

shall be submitted in electronic and hard copy format to the Chatham County Public Works Department prior to final plat approval for the project. In addition, the developer and all subsequent owning entities and responsible parties of the stormwater management system shall submit any updates to these documents within thirty (30) days of when the documents are updated.

## **SECTION 9: BUFFERS**

### **9.1 Riparian Buffers**

In all residential, commercial, and civic areas in each compact community, vegetative buffers of the following widths shall be permanently protected along each side of the following streams:

- At least one hundred (100) feet along all perennial streams;
- At least fifty (50) feet along all intermittent streams;
- At least fifty (50) feet along all ephemeral streams shown on the Soil Survey maps and having a drainage area of more than twenty-five (25) acres;
- At least thirty (30) feet along all ephemeral streams shown on the Soil Survey maps and having a drainage area of between ten (10) acres and twenty-five (25) acres.

#### **Uses Within the Buffer**

No new development is allowed in the buffer area except for the following:

- Water dependent structures;
- Other structures such as flag poles;
- Signs and security lights which result in only diminutive increases in impervious area;
- Projects such as road crossings and greenways where no practical alternative exists;
- Desirable artificial stream bank or shoreline stabilization, as determined by Chatham County.


These activities should minimize built-upon surface area, direct runoff away from the surface waters (except sheet flow directed into a buffer), and maximize the utilization of stormwater best management practices.

To avoid a loss of effectiveness in protecting streams, the stream buffer shall remain in natural undisturbed vegetation, except as provided below.

Clearing, grading or other land disturbing activities that would reduce the effectiveness of the buffer shall be revegetated.

Buildings and other features that require grading and construction shall be set back at least ten (10) feet from the edge of the buffer.

Crossings by streets, driveways, culverts, railroads, recreational features, intakes, docks, utilities, bridges or other facilities shall be designed to minimize the amount of intrusion into the buffer.

 The following are prohibited within riparian buffers:

- Wastewater treatment, disposal, and reuse components, including any wastewater sprayfields. Water and sewer lines are allowed to cross the buffer if no available alternative exists, provided that they are designed to minimize disturbance to the buffer (e.g. by running under bridges or crossing at right angles to the extent possible).
- Receiving areas for toxic or hazardous waste or other contaminants;
- Hazardous or sanitary waste landfills;
- Stormwater features, except in limited circumstances in buffers along ephemeral streams if the developer implements low impact development design techniques and/or other stormwater controls that meet or exceed the stormwater treatment and management performance provided by fully functioning ephemeral stream buffers in that location.

Stream buffers can be used for passive recreational activities with very low impact walking trails, with no impervious surface. Highly erosive activities such as use by bicycles should be discouraged. The service facilities for such activities, including but not limited to parking, picnicking and sanitary facilities, shall be located outside the buffer.

Horses and motorized all terrain vehicles are prohibited within the buffer, except for maintenance vehicles, emergency vehicles, and motorized wheel chairs for disabled persons.

Unpaved trails running parallel to the stream shall be located at least thirty (30) feet from the edge of the stream.

Paved trails up to eight (8) feet in width are allowed along any streams provided they are at least fifty (50) feet from the edge of perennial and intermittent streams, and provided that the buffer as a whole is extended a distance equal to the width of the trail. Bicycles are expressly allowed on paved trails.

Water oriented recreational facilities, such as boat or fishing piers, shall require an approved use permit from the Watershed Administrator.

Clearing and re-vegetating the stream buffer for the purposes of improving its pollutant removal efficiency may be permitted, except within thirty (30) feet of a stream.

Invasive species listed by the North Carolina Botanical Garden may be removed from the buffer.

Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer shall be allowed provided that soil disturbance is minimized. Plantings shall consist primarily of native species.

Tracked or wheeled vehicles are not permitted within the riparian buffer, except for the purpose of maintaining utility corridors and providing emergency services. Bicycles are expressly allowed on paved trails.

## **9.2 Perimeter Buffer**

Perimeter buffers shall be utilized to minimize the impacts of each compact community on adjacent properties along the entire perimeter of the compact community. Table 9.2 lists the minimum buffer width allowable, depending on the proposed land use along the edge of the compact community and the existing land use in the adjacent property at any point along the perimeter.

Chatham County may allow a reduction in the perimeter buffer width required by this ordinance of up to fifty percent (50%) if it determines that the impact of the compact community is adequately mitigated by community design or topography.

