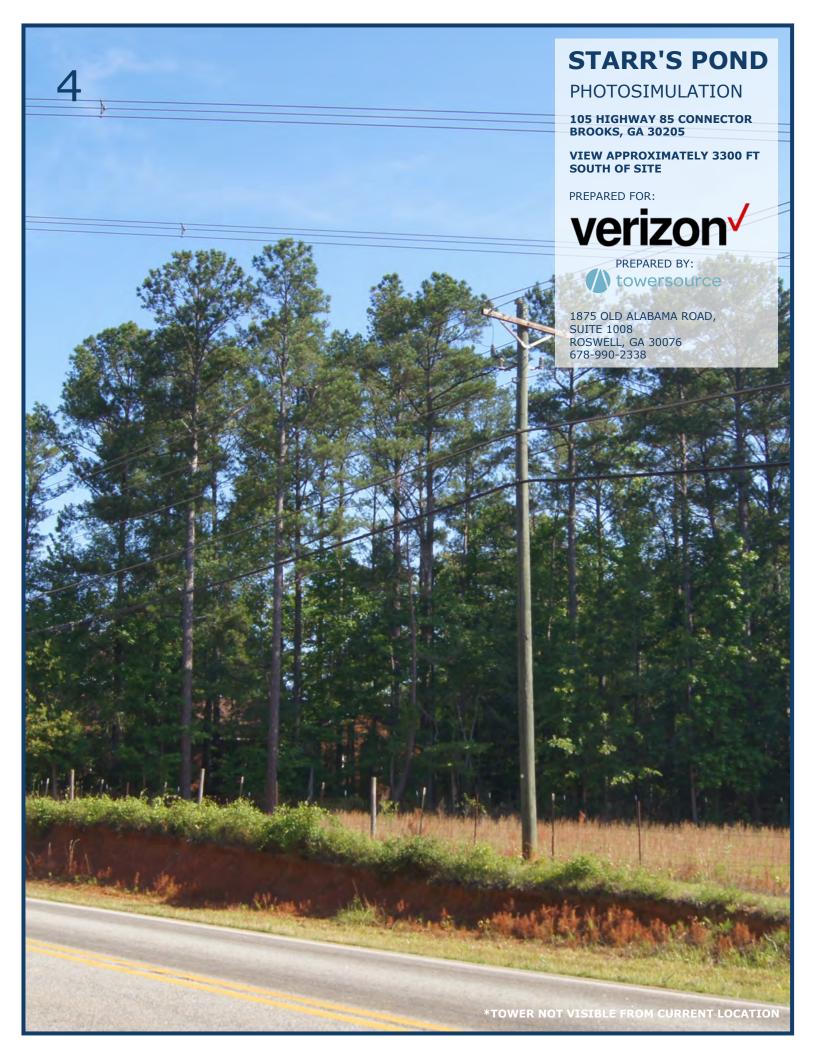
Name Address Phone Number Creage M. Uhrin 108 Ritmans Head Pitreelit, Cra 30264 678-8-11-4384











STATE OF GEORGIA

COUNTY OF FAYETTE

CELL TOWER BALLOON TEST AFFIDAVIT

Personally appeared before me an officer duly authorized to administer oaths, Raven Madison, who after being duly sworn states under oath as follows:
That my name is <u>Raven Maclison</u> I am over the age of eighteen (18), I am competent to make this affidavit, and I have personal knowledge of the facts contained herein.
2.
That this Cell Tower Affidavit is being provided pursuant to the requirement under Section 110-105 (f) (1) (c) & (d) of the Fayette County Zoning Ordinance (the "Zoning Ordinance") for a proposed cell tower site identified in Petition T-020-17 located at 105 Highway 85 Connector, Brooks, Georgia 30205 – parcel number 04-24-032.
That a Balloon Test, as described in Section 110-105 (f) (1) (c) & (d) of the Zoning Ordinance, was performed at the Tower Site consistent with the requirements within the aforementioned section of the Zoning Ordinance on September 9, 2017 from 9:00am to 1:00pm. 4.
That the correct location, height and all other applicable requirements of the tower were met in the Balloon Test. FURTHER AFFIANT SAITH NOT.
Raven Madison
Sworn to and subscribed before me

NOTARY PUBLIC

this 25 day of September, 2017.

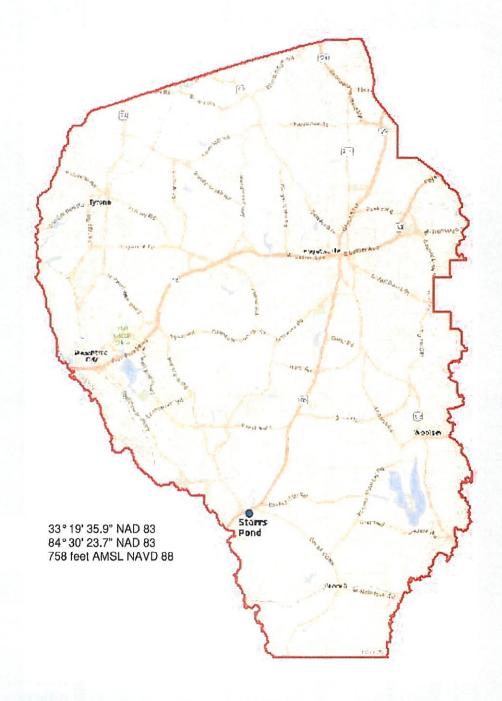
Catherine E James
NOTARY PUBLIC
Forsyth County, GEORGIA
My Comm. Expires 05/11/2021

Starrs Pond Propagation Map & Report

Coverage & Capacity Site

Wick Oliver, RF Engineer December 6, 2016

Latitude: Longitude: Ground Elevation:





FCC Determination in process.

Location: Senoia, GA

Latitude: 33°-19'-35.90" Longitude: 084°-30'-23.70"

SITE ELEVATION AMSL......758 ft.

STRUCTURE HEIGHT.....190 ft.

OVERALL HEIGHT AMSL.....948 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL)

FAR 77.9(b): NNR (DNE Notice Slope)

FAR 77.9(c): NNR (Not a Traverse Way)

FAR 77.9: NR Exceeds FFC Rwy 31, TERPS analysis required.

FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 3RU

FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required

NNR = Notice Not Required

PNR = Possible Notice Required



Verizon's FCC licenses for Fayette County.

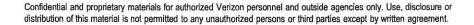
FCC Market Name	FCC Radio Service Code	FCC Market Number	FCC Channel Block	FCC Call Sign	Licensee Name	County FIPS	County Name
Atlanta, GA-AL-NC	AT	BEA040	Н	WQVN943	Cellco Partnership	13113	Fayette
Atlanta, GA-AL-NC	AT	BEA040	1	WQVN944	Cellco Partnership	13113	Fayette
Atlanta, GA	AW	CMA017	A	WQGB271	Cellco Partnership	13113	Fayette
Atlanta, GA-AL-NC	AW	BEA040	В	WQGA934	Cellco Partnership	13113	Fayette
Atlanta, GA	CL	CMA017	А	KNKA315	Verizon Wireless (VAW) LLC	13113	Fayette
Atlanta, GA	CW	BTA024	С	KNLF557	Cellco Partnership	13113	Fayette
Southeast	WU	REA002	С	WQJQ690	Cellco Partnership	13113	Fayette



Tower Location

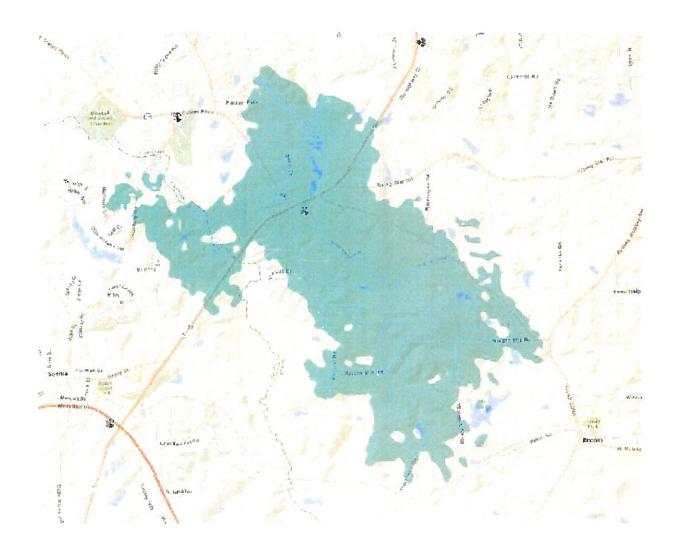
verizon v





Service Area.

Definition of the service area: The area (shown to the right) where the new Starrs Pond site has the strongest signal.





Search Area



Starrs Pond Search ring.

Could not find a location on the ridge for minimum terrain obstruction



Tower located within the search area: NONE

Nearest Non-Verizon Tower within 1 mile.



- 1. Sprint Tower (2001) not built
- 2. Powertel 195'.7 miles away Collocation is not feasible on this site due to topography and terrain, which prevents collocated antennas from providing necessary service improvements to the search area.

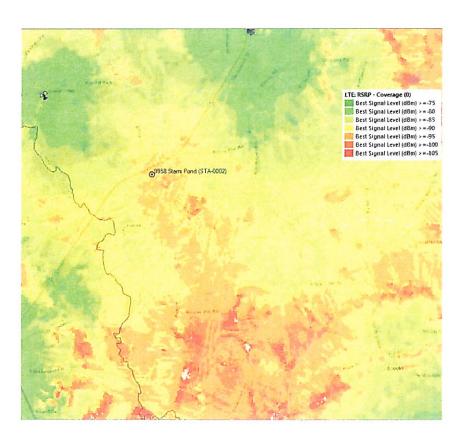


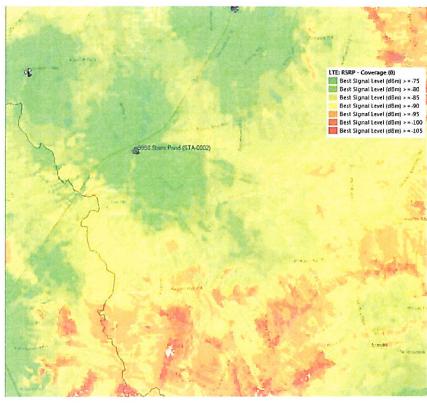
Fayette County – Verizon Site Locations

Site	Longitude	Latitude	Street Address	City	Zip Code	Support Height (ft)
QUARTERS	-84.509308	33.397375	268 Arnold Road	Fayetteville	30214	195
EBENEZER	-84.556906	33.422981	174 Peachtree E. St. Shopping Center	Peachtree City	30269	1 54
PEACHTREE CITY [ALLTEL]	-84.600167	33.39555	103 Line Creek Circle	Peachtree City	30269	182
WOOLSEY	-84.394931	33.357014	288 Mud Bridge Road	Woolsey	30214	225
COWAN PARKWAY	-84.588496	33.391125	209A Huddleston Road	Peactree City	30269	190
FALCON FIELD	-84.563094	33.360247	655 Dividend Drive	Peachtree City	30269	199
ADAMS CRABAPPLE	-84.576731	33.447297	200 Crabapple Lane	Tyrone	30290	180
MCBRIDE	-84.422942	33.391178	1488 Highway 92 South	Fayetteville	30215	189
CLAYETTE	-84.39485	33.459258	516 McDonough Road	Fayetteville	30214	164
WESTBRIDGE	-84.504528	33.526694	1479 State Route 92	Fairburn	30213	301
MANASSAS	-84.481861	33.433411	332 First Manassas Mile Road	Fayetteville	30215	275
PEACHTREE CITY	-84.511594	33.452615	2120 Hwy. 54 West	FAYETTEVILLE	30214	170
RISING STAR	-84.486792	33.352497	431 Porter Road	Fayetteville	30215	300
STARRS MILL	-84.532581	33.341442	100 Rockaway Road	Peachtree City	30276	180
PAVILLION	-84.440064	33.489467	155 Roberts Road	Fayetteville	30214	180
KENWOOD	-84.429883	33.516869	1929 N. Highway 85	Fayetteville	30214	250
BRIARWOOD	-84.440383	33.432486	550 Dickson Springs Road	Fayetteville	30215	300
BROOKS	-84.448528	33.266417	260 Carson road	Brooks	30205	250
COWAN PARKWAY	-84.588496	33.391125	209A Huddleston Road	Peactree City	30269	190
FALCON FIELD	-84.563094	33.360247	655 Dividend Drive	Peachtree City	30269	199
FAYETTEVILLE	-84.456314	33.454003	162 Georgia Avenue West	Fayetteville	30214	180
SWANSON	-84.568494	33.490014	365 Swanson Road	Tyrone	30269	515
FLINT RIVER	-84.391597	33.409428	347 Morgan Road at Fayette/Clayton Co. Line	Fayetteville	30215	191
WOOLSEY	-84.394931	33.357014	288 Mud Bridge Road	Woolsey	30214	225
TYRONE	-84.604097	33.42595	137 Senoia Rd	Peachtree City	30269	100



The Tower is Needed for Coverage





WITHOUT SITE

WITH SITE



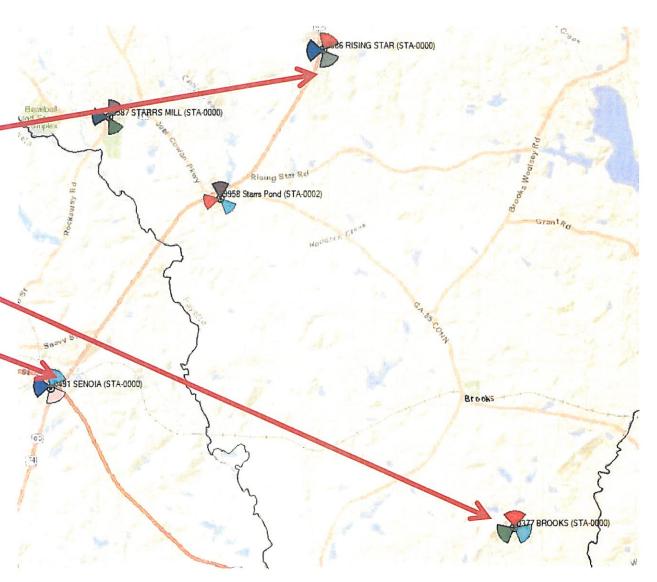
The Tower is Needed for Capacity

Surrounding Sectors
Needing Capacity offload

Rising Star Sectors 2 &3: Exhausted 9/2016

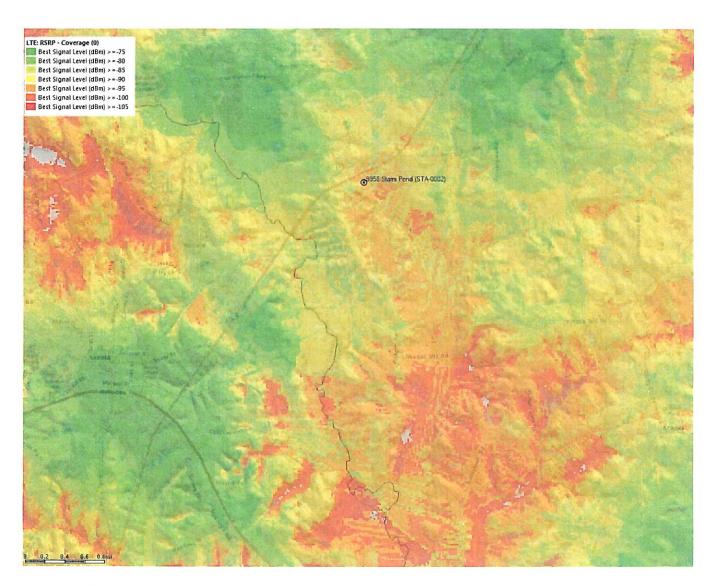
Brooks Sector 3: exhausted 9/2016

Senoia Sector 1: 73% of Capacity exhausting 5/201



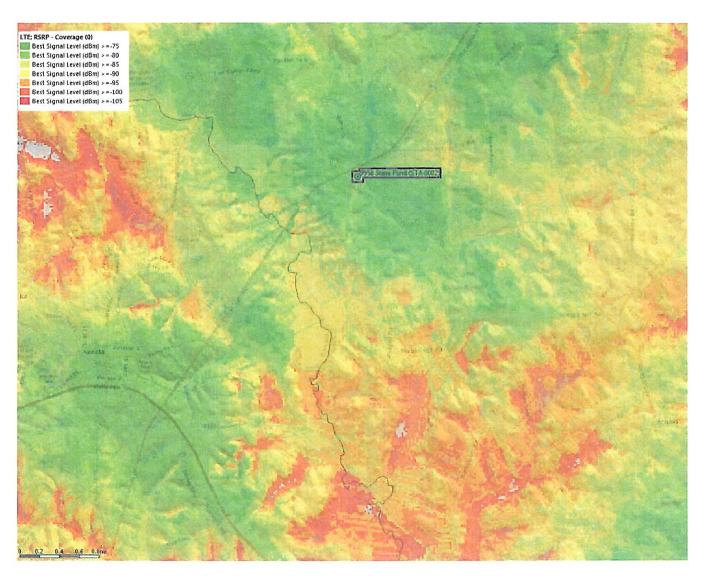


Coverage without New Site





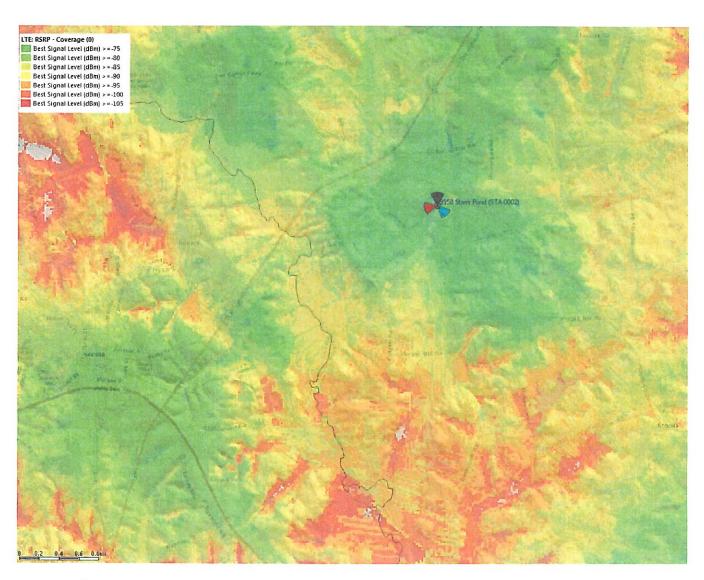
Coverage with New Site



The proposed tower provides the best coverage on Highway 74/85 between Fayetteville and Senoia and off-loads exhausted sites, thus improving service for residences and businesses along Highway 74/85 and throughout this portion of the County.



Coverage using existing tower



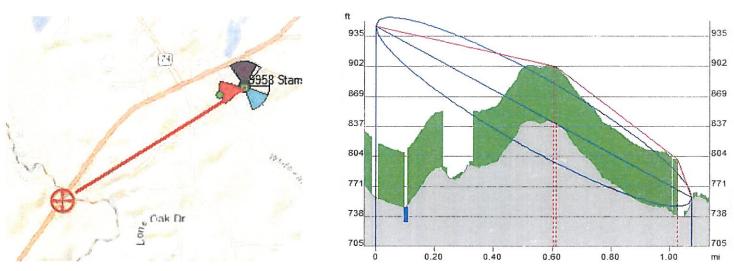
Collocating on the existing tower provides a smaller coverage area and does not effectively provide muchneeded capacity offload.



Necessary to Verizon's Network

The Starrs Pond fits into the existing network by providing capacity offload to three surrounding sites. It is also located near the existing point of weakest coverage on Hwy 74/85.

The proposed height is the minimum height required to provide the necessary coverage and capacity improvements.

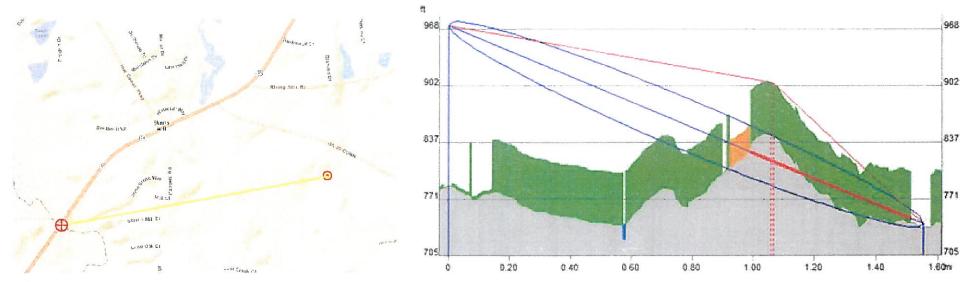


Terrain (grey) and Clutter (Green) between the site and the Fayette/Coweta county line shown above.



Terrain Blocks other tower from County Line

Tower outside the search area is terrain blocked from the county line at Hwy 74/85



Terrain (grey) and Clutter (Green) between the other tower and the Fayette/Coweta county line shown above.



Proposed location nearer to user demand



Colored dots indicate usage measured locations



Proposed location vs. Alternative

The proposed location is nearer to user demand allowing for better capacity offload due to strong signal and improved data transfer rates.

The proposed location has better line of site to the Fayette/Coweta county line on Hwy 74/85 allowing for fewer dropped connections and increased reliability.

Colored dots indicate usage measured locations



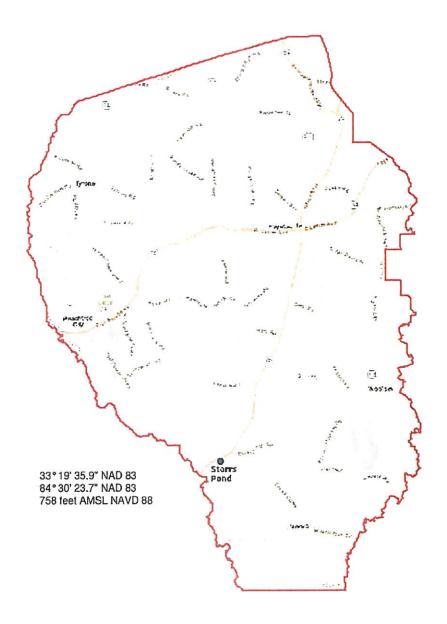
Starrs Pond Additional Comparison

Supplemental Radio Frequency Analysis

Coverage & Capacity Site

Wick Oliver, RF Engineer June 27, 2017

> Latitude: Longitude: Ground Elevation:

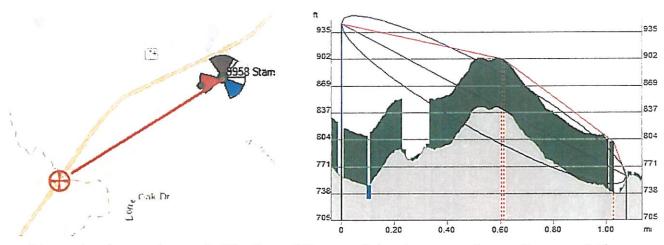




Necessary to Verizon's Network

The Starrs Pond fits into the existing network by providing capacity offload to three surrounding sites. It is also located near the existing of the weakest coverage on Hwy 84.

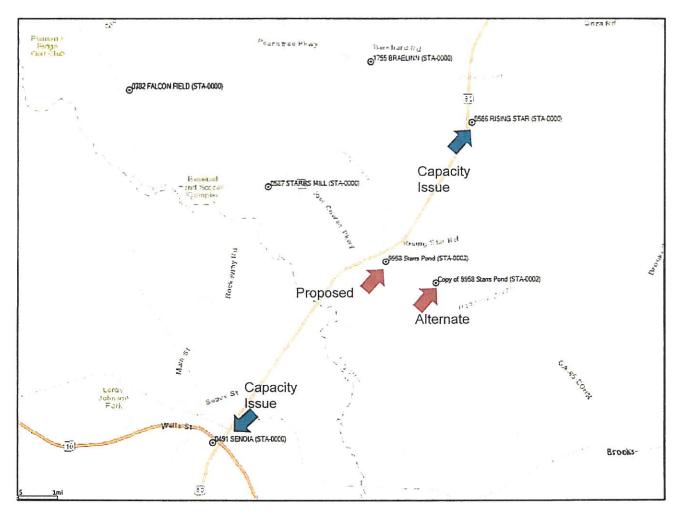
The proposed height is the minimum height required to provide the necessary coverage improvements.



Terrain (grey) and Clutter (Green) between the site and the Fayette/Coweta county line shown above.

