



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 7, 2019

Chatham County

Subject: Subdivision Plan Approval Briar Chapel Subdivision Phase 12 off of Great Ridge Parkway in Chatham County

McKim & Creed
c/o Chris Seamster, PLA
1730 Varsity Drive
Venture IV Building, STE 500
Raleigh, North Carolina 27606-2689
cseamster@mckimcreed.com

Dear Mr. Seamster:

The N. C. Department of Transportation, Division of Highways has reviewed the construction plans (cover sheet and Sheet C1.0 signed and sealed by Gareth Avant, P.E. on January 4, 2019 and subsequent sheets signed and sealed December 18, 2018) as submitted to this office and approval is granted subject to the following stipulations and recommendations:

1. All Construction is to be in accordance with the details as shown on the plans, as well as conform to the most recent edition of the *Standard Specifications for Roads and Structures*.
3. The entire proposed right of way is to be cleared and grubbed throughout the whole phase of the project. Please be aware that the areas within the sight distance quadrants are to be treated as right of way.
4. All soil areas within the proposed right of way and any other soil areas disturbed during construction shall be seeded and mulched immediately upon completion of roadway construction. The seeding shall be done as outlined in the seeding specification attachment.
5. The crossline drainage is approved as proposed on the construction plans. If, however field conditions dictate any changes, these shall be made upon approval by NCDOT. If any of the property owners desire to pipe their ditches within the proposed NCDOT right of way, please advise them that this work should conform to NCDOT specifications (see attached). If any ditches are piped and not satisfactorily completed to NCDOT specifications, this could result in the road not being accepted for addition to the State maintained system of roads. Any piped ditches or other installed encroachment prior to addition to the State maintained system are subject to an encroachment agreement, as are utility company installations when the road is added.

Mailing Address:
NC DEPARTMENT OF
TRANSPORTATION
DIVISION 8, DISTRICT 1
POST OFFICE BOX 1164
ASHEBORO, NC 27204

Telephone: (336) 318-4000
Fax: (336) 318-4573
Customer Service: 1-877-368-4968

Location:
300 DOT DRIVE
ASHEBORO, NC 27204

Website: www.ncdot.gov

6. The typicals as shown in the attached plans are approved.
7. The Division of Highways will only allow mailboxes, with non-rigid type post, such as 4" x 4" wooden or small diameter metal type on new additions. Brick columns or mailboxes on rigid stands such as block, stone or any other type deemed to be a traffic hazard will not be allowed within the right of way. This policy applies to all roads being considered for addition to the State Maintained System.
8. An erosion control plan shall require approval from Chatham County. The developer should forward this plan to Morgan DeWit, P.E., Erosion Control and Stormwater, 12 East Street, P.O. Box 1809, Pittsboro, N.C. 27312, phone (919) 542-8268 morgan.dewit@chathamnc.org for review and approval.
9. As this subdivision is proposed to be public and is likely to be requested to be added to the state maintained system of roads, the developer will be responsible for providing a PE Certification, (See Attached) and testing results for base and asphalt density stating that the streets have been built in accordance with the most current "Subdivision Roads: Minimum Construction Standards" manual and with the attached approved plans. Please be advised that this PE Certification does not approve the road for addition to the State Highway System for maintenance. When the proper home density is achieved, and roads have been satisfactorily maintained, the developer or property owners must submit Form SR-1, Petition for Road Addition (copy attached to this correspondence), and one copy of the recorded plat to request that the road or roads be added to the State Highway system. Any maintenance problems found when the road is requested to be added must be repaired by the developer or the party responsible for maintenance of the right of way prior to the road becoming state maintained. As stated in GS 136-102.6, final acceptance by the Division of Highways of the public streets and placing them on the State highway system for maintenance shall be conclusive proof that the streets have been constructed according to the minimum standards of the Board of Transportation.
10. The developer shall comply with all applicable local, state, and federal environmental regulations, and shall obtain all necessary local, state, and federal environmental permits, including, but not limited to, those related to sediment control, stormwater, wetlands, streams, endangered species, and historical sites.
11. A properly completed Verification of Compliance with the Department of Environment and Natural Resources (DENR)(page 35, attached) must be submitted prior to the road(s) being considered for addition to the NCDOT System.
12. In preparing the final plat for certification by this office and subsequent recording, the following information will be incorporated:
 - A. The sight distance quadrants at the intersections shall be shown either as a public easement or as the property line.
 - B. Permanent easements for drainage throughout the development.
 - C. All roads shall be shown as public and the right of way width shown.

