

Utilities Analysis and Routing Report (preliminary)

UARR (p)

Complete 540 -Triangle Expressway Southeast Extension

TIP #'s: R-2721 / R-2828 / R-2829

WBS: 37673.2.1 / 35516.2.1 / 35517.2.1

Wake & Johnston County

Prepared for:



North Carolina Department of Transportation

Prepared by:

Michael E Davis - Utility Coordination Manager

(704) 814-4407 / mdavis@hindengineering.com



July 2017

Purpose of UARR (p)

This document establishes a basis of understanding between NCDOT and interested parties for the:

- Analysis of utility conflicts with the Preliminary Design
- Opportunities for reducing conflicts through project design,
- Preliminary assessment of responsibilities for costs and design,
- Recognition of project schedules,
- Opportunities for budgeting,
- Possible solutions for consideration of compatibility with other utilities, environmental constraints, and the project design and construction.

Executive Summary

This report is based on Preliminary Design data. Estimated costs and timelines are derived from previous experience, similar projects and site visits.

Actual cost will deviate greatly from amounts suggested dependent upon actual facilities requiring relocation. Each utility will determine actual cost as project is further developed.

This highway project has potential conflicts with the following utilities:

- Water / Sewer Companies:
 - City of Raleigh
 - Most facilities are compensable under prior rights
 - Anticipated relocation cost to NCDOT \$2.375M
 - Town of Holly Springs
 - Compensable under GS 137-27.1
 - Anticipated relocation cost to NCDOT \$780K
 - Town of Garner
 - All water and sewer is owned and operated by the City of Raleigh
 - Town of Fuquay Varina
 - Compensable under GS 137-27.1
 - Anticipated relocation cost to NCDOT \$160K
 - Town of Cary
 - Some facilities are compensable under prior rights
 - Anticipated relocation cost to NCDOT \$396K

- Gas Companies:
 - Colonial Pipeline
 - Compensable under prior rights
 - Anticipated relocation cost to NCDOT \$46.238M
 - Cardinal Pipe Line
 - Compensable under prior rights
 - Anticipated relocation cost to NCDOT \$801.5K
 - PSNC
 - Not compensable
 - Anticipated relocation cost to NCDOT None
- Power
 - Transmission
 - Compensable under prior rights
 - Anticipated relocation cost to NCDOT \$2.094M
 - Distribution
 - Compensable under prior rights
 - Anticipated relocation cost to NCDOT \$5.57M
- Telephone
 - AT&T (Local)
 - Most facilities are not compensable
 - Anticipated relocation cost to NCDOT None
 - 1 Remote Terminal site compensable under prior rights
 - Anticipated relocation cost to NCDOT \$400K
 - AT&T (Legacy)
 - Not compensable
 - Anticipated relocation cost to NCDOT None
 - Century Link
 - Not compensable
 - Anticipated relocation cost to NCDOT None
 - Earthlink
 - Not compensable
 - Anticipated relocation cost to NCDOT None
 - Google Fiber
 - Not compensable
 - Anticipated relocation cost to NCDOT None
 - Level-3
 - Not compensable
 - Anticipated relocation cost to NCDOT None

- MCNC
 - Not compensable
 - Anticipated relocation cost to NCDOT None
- Verizon Business (MCI)
 - Not compensable
 - Anticipated relocation cost to NCDOT None
- CATV
 - Charter Communications
 - Not compensable
 - Anticipated relocation cost to NCDOT None

Project Information

General Highway Project description

R-2721: Complete 540 from west of NC-55 Bypass to east of US 401
R-2828: Complete 540 from east of US 401 to east of I-40
R-2829: Complete 540 from east of I-40 to north of US 64/264 Bypass (I-495)

Clear Recovery Distance

NCDOT will determine

Control of Access Requirements

Full Access Control

Project Contacts

Project Design Engineer:

Brian Eason, LOCHNER (919) 571-7111 beason@hwlochner.com

NCDOT Utilities Coordinator:

Donna Jackson, P.E. (919) 707-6691 djackson5@ncdot.gov

Todd Lapham (919) 707-7188 tdlapham@ncdot.gov

Current Schedule of Project

Final R/W Plans Varies by Project
Let Varies by Project

Schedule of Actions

UARR (preliminary) 07/10/2017
Preliminary Utility Easement Requests 07/10/2017
Preliminary Utilities by Others plans..... 07/10/2017

