

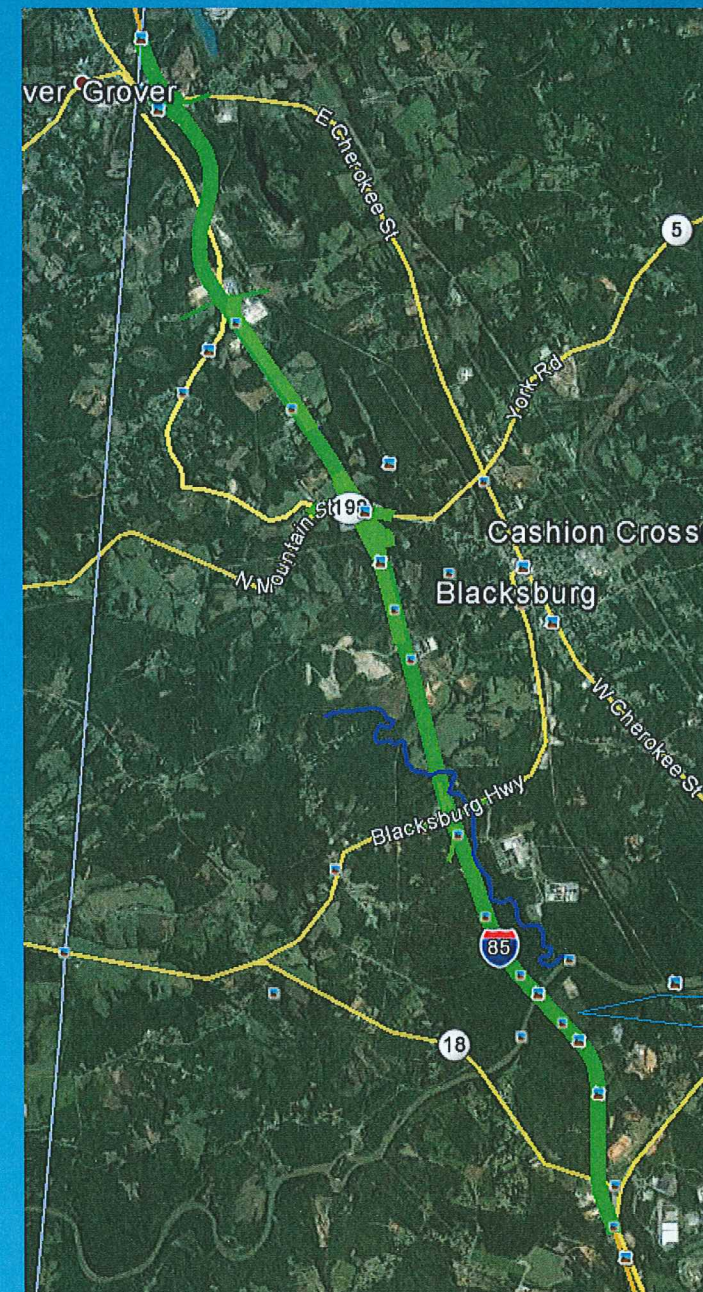


I-85 Widening, Phase III MM 96 to MM 106 Cherokee, SC

SCDOT Project ID: PO27116
CECS Project ID: 6114

Preliminary Utility Report

June 30, 2016
Revised - January 26, 2017



C E Civil Engineering
C S Consulting Services, Inc.



MEETING MINUTES

TO: Brad Reynolds SCDOT
Mark Attaway SCDOT
Jamie Fowler SCDOT
Shane Parris SCDOT
Greg Schuch HDR / ICA
Tom Miller HDR / ICA

FROM: Theresa Hodge, CECS
Lee Amick, CECS

DATE: January 26, 2017

PROJECT: I-85 Widening
MM96 to MM106
CECS Project: 6114
SCDOT Project: P027116

SUMMARY OF INITIAL JOINT UTILITY COORDINATION MEETING

On June 22, 2016, an Initial Joint Utility Coordination Meeting was held to discuss schedules, conflicts, and other concerns for the proposed widening of I-85 and interchange improvements.

In attendance were the following:

Justin Harvey South Carolina Department of Transportation SCDOT
Jesse Hames South Carolina Department of Transportation SCDOT
Shane Parris South Carolina Department of Transportation SCDOT
Jamie Fowler South Carolina Department of Transportation SCDOT
Mark Akin KCI Technologies Inc. for Duke Energy KCI
Lee Sadler American Telephone and Telegraph AT&T
Grier Mangum American Telephone and Telegraph AT&T
Ryan McCumber TPRC Broadband for Spirit TPRC
Kevin Grant TPRC Broadband for Spirit TPRC
Michael Smiley Town of Blacksburg
Charlene Carter Town of Blacksburg
Jeff Humphries Broad River Electric BRE
David Upchurch Broad River Electric BRE
Tom Miller HDR / ICA HDR
Theresa Hodge Civil Engineering Consulting Services CECS
Lee Amick Civil Engineering Consulting Services CECS

Meeting Overview:

Participants met at the Cherokee Maintenance Office on June 22, 2016, at 10:30 am to discuss schedules, conflicts, and other concerns for the proposed interstate widening interchange improvements. An overview of this meeting is summarized below:

Ms. Hodge opened the meeting by thanking all in attendance. There was a brief roundtable introduction of the attendees. She noted that this phase of the project was a broad brush summary of the utilities to provide to the Design Build Team at a later date.

Mr. Amick presented a presentation to the attendees. Some of the highlights from the presentation are as follows:

- The attendees were given an overview of the limits of the project; this included the I-85 corridor starting at the bridge over Broad River to the North Carolina state line, and the proposed alternatives at the interchanges. The participants were given a copy of the interchange alternatives along with a proposed typical section for I-85.
- It was noted that there was no SUE on this project.
- The attendees were asked if they knew of any planned utility improvements within the limits of this project, there was no response.
- The subject of prior rights was discussed. The attendees were asked if they knew of any documentation for their utility to claim prior rights. At this time there was no response.
- Mr. Amick noted that CECS needs “record drawings” / utility location data information by July 15, 2016.
- Mr. Tom Miller, representing ICA, noted the selected alternatives for the interchange improvements will not be made until December.

Duke Energy was represented by Mr. Mark Akin (KCI Technologies Inc.). There was some discussion concerning an “Introduction to Consultant Letter” from SCDOT. On 6/23/2016, Mr. Amick checked the letters that were sent out on 5/12/2016. An “Introduction to Consultant Letter” was sent to Mr. Larry Morris and Duke Energy Highway Relocation section. Mr. Amick forwarded a copy of this email to Mr. Akin and Mr. Carlos Gittens (KCI Technologies Inc.) for their records.

Ms. Hodge asked the utility company representatives to review a location map showing the various utilities located along I-85. The results of the utility company’s reviewing the map are as follows:

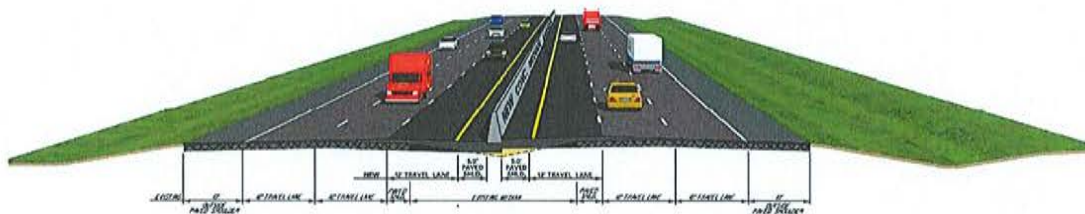
- The Town of Blacksburg was represented by Ms. Charlene Carter and Mr. Michael Smiley. Mr. Smiley stated the Town of Blacksburg has water/sewer lines going under I-85 in existing cattle crossings and at Buffalo Creek. According to Mr. Smiley, the Town of Blacksburg does not have prior rights.

- Broad River Electric was represented by Mr. Jeff Humphries and Mr. David Upchurch. Broad River Electric would like an updated map to verify their utility locations and make additions, if needed. They noted that Broad River Electric had replaced the power poles and lines running parallel to an interchange (exit 102).
- AT&T was represented by Mr. Grier Mangum and Mr. Lee Sadler. Mr. Sadler stated that he is working on getting the requested utility location information ready. AT&T should have their utility locations provided to CECS by the week of July 4th.
- Mr. Jamie Fowler noted a gas transmission line owned by Patriot Energy might be located in the I-85 widening corridor. On June 28, 2016, Mr. Amick contacted Mr. Comer with York County Natural Gas Authority (YCNGA) concerning the gas transmission line in question. Mr. Comer noted that Patriot Energy gas line was a multi municipality venture and YCNGA was part of that venture. Mr. Cromer stated that the Patriot Energy line was a 16-inch transmission line that ended south on S.C. Route 5, before the I-85 project and hence would be no conflict.

