

## Town of Indian Trail

# Memo



**TO:** Indian Trail Tree Board  
**FROM:** Kevin Icard, AICP, CZO, Senior Planner  
**DATE:** December 2015  
**SUBJECT:** **Indian Trail Charter School  
Landscaping and Tree Protection Plans**

This is a request for an Alternative Landscape Plan developed in compliance with Unified Development Ordinance (UDO) Sections 810.090 and 880.040, which state alternative plans may be submitted to the Tree Board for review and recommendation. The Tree Board issues a recommendation to the Planning Director who ultimately makes the final approval or disapproval decision. When reviewing Alternative Plans, the Tree Board should undertake a comprehensive review of the entire proposal and contemplate the reasonableness of it relative to site conditions and the proposal's furtherment of the Town's landscaping and tree protection goals.

### BACKGROUND AND REQUEST

The subject property, as shown in the map below, is approximately 14.52 acres located on Younts Road. It consists of five parcels that will be combined into one parcel. The site is being developed as a Charter School to serve western Union County. The school will be K-8, with the first year going to 6<sup>th</sup> grade and stair stepping each year for two years to full capacity.

The site has approximately 349 heritage trees (of varying size) as defined by the Town's UDO. The proposed development will require the removal of 169 heritage trees, with 180 heritage trees remaining. The mitigation process requires that there are 566 trees replanted. Below is a breakdown of the size of the mitigated trees and how many trees are required to be replanted. Attachment 4 shows a 13 year timeline where the majority of mature hardwood trees were located. Based on the proposed tree retention plan, the majority of these trees will be saved as a natural area.

Table 1: Tree Mitigation Calculation (Removed)

Caliber of Tree	Number of Trees Removed	Number Required	Required Replanting
12" to 18"	122	3	366
18" to 24"	35	4	140
24" +	<u>12</u>	<u>5</u>	<u>60</u>
<b>TOTAL</b>	<b>169</b>		<b>566</b>

Map 1: Charter School Site



**ALTERNATIVE LANDSCAPE/BUFFERING PLAN: INDIAN TRAIL CHARTER SCHOOL**

The Charter School is going to be located on Younts Road at the corner of Brown Lane. The use of a K-8 school is allowed by right in the Single Family (SF-1) District.

The 14.52-acre subject property is a partially wooded site containing approximately 349-Heritage Trees. The UDO defines a Heritage Tree as any tree with a min. caliper of 12-inches measured at 4.5-ft above grade. The proposed development will require removal of approximately 169-Heritage Trees. The use of a school in a residential district does require a 25-ft buffer, which is provided for the majority of the site with existing trees and shrubs. There are sections where additional landscaping will need to be planted to meet the minimum requirement. UDO Section 830.040E specifies that for any Heritage Tree that is removed, it shall be replaced with a min. of 3 to 5 replacement trees based on the size of the removed tree. Approximately 90 trees of the required 566 trees are being replanted on site.

*Tree Canopy Retention:* The UDO requires that commercial sites retain or plant a min. of 10% of their site area as tree canopy. The UDO requires a minimum of approximately 1.42 acres or 61,855 sq. ft. of tree canopy to be retained for this subject property. The property will save approximately 2.09 acres or 91,040 sq. ft. of tree canopy. As reflected in Attachment 1, the plan proposes an approx. 91,040 sq. ft. of tree retention area and with the additional trees that will be planted the full maturity the tree canopy will equal approximately 178,540 sq. ft. which includes; parking lot coverage, buffers and planting adjacent to the building.

*Site Layout:* The site is a combination of five separate parcels of land. Approximately 65% of the site is wooded with large mature hardwoods. The engineer for the development has designed the site to save the rear portion of the site which backs up to a residential subdivision (Lake Park). This is where the majority of the large hardwoods are located. It will provide a buffer that is approximately 150' from the property line. There is a grove of trees, approximately 9 of varying sizes, that is located next to the multi-purpose

field that can be saved. Of the 9 trees the largest is a 60” Oak tree will provide numerous benefits for the students and teachers.

*Requested Options:* The applicant is requesting that the following options be discussed;

1. Mitigation of 476 trees off-site; or
2. Payment-in-lieu; or
3. Acceptance of the planting of 90 trees on site as satisfactory with the 180 heritage trees that are being saved.

#### **COMMITTEE ACTION**

Pursuant to the UDO, the Board shall review the Alternative Landscape and Tree Protection/Planting Plan and make a recommendation to the Planning Director based on the finding that the proposal will afford a degree of buffering and screening, in terms of height, separation, and opacity that is equivalent or exceeding the applicable buffer standard and that the strict application of the tree protection/planting requirements is unreasonable or impracticable and the Alternative Tree Protection Plan is consistent with the Town’s tree protection goals.

**Attachment 1 – Additional Aerial Image**

**Attachment 2 – Alternative Landscape Plan**

**Attachment 3 A & B – Tree Survey& Enlarged Tree Save View**

**Attachment 4 – Historical Aerials**

## Calculations Based on Proposed Text Amendment (ZT2015-003)

If this site were to be calculated using the following proposed method;

- Classifying heritage trees at 14" for Deciduous and 18" for Evergreen and Pine
- Exempting trees that are located in the right-of-ways, or required infrastructure
- Replanting equation is based on a percentage of total caliper

Indian Trail Charter School Proposed 14" Deciduous & 18" Evergreen and Pine				
Existing Tree	Existing Caliper Inches	Replace w Caliper Inches	Total trees onsite of this calipers	Total Caliper Inches for Mitigation
Pine	18	0.25	2	9
Pine	19	0.25	1	4.75
Pine	22	0.25	2	11
Deciduous	14	0.25	15	52.5
Deciduous	15	0.25	13	48.75
Deciduous	16	0.25	8	32
Deciduous	17	0.25	13	55.25
Deciduous	18	0.25	13	58.5
Deciduous	19	0.25	1	4.75
Deciduous	20	0.25	7	35
Deciduous	21	0.25	3	15.75
Deciduous	22	0.25	4	22
Deciduous	23	0.25	1	5.75
Deciduous	24	0.25	8	48
Deciduous	25	0.25	0	0
Deciduous	26	0.25	1	6.5
Deciduous	28	0.25	1	7
Deciduous	30	0.25	2	15
Deciduous	32	0.25	2	16
Deciduous	35	0.25	0	0
Deciduous	36	0.25	1	9
Deciduous	38	0.25	0	0
Deciduous	40	0.25	1	10
Deciduous	60	0.25	0	0
<b>TOTALS:</b>	<b>618</b>		<b>99</b>	<b>466.5</b>

<b>Number of Replacement Trees 2.5"</b>	<b>186.6</b>
<b>Number of Replacement Trees 3.5"</b>	<b>133.3</b>

- Based on the proposed text amendment, this project would still be required to receive an alternative landscape plan from the Tree Board.