Future Actions prior to Let date

DOT will develop schedule as project advances beyond Preliminary Design

UARR (final).....
Concurrence by Utility Owner of UARR.....
SUE Level A requests to be sent to Location and Surveys
Final Utility Easement Requests
Utility Designs (final) from Utility Owners
Utilities by Others Final Plans and Provisions
Utility Authorizations.....
Utility Environmental Permit Submittal.....
Utility Easements obtained.....
Environmental permits received for Utility Relocations.....
Utility Construction Requests (including betterment requests).....
Utility Construction Agreement Plans.....
Utility Construction Final PS&E.....
Final Design Field Inspection.....
Utility Construction Agreements executed by owner (U&O or UA).....
Utility Relocations begin.....
Utility Relocations complete

Utility Owner Contacts, Utility Designers, and preliminary Cost Responsibilities

Water / Sewer

City of Raleigh

- **Contacts:**

Robert Massengill, PE
Public Utilities Director
Robert.Massengill@raleighnc.gov
(919) 996-3479

- **Cost responsibility:**

- Most facilities may be compensable under prior rights
- Anticipated relocation cost to NCDOT \$2.375M

Town of Holly Springs

- **Contacts:**

Kendra Parrish
Director of Engineering
kendra.parrish@hollyspringsnc.us
(919) 557-3935

- **Cost responsibility:**

- Compensable under GS 137-27.1
- Anticipated relocation cost to NCDOT \$780K

Town of Garner

- **Contacts:**

Forrest Jones
Public Works Director
fjones@garnernc.gov
(919) 772-7600

- **All water and sewer is owned and operated by the City of Raleigh**

Town of Fuquay Varina

- **Contacts:**

Marty Stone
Water Resources Director
marty.stone@apexnc.org
(919) 249-3353

- **Cost responsibility:**

- Compensable under GS 137-27.1
 - Anticipated relocation cost to NCDOT \$160K

Town of Cary

- **Contacts:**

- Jamie Revels
Director Utilities Department
Jamie.revels@townofcary.org
(919) 460-4303

- **Cost responsibility:**

- Most facilities are not compensable
 - Anticipated relocation cost to NCDOT \$396K

Gas Companies:

Colonial Pipeline

- **Contacts:**

- Tom West
(336) 931-6039
twest@colpipe.com
 - Dan Jacobsen, PE - Project Manager
(678) 762-2284
djacobsen@colpipe.com

- **Cost responsibility:**

- Compensable under prior rights
 - Conflicts with 38,810 liner feet of existing line
 - 917 feet x 1 line + 12,631 feet x 3 lines
 - Proposed new lines totaling 46,238 liner feet
 - 1,739 x 1 line + 14,833 x 3 lines
 - Anticipated relocation cost to NCDOT \$46.238M

Cardinal Pipeline

- **Contacts:**

- David S Dickerson, Division Engineer
(434) 964-2122
David.S.Dickerson@Williams.com

- **Cost responsibility:**

- Compensable under prior rights
 - Conflicts with 607 liner feet of existing line
 - Proposed new line totaling 2,116 feet
 - Anticipated relocation cost to NCDOT \$801.5K

PSNC

- **Contacts:**

- Whitney Waldrop
(919) 367-2713
Maegan.Waldrop@scana.com

- **Cost responsibility:**

- Not compensable
 - Anticipated relocation cost to NCDOT None

Power Companies:

Duke Energy

- **Contacts:**

Highway Relocation Program

Highway.Relocation@duke-energy.com

Note: Duke will not assign engineer(s) until required information identified in “Duke Energy Utility Relocation Contact Instructions” document is provided by NCDOT. A copy of document is included in “Correspondence, References and Appendices” section of this report.

Potential contacts:

- **Transmission:**

Jamie Loy

(919) 546-6034

jamie.loy@duke-energy.com

- **Distribution:**

Jimmy Perry

(919) 431-4741

Jimmy.perry@duke-energy.com

- **Cost responsibility:**

- **Transmission**

- Compensable under prior rights

- Conflicts with 2,556 linier feet of existing line

- Proposed new line totaling 6,983 feet

- Anticipated relocation cost to NCDOT \$2.094M

- **Distribution**

- Compensable under prior rights

- Conflicts with 51,850 linier feet of existing overhead line

- Anticipated relocation cost to NCDOT \$5.57M

Telecommunication Companies:

AT&T (Local)

- **Contacts:**

Kelly J Malpass

Manager Planning & Engineering Design

km4631@att.com

(919) 785-7771

- **Cost responsibility:**

- **Most facilities are not compensable**

- Anticipated relocation cost to NCDOT None

- **1 Remote Terminal sites are compensable under prior rights**

- Anticipated relocation cost to NCDOT \$400K

AT&T (Legacy)

- **Contacts:**
 - Scott Logeman
 - AT&T Network Operations
 - sl1213@att.com
 - (770) 335-8255
- **Cost responsibility:**
 - Not compensable
 - Anticipated relocation cost to NCDOT None