Mr. Amick will send to all attendees a copy of the meeting minutes.

Ms. Hodge thanked everyone for attending this meeting.

PROPOSED TYPICAL CROSS SECTION ALONG I-85



Typical Section with Concrete Median Barrier

PRELIMINARY
SUBJECT TO CHANGE

I. INITIAL ASSESSMENT OF PROJECT IMPACTS AND PRIOR RIGHTS

Stations referred to in this report are based on the survey stationing, slight variation occur between the design stations.

American Tower

Communications

American Tower owns and maintains two towers along I-85. The first tower is located between exits 102 and 104

Site Name: Kings Creek,
SC Site Number: SC-085517.

The second tower is located between exits 104 and 106.

Site Name: Tribal,
SC Site Number: SC-85490.



In an email from Alton Camp of American Tower, their facilities only have phone and power service provided to them. (See Appendix)

No conflicts are expected with American Tower, but the utilities that feed the cell towers if impacted, can cause critical outages to services such as 911 emergency.

American Tower will have prior rights.

AT&T Distribution

Telephone Communications

AT&T owns and maintains approximately 63,588 feet of aerial copper, 43,252 feet underground copper, 39,379 feet of underground fiber cable, and 3,912 feet of conduit within the I-85 project corridor, which includes the roads crossing over I-85 at exits 100, 102, 104 and 106. (See Appendix)

Conflicts should be expected primarily around the interchanges.

Some prior rights may exist at the cabinet and sub site locations.

Broad River Electric Cooperative

Aerial and Underground Electric

Broad River Electric Cooperative owns and maintains approximately 30,226 feet of aerial lines, 355 feet of underground lines and roughly 104 poles within the project corridor. The aerial lines start at Station 1895+00 and extending to Station 2210+00 along I-85 and at exits 100,102 and 104. (See Appendix)

Broad River Electric has aerial lines crossing over I-85 at the following locations:

Station 1904+24	Station 2100+80	Station 2160+50
Station 1957+00	Station 2117+65	Station 2196+90
Station 1993+90	Station 2128+30	Station 2210+00
Station 2029+50	Station 2129+50	
Station 2045+00	Station 2147+90	

Only the aerial lines crossing over I-85 at Stations 1904+24, 2029+50, 2045+00, 2100+80 and 2147+90 have potential for conflicts.

Conflicts should be expected mainly around the interchanges and at the aerial line crossings as defined above.

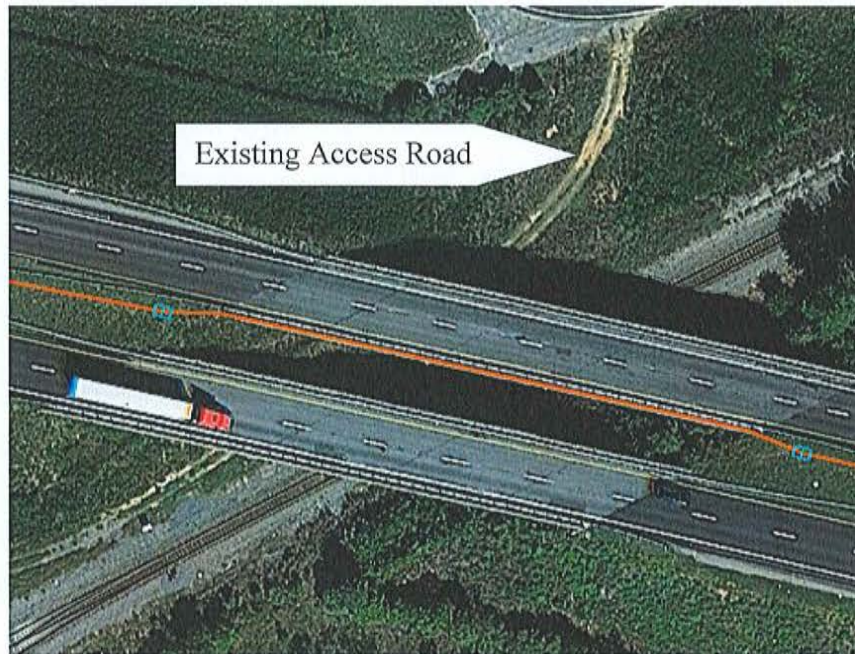
Some prior rights may exist.



Century Link

Fiber Communications

Century Link owns and maintains underground fiber optical cable running parallel to the Norfolk Southern railroad track at Station 2187+00. A section of the Century Link cable, between Access Road Station 48+00 and Station 50+00 appears to be in conflict with a proposed ditch. Approximately 300 feet of cable will need to be relocated. (See Appendix)



This fiber optical cable is located within Norfolk Southern right of way therefore prior rights will exist.

Charter Communications

Communications Aerial / Fiber & Coax

Charter Communications owns and maintains aerial, fiber and coax lines along S.C. Route 5 and S.C. Route 18 at exit 100. This is within the project corridor.

Conflicts should be expected.

Charter Communications should not have prior rights.

Cleveland County Water

Water

It was noted in a document attached to an email sent by the Town of Blacksburg that Cleveland County Water might have some utilities in the area of exit 106. In a phone conversation with Mr. Brad Cornwell representing Cleveland County Water, they do not have any utilities located within the project area. Mr. Cornwell also stated that most of their utilities stop at Battleground Road in North Carolina.

Duke Energy Distribution – (Carolina West)

Aerial Electric

Duke Energy owns and maintains about 46,203 feet of distribution lines which are primarily 3 phase overhead. There are approximately 171 power poles in the project corridor.

The aerial lines run along I-85 for the length of the project. Additionally, the lines run along the roads crossing over I-85 at exits 100, 102, 104 and 106. (See Appendix)

Conflicts should be expected primarily around the interchanges.

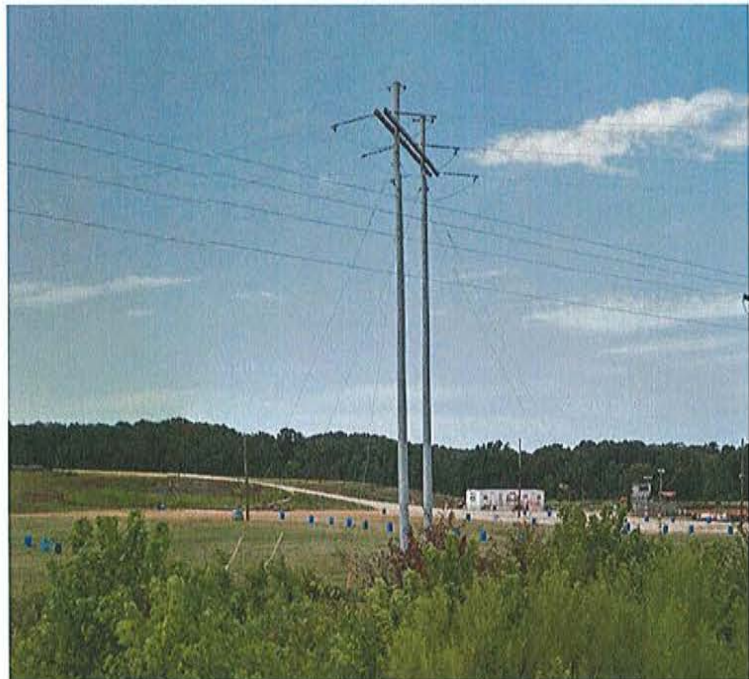
Duke Energy will have some prior rights within the proposed corridor.

Duke Energy Transmission

Duke Energy has approximately 3,192 feet of transmission lines within the project corridor. The transmission lines cross over I-85 at Stations 1960+87, 2192+50, 2028+00, 2254+35 and over Road S-99 (Tribal Road) at Station 59+25.

Some conflicts may exist but should be limited to areas at the interchanges, since the widening of I-85 to the center.

Duke Transmission will have prior rights.



Norfolk Southern

Railroad Communications

Norfolk Southern has abandoned the communication and signal lines along their railroad track under the I-85 bridge. However, Sprint Communications and Century Link have underground cable located within Norfolk Southern right of way.

Since the Norfolk Southern lines are abandoned, no conflicts are anticipated.

Norfolk Southern has prior rights.



SCDOT

Communication

SCDOT communication assets start at the beginning of the project near Station 1823+50 and extends to a point 475 feet north of exit 106 at Station 2242+80. SCDOT utility inventory within the project corridor consists of at least 42,000 feet of cable, eight cameras, and an Amber Alert sign. In a phone conversation with Mr. Dan Campbell on June 28, 2016, he stated that these cameras will be relocated due to the widening of I-85. (See Appendix)



These facilities will be impacted by the project.

The SCDOT ITS system is owned and operated by SCDOT. The cost of such relocation will be responsibility of the SCDOT.