ATTACHMENT 1

Higher Concentration of Heritage Trees



Imagery Date: 6/20/2015 35°05'00.89" N 80°38'50.27" W elev 649 ft eye alt 2688 ft

PLANT SCHEDULE							
CODE	COMMON NAME	BOTANICAL NAME	QTY.	CALIPER	HEIGHT	SPREAD	COMMENTS
<b>TREES</b>							
ER	EASTERN REDBUD	CERCIS CANADENSIS	80	2.5"	20'-30'	25'-30'	MEDIUM MATURING
JST	JAPANESE STYRAX	STYRAX JAPONICA	15	2.5"	20'-30'	20'-30'	SMALL MATURING
GA	GREEN ASH	FRAXINUS PENNSYLVANICA	25	2.5"	30'-60'	25'	LARGE MATURING
<b>SHRUBS</b>							
CAC	CHANSOINETTE CARELIA	CAMELLIA SASANQUA 'CHANSOINETTE'	100	—	24" MIN	24"	CONTAINER, DOUBLE PINK FLOWERS
DBH	DWARF BUFORD HOLLY	ILEX COMUTA 'BUFORD NANA'	105	—	24" MIN	24"	CONTAINER
SCA	SASANQUA CAMELLIA	CAMELLIA SASANQUA	0	—	24" MIN	18"-24"	CONTAINER, MAGENTA FLOWERS

**QUANTITIES**  
 QUANTITIES SHOWN IN LIST ARE FOR THE CONVENIENCE OF CONTRACTORS AND BELIEVED TO BE SUBSTANTIALLY CORRECT, BUT THE ACCURACY OF QUANTITIES IN LIST ARE NOT GUARANTEED. CHECK WITH LANDSCAPE ARCHITECT.

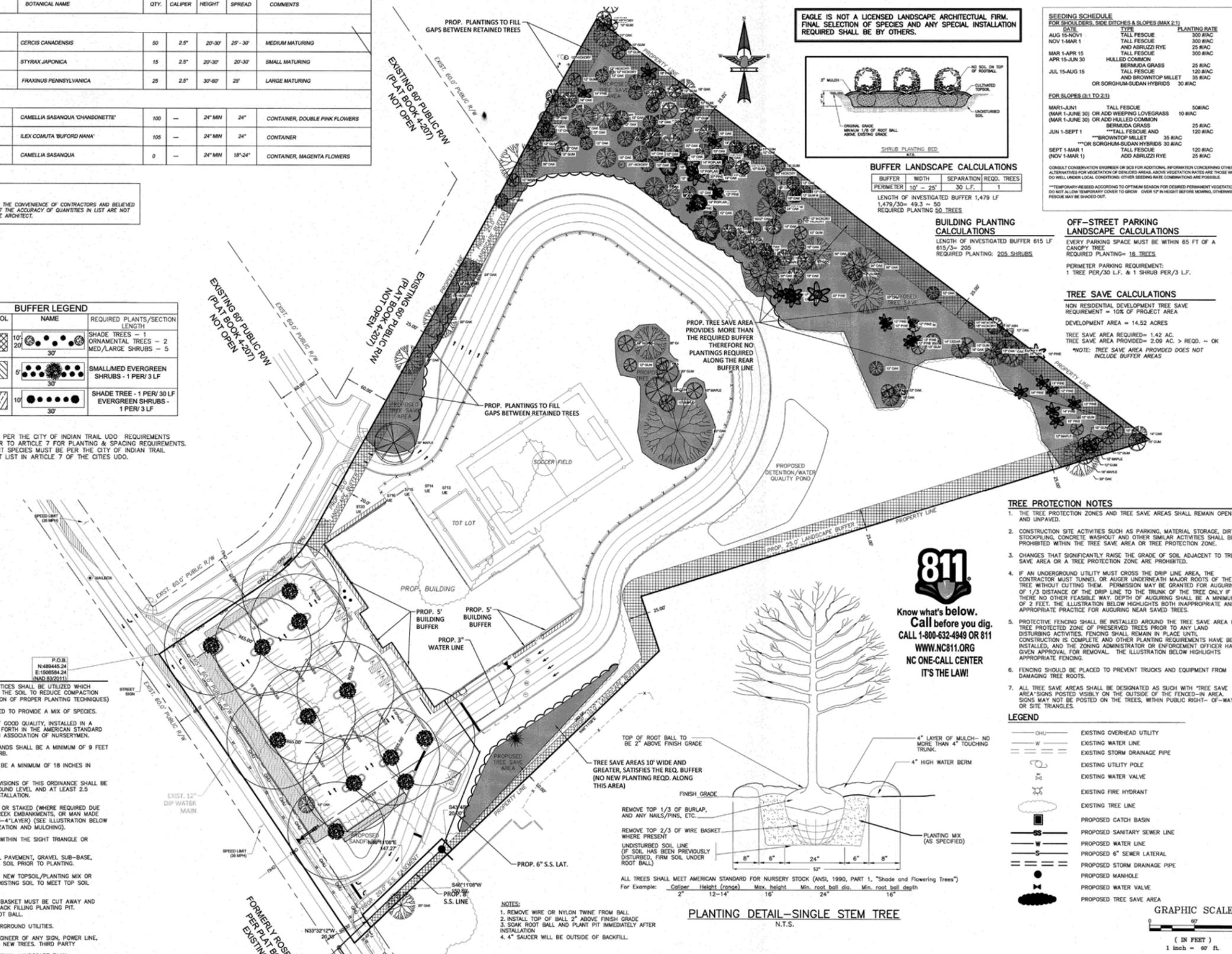
BUFFER LEGEND			
TYPE	SYMBOL	NAME	REQUIRED PLANTS/SECTION LENGTH
PERIMETER BUFFER YARD	10' 20'	SHADE TREES - 1 ORNAMENTAL TREES - 2 MED/LARGE SHRUBS - 5	
BUILDING YARD	5'	SMALL/MED EVERGREEN SHRUBS - 1 PER/3 LF	
PARKING LOT YARD PERIMETER	10'	SHADE TREE - 1 PER/30 LF EVERGREEN SHRUBS - 1 PER/3 LF	