Century Link

- **Contacts:**
 - Wayne Hall
 - Manager - Engineering
 - Ernest.W.Hall@Embarq.com
 - (910) 980-2229
- **Cost responsibility:**
 - Not compensable
 - Anticipated relocation cost to NCDOT None

Earthlink

- **Contacts:**
 - Brian Whitford
 - brian.whitford@corp.earthlink.com
 - (910) 332-9102
- **Cost responsibility:**
 - Not compensable
 - Anticipated relocation cost to NCDOT None

Google Fiber

- **Contacts:**
 - Brian Whitford
 - brian.whitford@corp.earthlink.com
 - (910) 332-9102
- **Cost responsibility:**
 - Not compensable
 - Anticipated relocation cost to NCDOT None

Level-3

- **Contacts:**
 - Relo – Level 3 Communications, LLC
 - relo@level3.com
- Note: Level 3 will not assign engineer(s) until preliminary plans along with anticipated project schedule is submitted to Relocation Group
- **Cost responsibility:**
 - Not compensable
 - Anticipated relocation cost to NCDOT None

MCNC

○ **Contacts:**

Grey Daughtry
gdaughtry@mcnc.org
(919) 248-4179

Paul Shaw
pshaw@MCNC.org
(704) 363-0021

○ **Cost responsibility:**

- Not compensable
- Anticipated relocation cost to NCDOT None

Verizon Business (MCI)

○ **Contacts:**

Eric Crane
OSP Sr. Engineer
eric.crane@verizonbusiness.com
(919) 696-6616

○ **Cost responsibility:**

- Not compensable
- Anticipated relocation cost to NCDOT None

Charter Communications (TWC)

○ **Contacts:**

Roland Bruyere
roland.bruyere@twcable.com
(919) 362-8327

○ **Cost responsibility:**

- Not compensable
- Anticipated relocation cost to NCDOT None

Utility Easements (Existing and Preliminary)

- **Duke Energy – Transmission**
 - Deeded easements crossing proposed roadway at:
 - L Sta. 233+00 (Pierce Olive Road)
 - L Sta. 642+00 (Holland Church Road)
 - L Sta. 823+00 (East of NC-50)
 - L Sta. 1123+50 (South of US 70 Business)
 - L Sta. 1306+40 (north of Battle Bridge Road)
- **Duke Energy – Distribution**
 - Will pursue prior rights claim along all Y lines at:
- **Colonial Pipeline**
 - Deeded easements crossing proposed roadway at:
 - L Sta. 97+00 (Sunset Lake Road)
 - L Sta. 305+00 (West Lake Road)
 - Y8 Sta. 22+00 (Bells Lake Road)
 - L Sta. 450+00 (Lake Wheeler Road) to L Sta. 490+00 (Old McCullers Road)
 - L Sta. 550+00 (Fanny Brown Road) to L Sta. 610+00 east of (Holland Church Road)
 - L Sta. 820+00 (East of NC-50)
- **Cardinal Pipeline**
 - Deeded easements crossing proposed roadway at:
 - L Sta. 642+00 (Holland Church Road)
 - L Sta. 1023+50 (south of White Oak Road)
- **AT&T (Local)**
 - Deeded easements at Remote Terminal sites
 - Y5 Sta. 35+00 (Holly Springs Road)

Survey Data Required

- Utility Survey
 - Include limits of existing utility easements

Possible Project Design Efforts for Utilities

Water / Sewer Companies:

- City of Raleigh
 - City of Raleigh will have relocation design responsibility for 8" 12", 16" and 30" diameter water lines currently in NCDOT right-of-way as well as 12", 16" and 30" diameter sewer lines (force main and gravity) that are installed by encroachment.
 - Avoid 72" sewer outfalls lines at Sta. L 1320.00 south of Auburn Knightdale Road
- Town of Holly Springs
 - Town of Holly Springs will have relocation design responsibility for 16" diameter water lines currently in NCDOT right-of-way as well as an 8" diameter gravity sewer line installed by encroachment.

- Town of Cary
 - Town of Cary will have relocation design responsibility for two 16" diameter water lines currently in NCDOT right-of-way.
- Town of Fuquay Varina
 - Town of Fuquay Varina will have relocation design responsibility for 12" diameter water line currently in NCDOT right-of-way.