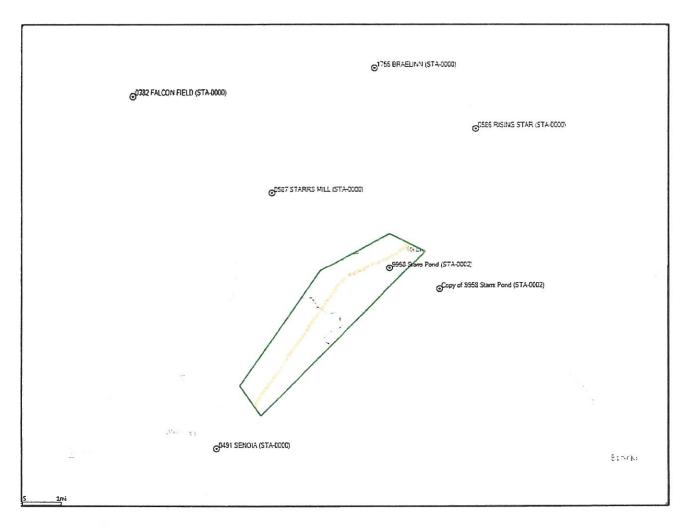


Map of existing Sites, Starrs Pond and Alt Site





Area of Focus for coverage and capacity offload





Coverage Legend

LTE: RSRP - Coverage (0)

Excellent RSRP Level (DL) (dBm) > = -75

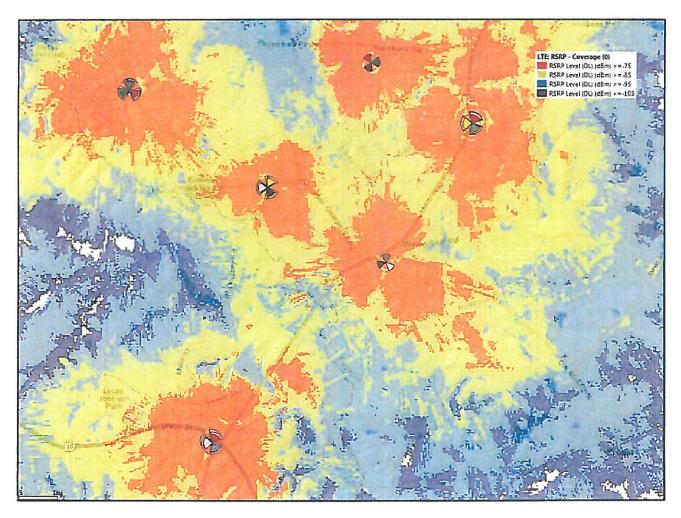
Good RSRP Level (DL) (dBm) > = -85

Fair RSRP Level (DL) (dBm) > = -95

Poor RSRP Level (DL) (dBm) > = -105

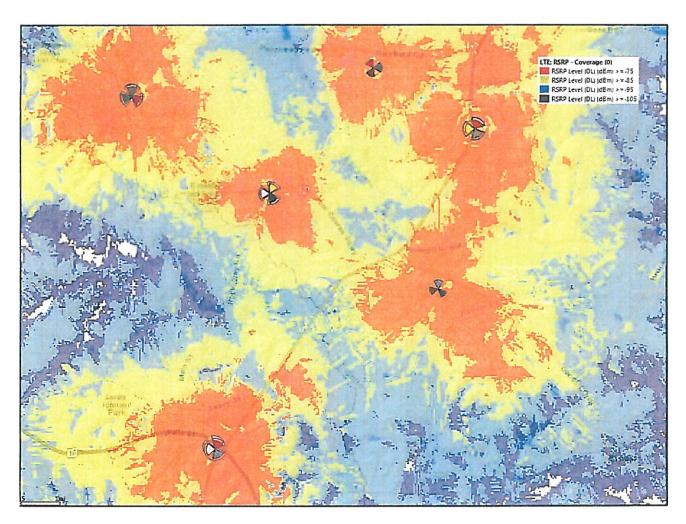


750 MHz Coverage Proposed Site



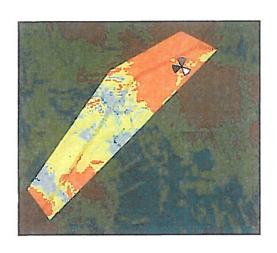


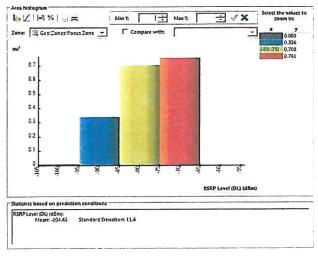
750 MHz Coverage Alt Site



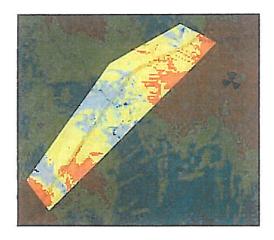


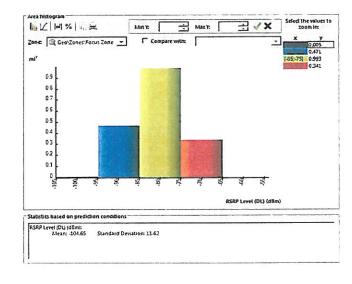
750 MHz Coverage Focus Zone





Proposed Location
Has the More
excellent coverage in
the focus zone



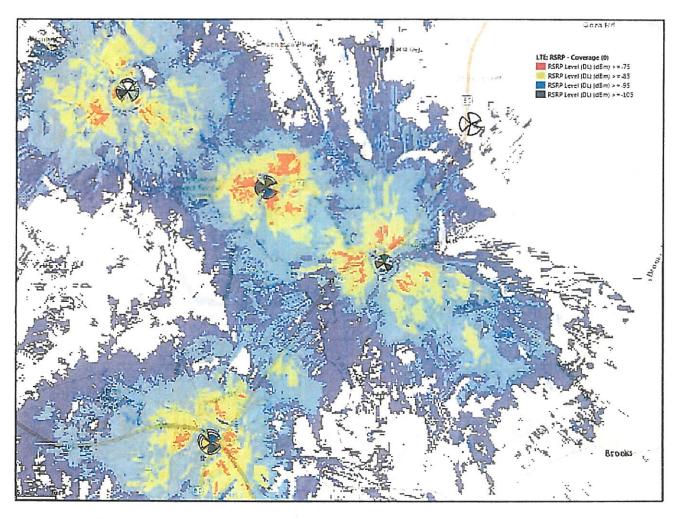


Alt Location
Has less excellent
coverage in the focus
zone



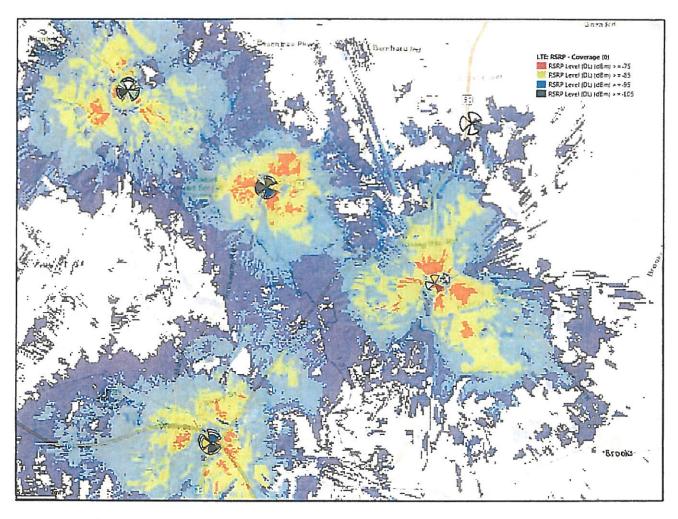


AWS Coverage Proposed Site





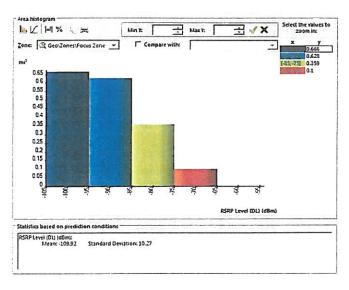
AWS Coverage Alt Site





AWS Coverage Focus Zone

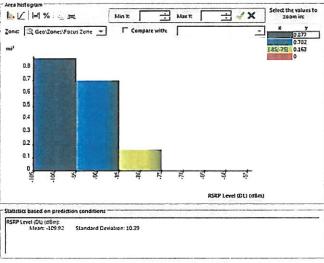




Proposed Location
Has the More
excellent and Good
coverage in the focus
zone



verizon\(^{\sqrt{}}\)



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement

Alt Location
Has Zero excellent
and less Good
coverage in the focus
zone



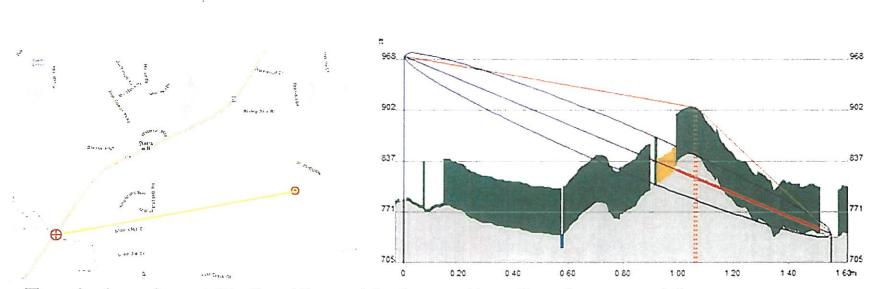
Coverage Summary

The proposed location for Starrs Pond puts better coverage where more people are using their mobile devices than the alternate location. With better signal levels, the throughput of the data is quicker and can send more information per unit of time, this allows for increase capacity offload at the proposed location. The focus zone used, is a major consideration of offload the Senoia site. This located along Hwy 85. The comparison of the Proposed and Alternate location is most notable at AWS frequencies. In the Focus Zone At 750 MHz, the proposed site provides 81% good and excellent coverage, while the alternate site provides 73% good and excellent coverage. In the Focus Zone At AWS frequencies, the proposed site provides 26% good and excellent coverage, while the alternate site provides only 9% good and excellent coverage. The remainder of the coverage is either fair or poor.



Terrain Blocks other tower from County Line

The alternate tower outside the search area is terrain blocked from the county line at Hwy 85, with a 145' centerline available.



Terrain (grey) and Clutter (Green) between the other tower and the Fayette/Coweta county line shown above.



Proposed location nearer to user demand



Colored dots indicate usage measured locations



Proposed location vs. Alternative

The proposed location is nearer to user demand allowing for better capacity offload due to strong signal and improved data transfer rates.

The proposed location has better line of site to the Fayette/Coweta county line on Hwy 85 allowing for fewer dropped connections and increased reliability...



Capacity & Coverage Needs in Search Area

3.

As an RF Engineer, I identify distinct geographic areas within which an additional site must be located to provide needed additional coverage and/or capacity to Verizon Wireless' telecommunications network. As shown on the map on page 6 of the attached document I prepared entitled "Starr's Pond Propagation Map and Report (the "RF Analysis"), Verizon Wireless' search area for the "Starr's Pond" site is located along Georgia Highway 85 northeast of the Fayette County-Coweta County line and surrounds the point of weakest service along the Georgia Highway 85 corridor.

4.

The proposed telecommunications facility is needed to provide coverage improvements to this area along Georgia Highway 85 and to provide additional capacity to relieve existing Verizon Wireless facilities currently over-loaded and stretching to meet customer demand. The Beta sector of Verizon Wireless' existing "Rising Star" site, the Alpha sector of Verizon Wireless' "Senoia" site, and sector 3 of the "Brooks" site, all of which are shown on page 10 of the RF Analysis, have all exhausted capacity. The overloaded capacity of these sites results in poor service, slow data transmission, and dropped calls throughout this area of Fayette County. To adequately meet service needs in this search area, Verizon Wireless determined coverage and capacity improvements must extend from the proposed site, along Georgia Highway 85, to the Fayette/Coweta County line.

5.

The proposed Starr's Pond site will provide much-needed off-load capacity to the existing Rising Star and Senoia sites by adding a new point of service. Addition maps focusing

31635294v1 2

on the Area of Hwy 84 and Hwy 74 have been provided in a presentation. The presentation shows the proposed site provides 8% better coverage at 750 MHz frequencies and 17% better coverage at AWS frequencies. It shows that this coverage location is consistent with mobile device usage locations. This provides capacity through higher data rates, and turn servicing the volume of demand is less time.

6.

The proposed Starr's Pond site will also improve coverage along Georgia Highway 85 by adding a new geographic point of service. As shown on pages 11-12 of the attached RF Analysis, the segment of Georgia Highway 85 from the Fayette/Coweta County line stretching northeast currently has weak service. The areas of weak coverage are represented in yellow and red on the map on page 11. An area with high demand and weak coverage, such as this portion of Georgia Highway 85, slows the data rate to wireless users and exhausts available resources serving those users, thus further diminishing the sector capacity of Verizon Wireless' existing sites already stretching to meet customer demand. As shown in green on the map on page 12 of the RF Analysis, the addition of the Starr's Pond site significantly improves wireless service coverage and quality in this area.

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The proposed capacity and coverage improvements will provide critical service improvements to the businesses, residences, schools, and wireless users along Georgia Highway 85, Georgia Highway 85 Connector, and Georgia Highway 74.

Collocation Analysis

8.

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When towers exist in or very near the boundaries of the search area, such towers are evaluated to determine the feasibility of locating additional antennas and associated equipment on such nearby towers. As part of my RF search analysis, I searched for existing towers suitable for collocation within Verizon Wireless' identified search area. In my experience, Verizon Wireless prefers to collocate on existing towers if they are structurally sound and located such that Verizon's service objectives can be met from that location. In this case, however, I have determined no existing towers are located within the search area.

9.

The closest existing tower is located 0.7 miles east of the proposed Starr's Pond site and is owned by T-Mobile. I carefully analyzed the possibility of collocating on this existing tower. As shown on the diagrams contained on pages 14 – 15 of the RF Analysis, the existing terrain and topography in the area prevents collocated antennas from providing the needed coverage and capacity improvements. As shown in gray and green on the diagram on page 15, the area west of the site is marked by points of steep topography (gray) and dense trees (green). Due to the location of the T-Mobile tower, the hills and trees block the potential signal from collocated antennas on this tower. These conditions prevent collocated antennas from providing the necessary service improvements in the identified area of need.

10.

The map on page 13 of the RF Analysis illustrates coverage improvements provided by collocation on the existing T-Mobile tower. When compared to the coverage improvements provided with the Starr's Pond site, shown on page 12, collocation on the existing tower provides a smaller coverage area and does not adequately provide coverage along the Georgia Highway 85 corridor.

31635294v1 4

Starr's Pond Site Best Meets Service Needs

11.

As shown on the diagram on page 14 of the RF Analysis, the height and location of the Starr's Pond site allows the wireless signal to pass over peaks in nearby topography and terrain, thus allowing the signal to reach the areas of greatest need along Georgia Highway 85. The proposed Starr's Pond location provides a better line of site to the Fayette/Coweta County line on Georgia Highway 85, which allows for fewer dropped connections and increased reliability.

12.

Additionally, as shown on the map on page 16 of the RF Analysis, the proposed Starr's Pond site is nearer to identified areas of user demand. The site's close proximity to the areas of greatest demand, particularly along Georgia Highway 85, allows for better capacity offload due to a stronger signal and improved data transfer rates.

13.

In my professional opinion, based on my knowledge of telecommunications industry standards, my extensive experience as an RF Engineer and the thorough evaluation of the search area and nearby sites, the subject property and the identified location for this proposed tower offers the only suitable location within the vicinity of the search area for this much-needed telecommunications facility.

5

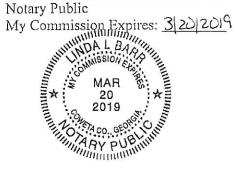
FURTHER AFFIANT SAYETH NOT.

31635294v1

This 27day of June, 2017.

Sworn to and subscribed by me this the 27th day of 2017

Notary Public



31635294vl

6

BEFORE THE BOARD OF COMMISSIONERS FAYETTE COUNTY, GEORGIA

RE: PUBLIC HEARING APPLICATION FOR NEW TOWER TO ALLOW FOR A 190-FOOT MONOPOLE TELECOMMUNICATIONS TOWER ON PROPERTY LOCATED AT 105 GEORGIA HIGHWAY 85 CONNECTOR (TAX ID 0424 032)

AFFIDAVIT OF WICK OLIVER

Personally appeared before the undersigned attesting officer duly authorized to administer oaths, Wick Oliver, who, after having first been duly sworn, states and deposes as follows:

1.

My name is Wick Oliver. I am over 21 years of age and make this Affidavit freely and of my own personal knowledge for use in the above-styled proceeding and for any and all other purposes permitted by law.

2.

I am and have been, at all times relevant to the matter averred to herein, a Radio
Frequency ("RF") Engineer for Verizon Wireless, a wireless communications company that
provides wireless voice, messaging, and data services to its customers. I have been employed in
the telecommunications industry for over 36 years and specifically as an RF Engineer at Verizon
Wireless for over 21 years. I attended California State University, Sacramento and obtained
Bachelor's and Master's degree in Electrical and Electronic Engineering

Capacity & Coverage Needs in Search Area

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31635294v1 3

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5

FURTHER AFFIANT SAYETH NOT.

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This 27day of June, 2017.

Sworn to and subscribed by me this the 27th day of 2017

Notary Public

My Commission Expires: 3 20 2019

MAR 20 2019

MARY PUBLISHMENT OF THE PUBLISH ARY PUBLISHMENT OF THE PUBLISH ARY PUBLISH ARY



To: Peter Frisina, Fayette County Division of Community Services

From: John Vegas, Commdex Consulting Engineering

Date: 7/14/17

Subject: Statement of Finding Regarding Stars Pond Transmitter Site

In accordance with due dilligance Commdex has been asked to review and comment on the material and findings presented by Verizon Wireless for a new tower located at 105 Georga highway and 85 connector. This statement of finding is to inform the county of Our review of the material and findings as presented by Verizon Wireless and if any existing site is a suitable alternative.

As stated by Wick Oliver, in the Affidavit of June 27th 2017, "The proposed telecommunications facility is needed to provide coverage improvements.. and provide additional capacity to relieve existing Verizon Wireless facilities currently over-loaded..". And with additional supporting details in the December 16 2016 Stars Pond Propagation Map & Report, where in P.10 claims current capacity having become exhausted in September 2016 and May 2017. These claims of capacity were accepted by Commdex and also accepted as the basis for a new canidate tower search.

Commdex reviewed available public data with in the search area, as defined as the area between the four current Verizon Wireless towers: **Stars Mill, Rising Star, Brooks**, and **Senoia**, as shown on P.10 of December 16, 2016 Stars Pond Propagation Map & Report, with the prupose to identify existing towers and their suitability to additional coverage. **ASR 1231543** – a Tmobile tower 195' AGC 978' AMSL Structure Coordinates: 33-19-21.0 N 84-29-44.2 W (NAD 83) was identified as a potential canidate with in this area. Using available public data no other existing towers were found in the in the search area.

ASR 1231543 with the 145' centerline available limited available was not sufficient to overcome terrain challenges to the north and west and is considered unsuitable to provide the necessary coverage improvements. Visual presentation of this point is shown on P.13 of December 16, 2016 Stars Pond Propagation Map & Report. The coverage area provided by ASR 1231543 does not cover the area of "coverage and offload capacity" as described on P.21 of December 16, 2016 Stars Pond Propagation Map & Report. With the goal to improve coverage in the area between the Rising Star tower and the Senoia tower, specifically Rt 74/85 between Link Creek bridge and the rising star road intersection, Verizon Wireless has demonstrated the available candidate tower is not suitable to improve coverage in this target area.



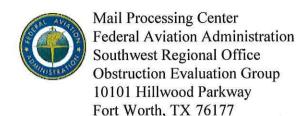
The proposed tower at **Starr's Pond** provides better coverage than the **ASR 1231543** in the target area as shown in P.25 and P.28 of December 16, 2016 <u>Stars Pond Propagation Map & Report.</u>

Other considerations reviewed: The new **Starr's Pond** location is located 3.8 miles from the Falcon field Atlanta Regional Airport, and 3 miles from the Big T private use airport. The proposed tower height at 185' will not require FAA notice, and tower lighting is not required.

The target area as defined as Rt 74/85 between Link Creek bridge and the rising star road intersection and accepting the capacity in the target area is exhausted, additional transmittion locations are needed. The available existing tower **ASR 1231543** canidate has been shown to have insufficient coverage in the target area. The proposed new **Starr's Pond** tower location provides the needed additional capacity in the target area.



John Vegas Commdex Staff Engineer



Stans Pand (ATL) Aeronautical Study No. 2017-ASO-8715-OE

Issued Date: 05/04/2017

Michael Bernheisel SmartLink 1997 Annapolis Exch Pkwy Annapolis, MD 21401

** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **

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

Structure:

Antenna Tower Starr's Pond

Location:

Senoia, GA

Latitude:

33-19-35.90N NAD 83

Longitude:

84-30-23.70W

Heights:

758 feet site elevation (SE)

190 feet above ground level (AGL) 948 feet above mean sea level (AMSL)

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

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

	At least 10 days prior to start of construction (7460-2, Part 1)
X	Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 1.

This determination expires on 11/04/2018 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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

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

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5928. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-ASO-8715-OE.

Signature Control No: 329157821-330612234

(DNE)

Chris Smith Technician

Attachment(s)
Case Description
Frequency Data
Map(s)

cc: FCC

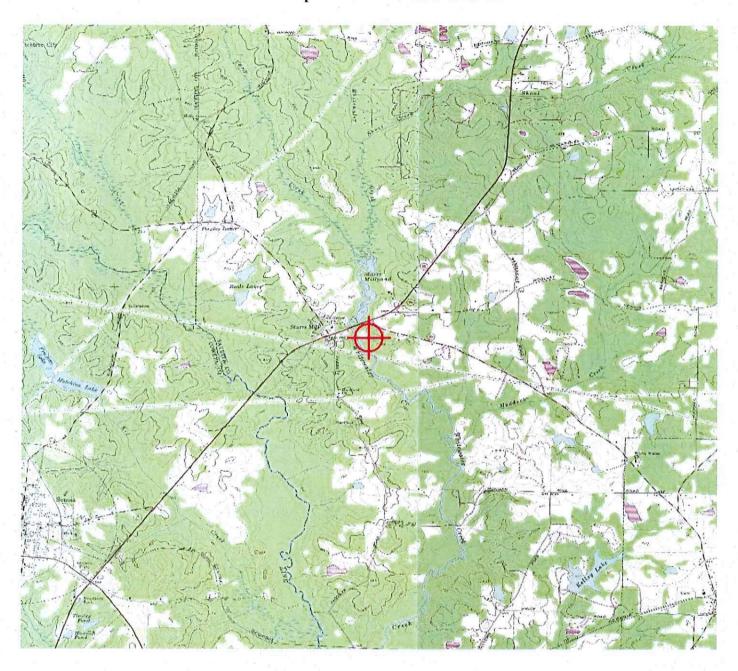
Case Description for ASN 2017-ASO-8715-OE

Proposed new construction.

Frequency Data for ASN 2017-ASO-8715-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
600	906	Var	1000	
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

TOPO Map for ASN 2017-ASO-8715-OE





Circle Search for Cases Results Form 7460-1 for ASN 2017-ASO-8715-OE

Stans Pand (ATL)

Overview									
Study (ASN):		2017-ASO-8715	-OE	Received D	ate: 04/2:	1/2017			
Prior Study:				Entered Da	te: 04/2:	1/2017			
Status:		Determined		Completion	Date: 05/04	4/2017			
Letters:		Determination		Expiration	Date: 11/0	4/2018			
Supplementa	l Form 7460-2:		dd a Supplemental Form 7460-2.	Мар:	View	Мар			
Sponsor Inf	formation			Sponsor's	Represent	ative Inf	ormation		
Sponsor:	SmartLink				tive: Sitesaf				-
	Michael Bernhei	sel		Attention O					
Address:	1997 Annapolis			Address:		lidgewater	Circle		
Address2:				Address2:	50.550.6				
City:	Annapolis			City:	Gaines	ville			
State:	MD			State:	GA				
Postal Code:				Postal Code					
Country:	US			Country:	US				
Phone:	617-448-2752			Phone:	100000000000000000000000000000000000000	32-3255			
Fax:	703-276-1169			Fax:		6-1169			
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Constructio	n Info			Structure	Summary				
Notice Of:	CONSTR			Structure T	ype: Anteni	na Tower			
Duration:	PERM (Mor	ths: 0 Days: 0)	Structure N	lame: Starr's	Pond			
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2345

2360

MHz

2000

PREPARED FOR:



10300 OLD ALABAMA ROAD CONNECTOR ALPHARETTA, GA 30022

SITE NAME:

STARR'S POND

PROJECT DESCRIPTION

GREENFIELD 185' MONOPOLE

TOTAL TOWER HEIGHT INCLUDING THE APPURTENANCE - 190' AGL





DRIVING DIRECTIONS FROM ATLANTA: Take 1-75 S/I-85 S

Keep right at the fork to continue on I-85 S 5.9 mi Keep left to stay on I-85 S 9.6 mi Use the right 2 lanes to take exit 61 for GA-74 toward Fairburn/Peachtree City 0.2 mi Use the left 2 lanes to turn left onto GA-74 S/Senoia Rd 18.2 mi Continue to follow GA-74 S Turn left onto GA-85 N 0.4 mi Turn right onto State Rte 85C and site will be on the left 482 ft

PROJECT SUMMARY

SITE ADDRESS:

105 HIGHWAY 85 CONNECTOR **BROOKS, GA 30205**

C-6 FOUNDATION DETAILS

C-8 ROAD PROFILE DETAILS

C-10 FENCE DETAILS

L-1 LANDSCAPE PLAN

E-1 ELECTRICAL NOTES

E-2 ONE-LINE DIAGRAM E-3A ELECTRICAL SITE PLAN

E-3B FIBER ROUTING PLAN

E-4 GROUNDING SITE PLAN E-5 GROUNDING DETAILS E-6 METER FRAME DETAILS

C-7B EROSION CONTROL DETAILS

C-7A GRADING & EROSION CONTROL PLAN

C-9 GRADING & SEDIMENT CONTROL NOTES

LATITUDE: LONGITUDE: 33° 19' 35.9" 84° 30' 23.7"

PARCEL ID:

0424 032

S-Z

ZONING CLASSIFICATION:

ZONING JURISDICTION: **FAYETTE COUNTY**

DISTURBED AREA:

33,768 SQ FT/0,7 ACRES

WILLIAM M. PORTER 105 HIGHWAY 85 CONNECTOR BROOKS, GA 30205

APPLICANT

LAND OWNER:

VERIZON WIRELESS 10300 OLD ALABAMA ROAD CONN

ALPHARETTA, GA 30022

ENGINEER:

TOWERSOURCE 1875 OLD ALABAMA ROAD, ROSWELL, GA 30076

678-990-2338

ELIZABETH B USHER P.E. GSWCC LEVEL II: 0000068680

CONTACT:

BRANDON STEWART 678-990-2338

TELEPHONE COMPANY:

CONSULT CM

POWER COMPANY:

D&D ELECTRIC 770-460-9522

-		SHEET INDEX	PREPARED FOR:
	NO.	DESCRIPTION	V(2) 172(0) N
	T-1	TITLE SHEET	10300 OLD ALABAMA ROAD CONNECTOR
		Committee of the Commit	ALPHARETTA,GA 30022
		SURVEY	(0-4)) A&E FIRM:
			———OWERSOURCE
	A-1	AERIAL SITE PLAN	
	A-2	AERIAL SITE PLAN	1875 OLD ALABAMA ROAD. SUITE 10 ROSWELL, GA 30076
			TEL 678-990-2338
	C-1	GENERAL NOTES	WWW.TOWERSOURCEINC.COM
	C-2	OVERALL SITE PLAN	
	C-3	DETAILED SITE PLAN	THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY
	C-4	TOWER ELEVATION & ANTENNA MOUNT DETAILS	BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES
Ī	C-5	FIBER COLOR CODE	TO THE CLIENT IS STRICTLY PROHIBITED.





