



Briar Chapel - Phase 8

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CHATHAM COUNTYPhase: Phase 8

Section: _____

MAJOR SUBDIVISIONReview For: ☐ Preliminary PlatSubmittal Date: 7/12/2013**REVIEW CHECKLIST – BRIAR CHAPEL**

Attach all supporting documentation regarding these approvals.

#	PRELIMINARY PLAT	APPROVAL DATE
1	<input checked="" type="checkbox"/> Date of TRC Pre-Submittal Meeting (Per Condition 18 of 2012 CUP Revision)	10/17/2012
2	<input checked="" type="checkbox"/> 20 Copies of Plat/Detailed Site Plan (folded) <i>Sheet C1.0</i>
3	<input checked="" type="checkbox"/> Application
4	<input checked="" type="checkbox"/> Road name approval(s)	3/18/2013
5	<input checked="" type="checkbox"/> NCDOT Road Plan approval (if public roads)	7/8/2013
	[N/A] NCDOT Commercial Driveway Permit (if applicable)
6	<input checked="" type="checkbox"/> Erosion Control Plan approval	2/28/2013
7	<input checked="" type="checkbox"/> U. S. Army Corps of Engineers 404 Permit (if applicable)	8/21/2009
8	<input checked="" type="checkbox"/> NCDENR Water Quality 401 Permit (if applicable)	8/31/2009
9	<input checked="" type="checkbox"/> Statement regarding historical structures and/or features <i>See CUP Response letter, item 16.</i>	7/11/2013
10	<input checked="" type="checkbox"/> NCDENR DWQ Wastewater Collection System Extension	5/30/2013
11	<input checked="" type="checkbox"/> NCDENR DWQ Wastewater Treatment/Reclaimed Water/Spray Irrigation Permit	5/18/2009
12	<input checked="" type="checkbox"/> Chatham County Water Plan Approval & Fees Paid per Condition 13A of 2012 CUP Revision. <i>(\$3,500 per lot fee paid on 6/6/2013)</i>	5/31/2013
13	<input checked="" type="checkbox"/> NCDENR Water Main Extension	6/27/2013
14	<input checked="" type="checkbox"/> NCDENR Authorization to Construct / Water System	6/27/2013
15	<input checked="" type="checkbox"/> Updated impervious surface calculations sheet for phase of development	7/11/2013
16	<input checked="" type="checkbox"/> Conditional Use Permit Stipulations Response & Master Plan updates: Per Condition 18 of 2012 CUP revision: (1 electronic copy and 1 hard copy of each) <input checked="" type="checkbox"/> Updated T-zone tracking table <input checked="" type="checkbox"/> Grading Plan <i>(See construction drawing set included with submittal)</i> <input checked="" type="checkbox"/> Utility Plan in compliance with Condition #7 of 2012 CUP Revision <i>(See construction drawing set included with submittal)</i>	
17	<input checked="" type="checkbox"/> Stormwater Management Plan with detailed Hydraulic calculations and final construction drawings per Condition 4 and 18 <i>(See construction drawing set and calculations included with submittal)</i>	
18	<input checked="" type="checkbox"/> Any other permits or approval letters necessary to obtain Prelim Plat approval <i>Approval of Stormwater Management Plan (6/27/2013)</i>	
	[N/A] Preliminary plat fees (\$45.00 per residential lot) Paid <u>\$4,860.00</u> Date <u>7/12/2013</u> { X } 1 electronic copy of all items above (see Digital Document Requirements)	
	Comments:	

Date Complete Application Rec'd: _____ / _____ / _____ By: _____

P.O. Box 54
Pittsboro, NC 27312
Tel: (919) 542-8204
Fax: (919) 542-2698

☒ Preliminary
☐ Final

**BRIAR CHAPEL
MAJOR SUBDIVISION APPLICATION**

Phase / Section : Phase 8

Subdivision Applicant:

Name: Lee Bowman, Project Manager
Address: 16 Windy Knoll Circle
Chapel Hill, NC 27516
Phone:(W) (919) 951-0712
Phone:(H) _____ Fax: (919) 951-0701
E-Mail lb Bowman@newlandco.com

Township: Baldwin Zoning: CUD-CC
Flood Map # 3710976500J Zone: AE
Watershed: WS-IV PA

Subdivision Owner:

Name: NNP Briar Chapel LLC
Address: 16 Windy Knoll Circle
Chapel Hill, NC 27516
Phone:(W) (919) 951-0712
Phone:(H) _____ Fax: (919) 951-0701
E-Mail lb Bowman@newlandco.com

P. I. N. # 9765-64-6065.000, 9765-83-4383
Parcel # 87090 & 89623 (AKPAR)
Existing Access Road: S.R. #1528/1526
S.R. road name Andrews Store / Parker Herndon

Total Project Acreage: 1,586.26 ac
Total Acreage of Phase/Section: 24.7 ac

Total # of Lots: Overall 2,389
Total # of Lots: 110

Name and date of contact with Chatham County Historical Association: 10/17/2013

Type of new road: ☒ Private/ Length: 0 LF ☒ Public/ Length: 3,950 LF
Road Surface: **Water System:** **Sewer System:**
☒ paved ☒ Public System ☒ Public Utility
Chatham County On-Site WWTP

List other facilities in Phase/Section: commercial, recreation, etc., and the approximate acreage or square footage:

Lee Bowman Date 7/11/13 Lee Bowman Date 7/11/13
Signature of Applicant Signature of Owner

For Office Use Only:

Notes: _____

Approved by County Commissioners: CUP/Sketc Feb. 15, 2005

Fee Paid: _____ Date: _____

Preliminary Plan
Final Plat

ADJACENT LAND OWNERS (Property owners across a road, easement, or waterway are considered adjacent land owners):

Legal notices are mailed to these owners, please **type or write neatly, and include zip codes.**

1. MOORE FAMILY PARTNERSHIP	11.
409 MOUNTAIN LANE	
PITTSBORO, NC 27312	
2. BRIAR CHAPEL COMMUNITY ASSOC INC.	12.
50101 GOVERNORS DRIVE, SUITE 100	
CHAPEL HILL, NC 27517	
3. COUNTY OF CHATHAM	13.
PO BOX 1809	
PITTSBORO, NC 27312	
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

FOR OFFICE USE ONLY

Date's Adjacent Owner Letters were mailed out

Preliminary	/ /	/ /
-------------	-----	-----

Dates and Actions of Planning Board Meetings

Preliminary	/ /	[] Appv'd	[] Denied	[] Tabled
Final	/ /	[] Appv'd	[] Denied	[] Tabled

Dates and Actions of Board of Commissioners Meetings

CC/CUP/ Sketch	2 /15 05/	[X] Appv'd	[] Denied	[] Tabled
Preliminary	/ /	[] Appv'd	[] Denied	[] Tabled
Final	/ /	[] Appv'd	[] Denied	[] Tabled

Conditions stipulated by Planning Board or Board of Commissioners (label as sketch, preliminary or final):

See A RESOLUTION APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A REQUEST BY MITCH BARRON ON BEHALF OF NEWLAND COMMUNITIES FOR BRIAR CHAPEL PLANNED RESIDENTIAL DEVELOPMENT dated February 15, 2005 for list of Conditional Use Permit and subdivision sketch design stipulations and conditions.

Financial Guarantee (if applicable):

Submitted by: _____
 Guarantee Type: _____
 Amount: \$ _____
 Acceptance Date: ____/____/____
 Expiration Date: ____/____/____
 Release Date: ____/____/____
 Release Payable to: _____

_____/____/____
 Planning Department

Date

Chris Seamster

From: Lee Bowman <lbowman@newlandco.com>
Sent: Wednesday, April 10, 2013 3:24 PM
To: Chris Seamster
Subject: FW: Proposed New Street Names for Future Briar Chapel Phase(s)
Attachments: BC South - street name submittal - 3-13-13LBRev.docx

From: Denise Suits [<mailto:denise.suits@chathamnc.org>]
Sent: Monday, March 18, 2013 3:29 PM
To: Lee Bowman
Subject: RE: Proposed New Street Names for Future Briar Chapel Phase(s)

Hey Lee,

Sorry took so long but I had to check our roads and Orange County roads against this list. I have attached the ones that can be approved. Let me know which ones you decide to use and I'll approve them for Lynn.

Thanks,
Denise

From: Lee Bowman [<mailto:lbowman@newlandco.com>]
Sent: Thursday, March 14, 2013 10:04 AM
To: Lesa Chavis; Denise Suits
Subject: Re: Proposed New Street Names for Future Briar Chapel Phase(s)

My apologies, thanks.
Lee Bowman
Project Manager
Newland Communities
16 Windy Knoll Circle
Chapel Hill, NC 27516
T. 919.951.0712
C. 919.697.1323
F. 919.951.0711
lbowman@newlandco.com
www.newlandco.com
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From: Lesa Chavis [<mailto:lesa.chavis@chathamnc.org>]
Sent: Thursday, March 14, 2013 06:50 AM
To: Denise Suits <denise.suits@chathamnc.org>
Cc: Lee Bowman

Subject: FW: Proposed New Street Names for Future Briar Chapel Phase(s)

I am forwarding this email to Denise Suits. Denise is responsible for approving road names.

Thanks,

Lesla Chavis, E-911 Specialist
Chatham County Emergency Operations

From: Lee Bowman [<mailto:lb Bowman@newlandco.com>]
Sent: Thursday, March 14, 2013 9:08 AM
To: Lesla Chavis
Subject: Proposed New Street Names for Future Briar Chapel Phase(s)

Lesla,

Attached is the list of potential street names for some upcoming phases at Briar Chapel. In all, we need forty-one (41) new street names.

I realize this list may seem overwhelming, but past history being any indication of current, usually half the ones that I submit are already used. At any rate, feel free to give me a call to discuss further.

I would hope to have this list approved by April 1st in order to get into the Planning Dept. Thanks.

Lee Bowman
Project Manager
Newland Communities
16 Windy Knoll Circle
Chapel Hill, NC 27516
T. 919.951.0712
C. 919.697.1323
F. 919.951.0711
lb Bowman@newlandco.com
www.newlandco.com
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_____ Information from ESET NOD32 Antivirus, version of virus signature database 8115 (20130314)

The message was checked by ESET NOD32 Antivirus.

<http://www.eset.com>

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8130 (20130318)

Briar Chapel Street Name Submittal

- 1) Juneberry Drive
- 2) Merry Mountain Trail
- 3) Salamander Way
- 4) Walking Stick Trail
- 5) Rabbit Warren Road
- 6) Kuralt View
- 7) Murrow Manor
- 8) Brinkley Dell
- 9) Cosell Corner
- 10) Griffith Glen
- 11) Bavier Crest
- 12) Scuppernong Street
- 13) Phacelia Point
- 14) Harperella Landing
- 15) Dion Skipper Vista
- 16) Bachman Sparrow Glade
- 17) Chinquapin Path
- 18) Yaupon Highlands
- 19) Cherokee Clay Patch
- 20) Mattamuskett View
- 21) Artillery Punch Place
- 22) Tin Pan Alley
- 23) Gumbo Alley
- 24) Rally Alley
- 25) Gameland Circle
- 26) Old Piedmont Circle
- 27) Box Elder Way
- 28) Hop Hornbeam Road
- 29) Overcup Trail
- 30) Slippery Elm Drive
- 31) Turkey Oak Trail
- 32) Yellow Buckeye Drive
- 33) Salt Cedar Lane
- 34) Sawtooth Road
- 35) Reedy Fork Trail
- 36) Nancy Branch Drive
- 37) Leopard Branch Bend
- 38) Haven Creek Road
- 39) South Fork Avenue
- 40) Little Yellow Lane
- 41) American Copper Bend
- 42) Brown Elfin Vista
- 43) Silvery Blue Road
- 44) Pearl Crescent Court
- 45) Monarch Trail
- 46) Cloudywing Drive
- 47) Skipperling Street
- 48) Glassywing Grove
- 49) Crystal Skipper Avenue

Briar Chapel Street Name Submittal

- 50) Long Dash Dell
- 51) Whirlabout Way
- 52) Sachem Lane
- 53) Longtail Court
- 54) Tawny Crescent Road
- 55) Sleepy Orange Drive
- 56) Loon Landing
- 57) Golden Eagle Way
- 58) Peregrine Place
- 59) Puffin Street
- 60) Snowy Owl Court
- 61) Nighthawk Trail
- 62) Purple Martin Avenue
- 63) Barn Swallow Bend
- 64) Carolina Wren Way
- 65) Snowbunting Street
- 66) Indigo Bunting Court
- 67) Condoret Corner
- 68) McIver Landing
- 69) LaGrange Lane
- 70) Valena Drive
- 71) Chewacla Lane
- 72) Piedmont Passage
- 73) Cloverluck Way
- 74) Cara Way
- 75) Pepperdew Alley
- 76) Grassy Swale
- 77) Chapelton Court
- 78) Beaverbuilt Passage
- 79) Boulder Field Landing
- 80) Heartleaf Drive
- 81) Artifact Alley



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

DIVISION OF HIGHWAYS

ANTHONY J. TATA
SECRETARY

July 8, 2013

Chatham County

Subject: Subdivision Final Plan Review – Phase 8 – Briar Chapel Subdivision off of Great Ridge Parkway near SR 1528

Newland Communities, LLC
c/o Bill Mumford
13777 Ballantyne Corporate Pl, Ste. 550
Charlotte, North Carolina 28277

Dear Mr. Mumford:

The N. C. Department of Transportation, Division of Highways has reviewed the construction plans signed and sealed by Grant Livengood P.E. on June 18, 2013 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*.
2. A Driveway Permit is not needed for this package.
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 for this type of work (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 ditches piped or other encroachment prior to addition to the state maintained system are subject to an encroachment agreement, as are utility companies, when the road is added.

6. The typicals as shown in the 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 Mr. Jim Willis, Erosion and Sediment Control Officer, 80 East, P.O. Box 130, Pittsboro, N.C. 27312, phone (919) 545-8343 for his 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 four (4) copies 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 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. Public 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 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 a minimum of 6' from edge of pavement, 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,



Jeff B. Loflin, PE
District Engineer

Attachments

cc: Richard W. Hancock, P.E., Division Engineer
Justin Bullock, P.E., Chatham County Maintenance Engineer
Lynn Richardson, Chatham County Planning
Chris Seamster, RLA 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

**North Carolina Department of Transportation
Division of Highways
Petition for Road Addition**

ROADWAY INFORMATION: (Please Print/Type)

County: _____ Road Name: _____
(Please list additional street names and lengths on the back of this form.)

Subdivision Name: _____ Length (miles): _____

Number of occupied homes having street frontage: _____ Located (miles): _____

miles N ☐ S ☐ E ☐ W ☐ of the intersection of Route _____ and Route _____
(Check one) (SR, NC, US) (SR, NC, US)

We, the undersigned, being property owners and/or developers of _____ in
_____ County, do hereby request the Division of Highways to add the above described road.

CONTACT PERSON: Name and Address of First Petitioner. (Please Print/Type)

Name: _____ Phone Number: _____

Street Address: _____

Mailing Address: _____

PROPERTY OWNERS

Name

Mailing Address

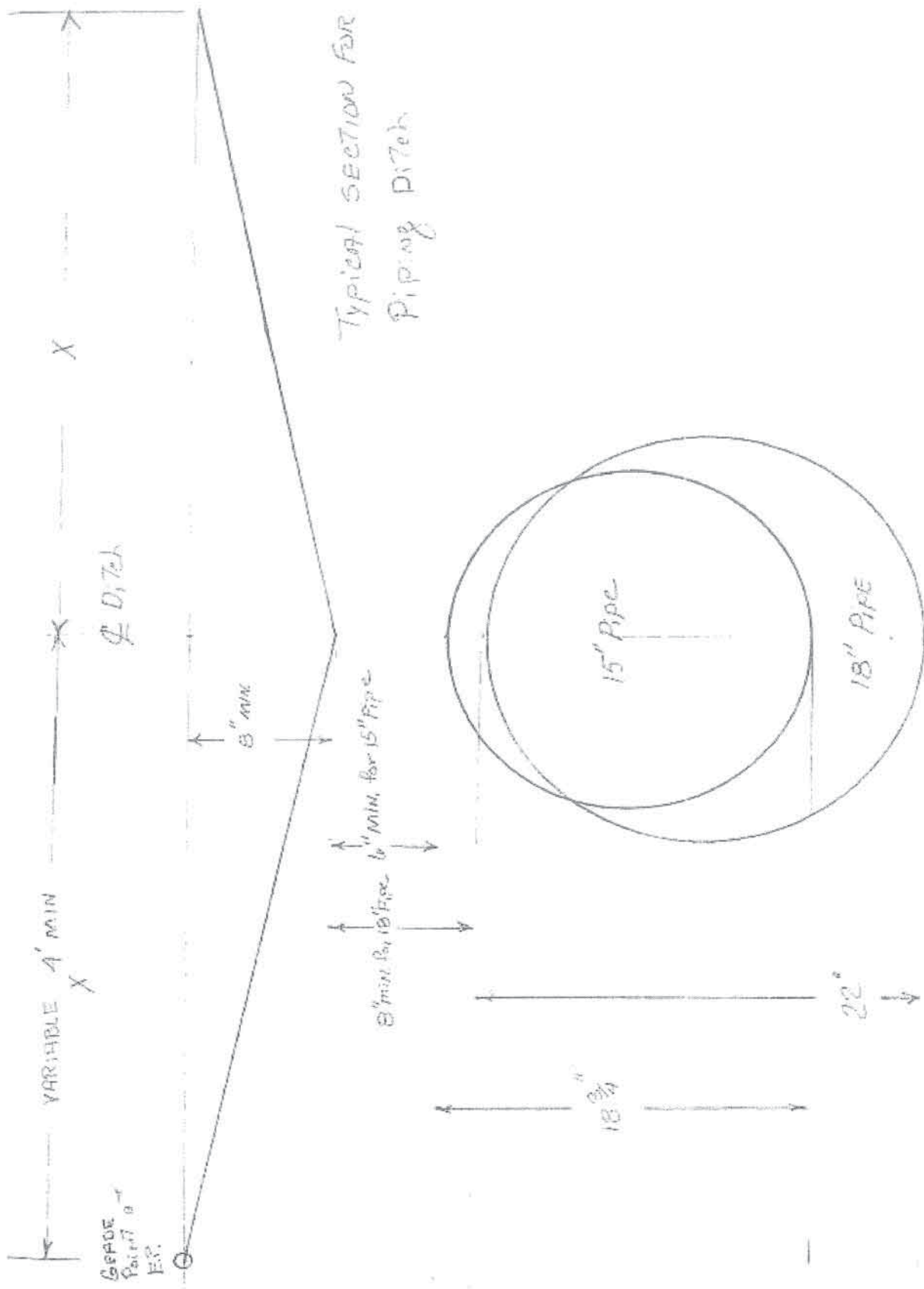
Telephone

1. Complete Information Section
2. Identify Contact Person (This person serves as spokesperson for petitioner(s)).
3. Attach four (4) copies of recorded subdivision plat or property deeds, which refer to candidate road.
4. Adjoining property owners and/or the developer may submit a petition. Subdivision roads with prior NCDOT review and approval only require the developer's signature.
5. If submitted by the developer, encroachment agreements from all utilities located within the right of way shall be submitted with the petition for Road addition. However, construction plans may not be required at this time.
6. Submit to District Engineer's Office.

☐ Rural Road ☐ Subdivision platted prior to October 1, 1975 ☐ Subdivision platted after September 30, 1975

If this road meets the requirements necessary for addition, we agree to grant the Department of Transportation a right-of-way of the necessary width to construct the road to the minimum construction standards of the NCDOT. The right-of-way will extend the entire length of the road that is requested to be added to the state maintained system and will include the necessary areas outside of the right-of-way for cut and fill slopes and drainage. Also, we agree to dedicate additional right-of-way at intersections for sight distance and design purposes and execute said right-of-way agreement forms that will be submitted to us by representatives of the NCDOT. The right-of-way shall be cleared at no expense to the NCDOT, which includes the removal of utilities, fences, other obstructions, etc.

[illegible]



**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

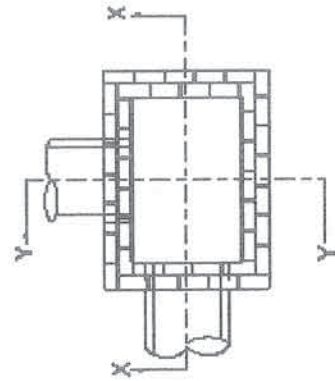
CAPITAL FOUNDRY OF VIRGINIA, INC.
P.O. BOX 2212
VIRGINIA BEACH, VIRGINIA 23450

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

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

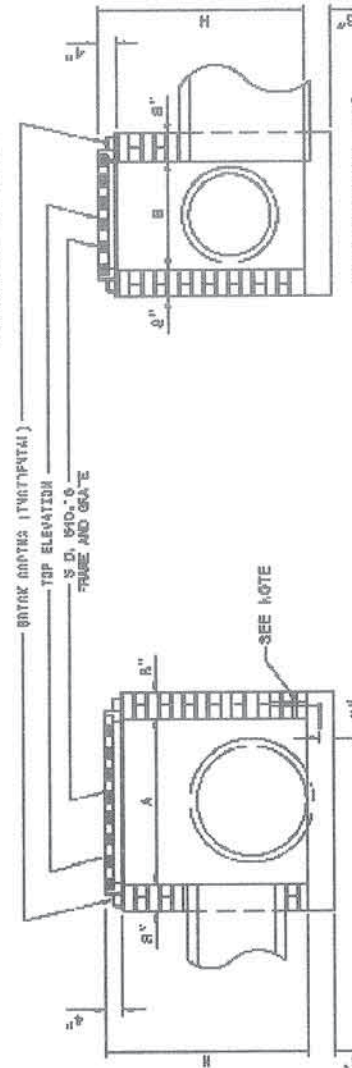
GENERAL NOTES:

MORTAR JOINTS $\frac{1}{8}$ " +/- $\frac{1}{16}$ " THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMER FOR CONSTRUCTION OF THE BOTTOM SLAB.
USE #4 BAR CORNERS AT 12" CENTERS.
DEJOINT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
PROVIDE ALL CATCH BASINS OVER 8'-0" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.16B.
USE BRICK OF 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 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0" - QUANTITIES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE DRUMS 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.