**Table 9.2 Width of Vegetative Perimeter Buffers**

		Land Use Adjacent to Compact Community Perimeter				
		Residential – large lot	Residential – small lot	Commercial	Recreational	Agricultural <sup>2</sup>
Compact Community Perimeter Land Use	Residential- large lot	0 feet	0 feet	0 feet	0 feet	0 feet
	Residential - small lot	100 feet	100 feet	0 feet	0 feet	100 feet
	Commercial	200 feet	200 feet	0 feet	200 feet <sup>3</sup>	200 feet
	Recreational	200 feet	200 feet	200 feet <sup>3</sup>	0 feet	200 feet
	Agricultural <sup>2</sup>	0 feet	0 feet	0 feet	0 feet	0 feet

<sup>1</sup> The perimeter buffer requirements only apply to areas along the boundary of the compact community where no public road exists. In areas where a public road forms the boundary of the compact community, then the viewshed buffer requirements specified in Section 9.3 apply instead.

<sup>2</sup> Any bona fide farming operation, including land enrolled in the use value assessment program for agricultural, horticultural, forest, or conservation purposes, or part of a Voluntary Agricultural District.

<sup>3</sup> A barrier that assures the safety of recreational activity participants in the compact community may be substituted for a buffer at the discretion of Chatham County.

### **Dedication of the Buffer**

The perimeter buffers required in this section only apply to areas along the boundary of the compact community where no public road exists. In areas where a public road forms the boundary of the compact community, then the viewshed buffer requirements specified in Section 9.3 apply instead. Once the perimeter buffer has been delineated, a deed restriction satisfactory to the County Attorney shall be filed with the Chatham County Register of Deeds that permanently protects this land as a buffer and identifies the maintenance responsibility that rests with the homeowners association.

### **Perimeter Buffer Vegetation and Land Uses**



# No prohibition on stormwater features in Perimeter Buffers.

To the extent practicable, existing native forest vegetation shall be utilized for the perimeter buffer. Farms, pastures, and other traditional rural land uses owned by the developer or protected with a permanent conservation easement may be used to meet this requirement. Topographic features such as hills, valleys, and planted berms owned by the developer may also be used to meet this requirement.

Vegetative plantings in the buffer shall produce the effect of a natural forested area, using native species. The planting does not have to be opaque, but should function to significantly soften the visual impact of buildings, both initially and in the longer term. The visual buffering provided by vegetative plantings shall be effective in all seasons.

## **9.3 Viewshed Buffers**

Viewshed buffers shall be utilized in order to minimize the impacts of compact communities on pre-development roadway views.

The developer shall map all roadway views into the project and delineate a continuous buffer of at least one hundred (100) feet in width. The buffer shall be measured at right angles to the edge of the roadway right of way into the compact community.

The Chatham County Board of Commissioners may allow a reduction in the viewshed buffer width required by this ordinance of up to fifty percent (50%) if it determines that the impact of the compact community is adequately mitigated by community design, topography, and/or guidelines for outdoor lighting such as those included in the proposed Chatham County lighting ordinance.

### **Dedication of the Buffer**

Once the viewshed buffer has been delineated, a deed restriction satisfactory to the County Attorney shall be filed with the Chatham County Register of Deeds that permanently protects this land as a buffer and identifies the maintenance responsibility that rests with the homeowners association.