	A&E PROJECT #:		
	DRAWN BY:	JBE	
4	CHECKED BY:	EBU	

	TICLE DI.	LBO			
	REVISIONS				
NO.	DATE	DESCRIPTION			
Α	02/02/16	ISSUED FOR REVIEW			
0	03/28/16	ISSUED FOR CONSTRUCTION			
1	08/02/16	UPDATED TO SKID			

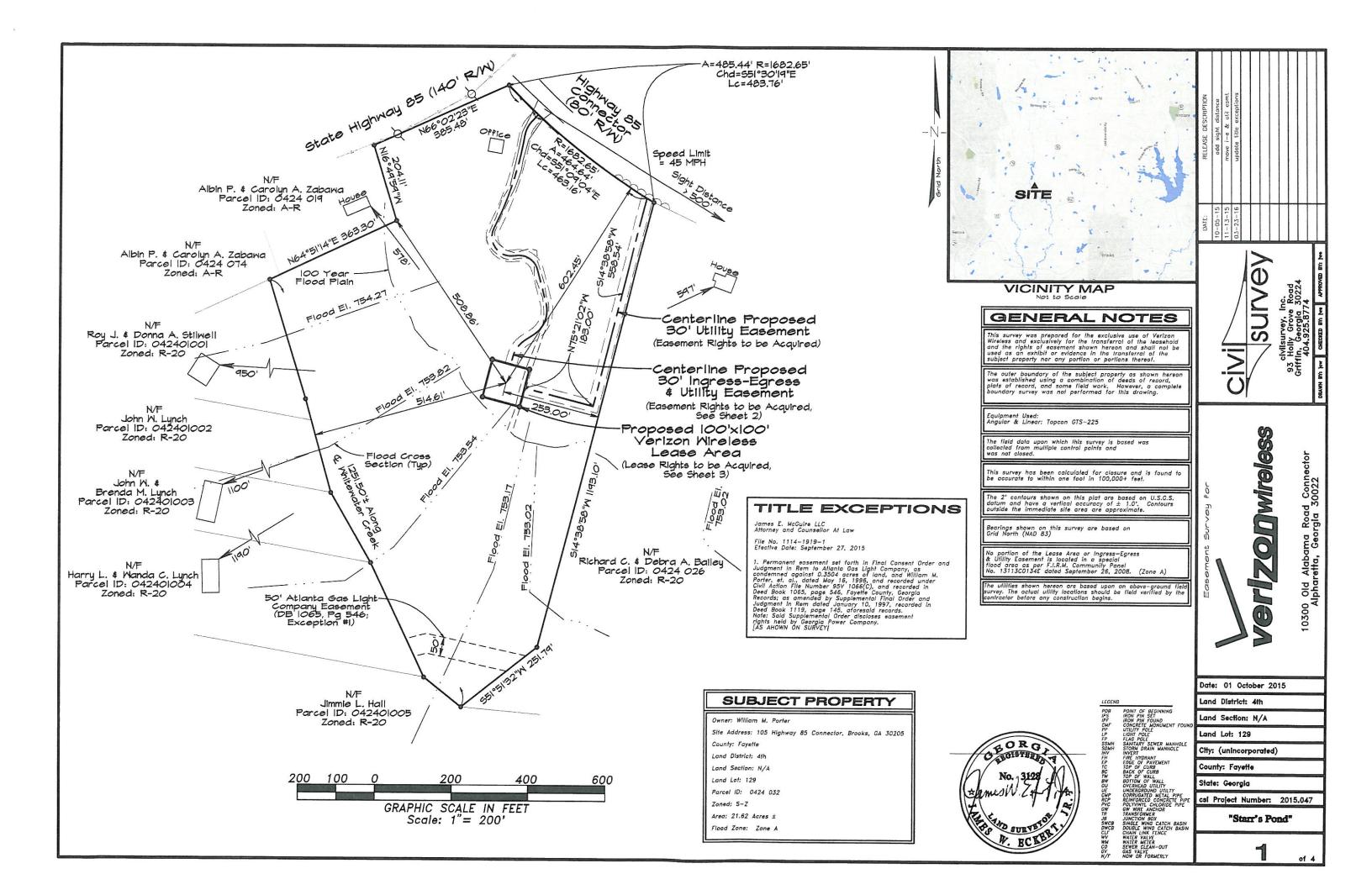


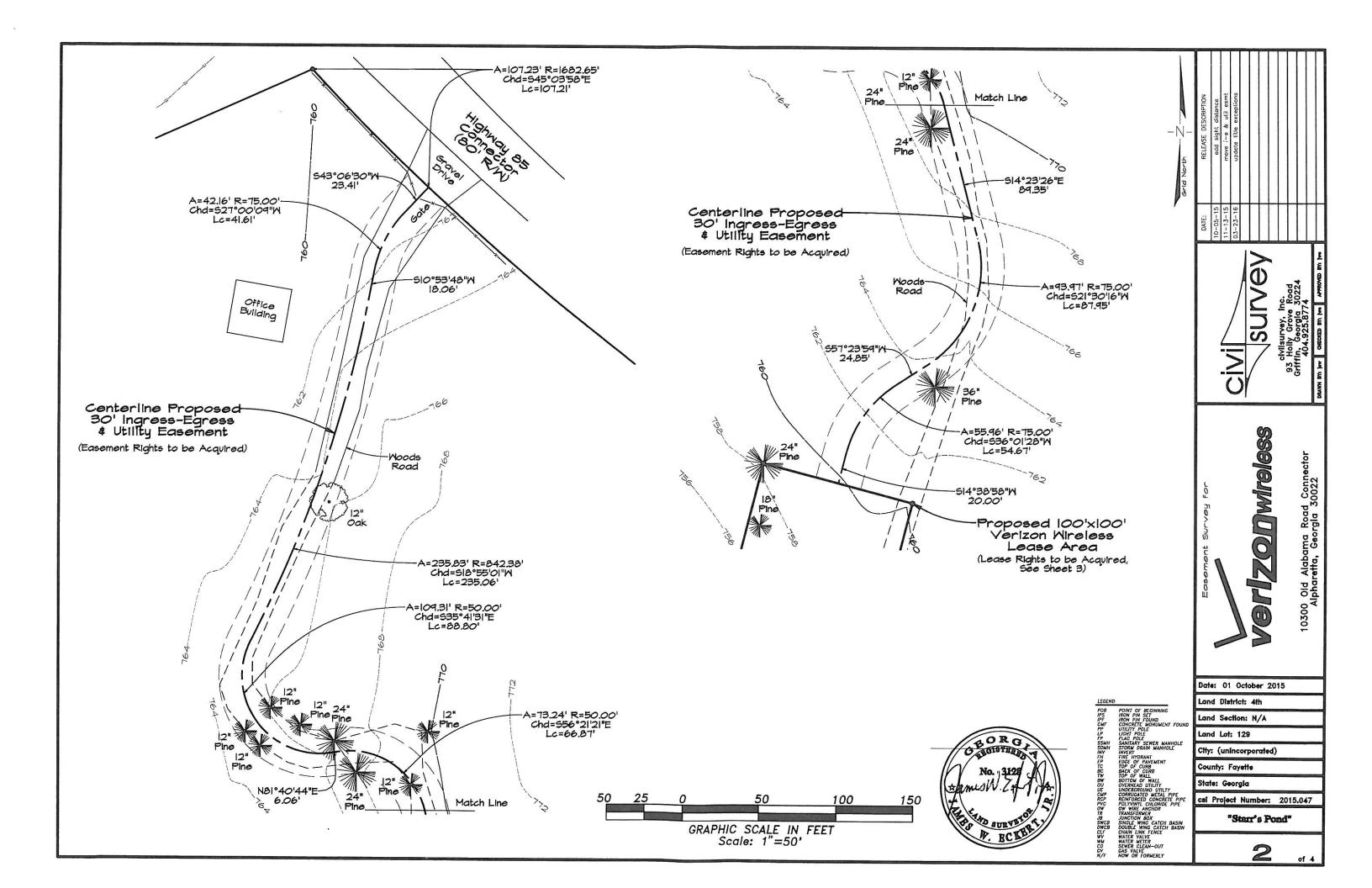
STARR'S POND

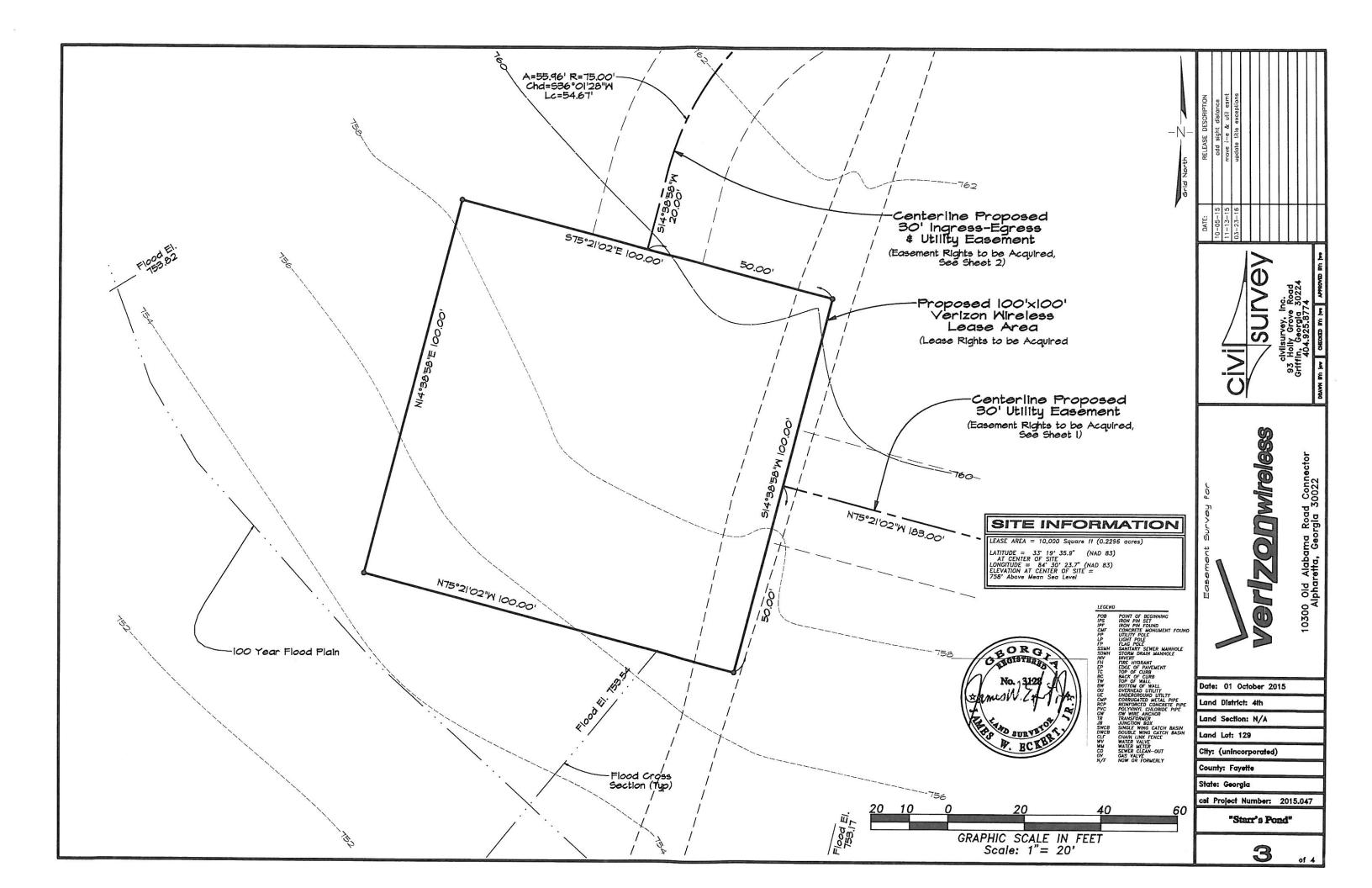
VERIZON

GREENFIELD

TITLE SHEET







SUBJECT PROPERTY

All that tract or parcel of land lying and being in Land Lot 129 of the 4th District, Fayette County, Georgia, and being more particularly described as follows:

BEGINNING at the intersection of the southeastern right of way of State Highway 85 and the southwestern right of way of Highway 85 Connector; Thence running along said southwestern right of way of Highway 85 Connector, 485.44 feet along a curve to the left, having a radius of 1682.65 feet and being scribed by a chord bearing South 51'30'19" East, 483.76 feet to a point; Thence leaving said right of way and running, South 14'38'58" West, 1193.10 feet to a point; Thence, South 51'51'32" West, 251.79 feet to a point in the centerline of Whitewater Creek; Thence following the meandarings of said creek centerline 1251 50 feet more or less to a point. Thence following the meanderings of said creek centerline1251.50 feet, more or less, to a point; Thence leaving said creek centerline and running, North 64°51'14" East, 363.30 feet to a point; Thence, North 16°49'59" West, 204.11 feet to a point on the southeastern right of way Thence running along said right of way, North 66°02'23" East, 385.48 feet to a point and the true POINT OF BEGINNING.

Said tract contains 21.6199 acres (941,762 square feet), more or less.

LEASE AREA

All that tract or parcel of land lying and being in Land Lot 129 of the 4th District, Fayette County, Georgia, and being more particularly described as follows:

To find the Point of Beginning, COMMENCE at the intersection of the southeastern right of way of State Highway 85 and the southwestern right of way of Highway 85 Connector; Thence running along said southwestern right of way of Highway 85 Connector, 107.23 feet along a curve to the left, having a radius of 1682.65 feet and being scribed by a chord bearing South 45'03'58" East, 107.21 feet to a point; Thence leaving said right of way and running, South 43'06'30" West, 23.41 feet to a point; Thence, 42.16 feet along a curve to the left, having a radius of 75.00 feet and being scribed by a chord bearing South 27'00'09" West, 41.61 feet to a point; Thence, South 10'53'48" West, 18.06 feet to a point; Thence, 235.83 feet along a curve to the right, having a radius of 842.38 feet and being scribed by a chord bearing South 18'55'01" West, 235.06 feet to a point; Thence, 109.31 feet along a curve to the left having a radius of 50.00 feet and being scribed by a chord bearing South 35'41'31" East, 88.80 feet to a point; Thence, North 81'40'44" East, 6.06 feet to a point; Thence, 73.24 feet along a curve to the right, having a radius of 50.00 feet and being scribed Thence, 73.24 feet along a curve to the right, having a radius of 50.00 feet and being scribed by a chord bearing South 56°21'21" East, 66.87 feet to a point;
Thence, South 14°23'26" East, 89.35 feet to a point; Thence, South 14'23'26' East, 89.35 teet to a point;
Thence, 93.97 feet along a curve to the right, having a radius of 75.00 feet and being scribed by a chord bearing South 21'30'16" West, 87.95 feet to a point;
Thence, South 57'23'59" West, 24.85 feet to a point;
Thence, 55.96 feet along a curve to the left, having a radius of 75.00 feet and being scribed by a chord bearing South 36'01'28" West, 54.67 feet to a point;
Thence, South 14'38'58" West, 20.00 feet to a point;
Thence, South 75'21'02" East, 50.00 feet to a point and the true POINT OF BEGINNING;

Thence running, South 14'38'58" West, 100.00 feet to a point;
Thence, North 75'21'02" West, 100.00 feet to a point;
Thence, North 14'38'58" East, 100.00 feet to a point;
Thence, South 75'21'02" East, 100.00 feet to a point and the true POINT OF BEGINNING.

Said tract contains 0.2296 acres (10,000 square feet), more or less.

30' INGRESS-EGRESS AND UTILITY EASEMENT

Together with a 30' Ingress-Egress & Utility Easement lying and being in Land Lot 129 of the 4th District, Fayette County, Georgia, and being more particularly described by the following centerline data:

To find the Point of Beginning, COMMENCE at the intersection of the southeastern right of way of State Highway 85 and the southwestern right of way of Highway 85 Connector; Thence running along said southwestern right of way of Highway 85 Connector, 107.23 feet along a curve to the left, having a radius of 1682.65 feet and being scribed by a chord bearing South 45°03'58" East, 107.21 feet to a point and the true POINT OF BEGINNING;

Thence leaving said right of way and running, South 43'06'30" West, 23.41 feet to a point; Thence, 42.16 feet along a curve to the left, having a radius of 75.00 feet and being scribed by a chord bearing South 27'00'09" West, 41.61 feet to a point; Thence, South 10'53'48" West, 18.06 feet to a point; Thence, 235.83 feet along a curve to the right, having a radius of 842.38 feet and being scribed by a chord bearing South 18'55'01" West, 235.06 feet to a point; Thence, North 81'40'44" East, 6.06 feet to a point;

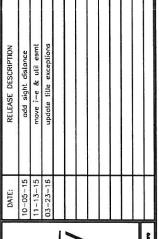
Thence, North 81'40'44" East, 6.06 feet to a point; Thence, 73.24 feet along a curve to the right, having a radius of 50.00 feet and being scribed by a chord bearing South 56'21'21" East, 66.87 feet to a point;
Thence, South 14'23'26" East, 89.35 feet to a point; Thence, South 1423.26 East, 89.33 feet to a point;
Thence, 93.97 feet along a curve to the right, having a radius of 75.00 feet and being scribed by a chord bearing South 21'30'16" West, 87.95 feet to a point;
Thence, South 57'23'59" West, 24.85 feet to a point; Thence, 55.96 feet along a curve to the left, having a radius of 75.00 feet and being scribed by a chord bearing South 36.01.28" West, 54.67 feet to a point;
Thence, South 14.38.58" West, 20.00 feet to the ENDING at a point.

30' UTILITY EASEMENT

Together with a 30' Utility Easement lying and being in Land Lot 129 of the 4th District, Fayette County, Georgia, and being more particularly described by the following centerline data:

To find the Point of Beginning, COMMENCE at the intersection of the southeastern right of way of State Highway 85 and the southwestern right of way of Highway 85 Connector; Thence running along said southwestern right of way of Highway 85 Connector, 464.64 feet along a curve to the left, having a radius of 1682.65 feet and being scribed by a chord bearing South 51°09'04" East, 463.16 feet to a point and the true POINT OF BEGINNING;

Thence leaving said right of way and running, South 14'38'58" West, 558.54 feet to a point; Thence, North 75'21'02" West, 183.00 feet to the ENDING at a point.







O/nwireless



Date: 01 October 2015 Land District: 4th

Land Section: N/A

Land Lot: 129

City: (unincorporated)

County: Favette

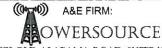
State: Georgia

csi Project Number: 2015.047

"Starr's Pond"







1875 OLD ALABAMA ROAD, SUITE 1008 ROSWELL, GA 30076 TEL 678-990-2338 WWW.TOWERSOURCEINC.COM

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OF DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

A&E PROJECT #:	
DRAWN BY:	JBE
CHECKED BY:	EBU

	REVISIONS					
NO.	DATE	DESCRIPTION				
A	02/02/16	ISSUED FOR REVIEW				
0	03/28/16	ISSUED FOR CONSTRUCTION				
1	08/02/16	UPDATED TO SKID				

VERIZON WIRELESS SITE NAME:

STARR'S

POND

OWER OWNER /

VERIZON

DESIGN TYPE:

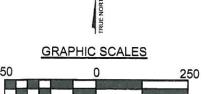
GREENFIELD

SHEET TITLE

AERIAL SITE PLAN

DRAWING NO.

REVISION NO.



SCALE: 1" =250'-0"

AERIAL SITE PLAN

SCALE: 1" =250'-0"



PREPARED FOR:

VELOCIO

10300 OLD ALABAMA ROAD CONNECTOR

A RAMPETA CA 20032



1875 OLD ALABAMA ROAD, SUITE 1008 ROSWELL, GA 30076 TEL 678-990-2338 WWW.TOWERSOURCEINC.COM

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VERIZON WIRELESS SITE NAME:

STARR'S

POND

OWER OWNER /

VERIZON

GREENFIELD

CHEET TITLE

AERIAL SITE PLAN

DRAWING NO.

1

AERIAL SITE PLAN
SCALE: 1" =600'-0"

GRAPHIC SCALES

SCALE: 1" =600'-0"

GENERAL NOTES: ALL CONSTRUCTION TO COMPLY WITH THE FOLLOWING CODES PLUS LATEST STATE AMENDMENTS: International Building Code - 2012 Edition with 2014 & 2015 Georgia State Amendments - NFPA National Electrical Code - 2014 Edition - International Mechanical Code - 2012 Edition with 2014 & 2015 Georgia State Amendments - International Fuel Gas Code - 2012 Edition with 2014 & 2015 Georgia State Amendments International Plumbing Code - 2012 Edition with 2014 & 2015 Georgia State Amendment - International Residential Code for One & Two Family Dwellings - 2012 Edition with 2014 & 2015 Georgia State Amendments - International Existing Building Code - 2012 Edition with 2015 Georgia State Amendments - Masonry Code - ASCE 5-10 Structural Concrete Code - ACI 318-11 - International Energy Conservation Code - 2009 Edition with 2011 & 2012 Georgia State Amendments - Structural standards for steel antenna towers and antenna supporting structures - (TIA/EIA-222-G) - Georgia Erosion and Sedimentation Act of 1975, (Amended in 2003) CONTRACTOR IS TO COMPLY WITH THE REQUEST FOR QUOTATION (RFQ) AND CONSTRUCTION SPECIFICATIONS (LATEST REVISION) & BUILDING MANUFACTURER'S DRAWINGS, ALL PREVIOUSLY PROVIDED BY VERIZON WIRELESS. DIMENSIONS TO ALL EXISTING SITE FEATURES SHALL BE FIELD VERIFIED BY THE CONTRACTOR & ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES, PIPES, OR ANY OTHER SUBSURFACE STRUCTURES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY LOCATING SERVICE 48 HRS PRIOR TO DIGGING, DRILLING, OR BLASTING. VERIZON'S CONSTRUCTION PROJECT MANAGER OR VERIZON'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY 6.2. FROM THE PLANS WITHOUT THE EXPRESSED WRITTEN APPROVAL OF VERIZON'S CONSTRUCTION PROJECT MANAGER OR VERIZON'S REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL DRAWINGS & SPECIFICATIONS AND TO COORDINATE HIS WORK WITH THE WORK OF ALL OTHERS TO ENSURE THAT WORK PROGRESSION IS NOT 1. DESIGN GRAVITY LOADS: CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE PROPERTY OWNER AS TO AVOID ANY INTERRUPTIONS WITH THE PROPERTY OWNER'S OPERATIONS. CONTRACTOR SHALL KEEP THE PROJECT SITE FREE FROM ACCUMULATION OF WASTE MATERIALS & RUBBISH AT ALL TIMES DURING THE CONSTRUCTION PERIOD, & SHALL REMOVE ALL WASTE MATERIALS & RUBBISH FROM THE PROJECT SITE AT THE COMPLETION OF WORK, EXCEPT THOSE SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS TO BE LEFT FOR THE OWNER'S MAINTENANCE. THE CONTRACTOR SHALL RESTORE ALL PROPERTY TO IT'S PRE-CONSTRUCTION CONDITION TO THE OWNER'S SATISFACTION THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY DISTURBED. DAMAGED, OR REMOVAL OF MONUMENTATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A REGISTERED LAND SURVEYOR 11. DAMAGE TO EXISTING STRUCTURES & UTILITIES SHALL BE REPAIRED OR REPLACED TO OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE. MAINTAIN FLOW FOR ALL UTILITIES. 12. ALL UTILITY CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY COMPANY PRIOR TO EACH CONNECTION. 13. UNLESS OTHERWISE INDICATED, VERIZON SHALL OBTAIN & PROVIDE CONSTRUCTION PERMITS, THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL REQUIRED LOCAL, CITY, STATE AND/OR COUNTY 4.2. CONSTRUCTION LICENSES. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL APPLY FOR & PROVIDE A CERTIFICATE OF OCCUPANCY. 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE FOR CONSTRUCTION 15. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. 16. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO AN APPROVED LANDFILL. 17. SECURITY TO THE SITE SHALL BE MAINTAINED AT ALL TIMES. 18. CONTRACTOR IS RESPONSIBLE FOR THE CONDITION OF THE SHELTER DURING AND AFTER CONSTRUCTION. THE EQUIPMENT SHELTER SHALL NOT BE USED FOR STORAGE OF TOOLS CONSTRUCTION MATERIALS OR EQUIPMENT. CONTRACTOR SHALL ENSURE THE SHELTER IS CLEANED AT 6.1. CONCLUSION OF CONSTRUCTION AND THE FLOOR CLEANED, WAXED, AND BUFFED TO SHINE 19. FOR GREENFIELD/NEW TOWERS SITES, CONTRACTOR IS RESPONSIBLE FOR ENSURING THE TOWER LIGHTS ARE MONITORED MORNING AND NIGHT EACH 24 HRS FROM THE TIME THE TOWER IS TOPPED OUT 6.2. UNTIL SITE HAS ALARMS CONNECTED TO THE OPERATIONS SWITCH OR NO. CONTRACTOR TO NOTIFY PROJECT MANAGER AT THE TIME THE TOWER IS TOPPED OUT TO FOWARD NOTIFICATION TO VERIZON REGULATORY AND FCC/FAA. **LEGEND** - FENCE 550 CONTOUR LINE PROPERTY LINE / ROW EASEMENT DISCONNECT SWITCH

 \triangle

METER

- LOD - LIMITS OF DISTURBANCE -

CIRCUIT BREAKER

- GROUND WIRE

CODED NOTE NUMBER

CHEMICAL GROUND ROD

CADWELD TYPE CONNECTION

GROUND ROD WITH INSPECTION SLEEVE

(x)

-

STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"
- 2. ALL INTERIOR STRUCTURAL STEEL SHALL BE FINISHED WITH ONE COAT FABRICATOR'S NON-LEAD, RED OXIDE PRIMER. PRIMING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT 2. POSSIBLE, ALL DINGS, SCRAPES, MARS, & WELDS IN THE PRIMED AREAS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK
- 3. ALL EXTERIOR STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION ASTM A123 UNLESS OTHERWISE NOTED, GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, & WELDS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK.
- 4. HOLES SHALL NOT BE PLACED THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND

5. CONNECTIONS:

- ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 13th EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4") AND SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA GALVANIZED ASTM A307 BOLTS UNLESS NOTED OTHERWISE
- CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER. STEEL SHAPE
- W SHAPES ASTM A992, GR 50
- PLATES, ANGLES, CHANNELS ASTM A36

ROOF LIVE LOAD = 20 PSF DESIGN WIND LOADS: RISK CATEGORY I BASIC WIND SPEED = 140 MPH EXPOSURE C Kzt = 1.0

ANTENNA NOTES

- AFTER ANTENNA INSTALLATION, LABEL EACH COAXIAL CABLE LINE WITH STRIPS OF COLORED, UV RESISTANT TAPE AT BOTH ENDS OF EVERY LINE. IDENTIFICATION TAPE AS SHOWN ON TOWER ELEVATION PAGE.
- TEST ALL COMPONENTS UPON COMPLETION OF INSTALLATION TO ENSURE THAT ALL ITEMS HAVE BEEN 17. FOR COLD WEATHER & HOT WEATHER PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND PROPERLY INSTALLED AND ARE OPERATIONAL AS INTENDED

TEST CRITERIA

- ALL CABLES SHALL BE TESTED BETWEEN 700-1900 MHz.
- ALL ANTENNAS MUST MEET A RETURN LOSS OF 16dB OR BETTER.
- ALL INSERTION LOSS SHALL MEET OR BE LESS THAN THAT SPECIFIED ON THE EBTS WORKSHEET.
- EQUIPMENT REQUIRED MINIMUM TEST EQUIPMENT SHALL INCLUDE:
- SWEPT-FREQUENCY SCALAR NETWORK ANALYZER SYSTEM. SIGNAL SEPARATION DEVICE WITH A DIRECTIVITY OF AT LEAST 40dB BETTER THAN THE HIGHEST RETURN LOSS IT IS REQUIRED TO MEASURE
- PRINTER OR PLOTTER CABLE CAPABLE OF PRODUCING 8.5"x11" COPIES (DIGITAL PRINTERS UNACCEPTABLE) FOR RECORDING PERMANENT RECORD OF MEASURED RETURN LOSS & INSERTION LOSS AND INSERTION CHARACTERISTICS. A TIME DOMAIN REFLECTOMETER (TDR) FOR FAULT LOCATION

TESTS REQUIRED

- CABLE RETURN LOSS (INCLUDES TOP & BOTTOM JUMPERS) LOAD TEST; SHOULD BE -40dB OR BETTER.
- CABLE INSERTION LOSS MUST MEET OR BE LESS THAN THE MANUFACTURER'S PUBLISHED
- SYSTEM RETURN LOSS IF SYSTEM SWEEPS BETTER THAN LOAD, THERE IS A PROBLEM IN THE

TEST DOCUMENTATION

- THE FOLLOWING DATA MUST BE INCLUDED FOR EACH ANTENNA TESTED:
- 6.1.1. INSERTION LOSS DATA.
- 6.1.2. RETURN LOSS INTO 50ohm LOAD, SWEEP MEASUREMENTS.
- 6.1.3. RETURN LOSS INTO ANTENNA SWEEP MEASUREMENTS.
- DOCUMENTATION FORMAT
- 6.2.1, COPIES OF ALL TEST DATA MUST BE PLACED IN BINDERS.
- 6.2.2. PROVIDE TWO (2) COPIES OF ALL TEST DATA, ONE COPY TO REMAIN AT SITE & ONE COPY FOR THE VERIZON PROJECT MANAGER.
- 6.2.3. ALL TESTS MUST BE LOGGED AND DATED. 6.2.4. SWEEP MEASUREMENTS MUST BE CHART RECORDED & DATED.

THE ADJACENT TABLE IS THE MINIMUM THAT OPERATIONS IS REQUIRED TO PROVIDE DURING A COMPLETE SYSTEM RETURN LOSS TEST (I.E. WITH IN-I INF DUPLEXERS, DIPLEXERS, SURGE ARRESTORS, ETC.) THE VALUES WITHIN THIS TABLE ARE CONSIDERED PASS VALUES FOR A NEW OR EXISTING SYSTEM. GENERAL CONTRACTOR- BASED ON THESE TABLES, GC IS REQUIRED TO PROVIDE A SYSTEM SWEEP FROM THE CONNECTOR AT THE HATCH PLATE WITH A READING OF -20dB OR BETTER, TO ALLOW OPERATIONS TO GET THEIR

FOR DTF TESTING WITH LOAD TERMINATION ON NEW OR EXISTING PASS CRITERIA FOR MAIN FEED LINE (MFL) OR ANY JUMPER -40 dB OR PASS CRITERIA FOR DIN AND MFL CONNECTORS -30 dB OR BETTER PASS CRITERIA FOR N CONNECTORS -27.5 dB OR BETTER

CONCRETE NOTES:

- DESIGN & CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS NOTED OTHERWISE.
- CONCRETE MATERIALS

PORTLAND CEMENT ASTM C 150, TYPE I REINFORCEMENT **ASTM A 185** NORMAL WEIGHT AGGREGATE ATSM C 33 WATER POTABLE **ADMIXTURES** NON-CHLORIDE

- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED, UNLESS NOTED OTHERWISE. WWF SHALL CONFORM TO ASTM A185 UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND HOOKS SHALL BE ASTM STANDARD UNLESS NOTED OTHERWISE.
- MINIMUM COVER FOR REINFORCING STEEL:

CONCRETE CAST AGAINST EARTH

EXPOSED CONCRETE #6 & LARGER - 2 IN. #5 & SMALLER - 1 1/2 IN NON-EXPOSED SLAB & WALL 3/4 IN

NON-EXPOSED BEAMS & COLUMNS NON-CHLORIDE

- 8. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. NO REINFORCING SHALL BE CUT WITHOUT ENGINEER'S APPROVAL.
- 10. CURING COMPOUNDS SHALL CONFORM TO ASTM C 309.
- 11. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI 301
- 12. DO NOT WELD OR TACK WELD REINFORCING STEEL.
- 13. ALL PENETRATIONS SHALL BE IN PLACE PRIOR TO CONCRETE PLACEMENT.
- 14. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- 15. CONCRETE SHALL NOT BE PLACED IN WATER, ICE, OR ON FROZEN GROUND
- 16. DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD.
- RECOMMENDATIONS

GENERATOR, DIESEL & LPG TANK NOTES

- INSTALLATION OF ALL GENERATORS AND DIESEL/LPG TANK INSIDE OR OUTSIDE MUST MEET ALL
- ALL FUEL PIPING CONNECTION INSTALLED AT THE SITE MUST BE PRESSURE TESTED PER LOCAL CODE
- IN FLOOD ZONES LPG TANK FOUNDATION MUST BE INCREASED FROM A DEPTH OF 4" TO 20" TO PREVENT TANK FROM FLOATING AWAY IN A FLOOD.