Spirit Communications

Communications

In an email from Mr. Joey Adams to Mr. Lee Amick dated May 26, 2016, stated that Spirit Communications has strands leased in the fiber cable owned and maintained by Century Link.

Since the strands are leased, ownership and prior rights are with Century Link.

Sprint Communications

Communications

Sprint Communications has underground fiber optical cable running parallel to the Norfolk Southern Railroad nears Station 2187+00. This cable is located at the edge of the proposed access road.

Conflicts should be expected, since a proposed trapezoidal ditch will run parallel to this road, and potentially impacting the Sprint cable. It is anticipated that approximately 500 feet of underground fiber optical line will need to be relocated.

This fiber optical cable is located within Norfolk Southern right of way and will have prior rights. (See Appendix)

Town of Blacksburg

Water & Sewer

The Town of Blacksburg owns approximately 19,820 feet of sewer force main and 34,306 feet of water lines. The Town also owns lift stations along I-85 at Station 2029+50, at Loves Truck Stop Exit 41, Station 2130+00, and at the Welcome Center along White Farm Road. The Town of Blacksburg has utilities along roads crossing over I-85 at exits 100, 102, 104 and 106. The Town does not have record drawings for most of their system. Hence, hand sketches for their utility locations were provided.



Because of the lack of plans, the expanse of utility conflicts is not precisely known. (See Appendix)

Conflicts are expected especially at the interchanges.

The Town utilities are primarily located in SCDOT's right-of-way. The Town of Blacksburg should not have prior rights, except where they cross the interstate and extend beyond the SCDOT right of way and at the Lift Station.

York County Natural Gas Authority (YCNGA)

Gas

YCNGA owns and maintains approximately 2,847 feet of 6", 2,573 feet of 4" and 1,212 feet of 1" plastic gas mains. The gas begins at Station 2034+85 and extends to Station 2157+10. YCNGA has gas lines located at exits 102 and 104. (See Appendix)

Conflicts should be expected at the interchanges.

YCNGA gas lines are located within the SCDOT right-of-way-right. However, YCNGA has provided documentation indicating that they have an easement from S.C. Route 98 near exit 102, to Station 2061+50. This easement runs parallel to SCDOT'S right-of-way. Therefore, YCNGA will have prior rights at this location.

II. ESTIMATED COST FOR RELOCATING UTILITIES

The estimate of cost to SCDOT for relocating the utility conflicts, shown below, is for **"Information Only"**. This cost does not reflect any right of way costs that may be necessary for some utilities to relocate.

UTILITY COMPANY	COST
American Tower	- 0 -
AT&T Distribution	\$100,000
Broad River Electric Cooperative	\$400,000
Century Link	\$50,000
Charter Communications	- 0 -
Duke Energy Distribution. - Carolinas West	\$430,000
Duke Transmission	\$2,000,000
SCDOT ITS	\$2,500,000
Sprint Communications	\$50,000
Town of Blacksburg	\$500,000
York County Natural Gas	\$100,000
TOTAL COST	\$ 6,130,000

III. RECOMMENDATIONS FOR EARLY RELOCATIONS

Until such time that the intersections can be finalized, no recommendations for early relocation can be made.

However, every attempt to relocate early for both aerial and underground "perpendicular" utility crossings of I-85 should be made.

IV. IN CONTRACT SERVICES

None of the utility companies chose in contract services for this project.

V. LOCATION OF OVERHEAD LINES

All utility companies were notified, in an email dated 08-29-2016, that *"no overhead lines will be allowed at intersections within the interchanges due to the possibility of future signals."*

VI. UTILITY CONTACT INFORMATION CHART

SC I-85 WIDENING, MM96 to MM106					
Company Name	Address	City State Zip	Contact	Phone Main/ Cell	Email
American Tower	10 Residential Way	Woburn, MA 01801	Alton Campbell	Office: n/a Mobile: 864-979-3293	alton.cambell@americantower.com
AT&T Distribution	4100 South Stream Blvd.	Charlotte, NC 28217	Lee Sadler	Office: 704-478-7917 Mobile: 704-497-4948	ls9173@att.com
AT&T - Distribution - Telics	810 Dutch Square Blvd Suite 212	Columbia, SC 29210	Grier Mangum	Office: 888-611-9939	telicsroadmove@gmail.com
Broad River Electric Cooperative	P.O. Box 2269	Gaffney SC 29342	Jeff Humphries	Office: 864-491-9237 Mobile: n/a	jhumphries@broadriverelectric.com
Century Link	243 F Burgess Road	Greensboro, NC 27107	Richard Browning	Office: (703) 363-8912 Mobile: (703) 363-8912	dennis.browning@centurylink.co
Cleveland County Water	439 Casar Lawndale Road	Lawndale, NC 28090	Brad Cornwell	Office: 704-538-9033	brad.cornwell@clevelandcountyywater.com
Charter Communications	110 Commercial Road	Spartanburg, SC 29303	Larry Camp	Office: (864) 449-8850 Mobile: n/a	Larry.camp@charter.com
Duke Energy Distribution - Carolinas West / KCI Technologies Inc.	128 Millport Circle, Suite 200	Greenville, SC 29607	Mark Akin	Office: 864-252-0024 Mobile: 518-248-8791	Mark.Akin@kci.com
Duke Energy Dist.-Carolinas West	217 Craig Manor Road	Lancaster, SC 29707	Larry Morris	Office: 803-283-5084 Mobile: 704-451-2912	larry.morris@duke-energy.com
Duke Energy Carolinas Transmission West	526 South Church Street	Charlotte, N.C. 28202	Jeremy Sabo	Office: 704-382-8396	Jeremy.sabo@duke-energy.com
SCDOT ITS	Shop Road	Columbia, SC	Dan Campbell	Office: 803-737-1646 Mobile: n/a	cambellde@scdot.org
Sprint	411 Huger Street	Columbia, S.C. 29201	Steve Thomas	Mobile: 678-852-2726	steve.r.thompson@sprint.com
Spirit Communications	491 Lakeshore Parkway	Rock Hill, SC 29730	Joey Adams	Office: (803) 230-3490 Mobile: n/a	joev.adams@spiritcom.com
Town of Blacksburg	200 Osee St, PO Box 487	Blacksburg, SC 29702	Michael Smiley	Office: 864-839-2458	Michael@townofblacksburg.com
Town of Blacksburg	105 S. Shelby St.	Blacksburg, SC 29702	Charlene Carter	Office: 864-839-2332 / 864-219-2887	Charlene@townofblacksburg.com
York County Natural Gas	979 W. Main Street	Rock Hill, SC 29731	Stephen Comer	Office: (803) 323-5388 Mobile: n/a	stephen.comer@vcnqa.com

MEETING ATTENDANCE SIGN IN SHEET

PROJECT: Cherokee Co. I-85 Phase 3 (mm96 to mm106) Initial Joint Utility Coordination Meeting

DATE: July 22, 2016

MEETING LOCATION: Cherokee Maintenance Office



Civil Engineering
Consulting Services, Inc.

NAME	COMPANY	TELEPHONE	EMAIL
Theresa Hoody	CECS	803-779-0811	Hodgeth@cecsinc.com
Lee Amick	"	"	AmickL@cecsinc.com
Justin Harvey	SCDOT		harveyjk@scdot.org
Jesse Hames	SCDOT	864-490-9910	hamesja@scdot.org
SHANE PARRIS	SCDOT	864-490-0466	parmiss@scdot.org
Tomie Fowler	SCDOT	803-597-4455	Fowlerje@scdot.org
Grier Mangum	AT&T	803-409-6905	telicsroadmove@gmail.com
Michael Smiley	Town of Blacksburg	864-505-1405 864-839-2332	Michaeltownofblacksburg.com
Charlene Carter	Administrator Blacksburg	864-219-2887 864-889-2332	Charlene@townofblacksburg.com
TOM MILLER	ICA	803-509-6617	Thomas.Miller@hdwr.com
Ryan McCumber	TPRC Roadband	336-487-4254	ryan@tprcroadband.com
Kevin Gunt	TPRC Broadband	951-810-2016	kgunt@tprcbroadband.com
Mark Akin	KCI	864-252-0024	mark mark.akin@duke-energy.com
Jeff Humphreys	Broad River Electric	864-219-0285	jeffh@brerel.com



Civil Engineering
Consulting Services, Inc.

APPENDIX

AMERICAN TOWER

I-85 WIDENING, MM96 to MM106
Preliminary Utility Report

Lee Amick

From: Alton Campbell <Alton.Campbell@AmericanTower.com>
Sent: Thursday, July 21, 2016 6:03 PM
To: Lee Amick
Subject: RE: widening of I-85 from mm85 to mm 106 in Cherokee County, S.C., Tower numbers SC-085517 and SC-85490
Attachments: 85490_SUR_060998_7_11_2012_14_24_45.pdf; 085517_SUR_030502_7_19_2002_17_35_47.pdf

I am not aware of any lines that would be in the SCDOT right of way. We usually only have power and telephone lines to the towers and they usually run along our access roads. Over the past several years some towers have had fiber run to them by different fiber providers. The only route we ever approve is when utility providers use our access and utility easements. If they go outside of our easements then would have to get a right of way from the neighboring land owners. **With that said if they were to utilize the SCDOT's right of way they should have secured an agreement/easement with the SCDOT.** I feel you are probably safe but having the area located prior to construction would be the safest way to tell. I have attached the surveys for these 2 sites.