Gas Companies:

- Colonial Pipeline
 - Reduce NCDOT R/W impact to existing pipeline between L Sta. 450+00 - Lake Wheeler and L Sta. 490+00 Old McCullers Road
 - Minimize cut and/or fill over existing pipelines
 - Reference “CPC 3rd party guidelines” included in “Correspondence, References and Appendices” section of this report
- Cardinal Pipeline
 - Minimize cut and/or fill over existing pipelines

Power Companies:

- Duke Energy – Transmission
 - Avoid excavation within 25’ of transmission structures (poles, towers, guys, etc.)
 - Reference copy of “Duke Energy Transmission RW Standards” included in “Correspondence, References and Appendices” section of this report

Telecommunication Companies:

- AT&T (Local)
 - Avoid Remote Terminal (RT) sites

Possible Permit Needs

Railroad Permits

- Utility Owners will obtain permits required for respective relocations

Environmental Impacts

- NCDOT will obtain required permits including all utility relocations within project limits

Coordination and Constructability

Traffic Control Needs

- Utility Owners are responsible for traffic control for utility relocations by others not included in NCDOT contract
- General Contractor is responsible for traffic control for utility relocations included in contract

Division Construction Review

- NCDOT Division 5 & 4 will establish review dates when project develops beyond Preliminary Design

Constructability Issues

- NCDOT Division 5 & 4 will establish review dates when project develops beyond Preliminary Design

Utility Owner's Comments

- Utility Owner's will provide comments when project develops beyond Preliminary Design

Utility Relocation Durations and Staging

Water / Sewer Companies:

- *City of Raleigh*
 - *Acquisition of new R/W and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months
- *Town of Holly Springs*
 - *Acquisition of new R/W and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months
- *Town of Cary*
 - *Acquisition of new R/W and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months
- *Town of Fuquay Varina*
 - *Acquisition of new R/W and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months

Gas Companies:

- *Colonial Pipeline*
 - *Acquisition of new R/W and Design* 6 months
 - *Construction/Cutover/Removal* 12 months
 - *Cutover for pipelines are restricted during winter months*
- *Cardinal Pipeline*
 - *Acquisition of new R/W and Design* 6 months
 - *Construction/Cutover/Removal* 12 months
 - *Cutover for pipelines are restricted during winter months*
- *PSNC*
 - *Design* 6 months
 - *Construction/Cutover/Removal* 12 months
 - *Cutover restricted during winter months*

Power Companies:

- *Duke Energy - Transmission*
 - *Acquisition of new R/W and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months
 - *Cutover for transmission lines are restricted during winter and summer months*
- *Duke Energy - Distribution*
 - *Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months

Telecommunication Companies:

- *AT&T (Local)*
 - *Acquisition of new RT site and Design* 12 months
 - *Construction/Cutover/Removal* 12-18 months
- *AT&T (Legacy)*
 - *Design* 6 months
 - *Construction/Cutover/Removal* 12-18 months

- *Century Link*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*
- *Earthlink*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*
- *Level 3 Communications*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*
- *MCNC*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*
- *Verizon Business (MCI)*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*
- *Charter Spectrum (aka Time Warner Cable)*
 - *Design* *6 months*
 - *Construction/Cutover/Removal* *12-18 months*

Correspondence, References and Appendices

Duke Energy Utility Relocation Contact Instructions
Duke Energy Transmission RW Standards
CPC 3rd party guidelines
Compensable Utility Matrix

DUKE ENERGY
Carolina Delivery Operations
Utility Relocation Contact Instructions
03/09/2015

A. Where should I send my contact information?

Notification: The Agency or the consultant (third party) working with the Agency must send Duke Energy a letter or e-mail of notification of a potential utility conflict. Any notifications sent from third parties, should copy the Government Agency the third party is representing*. Notification is required for all Transmission and Distribution conflicts with road construction projects located in the Carolinas. Reference item B below for a checklist of data required by Duke Energy to start the utility relocation process.

Send all e-mail notifications to Duke Energy at: Highway.Relocation@duke-energy.com

Mail other documents USPS to the following address:

Duke Energy
Highway Relocation Program
4690 Simms Creek Road
Raleigh, N.C. 27616

For facilities formerly under the controls of Carolinas Power & Light Company d/b/as Progress Energy Carolinas, Inc. The new legal name for this company is now Duke Energy Progress, Inc. The Program Manager is Jacqueline Coley @ 919-661-4335.

For facilities formerly under the controls of Duke Power Company or Duke Energy. The new legal name for this company is Duke Energy Carolinas, LLC. The Program Manager is Larry Morris @ 803-283-5084.