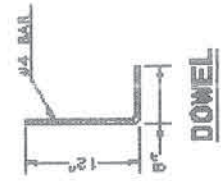
PLAN

WITH CORNER REMOVED



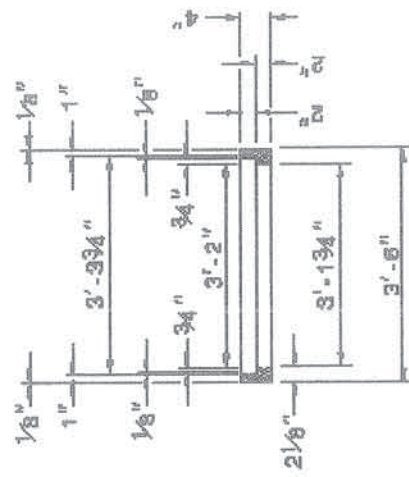
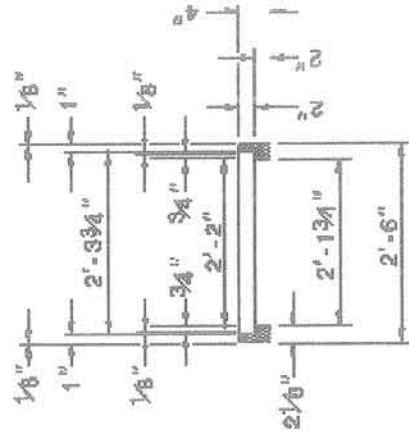
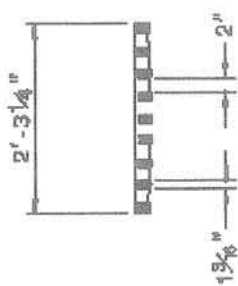
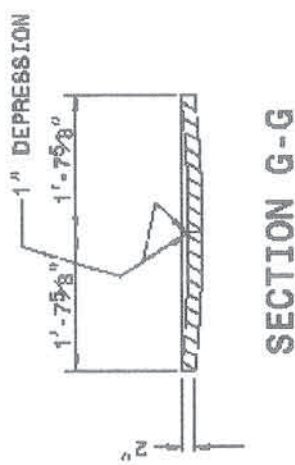
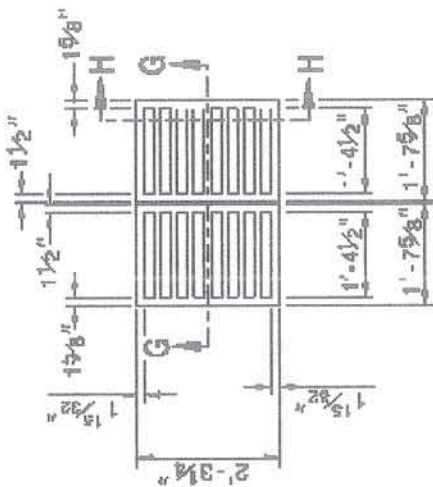
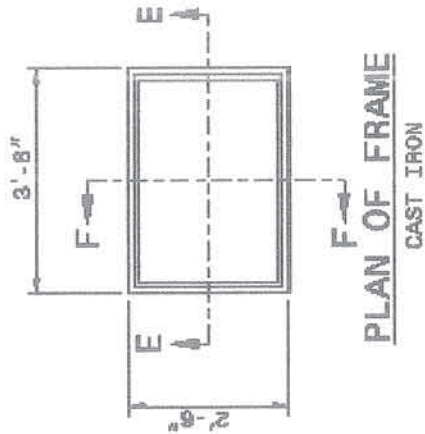
SECTION X-X

SECTION Y-Y



DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)				REDUCTIONS FOR ONE PIPE			
PIPE	SPAN	WIDTH	MIN. HEIGHT	CUBIC YARDS CONCRETE	CUBIC YARDS BRICK MASONRY	TOTAL BRICK MASONRY PER FOOT HT. 1/2 IN. 1/2 IN. 1/2 IN.	R.C.
D	A	B	H	BOTTOM SLAB	WALL PER FOOT HT.	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.582	0.132
15"	3'-0"	2'-0"	2'-3"	0.268	0.313	0.582	0.132
18"	3'-0"	2'-0"	2'-6"	0.268	0.313	0.582	0.132
24"	3'-0"	2'-0"	3'-0"	0.268	0.313	0.582	0.132
30"	3'-0"	2'-0"	3'-6"	0.268	0.313	0.582	0.132



**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: _____

Applicants Name: _____

P.E. SEAL

Date Submitted: _____

(Reference Page 11, Item 10)

11/07/2003

ATTACHMENT "A"

Seeding and mulching shall be in accordance with Section 880 of the North Carolina Standard Specifications for Roads and Structures, except that Articles 880-8(B) shall not apply. Final determination of soil type shall be made by the Engineer. The following rates in pounds per acre shall apply:

SANDY SOIL

50# - KY 31 Tall Fescue or
Alta Tall Fescue

5# - Centipede

50# - Pensacola Bahiagrass

500# - Fertilizer

4000# - Limestone

CLAY SOIL

100# - KY 31 Tall Fescue or
Alta Tall Fescue

15# - Kenblue Bluegrass

500# - Fertilizer

4000# - Limestone

Add 10# Kobe or Korean Lespedeza and 10# Millet to the above mixture from May 1 to August 31.

On cut and fill slopes 2:1 or steeper, add 30# Sericea Lespedeza from January 1 to December 31.

Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, 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.

BRIAR CHAPEL

PHASE 8

PRELIMINARY PLAT SUBMITTAL

U.S. HWY 15-501 and MANN'S CHAPEL ROAD

CHATHAM COUNTY, NORTH CAROLINA

DATE: JUNE 18, 2013

COUNTY AND AGENCY CONTACTS	
A. Chatham County Planning Department Dorris Building 60 East Street Pittsboro, NC 27312 (919) 542-2712 phone (919) 542-2713 fax Contact: Jeff B. Larkin, PE Email: jlarlin@chathamnc.org	E. NCDOT Division of Engineering 300 DOT Drive P.O. Box 1184 Asheboro, NC 27204 (919) 542-2712 phone (919) 542-2713 fax Contact: Jeff B. Larkin, PE Email: jlarlin@ncdot.gov
B. Chatham County Public Works Dorris Building 60 East Street Pittsboro, NC 27312 (919) 542-2712 phone (919) 542-2713 fax Contact: Dan Larkins, PE Email: dlarkins@chathamnc.org	F. NCDENR Division of Water Quality 2021 Crabtree Blvd., Suite 250 Raleigh, NC 27604 (919) 791-4500 phone (919) 791-4501 fax Email: Annette.Larson@ncdenr.gov
C. Chatham County Health Department Dorris Building 60 East Street Pittsboro, NC 27312 (919) 542-2712 phone (919) 542-2713 fax Contact: Susan Larkins, PE Email: slarkins@chathamnc.org	G. NCDENR Division of Environmental Health 1634 Mail Service Center Raleigh, NC 27609-1634 (919) 791-6074 phone (919) 791-6075 fax Email: richard.davis@ncdenr.gov
D. Chatham County Public Works Dorris Building 60 East Street Pittsboro, NC 27312 (919) 542-2712 phone (919) 542-2713 fax Contact: Susan Larkins, PE Email: slarkins@chathamnc.org	H. NCDENR Division of Water Quality 2021 Crabtree Blvd., Suite 250 Raleigh, NC 27604 (919) 791-4500 phone (919) 791-4501 fax Email: Larry.Nichols@ncdenr.gov



VICINITY MAP
NTS

PROJECT DATA

NAME OF PROJECT:
PHASE 8
CHATHAM COUNTY, NORTH CAROLINA

OWNER:
NAP BRIAR CHAPEL, LLC
18 WINDY KNOLL CIRCLE
CHAPEL HILL, NC 27516
(919) 940-0070
FAX: (919) 940-0070
PLANS: KEVIN GRAHAM
CONTACT: KEVIN GRAHAM
EMAIL: kgraham@briarchapels.com

PREPARED BY:
MCKIM & CREED
1730 VARIETY DRIVE, SUITE 500
RALEIGH, NORTH CAROLINA 27606
(919) 233-8031
FAX: (919) 233-8031
CONTACT: GRANT LIVENGOOD, PE
EMAIL: glivengood@mckimcreed.com

PROJECT AREA: 24.7 AC

These improvements shall be constructed in accordance with the following plans, and the Standard Specifications of NCDOT and Chatham County.



BRIAR CHAPEL®

by **Newland COMMUNITIES**



MCKIM & CREED

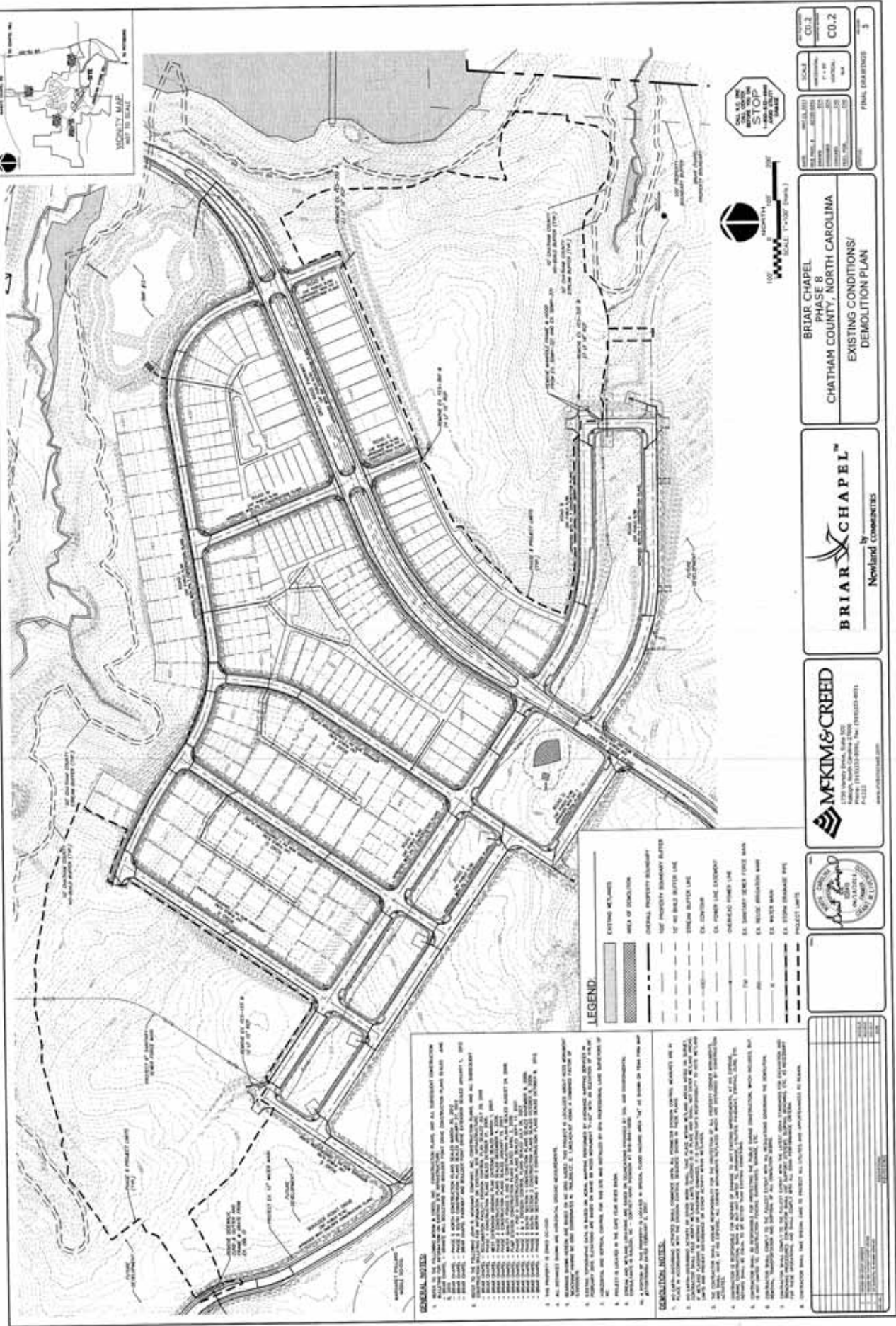
1730 Variety Drive, Suite 500
Raleigh, North Carolina 27606
Phone: (919) 233-8091, Fax: (919) 233-8031
F-1222
www.mckimcreed.com

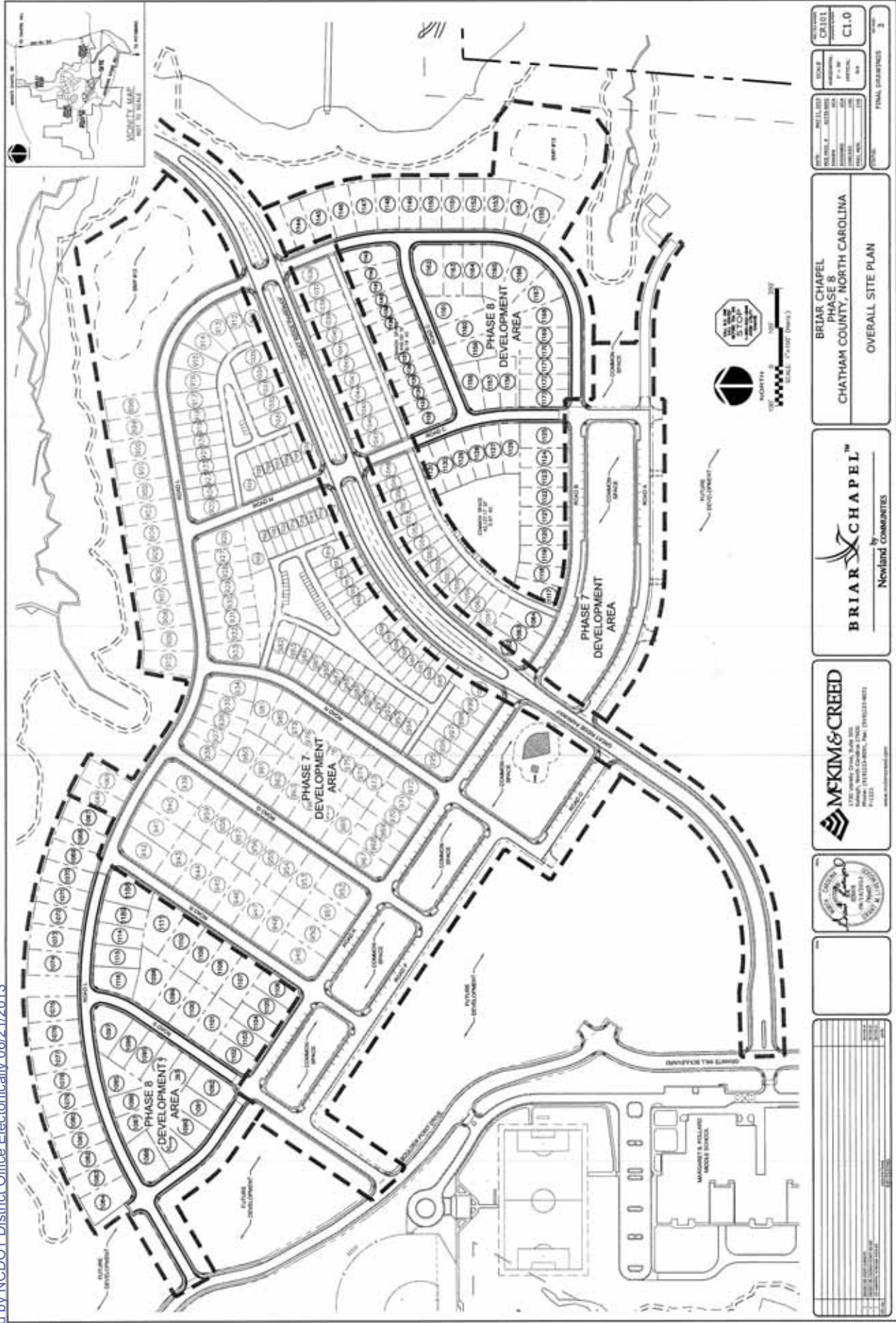
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C8.5	UTILITY PLAN
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C8.100	STAGE 95 DISSECTION CONTROL PLAN

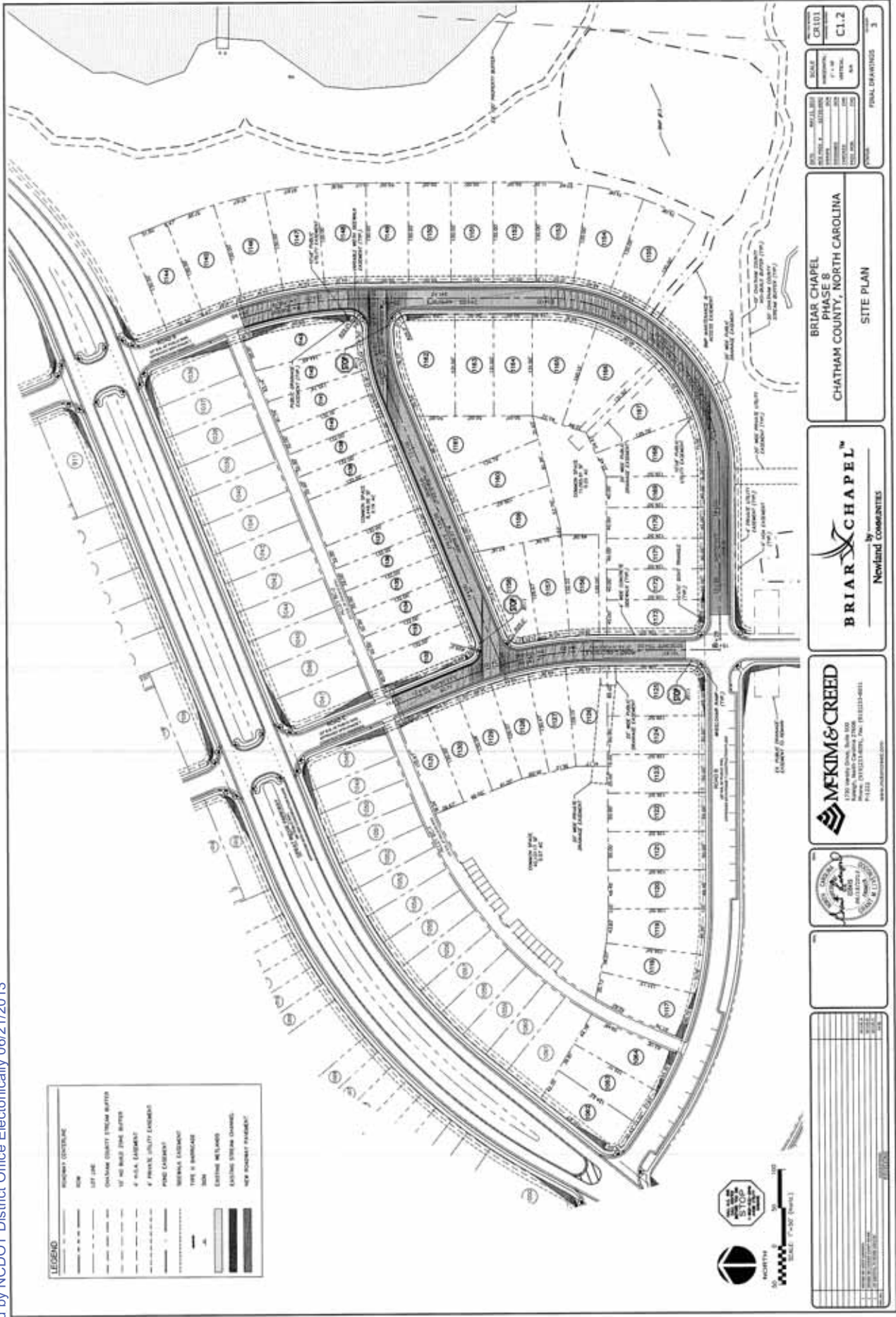


FINAL DRAWINGS







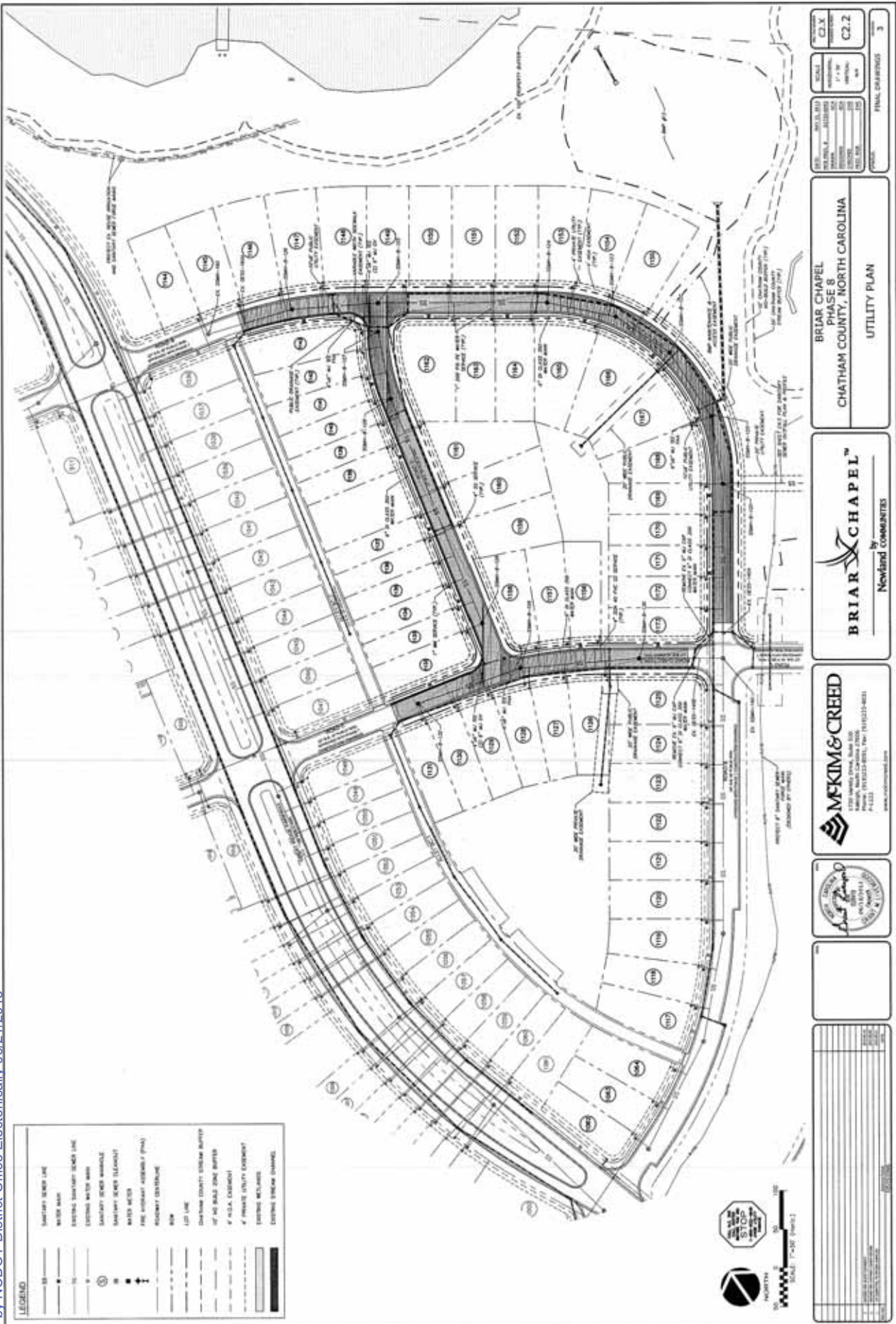




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 <p>McKIM & CREED 1100 Spruill Drive, Suite 300 Greenville, SC 29615 Phone: (813) 212-4999, Fax: (716) 611-4601 F: 1225 www.mckimandcreed.com</p>		<p>BRIAR CHAPEL™ by Newland CONCRETE</p>		<p>BRIAR CHAPEL PHASE 8 CHATHAM COUNTY, NORTH CAROLINA</p>		<p>UTILITY PLAN</p>	
<p>DATE: 08/13/2013 DRAWN BY: J. J. JONES CHECKED BY: J. J. JONES DESIGNED BY: J. J. JONES TITLE: CON.</p>		<p>SCALE: 1" = 10' 1" = 10' 1" = 10'</p>		<p>C2.1</p>		<p>3</p>	