Thanks,

Alton Campbell
Field Operations Tech - Southeast
American Tower Corporation
PO Box 1782
West Union, SC 29696
(864) 979-3293 (mobile)
alton.campbell@americantower.com
www.AmericanTower.com

TEXTING and DRIVING... It Can Wait. **Take the pledge** today and pass it on.

Go Green! Please think about our environment before printing this email.

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From: Lee Amick [mailto:amickl@cecsinc.com]
Sent: Thursday, July 21, 2016 3:03 PM
To: Alton Campbell
Subject: widening of I-85 from mm85 to mm 106 in Cherokee County, S.C., Tower numbers SC-085517 and SC-85490

Good Afternoon Alton,

My name is Lee Amick and I work for CECS. CECS is an engineering company located in Columbia, South Carolina. I have been assign the task of performing the utility coordination for the widening of I-85 from mm85 to mm 106 in Cherokee County, S.C. American Tower has two towers located along I-85. The site numbers are SC-085517 and SC-85490. These towers are outside of SCDOT right of way. I would like to check and see if there are any lines from the towers that may go into SCDOT right of way.

I have attached some location maps.

Lee Amick

From: Parris, Shane <ParrisSL@scdot.org>
Sent: Tuesday, July 12, 2016 7:17 AM
To: Lee Amick
Cc: Ellis, Stephen V.
Subject: RE: towers on I-85 between exits 102 & 104
Attachments: 2 UNKNOWN CELL TOWERS.PDF

Lee,

I apologize. I do not have any information on the towers.

Stephen, Do you know any information?

Shane

From: Lee Amick [mailto:amickl@cecsinc.com]
Sent: Monday, July 11, 2016 11:26 AM
To: Parris, Shane
Subject: towers on I-85 between exits 102 & 104

Good afternoon Shane,

There are two towers located along I-85 between exits 102 and 104 (on the right heading toward North Carolina). It appears they are off of SCDOT right-of-way. I would like to find out who owns these towers so that I can get in touch with the owners and check and see if they have any utility located within SCDOT right-of-way. If you have any information concerning these towers, I would appreciate it. A location map attached of these towers is attached to this email.

Thanks,

Lee Amick

Civil Engineering Consulting Services, Inc.
2000 Park Street Suite 201
Columbia, SC 29201
<mailto:amickl@cecsinc.com>
Phone: (803)779-0311 ext 219
Fax: (803) 779-0528

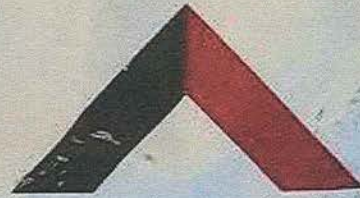
C E Civil Engineering
C S Consulting Services, Inc.

*Commitment
to
Excellence*

Lee Amick

From: Ellis, Stephen V. <EllisSV@scdot.org>
Sent: Tuesday, July 12, 2016 9:08 AM
To: Parris, Shane
Cc: amickl@cecsinc.com
Subject: RE: towers on I-85 between exits 102 & 104

This is all I can find on them. The one on Gibbons road(cell tower 1) appears to be on a piece of property owned by Lequita Ramsey. Her contact information is attached. Tower 2 off of Quarry Road appears to be on property owned by Larry Smith. I can't find anything as far as permits for drives. Sometimes they add new drives when they install these but I don't show anything at either of these locations.



AMERICAN TOWER™

CORPORATION

SITE NAME: KINGS CREEK, SC

SITE NUMBER: SC-085517

FCC REGISTRATION NUMBER: NOT REQUIRED

FOR LEASING INFORMATION:

877-282-7483

877-ATC-SITE

IN CASE OF EMERGENCY:

877-518-6937

877-51-TOWER

NO TRESPASSING

www.americantower.com

POSTING OF THIS SIGN REQUIRED BY LAW

Exhibit
to Memorandum of Lease

SUR

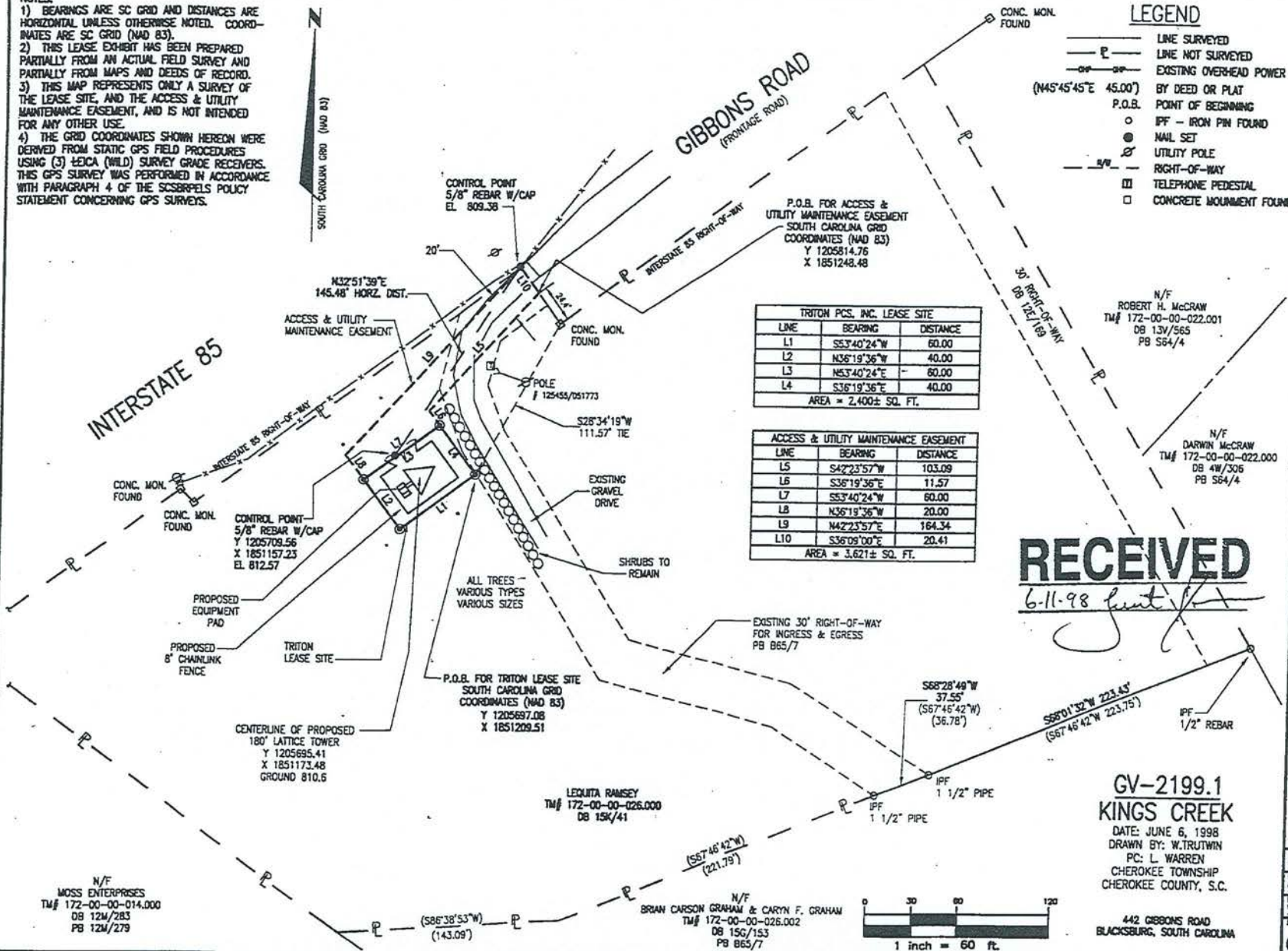
TRITON GV-2199.1 KINGS CREEK

BEING the Lease Area as shown on a plat delineated as the "SR2", prepared for Triton PCS, Inc., by ARCADIS Geraghty & Miller dated June 6, 1998, and attached hereto and made a part hereof, such Lease Site being a portion (or portions) of the real property of Lequita Ramsey as such real property as located in the Cherokee Township, Cherokee County Registry, South Carolina. Commencing at a concrete monument on the southern right-of-way of Interstate 85, which is at the termination of Gibbons Road and the beginning of an existing ingress-egress easement, and proceeding thence with a tie line S 28°34'19" W 111.57 ft. to a point labeled as the "P.O.B. for Triton Lease Site" with state plane coordinates as follows: Y 1205697.08 and X 1851209.51; thence S 53°40'24" W 60.00 ft. to a point, thence N 36°19'36" W 40.00 ft. to a point, thence N 53°40'24" E 60.00 ft. to a point, thence S 36°19'36" E 40.00 ft. to a point which is the Point of Beginning.