**NOTES:**  
 1. PLANTING YARDS PER THE CITY OF INDIAN TRAIL UDO REQUIREMENTS ARTICLE 7. REFER TO ARTICLE 7 FOR PLANTING & SPACING REQUIREMENTS.  
 2. ALTERNATE PLANT SPECIES MUST BE PER THE CITY OF INDIAN TRAIL APPROVED PLANT LIST IN ARTICLE 7 OF THE CITIES UDO.

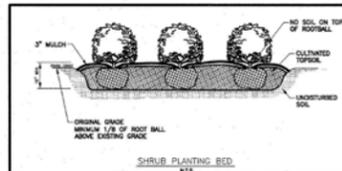
**LANDSCAPING NOTES:**

- INSTALLATION AND CONSTRUCTION PRACTICES SHALL BE UTILIZED WHICH PRESERVE EXISTING TOPSOIL OR AMEND THE SOIL TO REDUCE COMPACTION (SEE FIGURE BELOW FOR AN ILLUSTRATION OF PROPER PLANTING TECHNIQUES)
- ALL TREE PLANTINGS SHALL BE REQUIRED TO PROVIDE A MIX OF SPECIES.
- ALL NEW PLANT MATERIAL SHALL BE OF GOOD QUALITY, INSTALLED IN A MANNER TO MEET THE STANDARDS SET FORTH IN THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL PLANTING STRIPS OR PLANTING ISLANDS SHALL BE A MINIMUM OF 9 FEET IN WIDTH MEASURED FROM FACE OF CURB.
- ALL PREPARED PLANTING HOLES SHALL BE A MINIMUM OF 18 INCHES IN DEPTH.
- ALL TREES PLANTED TO MEET THE PROVISIONS OF THIS ORDINANCE SHALL BE AT LEAST 8 FEET IN HEIGHT ABOVE GROUND LEVEL AND AT LEAST 2.5 INCHES IN CALIPER AT THE TIME OF INSTALLATION.
- ALL TREES SHALL BE PROPERLY CUYED OR STAKED (WHERE REQUIRED DUE TO GRADE CHANGES, STEEP SLOPES, CREEK EMBANKMENTS, OR MAN MADE HAZARDS), FERTILIZED AND MULCHED (3-4" LAYER) (SEE ILLUSTRATION BELOW AND THE ANSI STANDARDS FOR FERTILIZATION AND MULCHING).
- NO TREE SHALL BE PLANTED DIRECTLY WITHIN THE SIGHT TRIANGLE OR RIGHT-OF-WAY.
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE, CONSTRUCTION CERBS AND COMPACTED SOIL PRIOR TO PLANTING.
- REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL/PLANTING MIX OR UNCOMPACT AND AMEND TOP 24" OF EXISTING SOIL TO MEET TOP SOIL STANDARDS FOR PLANTING TREES.
- ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACK FILLING PLANTING PIT. REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL.
- ADJUST TREE PLANTING TO AVOID UNDERGROUND UTILITIES.
- ATTENTION LANDSCAPER NOTIFY THE ENGINEER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES. THIRD PARTY.
- UTILITIES SHALL BE COORDINATED WITH FINAL LANDSCAPE PLAN.

P.O. B.  
 N488462.24  
 E1506584.24  
 (NAD 83/2011)



EAGLE IS NOT A LICENSED LANDSCAPE ARCHITECTURAL FIRM. FINAL SELECTION OF SPECIES AND ANY SPECIAL INSTALLATION REQUIRED SHALL BE BY OTHERS.



**BUFFER LANDSCAPE CALCULATIONS**

BUFFER	WIDTH	SEPARATION	REQD. TREES
PERIMETER	10' - 25'	30' L.F.	1

LENGTH OF INVESTIGATED BUFFER 1,479 LF  
 1,479/30= 49.3 ~ 50  
 REQUIRED PLANTING 50 TREES

**BUILDING PLANTING CALCULATIONS**

LENGTH OF INVESTIGATED BUFFER 615 LF  
 615/3= 205  
 REQUIRED PLANTING 205 SHRUBS

**SEEDING SCHEDULE FOR SLOPES, SIDE DITCHES & SLOPES (MAX 2:1)**

DATE	TYPE	PLANTING RATE
AUG 15-NOV 1	TALL FESCUE	300 #/AC
NOV 1-MAR 1	TALL FESCUE AND ABRUZZI RYE	300 #/AC
MAR 1-APR 15	TALL FESCUE	300 #/AC
APR 15-JUN 30	HULLED COMMON BERMUDA GRASS	25 #/AC
JUL 15-AUG 15	TALL FESCUE AND BROWNTOP MILLET	120 #/AC
	OR SORGHUM-SUDAN HYBRIDS	30 #/AC

**FOR SLOPES (3:1 TO 2:1)**

DATE	TYPE	PLANTING RATE
MAR 1-JUN 1	TALL FESCUE	50 #/AC
MAR 1-JUNE 30	OR ADD WEEPING LOVEGRASS	10 #/AC
MAR 1-JUNE 30	OR ADD HULLED COMMON BERMUDA GRASS	25 #/AC
JUN 1-SEPT 1	TALL FESCUE AND BROWNTOP MILLET	35 #/AC
	OR SORGHUM-SUDAN HYBRIDS	30 #/AC
SEPT 1-MAR 1	TALL FESCUE	120 #/AC
(NOV 1-MAR 1)	ADD ABRUZZI RYE	25 #/AC

CONSULT CONSERVATION ENGINEER OR SCI FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENuded AREAS. ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS. OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.  
 \*\*\*TEMPORARY SEEDING ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW. COVER UP TO HEIGHT BEFORE MOWING. OTHERWISE FESCUE MAY BE SHAVED OUT.