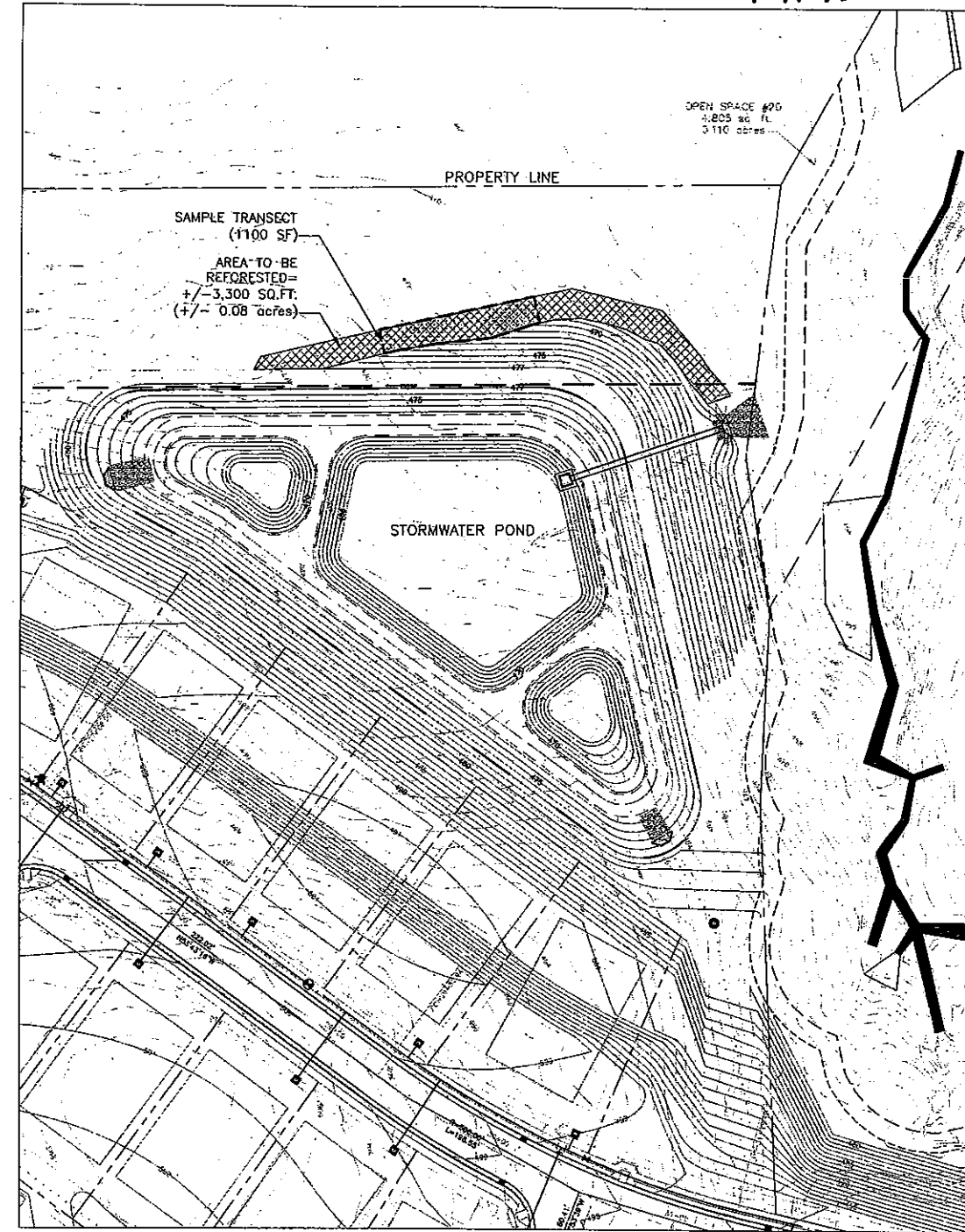
### **Viewshed Buffer Vegetation and Land Uses**

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## **SECTION 10. RECREATION AND OPEN SPACE**