NO. 100

DATE 06/21/2013

DESCRIPTION ISSUED FOR PERMIT

NO. 101

DATE 07/08/2013

DESCRIPTION APPROVED FOR CONSTRUCTION

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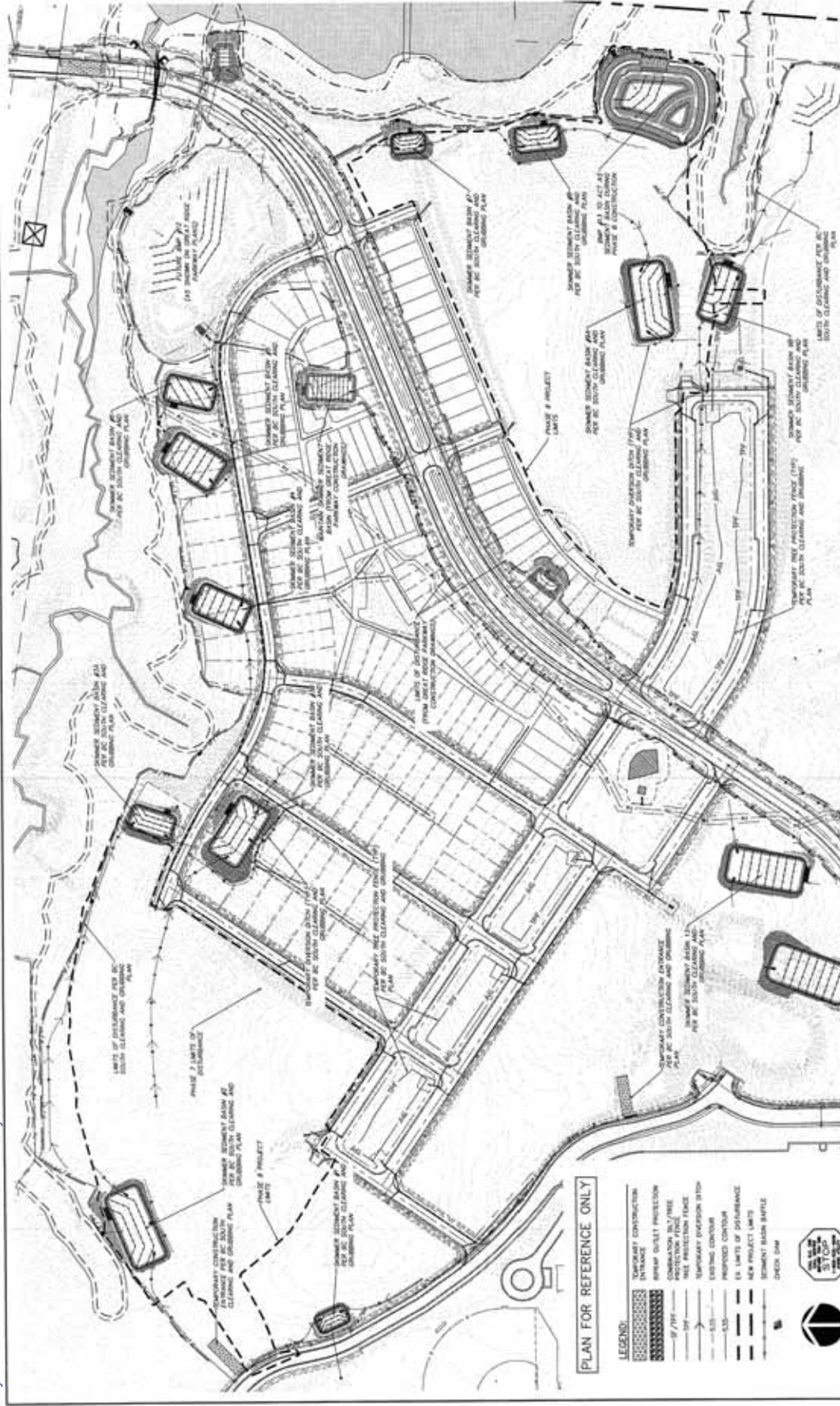
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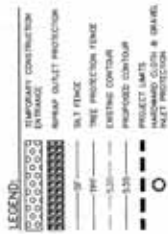
96.00

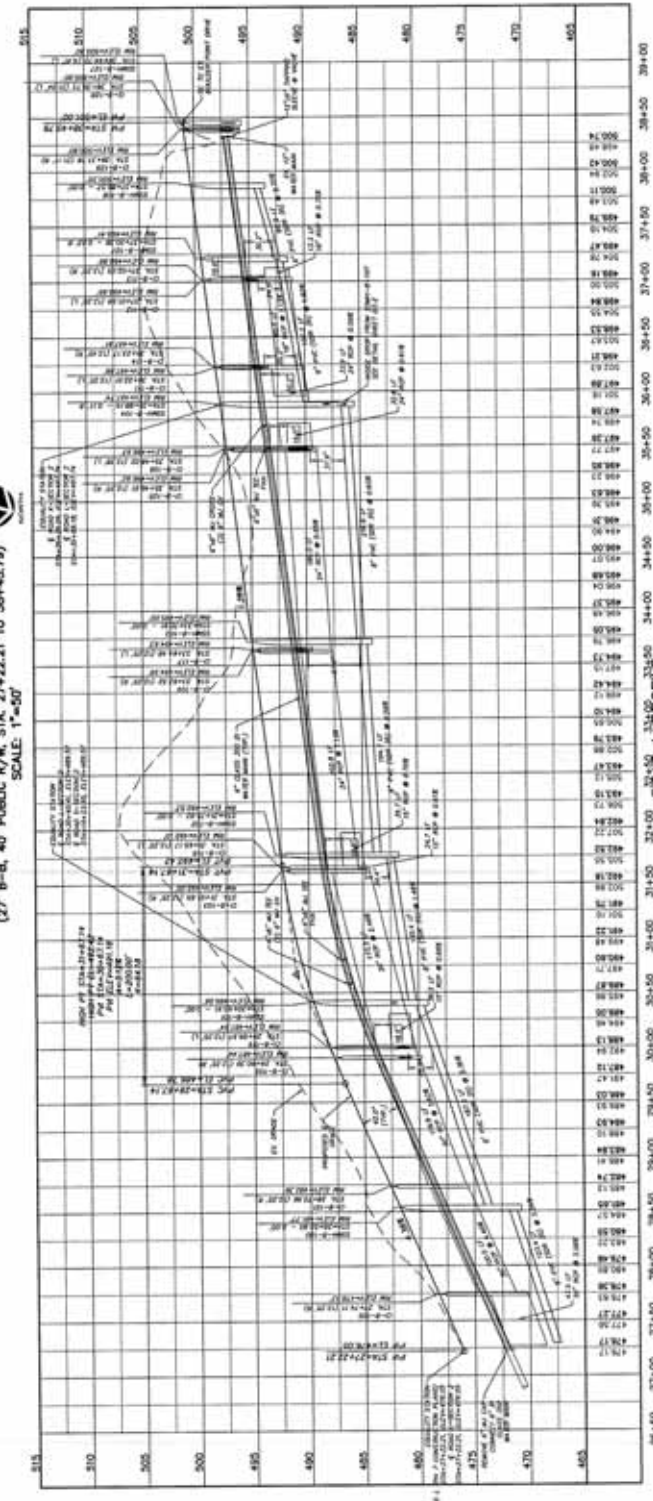
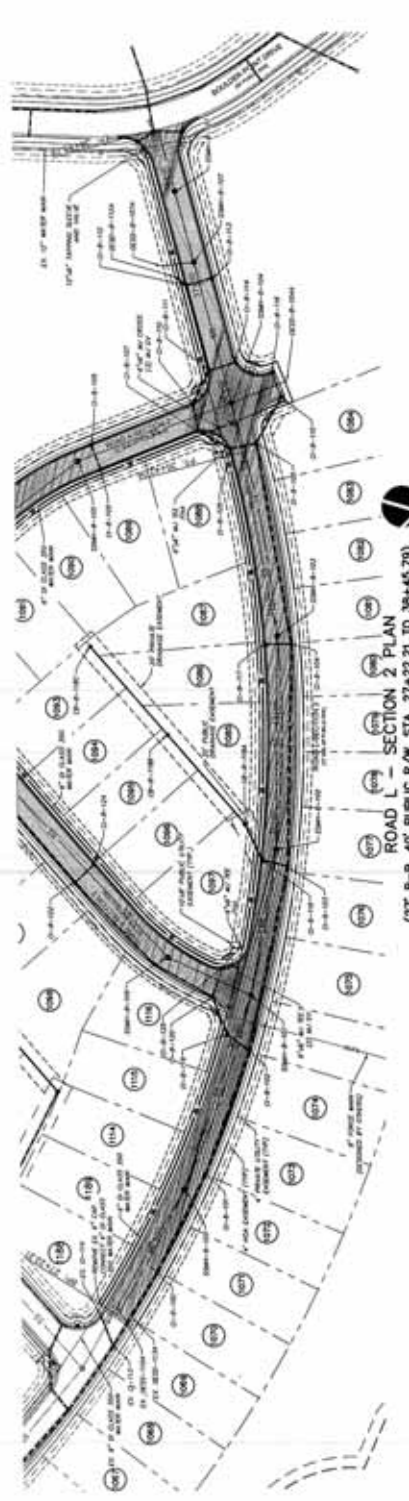
1.00

LOT

97.00

[illegible]





27 B-B, 40' PUBLIC R/W, STA. 27+22.21 TO 39+45.79
SCALE: (Plan) 1"=50'
SCALE: (Profile) 1"=5'



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS



MKIM & CREED
1200 North Tryon Street, Suite 300
Charlotte, North Carolina 28206
Phone: 704.371.1111
Fax: 704.371.1112
www.mkimandcreed.com

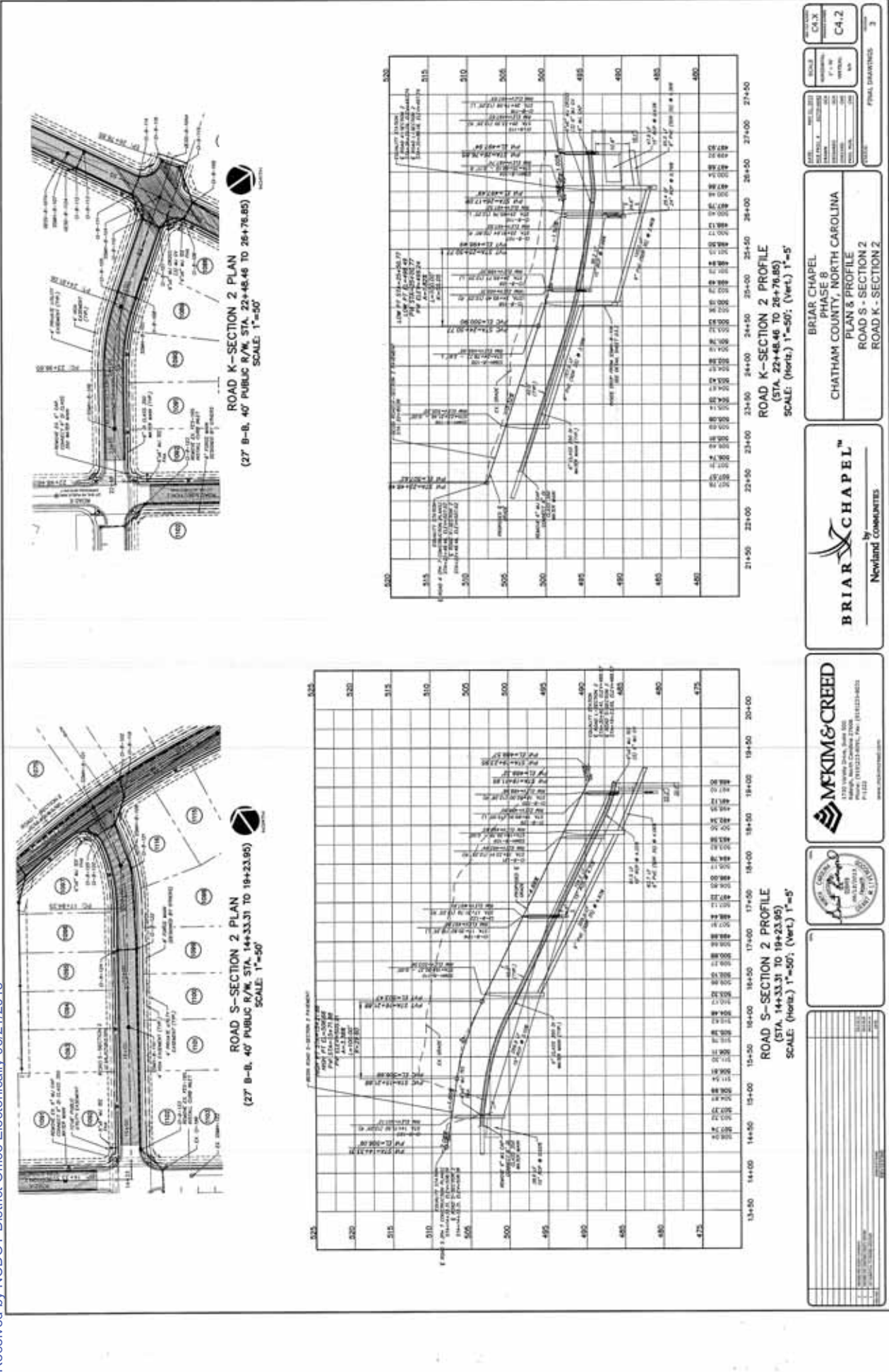


BRIAR CHAPEL™
by
Newland Communities

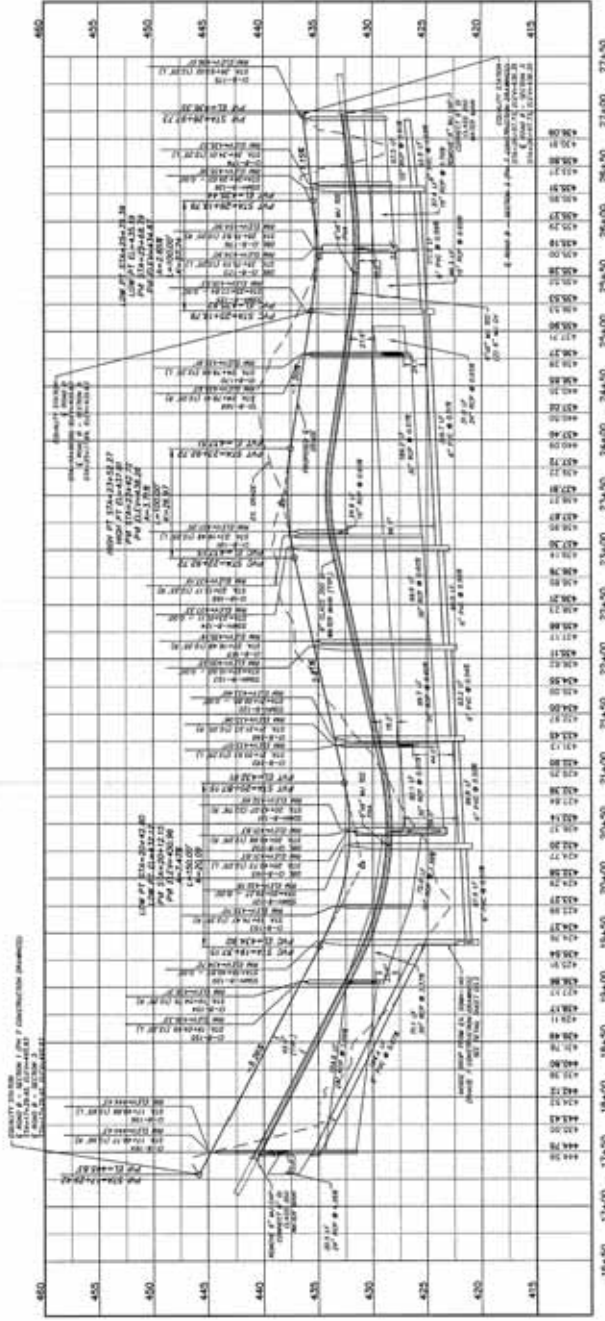
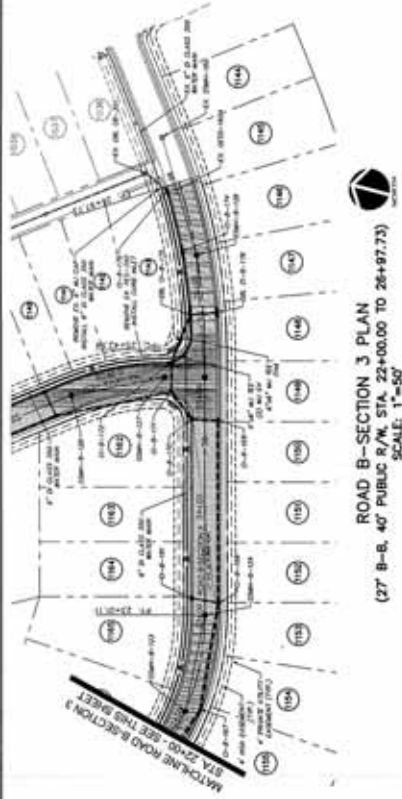
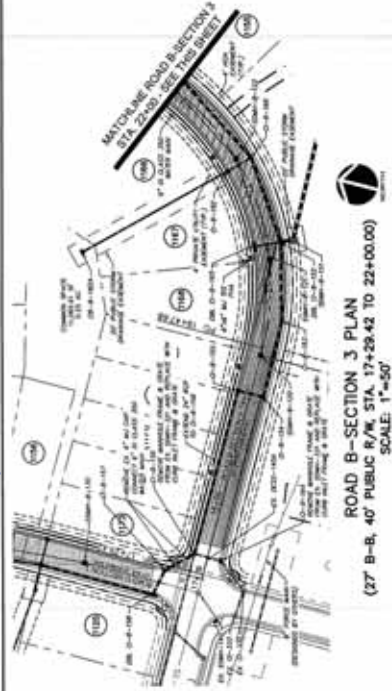
**BRIAR CHAPEL
PHASE B
CHATHAM COUNTY, NORTH CAROLINA
PLAN & PROFILE
ROAD L
STA. 27+22.21 TO STA. 39+45.79**

DATE	DESCRIPTION
07/08/2013	FINAL

SCALE: 1"=50'
C4.1
3



BRIAR & CHAPEL by Newland CONSULTANTS		CHATHAM COUNTY, NORTH CAROLINA PLAN & PROFILE ROAD S - SECTION 2 ROAD K - SECTION 2		BRIAR CHAPEL PHASE 8	
MR. KIM & CREED 1700 University Drive, Suite 500 Raleigh, North Carolina 27608 P: 919.222.8870, Fax: 919.222.8821 www.kimcreed.com		CHATHAM COUNTY 1700 University Drive, Suite 500 Raleigh, North Carolina 27608 P: 919.222.8870, Fax: 919.222.8821 www.kimcreed.com		CHATHAM COUNTY 1700 University Drive, Suite 500 Raleigh, North Carolina 27608 P: 919.222.8870, Fax: 919.222.8821 www.kimcreed.com	
DATE: 06/21/2013 DESIGNED BY: J. L. LEE CHECKED BY: J. L. LEE IN CHARGE: J. L. LEE SCALE: 1"=50'		DATE: 06/21/2013 DESIGNED BY: J. L. LEE CHECKED BY: J. L. LEE IN CHARGE: J. L. LEE SCALE: 1"=50'		DATE: 06/21/2013 DESIGNED BY: J. L. LEE CHECKED BY: J. L. LEE IN CHARGE: J. L. LEE SCALE: 1"=50'	
PROJECT: CHATHAM COUNTY, NORTH CAROLINA PHASE: 8 SECTION: S-SECTION 2 SCALE: 1"=50'		PROJECT: CHATHAM COUNTY, NORTH CAROLINA PHASE: 8 SECTION: K-SECTION 2 SCALE: 1"=50'		PROJECT: CHATHAM COUNTY, NORTH CAROLINA PHASE: 8 SECTION: K-SECTION 2 SCALE: 1"=50'	