**OFF-STREET PARKING LANDSCAPE CALCULATIONS**

EVERY PARKING SPACE MUST BE WITHIN 65 FT OF A CANOPY TREE.  
 REQUIRED PLANTING= 16 TREES

PERMETER PARKING REQUIREMENT:  
 1 TREE PER/30 L.F. & 1 SHRUB PER/3 L.F.

**TREE SAVE CALCULATIONS**

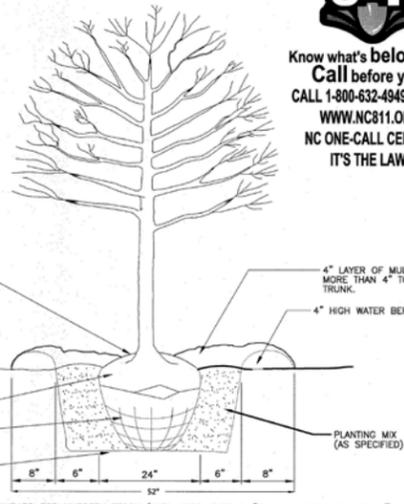
NON RESIDENTIAL DEVELOPMENT TREE SAVE REQUIREMENT = 10% OF PROJECT AREA  
 DEVELOPMENT AREA = 14.52 ACRES  
 TREE SAVE AREA REQUIRED= 1.42 AC.  
 TREE SAVE AREA PROVIDED= 2.09 AC. > REQD. ~ OK  
 \*NOTE: TREE SAVE AREA PROVIDED DOES NOT INCLUDE BUFFER AREAS

**TREE PROTECTION NOTES**

- THE TREE PROTECTION ZONES AND TREE SAVE AREAS SHALL REMAIN OPEN AND UNPAVED.
- CONSTRUCTION SITE ACTIVITIES SUCH AS PARKING, MATERIAL STORAGE, DIRT STOCKPILING, CONCRETE WASHOUT AND OTHER SIMILAR ACTIVITIES SHALL BE PROHIBITED WITHIN THE TREE SAVE AREA OR TREE PROTECTION ZONE.
- CHANGES THAT SIGNIFICANTLY RAISE THE GRADE OF SOIL ADJACENT TO TREE SAVE AREA OR A TREE PROTECTION ZONE ARE PROHIBITED.
- IF AN UNDERGROUND UTILITY MUST CROSS THE DRIP LINE AREA, THE CONTRACTOR MUST TUNNEL OR AUGER UNDERNEATH MAJOR ROOTS OF THE TREE WITHOUT CUTTING THEM. PERMISSION MAY BE GRANTED FOR AUGURING OF 1/3 DISTANCE OF THE DRIP LINE TO THE TRUNK OF THE TREE ONLY IF THERE IS NO OTHER FEASIBLE WAY. DEPTH OF AUGURING SHALL BE A MINIMUM OF 2 FEET. THE ILLUSTRATION BELOW HIGHLIGHTS BOTH INAPPROPRIATE AND APPROPRIATE PRACTICE FOR AUGURING NEAR SAVED TREES.
- PROTECTIVE FENCING SHALL BE INSTALLED AROUND THE TREE SAVE AREA OR TREE PROTECTED ZONE OF PRESERVED TREES PRIOR TO ANY LAND DISTURBING ACTIVITIES. FENCING SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND OTHER PLANTING REQUIREMENTS HAVE BEEN INSTALLED, AND THE ZONING ADMINISTRATOR OR ENFORCEMENT OFFICER HAS GIVEN APPROVAL FOR REMOVAL. THE ILLUSTRATION BELOW HIGHLIGHTS APPROPRIATE FENCING.
- FENCING SHOULD BE PLACED TO PREVENT TRUCKS AND EQUIPMENT FROM DAMAGING TREE ROOTS.
- ALL TREE SAVE AREAS SHALL BE DESIGNATED AS SUCH WITH "TREE SAVE AREA" SIGNS POSTED VISIBLY ON THE OUTSIDE OF THE FENCED-IN AREA. SIGNS MAY NOT BE POSTED ON THE TREES, WITHIN PUBLIC RIGHT-OF-WAYS OR SITE TRIANGLES.

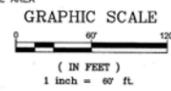


Know what's below.  
 Call before you dig.  
 CALL 1-800-632-4949 OR 811  
 WWW.NC811.ORG  
 NC ONE-CALL CENTER  
 IT'S THE LAW!



PLANTING DETAIL-SINGLE STEM TREE  
 N.T.S.

- NOTES:**
- REMOVE WIRE OR NYLON TWINE FROM BALL.
  - INSTALL TOP OF BALL 2" ABOVE FINISH GRADE
  - SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.
  - 4" SAUCER WILL BE OUTSIDE OF BACKFILL.



**ENGINEERING**

2013A Van Buren Avenue  
 Indian Trail, NC 28079  
 (704) 882-4222  
 www.eagleinc.net