COAX PASS CRITERIA @ 1900 MHZ RL-SYSTEM 1-5/8 7/8* 1-1/4" ength (f 100' -17 1 -4.9 -4 -3.5 -22 -22 -22 150" -17.4 -17.3 -8.7 -5.2 -4.5 -22 -22 -22 200' -18 -17.7 -8.4 -17 5 -6.5 5.5 -23 -23 -23 250" -18.2 -17.9 -10.2 -7.8 -6.5 -23 -23 -23 300' -18.3 -18.1 -11.9 -9 -7.5 -24 -24 -24 350' -18.4 -18.2 -18.1 -13.7 -10.3 -8.6 -24 -24 -24 400' -18.5 -18.3 -18.2 -15.4 -11.6 -96 -25 -25 -25

System Line Length (ft)	RL-SYSTEM		RL-SHORT		RL-LOAD				
	7/8*	1-1/4"	1-5/8"	7/8*	1-1/4*	1-5/8"	7/8"	1-1/4"	1-5/8"
100'	-17	-16.8	-16.7	-3.2	-2.6	-2.3	-22	-22	-22
150'	-17.3	-17	-16.9	-4.3	-3.4	-2.9	-22	-22	-22
200'	-17.6	-17.3	-17.1	-5.4	-4.1	-3.6	-23	-23	-23
250'	-17.8	-17.5	-17.3	-6.5	4.9	-4.2	-23	-23	-23
300'	-18	-17.6	-17.5	-7.6	-5.7	-4.9	-24	-24	-24
350'	-18.1	-17.8	-17.5	-8.8	-6.5	-5.5	-24	-24	-24
400'	-18.2	-17.9	-17.7	-99	-7.3	-6.2	-25	-25	-25





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STARR'S POND

OWER OWNER / SITE NUMBER

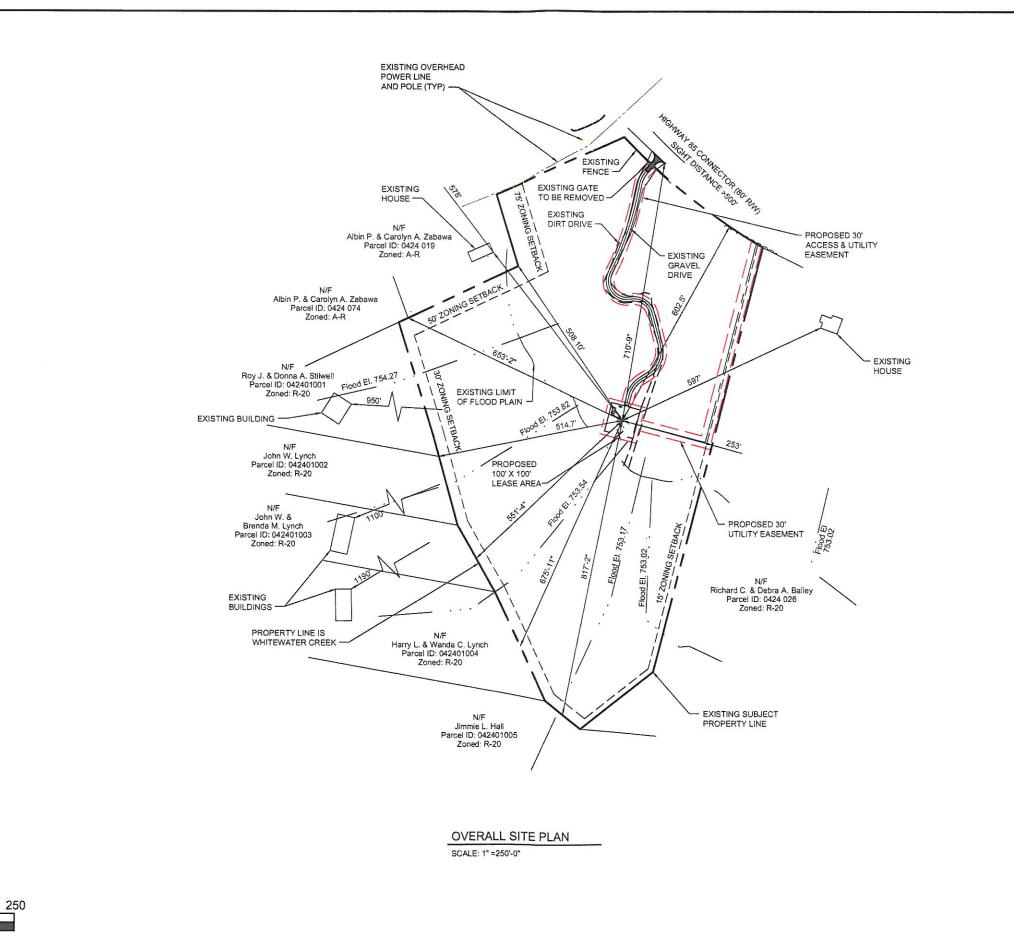
VERIZON

GREENFIELD

SHEET TITLE:

GENERAL NOTES

REVISION NO



GRAPHIC SCALES

SCALE: 1" =250'-0"

250





1875 OLD ALABAMA ROAD, SUITE 1008 ROSWELL, GA 30076 TEL 678-990-2338 WWW.TOWERSOURCEINC.COM

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VERIZON WIRELESS SITE NAME
STARR'S
POND

OWER OWNER / S

VERIZON

DESIGN TYPE:

GREENFIELD

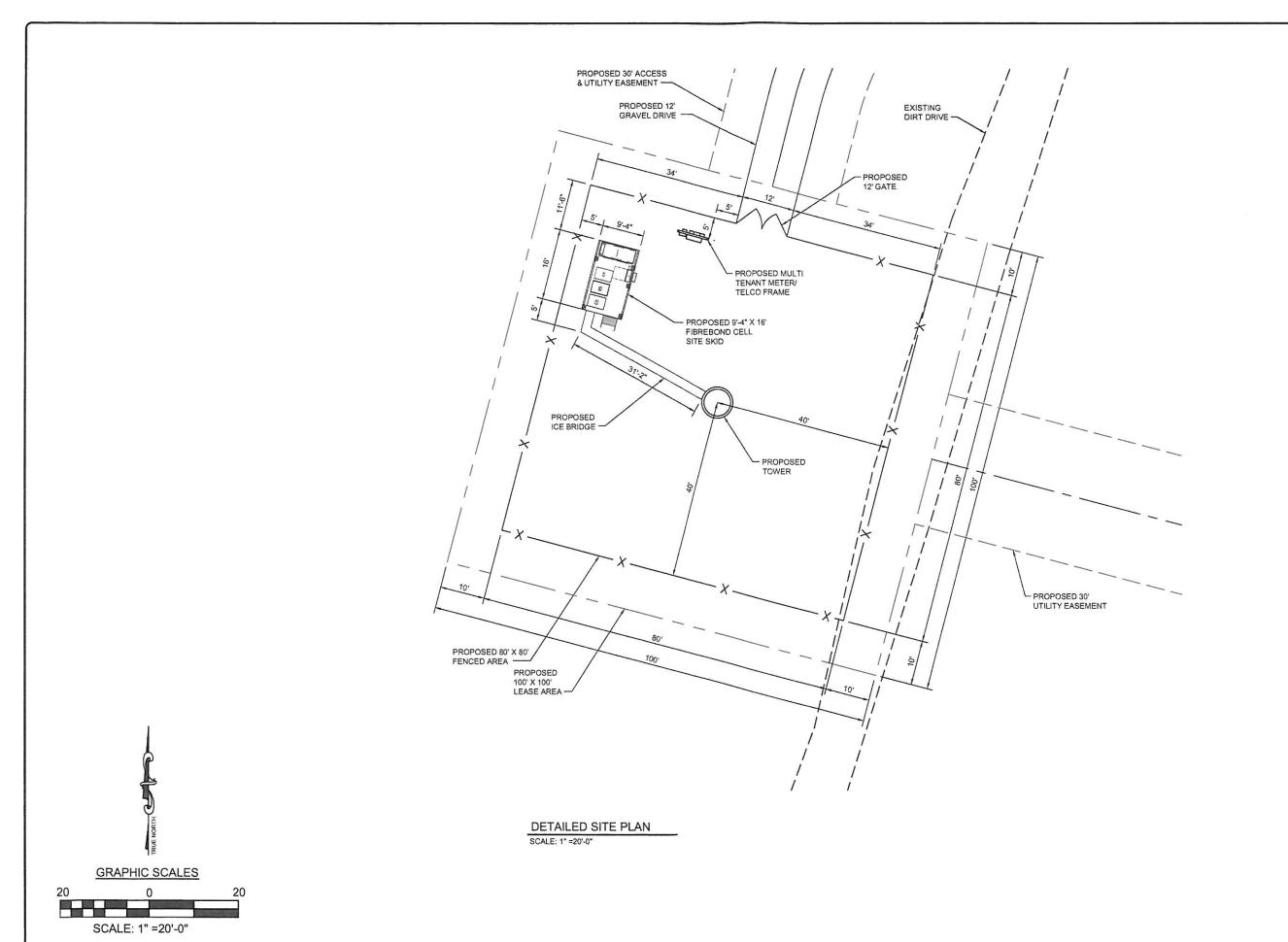
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OVERALL SITE PLAN

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STARR'S

POND

TOWER OWNER / SITE NUMBER:

VERIZON

DESIGN TYPE:

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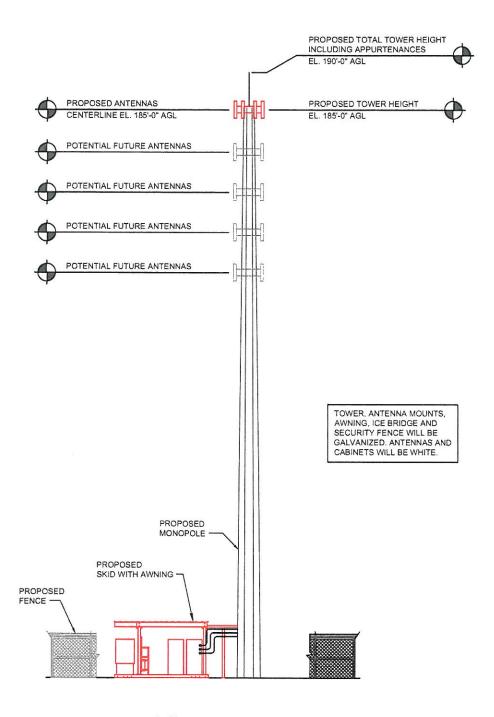
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DETAILED SITE PLAN

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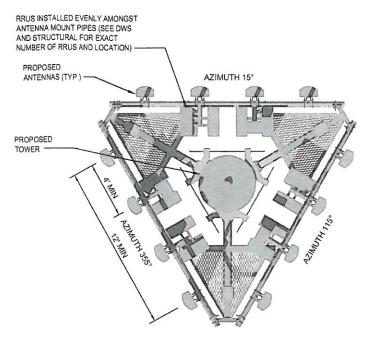
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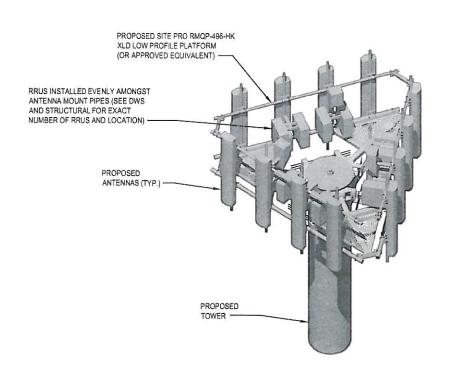


TOWER ELEVATION NOT TO SCALE

NOTE:
- TOWER AND FOUNDATION DESIGN / CHECK PERFORMED BY OTHERS. (MANUFACTURER)
- THIS CONSTRUCTION DOCUMENT MUST BE ACCOMPANIED BY A SEALED & SIGNED STRUCTURAL ASSESSMENT/ANALYSIS REVIEW MADE BY A LICENSED ENGINEER.



ANTENNA ORIENTATION DETAIL NOT TO SCALE



ANTENNA ORIENTATION DETAIL NOT TO SCALE





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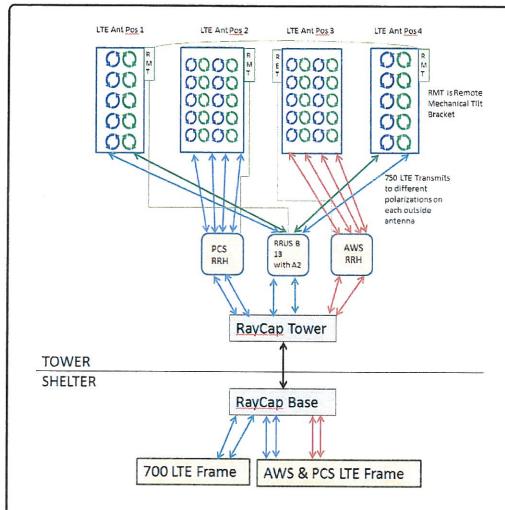
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TOWER ELEVATION & ANTENNA MOUNT DETAILS

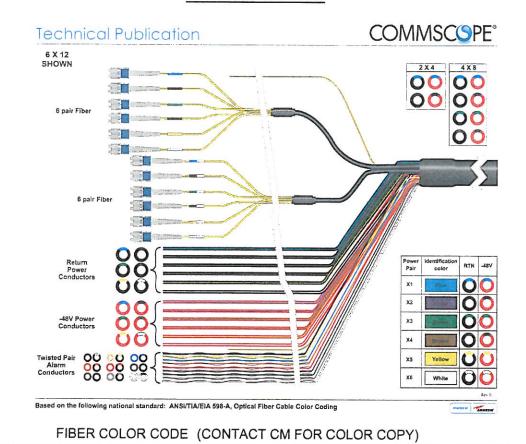
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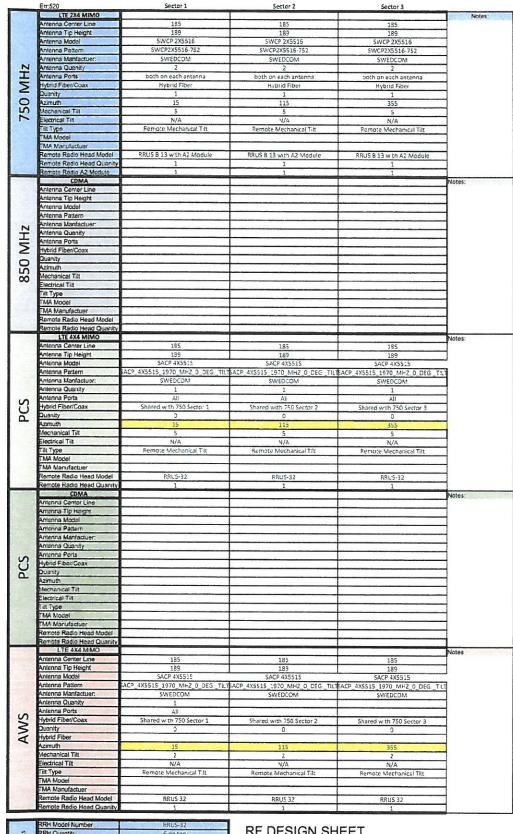
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1



ANTENNA DIAGRAM





RF DESIGN SHEET DWS R3

CONTRACTOR TO VERIFY MOST CURRENT RF DESIGN WORKSHEET (DWS)
 REFER TO DWS AND VERIFY AZIMUTH AND DOWNTILT INFORMATION.
 REFER TO STRUCTURAL ANALYSIS OF THE TOWER FOR COAX ROUTING





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VERIZON WIRELESS SITE NAME
STARR'S
POND

VER OWNER / SITE

VERIZON

ESIGN TYPE

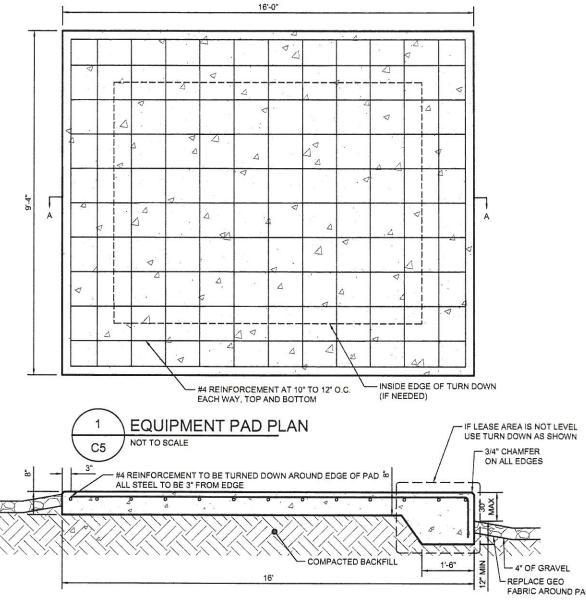
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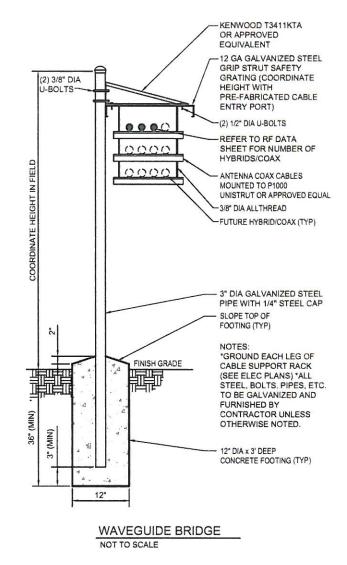
FIBER COLOR CODE

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REVISION NO.



SECTION AA THROUGH EQUIPMENT PAD







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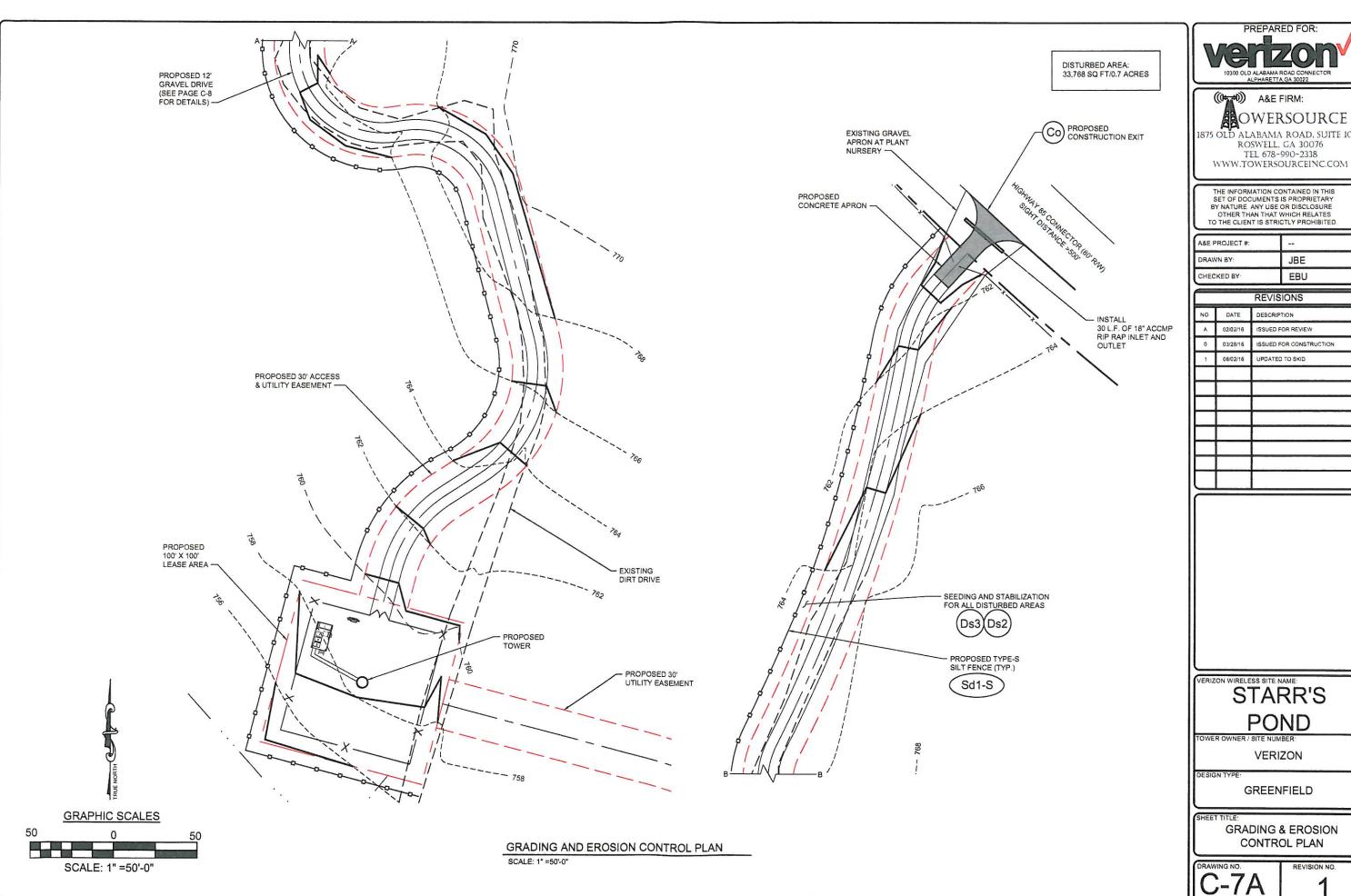
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SHEET TITL

FOUNDATION DETAILS

DRAWING NO.

1







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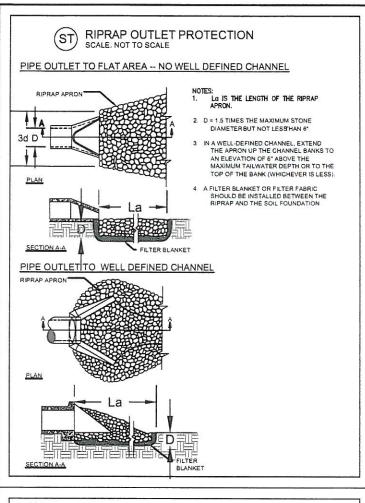
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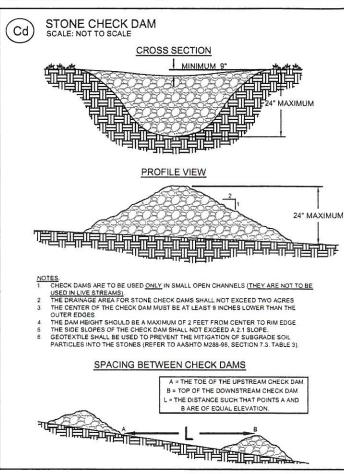
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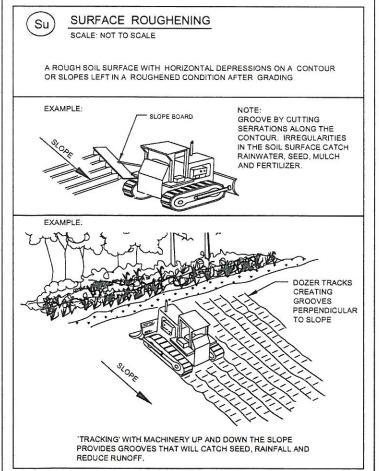
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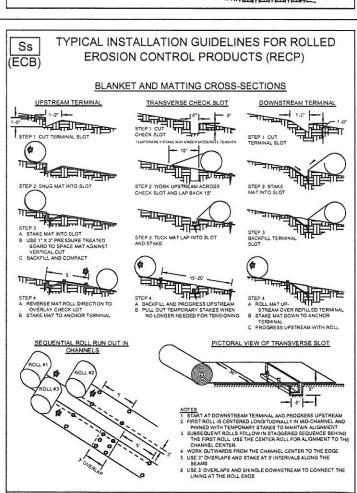
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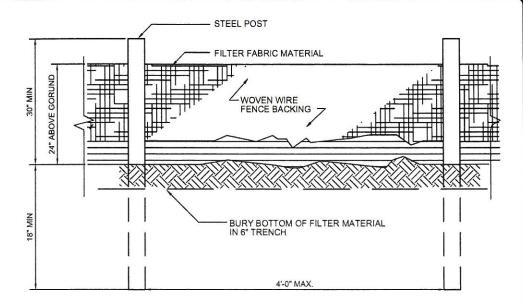
GRADING & EROSION CONTROL PLAN



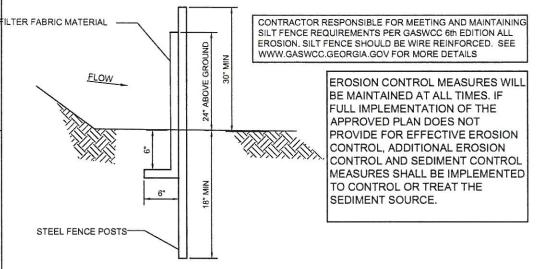




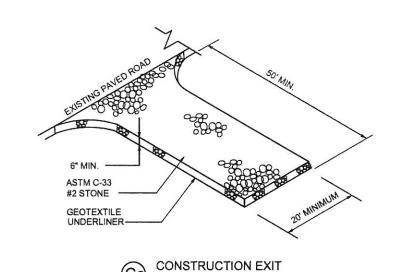




NOTE: USE 36" DOT APPROVED FABRIC USE STEEL POSTS











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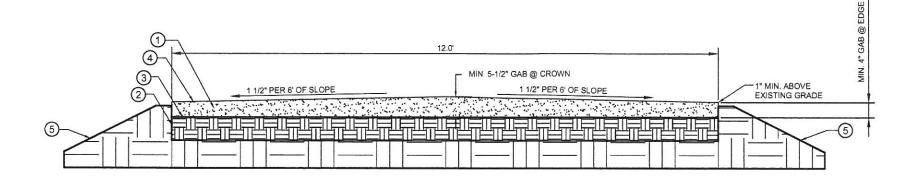
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STARR'S POND

VERIZON

GREENFIELD

EROSION CONTROL DETAILS



TYPICAL GRAVEL ROAD CROSS SECTION

** CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING & GRUBBING THE CONSTRUCTION SITE AND ROADWAY AREAS. THE CONTRACTOR SHALL COMPLY, WHEN NECESSARY, WITH THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT PREPARED FOR THIS SITE FOR SITE WORK PREPARATION & FOUNDATION WORK. **

- 1. REMOVE ALL ORGANIC MATERIAL. (STUMPS, ROOTS, LEAVES, ETC.) A MIN 3" OF SOIL TO BE REMOVED.
- 2. LEVEL AND COMPACT SUBGRADE TO A 95% COMPACTION.
- 3. INSTALL GEOTEXTILE FABRIC (AND/OR OTHER STABILIZATION METHOD) OVER SUBGRADE ON ALL ROADS.
- 4. INSTALL MIN. 4" OF GRADED AGGREGATE BASE (GAB/CRUSHER RUN) WITH 5-1/2" AT CROWN. GAB SHALL HAVE A 1-1/2" TO 6" SLOPE FROM CROWN. ALL GAB SHALL BE COMPACTED TO A 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 OR WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT.
- 5. ALL CUT AND FILL SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL MAXIMUM. SLOPES SHALL BE STABILIZED WITH SEED (SEE NOTE DS2 & DS3).