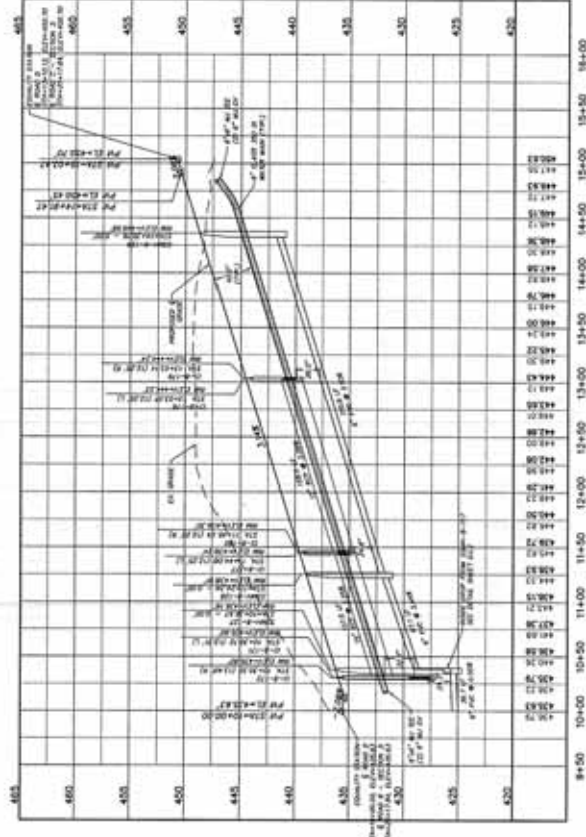
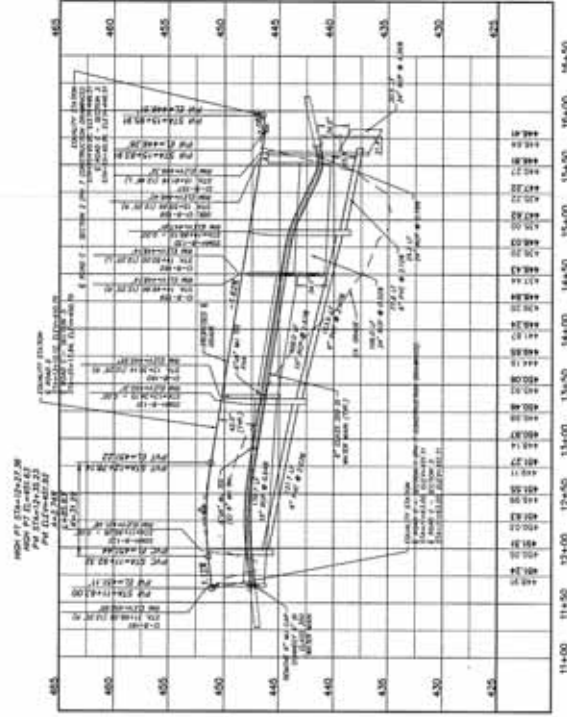
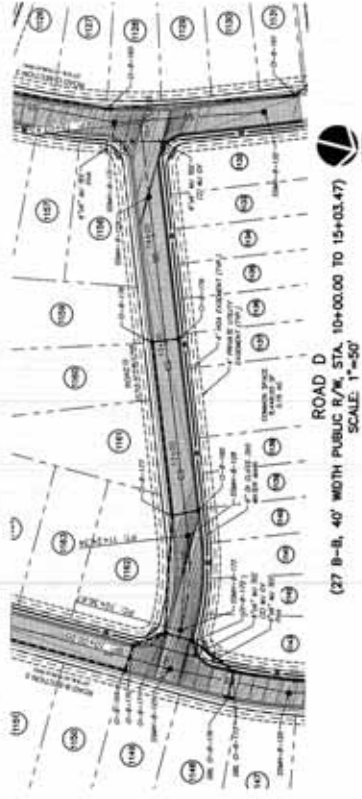
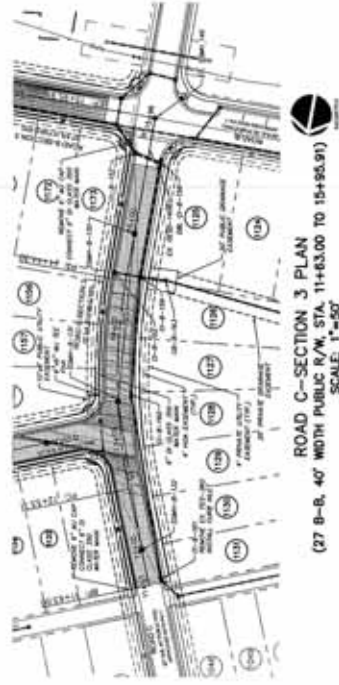


DATE: 06/21/2013	TIME: 10:00 AM
BY: J. L. CREED	FOR: BRIAR CHAPEL
CHECKED: J. L. CREED	DATE: 06/21/2013
APPROVED: J. L. CREED	DATE: 06/21/2013



BRIAR CHAPEL
PHASE 8
CHATHAM COUNTY, NORTH CAROLINA
PLAN & PROFILE
ROAD B-SECTION 3
STA. 17+23.42 TO STA. 26+97.73

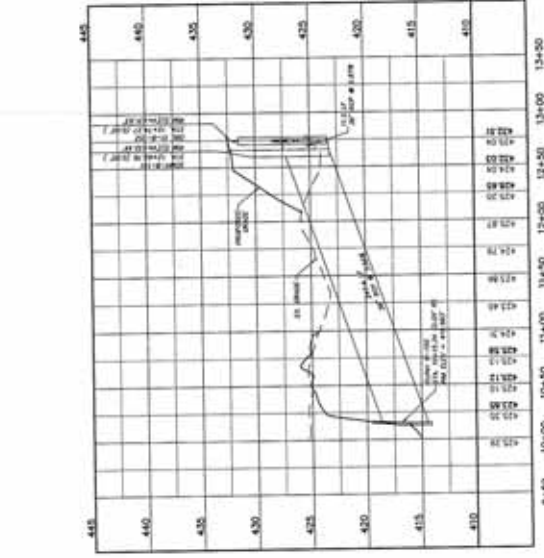
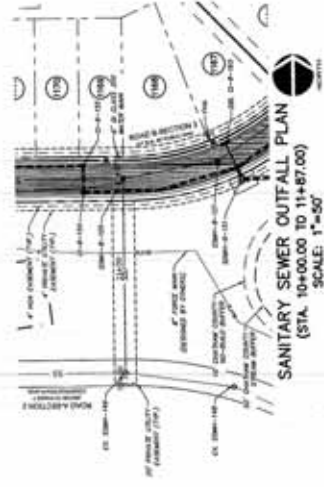
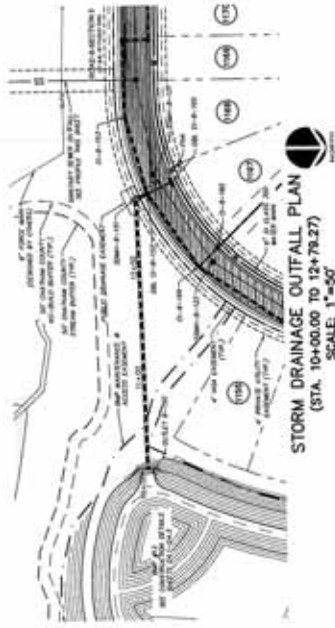
DATE: 06/21/2013	TIME: 10:00 AM
BY: J. L. CREED	FOR: BRIAR CHAPEL
CHECKED: J. L. CREED	DATE: 06/21/2013
APPROVED: J. L. CREED	DATE: 06/21/2013



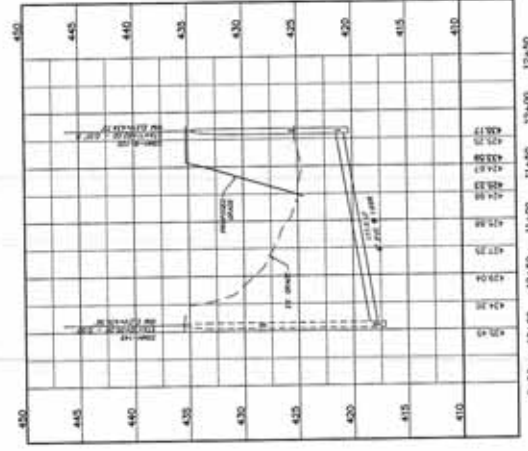
ROAD C-SECTION 3 PROFILE
(STA. 11+63.00 TO 15+95.91)
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

ROAD D PROFILE
(STA. 10+00.00 TO 15+03.47)
SCALE: (HORIZ.) 1"=50'; (VERT.) 1"=5'

[illegible]



STORM DRAINAGE OUTFALL PROFILE
(STA. 10+00.00 TO 12+79.27)
SCALE: (HORIZ.) 1"=50'; (VERT.) 1"=5'

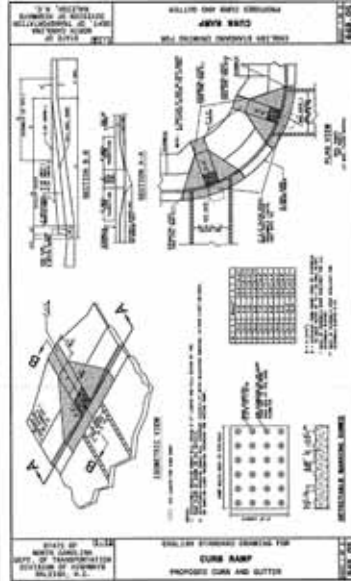
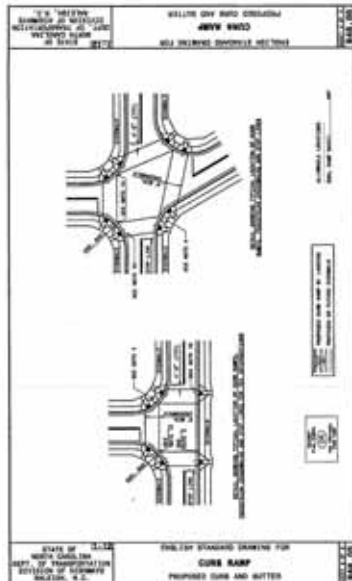

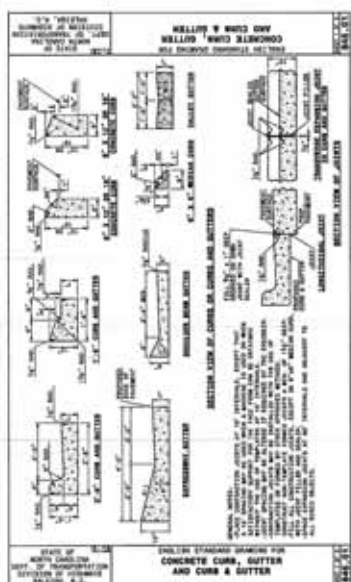
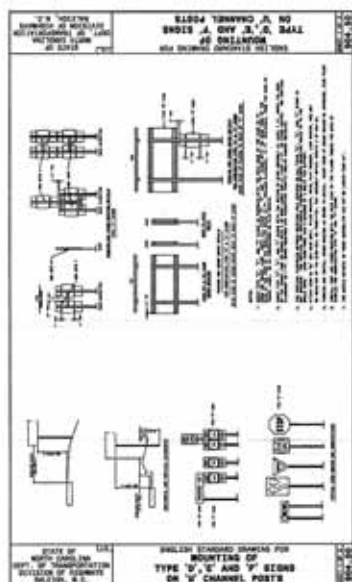
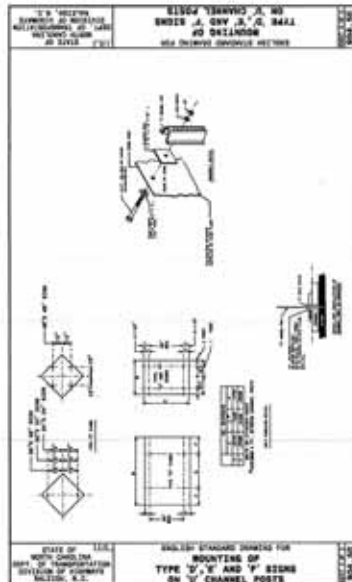
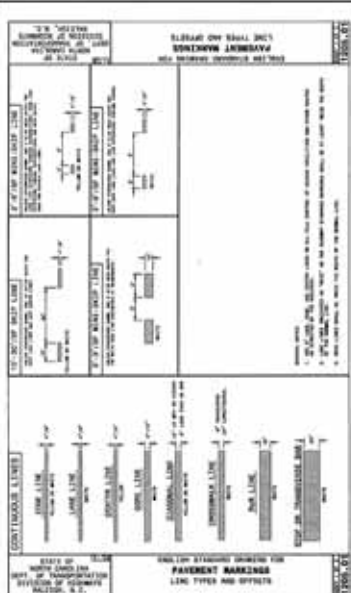
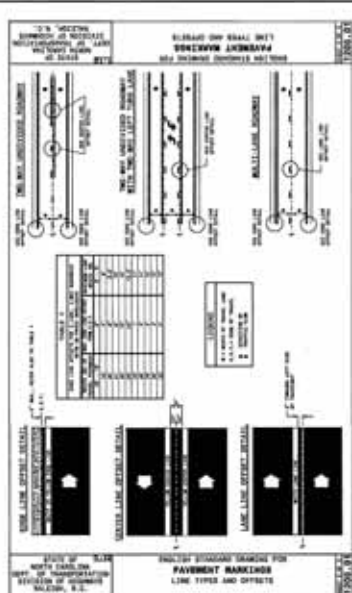



SANITARY SEWER OUTFALL PROFILE
(STA. 10+00.00 TO 11+87.00)
SCALE: (HORIZ.) 1"=50'; (VERT.) 1"=5'

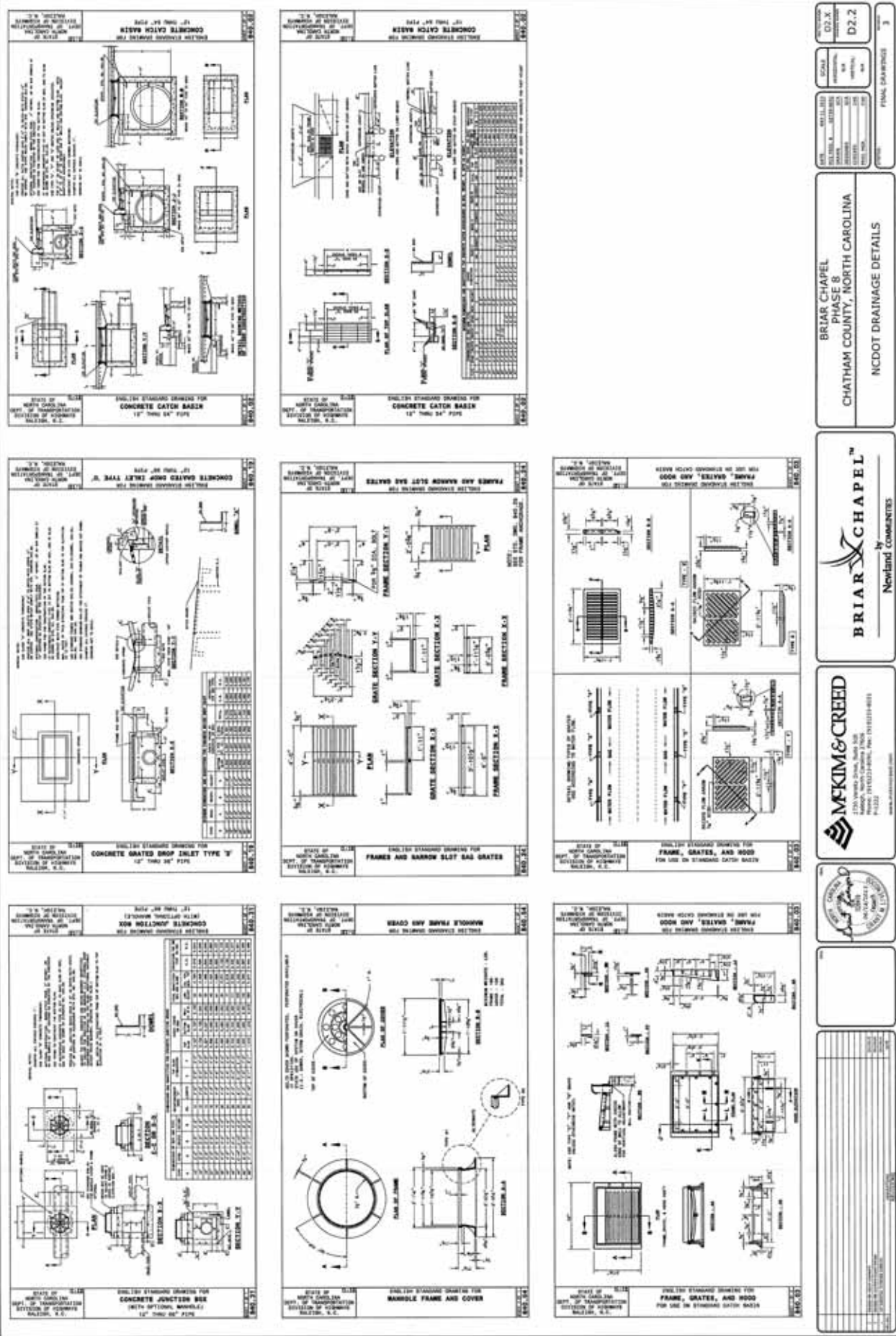
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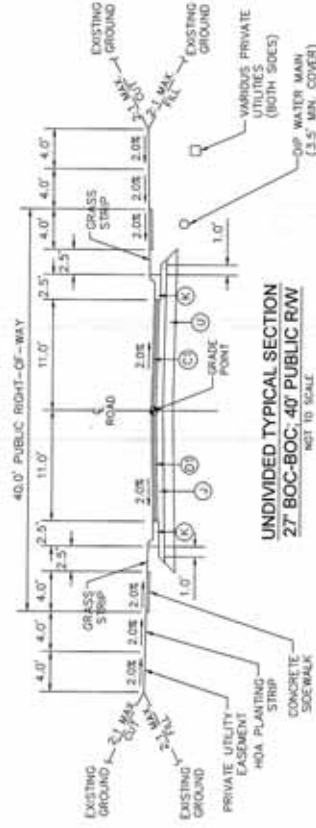


[illegible]



 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>	
 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>	
 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>		 <p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>	
<p>SECTION 100.00 CURE RAMP PROPOSED CURB AND GUTTER</p>					

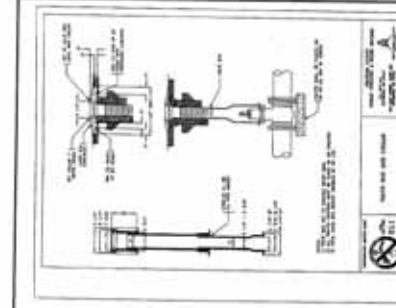
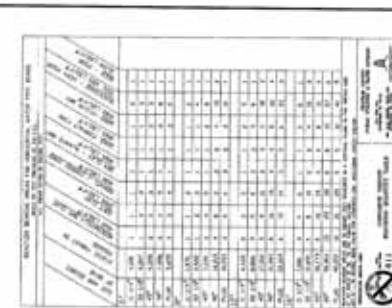
BRIAR CHAPEL PHASE 8 CHATHAM COUNTY, NORTH CAROLINA NCDOT ROADWAY DETAILS	
BRIAR & CHAPEL Newland Communities	
MCKIM & CREED 11200 Wilshire Drive, Suite 500 Raleigh, North Carolina 27606 P-1222 www.mckimandcreed.com	
NCDOT STANDARD DRAWING FOR CURE RAMP NOTES	
1. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 2. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 3. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 4. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 5. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 6. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 7. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 8. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 9. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY. 10. THE CURE RAMP SHALL BE CONSTRUCTED TO THE DESIGN SPEED OF THE ROADWAY.	



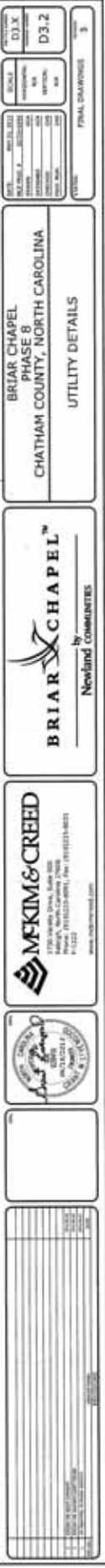


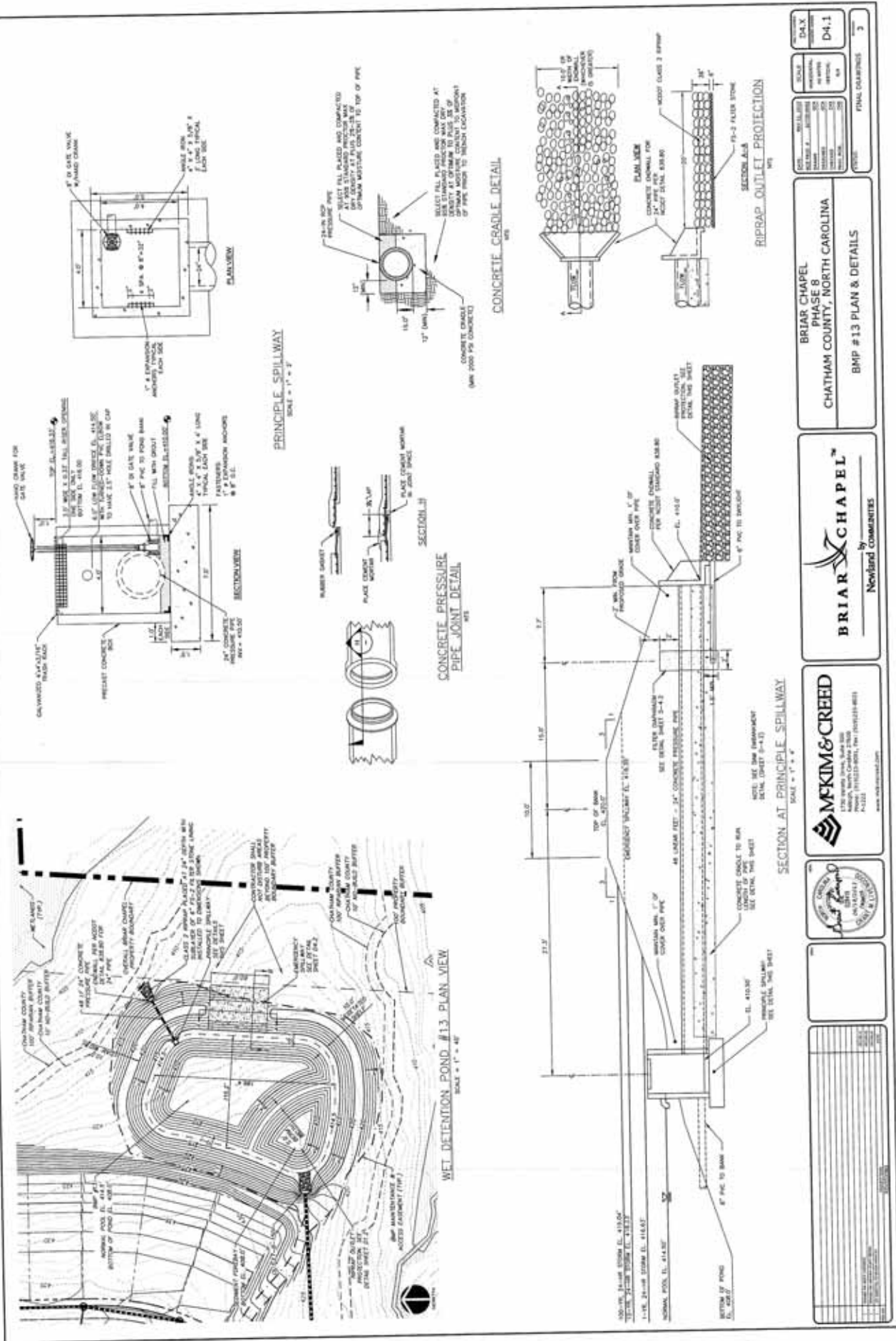
PAVEMENT SCHEDULE	
1	1" 95% ASPHALT SURFACE COURSE AT AN AVERAGE RATE OF 110 LBS PER SQ. YARD
2	2" 95% ASPHALT SURFACE COURSE AT AN AVERAGE RATE OF 220 LBS PER SQ. YARD
3	8" COMPACTED A/C STONE BASE COURSE
4	30" C&G AND OTHER
5	COMPACTED SUBGRADE
6	DETERMINED FILL (IF NECESSARY) COORDINATE WITH GEOLOGICAL ENGINEER