P.O. BOX 581  
 Alpharetta, GA 30009  
 (770) 339-0640

NO.	DATE	BY	ISSUE
1.	11/20/15	PMQ	PER TREE PER TREE BOARD REQUEST

INDIAN TRAIL CHARTER K-8  
 Indian Trail, Union County, NC

Ryan Companies US, Inc.  
 101 E Kennedy Blvd., Suite 2450  
 Tampa, FL 33602

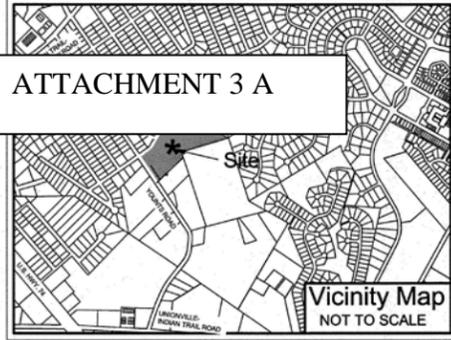
**LANDSCAPING PLAN**

DESIGNED BY	CHECKED BY	DATE	JOB NUMBER
CAC	CAC	11/20/15	6498



SHEET  
**L1.0**

**ATTACHMENT 3 A**



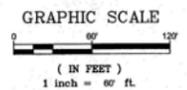
**ZONING INFORMATION**  
 ACCORDING TO THE TOWN OF INDIAN TRAIL OFFICIAL ZONING MAP DATED AUGUST 26, 2013 THE SUBJECT PROPERTY IS ZONED "SF1" SINGLE FAMILY, LOW DENSITY. BECAUSE THERE MAY BE A NEED FOR INTERPRETATION OF THE APPLICABLE ZONING CODES, WE REFER YOU TO THE TOWN OF INDIAN TRAIL PLANNING AND ZONING DEPARTMENT AT (704) 821-5401.

**MISCELLANEOUS NOTES**  
 NO USGS MONUMENTATION WITHIN 2000' OF SITE. GRID POSITIONS WERE DETERMINED USING A TRIMBLE 5800 GNSS GPS RECEIVER UTILIZING THE NORTH CAROLINA GEODETIC SURVEY VRS NETWORK. ALL COORDINATES AND BEARINGS SHOWN ARE BASED ON NAD 83/2011. AREAS COMPUTED USING COORDINATE GEOMETRY.  
 IRON REBARS AT ALL PROPERTY CORNERS UNLESS OTHERWISE NOTED.  
 REFERENCES: PLAT CAB. F, FILE 823.  
 ALL ADJOINING PROPERTY OWNER INFORMATION IS TAKEN FROM CURRENT DEEDS AND TAX RECORDS AND ARE CONSIDERED "NOW OR FORMERLY".  
 RAW ERROR OF CLOSURE: 1:10,000+. BOUNDARY TRAVERSE WAS ADJUSTED USING THE LEAST SQUARES METHOD.  
 OTHER UNDERGROUND UTILITIES MAY EXIST BUT THEIR LOCATIONS ARE NOT KNOWN.  
 THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES. CONTOUR INTERVAL = ONE FOOT.  
 ELEVATION DATUM IS BASED ON NAVD83.  
 TREES SHOWN ARE SUBJECT TO ERROR IN KIND.  
 THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 3710540700, EFFECTIVE DATE 10/16/06.

**UTILITY NOTES**  
 THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND APERTURES ONLY. THE SURVEYOR WAS NOT PROVIDED WITH UNDERGROUND PLANS TO DETERMINE THE LOCATION OF ANY SUBTERRANEAN USES. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THERE IS NO CERTAINTY OF THE ACCURACY OF THE INFORMATION AND IT SHALL BE CONSIDERED IN THE LIGHT BY THOSE USING THIS SURVEY. UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS CONSULTANTS AND HIS CONTRACTORS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THIS SURVEYOR IS NOT RESPONSIBLE FOR THE SUFFICIENCY OF THE UNDERGROUND UTILITY INFORMATION PROVIDED HEREON, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

 Call Before You Dig!!  
 North Carolina One Call  
 1-800-632-6349  
 IT'S THE LAW  
<http://www2.ncocc.org>

- LEGEND OF SYMBOLS & ABBREVIATIONS**
- ⊖ - EXISTING IRON PIPE
  - ⊖ - EXISTING IRON REBAR
  - ⊖ - NEW IRON REBAR
  - ⊖ - SIGHT TRIANGLE
  - M.B.S. - MINIMUM BUILDING SETBACK
  - P.S.D.E. - PUBLIC STORM DRAINAGE EASEMENT
  - S.S.E. - SANITARY SEWER EASEMENT
  - SSMH - SANITARY SEWER MANHOLE
  - R.W. - RIGHT OF WAY
  - P.S.E. - PRIVATE SANITARY SEWER EASEMENT
  - GPUE - GENERAL PUBLIC UTILITY EASEMENT
  - C.P. - COMPUTED POINT
  - ECM - EXISTING CONCRETE MONUMENT
  - E.P.K. - EXISTING P.K. NAIL
  - ♿ - HANDICAPPED PARKING
  - ⊖ - TRANSMISSION TOWER
  - ⊖ - UTILITY POLE
  - - UNDERGROUND GASLINE
  - - OVERHEAD UTILITY LINE
  - - SANITARY SEWER LINE
  - ⊖ - SANITARY SEWER MANHOLE
  - ⊖ - FIRE HYDRANT
  - ⊖ - WATER VALVE
  - ⊖ - WATER WELL
  - ⊖ - YARD INLET / AREA DRAIN
  - ||||| - RAILROAD TRACK
  - ⊖ - MONITORING WELL
  - ⊖ - ELECTRIC BOX/TRANSFORMER
  - ⊖ - CURB INLET
  - - STORM DRAIN
  - - WATER LINE
  - - FENCE LINE
  - - ZONING LINE
  - - 1446 - UNDERGROUND TELEPHONE



**ENGINEERING**  
 P.O. BOX 551  
 Alhambra, GA 30009  
 2013A Van Buren Avenue  
 Indian Trail, NC 28079  
 (704) 882-4222  
[www.engpointinc.com](http://www.engpointinc.com)

NO.	DATE	BY	ISSUE
1	9/29/15	RLW	REVISED TO REFERENCE UPDATED TITLE COMMITMENT

**THE YOUNTS ROAD PARTNERS, LLC PROPERTY INDIAN TRAIL, UNION CO., N.C.**  
 For the Benefit of:  
**RYAN COMPANIES US, INC. OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY**