***The Agency must notify Duke Energy in writing either by letter or email when a contractor is hired to perform utility coordination for the Agency.**

B. What information should I provide?

1. The WBS Element number, TIP number, File number, or other agency project numbers
2. A brief description of the project location, the county, and nearby town
3. A short description of the project scope
4. The project point(s) of contact – Agency Utility Coordinator &/or Third Party Utility Coordinator
5. Project plans, profile, and cross sections
6. Provide the following dates and project milestones
 - a. PUE Plan Due Date
 - b. URA and Estimate Need Date
 - c. Authorization Need Date
 - d. Early Construction Start Date
 - e. Project Let Date

C. Other related information

Notes:

1. The Agency will receive notification of Duke Energy Engineer within 5 business days. Once this notification has been received, the project should be coordinated through the Duke Energy Engineer.
2. For general questions, contact the Duke Energy Program Manager for your area.
3. Minor projects submitted from Agency Maintenance may not require complete date information as listed in section B.
4. The information shown in section A. and B. will apply to all projects, unless otherwise noted in this document.

**DUKE ENERGY ELECTRIC TRANSMISSION RIGHTS-OF WAY
GUIDELINES/RESTRICTIONS
VALID FOR
NORTH CAROLINA AND SOUTH CAROLINA**

This list of rights-of-way restrictions has been developed to answer the most frequently asked questions about property owner use of Duke Energy's electric transmission rights of way. This list does not cover all restrictions or all possible situations. You should contact the Asset Protection Right-of-Way Specialist if you have additional concerns about the rights of way. This list of restrictions is subject to change at any time and without notice. Duke Energy reserves all rights conveyed to it by the right-of-way agreement applicable to the subject property. All activity within the rights of way shall be reviewed by an Asset Protection Right-of-Way Specialist to obtain prior written approval. Engineering plans may be required. Compliance with the Duke Energy Right-of-Way Guidelines/Restrictions or approval of any plans by Duke Energy does not mean that the requirements of any local, county, state, or federal government or other applicable agency with governing authority have been satisfied.

1. Structures, buildings, manufactured/mobile homes, satellite systems, swimming pools (any associated equipment and decking), graves, billboards, dumpsters, signs, wells, deer stands, retaining walls, septic systems or tanks (whether above or below ground), debris of any type, flammable material, building material, wrecked or disabled vehicles and all other objects (whether above or below ground) which, in Duke Energy's opinion interferes with the electric transmission right of way, are not allowed within the right-of-way limits. Transformers, telephone/cable pedestals (and associated equipment), and fire hydrants are not allowed. Manholes, water valves, water meters, backflow preventers and irrigation heads are not permitted. Attachments to Duke Energy structures are prohibited.
2. Fences and gates shall not exceed 10 feet in height and shall be installed greater than 25 feet from poles, towers and guy anchors. Fences shall not parallel the centerline within the rights of way but may cross from one side to the other at any angle not less than 30 degrees with the centerline. If a fence crosses the rights of way, a gate (16 foot wide at each crossing) shall be installed by the property owner, per Duke Energy's specifications. The property owner is required to install a Duke lock on the gate to insure access. Duke will supply a lock.
3. Grading (cuts or fill) shall be no closer than 25 feet from poles, towers, guys and anchors (except for parking areas, see paragraph 7) and the slope shall not exceed 4:1. Grading or filling near Duke Energy facilities, which will prevent free equipment access, or creates ground to conductor clearance violations, will not be permitted. Storage or stockpiling of dirt or any other material is prohibited. Sedimentation control, including re-vegetation, is required per state regulations.
4. Streets, roads, driveways, sewer/water lines, other utility lines or any underground facilities shall not parallel the centerline within the rights of way, but may cross, from one side to the other, at any angle not less than 30 degrees with the centerline. No portion of such facility or corresponding easement shall be located within 25 feet of Duke Energy's facilities. Roundabouts, cul-de-sacs, intersections (roads, driveways and alleyways) are not permitted.
5. Any drainage feature that allows water to pond, causes erosion, directs storm water toward the rights of way, or limits access to or around Duke Energy facilities is prohibited.
6. Contact Duke Energy prior to the construction of lakes, ponds, retention, or detention facilities, etc.
7. Parking may be permitted within the rights of way, provided that:
 - a. Prior to grading, concrete barriers shall be installed at a minimum of 9 feet from the Duke Energy facilities. During construction, grading shall be no closer than 10 feet to any Duke Energy facility.
 - b. After grading/paving activity is complete, Duke Energy approved barrier, sufficient to withstand a 15 mph vehicular impact, shall be erected 9 ft. from any Duke Energy facility.
 - c. Any access areas, entrances, or exits shall cross (from one side to the other) the right of way at any angle not less than 30 degrees with the centerline, and shall not pass within 25 feet of any structure. Parking lot entrances/exits cannot create an intersection within the right of way.
 - d. Lighting within the rights-of-way limits must be approved by Duke Energy before installing. Due to engineering design standards, lighting is not allowed in the "Wire Zone". Where lighting is approved (Border Zone), the total height may not exceed 15 ft. in Area A and 12 feet in Area B. See map on back of this page for Areas. Contact your Asset Protection Specialist as the "Wire Zone" varies for the different voltage lines.
8. Duke Energy will not object to certain vegetation plantings as long as:
 - a. It does not interfere with the access to or the safe, reliable operation and maintenance of Duke Facilities.
 - b. With prior written approval, Duke Energy does not object to low growing shrubs and grasses within the "Wire Zone". Tree species are not allowed within the "Wire Zone". Trees that are approved in the border zone may not exceed, at maturity, 15 ft. in Area A and 12 feet in Area B. See map on back of page for Areas. Contact your Asset Protection Specialist as the "Wire Zone" varies for the different voltage lines.
 - c. Engineering drawings must indicate the lowest conductors.
 - d. Vegetation that is not in compliance is subject to removal without notice.
 - e. Duke Energy may exercise the right to cut "danger trees" outside the rights of way limits as required to properly maintain and operate the transmission line.