13. If the plans of this subdivision change in a way that would cause a change in the classification of these roads from Local Residential to Residential Collector the developer will be responsible for upgrading roads to meet Residential Collector standards prior to addition to the State maintenance system.
14. This approval does not approve the utilities within this subdivision. Any utilities shall be submitted for approval to this office via a properly executed Encroachment Agreement to be approved at the time the roads within the subdivision are petitioned to be added to the State system for maintenance. Please note that water valves should be located outside the pavement area, utility lines should be installed behind the ditch and within 5ft from the right of way line, fire hydrants should be behind the right of way line and all service taps should be installed prior to paving.

If you have any further questions regarding this matter, please do not hesitate to call this office at 336. 318.4000

Yours truly,

DocuSigned by:

DE44C69F4BC74D9...
Matthew Kitchen, PE
District Engineer

Attachments

cc: Brandon Jones, Division Engineer
Justin Bullock, P.E., Chatham County Maintenance Engineer
Lynn Richardson, Chatham County Planning
Trey Caddell, Senior Right of Way Agent
Chris Seamster, PLA, Mckim & Creed
File



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

DIVISION OF HIGHWAYS

ANTHONY J. TATA
SECRETARY

**PROFESSIONAL ENGINEER CERTIFICATION
SUBDIVISIONS AND COMMERCIAL DRIVEWAYS
DIVISION 8, DISTRICT 1**

DATE: _____

COUNTY: _____

SUBDIVISION NAME: _____

STREET NAMES From Sta. No. To Sta. No.

This is to certify that the above listed roads have been constructed in accordance with the approved plans and all aspects of the most current Subdivision Roads: Minimum Construction Standards manual.

NAME: _____
SIGNATURE: _____
NC PE LICENSE #: _____

Professional Engineer Seal

VERIFICATION OF COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

(Check Appropriate Box)

- Permits from the N.C. Department of Environment and Natural Resources and the U.S. Army Corp of Engineers are not required for this project. However, all applicable federal and state regulations have been followed.

- The required permits from the N.C. Department of Environment and Natural Resources and the U.S. Army Corp of Engineers have been obtained for this project. Copies of permits and Completion Certificates are attached.

- All applicable NPDES Stormwater Permit requirements have been met for this project. (The applicant should contact the N.C. Division of Water Quality in Raleigh to determine if a stormwater permit is required.)

- The project is in compliance with all applicable sedimentation and erosion control laws and regulations.