ALSO being a nonexclusive easement for utilities and for ingress, egress and regress for pedestrians and vehicular access to the Lease Site, as shown, beginning at a concrete monument on the southern right-of-way of Interstate 85, which is at the termination of Gibbons Road and the beginning of an existing ingress-egress easement, and proceeding in a northwesterly direction 24.4 ft. to the point labeled as the "P.O.B. for Access & Utility Maintenance Easement" with state plane coordinates as follows: Y 1205814.76 and X 1851248.48; thence S 42°23'57" W 103.09 ft. to a point, thence S 36°19'36" E 11.57 ft. to a point, thence S 53°40'24" W 60.00 ft. to a point, thence N 36°19'36" W 20.00 ft. to a point, thence N 42°23'57" E 164.34 ft. to a point, thence S 36°09'00" E 20.41 ft. to a point which is the Point of Beginning and abuts said Lease Site as shown on the attached drawing.

NOTES:
 1) BEARINGS ARE SC GRID AND DISTANCES ARE HORIZONTAL UNLESS OTHERWISE NOTED. COORDINATES ARE SC GRID (NAD 83).
 2) THIS LEASE EXHIBIT HAS BEEN PREPARED PARTIALLY FROM AN ACTUAL FIELD SURVEY AND PARTIALLY FROM MAPS AND DEEDS OF RECORD.
 3) THIS MAP REPRESENTS ONLY A SURVEY OF THE LEASE SITE, AND THE ACCESS & UTILITY MAINTENANCE EASEMENT, AND IS NOT INTENDED FOR ANY OTHER USE.
 4) THE GRID COORDINATES SHOWN HEREON WERE DERIVED FROM STATIC GPS FIELD PROCEDURES USING (3) LEICA (WILD) SURVEY GRADE RECEIVERS. THIS GPS SURVEY WAS PERFORMED IN ACCORDANCE WITH PARAGRAPH 4 OF THE SCSRP'S POLICY STATEMENT CONCERNING GPS SURVEYS.

SOUTH CAROLINA GRID (NAD 83)



- LEGEND**
- LINE SURVEYED
 - - - LINE NOT SURVEYED
 - EXISTING OVERHEAD POWER
 - P.O.B. BY DEED OR PLAT
 - POINT OF BEGINNING
 - IFF - IRON PIN FOUND
 - NAIL SET
 - UTILITY POLE
 - RIGHT-OF-WAY
 - TELEPHONE PEDESTAL
 - CONCRETE MOUND FOUND

TRITON PCS, INC. LEASE SITE

LINE	BEARING	DISTANCE
L1	S53°40'24\"W	60.00
L2	N36°19'36\"W	40.00
L3	N53°40'24\"E	60.00
L4	S36°19'36\"E	40.00

AREA = 2,400± SQ. FT.

ACCESS & UTILITY MAINTENANCE EASEMENT

LINE	BEARING	DISTANCE
L5	S42°25'57\"W	103.09
L6	S36°19'36\"E	11.57
L7	S53°40'24\"W	60.00
L8	N36°19'36\"W	20.00
L9	N42°25'57\"E	164.34
L10	S36°09'00\"E	20.41

AREA = 3,621± SQ. FT.

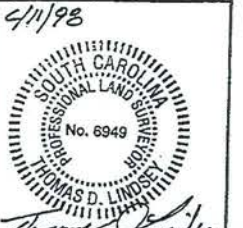
RECEIVED
 6-11-98

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NO.	DATE	REVISION DESCRIPTION	BY	COO.

TRITON PCS, INC.
 TRITON- GV2199.1
 KINGS CREEK
 SITE SURVEY

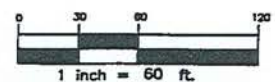
ARCADIS GERAGHTY & MILLER
 420 Park Avenue, Post Office Box 1717
 Greenville, South Carolina 29602-1717
 Tel: 864/242-1717 Fax: 864/235-9062



PROJECT MANAGER C. EDWARDS-BRYER	DEPARTMENT MANAGER T. AMICK
LEAD DESIGNER E. WINDSEY	CHECKED D. LINDSEY
DRAWN BY W. TRUTWIN	DATE JUNE 6, 1998
PROJECT NUMBER GSGV2199.0001	DRAWING NUMBER SR2

**GV-2199.1
 KINGS CREEK**
 DATE: JUNE 6, 1998
 DRAWN BY: W. TRUTWIN
 PC: L. WARREN
 CHEROKEE TOWNSHIP
 CHEROKEE COUNTY, S.C.

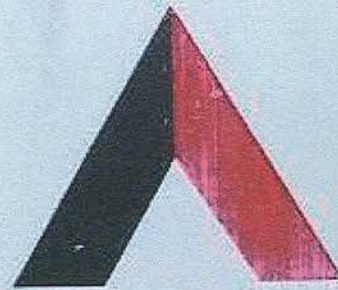
442 GIBBONS ROAD
 BLACKSBURG, SOUTH CAROLINA



N/F
 MOSS ENTERPRISES
 TM# 172-00-00-014.000
 DB 12M/283
 PB 12M/279

LEQUITA RAMSEY
 TM# 172-00-00-026.000
 DB 15K/41

N/F
 BRIAN CARSON GRAHAM & CARYN F. GRAHAM
 TM# 172-00-00-026.002
 DB 15G/153
 PB 865/7



AMERICAN TOWER™

C O R P O R A T I O N

SITE NAME:	TRIBAL
SITE NUMBER:	SC-85490
FCC REGISTRATION NUMBER:	NOT REQUIRED

FOR LEASING INFORMATION:

877-282-7483

877-ATC-SITE

IN CASE OF EMERGENCY:

877-518-6937

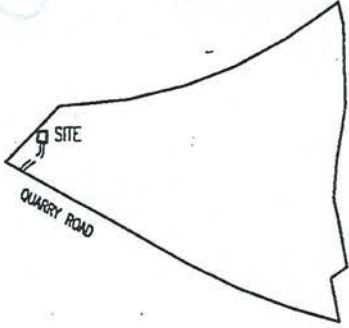
877-51-TOWER

NO RESPASSING

www.americantower.com

POSTING OF THIS SIGN REQUIRED BY LAW

SUR
6-9-98



NOTES:
 1) BEARINGS ARE SC GRID AND DISTANCES ARE HORIZONTAL UNLESS OTHERWISE NOTED. COORDINATES ARE SC GRID (NAD 83).
 2) THIS LEASE EXHIBIT HAS BEEN PREPARED PARTIALLY FROM AN ACTUAL FIELD SURVEY AND PARTIALLY FROM MAPS AND DEEDS OF RECORD.
 3) THIS MAP REPRESENTS ONLY A SURVEY OF THE LEASE SITE, AND THE ACCESS & UTILITY MAINTENANCE EASEMENT, AND IS NOT INTENDED FOR ANY OTHER USE.
 4) THE GRID COORDINATES SHOWN HEREON WERE DERIVED FROM STATIC GPS FIELD PROCEDURES USING (3) LEICA (WILD) SURVEY GRADE RECEIVERS. THIS GPS SURVEY WAS PERFORMED IN ACCORDANCE WITH PARAGRAPH 4 OF THE SCSBRPELS POLICY STATEMENT CONCERNING GPS SURVEYS.

PARENT TRACT
NOT TO SCALE

N/F
 VULCAN MATERIALS COMPANY
 TAX MAP #191-00-00-035.0
 DB 10C PG 289

P.O.B. FOR TRITON LEASE SITE
 SOUTH CAROLINA GRID
 COORDINATES (NAD 83)
 Y 1210349.95
 X 1861481.80

LARRY B. & BARBARA W. SMITH
 TAX MAP #191-00-00-038.0
 DB 12K PG 496
 PB 11U PG 90
 AREA = ± 149,2248
 ZONING: NONE

PROPOSED 180'
 LATTICE TOWER
 Y = 1210324.21
 X = 1861506.03

TRITON PCS INC, LEASE SITE		
LINE	BEARING	LENGTH
L1	S88°16'35"E	50.00
L2	S01°43'25"W	50.00
L3	N88°16'35"W	50.00
L4	N01°43'25"E	50.00
AREA = ±2,500 SQ. FT.		

ACCESS AND UTILITY MAINTENANCE EASEMENT		
LINE	BEARING	LENGTH
L5	N40°08'34"E	24.67
L6	N59°28'49"E	107.77
L7	N15°17'41"E	17.23
L8	N01°48'05"E	42.16
AREA = ±3,837 SQ. FT.		