We hope this is useful information. If you have additional questions or plan any activity not mentioned above, please contact the Asset Protection Specialist for your area.

Duke Energy Asset Protection Specialist: _____

Telephone Number: _____



Colonial Pipeline Company

Tom West
Right of Way Coordinator
Southeast District

Phone: 336-931-6039
Fax: 336-931-6068
E-mail: twest@colpipe.com

RE: Guidelines for encroachments and/or third party activity on Colonial's right of way

A. General requirements

Request for encroachments, or other activity on Colonial Pipeline Company's right of way, are to be sent to the local Colonial representative. Please call Tom West at 336-931-6039 for further information about the local representative.

1. A letter of request outlining proposed work to be performed on Colonial's right of way, identifying the exact location of property (i.e., the county, state, land lot, section, district, township, range, etc.).
2. Two (2) copies each of plans or drawings showing proposed encroachment or other activity on Colonial's ROW.
3. A vicinity map, if available, with location of property noted thereon. Colonial's lines extend into 15 states, with more than 5,250 miles of pipelines; an accurate description is necessary.
4. For water lines or utility lines, specify the size and materials of proposed encroachment.

After review and determination as to whether or not the encroachment or other activity can be allowed within or over the easement area, Colonial will notify you as to (a) any changes necessary; (b) if the encroachment can be allowed; or (c) forward an encroachment letter for approval and return. This letter will include a hold harmless clause.

*****Construction will not be allowed until a locate request has been issued from the State Utility Protection Centers, and Colonial has received the signed encroachment agreement.**

******If applicable all modifications to be made by Colonial Pipeline Company, to its pipeline(s) or rights of way, will be performed by Colonial contractors, at the owners expense. A detailed estimate of the cost, plus applicable overhead, will be provided and must be paid in full before Colonial Pipeline Company will issue an Encroachment Agreement, or work is to begin. At completion of work, an itemized summary will be furnished detailing all costs.**

B. Standard provisions in encroachment agreement letters:

1. Notice must be given at least **48 hours** prior to construction, subsequent maintenance or, repair, so Colonial may provide a representative at the site. Colonial will show the proper party to contact in the encroachment agreement.
2. Permanent structures are not permitted on the easement. Buildings, manholes, junction boxes, valve boxes, service meters, etc., are considered permanent structures.
3. No temporary structures will be allowed in the right of way without express approval of Colonial's representative, such as signs, trailers, temporary power poles, etc.
4. No trees will be allowed in the right of way, nor will pipeline markers be obscured from public view.
5. Right of way is to stay clear of equipment, vehicles and materials at all times.
6. Heavy equipment will not be permitted to operate over the pipeline unless earth padding has been provided to protect the pipeline from vibrating, overloading or physical damage.
7. Burning of trash, brush, debris, etc., will not be permitted on Colonial's right of way.
8. Should any damage occur to the permitted encroachment as a result of Colonial exercising any of its rights at any time, Colonial will not be responsible for damages. Any cost involved to repair the encroachment will be borne by the owners.
9. Blasting within the limits of Colonial's easement will not be permitted. Blasting within 200' of the pipeline will be coordinated with Colonial's representative as to time and procedure.

C. Roads or Streets

1. Roads, streets, driveways, etc. are to be designed so that at least 4.5 feet of vertical clearance is maintained between the top of the pipeline and the finished road surface, and 3 feet of clearance in open drainage or road ditches.
2. Parallel occupancy or roads constructed longitudinally along the easement is not permitted. Crossings will be as near 90 degree angle as practical.