Project Name: _____

Township: _____ County: _____

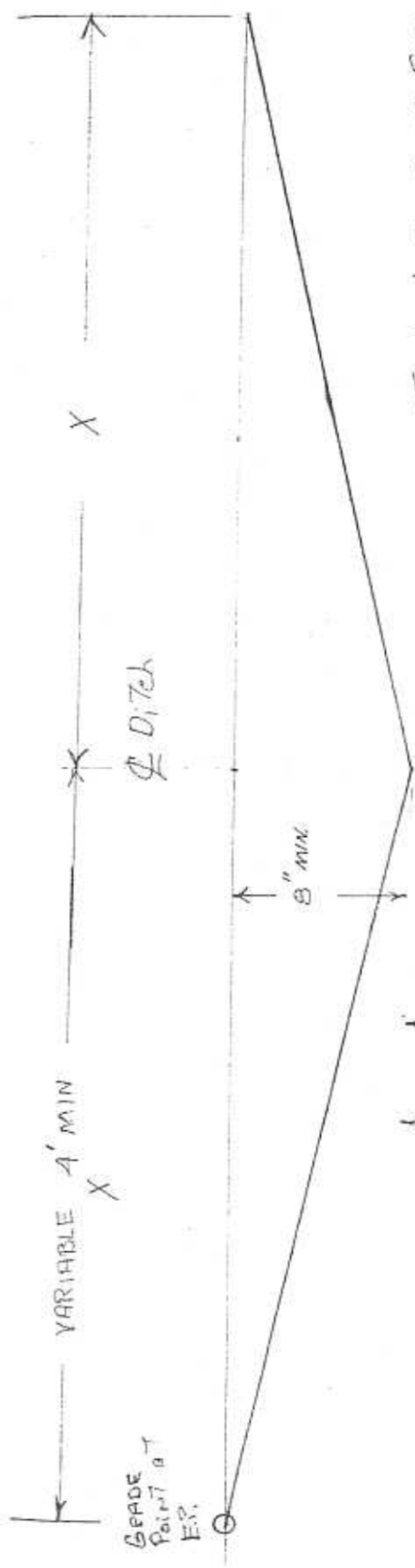
Project Engineer: _____ Phone No.: _____