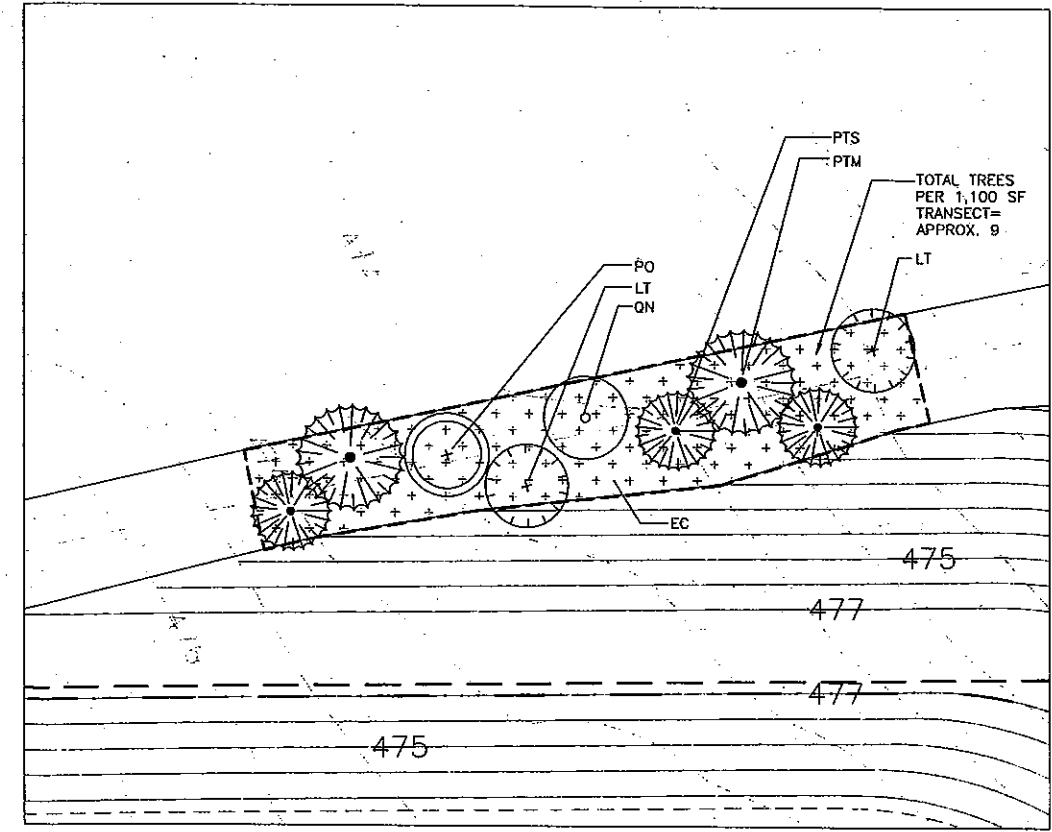
Handout #2  
9-11-12



REFERENCE PLAN  
SCALE: 1"=30'-0"

IN	QTY	BOTANICAL NAME	COMMON NAME	MIN HT	REMARKS
TREES					
LT	4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
PO	4	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
PTS	8	PINUS TAEDA (SMALL)	LOBLOLLY PINE	3'	FULL TO GROUND
PTM	8	PINUS TAEDA (MEDIUM)	LOBLOLLY PINE	6'	FULL TO GROUND
QN	4	QUERCUS NUTTALLI	NUTTALL OAK	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
MEADOW					
EC	3300	ERAGROSTIS CURVULA	WEeping LOVE GRASS	2.5' POIS	
SHADEDED HARDWOOD MULCH: 6 CUBIC YARDS					

- PLANTING NOTES - (APPLY TO ALL L-SERIES DRAWINGS)
- 1) PLANT SIZES ARE THE SIZE AT INSTALLATION.
  - 2) PLANT EXAMPLES ARE FOR DESIGN INTENT ONLY, AND MAY BE CHANGED TO A SIMILAR SPECIES AT A LATER DATE.
  - 3) AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES, SILT, RIP RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL. PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.
  - 4) TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOO OR LANDSCAPE BEDS.
  - 5) UNLESS OTHERWISE NOTED IN THE PLANT LIST, THE CONTRACTOR SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT - GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
  - 6) ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
  - 7) FURNISHED PLANT MATERIAL SHALL MEET THE MINIMUM HEIGHT OR MINIMUM SPREAD DIMENSIONS SHOWN IN THE PLANT LIST HEADINGS. THE CONTRACTOR SHALL UTILIZE THE MOST STROGENT DIMENSION SHOWN ON THE PLANT LIST.
  - 8) DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.
  - 9) PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN, ONCE A SATISFACTORY MATCHED OUTER SHAPE IS DETERMINED. FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.
  - 10) THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS.
  - 11) THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS INCLUDING CONSTRUCTION ACCESS OUTSIDE PROJECT LIMITS, WITH THE EXCEPTION OF THOSE AREAS DESIGNATED TO RECEIVE SOO.
  - 12) ALL PROPOSED PLANTING BEDS SHALL BE TIED INTO EXISTING PLANTING BEDS OR EXISTING TREELINES WHERE APPLICABLE.
  - 13) FINISHED GRADES/TOPOGRAPHY AND ABOVE GROUND UTILITIES ARE FOR REFERENCE ONLY. THE ACTUAL GRADES AND UTILITY LOCATIONS MAY VARY. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO PLANT INSTALLATION.
  - 14) ALL MAJOR TREE PLANTINGS AND BEDS SHALL BE STAKED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
  - 15) ALL TREES SHALL BE PLANTED IN 5'-0" DIAMETER MULCH BEDS EXCEPT AS OTHERWISE NOTED ON PLANS. ALL TREES, SHRUBS AND GROUNDCOVERS SHALL RECEIVE UNIFORM MULCH COVER AS SPECIFIED.