 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	 MKIM & CREED 1700 University Drive, Suite 200 Raleigh, North Carolina 27608 Phone: (919) 873-8800, Fax: (919) 873-8801 www.mkimandcreed.com	 BRIAR CHAPEL by Newland CONSTRUCTORS	BRIAR CHAPEL PHASE 8 CHATHAM COUNTY, NORTH CAROLINA ROADWAY TYPICAL SECTIONS	DATE: 07/11/2013 DESIGNED BY: JST/BJD CHECKED BY: JST/BJD IN CHARGE: JST/BJD SCALE: AS SHOWN	DATE: 07/11/2013 DESIGNED BY: JST/BJD CHECKED BY: JST/BJD IN CHARGE: JST/BJD SCALE: AS SHOWN	DATE: 07/11/2013 DESIGNED BY: JST/BJD CHECKED BY: JST/BJD IN CHARGE: JST/BJD SCALE: AS SHOWN
				FIGURE NO. D2.3	FIGURE NO. D2.3	FIGURE NO. D2.3
SHEET NO. 1 OF 1				TOTAL SHEETS: 1		

[illegible]

 McKIM & CREED 1000 WOODBINE DRIVE, SUITE 300 FARMINGTON, CT 06030 Phone: (860) 625-8801, Fax: (860) 625-4211 F-1122 www.mckimandcreed.com		BRIAR & CHAPEL™ by Newland Communities		BRIAR CHAPEL PHASE B CHATHAM COUNTY, NORTH CAROLINA UTILITY DETAILS		DATE: 04/11/2017 DESIGNED BY: JACOBSON CHECKED BY: JACOBSON SCALE: 1/8" = 1'-0" SHEET NO.: 01X TOTAL SHEETS: 3	
							





BRIAR CHAPEL PHASE 8 CHATHAM COUNTY, NORTH CAROLINA BMP #13 PLAN & DETAILS	
BRIAR CHAPEL Newland CONCRETE	
McKIM & CREED 1750 North Street, Suite 100 Raleigh, NC 27601 P-2021	
DATE: 07/08/2013 SCALE: AS SHOWN SHEET: 13 OF 13	DATE: 07/08/2013 SCALE: AS SHOWN SHEET: 13 OF 13
FINAL CHECKSHEET: 3	



									
<p>STATE OF NORTH CAROLINA COUNTY OF _____</p>		<p>MKIM & CREED ARCHITECTS 1200 S. W. 10th Ave. Aurora, North Carolina 27006 Phone: (919) 231-9891, Fax: (919) 231-4611 FAX</p>		<p>BRIAR CHAPEL™ by _____ Newland Communities</p>		<p>BRIAR CHAPEL PHASE 8 CHATHAM COUNTY, NORTH CAROLINA</p>		<p>BMP #13 PLAN & DETAILS</p>	
<p>DATE: _____</p>		<p>DATE: _____</p>		<p>DATE: _____</p>		<p>DATE: _____</p>			
<p>BY: _____</p>		<p>BY: _____</p>		<p>BY: _____</p>		<p>BY: _____</p>			
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STORM DRAINAGE SUMMARY TABLE						
STATIONING	CONCRETE BOX STRUCTURE	CONCRETE BOX STRUCTURE	CONCRETE BOX STRUCTURE	CONCRETE BOX STRUCTURE	PIPE MATERIAL	LENGTH (ft)
0+00-0+10	Storm-1-10	Storm-1-10	Storm-1-10	Storm-1-10	12"	11.4
0+10-0+20	Storm-1-20	Storm-1-20	Storm-1-20	Storm-1-20	12"	20.0
0+20-0+30	Storm-1-30	Storm-1-30	Storm-1-30	Storm-1-30	12"	20.0
0+30-0+40	Storm-1-40	Storm-1-40	Storm-1-40	Storm-1-40	12"	20.0
0+40-0+50	Storm-1-50	Storm-1-50	Storm-1-50	Storm-1-50	12"	20.0
0+50-0+60	Storm-1-60	Storm-1-60	Storm-1-60	Storm-1-60	12"	20.0
0+60-0+70	Storm-1-70	Storm-1-70	Storm-1-70	Storm-1-70	12"	20.0
0+70-0+80	Storm-1-80	Storm-1-80	Storm-1-80	Storm-1-80	12"	20.0
0+80-0+90	Storm-1-90	Storm-1-90	Storm-1-90	Storm-1-90	12"	20.0
0+90-1+00	Storm-2-00	Storm-2-00	Storm-2-00	Storm-2-00	12"	20.0
1+00-1+10	Storm-2-10	Storm-2-10	Storm-2-10	Storm-2-10	12"	20.0
1+10-1+20	Storm-2-20	Storm-2-20	Storm-2-20	Storm-2-20	12"	20.0
1+20-1+30	Storm-2-30	Storm-2-30	Storm-2-30	Storm-2-30	12"	20.0
1+30-1+40	Storm-2-40	Storm-2-40	Storm-2-40	Storm-2-40	12"	20.0
1+40-1+50	Storm-2-50	Storm-2-50	Storm-2-50	Storm-2-50	12"	20.0
1+50-1+60	Storm-2-60	Storm-2-60	Storm-2-60	Storm-2-60	12"	20.0
1+60-1+70	Storm-2-70	Storm-2-70	Storm-2-70	Storm-2-70	12"	20.0
1+70-1+80	Storm-2-80	Storm-2-80	Storm-2-80	Storm-2-80	12"	20.0
1+80-1+90	Storm-2-90	Storm-2-90	Storm-2-90	Storm-2-90	12"	20.0
1+90-2+00	Storm-3-00	Storm-3-00	Storm-3-00	Storm-3-00	12"	20.0
2+00-2+10	Storm-3-10	Storm-3-10	Storm-3-10	Storm-3-10	12"	20.0
2+10-2+20	Storm-3-20	Storm-3-20	Storm-3-20	Storm-3-20	12"	20.0
2+20-2+30	Storm-3-30	Storm-3-30	Storm-3-30	Storm-3-30	12"	20.0
2+30-2+40	Storm-3-40	Storm-3-40	Storm-3-40	Storm-3-40	12"	20.0
2+40-2+50	Storm-3-50	Storm-3-50	Storm-3-50	Storm-3-50	12"	20.0
2+50-2+60	Storm-3-60	Storm-3-60	Storm-3-60	Storm-3-60	12"	20.0
2+60-2+70	Storm-3-70	Storm-3-70	Storm-3-70	Storm-3-70	12"	20.0
2+70-2+80	Storm-3-80	Storm-3-80	Storm-3-80	Storm-3-80	12"	20.0
2+80-2+90	Storm-3-90	Storm-3-90	Storm-3-90	Storm-3-90	12"	20.0
2+90-3+00	Storm-4-00	Storm-4-00	Storm-4-00	Storm-4-00	12"	20.0
3+00-3+10	Storm-4-10	Storm-4-10	Storm-4-10	Storm-4-10	12"	20.0
3+10-3+20	Storm-4-20	Storm-4-20	Storm-4-20	Storm-4-20	12"	20.0
3+20-3+30	Storm-4-30	Storm-4-30	Storm-4-30	Storm-4-30	12"	20.0
3+30-3+40	Storm-4-40	Storm-4-40	Storm-4-40	Storm-4-40	12"	20.0
3+40-3+50	Storm-4-50	Storm-4-50	Storm-4-50	Storm-4-50	12"	20.0
3+50-3+60	Storm-4-60	Storm-4-60	Storm-4-60	Storm-4-60	12"	20.0
3+60-3+70	Storm-4-70	Storm-4-70	Storm-4-70	Storm-4-70	12"	20.0
3+70-3+80	Storm-4-80	Storm-4-80	Storm-4-80	Storm-4-80	12"	20.0
3+80-3+90	Storm-4-90	Storm-4-90	Storm-4-90	Storm-4-90	12"	20.0
3+90-4+00	Storm-5-00	Storm-5-00	Storm-5-00	Storm-5-00	12"	20.0
4+00-4+10	Storm-5-10	Storm-5-10	Storm-5-10	Storm-5-10	12"	20.0
4+10-4+20	Storm-5-20	Storm-5-20	Storm-5-20	Storm-5-20	12"	20.0
4+20-4+30	Storm-5-30	Storm-5-30	Storm-5-30	Storm-5-30	12"	20.0
4+30-4+40	Storm-5-40	Storm-5-40	Storm-5-40	Storm-5-40	12"	20.0
4+40-4+50	Storm-5-50	Storm-5-50	Storm-5-50	Storm-5-50	12"	20.0
4+50-4+60	Storm-5-60	Storm-5-60	Storm-5-60	Storm-5-60	12"	20.0
4+60-4+70	Storm-5-70	Storm-5-70	Storm-5-70	Storm-5-70	12"	20.0
4+70-4+80	Storm-5-80	Storm-5-80	Storm-5-80	Storm-5-80	12"	20.0
4+80-4+90	Storm-5-90	Storm-5-90	Storm-5-90	Storm-5-90	12"	20.0
4+90-5+00	Storm-6-00	Storm-6-00	Storm-6-00	Storm-6-00	12"	20.0
5+00-5+10	Storm-6-10	Storm-6-10	Storm-6-10	Storm-6-10	12"	20.0
5+10-5+20	Storm-6-20	Storm-6-20	Storm-6-20	Storm-6-20	12"	20.0
5+20-5+30	Storm-6-30	Storm-6-30	Storm-6-30	Storm-6-30	12"	20.0
5+30-5+40	Storm-6-40	Storm-6-40	Storm-6-40	Storm-6-40	12"	20.0
5+40-5+50	Storm-6-50	Storm-6-50	Storm-6-50	Storm-6-50	12"	20.0
5+50-5+60	Storm-6-60	Storm-6-60	Storm-6-60	Storm-6-60	12"	20.0
5+60-5+70	Storm-6-70	Storm-6-70	Storm-6-70	Storm-6-70	12"	20.0
5+70-5+80	Storm-6-80	Storm-6-80	Storm-6-80	Storm-6-80	12"	20.0
5+80-5+90	Storm-6-90	Storm-6-90	Storm-6-90	Storm-6-90	12"	20.0
5+90-6+00	Storm-7-00	Storm-7-00	Storm-7-00	Storm-7-00	12"	20.0
6+00-6+10	Storm-7-10	Storm-7-10	Storm-7-10	Storm-7-10	12"	20.0
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6+90-7+00	Storm-8-00	Storm-8-00	Storm-8-00	Storm-8-00	12"	20.0
7+00-7+10	Storm-8-10	Storm-8-10	Storm-8-10	Storm-8-10	12"	20.0
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9+90-10+00	Storm-11-00	Storm-11-00	Storm-11-00	Storm-11-00	12"	20.0
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11+10-11+20	Storm-12-20	Storm-12-20	Storm-12-20	Storm-12-20	12"	20.0
11+20-11+30	Storm-12-30	Storm-12-30	Storm-12-30	Storm-12-30	12"	20.0
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12+30-12+40	Storm-13-40	Storm-13-40	Storm-13-40	Storm-13-40	12"	20.0
12+40-12+50	Storm-13-50	Storm-13-50	Storm-13-50	Storm-13-50	12"	20.0
12+50-12+60	Storm-13-60	Storm-13-60	Storm-13-60	Storm-13-60	12"	20.0
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13+10-13+20	Storm-14-20	Storm-14-20	Storm-14-20	Storm-14-20	12"	20.0
13+20-13+30	Storm-14-30	Storm-14-30	Storm-14-30	Storm-14-30	12"	20.0
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13+90-14+00	Storm-15-00	Storm-15-00	Storm-15-00	Storm-15-00	12"	20.0
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14+20-14+30	Storm-15-30	Storm-15-30	Storm-15-30	Storm-15-30	12"	20.0
14+30-14+40	Storm-15-40	Storm-15-40	Storm-15-40	Storm-15-40	12"	20.0
14+40-14+50	Storm-15-50	Storm-15-50	Storm-15-50	Storm-15-50	12"	20.0
14+50-14+60	Storm-15-60	Storm-15-60	Storm-15-60	Storm-15-60	12"	20.0
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14+80-14+90	Storm-15-90	Storm-15-90	Storm-15-90	Storm-15-90	12"	20.0
14+90-15+00	Storm-16-00	Storm-16-00	Storm-16-00	Storm-16-00	12"	20.0
15+00-15+10	Storm-16-10	Storm-16-10	Storm-16-10	Storm-16-10	12"	20.0
15+10-15+20	Storm-16-20	Storm-16-20	Storm-16-20	Storm-16-20	12"	20.0
15+20-15+30	Storm-16-30	Storm-16-30	Storm-16-30	Storm-16-30	12"	20.0

Please be aware that your project will be covered by the enclosed NPDES General Stormwater Permit NCGO1000 (Construction Activities). You should first become familiar with all of the requirements for compliance with the enclosed general permit.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. Please notify us when you would like to schedule a preconstruction conference. Notification shall be given at least 7 days prior to initiation of activity.

Your cooperation is appreciated.

Sincerely,

A handwritten signature in black ink that reads "Rachael Thorn". The signature is written in a cursive, flowing style.

Rachael Thorn
Lead Sedimentation and Erosion Control Officer
Chatham County Environmental Quality Department

Enclosures: Certificate of Approval
 NPDES Permit



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF

August 21, 2009

Regulatory Division

Action ID. 200121252

Mr. William S. Mumford
NNP – Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, North Carolina 27516

Dear Mr. Mumford:

Reference the Department of the Army (DA) permit issued on October 2, 2006, to Mitch Barron of Newland Communities for impacts associated with the Briar Chapel Development. Also reference the modification to this permit approved in December, 2007. This development is approximately 1,589 acres in size and is located west of US Highway 15-501, north of Andrew's Store Road (SR 1528), and south of Mann's Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina. Coordinates (in decimal degrees) for the site are 35.8251 ° North, 79.1059 ° West. The site contains several unnamed tributaries and adjacent wetlands of Pokeberry Creek and Wilkinson Creek, in the Cape Fear River Basin (8-Digit Cataloging Unit 03030002).

Permanent impacts authorized by this permit and the subsequent 2007 modification totaled 1,666 linear feet of stream channel and 0.4422 acre of wetland, and temporary impacts totaled 359 linear feet of stream channel and 0.156 acre of wetlands. Mitigation was implemented for the unavoidable impacts by: a) Payment into the North Carolina Ecosystem Enhancement Program for the restoration of 0.6655 acre of riparian wetlands; b) Restoration of 2,127 linear feet of stream channel at the Harpers Crossroads Mitigation Site; and c) On-site preservation of 59.3 acres of wetlands and 63,412 linear feet of stream channel.

Also reference your permit modification request received by the Corps on May 8, 2009. This modification was to address impact amounts and location changes associated with roadway crossings in and near the development. Also included within the requested modification were impacts associated with restoration to streams and wetlands as required to satisfy an existing on-site Clean Water Act violation. On May 22, 2009, a Public Notice was issued detailing this modification request which would bring total impacts associated with Briar Chapel to: 2,237 linear feet of permanent stream channel, 634 linear feet of temporary stream channel, 0.4374 acre of permanent wetland impact,

and 0.197 acres of temporary wetland impact. Please note the attached Tables 1, 2, and 3; originally created by your consultant S&EC, which describe the impact history by site number and amount. No additional mitigation was proposed due to the relatively large amount of preservation mitigation required within the original permit.


The Corps has completed the evaluation of your request and concurs with your request for a change in impacts associated with your referenced DA permit including the change to plans as requested. No additional mitigation is required for this modification.

Special condition 1 of your permit is hereby modified to read:

"All work authorized by this permit must be performed in strict compliance with the attached plans, Exhibit A, Exhibit E, and/or Exhibit F which are a part of this permit. These plans reflect the original proposal, Exhibit A; and the modifications as depicted within the January 26, and the revised June 7, 2007, proposals as shown in Exhibit E, and the modification request of May 8, 2009, as shown in Exhibit F. Only the attached modification plans reflect approved changes to the original plans, therefore any additional deviations from the original plans are not approved per this modification and any further modification to the plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation. The temporary impacts as identified on Exhibit E shall be removed by May 1, 2008, or the project shall be considered non-compliant with this condition. In addition, the following time deadlines are hereby established for work considered authorized under this 2009 permit modification: all impacts, both temporary and permanent, as shown in the stream repair and stabilization document received with the modification application on May 8, 2009, must be completed prior to April 15, 2010; and all additional temporary impacts, not requested within the stream repair and stabilization document but requested and authorized under this 2009 modification, shall be removed within 30 days of the completion of each respective crossing. Proper documentation of permit compliance for this 2009 modification shall be submitted to the Corps of Engineers Regulatory Representative via email on or before April 15, 2010, or at the time of each temporary impact removal, respectively. "

Please note that all other permit conditions and exhibits remain in effect as written. Should you have questions, contact Mr. Monte Matthews, Raleigh Regulatory Field Office at telephone (919) 554-4884, Extension 30.

Sincerely,


for/ Jefferson M. Ryscavage
Colonel, U.S. Army
District Commander

Attachments

Copy Furnished (w/o attachment)

Ms. Cyndi Karoly
Division of Water Quality
North Carolina Department of Environment
and Natural Resources
2321 Crabtree Boulevard, Suite 250
Raleigh, NC 27604

Copy Furnished (w/attachment)

Ms. Nicole Thomson
Soil & Environmental Consultants
11010 Raven Ridge Road
Raleigh, NC 27614



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

August 31, 2009



Mr. William S. Mumford
NNP – Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, NC 27516

Re: Briar Chapel, Chatham County
DWQ Project # 20050732, Ver. 13; USACE Action ID. No. 200121252
APPROVAL of 401 Water Quality Certification with Additional Conditions - MODIFICATION

Dear Mr. Mumford:

Attached hereto is a copy of Certification No. 3567 issued to Mr. William S. Mumford of NNP- Briar Chapel, LLC, Inc., dated August 31, 2009. **This Certification replaces the Certification issued to you on January 11, 2008, July 21, 2009, and July 24, 2009.** In addition, you should get any other federal, state or local permits before you go ahead with your project including (but not limited to) Solid Waste, Sediment and Erosion Control, Stormwater, Dam Safety, Non-discharge and Water Supply Watershed regulations.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen Sullins

CHS/cbk/ijm

Attachments: Certificate of Completion

cc: Becky Fox, EPA, 1307 Firefly Road, Whittier, NC 28789
U.S. Army Corps of Engineers, Raleigh Regulatory Field Office, Wilmington District
Lauren Witherspoon, DWQ Raleigh Regional Office
DLR, Raleigh Regional Office
File Copy
Nicole Thomson, S&EC, P.A., 11010 Raven Ridge Road, Raleigh, NC 27614

Filename: 050732Ver13BriarChapel(Chatham)401_IC_MOD2_Revised

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500 to Mr. William S. Mumford of NNP- Briar Chapel, LLC to fill 0.4374 acres of 404/wetland (permanent impact), 0.197 acres 404/wetland (temporary impact), 2,154 linear feet of perennial stream (permanent impact), 612 linear feet of perennial stream (temporary impact), 83 linear feet of intermittent stream (permanent impact), and 22 linear feet of intermittent stream (temporary impact), in the Cape Fear River Basin, to construct the Briar Chapel residential and mixed use development at the site. The site is located west of U.S. Highway 15-501, and north of Andrew's Store Road (SR 1528), and south of Mann's Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina, pursuant to a permit application dated May 8, 2009, and received by the DWQ on May 8, 2009, by Public Notice issued by the USACE on May 22, 2009, and received by the DWQ on May 22, 2009, and by all additional correspondences received by the DWQ on May 20, 2009 and June 25, 2009.

The application and supporting documentation provides adequate assurance that the proposed work will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted in the application materials and as described in the Public Notice. If the project is changed, prior to notification a new application for a new Certification is required. If the property is sold, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions of this Certification. Any new owner must notify the Division and request the Certification be issued in their name. Should wetland or stream fill be requested in the future, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). If any plan revisions from the approved site plan result in a change in stream or wetland impact or an increase in impervious surfaces, the DWQ shall be notified in writing and a new application for 401 Certification may be required. For this approval to be valid, compliance with the conditions listed below is required.

Conditions of Certification:

1. Impacts Approved

The following impacts are hereby approved as long as all of the other specific and general conditions of this Certification (or Isolated Wetland Permit) are met. No other impacts are approved including incidental impacts:

Type of Impact	Amount Approved (Units)	Plan Location or Reference
404/401 Wetlands	0.4374 (acres) – permanent impact	Table 2, Application, and Public Notice
404/401 Wetlands	0.197 (acres) – temporary impact	Table 2, Application, and Public Notice
Stream (perennial)	2,154 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (perennial)	612 (linear feet) – temporary impact	Table 2, Application, and Public Notice
Stream (intermittent)	83 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (intermittent)	22 (linear feet) – temporary impact	Table 2, Application, and Public Notice

Sediment and Erosion Control:

2. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the 404/401 Permit Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur;
4. Sediment and erosion control measures shall not be placed in wetlands or waters without prior approval from the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources or locally delegated program has released the project.
5. Protective Fencing - The outside buffer, wetland or water boundary and along the construction corridor within these boundaries approved under this authorization shall be clearly marked with orange warning fencing (or similar high visibility material) for the areas that have been approved to infringe within the buffer, wetland or water prior to any land disturbing activities.