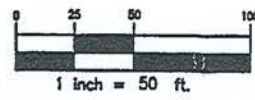
SOUTH CAROLINA GRID (NAD 83)

CONTROL POINT
 5/8" REBAR W/CAP
 ELEV. = 862.8
 N87°22'06"W
 243.63' HORZ. DIST.

P.O.B. FOR C. OF ACCESS &
 UTILITY MAINTENANCE EASEMENT
 SOUTH CAROLINA GRID
 COORDINATES (NAD 83)
 Y = 1210166.87
 X = 1861390.67

CONTROL POINT
 5/8" REBAR W/CAP
 ELEV. = 862.4
 Y = 1210152.70
 X = 1861403.51

- LEGEND**
- LINE SURVEYED
 - - - LINE NOT SURVEYED
 - OP-OP- EXISTING OVERHEAD POWER
 - (N45°45'45"E 45.00') BY DEED OR PLAT
 - P.O.B. POINT OF BEGINNING
 - IPF - IRON PIN FOUND
 - NAIL SET
 - ⊗ UTILITY POLE
 - R/W- RIGHT-OF-WAY
 - UT-UT- UNDERGROUND TELEPHONE



RECEIVED
 6-9-98
 GV-2106.1

TRIBAL
 6-09-98
 BY: C. LASERNA
 PC: L. WARREN
 CHEROKEE TOWNSHIP
 CHEROKEE COUNTY, SC

SITE ADDRESS:
 680 QUARRY ROAD
 BLACKSBURG, SC 29702

NO.	DATE	REVISION DESCRIPTION	BY	CHKD

TRITON PCS, INC.

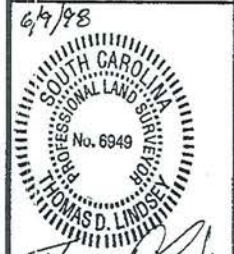
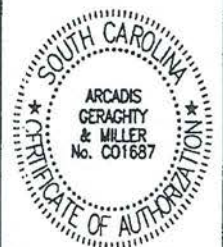
TRITON-GV2106.1
 TRIBAL

SITE
 SURVEY

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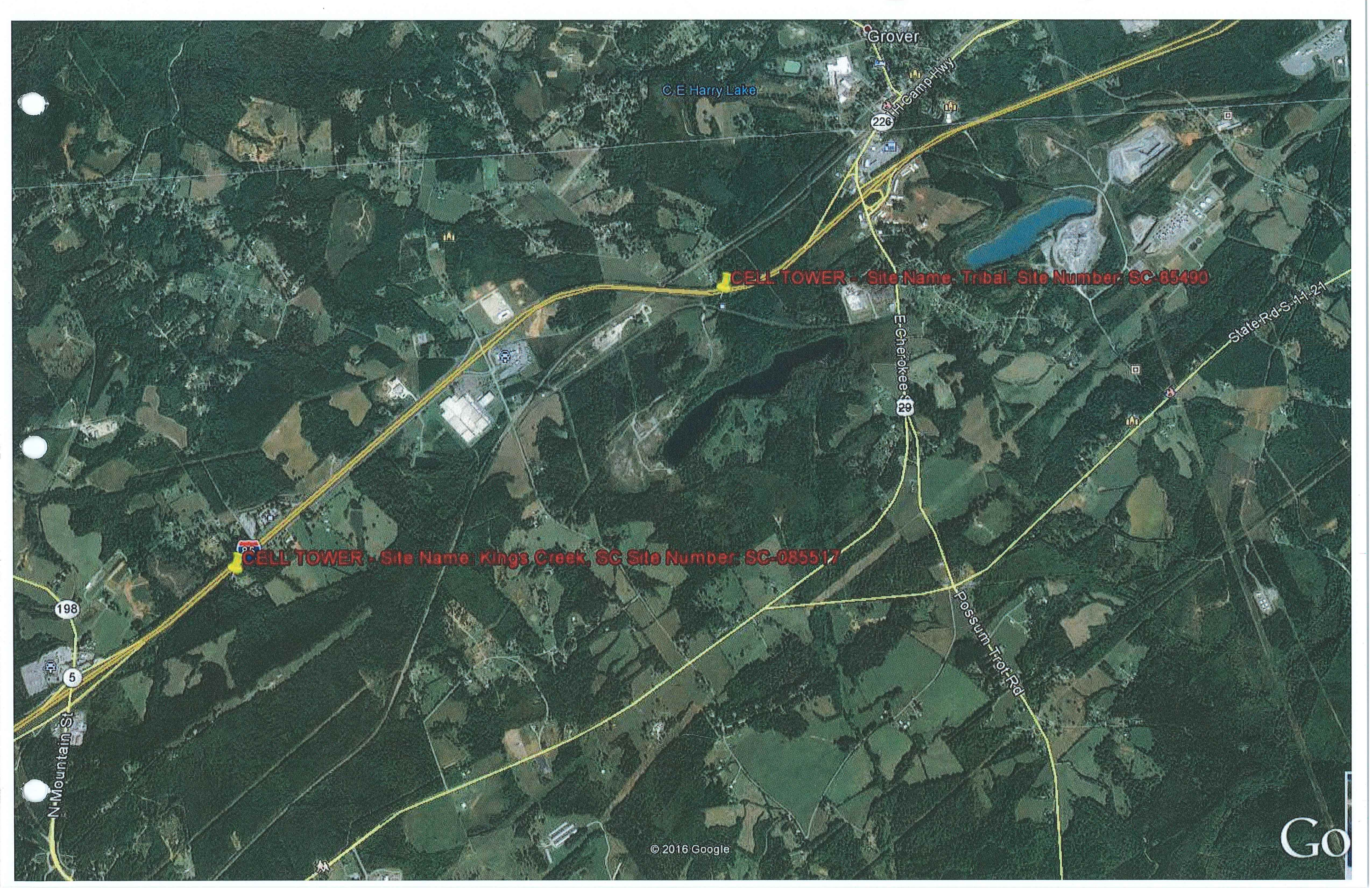
ARCADIS
 GERAGHTY & MILLER

420 Park Avenue, Post Office Box 1717
 Drive #16, South Carolina 29602-1717
 Tel: 854/242-1717 Fax: 854/235-8002



PROJECT MANAGER K. KUNINSKI-BEYER	DEPARTMENT MANAGER D. LINDSEY
LEAD DESIGN PROF. T. AMCK	CHECKED T. AMCK
DRAWN C. L. SERNA	DATE 6-09-98
PROJECT NUMBER	DRAWING NUMBER