Project Contact: _____

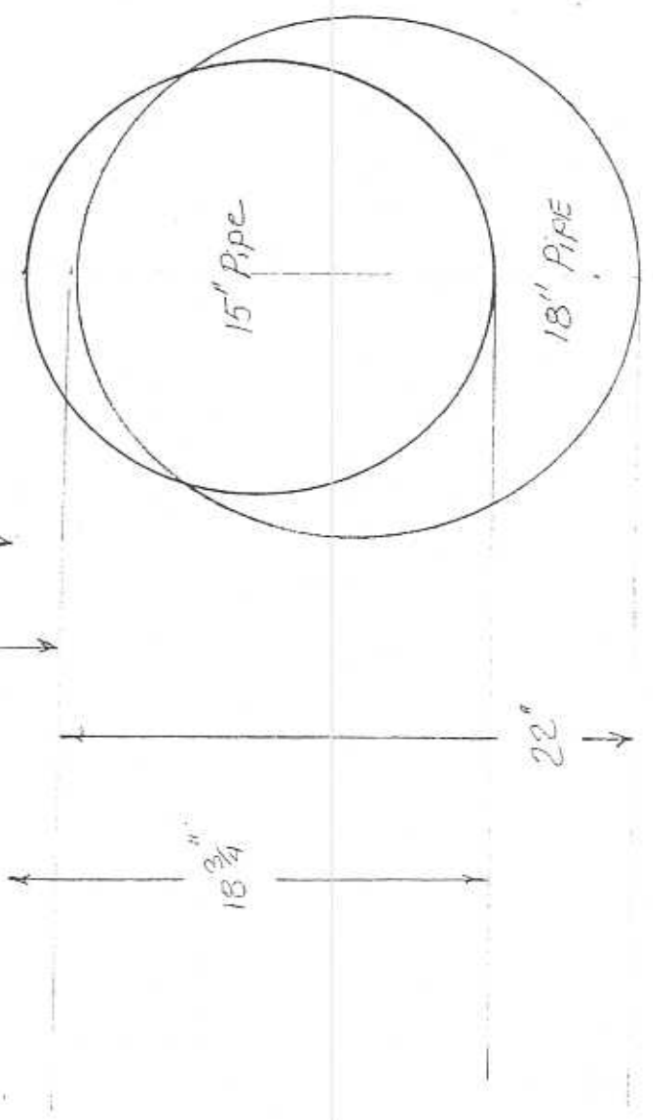
Applicant's Name: _____

P.E. SEAL

Date Submitted: _____



TYPICAL SECTION FOR
PIPING PITCH



**POSSIBLE SUPPLIERS FOR
GRATES AND FRAMES**

SOUTHERN FOUNDRY
P.O. BOX 186
APEX, N.C. 27502
(919) 362-7744

NORFOLK CAST, INC.
P.O. BOX 328
NORFOLK, VA. 23501

VULCAN FOUNDRY CORP.
P.O. BOX 905
DENHAM SPRINGS, LA.
1(800)626-4653

US FOUNDRY
8351 N. W. 93RD ST
MEDLEY, FLA. 33166
(305) 885-0301 FAX (305) 844-3253

SUPER CAST, INC.
1104 US HWY. 117 BYPASS, S.
GOLDSBORO, N.C. 27530
(919) 736-9010 FAX (919) 736-0290

BUNCH PATTERN WORKS, INC.
P.O. BOX 267 HWY 308 N.
LEWISTON-WOODVILLE, N.C. 27849

CAPITAL FOUNDRY OF VIRGINIA, INC.
P.O. BOX 2212
VIRGINIA BEACH, VIRGINIA 23450

EMPORIA FOUNDRY, INC.
620 REESE STREET
EMPORIA, VIRGINIA 23847

ENNIS ENTERPRISES
P.O. BOX 931
WILMINGTON, N.C. 28402
(910) 371-9323

GENERAL NOTES:

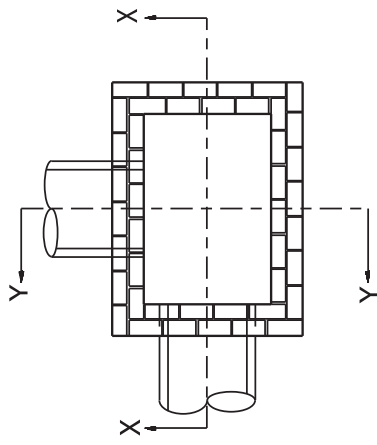
- MORTAR JOINTS 1/2" +/- 1/8" THICK.
- USE CLASS "B" CONCRETE THROUGHOUT.
- USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
- USE #4 BAR DOWELS AT 12" CENTERS.
- DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
- PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
- USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
- IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
- FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
- CONSTRUCT WITH PIPE CROWNS MATCHING.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.

DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.

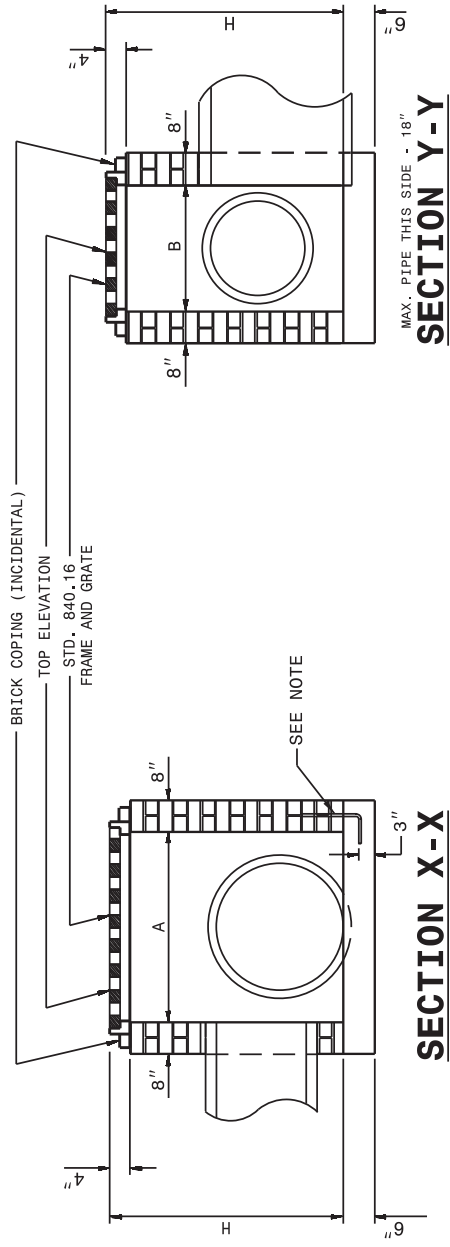
CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