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NO DATE DESCRIPTION	
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VERIZON WIRELESS SITE NAME
STARR'S
POND

TOWER OWNER / SITE NUMBER

VERIZON

DESIGN TYPE:

GREENFIELD

SHEET TITLE

ROAD PROFILE DETAILS

DRAWING NO.

REVISION NO.

1

EXCAVATION & GRADING NOTES:

- ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
- 2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
- 3. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
- 4. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH,
- BACKFILLING SHALL:

 -USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE;

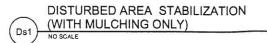
-BE FREE FROM CLODS OR STONES OVER 2-1/2" MAXIMUM DIMENSIONS -BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR IS REQUIRED.

6. FILL PREPARATION:

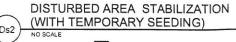
REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.

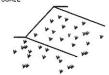
- 7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
- 8. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
- DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED / REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
- 11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
- 12. ALL CUT AND FILL SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL MAXIMUM.
- 13. REMOVE ALL ORGANICS, ROCKS GREATER THAN 3", UNUSED FILL AND OTHER DEBRIS TO AN AREA OFF SITE IN A LEGAL MANNER.













ACTIVITY SCHEDULE	r
WORK DESCRIPTION	WORKING DAYS
INSTALLATION OF EROSION CONTROL MEASURES	1-2
CLEARING, GRUBBING, AND GRADING	3-5
MAINTAINING EROSION CONTROL MEASURES	6-8
TEMPORARY GRASSING	9-12
BUILDING CONSTRUCTION	13-19
FINAL LANDSCAPING, GRASSING	20-23
REMOVING EROSION CONTROL MEASURES	24-26

THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

- ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
- PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
- 3. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION.

 CONTRACTOR SHALL CALL APPROPRIATE COUNTY FOR AN INSPECTION OF SOIL EROSION CONTROL MEASURES PRIOR TO BEGINNING GRADING ACTIVITY.

ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED.

- 4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- 5. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR ELECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
- SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER
 THAN 7 DAYS SHALL BE STABILIZED WITH SEEDING.
- 10. SEEDING

A. SEEDING WITH MULCH (CONVENTIONAL SEEDING ON SLOPES LESS THAN 3:1) (HYDRAULIC SEEDING EQUIPMENT ON SLOPES 3:1 AND STEEPER)

AGRICULTURAL LIMESTONE FERTILIZER. 5-10-15 MULCH STRAW OR HAY 4000 LBS./acre 1500 lbs./acre 5000 lbs./arce

SEED SPECIES	APPLICATION RATE/ACRE	PLANNING <u>DATES</u>	
HULLED COMMON BERMUDA GRASS	10lbs.	3/1 - 6/15	
FESCUE	50lbs.	9/1 -10/31	
FESCUE RYE GRASS	50lbs. 50lbs.	11/1 -2/28	
HAY MULCH FOR TEMPORARY COVER	5000lbs.	6/15 -8/31	
B <u>TOPDRESSING:</u> APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL FERTILIZER (AMMONIUM NITRATE 33.5%) 300 lbs./acre			
C. SECOND-YEAR-FERTILIZER: (5-10-15	800 lbs./acre		

HYDRAULIC SEEDING EQUIPMENT

WHEN HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED, NO GRADING AND SHAPING OR SEEDBED PREPARATION WILL BE REQUIRED. THE FERTILIZER, SEED AND WOOD CELLULOSE FIBER MULCH WILL BE MIXED WITH WATER AND APPLIED IN A SLURRY, ALL SLURRY INGREDIENTS MUST BE COMBINED TO FORM A HOMOGENEOUS MIXTURE, AND SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER MIXTURE IS MADE. STRAW OR HAY MULCH AND ASPHALT EMULSION WILL BE APPLIED WITH BLOWER-TYPE MULCH SPREADING EQUIPMENT WITHIN 24 HOURS AFTER SEEDING, THE MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED.

CONVENTIONAL SEEDING EQUIPMENT

GRADE, SHAPE AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION. A SEEDBED WILL BE PREPARED BY SCARIFYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL PULVERIZED, SMOOTHED AND FIRMED. SEEDING WILL BE DONE WITH CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER A FRESHLY PREPARED SEEDBED AND COVERED LIGHTLY. WITHIN 24 HOURS AFTER SEEDING, STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER-TYPE MULCH EQUIPMENT OR BY HAND AND ANCHORED IMMEDIATELY AFTER IT IS SPREAD. A DISK HARROW WITH THE DISK SET STRAIGHT OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH HITO THE SOIL.

- CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
- 12. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
- ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS
 OF THEIR CONSTRUCTION.
- 14. ALL FILL SLOPES WILL HAVE SILT FENCE AT TOE OF SLOPES.
- 15. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE ISSUING AUTHORITY.
- 16 THE ONLY MATERIAL TO BE BURIED ON-SITE IS VEGETATIVE MATERIAL. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL.
- A 25' MIN UNDISTURBED VEGETATIVE BUFFER ADJACENT TO ALL RUNNING STREAMS AND CREEKS WILL BE LEFT AND MAINTAINED.





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CHECKED BY:	EBU

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VERIZON WIRELESS SITE NAME:

STARR'S

POND

WER OWNER / SITE N

VERIZON

DESIGN TYPE:

GREENFIELD

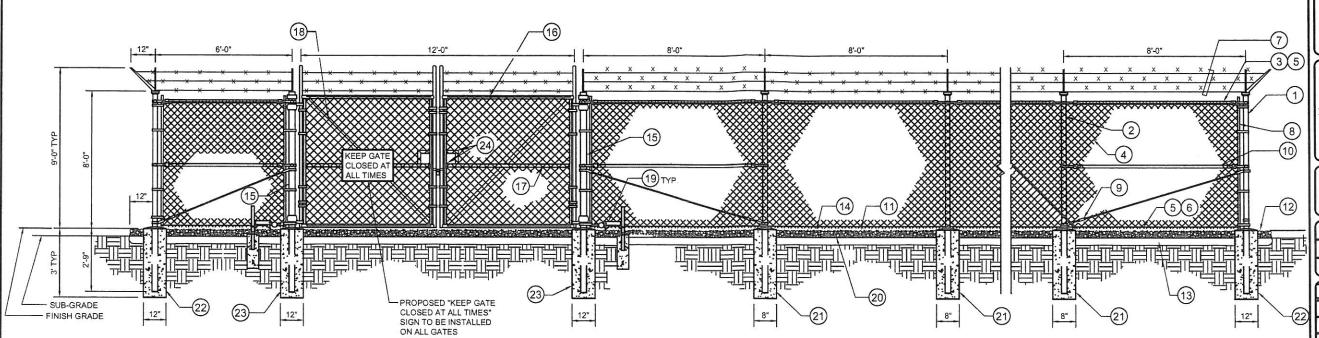
SHEET TITLE

GRADING & SEDIMENT CONTROL NOTES

DRAWING NO

EVISION NO.

-9



REFERENCE NOTES:

- 1.) CORNER, END OR PULL POST 3" NOMINAL SCHEDULE 40 PIPE.
- ② LINE POST: 2-1/2" SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
- 3. TOP RAIL & BRACE RAIL: 1-1/2" PIPE, PER ASTM-F1083.
- 4) FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- (5) TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.
- 6) TENSION WIRE: 9 GA. GALVANIZED STEEL
- 7 BARBED WIRE: DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
- 8 STRETCHER BAR.
- (9) 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- 10) FENCE CORNER POST BRACE: 1-5/8" DIA. EACH CORNER EACH WAY.
- 1 1-1/2" MAXIMUM CLEARANCE FROM GRADE.
- (2) 4" OF GRAVEL SHOULD BE SPREAD ON TOP OF GEO FABRIC THROUGHOUT COMPOUND AND 12" TO 18" OUTSIDE FENCE.
- (3) 4" COMPACTED 95% BASE MATERIAL OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
- (4) FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- (5) GATE POST 6". SCHEDULE 40 PIPE, FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE, PER ASTM-F1083.

- (6) GATE FRAME: 1-1/2" PIPE, PER ASTM-F1083.
- (17) GATE FRAME; 1-5/8" DIAMETER PIPE, PER ASTM-F1083.
- (8) GATE DIAGONAL GALVANIZED STEEL 1-1/2" PIPE.
- (9) DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
- @ GEOTEXTILE FABRIC.
- 21) LINE POST: CONCRETE FOUNDATION (2000 PSI).
- (2) CORNER POST: CONCRETE FOUNDATION (2000 PSI).
- (23) GATE POST: CONCRETE FOUNDATION (2000 PSI).
- CONTRACTOR TO PROVIDE PROGRAMMABLE 4 DIGIT COMBINATION LOCK AND 3/8" MIN GALVANIZED CHAIN. CONSULT CM FOR CORRECT VZW COMBINATION. GATE SHOULD HAVE 4" X 6" HAND HOLE FOR CHAIN WITH NO SHARP EDGES.

GENERAL NOTES:

- 1. INSTALL FENCING PER ASTM F-567
- 2. INSTALL SWING GATES PER ASTM F- 900
- LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
- 4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS.
 ALL PIPE TO BE 1-1/2" GALV. (UNLESS NOTED OTHERWISE)
 (HOT DIP, ASTM A120 GRADE "A" STEEL.).
 ALL GATE FRAMES SHALL BE WELDED.
 ALL WELDING SHALL BE COATED WITH (3) COATS
 OF COLD GALV. (OR EQUAL).
- 5. ALL OPEN POSTS SHALL HAVE END-CAPS.
- 6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
- ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

FENCE MUST BE A 8' DARK VINYL COATED, CHAIN LINK STEEL.





ROSWELL, GA 30076 TEL 678-990-2338 WWW.TOWERSOURCEINC.COM

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VERIZON WIRELESS SITE NAME:

STARR'S

POND

OWER OWNER / S

VERIZON

DESIGN TYPE

GREENFIELD

SHEET TITLE

FENCE DETAILS

DRAWING NO.

1

GENERAL NOTES:

1. SCOPE:

PROVIDE LABOR, EQUIPMENT, MATERIALS, ETC., REQUIRED TO COMPLETE THE INSTALLATION SHOWN.

2. CODES AND STANDARDS:

INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REGULATIONS, & APPLICABLE REQUIREMENTS OF LATEST EDITIONS OF CODES LIST ON C-1

3 PERMITS

OBTAIN & PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC.

COORDINATION

COORDINATE ELECTRICAL WORK WITH OTHER TRADES.

SUBMIT BROCHURES FOR APPROVAL ON DISCONNECT SWITCH & OTHER MAJOR SYSTEM COMPONENTS.

DO NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.

7. EQUIPMENT

CONNECT ELECTRICALLY OPERATED EQUIPMENT.

RECORD DRAWINGS:

MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DOCUMENTS WHICH SHALL BE TURNED OVER TO THE OWNER UPON COMPLETION OF THE PROJECT.

9. IDENTIFICATION:

IDENTIFY DISCONNECT SWITCH WITH PERMANENT ENGRAVED NAMEPLATE.

10. GUARANTEEWARRANTY

GUARANTEE INSTALLATION TO BE FREE OF DEFECTS, SHORTS, GROUNDS, ETC., FOR A PERIOD OF ONE YEAR. FURNISH WARRANTY SO THE DEFECTIVE MATERIALS AND/OR WORKMANSHIP WILL BE REPAIRED/REPLACED IMMEDIATELY UPON NOTIFICATION AT NO COST TO THE OWNER FOR PERIOD OF WARRANTY.

11. CUTTING & PATCHING:

PROVIDE CUTTING REQUIRED TO DO THE WORK. DO NOT CUT STRUCTURAL ELEMENTS WITHOUT APPROVAL. PATCHING SHALL BE OF QUALITY EQUAL TO & OF MATCHING APPEARANCE OF EXISTING CONSTRUCTION.

12. TRENCHING & BACKFILL:

PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES.

13. RACEWAYS:

UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT (MEETING NEMA TC2-1990). UNDERGROUND PVC CONDUIT SHALL TRANSITION TO RIGID GALVANIZED STEEL CONDUIT BEFORE RISING ABOVE GRADE OR WHEN SUBJECTED TO VEHICLE TRAFFIC LOADS. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 24" RADIUS. EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL. RGS CONDUIT, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. INTERIOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING WITH COMPRESSION TYPE FITTINGS.

14. SUPPORTS:

AS REQUIRED BY THE NEC.

15. CONDUCTORS:

USE 98% CONDUCTIVITY COPPER WITH TYPE THHN/THWN INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO #8 AWG. USE STRANDED CONDUCTORS FOR WIRE #8 AWG AND ABOVE.

16. CONNECTORS FOR POWER CONDUCTORS:

USE PRESSURE TYPE INSULATED TWIST CONNECTORS FOR #10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR #8 AWG AND LARGER.

17. GROUNDING:

A. ALL MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & INSTRUCTIONS.

3. ALL CONNECTIONS SHALL BE 2- HOLE LUG UNLESS UNDERGROUND

C. LUGS SHALL BE ATTACHED TO GROUND BARS USING STAINLESS STEEL OR HOT-DIPPED GALVANIZED STEEL BOLTS, NUTS, & LOCKWASHERS

D. PROVIDE TESTING OF GROUNDING SYSTEM AS DIRECTED BY CONSTRUCTION MANAGER.

GENERAL ELECTRICAL NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES, LAWS, AND ORDINANCES
- ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE INDICATED. CONDUITS EXPOSED ABOVE GROUND OR ROUTED UNDER GRAVEL ROAD SHALL BE RIGID GALVANIZED STEEL. ALL UNDERGROUND CONDUIT SHALL TRANSITION FROM PVC TO RIGID AT THE 90° BEND BELOW GRADE. SUPPLY UTILITY MARKING TAPE BURIED 12" BELOW GRADE ALONG ENTIRE LENGTH OF UNDERGROUND CONDUITS.
- 3. ALL CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION. CONTROL CONDUCTORS SHALL BE STRANDED. POWER & LIGHTING CONDUCTORS SHALL BE SOLID FOR #10 & #12 CONDUCTORS AND STRANDED
- 4. ELECTRICAL DRAWINGS ARE IN PART DIAGRAMMATIC. COORDINATE ELECTRICAL WORK WITH BUILDING STRUCTURE AND MECHANICAL EQUIPMENT. PROVIDE ADDITIONAL SUPPORTS FOR ELECTRICAL EQUIPMENT WHERE THE BUILDING STRUCTURE IS NOT ADAPTED TO MOUNTING EQUIPMENT THEREON.
- 5. LOCATE ALL UNDERGROUND UTILITIES BEFORE TRENCHING. IF CONFLICTS ARISE, CONTACT UTILITY COMPANY AND ENGINEER IMMEDIATELY.
- 6. ALL EXPOSED CONDUITS SHALL HAVE WEATHERPROOF CAPS NOT DUCT TAPE.
- 7. PROVIDE 200 LB TEST PULL WIRES IN EACH EMPTY TELEPHONE AND POWER CONDUIT.
- 8. COORDINATE ALL CONDUIT STUB-UP LOCATIONS WITH UTILITY COMPANY.
- 9. PROVIDE WEATHERPROOF SEALS FOR ALL CONDUIT STUB-UPS
- 10. CONDUIT TO BE INSTALLED PER NEC REQUIREMENTS. MAX OF 4 90'S ALLOWED IN SINGLE RUN OF CONDUIT. IF MORE BENDS ARE REQUIRED INSTALL PULL BOX EVERY (4) 90'S. 4 BENDS OR 150' IN LENGTH
- 11. FIBER CONDUITS: CONDUITS TO BE INSTALLED FROM ROW OF PUBLIC ROAD TO COMPOUND. HAND HOLES TO BE INSTALLED IN ROW, AT COMPOUND AND EVERY 400' BETWEEN (OR AS DIRECTED BY UTILITY OR REQUIRED BY NEC). USE HIGHLINE PHA173030 12,000LB HAND HOLE OR APPROVED EQUIVALENT. 11.1. CONDUIT 1 (VERIZON'S, WHEN PROVIDER IS TOWERCLOUD, SOUTHERNLIGHT, COX OR ZAYO): RUN (1) 2°C WITH (2) PULL STRINGS FROM VERIZON HAND HOLE AT ROW OF STREET STRAIGHT TO NEMA BOX ON VERIZON'S UTILITY FRAME.
 - 11.2. CONDUIT 2* (WHEN PROVIDER IS AT&T OR WINDSTREAM):
 - 11.2.1. GREENFIELDS AND COLOS WHERE PROVIDER DOES NOT HAVE NEMA BOX IN COMPOUND RUN (1) 2"C WITH (2) PULL STRINGS FROM FIBER PROVIDERS HAND HOLE AT ROW TO NEMA CABINET MOUNTED ON MULTI TENANT FRAME. AND ALSO FROM MULTI TENANT NEMA CABINET TO VERIZON'S NEMA BOX ON UTILITY FRAME.
 - (STUB UP CONDUIT IF FIBER PROVIDER IS NOT YET AT ROW) 11.2.2. COLOS WHERE PROVIDER HAS EXISTING MULTI TENANT NEMA BOX IN COMPOUND: ONLY RUN
- (1) 2" C WITH (2) PULL STRINGS FROM EXISTING MULTI TENANT NEMA TO VERIZON'S NEMA BOX ON UTILITY FRAME

*CONSULT CM FOR CORRECT FIBER PROVIDER OPTION.

"CONTRACTOR RESPONSIBLE FOR ENSURING EASEMENT IS CORRECTLY MARKED IN FIELD BEFORE INSTALLING

GENERAL GROUNDING NOTES:

- 1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:
- 1.1. #2 TINNED SOLID COPPER WIRE: CADWELDED TO RODS OR GROUND RING
- LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS USE STAINLESS STEEL HARDWARE THROUGHOUT.
- 2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
- 3. GROUND RODS SHOULD BE SPACED 2X HEIGHT APART AROUND COMPOUND GROUND RING. (EX. 10' ROD HOULD BE SPACED 20' APART)
- 4. VERIZON'S CONSTRUCTION PROJECT MANAGER OR VERIZON'S REPRESENTATIVE WILL BE PRESENT TO INSPECT CADWELDS AND MEGGER TEST DURING BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED. IF COMPOUND GROUND RING AND RODS DON'T MEET REQUIREMENTS THEN CONTINUE GROUND RING DOWN EASEMENT WITH GROUND RODS SPACED AT 2X HEIGHT APART.
- 5. DO NOT INSTALL GROUND RING OUTSIDE OF LEASED AREA.
- 6. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
- 7. ALL CADWELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS
- 8. BOND DOOR FRAMES, HANDRAILS, UNUSED HATCH PLATES AND MISCELLANEOUS LIFTING EYE/PLATES TO GROUND RING. BOND METAL AWNING TO DOOR FRAME
- 9. ALL GROUNDING TO ABOVE GRADE RIGID CONDUITS TO BE ATTACHED USING A COLD WATER GROUND CLAMP. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
- 10. ALL BUSS BAR SHALL BE GALVANIZED. ALL CONNECTIONS TO BUSS BAR ARE TO BE 2 HOLE LUGS.
- 11. ALL GROUNDING IS TO COMPLY WITH VERIZON NSTD46. IF YOU DO NOT HAVE A COPY OF THE PRACTICE/STANDARD PLEASE REQUEST A COPY FROM THE PROJECT MANAGER.





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STARR'S POND

TOWER OWNER / SITE NUMBER

VERIZON

GREENFIELD

SHEET TITLE:

ELECTRICAL NOTES

DRAWING NO

GENERAL NOTES:

PROVIDE LABOR, EQUIPMENT, MATERIALS, ETC., REQUIRED TO COMPLETE THE INSTALLATION SHOWN.

INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REGULATIONS, & APPLICABLE REQUIREMENTS OF LATEST EDITIONS OF CODES LIST ON C-1.

PERMITS

OBTAIN & PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC..

4. COORDINATION

COORDINATE ELECTRICAL WORK WITH OTHER TRADES.

SUBMITTALS

SUBMIT BROCHURES FOR APPROVAL ON DISCONNECT SWITCH & OTHER MAJOR SYSTEM COMPONENTS.

6. EXISTING SERVICES

DO NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.

EQUIPMENT:

CONNECT ELECTRICALLY OPERATED EQUIPMENT.

8. RECORD DRAWINGS

MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DOCUMENTS WHICH SHALL BE TURNED OVER TO THE OWNER UPON COMPLETION OF THE PROJECT.

9. IDENTIFICATION:

IDENTIFY DISCONNECT SWITCH WITH PERMANENT ENGRAVED NAMEPLATE.

10. GUARANTEE/WARRANTY:

GUARANTEE INSTALLATION TO BE FREE OF DEFECTS, SHORTS, GROUNDS. ETC., FOR A PERIOD OF ONE YEAR. FURNISH WARRANTY SO THE DEFECTIVE MATERIALS AND/OR WORKMANSHIP WILL BE REPAIRED/REPLACED IMMEDIATELY UPON NOTIFICATION AT NO COST TO THE OWNER FOR PERIOD OF WARRANTY.

PROVIDE CUTTING REQUIRED TO DO THE WORK, DO NOT CUT STRUCTURAL ELEMENTS WITHOUT APPROVAL. PATCHING SHALL BE OF QUALITY EQUAL TO & OF MATCHING APPEARANCE OF EXISTING CONSTRUCTION.

12. TRENCHING & BACKFILL:

PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES.

13 RACEWAYS

UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT (MEETING NEMA TC2-1990). UNDERGROUND PVC CONDUIT SHALL TRANSITION TO RIGID GALVANIZED STEEL CONDUIT BEFORE RISING ABOVE GRADE OR WHEN SUBJECTED TO VEHICLE TRAFFIC LOADS. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 24" RADIUS. EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL. RGS CONDUIT, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. INTERIOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING WITH COMPRESSION TYPE FITTINGS.

14. SUPPORTS:

AS REQUIRED BY THE NEC.

15 CONDUCTORS:

USE 98% CONDUCTIVITY COPPER WITH TYPE THHN/THWN INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO #8 AWG. USE STRANDED CONDUCTORS FOR WIRE #8 AWG AND ABOVE.

16. CONNECTORS FOR POWER CONDUCTORS: USE PRESSURE TYPE INSULATED TWIST CONNECTORS FOR #10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR #8 AWG AND LARGER.

17 GROUNDING

A. ALL MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & INSTRUCTIONS.

B. ALL CONNECTIONS SHALL BE 2- HOLE LUG UNLESS UNDERGROUND.

C. LUGS SHALL BE ATTACHED TO GROUND BARS USING STAINLESS STEEL OR HOT-DIPPED GALVANIZED

STEEL BOLTS, NUTS, & LOCKWASHERS.

D. PROVIDE TESTING OF GROUNDING SYSTEM AS DIRECTED BY CONSTRUCTION MANAGER.

GENERAL ELECTRICAL NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES, LAWS, AND ORDINANCES
- 2. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE INDICATED, CONDUITS EXPOSED ABOVE GROUND OR ROUTED UNDER GRAVEL ROAD SHALL BE RIGID GALVANIZED STEEL. ALL UNDERGROUND CONDUIT SHALL TRANSITION FROM PVC TO RIGID AT THE 90° BEND BELOW GRADE. SUPPLY UTILITY MARKING TAPE BURIED 12" BELOW GRADE ALONG ENTIRE LENGTH OF UNDERGROUND CONDUITS.
- 3. ALL CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION. CONTROL CONDUCTORS SHALL BE STRANDED. POWER & LIGHTING CONDUCTORS SHALL BE SOLID FOR #10 & #12 CONDUCTORS AND STRANDED
- 4. ELECTRICAL DRAWINGS ARE IN PART DIAGRAMMATIC. COORDINATE ELECTRICAL WORK WITH BUILDING STRUCTURE AND MECHANICAL EQUIPMENT. PROVIDE ADDITIONAL SUPPORTS FOR ELECTRICAL EQUIPMENT WHERE THE BUILDING STRUCTURE IS NOT ADAPTED TO MOUNTING EQUIPMENT THEREON.
- 5. LOCATE ALL UNDERGROUND UTILITIES BEFORE TRENCHING. IF CONFLICTS ARISE, CONTACT UTILITY COMPANY AND ENGINEER IMMEDIATELY
- 6. ALL EXPOSED CONDUITS SHALL HAVE WEATHERPROOF CAPS NOT DUCT TAPE
- 7. PROVIDE 200 LB TEST PULL WIRES IN EACH EMPTY TELEPHONE AND POWER CONDUIT.
- 8. COORDINATE ALL CONDUIT STUB-UP LOCATIONS WITH UTILITY COMPANY.
- 9. PROVIDE WEATHERPROOF SEALS FOR ALL CONDUIT STUB-UPS.
- 10. CONDUIT TO BE INSTALLED PER NEC REQUIREMENTS. MAX OF 4 90'S ALLOWED IN SINGLE RUN OF CONDUIT. IF MORE BENDS ARE REQUIRED INSTALL PULL BOX EVERY (4) 90'S. 4 BENDS OR 150' IN LENGTH
- 11. FIBER CONDUITS: CONDUITS TO BE INSTALLED FROM ROW OF PUBLIC ROAD TO COMPOUND. HAND HOLES TO BE INSTALLED IN ROW, AT COMPOUND AND EVERY 400' BETWEEN (OR AS DIRECTED BY UTILITY OR REQUIRED BY NEC). USE HIGHLINE PHA173030 12,000LB HAND HOLE OR APPROVED EQUIVALENT 11.1. CONDUIT 1 (VERIZON'S, WHEN PROVIDER IS TOWERCLOUD, SOUTHERNLIGHT, COX OR ZAYO):

RUN (1) 2°C WITH (2) PULL STRINGS FROM VERIZON HAND HOLE AT

ROW OF STREET STRAIGHT TO NEMA BOX ON VERIZON'S UTILITY FRAME

11.2. CONDUIT 2* (WHEN PROVIDER IS AT&T OR WINDSTREAM):

11.2.1. GREENFIELDS AND COLOS WHERE PROVIDER DOES NOT HAVE NEMA BOX IN COMPOUND: RUN (1) 2"C WITH (2) PULL STRINGS FROM FIBER PROVIDERS HAND HOLE AT ROW TO NEMA CABINET MOUNTED ON MULTI TENANT FRAME. AND ALSO FROM MULTI TENANT NEMA CABINET TO VERIZON'S NEMA BOX ON LITHITY FRAME

(STUB UP CONDUIT IF FIBER PROVIDER IS NOT YET AT ROW)

11.2.2. COLOS WHERE PROVIDER HAS EXISTING MULTI TENANT NEMA BOX IN COMPOUND: ONLY RUN (1) 2" C WITH (2) PULL STRINGS FROM EXISTING MULTI TENANT NEMA TO VERIZON'S NEMA BOX ON UTILITY FRAME

*CONSULT CM FOR CORRECT FIBER PROVIDER OPTION.