**TREE SURVEY 14.452 ACRES**

DATE	DATE	CHECKED BY	RLW
11 = 60'	08/12/2015	RLW	5488



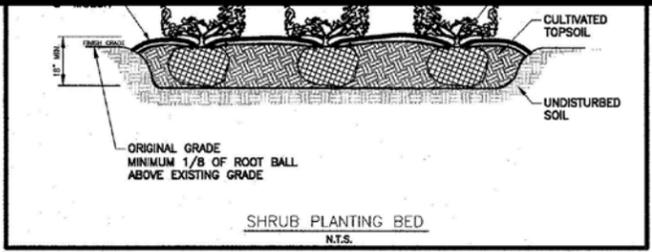
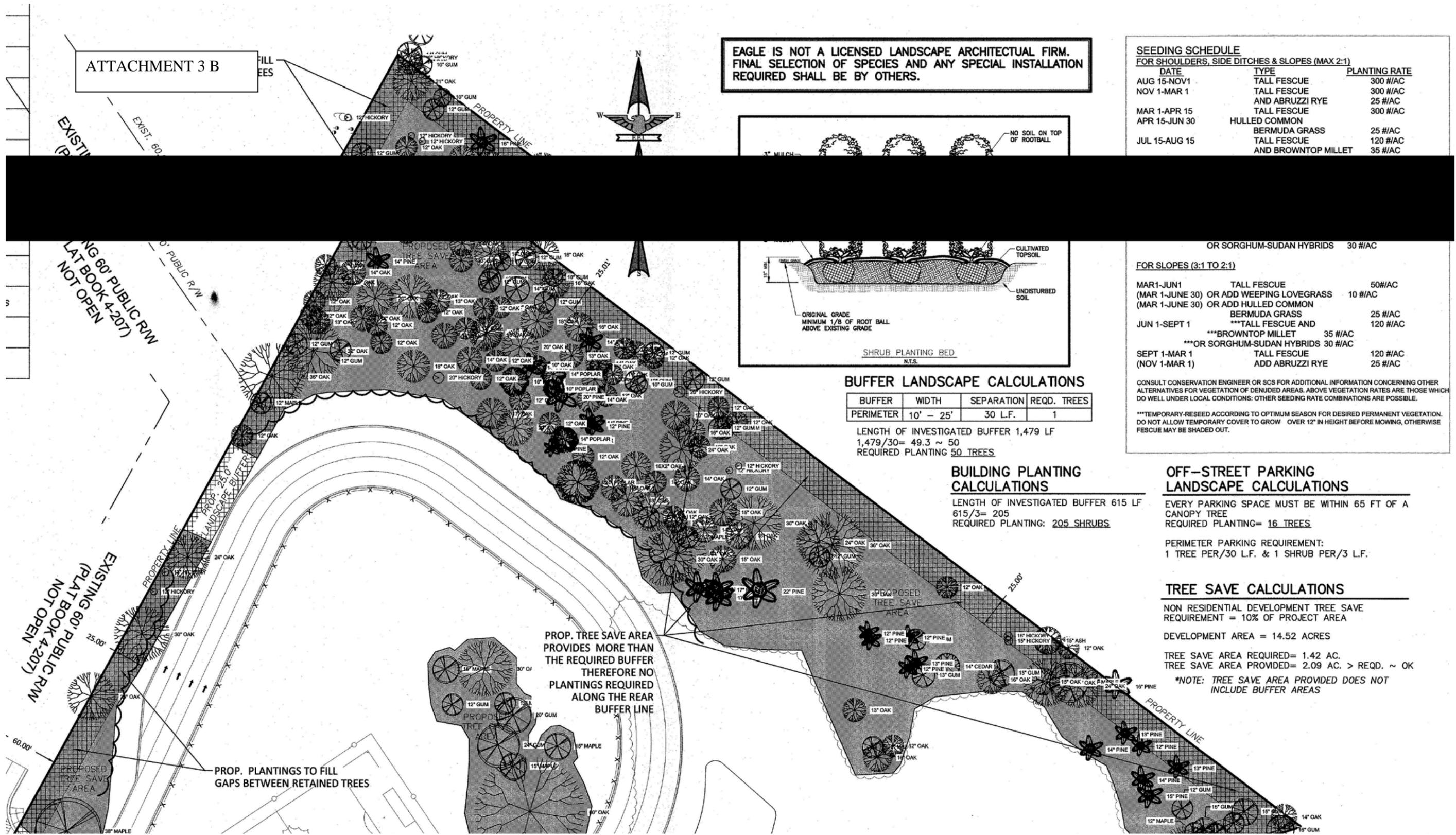
Sheet  
**C-1.0**

ATTACHMENT 3 B

EAGLE IS NOT A LICENSED LANDSCAPE ARCHITECTURAL FIRM.  
FINAL SELECTION OF SPECIES AND ANY SPECIAL INSTALLATION  
REQUIRED SHALL BE BY OTHERS.

**SEEDING SCHEDULE**  
FOR SHOULDERS, SIDE DITCHES & SLOPES (MAX 2:1)

DATE	TYPE	PLANTING RATE
AUG 15-NOV 1	TALL FESCUE	300 #/AC
NOV 1-MAR 1	TALL FESCUE AND ABRUZZI RYE	300 #/AC 25 #/AC
MAR 1-APR 15	TALL FESCUE	300 #/AC
APR 15-JUN 30	HULLED COMMON BERMUDA GRASS	25 #/AC 25 #/AC
JUL 15-AUG 15	TALL FESCUE AND BROWNTOP MILLET	120 #/AC 35 #/AC



**BUFFER LANDSCAPE CALCULATIONS**

BUFFER PERIMETER	WIDTH	SEPARATION	REQD. TREES
10' - 25'	30 L.F.	1	

LENGTH OF INVESTIGATED BUFFER 1,479 LF  
 $1,479/30 = 49.3 \sim 50$   
 REQUIRED PLANTING 50 TREES

**BUILDING PLANTING CALCULATIONS**

LENGTH OF INVESTIGATED BUFFER 615 LF  
 $615/3 = 205$   
 REQUIRED PLANTING: 205 SHRUBS

**OR SORGHUM-SUDAN HYBRIDS 30 #/AC**  
**FOR SLOPES (3:1 TO 2:1)**

MAR 1-JUN 1	TALL FESCUE	50 #/AC
(MAR 1-JUNE 30) OR ADD WEEPING LOVEGRASS		10 #/AC
(MAR 1-JUNE 30) OR ADD HULLED COMMON		25 #/AC
JUN 1-SEPT 1	BERMUDA GRASS	120 #/AC
***TALL FESCUE AND		
***BROWNTOP MILLET	35 #/AC	
***OR SORGHUM-SUDAN HYBRIDS	30 #/AC	
SEPT 1-MAR 1	TALL FESCUE	120 #/AC
(NOV 1-MAR 1)	ADD ABRUZZI RYE	25 #/AC