Continuing Compliance:

6. Mr. William S. Mumford and NNP- Briar Chapel, LLC shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act) and any other appropriate requirements of State law and federal law. If the Division determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the Division may reevaluate and modify this Certification to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H.0507(d). Before modifying the Certification, the Division shall notify Mr. William S. Mumford and NNP- Briar Chapel, LLC and the US Army Corps of Engineers, provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to Mr. William S. Mumford and NNP- Briar Chapel, LLC in writing, shall be provided to the United States Army Corps of Engineers for reference in any Permit issued

pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project;

7. Construction Stormwater Permit NCG010000

Upon the approval of an Erosion and Sedimentation Control Plan issued by the Division of Land Resources (DLR) or a DLR delegated local erosion and sedimentation control program, an NPDES General stormwater permit (NCG010000) administered by DWQ is automatically issued to the project. This General Permit allows stormwater to be discharged during land disturbing construction activities as stipulated by conditions in the permit. If your project is covered by this permit [applicable to construction projects that disturb one (1) or more acres], full compliance with permit conditions including the sedimentation control plan, self-monitoring, record keeping and reporting requirements are required. A copy of this permit and monitoring report forms may be found at http://h2o.enr.state.nc.us/su/Forms_Documents.htm.

Mitigation:

8. Compensatory Mitigation

Compensatory stream mitigation shall be accomplished by using 2,127 linear feet of stream mitigation credit at the Harpers Crossroads stream mitigation site and the remaining 27 linear feet of required stream credit (10:1 ratio = 270 linear feet) from the 63,412 linear feet of available onsite stream preservation. These mitigation efforts shall be protected through use of conservation easement written to satisfy the US Army Corps of Engineers. Uses which may be allowable in the protected stream buffers include water dependent activities and greenway trails upon additional written approval of the Division of Water quality and the US Army Corps of Engineers. These provisions should be explicitly reflected in the conservation easements, or similar mechanisms, written to satisfy the USACE.

The Permittee shall provide stream restoration in accordance with the plan entitled 'Harpers Crossroads Stream Restoration Plan,' dated September 2005. The restoration site, which was authorized with a separate DA nationwide permit (USACE Action Id No. 200420489) has already been constructed. The as-built report dated June 12, 2006 states the total stream restoration generated by the project as 2,127 linear feet. Within 90 days of the USACE's determination that the Harpers Crossroads Stream Restoration Project has met the success criteria outlined in the 'Harpers Crossroads Stream Restoration Plan,' the permittee shall arrange for the transfer of the existing conservation easements to a third-party grantee, subject to approval by the USACE.

Type of Impact	Compensatory Mitigation Required	River and Sub-basin Number
Stream (perennial)	2,154 (linear feet)	Cape Fear/03030002

9. Stormwater Management Plan Implementation Procedures (No Further Approval Needed)

- The approved SMP must be constructed and operational before any permanent building or other structure is occupied at the site. If a development is phased, then the approved SMP for each future phase must be constructed and operational before any permanent building or other structure associated with that phase is occupied.
- The approved SMP as well as drainage patterns must be maintained in perpetuity.
- The SMP may not be modified without prior written authorization from the SMP approval authority. If the SMP falls under another state stormwater program, then a copy of the approval letter and the modified SMP must be submitted to the 401 Oversight/Express Unit prior to the commencement of the modifications.

10. Culvert Installation

All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual (http://www.ncdot.org/doh/operations/BMP_manual/download/BMP_Manual.pdf)

such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

Culverts required for this project shall be installed in such a manner that the original stream profiles are not altered. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert. Culverts shall be designed and installed to allow for aquatic life movement as well as to prevent head cutting of the streams. If any of the existing pipes are or become perched, the appropriate stream grade shall be re-established or, if the pipes installed in a perched manner, the pipes shall be removed and re-installed correctly.

Culvert(s) shall not be installed in such a manner that will cause aggradation or erosion of the stream up or down stream of the culvert(s). Existing stream dimensions (including the cross section dimensions, pattern and longitudinal profile) shall be maintained above and below locations of each culvert.

Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.

The establishment of native, woody vegetation and other soft stream bank stabilization techniques must be used where practicable instead of rip rap or other bank hardening methods. If rip-rap is necessary, it shall not be placed in the stream bed, unless specifically approved by the Division of Water Quality.

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions.

Upon completion of the project, the Applicant shall complete and return the enclosed "Certificate of Completion" form to notify NCDWQ when all work included in the §401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the NC Division of Water Quality upon completion of the project. *Please send photographs upstream and downstream of each culvert site to document correct installation along with the Certificate of Completion form.*

11. Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return the attached certificate of completion to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650.

Also, this approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 or CAMA Permit.

August 31, 2009

If this Certification is unacceptable to you, you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 31st day of August 2009
DIVISION OF WATER QUALITY



Coleen Sullins

CHS/cbk/ijm

3567

Briar Chapel-Phase 8

Statement regarding historical structure(s) and/or features

1. Archaeological Survey

- a. Based on the August 2006 report by ESI (entitled "An Intensive Cultural Resource Investigation: Briar Chapel, Chatham County, NC"), there are no cemeteries or structures eligible for the National Register within the project area of Phase 8.



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Pat McCrory
Governor

Charles Wakild, P. E.
Director

John E. Skvarla, III
Secretary

May 30, 2013

Kevin Graham, Vice President Operations
NNP Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, NC 27516

Subject: Permit No. WQ0036547
NNP Briar Chapel, LLC
Briar Chapel Phase 8
Wastewater Collection System Extension
Chatham County

Dear Mr. Graham,

In accordance with your application received May 23, 2013, and additional information received on May 29, 2013, we are forwarding herewith Permit No. WQ0036547 dated May 30, 2013, to NNP Briar Chapel, LLC, for the construction and operation of the subject wastewater collection system extension. This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein. This cover letter and supplement shall be considered a part of this permit and are therefore incorporated therein by reference.

Please pay particular attention to the following conditions contained within this permit:

Condition II.4: Requires that the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 2T .0403 or any individual system-wide collection system permit issued to the Permittee.

It shall be responsibility of NNP Briar Chapel, LLC, to ensure that the as-constructed project meets the appropriate design criteria and rules. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

1628 Mail Service Center, Raleigh, North Carolina 27699-1628
(3800 Barrett Drive, Raleigh, North Carolina 27609)
Internet: www.ncwaterquality.org
Customer Service: 877-623-6748

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NNP Briar Chapel, LLC
WQ0036547
May 30, 2013

If you need additional information concerning this matter, please contact Barry Herzberg at (919) 791-4249 or via e-mail to Barry.Herzberg@ncdenr.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Daniel Smith", with a stylized flourish at the end.

for Charles Wakild, P.E., Director
Division of Water Quality

by S. Daniel Smith
Surface Water Quality Supervisor
Raleigh Regional Office

cc: Grant Livengood, PE; McKim & Creed, 1730 Varsity Drive Suite 500, Raleigh, NC 27606
Chatham County Health Department
RRO, SWP files
Matt Fleahman, RRO, APS
Water Quality Central Files
PERCS (electronic copy)



STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

WASTEWATER COLLECTION SYSTEM EXTENSION PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations, permission is hereby granted to

NNP Briar Chapel, LLC
Chatham County

for the construction and operation of approximately 2,342 linear feet of 8-inch gravity sewer and approximately 4,261 linear feet of 6-inch gravity sewer to serve 110 single family building lots as part of the Briar Chapel Phase 8 project, and the discharge of 27,500 gallons per day of collected domestic wastewater into the Briar Chapel Utilities existing sewerage system, pursuant to the application received May 23, 2013, additional information received May 29, 2013, and in conformity with 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the specified conditions and limitations contained therein.

Permit issued this the 30th Day of May 2013

for Charles Wakild, P.E., Director
Division of Water Quality
By Authority of The Environmental Management Commission

Permit Number: WQ0036547

SUPPLEMENT TO PERMIT COVER SHEET

NNP Briar Chapel, LLC, is hereby authorized to:

Construct and then operate upon certification the aforementioned wastewater collection extension. The sewage and wastewater collected by this system shall be treated in the Briar Chapel Utilities Wastewater Treatment Facility, NPDES Permit number WQ0028552, prior to being land applied by spray irrigation.

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; and the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable, unless specifically mentioned herein. Division approval is based on acceptance of the certification provided by a North Carolina-licensed Professional Engineer in the application. It shall be the Permittee's responsibility to ensure that the as-constructed project meets the appropriate design criteria and rules.

Construction and operation is contingent upon compliance with the Standard Conditions and any Special Conditions identified below.

I. SPECIAL CONDITIONS

1. None.

II. STANDARD CONDITIONS

1. **This permit shall not be transferable.** In the event there is a desire for the wastewater collection facilities to change ownership, or there is a name change of the Permittee, a formal permit request shall be submitted to the Division accompanied by documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request shall be considered on its merits and may or may not be approved.
2. This permit shall become voidable unless the wastewater collection facilities are constructed in accordance with the conditions of this permit; 15A NCAC 2T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials unless specifically mentioned herein.
3. This permit shall be effective only with respect to the nature and volume of wastes described in the application and other supporting data.
4. The wastewater collection facilities shall be properly maintained and operated at all times. The Permittee shall maintain compliance with an individual system-wide collection system permit for the operation and maintenance of these facilities as required by 15A NCAC 2T .0403. If an individual permit is not required, the following performance criteria shall be met as provided in 15A NCAC 2T .0403:
 - a. The sewer system shall be effectively maintained and operated at all times to prevent discharge to land or surface waters, and to prevent any contravention of groundwater standards or surface water standards.
 - b. A map of the sewer system shall be developed and shall be actively maintained.
 - c. An operation and maintenance plan including pump station inspection frequency, preventative maintenance schedule, spare parts inventory and overflow response has been developed and implemented.
 - d. Pump stations that are not connected to a telemetry system shall be inspected every day (i.e. 365 days per year). Pump stations that are connected to a telemetry system shall be inspected at least once per week.
 - e. High-priority sewer lines shall be inspected at least once per every six months and inspections are documented.

- f. A general observation of the entire sewer system shall be conducted at least once per year.
- g. Overflows and bypasses shall be reported to the appropriate Division regional office in accordance with 15A NCAC 2B .0506(a), and public notice shall be provided as required by North Carolina General Statute §143-215.1C.
- h. A Grease Control Program is in place as follows:
 - 1. For public owned collection systems, the Grease Control Program shall include at least biannual distribution of educational materials for both commercial and residential users and the legal means to require grease interceptors at existing establishments. The plan shall also include legal means for inspections of the grease interceptors, enforcement for violators and the legal means to control grease entering the system from other public and private satellite sewer systems.
 - 2. For privately owned collection systems, the Grease Control Program shall include at least bi-annual distribution of grease education materials to users of the collection system by the Permittee or its representative.
 - 3. Grease education materials shall be distributed more often than required in Parts (1) and (2) of this Subparagraph if necessary to prevent grease-related sanitary sewer overflows.
- i. Right-of-ways and easements shall be maintained in the full easement width for personnel and equipment accessibility.
- j. Documentation shall be kept for Subparagraphs (a) through (i) of this Rule for a minimum of three years with exception of the map, which shall be maintained for the life of the system.

5. **Noncompliance Notification:**

The Permittee shall report by telephone to a water quality staff member at the Raleigh Regional Office, telephone number 919-791-4200, as soon as possible, but in no case more than 24 hours or on the next working day, following the occurrence or first knowledge of the occurrence of either of the following:

- a. Any process unit failure, due to known or unknown reasons, that renders the facility incapable of adequate wastewater transport, such as mechanical or electrical failures of pumps, line blockage or breakage, etc.; or
- b. Any SSO and/or spill over 1,000 gallons; or
- c. Any SSO and/or spill, regardless of volume, that reaches surface water

Voice mail messages or faxed information is permissible, but this shall not be considered as the initial verbal report. Overflows and spills occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Persons reporting any of the above occurrences shall file a spill report by completing and submitting Part I of Form CS-SSO (or the most current Division approved form) within five days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur. Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control.

- 6. Construction of the gravity sewers, pump stations, and force mains shall be scheduled so as not to interrupt service by the existing utilities nor result in an overflow or bypass discharge of wastewater to the surface waters of the State.
- 7. Per 15A NCAC 2T.0116, upon completion of construction and prior to operation of these permitted facilities, the completed Engineering Certification form attached to this permit shall be submitted with the required supporting documents to the address provided on the form. A complete certification is one where the form is fully executed and the supporting documents are provided as applicable. Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Engineer's Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions.

If the permit is issued to a private entity with an Operational Agreement, then a copy of the Articles of Incorporation, Declarations/Covenants/Restrictions, and Bylaws that have been appropriately filed with the applicable County's Register of Deeds office shall be submitted with the certification.

A complete certification is one where the form is fully executed and the supporting documents are provided as applicable. Supporting documentation shall include the following:

- a. One copy of the project construction record drawings (plan & profile views of sewer lines & force mains) of the wastewater collection system extension. Final record drawings should be clear on the plans or on digital media (CD or DVD disk) and are defined as the design drawings that are marked up or annotated with after construction information and show required buffers, separation distances, material changes, etc.
- b. One copy of the supporting pump station design calculations (selected pumps, system curve, operating point, buoyancy calculations, available storage if portable generator(s) or storage greater than longest past three year outage reliability option selected) for any pump stations permitted as part of this project.
- c. Changes to the project that do not result in non-compliance with this permit, regulations, or the Minimum Design Criteria should be clearly identified on the record drawings, on the certification in the space provided, or in written summary form.

Prior to Certification (Final or Partial): Permit modifications are required for any changes resulting in non-compliance with this permit (including pipe length increases of 10% or greater, increased flow, pump station design capacity design increases of 5% or greater, and increases in the number/type of connections), regulations, or the Minimum Design Criteria. Requested modifications or variances to the Minimum Design Criteria will be reviewed on a case-by-case basis and each on its own merit. Please note that variances to the Minimum Design Criteria should be requested and approved during the permitting process prior to construction. After-construction requests are discouraged by the Division and may not be approved, thus requiring replacement or repair prior to certification & activation.

8. A copy of the construction record drawings shall be maintained on file by the Permittee for the life of the wastewater collection facilities.
9. Failure to abide by the conditions and limitations contained in this permit; 15A NCAC 2T; the Division's Gravity Sewer Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Station and Force Mains adopted June 1, 2000 as applicable; and other supporting materials may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.
10. In the event that the wastewater collection facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by this Division, such as the construction of additional or replacement facilities.
11. The issuance of this permit shall not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (local, state and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B .0200, erosion and sedimentation control requirements in 15A NCAC Ch. 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 15A NCAC 2H .0500.

FAST TRACK ENGINEERING CERTIFICATION

Permittee: NNP Briar Chapel, LLC
Project: Briar Chapel Phase 8

Permit No. WQ0036547
Issue Date: May 30, 2013

Complete and submit this form to the permit issuing regional office with the following:

- One copy of the project record drawings (plan & profile views and detail drawings of sewer lines) of the wastewater collection system extension. Final record drawings should be clear on the plans or on digital media (CD or DVD disk) in pdf format. Record drawings should indicate the design and the marked up changes during construction.
- Supporting design calculations (selected pumps, system curve, operating point, available storage if portable generator(s) or storage greater than longest past three year outage reliability option selected) for any pump stations permitted as part of this project
- Changes to the project should be clearly identified on the record drawings or in written summary form. **Permit modifications are required for any changes resulting in non-compliance with this permit, regulations or minimum design criteria. Modifications should be submitted prior to certification.**

This project shall not be considered complete nor allowed to operate until the Division has received this Engineer's Certification and all required supporting documentation. **Therefore, it is highly recommended that this certification be sent in a manner that provides proof of receipt by the Division.**

PERMITTEE'S CERTIFICATION

I, _____, the undersigned agent for the Permittee, hereby state that this project has been constructed pursuant to the applicable standards & requirements, the Professional Engineer below has provided applicable design/construction information to the Permittee, and the Permittee is prepared to operate & maintain the wastewater collection system permitted herein or portions thereof.

Printed Name, Title

Signature

Date

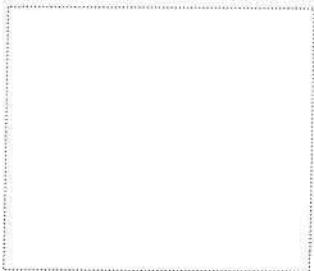
ENGINEER'S CERTIFICATION

☐ Partial

☐ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (☐ periodically, ☐ weekly, ☐ full time) the construction of the subject project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance of this permit; 15A NCAC 02T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials.

**North Carolina Professional Engineer's
Seal, signature, and date:**



**SEND THIS FORM & SUPPORTING DOCUMENTATION
WITH REQUIRED ATTACHMENTS TO THE FOLLOWING ADDRESS**

**Surface Water Protection Supervisor
Raleigh Regional Office
1628 Mail Service Center
Raleigh, NC 27699-1628**

The Permittee is responsible for tracking all partial certifications up until a final certification is received. Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Engineer's Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions.

DWQ use only:

Flow from this project is tributary to: Briar Chapel Utilities WWTP



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Coleen H. Sullins

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

May 18, 2009

WILLIAM MUMFORD – ASSISTANT SECRETARY

BRIAR CHAPEL UTILITIES, LLC

16 WINDY KNOLL CIRCLE

CHAPEL HILL, NORTH CAROLINA 27516

Subject: Permit No. WQ0028552
Briar Chapel Development
Wastewater Treatment, Irrigation
and Non-Conjunctive Reclaimed
Water Utilization System
Chatham County

Dear Mr. Mumford:

In accordance with your permit modification request received April 23, 2009, and subsequent additional information received May 7, 2009, we are forwarding herewith Permit No. WQ0028552, dated May 18, 2009, to Briar Chapel Utilities, LLC for the continued operation of the Phase A wastewater treatment plant, 5-day upset pond and main wet weather storage pond, and the construction and operation of the remaining subject wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization facilities.

The subject modification is to add approximately 9.5 acres of non-conjunctive reclaimed utilization area along the existing parkway between US 15-501 and the bridge at Pokeberry Creek. This additional utilization area shall be known as Phase 1C.

This permit shall be effective from the date of issuance until March 31, 2010, shall void Permit No. WQ0028552 issued May 22, 2008, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements in this permit. Failure to establish an adequate system for collecting and maintaining the required operational information will result in future compliance problems.

Please note this permit contains two new permit conditions since the last permit issuance. Please review these conditions carefully:

- Condition I.3. – This condition requires the Permittee to abandon water supply well WSW-38 prior to operation of Phase 1C spray heads that throw within 100 feet of the aforementioned well.

AQUIFER PROTECTION SECTION

1636 Mail Service Center, Raleigh, North Carolina 27699-1636

Location: 2726 Capital Boulevard, Raleigh, North Carolina 27604

Phone: 919-733-3221 \ FAX 1: 919-715-0588; FAX 2: 919-715-6048 \ Customer Service: 1-877-623-6748

Internet: www.nowaterquality.org

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- Condition II.17. – This condition requires the Permittee to aerate those areas in Phase 1C affected by significant compaction prior to any utilization of reclaimed water on those sites.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Nathaniel Thornburg at (919) 715-6160 or nathaniel.thornburg@ncdenr.gov.

Sincerely,


Coleen H. Sullins

cc: Chatham County Health Department
Raleigh Regional Office, Aquifer Protection Section
Mark P. Ashness, PE – CE Group
Technical Assistance and Certification Unit
APS Central Files
LAU Files

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH

**WASTEWATER TREATMENT, WASTEWATER IRRIGATION AND NON-CONJUNCTIVE
RECLAIMED WATER UTILIZATION SYSTEM PERMIT**

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

Briar Chapel Utilities, LLC
Chatham County

FOR THE

operation of a wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization facility consisting of the:

continued operation of a 250,000 gallon per day (GPD) extended aeration wastewater treatment plant (i.e., Phase A) consisting of: dual static screens for grit removal (serving Phases A, B and C); a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two (2) 225 gallon per minute (GPM) variable speed pumps each with an influent flow meter and one (1) 7.5 horsepower (hp) aerator; two (2) 31,500 gallon anoxic chambers each with two (2) 3 hp mixers; two (2) 189,000 gallon aeration basins each with two (2) 10 hp aerators; two (2) 31,500 gallon clarifiers each with one (1) variable speed sludge return pump; a 75,400 gallon sludge holding basin with one (1) variable speed decanting pump and one (1) 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two (2) variable speed chlorine injection pumps; a 16,800 gallon mudwell with two (2) 200 GPM return pumps; two (2) 90 square foot (ft²) tertiary filters; a 13,800 gallon clearwell with four (4) 675 GPM backwash pumps (pumps serve Phases A, B and C); dual banks of ultraviolet (UV) modules each with 10 bulbs; a 6,850 gallon dechlorination chamber with two (2) air diffusers; an effluent flow measuring device (serving Phases A, B and C); an effluent turbidimeter (serving Phases A, B and C); a permanent auxiliary generator (serving Phases A, B and C); and all associated piping, valves and appurtenances; the

continued operation of: a 3.5 million gallon (MG) clay lined five day upset pond with a 400 GPM dual submersible pumps station and audible/visual alarms; and a 21.3 MG clay lined central storage pond with dual 2,000 GPM flooded suction pumps; the

construction and operation of two additional 250,000 GPD extended aeration wastewater treatment plants to be constructed (i.e., Phases B and C) with each phase consisting of: a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two (2) 225 GPM variable speed pumps each with an influent flow meter and one (1) 7.5 hp aerator; two (2) 31,500 gallon anoxic chambers each with two (2) 3 hp mixers; two (2) 189,000 gallon aeration basins each with two (2) 10 hp aerators; two (2) 31,500 gallon clarifiers each with one (1) variable speed sludge return pump; a 75,400 gallon sludge holding basin with one (1) variable speed decanting pump and one (1) 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two (2) variable speed chlorine injection pumps; a 16,800 gallon mudwell with two (2) 200 GPM return pumps; two (2) 90 ft² tertiary filters; dual banks of ultraviolet (UV) modules each with 10

bulbs; a 6,850 gallon dechlorination chamber with two (2) air diffusers; and all associated piping, valves and appurtenances; the

construction and operation of a 253,027 GPD reclaimed water utilization system (Phase 1A: Fields C-1A through E-4C) consisting of: thirty-five (35) irrigation zones comprising approximately 82.2 acres; a 14.1 MG clay lined east storage pond with dual 1,200 GPM vertical turbine pumps serving nine (9) irrigation zones consisting of approximately 42.1 acres; and all associated piping, valves and appurtenances; the

construction and operation of a 51,499 GPD wastewater irrigation system (Phase 1B: Fields B-1A through B-9C) consisting of: sixteen (16) irrigation zones comprising approximately 22.0 acres; and all associated piping, valves and appurtenances; and the

construction and operation of a 21,749 GPD non-conjunctive reclaimed water utilization system (Phase 1C) consisting of: one (1) irrigation zone comprising approximately 9.48 acres; and all associated piping, valves and appurtenances; and the

to serve the Briar Chapel Development, with no discharge of wastes to the surface waters, pursuant to the application received April 23, 2009, and subsequent additional information received by the Division of Water Quality (Division), and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until March 31, 2010, shall void Permit No. WQ0028552 issued May 22, 2008, and shall be subject to the following specified conditions and limitations:

I. SCHEDULES

1. Upon completion of construction and prior to operation of this permitted facility, a certification (see attached form) must be received from a professional engineer certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting materials including the location of all monitoring wells as applicable. If this project is to be completed in phases and partially certified, you shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Aquifer Protection Section, Division of Water Quality, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least forty-eight (48) hours in advance (excluding weekends and holidays) of operation of the installed facilities so that an in-place inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
3. Prior to operation of any Phase 1C spray heads that throw within 100 feet of water supply well WSW-38, said well shall be permanently abandoned. Within thirty (30) days of abandonment, a Well Abandonment Record (GW-30 form) that lists this permit number and the appropriate well identification number shall be completed for each well abandoned and mailed to N.C. Division of Water Quality, Aquifer Protection Section, 1636 Mail Service Center, Raleigh, N.C. 27699-1636. The well shall be abandoned by a North Carolina Certified Well Contractor according to the North Carolina Well Construction Standards (15A NCAC 02C .0113) and local county rules.