*CONTRACTOR RESPONSIBLE FOR ENSURING EASEMENT IS CORRECTLY MARKED IN FIELD BEFORE INSTALLING

GENERAL GROUNDING NOTES:

- 1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:
- 1.1. #2 TINNED SOLID COPPER WIRE: CADWELDED TO RODS OR GROUND RING
- LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS, USE STAINLESS STEEL HARDWARE THROUGHOUT
- 2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS,
- 3. GROUND RODS SHOULD BE SPACED 2X HEIGHT APART AROUND COMPOUND GROUND RING. (EX. 10' ROD SHOULD BE SPACED 20' APART).
- 4. VERIZON'S CONSTRUCTION PROJECT MANAGER OR VERIZON'S REPRESENTATIVE WILL BE PRESENT TO INSPECT CADWELDS AND MEGGER TEST DURING BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED, IF COMPOUND GROUND RING AND RODS DON'T MEET REQUIREMENTS THEN CONTINUE GROUND RING DOWN EASEMENT WITH GROUND RODS SPACED AT 2X HEIGHT APART.
- 5. DO NOT INSTALL GROUND RING OUTSIDE OF LEASED AREA
- 6. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
- 7. ALL CADWELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE TEE TYPE.
- 8. BOND DOOR FRAMES, HANDRAILS, UNUSED HATCH PLATES AND MISCELLANEOUS LIFTING EYE/PLATES TO GROUND RING. BOND METAL AWNING TO DOOR FRAME.
- 9. ALL GROUNDING TO ABOVE GRADE RIGID CONDUITS TO BE ATTACHED USING A COLD WATER GROUND CLAMP. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
- 10. ALL BUSS BAR SHALL BE GALVANIZED. ALL CONNECTIONS TO BUSS BAR ARE TO BE 2 HOLE LUGS.
- 11. ALL GROUNDING IS TO COMPLY WITH VERIZON NSTD46. IF YOU DO NOT HAVE A COPY OF THE PRACTICE/STANDARD PLEASE REQUEST A COPY FROM THE PROJECT MANAGER.





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STARR'S POND

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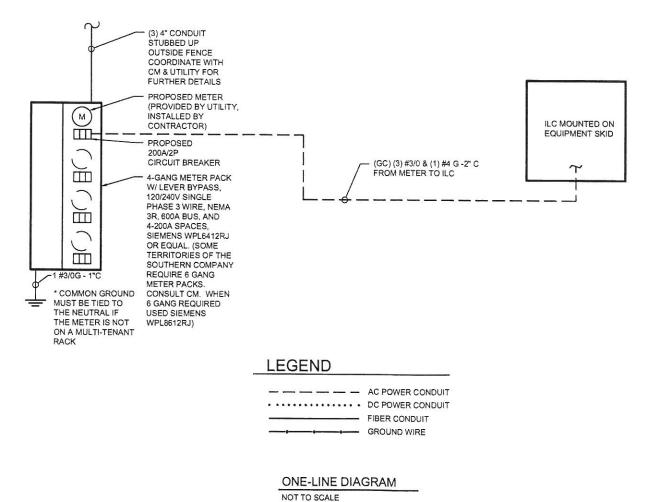
VERIZON

GREENFIELD

ELECTRICAL NOTES

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REVISION NO







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VERIZON WIRELESS SITE NAME
STARR'S
POND

TOWER OWNER / SITE NUMBER:

VERIZON

DESIGN TYPE

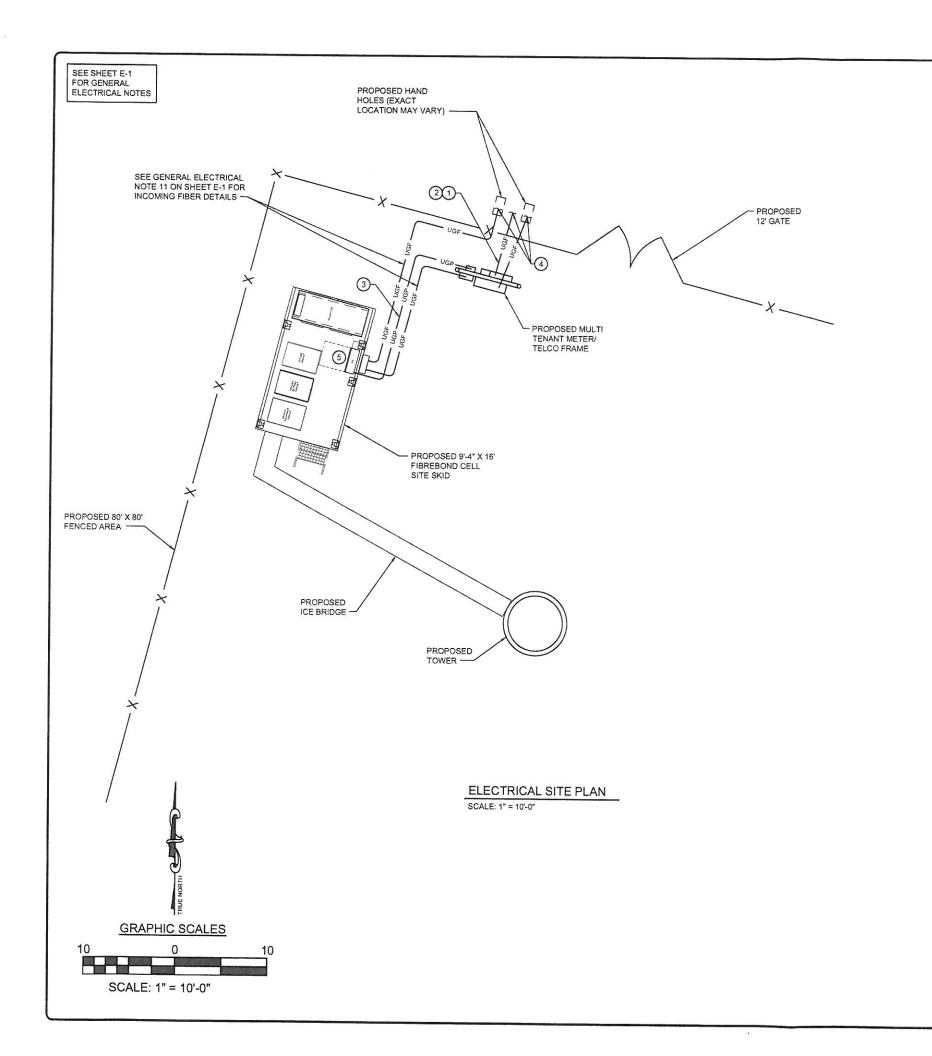
GREENFIELD

SHEET TITLE

ONE-LINE DIAGRAM

E-2

REVISION NO.



CODED DRAWING NOTES:

- 1. UTILITY TO DIRECT BURY OR CONTRACTOR TO INSTALL (1) 4°C WITH PULL WIRE FOR POWER SERVICE FROM UTILITY TO NEW TRANSFORMER. SEE PM FOR DETAILS. COORDINATE WITH UTILITY FOR TRANSFORMER LOCATION.
- (1) 4°C FOR POWER SERVICE FROM TRANSFORMER TO MULTI TENANT FRAME; REFER TO E-1.
- (1) 2°C W PULL WIRE FROM MULTI-METER TO ATS ON FRAME AND (1) 2°C FROM ATS TO PRIMARY LOAD CENTER; REFER TO E-2.
- COORDINATE ELECTRICAL SERVICE REQUIREMENTS IN ADVANCE WITH UTILITY COMPANY. STUB UP POWER AND TELEPHONE CONDUIT AS DIRECTED BY UTILITY COMPANY.
- (5.) MAINTAIN ALL NEC CLEARANCES.

ABBREVIATIONS

VDDIVE	MATIONS		
AWG	AMERICAN WIRE GAUGE	PVC	POLYVINYL CHLORIDE
BFG	BELOW FINISH GRADE	RGS	RIGID GALVANIZED STEEL
С	CONDUIT	SS	STAINLESS STEEL
CAB	CABINET	SST	SELF SUPPORTING TOWER
DWG	DRAWING	TYP	TYPICAL
G	GROUND		TTT TOTAL





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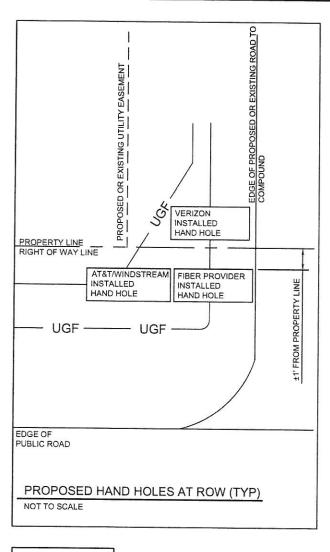
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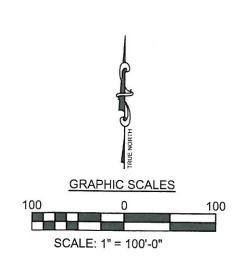
ELECTRICAL SITE PLAN

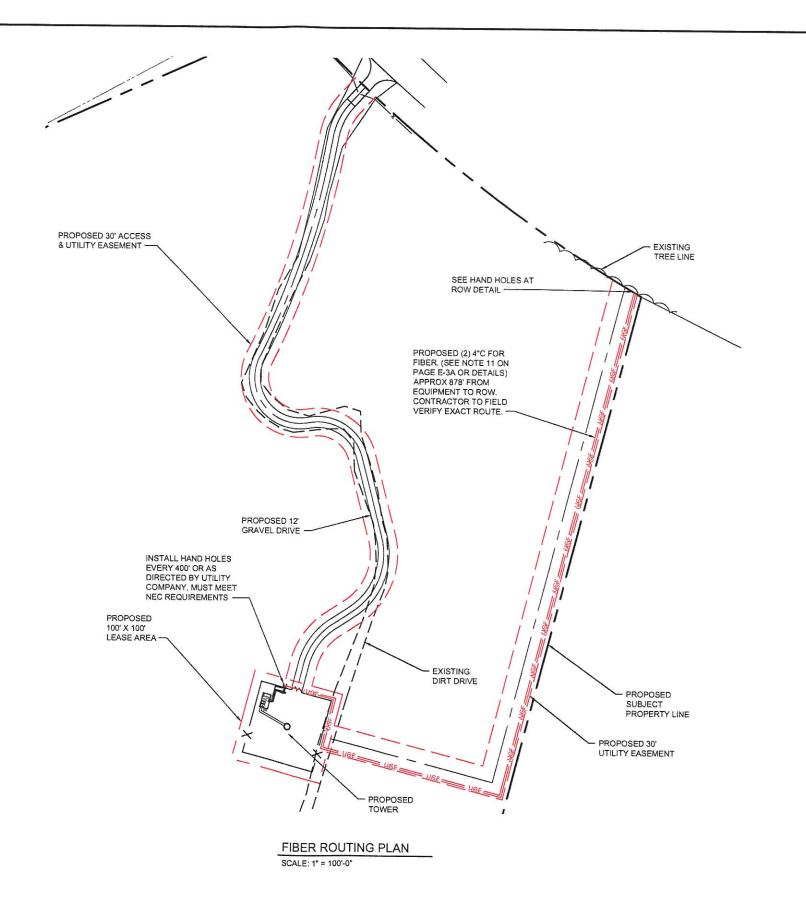
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REVISION NO.



UNDERLYING SURVEY PROVIDED BY TOWER OWNER







A&E FIRM:

OWERSOURCE

1875 OLD ALABAMA ROAD, SUITE 1008

ROSWELL, GA 30076

TEL 678-990-2338

WWW.TOWERSOURCEINC.COM

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STARR'S
POND

TOWER OWNER / SITE NUMBER:

VERIZON

DESIGN TYPE:

GREENFIELD

SHEET TITLE:

FIBER ROUTING PLAN

E-3B

A

SEE SHEET E-1 FOR GENERAL **ELECTRICAL NOTES** (TYP) (11)-PROPOSED 12' GATE (TYP) (14)-PROPOSED 9'-4" X 16' FIBREBOND CELL **CODED DRAWING NOTES:** SITE SKID -PROPOSED MULTI PROVIDE #2 COPPER GROUND RING BURIED AT MINIMUM 30" BELOW GRADE. TENANT METER/ BOND CABLE GROUND KIT TO TOWER GROUND BAR. TELCO FRAME -PROPOSED BOND TOWER GROUND BAR TO GROUND RING. GROUND ROD (TYP.) 4.) BOND EVERY ICE BRIDGE POST TO GRIP STRUT. (TYP.) (5.) BOND FIRST AND LAST ICE BRIDGE POST TO GRIP STRUT. (TYP.) (6.) CONNECT ICE BRIDGE SECTIONS WITH JUMPERS. (TYP.) - PROPOSED BOND CABLE GROUND KIT TO CABINET GROUND BAR AND GROUND RING. TOWER PROPOSED BOND TOWER GROUND RING TO COMPOUND GROUND RING (TYP.) ICE BRIDGE 9. BOND TOWER TO TOWER GROUND RING TYPICAL AT EACH LEG. (3 PLACES) (TYP) (4)-(10) BOND ALL FENCE POST WITHIN 6' OF GROUND RING TO GROUND RING. (TYP) (5)--2 BOND H-FRAME POST TO GROUND RING. (TYP.) (TYP) 6 (2 PLACES)(3)-GROUND BUSS BAR ON NEW METER TO INSULATED GROUND ROD. BOND EACH FENCE/GATE POST TO GROUND RING. (3 PLACES) 9 BOND ALL SUPPLIED GROUND LEADS ON SKID TO GROUND RING. PROPOSED 80' X 80' FENCED AREA 0 8 \times PROPOSED GROUND ROD WITH INSPECTION WELL (TYP) **GROUNDING SITE PLAN** SCALE: 1" = 15'-0" **GRAPHIC SCALES** SCALE: 1" = 15'-0"



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ABBREVIATIONS

GROUND CONNECTION

CHEMICAL GROUND ROD

GROUND ROD

GROUND ROD WITH INSPECTION SLEEVE

CADWELD TYPE CONNECTION

COMPRESSION TYPE CONNECTION

GROUND WIRE

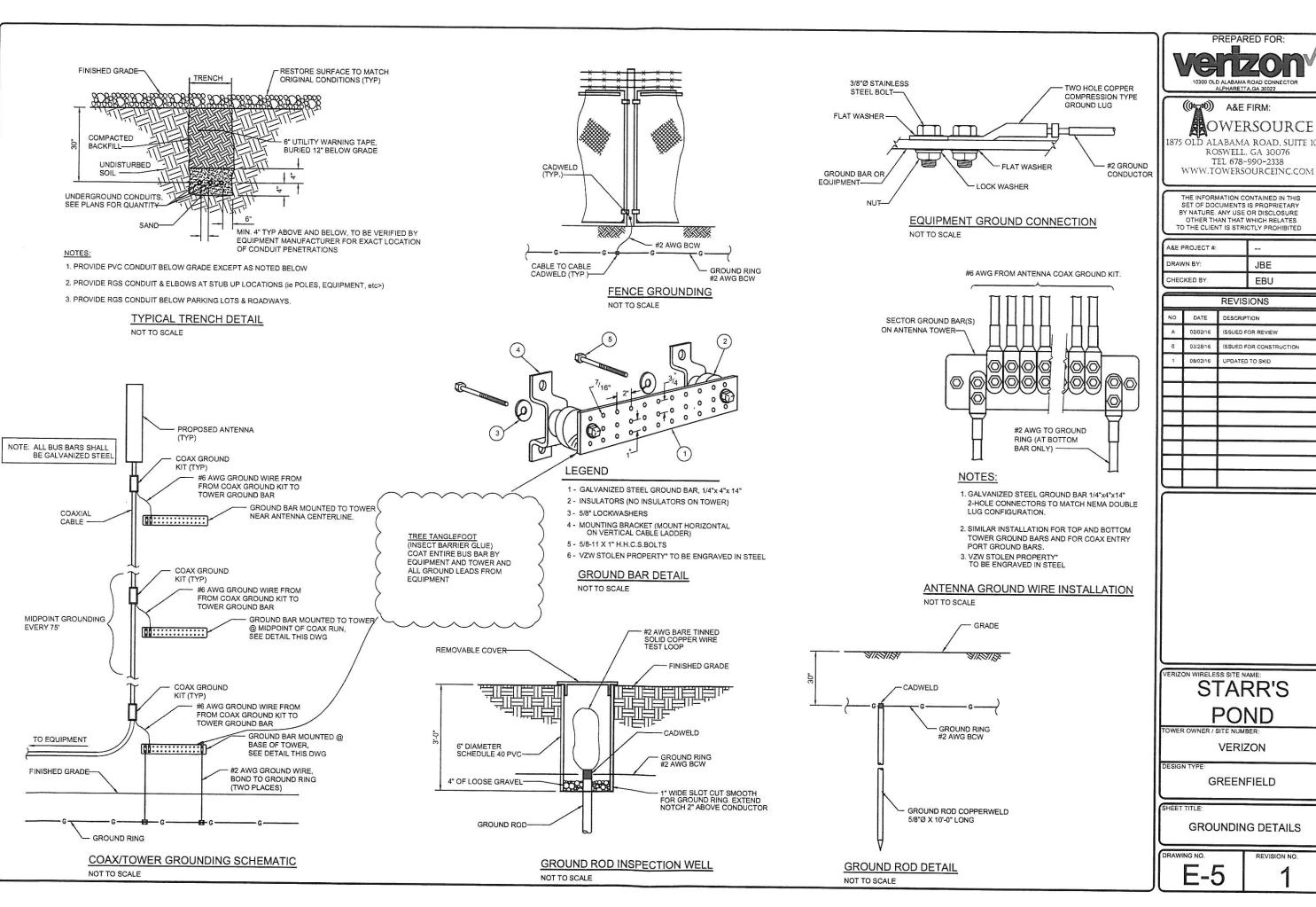
STARR'S POND TOWER OWNER / SITE NUMBER

VERIZON

GREENFIELD

GROUNDING SITE PLAN

REVISION NO.



PREPARED FOR:

(A&E FIRM: OWERSOURCE 1875 OLD ALABAMA ROAD, SUITE 100 ROSWELL, GA 30076 TEL 678-990-2338

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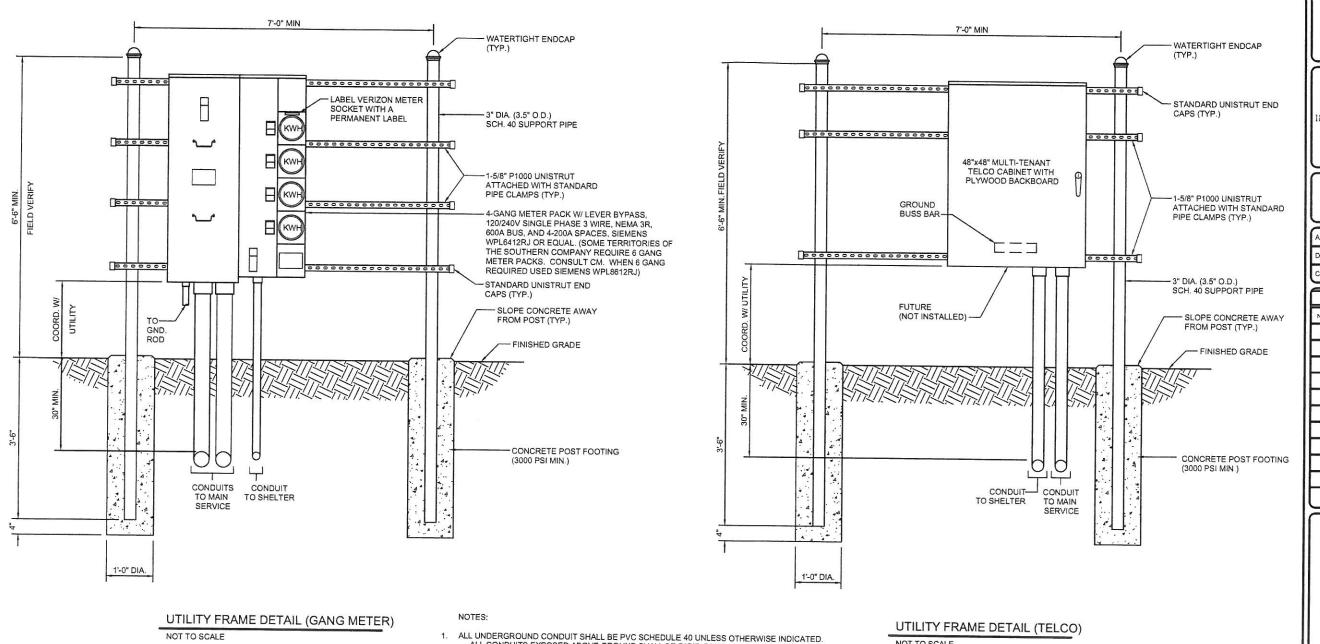
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VERIZON

GREENFIELD

GROUNDING DETAILS

REVISION NO



- ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE INDICATED. ALL CONDUITS EXPOSED ABOVE GROUND SHALL BE RIGID GALVANIZED STEEL. ALL UNDERGROUND CONDUIT SHALL TRANSITION FROM PVC TO RIGID AT THE 90° BEND BELOW GRADE.
- CONTRACTOR SHALL FIELD LOCATE THE METER PEDESTAL AS SHOWN ON SITE PLAN. INSTALL THE METER PEDESTAL NEAR THE PERIMETER OF THE FENCED COMPOUND WITH THE METERS FACING AS SHOWN.
- THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY FOR THE CONDUIT RUN TO THE MAIN SERVICE CONNECTION OR TRANSFORMER.
- 4. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY FOR GROUND ROD REQUIREMENTS. IF REQUIRED, THE CONTRACTOR SHALL ORDER AND PAY FOR NECESSARY GROUND TESTS.
- SUPPORT POST AND UNISTRUT SHALL BE GALVANIZED. PIPE CLAMPS AND HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
- TELCO CABINET SHALL BE 36"x48"x10" HOFFMAN OR EQUIVALENT. PROVIDE 3/4" PLYWOOD BACKBOARD INSIDE THE MULTI-TENANT TELCO CABINET.
- ADJUSTMENTS TO THE METER PEDESTAL DESIGN MAY BE REQUIRED DEPENDING ON THE EXACT METER PANEL INSTALLED. CONTRACTOR SHALL FIELD COORDINATE ADJUSTMENTS AND INFORM THE ENGINEER IF ANY UNUSUAL CONDITIONS ARE FOUND TO EXIST.

NOT TO SCALE

PREPARED FOR:

VELZO

10300 OLD ALABAMA ROAD CONNECTOR
ALPHARETTA GA 30022

A&E FIRM:

OWERSOURCE

1875 OLD ALABAMA ROAD, SUITE 1008

ROSWELL, GA 30076

TEL 678-990-2338

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STARR'S POND

ER OWNER / SITE NU

VERIZON

DESIGN TYPE:

GREENFIELD

SHEET TITLE:

METER FRAME DETAILS

E-6

REVISION NO.

PETITION NO: 1269-17 & RP-064-17

REQUESTED ACTION: A-R to O-I

PROPOSED USE: Educational Facility

EXISTING USE: Residential

LOCATION: SR 54 West

DISTRICT/LAND LOT(S): 7th District, Land Lot(s) 39

OWNER: Michelle Camper, Patrick Camper, Howell Richardson, Melissa Phillips

AGENT: Randy Boyd

PLANNING COMMISSION PUBLIC HEARING: October 5, 2017

BOARD OF COMMISSIONERS PUBLIC HEARING: October 26, 2017

APPLICANT'S INTENT

Applicant proposes to develop an Educational Facility (gymnastics, cheerleading & dance) on 8.935 acres.

STAFF RECOMMENDATION

APPROVAL WITH ONE (1) CONDITION

INVESTIGATION

A. PROPERTY SITE

The subject property is a 8.935 acre tract fronting on SR 54 West in Land Lot(s) 39 of the 7th District. SR 54 is classified as a Major Arterial Road on the Fayette County Thoroughfare Plan. The subject property contains a single-family residence and is currently zoned A-R.

History: The subject property consists of two (2) lots originally platted on the Survey for H.L Newton and recorded on August 19, 1965, Book 3 Page 31 (see attached). These lots were again platted on the revised Survey for H.L Newton and recorded on January 28, 1966, Book 3 Page 75 (see attached).

The subject property was part of Rezoning Petition 1162-06 (A-R to O-I), consisting of 18.594 acres for the purpose of developing an assisted living center (300 units) and five (5) medical office lots. The request was denied by the Board of Commissioners on January 27, 2006.

B. SURROUNDING ZONING AND USES

The general situation is a 8.935 acre tract that is zoned A-R. In the vicinity of the subject property is land which is zoned A-R, R-40 and O-I. See the following table and also the attached Zoning Location Map.

The subject property is bound by the following adjacent zoning districts and uses:

Direction	Acreage	Zoning	Use	Comprehensive Plan
North	22.32	A-R	Undeveloped	Rural Residential -2 (1 Unit/2 Acres) & SR 54 West Overlay District
South	1.7 1.7	R-40 R-40	Single-Family Residential Single-Family Residential	Low Density Residential (1 Unit/1 Acre) & SR 54 West Overlay District
East	34.04	A-R	Undeveloped	Rural Residential -2 (1 Unit/2 Acres) & SR 54 West Overlay District
(Common	1.06	O-I	Community Septic System	
Oak Office	0.57	O-I	Undeveloped	
Subdivision)	0.50	O-I	Undeveloped	
	0.52	O-I	Undeveloped	
	0.77	O-I	Undeveloped	
West	4.9	A-R	Single-Family Residential	Rural Residential -2 (1 Unit/2 Acres) & SR 54 West Overlay District

C. COMPREHENSIVE PLAN

The subject property lies within an area designated for Rural Residential (I Unit/2 Acres) and the SR 54 West Overlay District. The SR 54 West Overlay District states the following:

Recommendations: The intent of the SR 54 West Overlay District is to offer existing tracts of five +/- acres the option to convert to office uses. Outside of the commercial designation at Tyrone Road and the commercial and office-institutional designation at Sumner Road (south), these parcels would be considered for the Office-Institutional Zoning District. Conditions should be placed on property at the time of rezoning to address unique situations.

This request conforms to the Fayette County Comprehensive Plan in relation to the SR 54 West Overlay District. The Subject Property consists of two lots that are five (5) +/-acres in size.

D. ZONING/REGULATORY REVIEW

The applicant seeks to rezone A-R from to O-I for the purpose of developing an Educational Facility (gymnastics, cheerleading & dance). An Educational Facility is a Permitted Use in the O-I zoning district as follows:

(5) Educational/instructional/tutorial facilities, including, but not limited to: academic, art, computer, dance, driving and/or DUI, martial arts, music, professional/business/trade, and similar facilities;

State Route Overlay

Due to the frontage on State Route 54, development of the property is subject to the requirements of the State Route 54 Overlay Zone. The Overlay Zone requirements are in addition to the zoning district requirements and any Conditional Use requirements. Overlay Zone requirements including, but not limited to, the following: a 100 foot setback from the right-of-way of SR 54, a 50 foot setback for impervious surfaces from right-of-way of SR 54, and architectural standards for buildings which require a residential character including a pitched peaked roof, a residential façade, and doors and windows of a residential character.

Platting

Revision to the Final Subdivision Plat (RP-064-17)

Sec. 104-595. Approval of subdivisions. (2), j. of the Subdivision Regulations states:

.....Proposed revisions to a recorded final plat of any existing residential or agricultural-residential subdivisions which add property to, increases the number of platted lots, or changes the principal use on a lot will be considered in public hearings before the planning commission and the board of commissioners. The legal notice shall be advertised at least seven calendar days prior to the public hearing before the planning commission, but not more than 45 calendar days, nor less than 15 calendar days prior to the public hearing before the board of commissioners.....

This rezoning would change the principal use on the property from residential to nonresidential and the plat must be revised to combine the two lots making up the subject property prior to submittal of the site plan. Should this request be approved, a minor revision to a final plat shall be required per Sec. 104-595. Approval of subdivisions. (2), l. of the Subdivision Regulations as follows:

Minor revisions to a recorded final plat or minor subdivision plat. A minor revision to a recorded final plat or minor subdivision plat such as the combination of lots, minor shifts to lot lines, corrections of errors and/or establishment or modification of an easement that does not increase the number of lots, change the use, alter the road or utility layout, or change the outer boundary of the final plat or minor subdivision plat will be reviewed by the zoning administrator. Based on the nature of the minor revision, the zoning administrator shall contact the applicable departments for their input. The signature of the zoning administrator and environmental health specialist shall be required for approval of the minor revision prior to recording. See section 104-596 for requirements to be indicated on the minor revision of a final plat or the minor revision of a minor subdivision plat, as applicable.

Staff will recommend a condition that the minor revision to the final plat be submitted and approved prior to the submittal on the site plan.