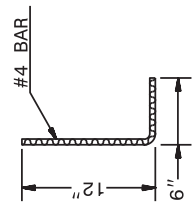


PLAN

WITH COPING REMOVED

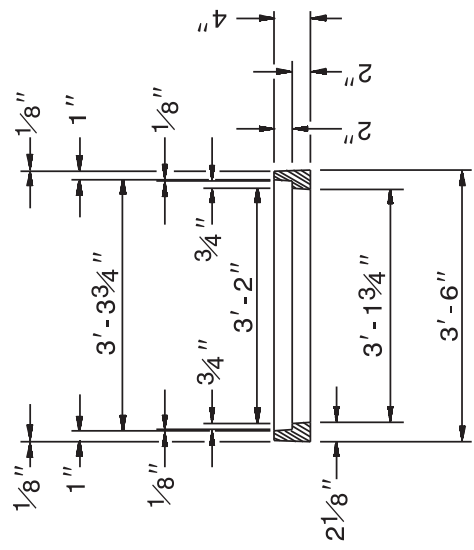
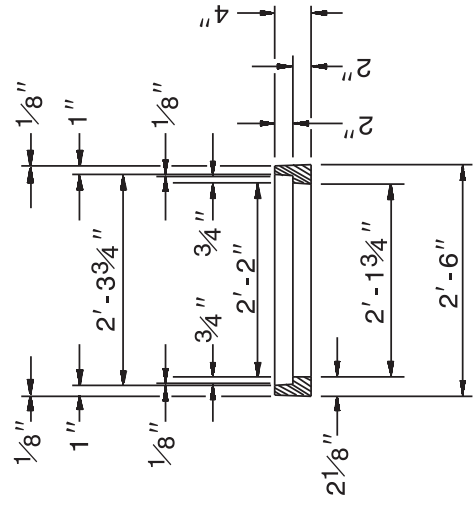
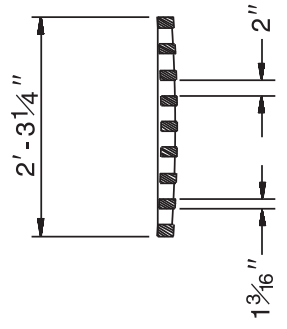
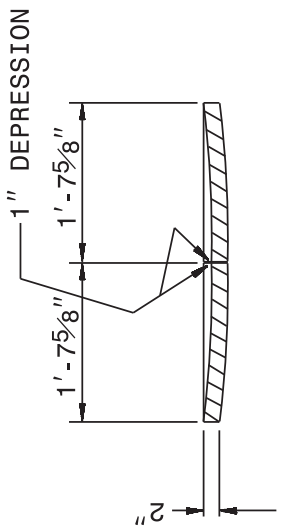
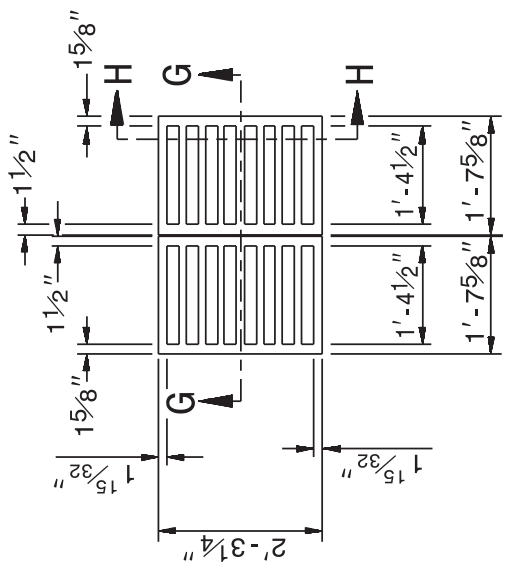
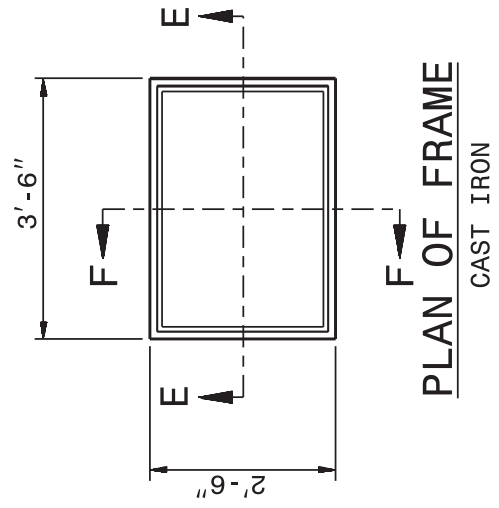