D. Underground utilities

1. Request for utility crossings should clearly designate (a) type of utility; (b) size of line, cable, etc.; and (c) materials to be used.
2. Underground utilities, i.e., storm drains, sewers, waterlines, electric and telephone cables generally may cross the easement provided they maintain a minimum vertical clearance of 2 feet over or under Colonial's pipelines, and cross at as near a 90-degree angle as practical. The same depth will be maintained across the right of way. Septic drain fields and or sewage drains used for percolation are not permissible inside the pipeline easement.
3. Electrical and communication cables and PVC water lines must be placed in a rigid conduit or otherwise encased across the full width of Colonial's easement.
4. Parallel occupancy of the easement with utility lines is not permitted.
5. Colonial's pipelines will be uncovered as necessary under the supervision of the Colonial representative. **Extreme caution will be used when excavating in the vicinity of the pipeline.** Only hand excavation will be permitted at least until the top of the pipeline is exposed at the crossing.
6. No machine ditching is allowed within 5 feet of either side of the centerline of the pipeline. Ditching or grading within the easement will require approval of Colonial's representative.

E. Grading

1. No excavation is permitted over Colonial's pipelines or within the easement without a Colonial representative being present. Sub-grading, grading and placement of fill over the pipelines will require the approval of Colonial's field representative as to equipment and method of construction.
2. Excavating or grading which might result in erosion or which could render the right of way inaccessible will not be permitted unless contractor/owner agrees to restore the area and provide protection to Colonial's facilities.
3. Erosion control measures within the easement, including diversion dikes, sediment traps, silt fences, gravel outlets, and emergency spillways will require approval of Colonial's field representative as to equipment and method.
4. Stocking of spoilage or topsoil over the pipelines is not permitted, and stockpiling within the easement requires the approval of Colonial's field representative.

F. Subdivisions and other developments

Two (2) copies of proposed design plans for grading, utility crossings, and roads etc., are to be submitted for approval to Colonial's local representative as listed above. As revisions in plans are necessary in many instances, it is preferable to submit plans at an early stage in development for Colonial's review and recommendations as to changes.

After approval of final design plans, Colonial will prepare an agreement letter relating to the above items, and will include a harmless clause. This agreement is to be signed by the proper official before work can begin within Colonial's easement.