Access

GDOT controls access to SR 54. SR 54 is a median divided four (4) lane roadway. The Concept Plan submitted indicates one (1) access from Georgia State Route 54. There is not an existing median cut to directly access the subject property from the east bound lane. Therefore access will be right in right out only from the west bound lane.

Site Plan

Should this petition be approved, the owner/developer must submit a site plan as required by Article II. - Nonresidential Construction Permit and Compliance Procedures of the Development Regulations.

E. REVIEW OF CONCEPT PLAN

The applicant is advised that the Concept Plan is for illustration purposes only. Any deficiencies must be addressed at the time of submittal of the Preliminary Plat, Final Plat, and/or Site Plan, as applicable.

G. DEPARTMENTAL COMMENTS

Water System

Water available on the opposite side of S.R. 54.

Public Works/Engineering

Rezoning and Plat – Access to the site is control by GDOT and SR 54.

Engineering references Sec. 104-55 (d) (9) and that the owner/developer of this property explore the provision for future inter-parcel access to similarly zoned properties to the east and/or west of the subject property and indicate such on the site plan for review by Engineering.

Environmental Management

Floodplain The property **IS ADJACENT TO** floodplain per FEMA FIRM

panel 13113C0083E dated Sept 26, 2008.

Wetlands According to the National Wetlands Inventory wetlands are not

present. However, a wetland study may be required upon field

inspection by staff. Per Section 8-4 of Fayette County

Development Regulations, the applicant must obtain all required permits from the U.S. Army Corps of Engineers <u>prior</u> to issuance of any permits from Fayette County for any phase of development

affecting wetlands.

Watershed Watershed Protection **DOES** apply based on geographic

information systems review.

Groundwater The property **IS NOT** within a groundwater recharge area.

This development **IS** subject to all applicable development regulations including Watershed Protection, Floodplain Management and Post-development Stormwater Management.

Environmental Health Department

No objections.

Fire

Must show fire hydrants on Final Plat.

Georgia Department of Transportation

Advise the property owner that the required GDOT access spacing of 350' between accesses should be designed in the final plans and also a deceleration lane for access to the dance studio may be warranted. Please reference the current edition of the GDOT Encroachment Manual for the designing of accesses on a state route.

STAFF ANALYSIS

This request is based on the petitioner's intent to rezone said property from A-R to O-I for the purpose of developing Educational Facility. Per Section 110-300 of the Fayette County Zoning Ordinance, Staff makes the following evaluations:

1. The subject property lies within an area designated for Rural Residential (1 Unit/2 Acres) and the SR 54 West Overlay District. The SR 54 West Overlay District states the following:

Recommendations: The intent of the SR 54 West Overlay District is to offer existing tracts of five +/- acres the option to convert to office uses. Outside of the commercial designation at Tyrone Road and the commercial and office-institutional designation at Sumner Road (south), these parcels would be considered for the Office-Institutional Zoning District. Conditions should be placed on property at the time of rezoning to address unique situations.

This request conforms to the Fayette County Comprehensive Plan in relation to the SR 54 West Overlay District. The Subject Property consists of two lots that are five (5) +/- acres in size.

- 2. The proposed rezoning will not adversely affect the existing use or usability of adjacent or nearby property.
- 3. The proposed rezoning will not result in a burdensome use of roads, utilities, or schools.
- 4. Existing conditions and the area's continuing development with a mix of single-family residential and office-institutional development support this petition.

Based on the foregoing Investigation and Staff Analysis, Staff recommends APPROVAL WITH ONE (1) CONDITION.

RECOMMENDED CONDITIONS

If this petition is approved by the Board of Commissioners, it should be approved **O-I CONDITIONAL** subject to the following enumerated conditions. Where these conditions conflict with the provisions of the Zoning Ordinance, these conditions shall supersede unless otherwise specifically stipulated by the Board of Commissioners.

1. That the minor revision to the final plat be submitted and approved prior to the submittal on the site plan.

Randy M. Boyd P.O. Box 64 Zebulon, Ga. 30295

September 22, 2017

VIA HAND DELIVERY

Pete Frisina, Director Fayette County Planning and Zoning Department 140 Stonewall Avenue, West Suite 202 Fayetteville, Ga. 30214

RE: Rezoning Petition No. 12-69-17 Revised Plat Petition No. RP-064-17 Tax Parcel No. 0713 035 and 0713 041

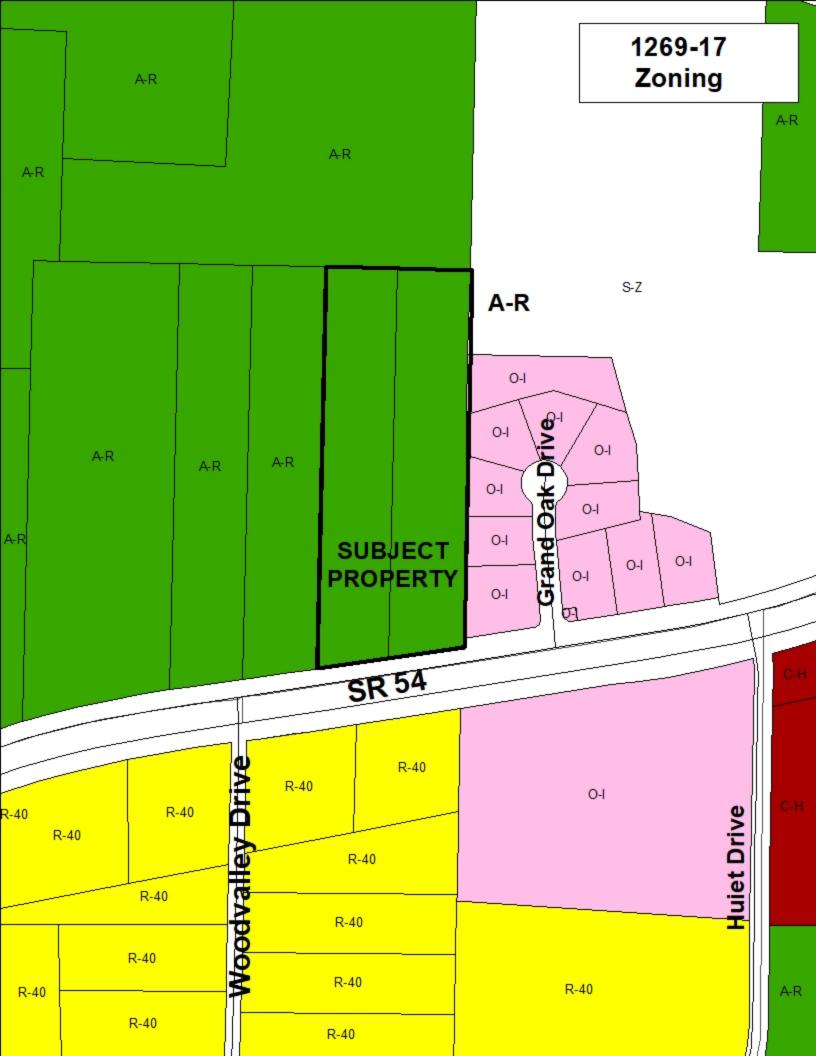
Dear Mr. Frisina,

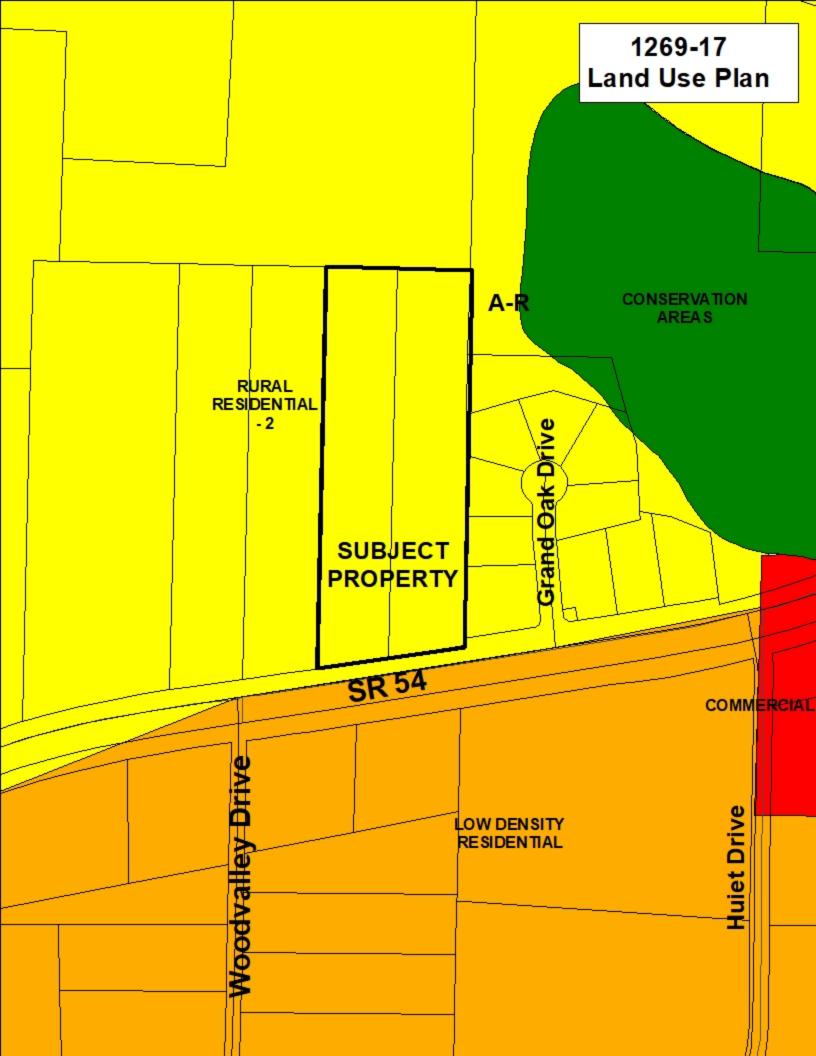
It is the intention of my client, Gym Sports Academy, to rezone 8.935 acres located on the north side of Georgia State Route No. 54 from AR to O-I to construct a building to provide educational gymnastics classes for boys and girls, cheer and tumbling classes. The proposed building dimensions are 100 feet by 220 feet. A minimum of 167 parking spaces as required by the O-I zoning classification will be provided. Sewerage will be provided by an onsite treatment facility. Water service will be provided by an extension of the Fayette County Water Department line located approximately 300 feet east of this site on the north side of Georgia State Route No. 54.

A revision to an existing final plat has been requested subject to the zoning approval. This is required because the two parcels were originally shown as lot 1 and 2 of the property of H. L. Newton recorded in plat book 3, page 31.

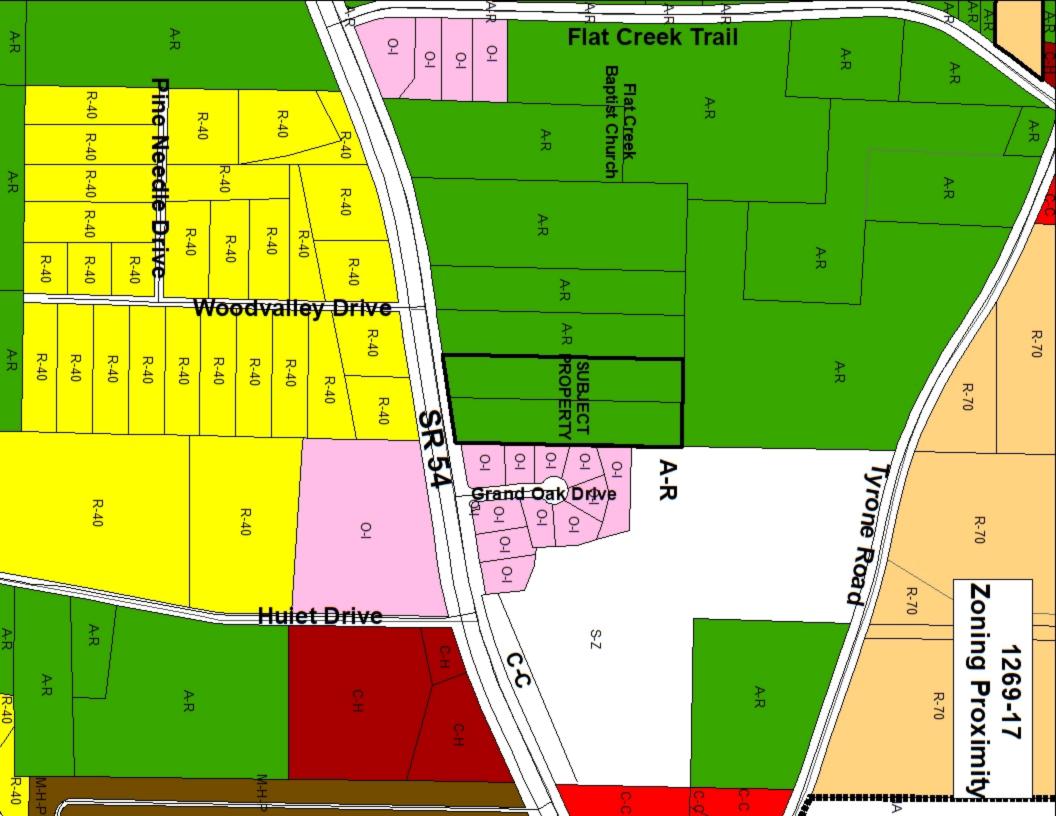
Respectfully submitted,

Randy M. Boy

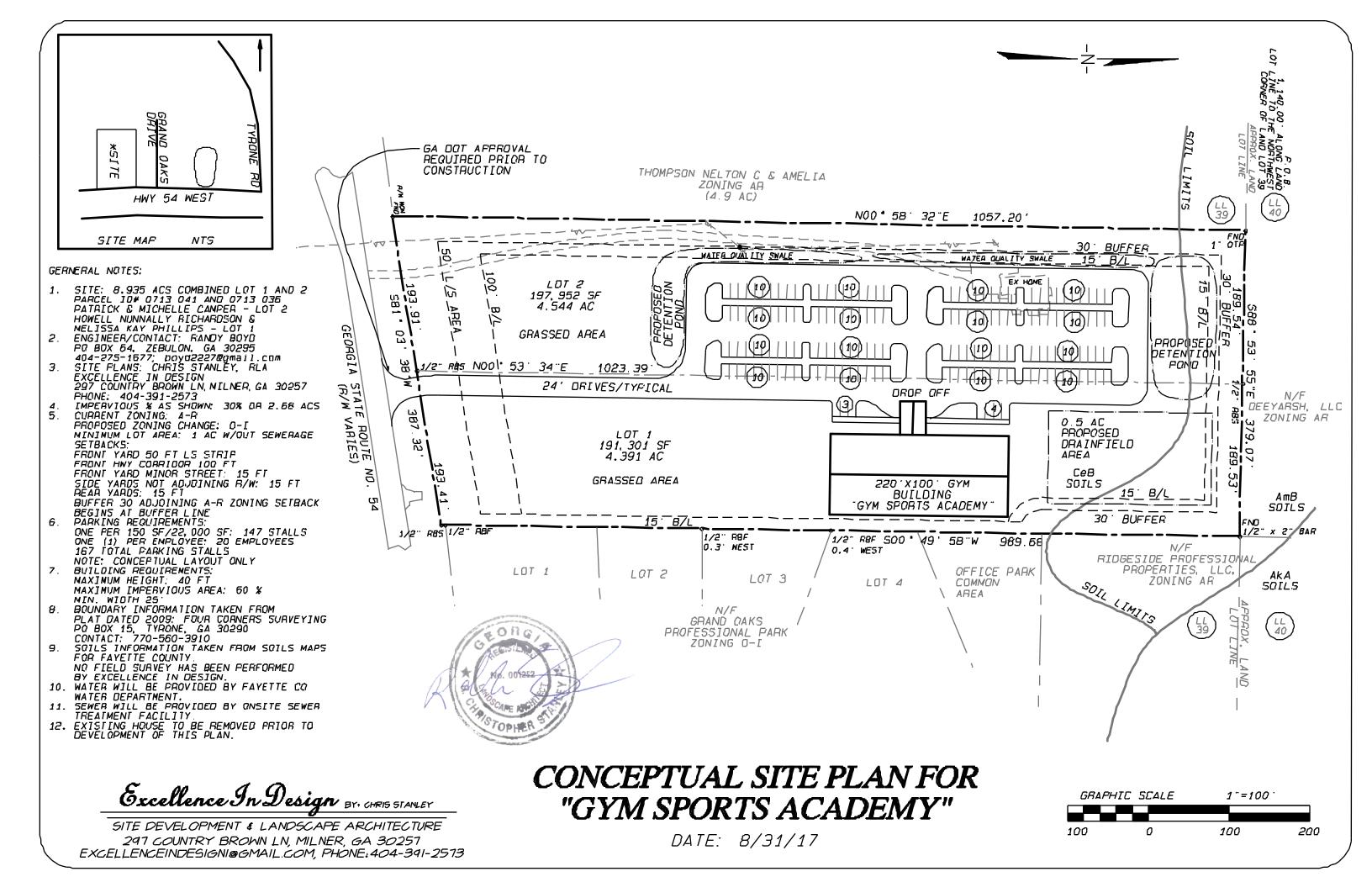








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Definitions

Floor area, accessory structure, means the sum of the horizontal areas of several floors of the structure under roof, excluding any space where the floor-to-ceiling height is less than six feet.

Footprint, means the area of the foundation upon which a structure or building sits and would include the area beneath a supported or cantilevered lean-to attached to the structure or building.

Foundation means an in-ground masonry or poured concrete support for a structure.

Story means the portion of a building, other than a basement, included between the surface of any floor and the surface of the floor next above it.

Sec. 110-79. - Accessory structures and uses.

- (a) The following accessory structures and uses are permitted in A-R and all residential zoning districts.
 - (1) Well/pump house;
 - (2) Guesthouse;
 - (3) Greenhouse, permanent or temporary (see (n) temporary greenhouse);
 - (4) Swimming pool, hot tub, pool deck, pool equipment enclosure, and pool screen enclosure;
 - (5) Garage;
 - (6) Recreational court;
 - (7) Gazebo;
 - (8) Cabana/pool house, boat house, covered patio, and covered deck;
 - (9) Storage building;
 - (10)Carport;
 - (11)Solar panel (ground-mounted);
 - (12) Wind turbine/windmill (ground-mounted);
 - (13) Aircraft hangar, detached (see article V of this chapter);
 - (14)Dog house and dog pen/run;
 - (15)Playhouse;
 - (16)Outdoor kitchen and/or fireplace;
 - (17)Patio; and

(18)Underground storm shelter.

Farm outbuildings, including horse stables, auxiliary structures, and commercial greenhouses are regulated as conditional uses under article VII of this chapter and shall be allowed in the A-R zoning district only. One semi-trailer may be utilized as a farm outbuilding provided the property is zoned A-R and the semi-trailer is being used to store agricultural items. These regulations shall not apply to those nonresidential uses allowed in A-R and residential zoning districts.

- (b) Structure limitations. Construction of an accessory structure shall occur concurrently with or after the construction of the principal structure. Accessory structures shall not be used as dwelling units or for lodging purposes, except a guesthouse.
- (c) *Number and size.* The number and size of accessory structures shall conform to the requirements described herein.
 - (1) Accessory structures shall be limited to one of the following options:
 - a. Two accessory structures, per individual lot, that shall not exceed a combined total footprint of 1,800 square feet of floor area or a combined total footprint of 3,600 square feet of floor area on a lot with a minimum of five acres and a minimum contiguous area of two acres clear of zoning setbacks, watershed protection buffers and setbacks, jurisdictional wetlands, 100-year floodplain area, and easements of any kind (see total square footage). The square footage of the largest accessory structure shall not exceed the total square footage of the principal structure. One of these accessory structures may include up to 700 square feet of heated and finished floor area to be utilized as a guesthouse. An accessory structure combined with a guesthouse, under this option, shall be deemed as one accessory structure. Under this option, an accessory structure located to the side of the principal structure shall not exceed 1,800 square feet;
 - b. One accessory structure, per individual lot, footprint not to exceed 1,800 square feet of floor area (see total square footage), or the total square footage of the principal structure, whichever is less. This accessory structure may include up to 700 square feet of heated and finished floor area to be utilized as a guesthouse. An accessory structure combined with a guesthouse, under this option, shall be deemed as one accessory structure; or
 - c. One accessory structure, per individual lot with a minimum of five acres and a minimum contiguous area of two acres clear of zoning setbacks, watershed protection buffers and setbacks, jurisdictional wetlands, 100-year floodplain area, and easements of any kind, footprint not to exceed 3,600 square feet of floor area (see total square footage) or the total square footage of the principal structure, whichever is less. This accessory structure may include up to 700 square feet of heated and finished floor area to be utilized as a guesthouse. An accessory structure combined with a guesthouse, under this option, shall be

- deemed as one accessory structure. Under this option, an accessory structure shall be located only to the rear of the principal structure.
- (2) At least 50 percent of the square footage of an accessory structure building shall be fully enclosed, except as otherwise provided herein. Said enclosed area shall be surrounded by connecting adjacent walls constructed of solid materials attached to the foundation and roof.
- (3) A well/pump house, dog house, or playhouse consisting of 70 square feet or less; dog pen/run; swimming pool, hot tub, or recreational court; aircraft hangar, farm outbuilding, greenhouse, horse stable, or auxiliary structure (as regulated in A-R under article V of this chapter); ground/pole-mounted solar panel consisting of less than 200 square feet or ground-mounted wind turbine/windmill; uncovered outdoor kitchen, fireplace; patio; underground storm shelter; or beehive shall not be included in determining the number of accessory structures provided herein.
- (4) Total square footage. When both of the following criteria are met, the upper level space shall be included in the total square footage of the structure:
 - a. The upper level space is accessed by permanent stairs; and
 - b. That portion of the upper level space where the ceiling width, measured at least seven feet in height, is more than 50 percent of the ceiling width measured at least five feet in height.
- (d) Location on lot. Accessory structures shall conform to the dimensional requirements within each zoning district. No structure shall be located in the front yard except: a detached garage (see subsections (d)(1) and (2) of this section for requirements); well/pump house consisting of 70 square feet or less; or farm outbuildings, including horse stables, auxiliary structures, and greenhouses located in an A-R zoning district, where the lot consists of five acres or more. A well/pump house of 70 square feet or less may be located within the setbacks. On a single frontage lot, the area between the street and the front building line shall be treated as a front yard with regard to the location of accessory structures. On a corner lot, the area between both of the streets and both of the front building lines shall be treated as a primary front yard and a secondary front yard with regard to the location of accessory structures. On a through lot, the area between the street from which the lot is accessed and the front building line shall be treated as a front yard with regard to the location of accessory structures.
 - (1) Detached garage located in the front yard of a single frontage lot and a through lot. A detached garage located in the front yard shall meet the following requirements:
 - a. Footprint shall not exceed 900 square feet of floor area;
 - b. Located no more than 35 feet from the principal structure;
 - c. Shall not exceed 23 feet in height;
 - d. No more than 50 percent of the footprint of the garage may be located beyond the front building line of the principal structure;

- e. The width of the portion of the garage facing the street shall not exceed 60 percent of the width of the principal structure; and
- f. No portion of the garage may be located directly between the principal structure and the street.
- (2) Detached garage located in the front yard of a corner lot.
 - a. Primary front yard. The location of the front door of the principal structure shall establish the primary front yard. If the front door is not oriented to a street, the driveway access shall be utilized to establish the primary front yard. The primary front yard is the area between the street and the front building line in which an accessory structure is prohibited, except in the case of a detached garage which shall comply with the requirements of a single frontage lot; and
 - b. Secondary front yard. Consequently, the other frontage shall be the secondary front yard. The secondary front yard is the area between the street and the front building line in which an accessory structure is prohibited, except in the case of a detached garage which shall comply with the following requirements:
 - 1. Footprint shall not exceed 900 square feet of floor area;
 - 2. Located no more than 35 feet from the principal structure; and
 - 3. Shall not exceed 23 feet in height.
- (3) Architectural standards for a detached garage located in all front yards. The garage shall maintain a residential character. Elevation drawings denoting compliance with the following requirements shall be submitted as part of the building permit application:
 - a. The design of the garage shall match with the general architectural style inherent in the existing principal structure, including, but not limited to: roof pitch, roof facade, facade, residential windows, and residential doors.
 - b. The garage shall have at least one opening for vehicular access.
 - c. A separate electrical meter is not permitted, unless otherwise required per the building permits and inspections department.
 - d. The garage shall be connected to the principal structure by at least one of the following:
 - An attached or detached breezeway. Said breezeway shall be a minimum of six feet in width and a minimum of eight feet in height (interior measurement). A detached breezeway shall be constructed within six inches of the principal structure and the garage;
 - 2. An attached raised deck. Said attached raised deck shall be a minimum height of 15 inches. The deck shall have a minimum width of six feet. Said deck shall have guard rails measuring a minimum of three feet in height; or

- 3. An attached or detached pergola. Said pergola shall consist of parallel colonnades supporting an open roof of beams and crossing rafters, shall be a minimum of six feet in width and a minimum of eight feet in height (interior measurement). A detached pergola shall be constructed within six inches of the principal structure and the garage.
- (e) Guesthouses. Only one guesthouse is allowed per individual lot. Any living area included in an accessory structure is a guesthouse. A guesthouse shall not be used as tenant space. A guesthouse shall not exceed 700 square feet of heated and finished floor area.
- (f) Architectural standards. All accessory structures of 200 square feet or greater, except a detached garage located in the front yard, shall be constructed in a residential character consisting of a facade of fiber-cement siding, wood siding, wood textured vinyl siding, brick/brick veneer, rock, stone, cast-stone, stucco, or synthetic stucco, or finished/baked enamel aluminum/metal siding which establishes a horizontal pattern. These standards shall not apply to an addition to an existing accessory structure that is nonconforming in terms of these standards. Any addition to an existing nonconforming accessory structure shall match the architectural design of the existing nonconforming accessory structure. Elevation drawing denoting compliance shall be submitted as part of the building permit application.
- (g) Temporary accessory storage. Portable on-demand storage units are only allowed on a temporary basis and only in conjunction with an ongoing a renovation project for the purpose of storage of household items for a period not to exceed one year. Portable on-demand storage units are defined as any container, storage unit, or other portable structure, other than an accessory building or shed complying with all building codes used to store household items. Only two portable on-demand storage units are allowed per lot.
- (h) Carport. The carport shall be used to house motor vehicles and trailers only. Carports shall be constructed of the same material or types of material as the principal structure on the property, or of metal.
- (i) Cabana/pool house, boat house, covered patio, and covered deck. The cabana, covered patio, and covered deck may contain an outdoor kitchen, fireplace, spa/hot tub, bathroom/changing room, and/or pool pump/filter but shall not be utilized as a carport, garage, storage building, open storage, or living area. Said structures shall, at a minimum, consist of a roof with supporting posts/columns, not to exceed one story, and comply with the architectural standards for an accessory structure 200 square feet or greater.
- (j) Swimming pool, pool deck, pool equipment enclosure, and pool screened enclosure. The pool deck, pool equipment enclosure, and pool screened enclosure shall comply with the required setbacks. A pool screen enclosure shall be constructed with insect screening commonly made of plastic, aluminum, or similar lightweight material and shall be exempt from the architectural requirements herein.
- (k) Solar panels (ground-mounted). Ground-mounted solar panels shall be limited to three per lot, the total cumulative square footage of ground-mounted solar panels

shall not exceed 900 square feet, shall not exceed ten feet in height, shall comply with the required setbacks, and shall comply with the location of an accessory structure/use. Ground-mounted solar panels consisting of less than 200 cumulative square feet shall not count toward the number of accessory structures/uses. Ground-mounted solar panels consisting of 200 cumulative square feet up to a maximum of 900 cumulative square feet shall be counted as one accessory structure/use.