SECTION X-X



DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE		CUBIC YARDS CONCRETE		CUBIC YARDS BRICK MASONRY		DEDUCTIONS FOR ONE PIPE		
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY OR MIN. HEIGHT, H	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032
15"			2'-3"	0.268	0.313	0.600	0.031	0.047
18"			2'-6"	0.268	0.313	0.678	0.044	0.065
24"			3'-0"	0.268	0.313	0.835	0.078	0.113
30"			3'-6"	0.268	0.313	0.991	0.122	0.170



STABILIZATION REQUIREMENTS:

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

NATIVE GRASS SEEDING AND MULCHING:

(West)

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands and riparian areas, and adjacent to Stream Relocation and/or trout stream construction within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank or center of depression. The stream bank of the stream relocation shall be seeded by a method that does not alter the typical cross section of the stream bank. Native Grass Seeding and Mulching shall also be performed in the permanent soil reinforcement mat section of preformed scour holes, and in other areas as directed.

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

August 1 - June 1		May 1 – September 1	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
8#	Big Bluestem	8#	Big Bluestem
6#	Indiangrass	6#	Indiangrass
4#	Switchgrass	4#	Switchgrass
35#	Rye Grain	25#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000	Limestone

Approved Creeping Red Fescue Cultivars:

- | | | | |
|----------|--------|------|-----------|
| Aberdeen | Boreal | Epic | Cindy Lou |
|----------|--------|------|-----------|

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Temporary Seeding

Fertilizer shall be the same analysis as specified for *Seeding and Mulching* and applied at the rate of 400 pounds and seeded at the rate of 50 pounds per acre. German Millet or Browntop Millet shall be used in summer months and rye grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

Fertilizer Topdressing

Fertilizer used for topdressing shall be 16-8-8 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis and as directed.

Supplemental Seeding

The kinds of seed and proportions shall be the same as specified for *Seeding and Mulching*, and the rate of application may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of a sod seeder.

Mowing

The minimum mowing height shall be 6 inches.

Measurement and Payment

Native Grass *Seeding and Mulching* will be measured and paid for in accordance with Article 1660-8 of the *Standard Specifications*.

Briar Chapel – Phase 12

Approved Road Names

Phase 12 will consist of three (3) new public roads and two (2) new private alleys. It is planned to be named per the following convention in reference to the approved Construction Drawings:

Road A – Copper Leaf Avenue

Road F – Vandalia Avenue and Chauncey Circle

Alley H – Twin Leaf Street

Alley I – Mills Gap Road

Ben Smith

From: Ben Smith
Sent: Friday, December 14, 2018 7:55 AM
To: 'Denise Suits'
Cc: Chris Seamster; Gareth Avant
Subject: RE: [Ext] Briar Chapel Road Names
Attachments: SubdivisionForm.pdf

Thank you!

We are going to go with the following 5 road names for this phase.