4. No later than six months prior to the expiration of this permit, the Permittee shall request renewal of this permit on official Division forms. Upon receipt of the request, the Division will review the adequacy of the facilities described therein, and if warranted, will renew the permit for such period of time and under such conditions and limitations as it may deem appropriate. Please note that Rule 15A NCAC 02T .0105(d) requires an updated site map to be submitted with the permit renewal application.
5. Prior to commencement of irrigation, an updated soil scientist site evaluation shall be submitted for all areas that have been significantly impacted during construction or altered by grading, cutting or filling. This report shall specifically address, but not be limited to, soil features such as soil compaction and saturated hydraulic conductivity of the least permeable layer, as well as any other properties that might impact the soil's ability to accept irrigation water. The report shall certify that the disturbed areas are capable of accepting the designed annual hydraulic loading rate. The requested information must be received and acknowledged in writing by the Aquifer Protection Section, 1628 Mail Service Center, Raleigh, NC 27699-1628, prior to any irrigation of wastewater.

II. PERFORMANCE STANDARDS

1. The wastewater irrigation and non-conjunctive reclaimed water utilization facilities shall be effectively maintained and operated at all times so that there is no discharge to the surface waters, nor any contravention of groundwater or surface water standards. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions due to improper operation and maintenance, or failure of the irrigation area to adequately assimilate the wastewater, the Permittee shall take immediate corrective actions including those actions that may be required by the Division, such as the construction of additional or replacement wastewater treatment and disposal facilities.
2. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to ground or surface waters resulting from the operation of this facility.
3. Effluent limitations shall not exceed those specified in Attachment A.
4. Application rates, whether hydraulic, nutrient, or other pollutant shall not exceed those specified in Attachment B.
5. The compliance and review boundaries for the specified reclaimed utilization areas (i.e., Phase 1A) are established at the property boundary. Any exceedance of standards at the Compliance or Review Boundary shall require action in accordance with 15A NCAC 02L .0106.
6. The compliance and review boundaries for the specified reclaimed utilization areas (i.e., Phase 1C) and the wastewater irrigation areas complying with 15A NCAC 02T .0506(c) (i.e., Phase 1B) are established at the irrigation/utilization area boundaries. Any exceedance of standards at the Compliance or Review Boundary shall require action in accordance with 15A NCAC 02L .0106.
7. The Permittee shall apply for a permit modification prior to any sale or transfer of property that affects a compliance boundary to establish a new compliance boundary.
8. In accordance with 15A NCAC 02L .0107(d), no wells, other than monitoring wells, shall be constructed within the compliance boundary except as provided by 15A NCAC 02L .0107(g).

9. Except as provided for in 15A NCAC 02L .0107(g), the Permittee shall ensure that any landowner who owns land within the compliance boundary, but who is not the Permittee, shall execute and file with the Register of Deeds in the county in which the land is located an easement running with the land that contains the following items:
- a. A notice of the permit and number or other description as allowed in 15A NCAC 02L .0107(f)(1);
 - b. Prohibits construction and operation of water supply wells within the compliance boundary; and
 - c. Reserves the right of the Permittee or the State to enter the property within the compliance boundary for purposes related to the permit.

The Director may terminate the easement when its purpose has been fulfilled or is no longer needed.

10. The facilities permitted herein must be constructed according to the following setbacks:

- a. The setbacks for reclaimed utilization sites (Phase 1A & Phase 1C) shall be as follows (all distances in feet):

i. Surface waters not classified SA:	25
ii. Surface waters classified SA:	100
iii. Any well with exception to monitoring wells	100

- b. The setbacks for the wastewater irrigation sites (Phase 1B) shall be as follows (all distances in feet):

a. Any habitable residence or place of public assembly under separate ownership:	400
b. Any habitable residence or place of public assembly owned by the Permittee:	200
c. Any private or public water supply source:	100
d. Surface waters:	100
e. Groundwater lowering ditches:	100
f. Surface water diversions:	25
g. Any well with exception of monitoring wells:	100
h. Any property line:	150 *
i. Top of slope of embankments or cuts of two feet or more in vertical height:	15
j. Any water line from a disposal system:	10
k. Subsurface groundwater lowering drainage systems:	100
l. Any swimming pool:	100
m. Public right of way:	50
n. Nitrification field:	20
o. Any building foundation or basement:	15

* Setback may be reduced to zero in accordance with 15A NCAC 2T .0506(c).

- c. The setbacks for treatment and storage units shall be as follows (all distances in feet):

i. Any habitable residence or place of public assembly under separate ownership:	100
ii. Any private or public water supply source:	100
iii. Surface waters:	50
iv. Any well with exception of monitoring wells:	100
v. Any property line:	50

11. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion):
 - a. All reclaimed water valves, storage facilities, and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with the water.
 - b. All reclaimed water piping, valves, outlets, and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
 - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER – DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
 - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER – DO NOT DRINK." Identification tape shall be installed on top of reclaimed water pipelines, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
 - c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
 - d. Above-ground hose bibs (i.e., spigots or other hand-operated connections) shall not be present. Hose bibs shall be located in locked below-grade vaults that shall be clearly labeled as being of non-potable quality. As an alternative to the use of locked below-grade vaults with standard hose bibs services, hose bibs, which can only be operated by a special tool or connected to a special hose connection, may be placed in non-lockable underground services boxes clearly labeled as non-potable water.
12. The Permittee shall maintain an active cross-connection control program that shall have the following minimum requirements (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion):
 - a. No direct cross-connections shall be allowed between the reclaimed water and potable water systems.
 - b. A reduced pressure principle backflow preventer, an approved air gap separation, or other device approved by the Division of Environmental Health shall be installed at the potable water service connection to the use area where both reclaimed water and potable water are supplied to a reclaimed water use area. The installation of the reduced pressure principle backflow prevention device shall allow proper testing.
 - c. An air gap separation, approved and regularly inspected by the Permittee shall be provided between the potable water and reclaimed water systems where potable water is used to supplement a reclaimed water system.
13. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall be located 10 feet horizontally from and 18 inches below any water line where practicable. Where these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.
14. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall not be less than 100 feet from a well unless the piping and integrity testing procedures meet water main standards in accordance with 15A NCAC 18C, but no case shall they be less than 25 feet from a private well or 50 feet from a public well.

15. Reclaimed water distribution lines (at a minimum Phase 1A & Phase 1C, but may include Phase 1B at the Permittee's discretion) shall meet the separation distances to sewer lines in accordance with Rule .0305 of Subchapter 02T.
16. The wastewater irrigation and reclaimed water utilization systems shall be connected to a rain or moisture sensor that shall indicate when reclaimed water application is not appropriate in accordance with Condition III.4. and III.5. of this permit.
17. Areas in Phase 1C affected by significant compaction shall be identified and the soil aerated prior to any irrigation in Zone C with reclaimed water.

III. OPERATION AND MAINTENANCE REQUIREMENTS

1. The facilities shall be properly maintained and operated at all times. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility. The Permittee shall maintain an Operation and Maintenance Plan pursuant to 15A NCAC 02T .0507 & .0913 including operational functions, maintenance schedules, safety measures, and a spill response plan.
2. Upon classification of the wastewater treatment, wastewater irrigation and non-conjunctive reclaimed water utilization facilities by the Water Pollution Control System Operators Certification Commission (WPCSOCC), the Permittee shall designate and employ a certified operator to be in responsible charge (ORC) and one or more certified operator(s) to be back-up ORC(s) of the facilities in accordance with 15A NCAC 08G .0200. The ORC shall visit the facilities in accordance with 15A NCAC 08G .0200 or as specified in this permit and shall comply with all other conditions specified in these rules.
3. A suitable year round vegetative cover shall be maintained such that crop health is optimized, allows for even distribution of effluent, and allows inspection of the wastewater irrigation and non-conjunctive reclaimed water utilization systems.
4. Adequate measures shall be taken to prevent wastewater ponding or runoff from the wastewater irrigation and non-conjunctive reclaimed water utilization sites.
5. Wastewater irrigation and non-conjunctive reclaimed water utilization shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff.
6. All waste application equipment must be tested and calibrated at least once per permit cycle. Records of the calibration must be maintained for five years.
7. No type of wastewater other than that from the Briar Chapel Development shall be applied to the wastewater irrigation and non-conjunctive reclaimed water utilization sites.
8. An automatically activated standby power source shall be on site and operational at all times capable of powering all essential treatment units. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
9. No traffic or equipment shall be allowed on the wastewater irrigation and non-conjunctive reclaimed water utilization sites except while installation occurs or while normal maintenance is being performed.
10. Public access to the land application sites shall be controlled.
11. The residuals generated from these treatment facilities must be disposed / utilized in accordance with 15A NCAC 02T .1100. The Permittee shall maintain a residual management plan pursuant to 15A NCAC 02T .0508 & .0914.

12. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
13. Freeboard in the five-day upset pond, central storage pond and east storage pond shall not be less than two (2) feet at any time.
14. Gauges to monitor waste levels in the five-day upset pond, central storage pond and east storage pond shall be provided. These gauges shall have readily visible permanent markings indicating the maximum liquid level at the top of the temporary liquid storage volume, minimum liquid level at the bottom of the temporary liquid storage volume, and the lowest point on top of the dam elevations.
15. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum allowable temporary storage elevation on the inside of the embankment), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen basin dikes or embankments. Earthen basin embankment areas shall be kept mowed or otherwise controlled and accessible.
16. All wastewater shall be routed to the five-day holding pond should the limit for fecal coliform (daily maximum concentration of 25 per 100 ml) or turbidity (instantaneous maximum of 10 NTU) be exceeded, until such time that the problems associated with the treatment capability of the wastewater treatment plant have been corrected. The wastewater in the five-day holding pond shall be pumped back to the treatment plant for re-treatment or treated in the five-day pond prior to discharge to the storage pond.
17. The permitted wastewater treatment facility shall treat domestic strength wastewater only. The wastewater treatment plant shall not accept any wastewater from commercial facilities deemed industrial (i.e., from processes of trade or business, Laundromats, or vehicle/equipment washes) per Regulation 15A NCAC 2T .0103(20).

IV. MONITORING AND REPORTING REQUIREMENTS

1. Any monitoring (including groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to ensure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.
2. All laboratory analyses for effluent, ground waters, or surface waters shall be made by a laboratory certified by the Division for the required parameter(s) under 15A NCAC 02H .0800.
3. Flow through the treatment facility shall be continuously monitored and daily flow values shall be reported on Form NDMR.

The Permittee shall install and maintain an appropriate flow measurement device consistent with approved engineering and scientific practices to ensure the accuracy and reliability of flow measurement. Flow measurement devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true flow, accurately calibrated at a minimum of once per year, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Permittee shall keep records of flow measurement device calibration on file for a period of at least three years. At a minimum, data to be included in this documentation shall be:

- a. Date of flow measurement device calibration,
 - b. Name of person performing calibration, and
 - c. Percent from true flow.
4. The effluent from the subject facilities shall be monitored by the Permittee at the frequencies and locations for the parameters specified in Attachment A.

5. The Permittee tracking the amount of wastewater irrigation and non-conjunctive reclaimed water utilization shall maintain adequate records. These records shall include, but are not necessarily limited to, the following information:
 - a. Date of wastewater irrigation and non-conjunctive reclaimed water utilization,
 - b. Volume of wastewater irrigated and reclaimed water utilized,
 - c. Field irrigated/utilized,
 - d. Length of time field is irrigated/utilized,
 - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each field,
 - f. Continuous monthly and year-to-date loadings for any non-hydraulic parameter specifically limited in Attachment B for each field,
 - g. Weather conditions, and
 - h. Maintenance of cover crops.
6. Freeboard (waste level to the lowest elevation on the top of the embankment) in the 5-day upset pond, central storage pond and east storage pond shall be recorded weekly.
7. A record shall be maintained of all residuals removed from this facility. This record shall include the name of the hauler, permit authorizing the disposal or a letter from a municipality agreeing to accept the residuals, date the residuals were hauled, and volume of residuals removed.
8. A maintenance log shall be maintained at this facility including but not limited to the following items:
 - a. Visual observations of the plant and plant site.
 - b. Record of preventative maintenance (i.e., changing of equipment, adjustments, testing, inspections and cleanings, etc.).
 - c. Date of calibration of flow measurement device.
 - d. Date and results of power interruption testing on alternate power supply.
9. Three (3) copies of all monitoring data [as specified in Conditions IV.3. and IV.4.] on Form NDMR for each PPI and three (3) copies of all operation and disposal records [as specified in Conditions IV.5 and IV.6.] on Form NDAR-1 for every field shall be submitted on or before the last day of the following month. If no activities occurred during the monitoring month, monitoring reports are still required documenting the absence of the activity. All information shall be submitted to the following address:

Division of Water Quality
 Information Processing Unit
 1617 Mail Service Center
 Raleigh, North Carolina 27699-1617

10. An annual representative soils analysis (Standard Soil Fertility Analysis) shall be conducted on each wastewater irrigation field (i.e., Phase 1B) and the results maintained on file by the Permittee for a minimum of five years. The Standard Soil Fertility Analysis shall include, but is not necessarily limited to, the following parameters:

Acidity	Manganese	Potassium
Calcium	Percent Humic Matter	Sodium
Copper	pH	Zinc
Magnesium	Base Saturation (by calculation)	Phosphorus
Cation Exchange Capacity	Exchangeable Sodium Percentage	

11. Noncompliance Notification:

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances including ponding in the wastewater irrigation or reclaimed utilization areas or runoff from the wastewater irrigation or reclaimed utilization areas.
- b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
- c. Any failure of disposal system resulting in a by-pass directly to receiving waters.
- d. Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations including, but not limited to, freeboard measurements, effluent limitations, exceedances of groundwater standards, or overloading of any irrigation or utilization area.

For any emergency that requires immediate reporting (e.g., discharges to surface waters, imminent failure of a storage structure, etc.) outside normal business hours must be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five (5) days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

V. INSPECTIONS

1. Adequate inspection and maintenance shall be provided by the Permittee to ensure proper operation of the subject facilities.
2. The Permittee or his designee shall inspect the wastewater treatment and disposal facilities to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment, a threat to human health, or a nuisance. The Permittee shall keep an inspection log or summary including at least the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee. This log of inspections shall be maintained by the Permittee for a period of five years from the date of the inspection and shall be made available upon request to the Division or other permitting authority.
3. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site or facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be maintained under the terms and conditions of this permit, and may obtain samples of groundwater, surface water, or leachate.

VI. GENERAL CONDITIONS

1. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
2. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.
3. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data. No variances to applicable rules governing the construction and / or operation of the permitted facilities are granted unless specifically requested and granted in this permit.
4. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state, and federal) that have jurisdiction. Of particular concern to the Division are applicable river buffer rules in 15A NCAC 02B .0200, erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 02B .0200 and 02H .0500.
5. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division on official Division form(s), documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The Permittee of record shall remain fully responsible for compliance until a permit is issued to the new owner.
6. The Permittee shall retain a set of approved plans and specifications for the life of the facilities permitted herein.
7. The Permittee shall maintain this permit until all permitted facilities herein are properly closed or permitted under another permit issued by the appropriate permitting authority.
8. The Permittee must pay the annual fee within thirty (30) days after being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit pursuant to 15A NCAC 02T .0105(e).

Permit issued this the 18th day of May 2009

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION


for Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number WQ0028552

Permit No. WQ0028552
May 18, 2009

ENGINEER'S CERTIFICATION

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,

Project Name

Location and County

for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of this permit, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

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ATTACHMENT A - LIMITATIONS AND MONITORING REQUIREMENTS

Permit Number: WQ0028552

Version: 1.3

PPI 001 – WWTF Effluent

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITS						MONITORING REQUIREMENTS			
	Monthly Average		Monthly Geometric Mean		Daily Minimum		Daily Maximum		Measurement Frequency	Sample Type
Parameter Description - PCS Code										
BOD, 5-Day (20 Deg. C) - 00310	10	mg/l					15	mg/l	2 x Month	Composite
Chloride (as Cl) - 00940									3 x Year ²	Composite
Chlorine, Total Residual – 50060									5 x Week	Grab
Coliform, Fecal MF, M-FC Broth, 44.5C - 31616			14	#/100ml			25	#/100ml	2 x Month ¹	Grab
Flow, in conduit or thru treatment plant - 50050	316,412 ³	GPD							Continuous	Recording
Nitrogen, Ammonia Total (as N) - 00610	4	mg/l					6	mg/l	2 x Month	Composite
Nitrogen, Nitrate Total (as N) - 00620									2 x Month	Composite
pH – 00400					6	s.u.	9	s.u.	5 x Week	Grab
Solids, Total Dissolved - 70300									3 x Year ²	Composite
Solids, Total Suspended - 00530 - Summer	5	mg/l					10	mg/l	2 x Month	Composite
Turbidity, HCH Turbidimeter -- 00076							10	ntu	Continuous	Recording

1. Monthly average for Fecal Coliform shall a geometric mean.
2. 3 x Year monitoring shall be conducted in March, July & November.
3. The monthly average daily flow is limited to 316,412 GPD due to available wet weather storage capacity.

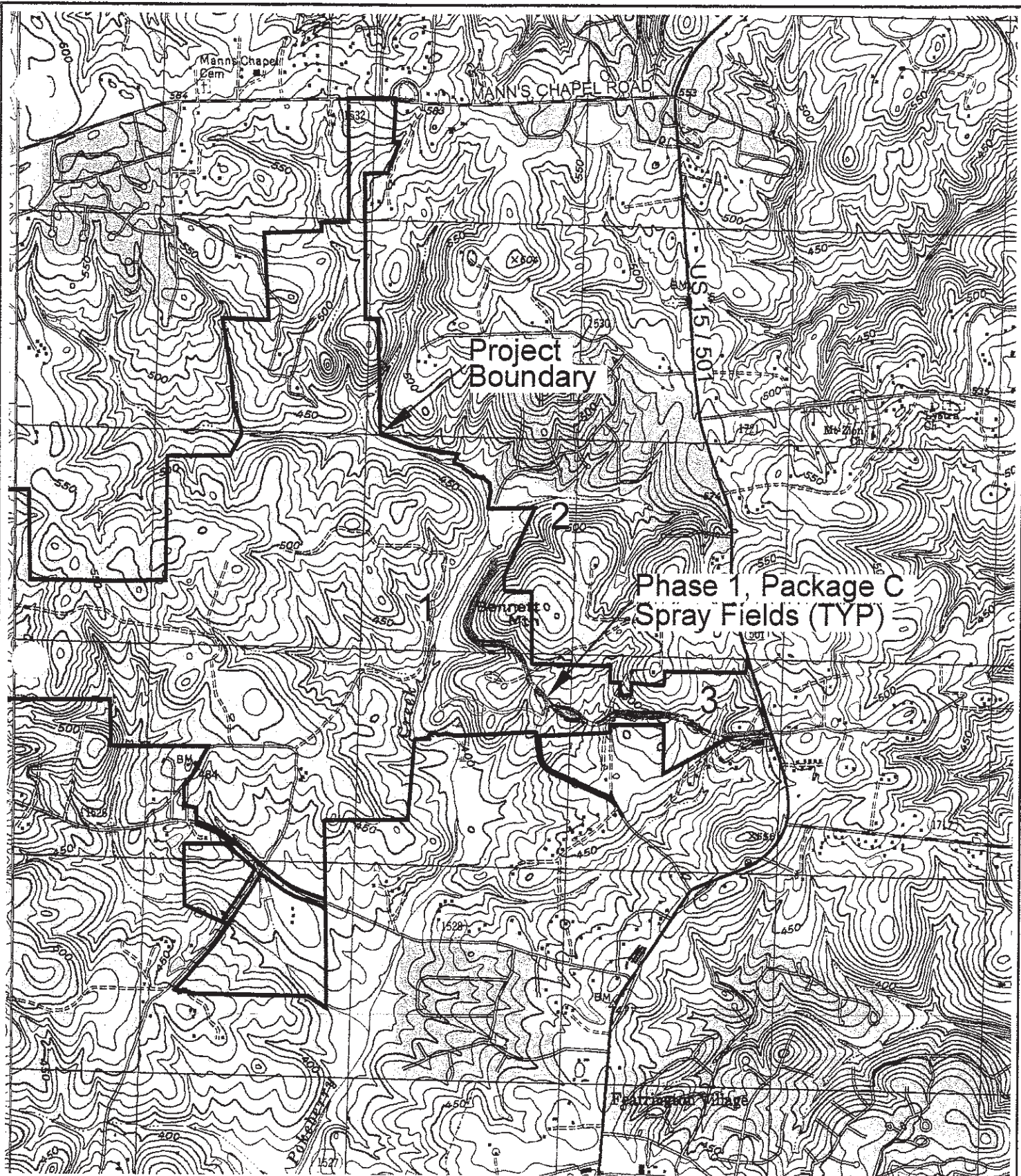
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ATTACHMENT B - APPROVED LAND APPLICATION SITES AND LIMITATIONS Permit Number: WQ0028552 Version: 1.3
Briar Chapel Utilities, LLC – Briar Chapel Development