Compensable Utility Matrix

Compensable Utilities

TIP Number	Location	Description	Power (Duke Energy)								Telecommunications				Gas Transmission						Water / Sewer				Y line totals			
			Duke/Progress Energy Transmission				Duke/Progress Energy Distribution				Cardinal Pipeline		Colonial Pipeline Company		Water / Sewer													
			Facility	Existing	Proposed	\$300 per foot Est. Cost	Facility	Existing	Proposed	\$100 per foot Est. Cost	Facility	Existing	Proposed	\$379 per foot Est. Cost	Facility	Existing	Proposed	\$1,000 per foot / line Est. Cost	Facility	Existing	Proposed	Est. Cost						
R-2721	Y2	E. Williams Road (Hwy 55)				\$0	OH Power	1,000	1,400	\$140,000										Holly Springs 16" DI water	2,000	2,000	\$330,000	\$470,000				
	Y3	Sunset Lake Rd. (SR-1301)				\$0	OH Power	1,400	1,800	\$180,000										Petroleum line x 1 Rem-917ft Inst-1,739ft	917	1,739	\$1,739,000	Holly Springs 8" PVC sewer	2,100	2,100	\$136,500	\$2,055,500
	Y4	Sunset Lake Rd. (SR-1301)				\$0	OH Power	450	500	\$50,000																\$50,000		
	Y5	Holly Springs Rd. (SR-1152)				\$0	OH Power	2,450	2,850	\$285,000	AT&T Remote Terminal Site	1	1	\$400,000										Cary 16" DI water	1,400	1,400	\$231,000	\$916,000
	Y6	Pierce Olive Rd. (SR-1389)	115KV Transmission line Wood "H" structures	669	2,931	\$879,300	OH Power	650	800	\$80,000													Holly Springs 16" DI water	1,900	1,900	\$313,500	\$313,500	
	Y7	West Lake Rd. (SR-1387)				\$0	OH Power	1,300	1,150	\$115,000										Petroleum line x 3 Rem-1,060ft Inst-2,048ft	3,180	6,144	\$6,144,000	Cary 16" DI water	1,000	1,000	\$165,000	\$6,424,000
	Y8	Bells Lake Rd. (SR-1386)				\$0	OH Power	1,500	3,400	\$340,000										Petroleum line x 3 Rem-180ft Inst-357ft	540	1,125	\$1,125,000					\$1,465,000
	Y9	Rhodes Road				\$0				\$0																	\$0	
	Y10B	Deer Meadow Dr.				\$0				\$0																	\$0	
	Y11	Johnson Pond Rd.				\$0	OH Power	650	800	\$80,000																	\$80,000	
	Y12	Lake Wheeler Rd. to US-401				\$0	OH Power	400	700	\$70,000										Petroleum line x 3 Rem-4,278ft Inst-4,645ft	12,834	13,935	\$13,935,000					\$14,005,000
Y13	Hwy 401				\$0	OH Power	1,600	1,900	\$190,000													Fuquay Varina 12" DI water	1,600	1,600	\$160,000	\$350,000		
Segment Cost			669	2,931	\$879,300		11,400	15,300	\$1,530,000		1	1	\$400,000		0	0	\$0		17,471	22,943	\$22,943,000	10,000	10,000	\$1,336,000	\$27,088,300			
R-2828	Y14	Old McCullers Rd.				\$0	OH Power	350	700	\$70,000																\$70,000		
	Y16	Fanny Brown Rd. (SR-2723)				\$0	OH Power	1,000	1,500	\$150,000										Petroleum lines x 3 Rem-6,473ft Inst-6,629ft	19,419	19,887	\$19,887,000				\$20,037,000	
	Y17	Old Stage Rd.				\$0	OH Power	4,100	4,200	\$420,000													Raleigh 8" DI water	2,000	2,000	\$130,000	\$550,000	
	Y18	Holland Church Rd. (SR-2725)	115KV Transmission line Wood "H" structures	594	2,115	\$634,500	OH Power	1,400	1,900	\$190,000	Gas transmission line Rem-607ft Inst-2,116ft	607	2,116	\$801,964													\$1,626,464	
	Y19	Sauls Rd.				\$0	OH Power	1,500	1,600	\$160,000																	\$160,000	
	Y20	Jordan Rd.				\$0	OH Power	500	800	\$80,000																	\$80,000	
	Y21	NC-50 Benson Hwy	115KV Transmission line Wood "H" structures	570	1,214	\$364,200	OH Power	1,500	1,800	\$180,000										Petroleum line x 3 Rem-640ft Inst-1,136ft	1,920	3,408	\$3,408,000				\$3,952,200	
Segment Cost			1,164	3,329	\$998,700		10,350	12,500	\$1,250,000		0	0	\$0		607	2,116	\$801,964		21,339	23,295	\$23,295,000	2,000	2,000	\$130,000	\$26,475,664			
R-2829	Y23	White Oak Rd.				\$0	OH Power	5,900	6,400	\$640,000													Raleigh 12" DI water	2,300	2,300	\$230,000	\$870,000	
	Y24	US 70 Business	115KV Transmission line Wood "H" structures Adj spans and pole height for 370ft crossing	370	370	\$111,000	OH Power	6,500	5,900	\$590,000																\$701,000		
	Y26	Garner Rd.				\$0	OH Power	2,000	1,200	\$120,000																\$120,000		
	Y27	Rock Quarry Rd.				\$0	OH Power	4,500	5,400	\$540,000													Raleigh 12" DI water	2,000	2,000	\$200,000	\$740,000	
	Y28	Battle Bridge Rd. (SR-2552)	115KV Transmission line Wood "H" structures Adj spans and pole height for 353ft crossing	353	353	\$105,900	OH Power	2,000	1,700	\$170,000													Raleigh 16" DI water	1,000	1,000	\$165,000	\$440,900	
						\$0				\$0													Raleigh 12" DI reuse	1,000	1,000	\$100,000	\$100,000	
	Y29	Auburn Knightdale Rd				\$0	OH Power	3,700	2,800	\$280,000													Raleigh 30" DI water	3,200	3,200	\$720,000	\$1,000,000	
						\$0				\$0													Raleigh 30" DI force main	3,200	3,200	\$720,000	\$720,000	
Y30	Poole Rd. (SR-1007)				\$0	OH Power	5,500	5,900	\$590,000													Raleigh 12" DI water	1,200	1,200	\$120,000	\$710,000		
					\$0				\$0													Raleigh 12" DI sewer	1,200	1,200	\$120,000	\$120,000		
Segment Cost			723	723	\$216,900		30,100	29,300	\$2,930,000		0	0	\$0		0	0	\$0		0	0	\$0	15,100	15,100	\$2,375,000	\$5,521,900			
Total End to End Utility Cost			2,556	6,983	\$2,094,900		51,850	55,700	\$5,570,000		1	1	\$400,000		607	2,116	\$801,964		38,810	46,238	\$46,238,000	27,100	27,100	\$3,841,000	\$59,085,864			