SAMPLE TRANSECT: PINE & HARDWOOD TREES  
SCALE: 1"=8'-0"

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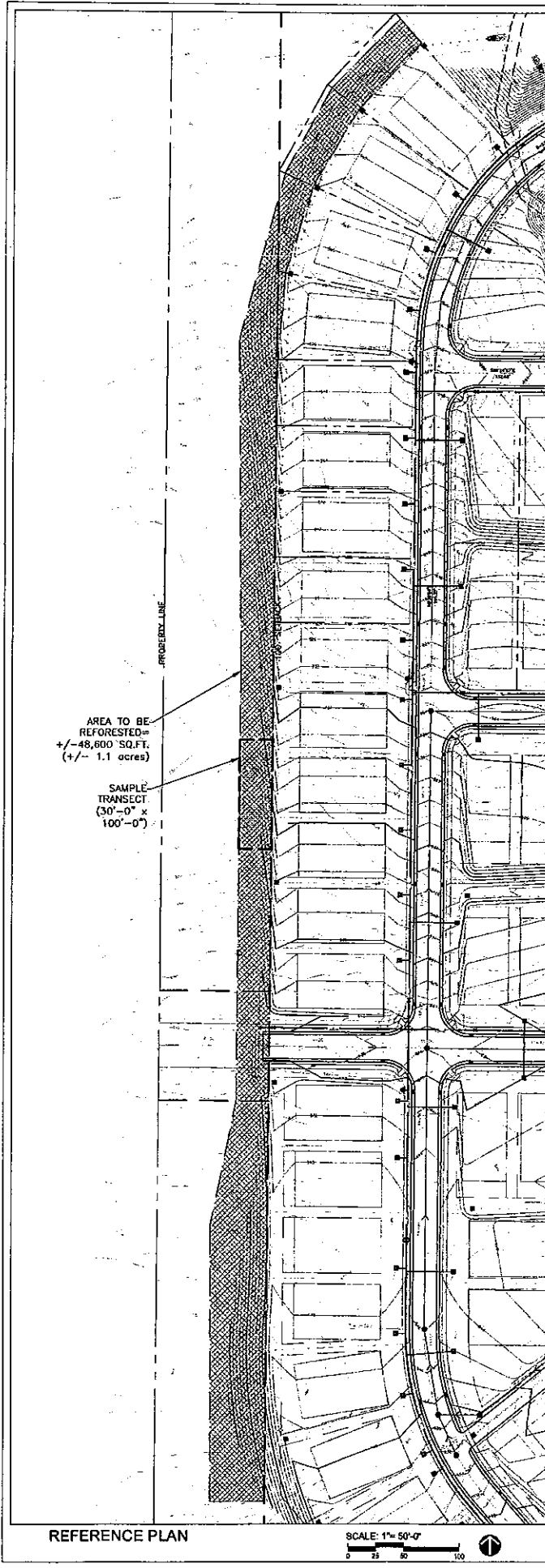