CONSULT CONSERVATION ENGINEER OR SCSS FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDEED AREAS. ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

\*\*\*TEMPORARY-RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

**OFF-STREET PARKING LANDSCAPE CALCULATIONS**

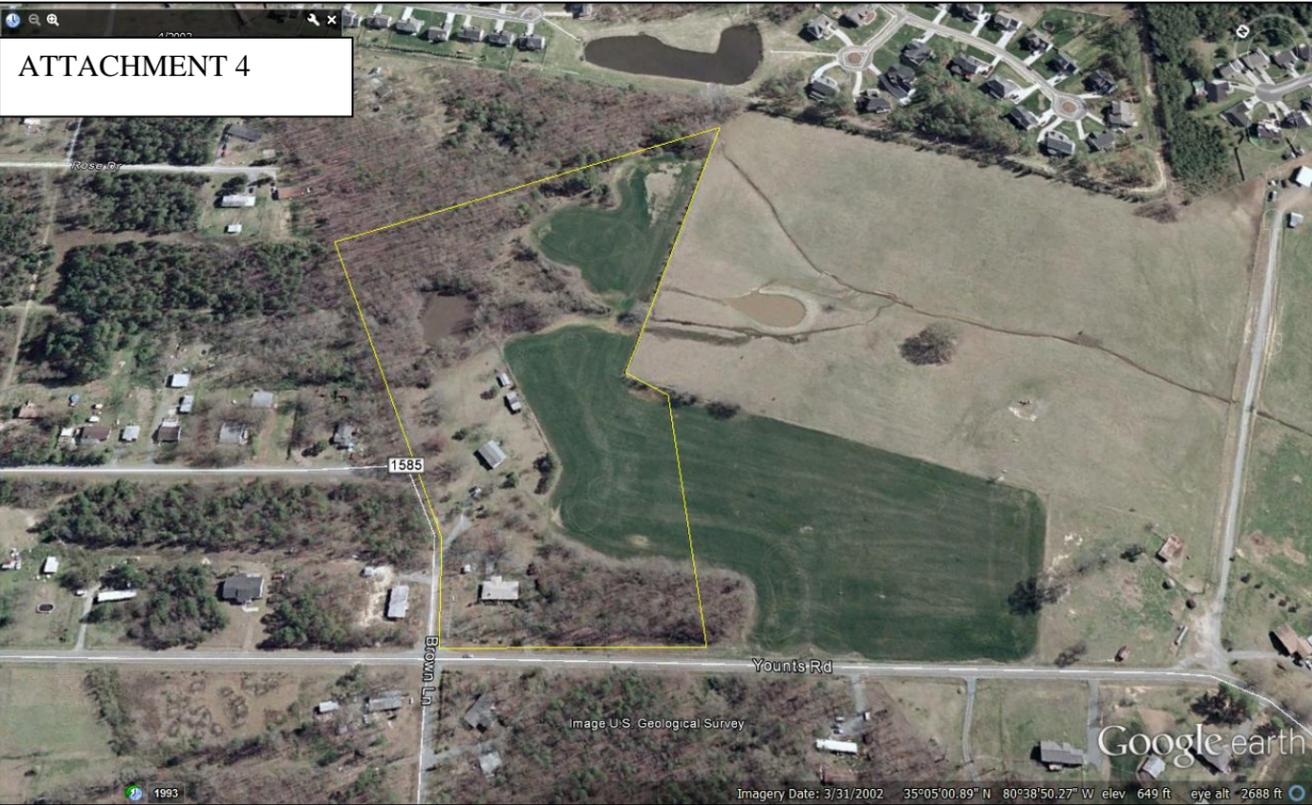
EVERY PARKING SPACE MUST BE WITHIN 65 FT OF A CANOPY TREE  
 REQUIRED PLANTING= 16 TREES  
 PERIMETER PARKING REQUIREMENT:  
 1 TREE PER/30 L.F. & 1 SHRUB PER/3 L.F.

**TREE SAVE CALCULATIONS**

NON RESIDENTIAL DEVELOPMENT TREE SAVE REQUIREMENT = 10% OF PROJECT AREA  
 DEVELOPMENT AREA = 14.52 ACRES  
 TREE SAVE AREA REQUIRED= 1.42 AC.  
 TREE SAVE AREA PROVIDED= 2.09 AC. > REQD. ~ OK  
 \*NOTE: TREE SAVE AREA PROVIDED DOES NOT INCLUDE BUFFER AREAS