- (I) Wind turbines/windmill (ground-mounted). Wind turbines/windmills shall not exceed 70 feet in height. The setbacks shall be equal to the height of the wind turbine, including the blades, or the applicable zoning district setbacks, whichever are greater. Each lot is limited to one ground-mounted wind turbine/windmill. The ground-mounted wind turbine/windmill shall not count toward the number of accessory structures/uses. All anchors for guyed towers shall meet the setbacks for the applicable zoning districts.
- (m) Nonconformance. All accessory structures or uses which had a building permit issued prior to January 24, 2008, are legally nonconforming and shall be allowed to be maintained and rebuilt to current size and in the existing location. All accessory structures or uses permitted after January 24, 2008, shall comply with the current requirements.
- (n) Temporary greenhouse. Temporary greenhouses shall not exceed ten feet in height. Each lot is limited to one temporary greenhouse. The side yard setback shall be a minimum of 30 feet or the minimum side yard setback of the applicable zoning district, whichever is greater, and the rear yard setback shall be a minimum of 50 feet or the minimum rear yard setback of the applicable zoning district, whichever is greater. The maximum square footage for temporary greenhouses shall be as follows:

Acreage	Square Feet
(2	600
2 to 〈 3	800
3 to 〈 4	1,000
4 to 〈 5	1,200
5 or greater	2,400

Temporary greenhouses shall be maintained in good condition and the covering shall not be torn and tattered. Temporary greenhouses shall only be used for the purpose of growing or storing plants. Temporary greenhouses shall be exempt from subsections (c)(2) and subsection (f) of this section. One temporary greenhouse of 120 or less square feet on a lot shall not count toward the total square footage or number of accessory structures for that lot. Greenhouses built in the A-R zoning district as regulated under article V of this chapter shall be exempt from these requirements.

A temporary greenhouse permit will be required for all temporary greenhouses prior to construction. Scaled drawings shall be submitted to the planning and zoning department which shall include, but not be limited to: temporary greenhouse elevations including height and total square footage and location on the lot including the distance from the property lines.

(Code 1992, § 20-5-20; Ord. No. 2012-09, § 3, 5-24-2012; Ord. No. 2012-13, § 3, 12-13-2012; Ord. No. 2013-07, § 1, 7-25-2013; Ord. No. 2014-19, §§ 2—5, 12-11-2014)

Sec. 110-149. - Planned unit development.

- (a) *Purpose*. The intent of this section is to:
 - (1) Encourage the development of large lots of land as: planned residential developments (PRD), planned industrial parks (PIP), planned retreats or lodges (PRL), planned entertainment farming (PEF), planned outdoor recreation (POR), and planned small business center (PSBC) and planned residential and business development (PRBD);
 - (2) Encourage flexible and creative concepts in site planning;
 - (3) Preserve the natural amenities of the land by encouraging scenic and functional open spaces;
 - (4) Accomplish a more desirable environment than would be possible through the strict application of minimum requirements of this chapter;
 - (5) Provide for an efficient use of land resulting in smaller networks of utilities and streets and thereby lower development and housing costs; and
 - (6) Provide an environment of stable character compatible with surrounding areas.
- (b) *Development standards*. Each planned unit development shall meet the following standards in addition to any other as hereinafter set forth:
 - (1) The development shall utilize creative and flexible design including, but not limited to: varied lot sizes, amenities, mixed uses, etc.;
 - (2) The development shall be compatible with surrounding uses and with the land use plan of the county; and
 - (3) Paving of roads. Developers of approved planned unit developments shall be required to pave all new subdivision streets contained within said development in conformance with the rules and regulations of the development regulations of the county (see chapter 104). Improvements to existing county-maintained roads or planned county roads which pass through a Planned Unit Development will be handled conditionally at the time of rezoning or at the time of a revision to a development plan. However, in any planned retreat or lodge (PRL), the developer shall be required to provide for all-weather roads, as approved by public works, suitable for the passage of emergency vehicles.
- (c) *Relation to zoning districts*. An approved planned unit development shall be considered to be a separate zoning district in which the development plan, as approved, establishes the uses, restrictions and regulations according to which development shall occur. Upon approval, the zoning map shall be changed to indicate the area as a planned unit development.
 - (1) *Procedures*. The following procedures shall be followed in the establishment of each and every planned unit development:
 - a. *Pre-application conference*. The deadline to submit copies of the development plan and Letter of Intent shall be the first of each month by noon. If the first of the month falls on the weekend or on a holiday, the deadline is automatically extended to the next working day by noon. Prior to filing a rezoning petition for a planned unit development, the applicant shall meet with the technical review committee (TRC) in order to review the general character of the proposed development, including, but not limited to: its scope, nature and location. At this time, the applicant shall be fully advised of the approval procedures contained herein and the various information, studies, etc., which the applicant may need in order to continue with the said procedures.
 - b. *Pre-recommendation meetings*. Prior to filing a rezoning petition for a planned unit development and subsequent to the pre-application conference with the planning and

zoning department zoning administrator, the applicant shall meet with the planning commission in a plan review session. At this meeting, the applicant shall be required to review any plan with the planning commission and provide preliminary data concerning said plan as required by the planning commission. The planning commission may require additional pre-recommendation meetings to review said preliminary data prior to their pre-recommendation.

- c. Rezoning petition. A rezoning petition for a planned unit development shall only be submitted subsequent to the pre-application conference with the planning and zoning department zoning administrator, and the pre-recommendation meetings with the planning commission. This petition shall contain a development plan and a written summary of intent, and shall show the relation between the proposed development and the surrounding area, both proposed and existing. A rezoning petition for a planned unit development shall follow the procedures in article VII of this chapter.
- d. *Development plan*. The following information shall be submitted as the development plan:
 - 1. General location map;
 - 2. Current topographical map clearly showing existing topographic conditions, including contour intervals of no more than 20 feet based on field survey or photogrammetric methods;
 - 3. Map showing the existing floodplains and flood soil as indicated by FEMA;
 - 4. Legal description of the subject property;
 - 5. Location and use of existing and proposed public, semi-public, or community facilities such as schools, parks and other open space. This will include areas proposed to be deducted or reserved for community or public use;
 - 6. Elevations of building types for all nonresidential structures which indicate the proposed general architectural style and appearance; and
 - 7. If a proposed development creates special problems or involves unusual circumstances, additional information may be required in order to properly evaluate the proposal as follows:
 - (i) Off-street parking and loading plan;
 - (ii) Economic feasibility report or market analysis;
 - (iii) Area traffic study and circulation plan within the development and to and from existing thoroughfares;
 - (iv) Hydraulic, hydrologic; and drainage engineering studies;
 - (v) Environmentally sensitive areas, including, but not limited to: watershed protection, wetlands, or groundwater recharge, impact study;
 - (vi) Based on the pre-application meeting with the planning and zoning department zoning administrator and/or the pre-recommendation meetings with the planning commission, other information as is deemed necessary may be requested, in addition any of the aforementioned required information (items enumerated in subsections (c)(1)a through h of this section) may be excluded if deemed not applicable.

- e. *Summary of intent*. The written statement submitted with the development plan shall include the following information:
 - 1. Statement of the present ownership of all land within the proposed development;
 - 2. Explanation of the character of the proposed development, including, but not limited to: a summary of uses, number and type of dwelling units, a net residential density calculation, and minimum standards for floor area, lot size, yard and spacing requirements;
 - 3. General statement of the proposed development schedule and progression of unit development or staging; and
 - 4. Agreements, provisions, and covenants which govern the use, maintenance, and protection of the development and any common or open space, including the provisions which will organize, regulate and sustain the property owners' association, where applicable.

f. Approval.

- 1. After review and public hearing, the board of commissioners may disapprove, approve or approve with modifications the proposed development after receiving the recommendations of the planning and zoning department administrator and planning commission. Modifications can include, but are not limited to, establishing residential densities, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
- 2. If the proposed development is approved as submitted, the planning and zoning department zoning administrator shall cause the official zoning map to be changed to indicate the planned unit development. If the plan is approved with modifications, the applicant shall file written notice of consent to the modification and a properly revised development plan with the planning and zoning department zoning administrator prior to changing the map. The development plan and all other accompanying information shall be properly identified and permanently filed with the planning and zoning department zoning administrator.

g. Subdivision approval.

- 1. At the option of the applicant, a preliminary subdivision plat may be filed along with the development plan in order that tentative approval of the subdivision by the planning commission may be granted, pending the approval by the board of commissioners of the development plan.
- 2. In no case shall final subdivision approval precede the approval of the development plan.
- 3. Site development regulations, specifications, and procedures governing the platting of a planned unit development and plat approval shall be in accordance with chapter 104, article XV.
- h. *Ownership control*. At the time a final plat or minor subdivision plat is approved and recorded for a planned unit development, as applicable, the land comprising the area for the final plat or minor subdivision plat shall be under one ownership (i.e., an individual, a corporation, or some other single legal entity). Individual lots may be sold only after

the final plat or minor subdivision plat has been approved and recorded and the deed contains sufficient covenants assuring the continuance of the planned unit development as originally approved and developed.

- i. Building and occupancy permits. The planning and zoning department zoning administrator shall approve of the issuance of building permits for buildings and structures in the planned unit development if they are in substantial conformity with the approved development plan, the development schedule, and with all other applicable regulations. A certificate of occupancy shall be issued for any completed building or structure if it conforms to the requirements of the approved development plan and all other applicable regulations.
- j. Revision of development plan. Any change in the approved development plan, which affects the intent and character of the development, the density or land use pattern, the approved uses, the location or dimensions of streets, or similar substantial changes, shall be reviewed and approved by the board of commissioners upon the recommendation of the planning and zoning department zoning administrator and planning commission. A petition for a revision of the development plan shall be supported by a written statement as to why the revisions are necessary or desirable.

(d) Planned residential development.

- (1) *Purpose*. The intent of a planned residential development (PRD) is to encourage creativity and resourcefulness in residential development and to provide open space, parks and recreational facilities for the residents of the development and/or the general public. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, establishing residential densities, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
- (2) *Permitted residential uses.* Planned residential developments may contain single-family dwellings, two-family dwellings, townhouses, or a combination thereof. Residential accessory buildings and uses shall also be allowed per article III of this chapter.
- (3) *Permitted recreational uses*. A list of proposed recreational uses shall be submitted with the summary of intent. Only those uses approved through the rezoning process shall be allowed in the PRD.
- (4) Permitted incidental uses. The following incidental uses shall be allowed in a PRD:
 - a. Day care facility (including an outdoor play area only);
 - b. Church and/or other place of worship (including a parsonage and outdoor play area only); and
 - c. School, private (including an outdoor play area but excluding housing or a stadium).

The buffers and setbacks for these uses along the exterior boundary of the PRD shall be consistent with the applicable conditional use requirements listed in article V of this chapter.

- (5) *Conditional uses*. The following conditional uses shall be allowed in the PRD zoning district, provided that all conditions specified in article V of this chapter are met:
 - a. Home occupation; and

- b. Horse quarters (see article III of this chapter).
- (6) *Minimum dimensional and other requirements*. The minimum dimensional requirements in the PRD shall be as follows:
 - a. Development size: 100 contiguous acres located within the A-R and/or residential zoning districts
 - b. Each single-family dwelling shall be placed on a separate lot.
 - c. Side yard setback: 15 feet.
 - d. Rear yard setback: 30 feet.
 - e. Maximum density: Four units per acre (single-family attached); and one unit per acre (single-family detached). For purposes of this section, density shall be interpreted as the number of dwelling units per net acre devoted to residential development.
- (7) Common open space requirements. Planned residential developments shall meet the following common open space requirements:
 - a. A minimum of 2,500 square feet per lot shall be reserved for open space. The open space shall not be located in the following areas: street rights-of-way (public or private); all land located within the 100-year floodplain; water impoundments; and all lands proposed to be dedicated to a governing authority.
 - b. The open space may be publicly owned, privately owned, or be deeded to and maintained by the property owners' association, comprised of the residents of the development. When the open space is to be deeded to the property owners' association the initial owner of the development shall be responsible for the organization of said association. The organization, responsibilities and financing of the property owners' association shall be established in appropriate deed covenants, which shall run with the land and which shall appear in each and every deed of property given by the initial owner.
 - c. Approved recreational uses may be located in the open space.
- (8) General deed covenants. Appropriate deed covenants, which shall run with the land, shall be made a part of each deed of property given by the initial owner of the development in order to ensure the continuance of the planned residential development in accordance with all approved plans and this section. A copy of the covenants shall be given to the planning and zoning department zoning administrator as a part of the record of the planned residential development.
- (e) Planned industrial park.
 - (1) *Purpose*. The intent of a planned industrial park (PIP) is to encourage the development of a localized industrial park designed to meet light and heavy industrial purposes. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, establishing nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) *Permitted uses*. Only those uses (permitted and conditional) in the M-1 and M-2 zoning districts shall be proposed for the PIP. Only those uses approved through the rezoning process will be allowed in the PIP.

- (3) *Minimum dimensional and other requirements*. The minimum requirements for a PIP shall be as follows:
 - a. Location: M-1 or M-2 Zoning District.
 - b. The development shall have access and egress only to an arterial thoroughfare.
 - c. Development size: ten acres.
 - d. Front, side, and rear yard setbacks along the exterior boundaries of the development shall be consistent with either the M-1 or M-2 zoning district, whichever is applicable.
 - e. Height limit: 35 feet.
 - f. A buffer of 75 feet shall be provided around the periphery of the development.
- (f) Planned retreat and/or lodge.
 - (1) Purpose. The intent of a planned retreat and/or lodge (PRL) is to provide a development exclusively designed to accommodate the assembly of groups or organizations for the purpose of association, education, therapy, or instruction through conferences, seminars, and/or camps. Food and lodging may be furnished for a definite and temporary period. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, establishing residential densities, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) *Permitted uses.* The following uses may be proposed in a PRL:
 - a. Assembly/meeting facilities (indoor and outdoor);
 - b. Dining facilities;
 - c. Lodges, dormitories, cabins, and/or tent campsites for temporary occupancy;
 - d. Recreational facilities, including, but not limited to: recreational courts/fields, playgrounds, picnic pavilions, swimming pools;
 - e. Caretaker and/or staff housing; and
 - f. Solar farm (limited to a net metered facility only), provided that any inoperative equipment is repaired of disposed of in a reasonable time and manner.

In addition, only those uses (permitted and conditional) allowed in the A-R zoning district may be proposed for a PRL. Only those uses approved through the rezoning procedure will be allowed in the PRL.

- (3) *Minimum dimensional and other requirements*. The minimum requirements for a PRL shall be as follows:
 - a. Location: A-R zoning district.
 - b. Development size: 50 contiguous acres.
 - c. Maximum density: One single-family unit for each ten net acres of the development.
 - d. The proposed site shall be permitted only on a lot which fronts on and accesses a major thoroughfare, as specified by the county thoroughfare plan.

- e. A site plan will be required prior to the construction of structures and/or recreational facilities, as applicable, per chapter 104.
- f. Each structure whose purpose is to provide lodging shall have paved access to a public street. Said access shall meet the requirements of chapter 104.
- g. No structure shall be permitted within 150 feet of the right-of-way (existing or required) of any existing street abutting or bisecting the development.
- h. A minimum buffer of 75 feet shall be provided around the periphery of the development. To provide sufficient separation from proposed uses to alleviate any adverse effect on the use or usability of abutting or nearby properties, said buffer may be increased through the rezoning procedure by the board of commissioners as a condition of approval and shall be indicated on the development plan. Any vehicular or multi-use path access proposed within the buffer shall be approved through the rezoning procedure and indicated on the development plan; conditions of approval may be incorporated by the board of commissioners.
- i. Height limit: 35 feet.
- (g) Planned entertainment farming.
 - (1) *Purpose*. To allow certain incidental uses to an active farming operation to preserve agricultural areas. An active farming operation is defined as any area of 100 or more contiguous acres from which \$10,000.00 or more of agricultural products are grown and sold on an annual basis. Income verification may be required. Agricultural products are defined here as the growing of annual crops, the raising of livestock and/or horses, and dairy farming. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, establishing residential densities, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) *Permitted uses.* The following permitted uses shall be allowed in a PEF:
 - a. Single-family dwelling and accessory uses and structures associated with the single-family dwelling exclusively as per article III of this chapter;
 - b. Farm buildings (shall be bona fide structures related to the farming operation);
 - c. Growing of crops;
 - d. Raising and selling livestock;
 - e. Dairy farm and production;
 - f. Greenhouses and shrubbery sales;
 - g. Farmer's market (limited to sales of crops grown on premises by owner of property);
 - h. Pick-your-own produce;
 - i. Processing of agricultural products (shall meet conditional use requirements per the A-R zoning district);
 - j. Horse stables and horseback riding;
 - k. Horse show (by permit, temporary, 14 days per year);
 - 1. Rodeo (by permit, temporary, 14 days per year);

- m. Petting zoo;
- n. Educational tours;
- o. Picnic area;
- p. Sit-down restaurant, banquet facility, bakery and catering (no drive-through, and selling of alcoholic beverages, shall be prohibited) (minimum seating capacity of 50 persons);
- q. Gift shop in association with restaurant only; and
- r. Pay fishing and bait sales in association with pay fishing.
- (3) Conditional uses. The following conditional use shall be allowed in the PUD PEF zoning district provided that all conditions specified in article V of this chapter are met: home occupation.
- (4) *Minimum dimensional and other requirements*. The minimum requirements for PEF shall be as follows:
 - a. Location: A-R zoning district.
 - b. Development size: 100 contiguous acres.
 - c. Single-family dwellings and those accessory uses and structures associated with the single-family dwelling shall meet those requirements established within the A-R zoning district.
 - d. All other nonresidential structures shall meet the following setbacks:
 - 1. Front yard: 200 feet.
 - 2. Rear yard: 100 feet.
 - 3. Side yard: 100 feet.
 - e. A site plan is required indicating the location of all structures/activities per chapter 104.
 - f. All parking and access areas shall be paved and landscaped per chapter 104.
 - g. All service areas shall be screened per article III of this chapter.
 - h. All parking and service areas shall be to the rear of any restaurant building.
 - i. Only structures whose principal purpose is for the storage of farm equipment and/or animals may have a metal facade. All other structures shall have a non-metallic facade.
 - j. Shall comply with all county, (including fire marshal), state and federal requirements.
- (h) Planned outdoor recreation.
 - (1) *Purpose*. The intent of a planned outdoor recreation development (POR) is to provide the residents of the county adequate recreational opportunities outside of existing public facilities, parks, private recreation and amenity areas. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) *Permitted uses.* The following permitted uses shall be allowed in a POR:
 - a. Outdoor athletic fields:

- b. Outdoor athletic courts;
- c. Accessory uses:
 - 1. Picnic and playground areas;
 - 2. Concession facilities;
 - 3. Press box facilities:
 - 4. Restroom facilities;
 - 5. Maintenance and/or equipment facilities;
 - 6. Ticket sales facilities;
 - 7. Bleachers;
 - 8. Dugouts;
 - 9. Lights; and
 - 10. Scoreboards.
- (3) *Prohibited uses.* The following uses shall be prohibited in a POR:
 - a. Motorized or other wheeled vehicle sports;
 - b. Swimming pools and water related activities;
 - c. Archery;
 - d. Firearms and target range;
 - e. Explosives and fireworks;
 - f. Paintball and similar activities; and
 - g. Amusement park activities and rides.
- (4) *Minimum dimensional and other requirements*. The minimum requirements for a POR shall be as follows:
 - a. Development size: 50 contiguous acres.
 - b. The development shall have ingress and egress only to an arterial thoroughfare as designated by the county thoroughfare plan.
 - c. Maximum number of outdoor athletic fields and/or courts: eight.
 - d. Setbacks:
 - 1. No permitted uses shall be allowed within 100 feet of the right-of-way.
 - 2. No permitted uses shall be allowed within 500 feet from any A-R or residential zoning district.
 - 3. No permitted uses shall be allowed within 50 feet from any nonresidential zoning district.
 - e. A buffer of 100 feet plus the required setbacks shall separate all permitted uses from any A-R or residential zoning district. Off-street parking areas may be located within the setback areas.
 - f. Landscaping and buffer areas shall be planted in accordance with chapter 104.
 - g. Paved access and paved parking shall be provided as follows:

- 1. 40 spaces per outdoor athletic field; and
- 2. Ten spaces per outdoor athletic court.
- h. Hours of operation are to be determined at the time of development plan approval. No play permitted after 10:00 p.m.
- i. Lights shall be established in such a way that adjacent properties and residents are not adversely affected, and that no direct light is cast upon said properties and residents. No lighting permitted after 10:30 p.m.
- j. Adequate trash receptacles and grounds maintenance shall be provided to maintain a litter-free recreation area. Dumpsters shall be screened on all sides.
- k. Outside loudspeaker system use permitted until 10:00 p.m.
- 1. Height limit: 35 feet, with the exception of lights.
- (i) Planned small business center.
 - (1) *Purpose.* The intent of the planned small business center is to provide a business incubator center through a planned, mixed-use nonresidential development consisting primarily of a mix of office uses, service uses, and light industrial uses, with limited small scale commercial uses as appropriate for the area. A PUD-PSBC will allow innovative and creative design and promote high standards in the development layout to alleviate incompatibility between the internal uses in the development to protect public safety to the greatest degree possible. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) *Uses.* Only those uses (permitted and conditional) allowed in the O-I, C-C, C-H, and M-1 zoning districts shall be proposed for the PUD-PSBC. Only those uses approved through the rezoning process shall be allowed.
 - (3) Minimum dimensional and other requirements.
 - a. Minimum lot size: minimum of ten acres.
 - b. The proposed site shall be permitted only on a lot which fronts on and accesses a major thoroughfare, as specified by the county thoroughfare plan.
 - c. Front, side, and rear yard setbacks and buffers along the exterior boundaries of the development shall be consistent with either the O-I, C-C, C-H, or M-1 zoning district, as applicable to the use.
 - d. The development plan shall indicate the different use areas for the proposed development. Appropriate separation, buffering, and vehicular circulation between uses internal to the development shall be established to alleviate incompatibility and protect public safety. Vehicular access facilities shall be designed in a manner to preclude large vehicles (semi-tractor trailers, delivery trucks, etc.) from utilizing areas where pedestrians are likely to be present.
 - e. Location: only those areas indicated in the county Comprehensive Plan shall be given consideration for PUD-PSBC.
 - f. Height limit: 35 feet.

- (j) Planned residential and business development (PRBD)
 - (1) *Purpose.* The intent of a planned residential and business development is to allow mixeduse development with principal single-family residential and incidental business uses and, through the use of large lots and the preservation of existing single-family dwellings, maintain rural characteThis zoning district may be considered in all residential land use designations as indicated on the Fayette County Future Land Use Plan map. The characteristics of a PRBD are: in conjunction with a principal residence the occupant conducts on- site business operations, clients/customers visit the site, receipt and shipments of goods occur, and non-occupant employees will be on site. The board of commissioners may approve the proposed development with modifications which could include, but are not limited to, establishing residential densities, limitations in nonresidential uses and intensities, architectural controls, traffic improvements such as decal-accel lanes, service drives, internal street configurations, turn lanes, etc. as may be required to mitigate traffic impacts and increased setbacks, buffers and/or screening as may be required to lessen the impact and/or shield views from adjacent properties and/or streets.
 - (2) Permitted residential uses and structures. Planned residential and business development shall contain single-family dwellings and residential accessory structures and uses shall also be allowed per article III of chapter 110. The summary of intent shall specify the minimum floor area proposed for the single- family dwellings. In addition, a home occupation is allowed per article V of chapter 110.
 - (3) Permitted business uses and structures. A list of proposed business uses shall be submitted with the summary of intent. Low-intensity businesses that are incidental and subordinate to the residential use of the property and which do not create offensive noise, dust, smoke, odor, vibrations, or glare that would adversely affect the existing use or usability of adjacent or nearby property and/or do not produce traffic that would be an excessive or burdensome use of existing or planned streets are appropriate for this zoning district. Only those business uses approved through the rezoning process shall be allowed in the PRBD. Any approved business that is listed as a conditional use in Article V shall meet the conditional use requirements, as is applicable. The summary of intent shall specify the list of proposed businesses, number of proposed on-site employees per business, and the number, size and architectural character of the business structures proposed for the individual businesses in the PRBD. architectural character of the business structures shall be agricultural in nature with roof types including hip, gambrel and gable. Appropriate facades shall include fiber-cement siding, wood siding, wood textured vinyl siding, brick/brick veneer, rock, stone, caststone, or finished/baked enamel aluminum/metal siding which establishes a horizontal pattern.
 - (4) Business vehicles. The summary of intent shall specify the type, size and number of business vehicles and trailers proposed per business in the PRBD and the anticipated frequency of business vehicular trips. Motor vehicles cannot exceed two axles, 22 feet in length, ten feet in height, and/or 8,000 pounds (curb weight). Vehicles that exceed these parameters shall be allowed only during business hours (see Item o. of Subparagraph (5) below) and only for the purpose of making deliveries, making pickups, and providing services.
 - (5) Minimum dimensional and other requirements in the PRBD shall be as follows:

- a. Development size: 75 contiguous acres.
- b. The proposed development shall be permitted only on a lot which fronts on and accesses a major thoroughfare, as specified by the county thoroughfare plan.
- c. A minimum buffer of 100 feet shall be provided around the side and rear periphery of the development (see Sec. 110-94).
- d. Minimum lot size: 15 acres.
- e. Minimum lot width: 250 feet.
- f. Front yard setback: 75 feet.
- g. Side yard setback: 50 feet (except where the 100 foot buffer is applicable).
- h. Rear yard setback: 75 feet (except where the 100 foot buffer is applicable).
- i. New single-family dwelling minimum floor area: 2,100 square feet.
- ij. Height limit: 35 feet.
- -jk. Lights shall be established in such a way that adjacent properties and residents are not adversely affected, and that no direct light is cast upon said properties and residents.

- _ kl. The business shall be owned and operated by the occupants of the property upon which the business operation is conducted. The operator of the business shall be one of the following:
 - 1. The business operator is the owner/occupant of the property and the business is not owned by a corporation or partnership; or
 - The property and business is owned by a corporation or partnership
 in which case the operator/occupant shall be an officer of the corporation or a partner in the case of a partnership.
- <u>lm</u>. No more than five (5) persons shall be employed on-site by a business, not including the owner/occupants.
- All structures associated with the business are allowed in the rear yard only behind the principal residence and must be fully enclosed and shall not be used for any residential purposes. Business structures shall not be located within 100 feet of the principal residential structure.no. All vehicles associated with the business must be parked in the rear yard only.
 - ор. The hours of operation, in the context of clients/customers shall be limited to 9:00 a.m. to 7:005:00 p.m., Monday through Saturday.
 - pq. All materials, equipment, supplies, and inventory associated with the business shall be stored, operated and maintained within the business structure. Semi-trailers or shipping containers cannot be used for storage.
- gr. Stormwater Requirements: In the event that 5,000 or more square feet of impervious surface (including driveways and parking for the business) is added in conjunction with a business structure, a site plan compliant with stormwater requirements of the county development regulations shall be required for that lot. The lot will be exempt from site plan requirements, the nonresidential development landscape requirements and tree retention, protection, and replacement requirements of the county development regulations. In the event that the property is subdivided with an internal street, the development shall comply with stormwater requirements of the county development regulations, as applicable.
- Adequate off-street parking shall be required. A prepared surface is required for the parking areas. The parking area shall comply with Article VIII. Off-Street Parking and Service Requirements of the Development Regulations and must be depicted on a sketch, drawn to

scale on a survey of the lot. Gravel parking areas shall be exempt from Nonresidential Development Landscape Requirements of the Fayette County Development Regulations. The following is required for gravel parking areas:

- (i) Exterior and interior parking aisles shall be terminated at both ends by a landscape island.
- (ii) Landscape islands shall be provided for each 150 feet of continuous parking length.
- (iii) One (1) canopy tree, six (6) feet high at planting, is required per landscape island.

Paved parking areas shall meet the Nonresidential Development Landscape Requirements of the Fayette County Development Regulations.

Signage on individual lots shall be regulated under Sec. 108-135(a).
 Signage located at the entrance of a subdivision served by an internal local road shall be regulated under Sec. 108-135(b).

(Code 1992, § 20-6-25; Ord. of 8-25-2011; Ord. No. 2012-09, § 4, 5-24-2012; Ord. No. 2016-11, § 1, 5-26-2016)