BRIAR CHAPEL  
PHASE 6 NORTH

NO.	REVISION	DATE
1	REVISED FOR PROPOSAL	AUG 2, 2012

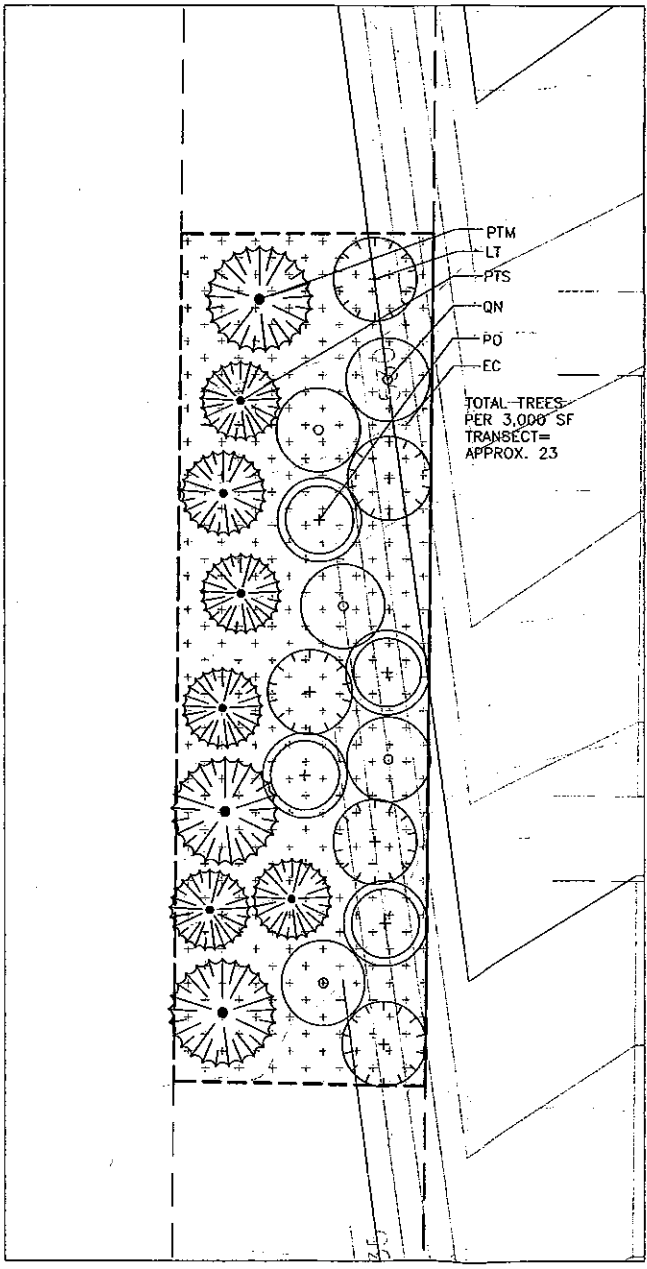
Phase 6 North  
Pricing Set

Lot Reforestation  
DATE: JUN 14, 2012  
DRAWN: RP, ED  
CHECKED: ED  
SHEET: L401



REFERENCE PLAN

SCALE: 1"= 50'-0"  
0 25 50 100



SAMPLE TRANSECT: PINE & HARDWOOD TREES

SCALE: 1"= 5'-0"  
0 4 8 16

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M	QTY	BOTANICAL NAME	COMMON NAME	MIN HT	REMARKS
TREES					
LT	54	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
PO	54	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
PTS	108	PINUS TAEDA (SMALL)	LOBLOLLY PINE	3'	FULL TO GROUND
PTM	108	PINUS TAEDA (MEDIUM)	LOBLOLLY PINE	6'	FULL TO GROUND
QN	54	QUERCUS NUTTALLI	NUTTALL OAK	5'	EVENLY BRANCHED, STRONG CENTRAL LEADER
MEADOW					
EC	48800	ERAGROSTIS CURVULA	WEEPING LOVE GRASS	2-3' POTS	
SHREDDED HARDWOOD MULCH: 21 CUBIC YARDS					

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FAX: 919 419 1869  
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BRIAR CHAPEL  
PHASE 6 NORTH

NO.	REVISION	DATE
1	REVISED FOR PHOHO	AUG 2 2012

Phase 6 North  
Pricing Set

Lot Reforestation  
DATE: JUN 14, 2012  
DRAWN: RP, BD  
CHECKED: ED  
SHEET: L400

Phase 6 N Preliminary Plat Application

Planning Board Meeting

September 11, 2012

PROPOSED REVISED CONDITIONS

Nicolas P. Robinson, Esq. on behalf of NNP-Briar Chapel, LLC

1. Applicant has voluntarily agreed to not place any stormwater structures (such as outlet piping, endwall or velocity dissipator) The final plat be revised to show no storm drainage easements or stormwater features located within the 100' a perimeter buffer. Stormwater easements, grading and pond maintenance access are allowed within the 100' buffer to the extent depicted on the preliminary plat submittals, except for limited grading that can be re-vegetated.
2. Prior to final plat submittal a The re-vegetation plan be submitted herewith by Applicant (and attached hereto) is approved and shall be installed during the first seasonally appropriate time following final plat approval for Phase 6 N. to staff for review and approval for those areas that require limited grading within the perimeter buffer.
3. A revised construction plan for the stormwater pond adjacent to the Marvin Meacham property be submitted for review by staff prior to any land disturbing activities associated with construction of the stormwater pond.
4. 3. A deed restriction, satisfactory to the County Attorney, for the perimeter buffers that permanently protects the land as a buffer and identifies the maintenance responsibility that rests with the homeowners association, shall be recorded with the Chatham County Register of Deeds prior to recordation of the final plat.
5. 4. The road names Buttress Way and Weathersby Way shown on the preliminary map shall be changed on the final plat to read Buttress Way Dr. and Weathersby Drive. Serenity Hill Circle also is to be changed to N. Serenity Hill Circle.
6. 5. The following items shall be revised on the final plat:
  - A. Label the Storm Drainage Easements 'private', except those maintained by NCDOT.
  - B. Number open spaces
  - C. Show vicinity map
  - D. Word floodplain note to state that Phase 6 North does not contain any floodable area.
  - E. Number stormwater pond