IRRIGATION / UTILIZATION AREA INFORMATION						APPLICATION LIMITATIONS				
Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
B-1A	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 05' 58"	9.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-1B	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 05"	1.70	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-2A	Briar Chapel Utilities LLC	Chatham	35° 49' 22"	-79° 06' 15"	0.30	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-3B	Briar Chapel Utilities LLC	Chatham	35° 49' 36"	-79° 06' 11"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-3C	Briar Chapel Utilities LLC	Chatham	35° 49' 41"	-79° 06' 11"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-4A	Briar Chapel Utilities LLC	Chatham	35° 49' 42"	-79° 06' 17"	0.60	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-5A	Briar Chapel Utilities LLC	Chatham	35° 49' 07"	-79° 06' 34"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-6A	Briar Chapel Utilities LLC	Chatham	35° 49' 07"	-79° 06' 31"	1.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-7A	Briar Chapel Utilities LLC	Chatham	35° 49' 59"	-79° 06' 28"	2.30	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-7B	Briar Chapel Utilities LLC	Chatham	35° 50' 16"	-79° 06' 32"	0.60	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8A	Briar Chapel Utilities LLC	Chatham	35° 50' 14"	-79° 06' 26"	0.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8B	Briar Chapel Utilities LLC	Chatham	35° 50' 32"	-79° 06' 27"	1.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
B-8D	Briar Chapel Utilities LLC	Chatham	35° 50' 25"	-79° 06' 25"	0.70	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-8E	Briar Chapel Utilities LLC	Chatham	35° 50' 37"	-79° 06' 22"	0.50	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-9A	Briar Chapel Utilities LLC	Chatham	35° 50' 42"	-79° 06' 26"	1.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
B-9C	Briar Chapel Utilities LLC	Chatham	35° 50' 41"	-79° 06' 20"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-1A	Briar Chapel Utilities LLC	Chatham	35° 48' 35"	-79° 06' 47"	8.00	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-2A	Briar Chapel Utilities LLC	Chatham	35° 48' 45"	-79° 06' 38"	1.40	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-2B	Briar Chapel Utilities LLC	Chatham	35° 48' 44"	-79° 06' 35"	0.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-2C	Briar Chapel Utilities LLC	Chatham	35° 48' 38"	-79° 06' 35"	6.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-2D	Briar Chapel Utilities LLC	Chatham	35° 48' 41"	-79° 06' 36"	1.80	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-3A	Briar Chapel Utilities LLC	Chatham	35° 48' 52"	-79° 06' 55"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3B	Briar Chapel Utilities LLC	Chatham	35° 48' 50"	-79° 06' 50"	0.80	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3C	Briar Chapel Utilities LLC	Chatham	35° 48' 47"	-79° 06' 49"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches

C-3D	Briar Chapel Utilities LLC	Chatham	35° 48' 43"	-79° 06' 46"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	19.95	inches
C-3E	Briar Chapel Utilities LLC	Chatham	35° 48' 50"	-79° 06' 53"	9.80	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-3F	Briar Chapel Utilities LLC	Chatham	35° 48' 42"	-79° 06' 44"	3.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-5A	Briar Chapel Utilities LLC	Chatham	35° 49' 05"	-79° 06' 25"	4.10	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-6A	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 01"	0.50	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-6B	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 54"	0.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-6C	Briar Chapel Utilities LLC	Chatham	35° 49' 13"	-79° 06' 58"	0.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-6D	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 06' 58"	0.70	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-9A	Briar Chapel Utilities LLC	Chatham	35° 49' 21"	-79° 07' 11"	4.20	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-9B	Briar Chapel Utilities LLC	Chatham	35° 49' 15"	-79° 07' 09"	3.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-12A	Briar Chapel Utilities LLC	Chatham	35° 49' 29"	-79° 07' 23"	2.00	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-12B	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 07' 12"	2.60	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-12C	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 07' 19"	3.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-12D	Briar Chapel Utilities LLC	Chatham	35° 49' 18"	-79° 07' 15"	0.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-13A	Briar Chapel Utilities LLC	Chatham	35° 49' 26"	-79° 07' 00"	0.40	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13B	Briar Chapel Utilities LLC	Chatham	35° 49' 29"	-79° 06' 59"	1.00	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13C	Briar Chapel Utilities LLC	Chatham	35° 49' 33"	-79° 07' 03"	1.10	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13D	Briar Chapel Utilities LLC	Chatham	35° 49' 36"	-79° 06' 59"	1.00	Rion	01284 - Application Surface Irrigation	0.10	19.95	inches
C-13E	Briar Chapel Utilities LLC	Chatham	35° 49' 31"	-79° 06' 59"	2.70	Pacolet	01284 - Application Surface Irrigation	0.10	37.31	inches
C-13F	Briar Chapel Utilities LLC	Chatham	35° 49' 28"	-79° 07' 03"	6.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15A	Briar Chapel Utilities LLC	Chatham	35° 49' 32"	-79° 06' 46"	3.50	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-15B	Briar Chapel Utilities LLC	Chatham	35° 49' 38"	-79° 06' 40"	0.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
C-15C	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 38"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15D	Briar Chapel Utilities LLC	Chatham	35° 49' 32"	-79° 06' 50"	0.90	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-15E	Briar Chapel Utilities LLC	Chatham	35° 49' 40"	-79° 06' 45"	1.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-16A	Briar Chapel Utilities LLC	Chatham	35° 49' 25"	-79° 06' 26"	6.20	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
C-20A	Briar Chapel Utilities LLC	Chatham	35° 49' 48"	-79° 07' 00"	0.40	Helena	01284 - Application Surface Irrigation	0.10	37.31	inches
E-1A	Briar Chapel Utilities LLC	Chatham	35° 49' 21"	-79° 06' 01"	10.40	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
E-2A	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 06' 49"	9.00	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches

E-3A	Briar Chapel Utilities LLC	Chatham	35° 49' 13"	-79° 05' 30"	0.80	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-3B	Briar Chapel Utilities LLC	Chatham	35° 49' 11"	-79° 05' 22"	2.20	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-3C	Briar Chapel Utilities LLC	Chatham	35° 49' 10"	-79° 05' 27"	3.50	Wedowee	01284 - Application Surface Irrigation	0.10	37.31	inches
E-3D	Briar Chapel Utilities LLC	Chatham	35° 49' 12"	-79° 05' 39"	0.90	Rion	01284 - Application Surface Irrigation	0.10	37.31	inches
E-4A	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 05' 35"	3.10	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-4B	Briar Chapel Utilities LLC	Chatham	35° 49' 18"	-79° 05' 18"	2.90	Helena	01284 - Application Surface Irrigation	0.10	19.95	inches
E-4C	Briar Chapel Utilities LLC	Chatham	35° 49' 16"	-79° 05' 26"	9.30	Rion	01284 - Application Surface Irrigation	0.10	37.31	inches
Phase 1C	Briar Chapel Utilities LLC	Chatham	35° 49' 14"	-79° 05' 46"	9.48	Wedowee	01284 - Application Surface Irrigation	0.10	30.84	inches
TOTAL					155.68					



0 2000' 4000'



SCALE: 1" = 2000'



FARRINGTON, NC
1993
NIMA 6155 1 6E-SERIES V842



BRIAR CHAPEL

PHASE 8

PRELIMINARY PLAT SUBMITTAL
U.S. HWY 15-501 and MANN'S CHAPEL ROAD
CHATHAM COUNTY, NORTH CAROLINA

DATE: MAY 21, 2013

COUNTY AND AGENCY CONTACTS

- A. Chatham County**
Planning Department
Durkin Building
80 East Street
Hillsboro, NC 27312
(919) 542-8204 phone
(919) 542-8270 phone
Email: jason.kellogg@chathamnc.org
- B. Chatham County**
Environmental Services
80 East Street
Hillsboro, NC 27312
(919) 542-0945 phone
Contact: Dan Lammington, PE
Email: dan.lammington@chathamnc.org
- C. Chatham County**
Soil Erosion and Sedimentation Control
Durkin Building
80 East Street
Hillsboro, NC 27312
(919) 542-8204 phone
(919) 542-8270 phone
Email: richard.ford@chathamnc.org
- D. Chatham County**
Public Works
964 East Street, 2nd Floor, Suite 205
Hillsboro, NC 27312
(919) 542-8270 phone
Contact: Leonard McElroy, III
Email: leonard.mcelroy@chathamnc.org
- E. NCDOT**
Division 8, District 1
300 DOT Drive
P.O. Box 1104
Arlington, NC 27204
(919) 486-6100 phone
Contact: Jeff B. Loflin, PE
Email: jloflin@ncdot.gov
- F. NCDENR**
Division of Water Quality
2021 Lenoir Road, Suite 250
Raleigh, NC 27604
(919) 751-4200 phone
Contact: Annette Lucas
Email: annette.lucas@ncdenr.gov
- G. NCDENR**
Division of Environmental Health
Public Water Supply Section
1634 Mail Service Center
Raleigh, NC 27605-1634
(919) 707-9274 phone
Contact: Richard Dohne
Email: richard.dohne@ncdenr.gov
- H. NCDENR**
Division of Water Quality
Surface Water Protection
2600 Barber Drive
Raleigh, NC 27609
(919) 791-4200 phone
Contact: Barry Herberg
Email: barry.herberg@ncdenr.gov



VICINITY MAP
NTS

PROJECT DATA

NAME OF PROJECT
PHASE 8
CHATHAM COUNTY, NORTH CAROLINA
OWNER
NMP BRIAR CHAPEL, LLC
15 WINDY KNOLL CIRCLE
CHAPEL HILL, NC 27516
PHONE (919) 951-0700
(919) 951-0700
FAX (919) 951-0700
FAX (919) 951-0700
EMAIL nmp@briarchapel.com
briarchapel@gmail.com
PREPARED BY
MCKIM & CREED
1730 VARSITY DRIVE, SUITE 500
RALEIGH, NORTH CAROLINA 27606
PHONE (919) 233-8031
FAX (919) 233-8031
CONTACT GRANT LAVENOGOOD, PE
EMAIL ggrant@mcckimcreed.com
PROJECT AREA 24.7 AC

These improvements shall be constructed in accordance with the following plans, and the Standard Specifications of NCDOT and Chatham County.

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CE-1	COVER SHEET
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CE-345	STAGE 342 EROSION CONTROL PLAN</



North Carolina Department of Environment and Natural Resources

Division of Water Resources

Pat McCrory
Governor

Thomas A. Reeder
Director

John E. Skvarla, III
Secretary

June 27, 2013

Mr. Charlie Horne, County Manager
Chatham County
12 East Street, Courthouse Annex
Pittsboro, North Carolina 27312

Re: Engineering Plans and Specifications Approval
Water Main Extension
Briar Chapel, Phase 8
Chatham County Water System-North
Water System No.: NC0319126, Chatham Co.
Serial No. 13-00546

Dear Mr. Horne:

Enclosed please find one copy of the "Application for Approval..." together with one copy of the referenced engineering plans and specifications bearing the Division of Water Resources stamp of approval for the referenced project. These engineering plans and specifications are approved under Division of Water Resources Serial Number 13-00546, dated June 27, 2013.

Engineering plans and specifications prepared by Grant M. Livengood, P.E, call for the installation of approximately 3,793 feet of 6-inch ductile iron pipe water main, 6 fire hydrants, valves and other appurtenances to serve Briar Chapel, Phase 8 which consists of two separate sections, one located along the south side of Great Ridge Parkway and the other northeast of Boulder Point Drive along Road L.

Please note that an "Authorization to Construct" requires both this approval of Engineering Plans and Specifications and submittal of a complete Water System Management Plan. No construction shall be undertaken, and no contract for construction, alteration, or installations shall be entered into until the Department issues an Authorization to Construct letter in accordance with 15A NCAC 18C .0305(a).

Please also note that in accordance with 15A NCAC 18C .0309(a), no construction, alteration, or expansion of a water system shall be placed into service or made available for human consumption until the Public Water Supply Section has issued Final Approval. Final Approval will be issued and mailed to the applicant upon receipt of both an Engineer's Certification and an Applicant's Certification submitted in accordance 15 A NCAC 18C .0303 (a) and (c).

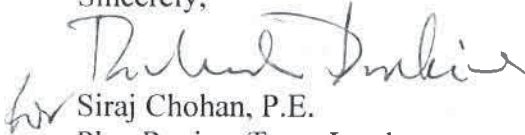
These plans and specifications in the foregoing application are approved insofar as the protection of public health is concerned as provided in the rules, standards and criteria adopted under the authority of Chapter 130A-317 of the General Statutes. This approval does not constitute a warranty of the design, construction or future operation of the water system.

Mr. Charlie Horne
Page 2 of 2
June 27, 2013

One copy of the "Application for Approval..." and a copy of the plans and specifications with a seal of approval from the department are enclosed. One copy of the enclosed documents is being forwarded to our Raleigh Regional Office. The third copy is being retained in our permanent files.

If the Public Water Supply Section can be of further service, please call (919) 707-9100.

Sincerely,


Siraj Chohan, P.E.
Plan Review Team Leader

SMC/RJD

Enclosures: Approval Document

cc: Michael Douglas, P.E., Raleigh Regional Office
Chatham County Health Department
Grant M. Livengood, P.E., McKim & Creed, Inc.
Leonard McBryde, III, P.E., Chatham County Public Utilities Director



North Carolina Department of Environment and Natural Resources
Division of Water Resources

Pat McCrory
Governor

Thomas A. Reeder
Director

John E. Skvarla III
Secretary

June 27, 2013

CHARLIE HORNE, COUNTY MANAGER
CHATHAM COUNTY
112 EAST STREET, COURTHOUSE ANNEX
PITTSBORO, NC 27312

Re: **Authorization to Construct**
BRIAR CHAPEL - PHASE 8
CHATHAM CO WATER SYSTEM
CHATHAM COUNTY, NC0319126

Authorization to Construct (This is not a Final Approval)

Dear Applicant:

This letter is to confirm that a complete Engineer's Report and a Water System Management Plan have been received, and that engineering plans and specifications have been approved by the Department for **BRIAR CHAPEL - PHASE 8, Serial No. 13-00546**.

The Authorization to Construct is valid for 24 months from the **Issue Date** (refer to next page). Authorization to Construct may be extended if the Rules Governing Public Water Supplies and site conditions have not changed (see Rule .0305). The Authorization to Construct and the engineering plans and specifications approval letter shall be posted at the primary entrance of the job site before and during construction.

Upon completion of the construction or modification, and prior to **placing the new construction or modification into service**, the applicant must submit an Engineer's Certification and Applicant Certification directly to RICHARD DICKIE, P.E. of this office.

- **Engineer Certification:** in accordance with Rule .0303 (a), the applicant shall submit a certification statement signed and sealed by a registered professional engineer stating that construction was completed in accordance with approved engineering plans and specifications, including any provisions stipulated in the Department's engineering plan and specification approval letter.
- **Applicant Certification:** in accordance with Rule .0303 (c), the applicant shall submit a signed certification statement indicating that the requirements for an Operation and Maintenance Plan and Emergency Management Plan have been satisfied in accordance with Rule .0307 (d) and (e) and that the system has a certified operator in accordance with Rule .1300. The "Applicant Certification" form is available at <http://www.deh.enr.state.nc.us/pws/> (click on Plan Review Forms, under Plan Review heading).

If this Authorization to Construct is for a new public water system, the owner must submit a completed **application for an Operating Permit** and the appropriate fee. For a copy of the application for an Operating Permit please call (919) 707-9085.

Once the certifications and permit application and fee, (if applicable), are received and determined adequate, the Department will issue a Final Approval letter to the applicant. In accordance with Rule .0309 (a), **no portion of this project shall be placed into service until the Department has issued Final Approval.**

If the Public Water Supply Section can be of further assistance, please call (919) 707-9100.

Sincerely,

Siraj Chohan, P.E.
Plan Review Team Leader

cc: Michael Douglas, P.E., REGIONAL ENGINEER
MCKIM AND CREED PA-CARY



North Carolina Department of Environment and Natural Resources
Division of Water Resources

Public Water System Authorization to Construct

Public Water System Name
and Water System No.:

CHATHAM CO WATER SYSTEM
NC0319126

Project Name:

BRIAR CHAPEL - PHASE 8

Serial No.:

13-00546

Issue Date:

06/27/2013

Expiration Date:

24 Months after Issue Date

In accordance with NCAC 18C .0305, this Authorization to Construct must be posted
at the primary entrance to the job site during construction.

SUMMARY OF IMPERVIOUS SURFACE CALCULATIONS
BRIAR CHAPEL DEVELOPMENT

July 11, 2013

Total Site Area	1,589.36 ac	
Total Phase 2	5.30 ac	230,840 sf
Total Phase 4	60.73 ac	2,645,299 sf
Total Phase 5 South	7.11 ac	309,920 sf
Total Phase 5 North	17.73 ac	772,486 sf
Total Phase 6 South	16.39 ac	714,021 sf
Total Phase 6 North	13.51 ac	588,450 sf
Total Phase 7	19.55 ac	851,782 sf
Total Phase 8	14.22 ac	619,546 sf
Total Phase 9	16.87 ac	734,791 sf
Total Phase 10	23.36 ac	1,017,722 sf
Total Phase 11	12.69 ac	552,614 sf
Total Phase 12	28.97 ac	1,261,923 sf
Total Phase 13	7.04 ac	306,624 sf
Total Phase 14	4.11 ac	178,832 sf
Total Phase 15	17.81 ac	775,645 sf
Total Phase 16	25.12 ac	1,094,311 sf
County Park	1.75 ac	76,314 sf
County School	7.32 ac	318,823 sf
Woods Charter School	4.15 ac	180,911 sf
Water Tank Site	0.32 ac	13,755 sf
Water Treatment Plant	0.89 ac	38,590 sf
BC Civic Building	0.95 ac	41,274 sf
BC Village Market (@ 15-501)	2.83 ac	123,156 sf
BC Town Center (@ 15-501)	31.08 ac	1,353,948 sf
Total Impervious	339.80 ac	14,801,577 sf
Total Impervious Percent	21.38%	

July 11, 2013

Lynn Richardson
Chatham County Planning
80-A East Street
Pittsboro, NC 27312-0130

Re: Briar Chapel Phase 8-Conditional Use Permit Stipulations

Dear Ms. Richardson:

The following are our responses to the Conditional Use Permit Stipulations for Briar Chapel Phase 8.

1. Construction Deadlines

- | | |
|-------------------------------|--------------------|
| a. Estimated Start Date: | September 16, 2013 |
| b. Estimated Completion Date: | August 15, 2014 |

2. Land Use Intensity

a. Overall Briar Chapel

- | | |
|---------------------------------------|---------|
| i. Gross land area (acres) | = 1,589 |
| ii. Maximum impervious surface area | = 24% |
| iii. Maximum number of dwelling units | = 2,389 |

b. Phase 8

- | | |
|---|---------|
| i. Gross land area (acres) | = 24.7 |
| ii. Impervious surface area (acres) | = 14.22 |
| iii. Number of dwelling units | = 110 |
| iv. Maximum impervious surface
(relative to overall) | = 0.89% |
| v. *Cumulative impervious surface | = 21.4% |

*Cumulative percentage is based on actual phase design for phases
platted prior to Phase 8 and projected for future phases.

3. Watershed Management

- a. Updated impervious surface calculations are included with this
submittal.



Venture IV Building, Suite 500

1730 Varsity Drive

Raleigh, NC 27606

919.233.8091

Fax 919.233.8031

www.mckimcreed.com

4. Stormwater Management
 - a. A Stormwater Management Plan has been designed by McKim & Creed, Inc. and approved by NCDENR-DWQ. A certificate of completion stating that stormwater control measures were observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications and other supporting materials, will be submitted to NCDENR-DWQ upon completion of the work. Also, impervious surface calculations are included with this submittal.
5. Commercial Use
 - a. Commercial use is not proposed in this phase.
6. Lighting Plan
 - a. Applicant shall place note on the final plat stating that all area lighting shall meet County standards and not adversely affect adjoining residential areas.
7. Utility and Access Easements
 - a. Utility and access easements have been shown on the approved construction documents.
8. Unity of Development
 - a. The residences projected for Phase 8 will be consistent with those approved in the previous phases.
9. Permits
 - a. Applicable permits required for Preliminary Plat have been obtained and are included within this submittal.
10. Improvements
 - a. No off-site improvements are necessary for this phase.
11. Parking and off-street loading areas
 - a. Sidewalks are shown throughout this phase to provide for pedestrian and bicycle circulation. Parking has not been provided along the public roads.
12. Streets
 - a. Six (6) public roadways are included in Phase 8. The roadways have been approved by NCDOT.
13. Utilities
 - a. The proposed water main design was approved by Chatham County Public Utilities and NCDENR Public Water Supply. The permits are included with this submittal.
 - b. The proposed sanitary sewer design for Phase 8 was approved by NCDENR-DWQ and is included with this submittal. Also, the

NCDENR-DWQ wastewater treatment/reclaimed water/spray irrigation permit is included with this submittal.

14. Public Facilities

- a. The public facilities listed in the Conditional Use Permit are not proposed within this phase.

15. Landscaping/Screening

- a. Not applicable in this phase.

16. Archaeological Survey

- a. Based on the August 2006 report by ESI (entitled "An Intensive Cultural Resource Investigation: Briar Chapel, Chatham County, NC"), there are no cemeteries or structures located within the project area of Phase 8.

17. Solid Waste Management Plan

- a. A solid waste management plan has been previously submitted and no changes are proposed for this phase.

18. Detailed site plan

- a. The detailed site plan included with this submittal conforms to the intent of the approved Briar Chapel Master Plan.

19. Stages

- a. Phase 8 will be constructed as a phase of the overall Briar Chapel development.

20. Moderate Income Housing

- a. Requirements have been met. No further obligations are required.

21. Environment

- a. This stipulation involves the Bennett Mountain area of the development. Phase 8 is not located in or near the Bennett Mountain area.

22. Erosion Control

- a. The approved erosion control plan and permit are included with this submittal.

23. Silt Control

- a. Silt control is part of the approved erosion control plan. See response to Erosion Control above.

24. Items #24-#29 in the CUP Stipulation List
a. Items #24-#29 are duly noted.

If you have any questions during your review, please do not hesitate to call me at (919) 233-8091. Thank you for your assistance.

Sincerely,
McKim & Creed, Inc.



Chris Seamster, PLA
Project Manager

Cc: Mr. Lee Bowman