PROP. TREE SAVE AREA PROVIDES MORE THAN THE REQUIRED BUFFER THEREFORE NO PLANTINGS REQUIRED ALONG THE REAR BUFFER LINE

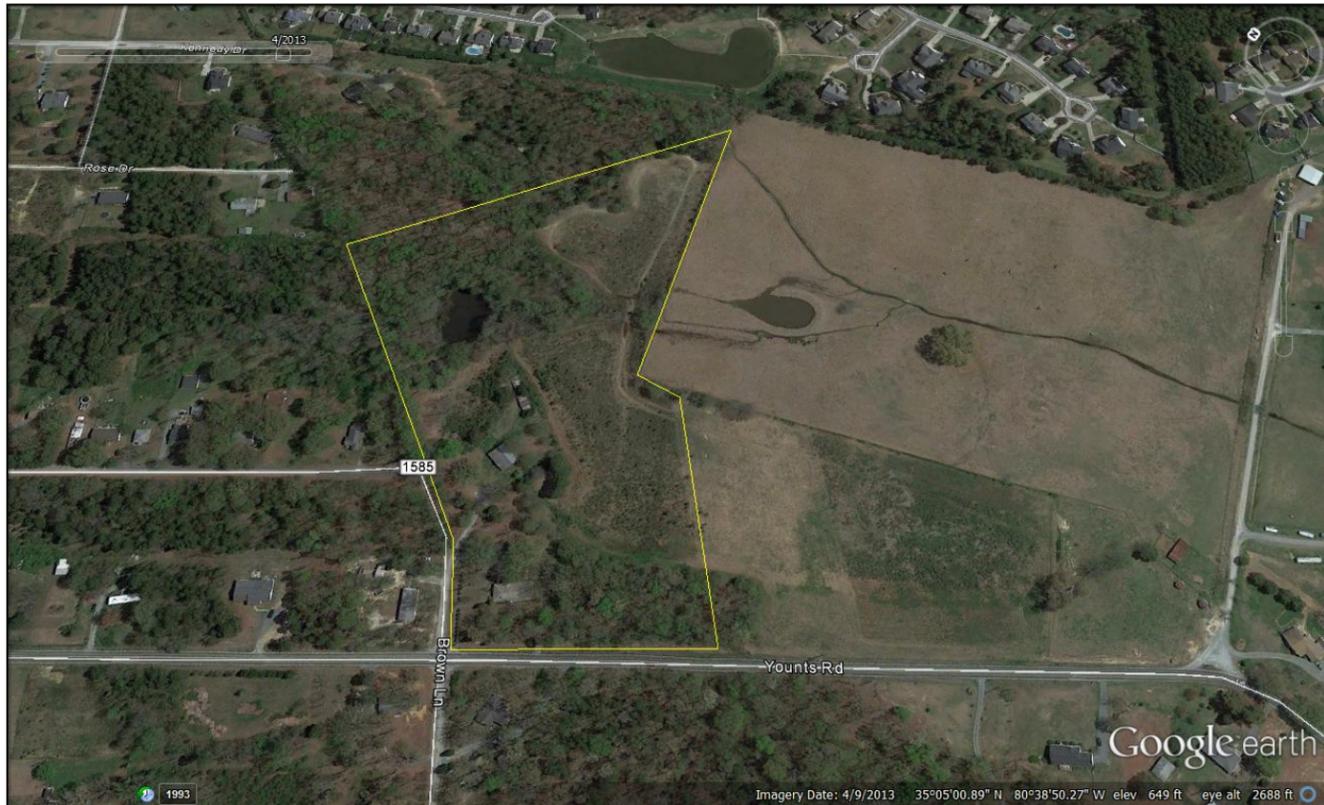
PROP. PLANTINGS TO FILL GAPS BETWEEN RETAINED TREES



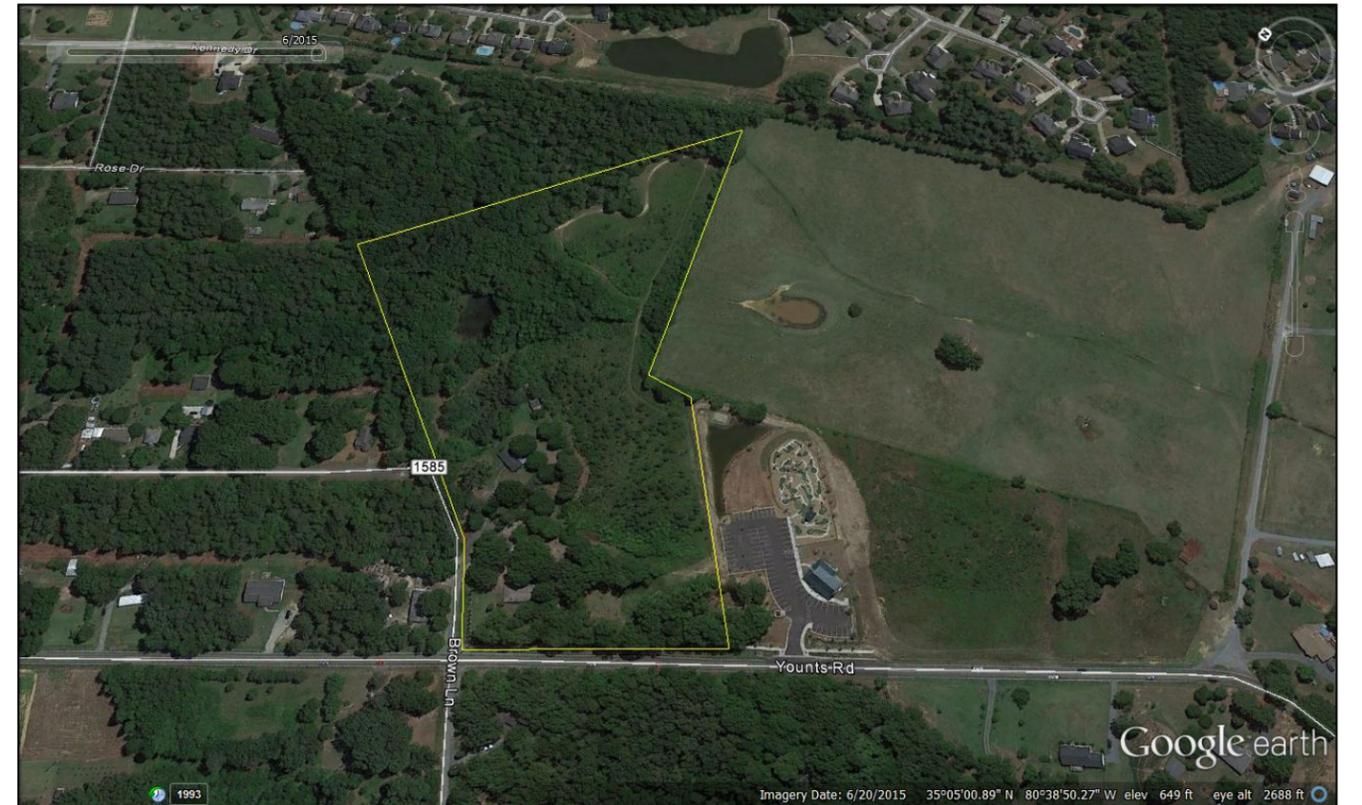
2002



2007



2013



2015