Vandalia Avenue
Chauncey Circle
Mills Gap Road
Copper Leaf Avenue
Twin Leaf Street

-Ben

From: Denise Suits <denise.suits@chathamnc.org>
Sent: Thursday, December 13, 2018 5:01 PM
To: Ben Smith <BSmith@mckimcreed.com>
Subject: RE: [Ext] Briar Chapel Road Names

Hey Ben,

These names are all approved.

Thanks,
Denise

From: Ben Smith [<mailto:BSmith@mckimcreed.com>]
Sent: Thursday, December 13, 2018 7:29 AM
To: Denise Suits <denise.suits@chathamnc.org>
Cc: Chris Seamster <cseamster@mckimcreed.com>; Gareth Avant <GAvant@mckimcreed.com>
Subject: RE: [Ext] Briar Chapel Road Names

Thank you for checking the names. I have included 6 new choices. Let me know if I need to provide more possibilities.

Mills Gap Road
Copper Leaf Avenue
Twin Leaf Street
Monteith Drive
Balfour Run
Deardom Way

Thanks again!

-Ben

From: Denise Suits <denise.suits@chathamnc.org>
Sent: Wednesday, December 12, 2018 3:56 PM
To: Ben Smith <BSmith@mckimcreed.com>
Subject: RE: [Ext] Briar Chapel Road Names

Hey Ben,

Vandalia Avenue and Chauncey Circle are ok. Hearthstone is duplicate for Orange County, Canterbury Road is duplicate for Chatham and Newcastle is duplicate for both Chatham and Orange. You need three more road names.

Denise

From: Ben Smith [<mailto:BSmith@mckimcreed.com>]
Sent: Wednesday, December 12, 2018 11:41 AM
To: Denise Suits <denise.suits@chathamnc.org>
Cc: Chris Seamster <cseamster@mckimcreed.com>; Gareth Avant <GAvant@mckimcreed.com>; Lesa Chavis <lesa.chavis@chathamnc.org>
Subject: [Ext] Briar Chapel Road Names

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Hi Denise,

Hope you are well. We will be submitting Phase 12 to the planning department this Friday and we were hoping to get approval of the road names we plan to use prior to the submittal. Sorry for the short notice on this one. I have attached a site plan showing the roads and the names we are proposing. The road form is attached as well. Please let us know if we can provide any additional information.

Thanks!

Ben Smith | Civil Designer

T 919.233.8091

1730 Varsity Drive, Venture IV Building, Suite 500, Raleigh, NC 27606-2689

bsmith@mckimcreed.com | www.mckimcreed.com

[Voted "Best Firm To Work For"](#) - *Zweig Group*



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SUBDIVISION: BRIAR CHAPEL-PHASE 12

DIRECTIONS: NORTH ON US 15-501 FROM PITTSBORO. TURN LEFT ONTO
MANNS CHAPEL ROAD. LEFT ONTO GREAT RIDGE PARKWAY.

DEVELOPER: NNP BRIAR CHAPEL LLC **PHONE NUMBER:** 919-951-0712

Major Development: X **Minor Development:** _____
Development with acreage of 10 acreage of 10 acres or more: _____

Proposed road names	OK to submit	DUPLICATED Do not Submit
<u>VANDALIA AVENUE</u>	_____	_____
<u>CHAUNCEY CIRCLE</u>	_____	_____
<u>MILLS GAP ROAD</u>	_____	_____
<u>COPPER LEAF AVENUE</u>	_____	_____
<u>TWIN LEAF STREET</u>	_____	_____
_____	_____	_____
_____	_____	_____

DATE SUBMITTED TO EOC: 12/12/2018
SUBMITTED BY: CHRIS SEAMSTER/MCKIM & CREED, INC.
EOC OFFICER: _____
DATE ROADS APPROVED: _____
DATE FINAL PLAT RECEIVED: _____
DATE GIVEN TO 911: _____
DATE CONTACT MADE WITH NUMBERS: _____
SURROUNDING COUNTY CONTACTED: _____
PERSON SPOKEN WITH: _____
COMMENTS: _____

revised 4/19/02