GSGV2106.1 SR2



Grover

C E Harry Lake

226

Camp Hwy

CELL TOWER - Site Name: Tribal, Site Number: SC-85490

E Cherokee

State Rd S-11-21

CELL TOWER - Site Name: Kings Creek, SC Site Number: SC-085517

Possum Trot Rd

198

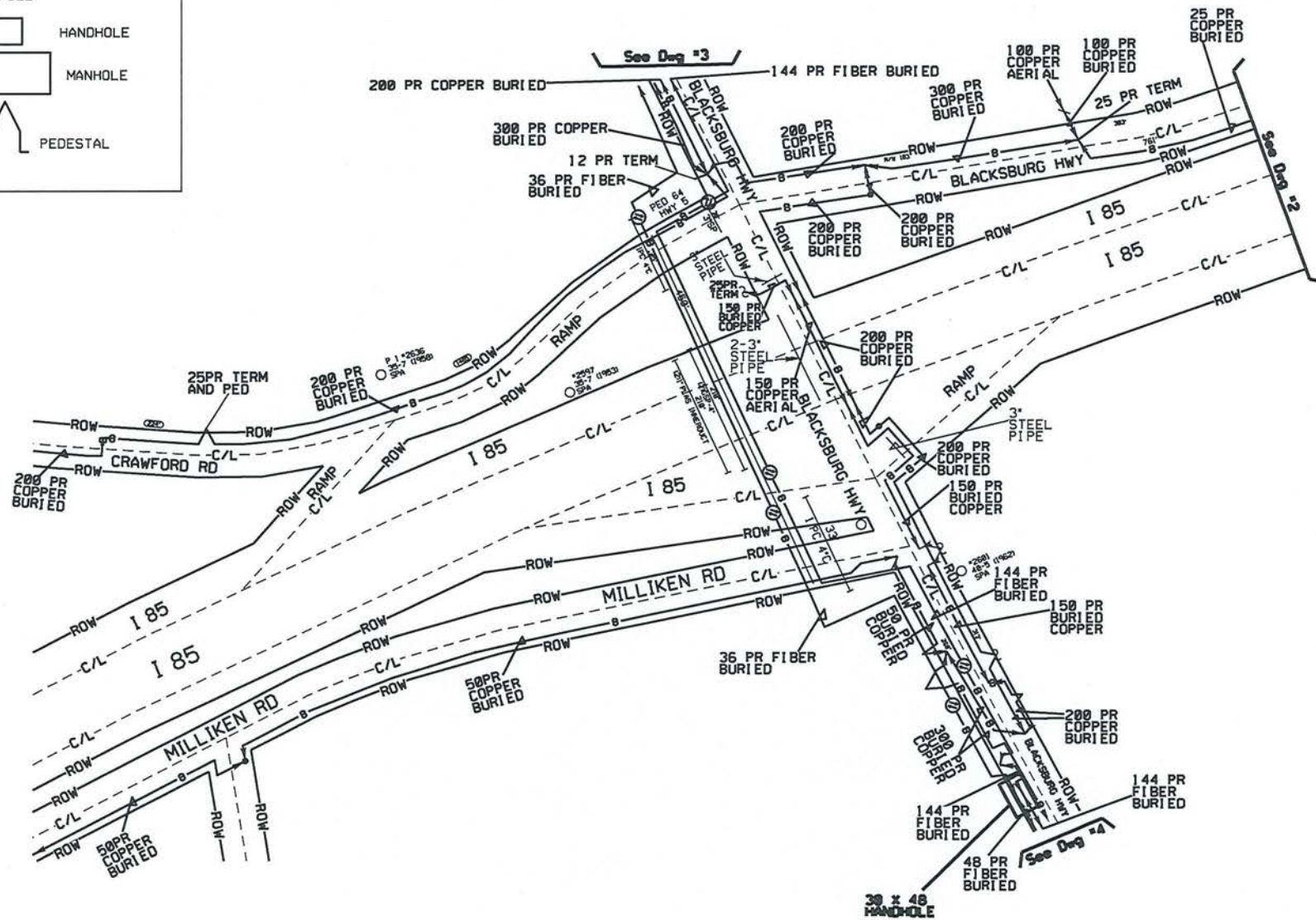
5

N Mountain St

AT&T Distribution

LEGEND

- POLE
- HANDHOLE
- ▭ MANHOLE
- ⌒ PEDESTAL



ATTSE



Construction
Work
Drawing

PROPRIETARY INFORMATION
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State: _____
District: _____
Exchanges: _____
Wire Ctr: BLBGSCMA

AA/Topic: _____
Tax District: RZ/CZ _____
Serv Unit Types: NONE

Designers: _____

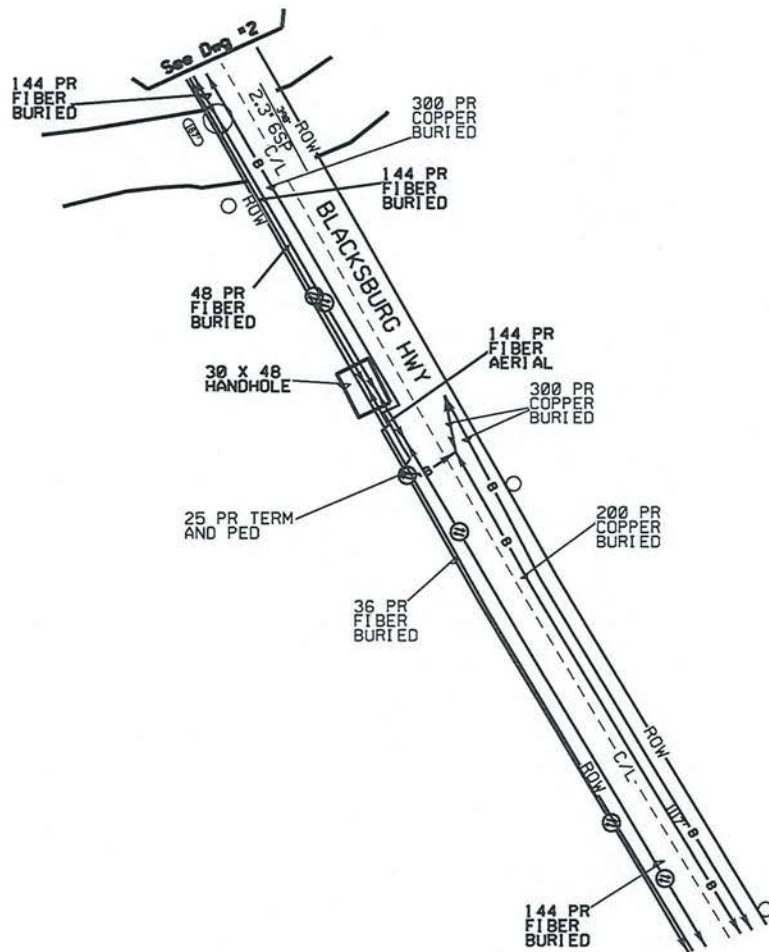
Phones: _____

Records Ref: _____

Job Descriptors: _____

Job Number / CFAS Project Number: _____

DWG 2 OF 33



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Construction Work Drawing

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States: Districts: Exchange: Wire Ctr: BLBSCMA

AA/Topos: Tax Districts: RZ/CZ: Serv Unit Types: NONE

Designer:

Phones:

Records Ref:

Job Descriptions

Job Number / CFAS Project Number:

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State:
District:
Exchange:
Wire Ctr: **BLBOSOMA**

AA/Tapers:
Tax District:
RZ/CZ:
Serv Unit Type: **NONE**

Designer:

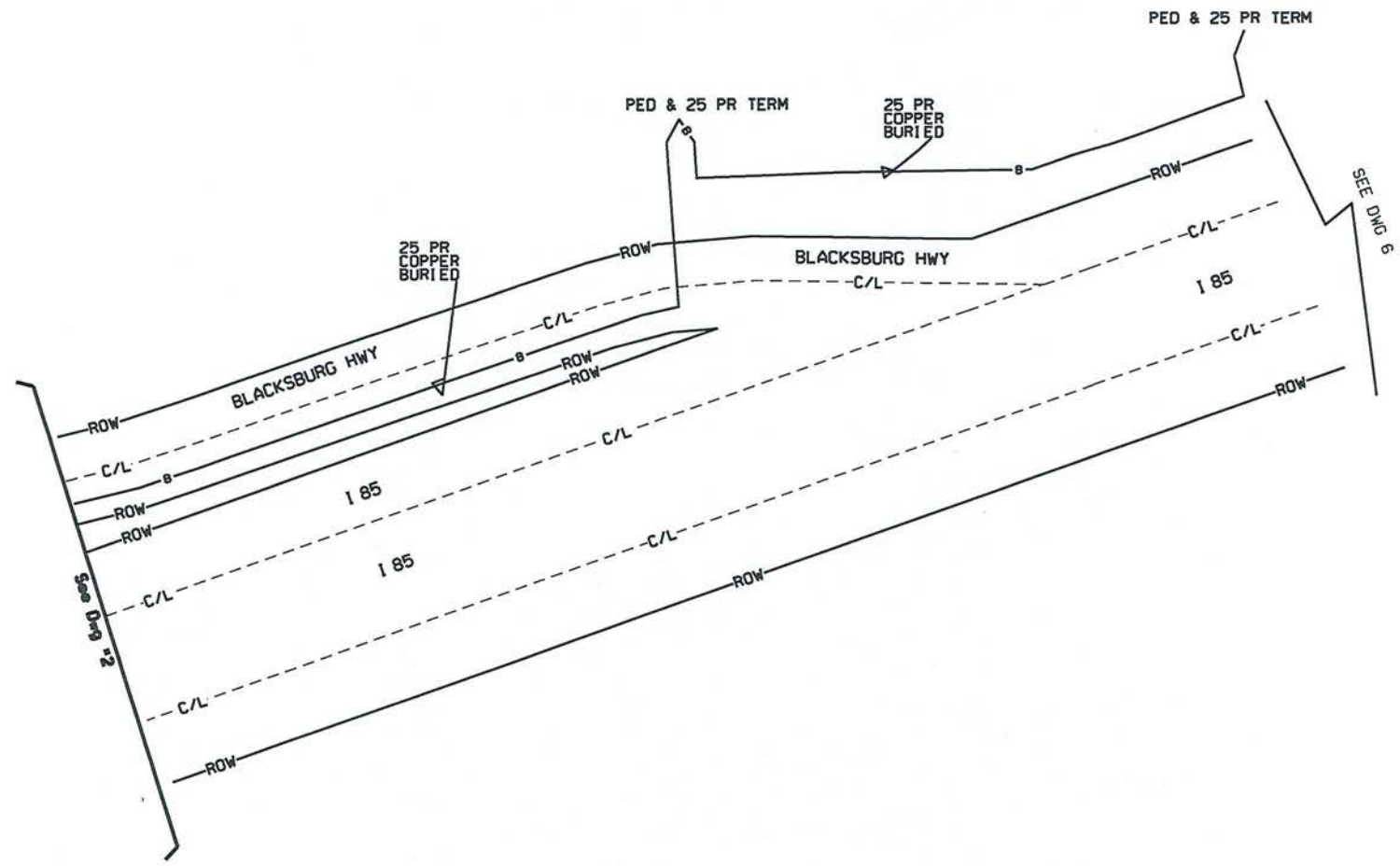
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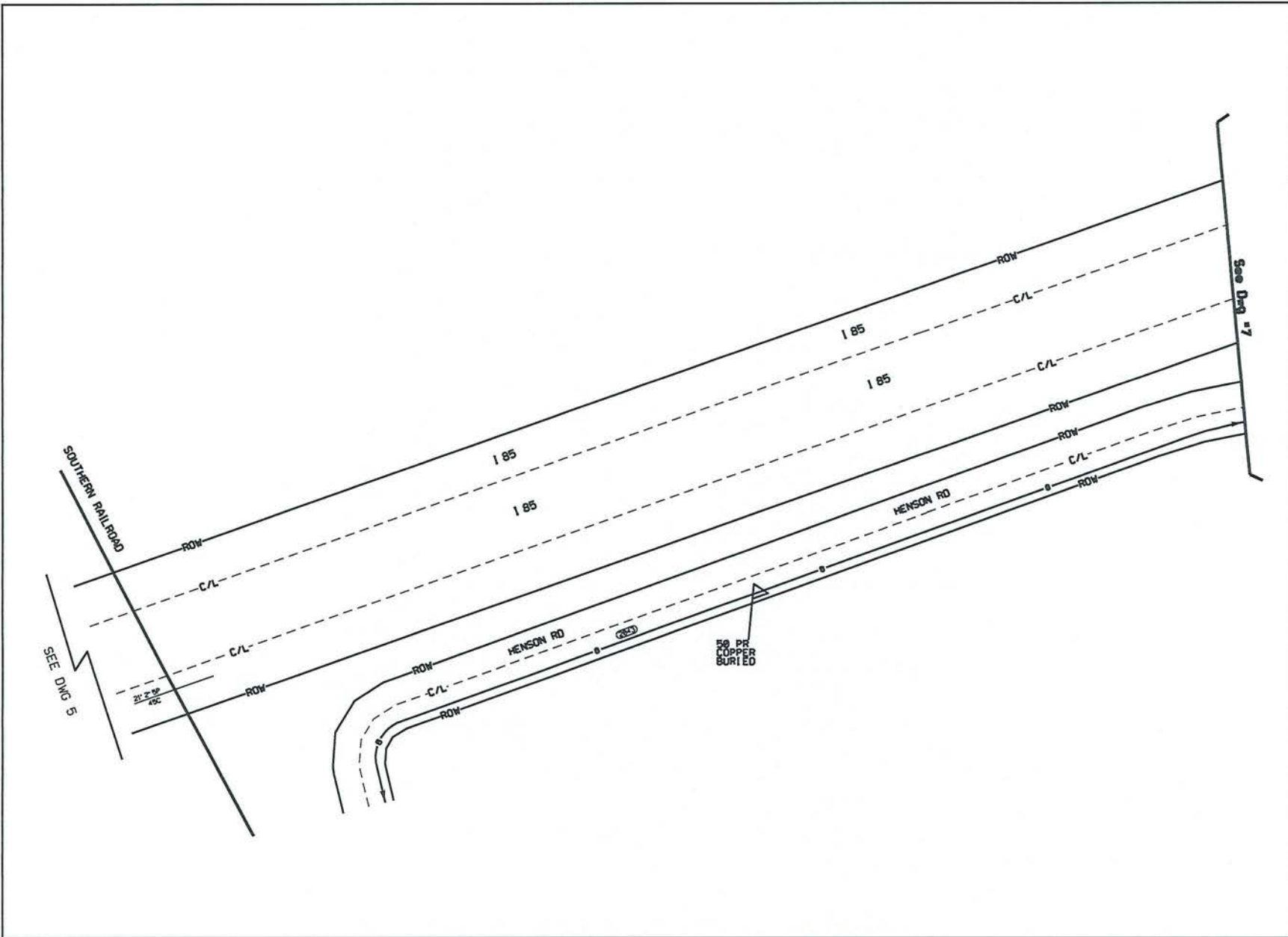
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Job Description:

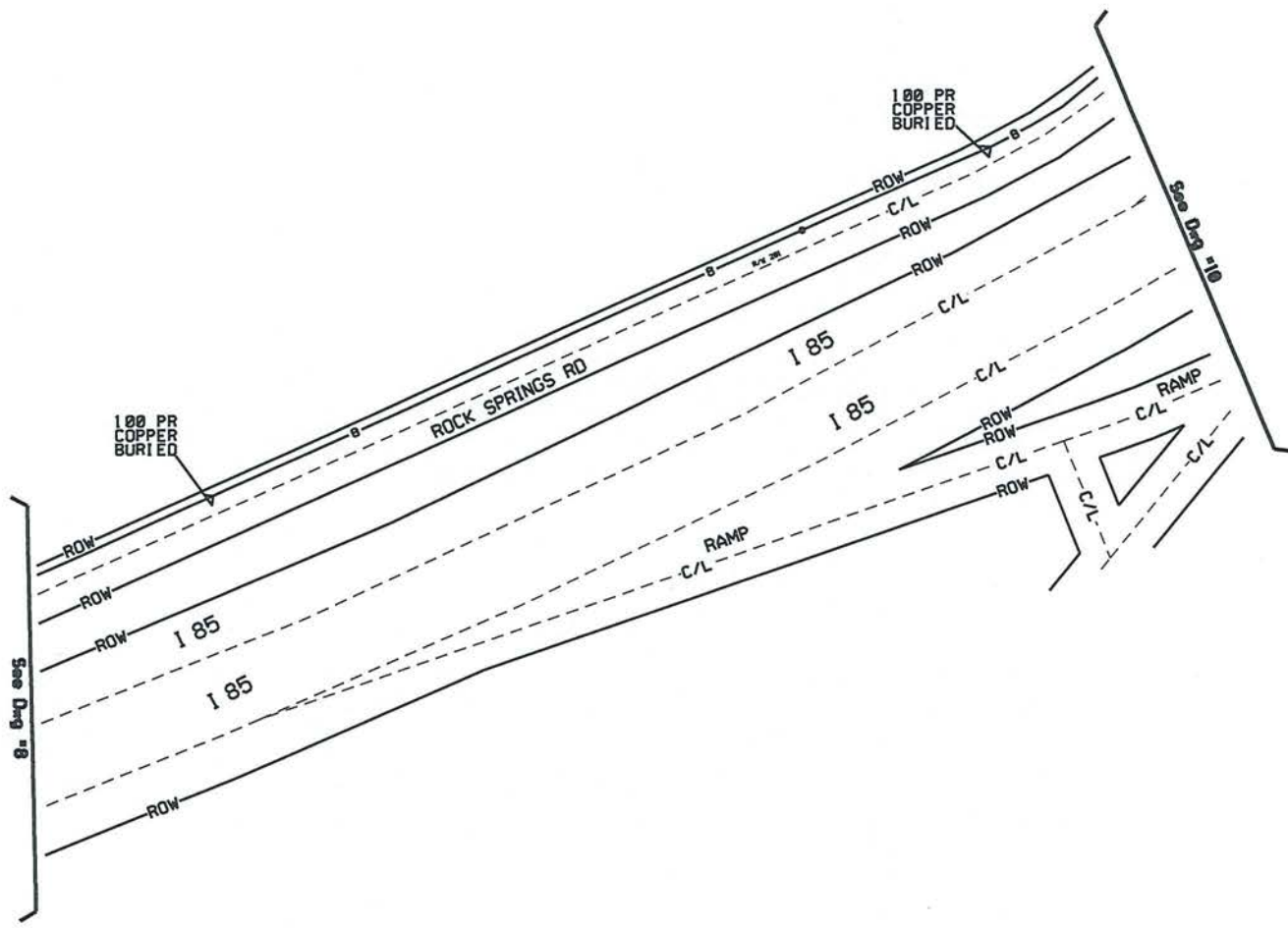
Job Number / CFAS Project Number:
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DWG 5 OF 33





ATTSE		
Construction Work Drawing		
PROPRIETARY INFORMATION <small>Not for disclosure outside the ATTSE family of companies except under written agreement.</small>		
State: District: Exchange: Wire Ctr: BLBOSDMA		
AA/Tapers: Tax District: RZ/CZ: Serv Unit Type: NONE		
Designer:		
Phone:		
Records Ref:		
Job Description:		
Job Number / CFAS Project Number: /		
DWG <u>6</u> OF <u>33</u>		



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Construction
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States:
Districts:
Exchanges:
Wire Ctrs: BLBSCMA

AA/Topers:
Tax Districts:
RZ/CZ:
Serv Unit Types: NONE

Designers:

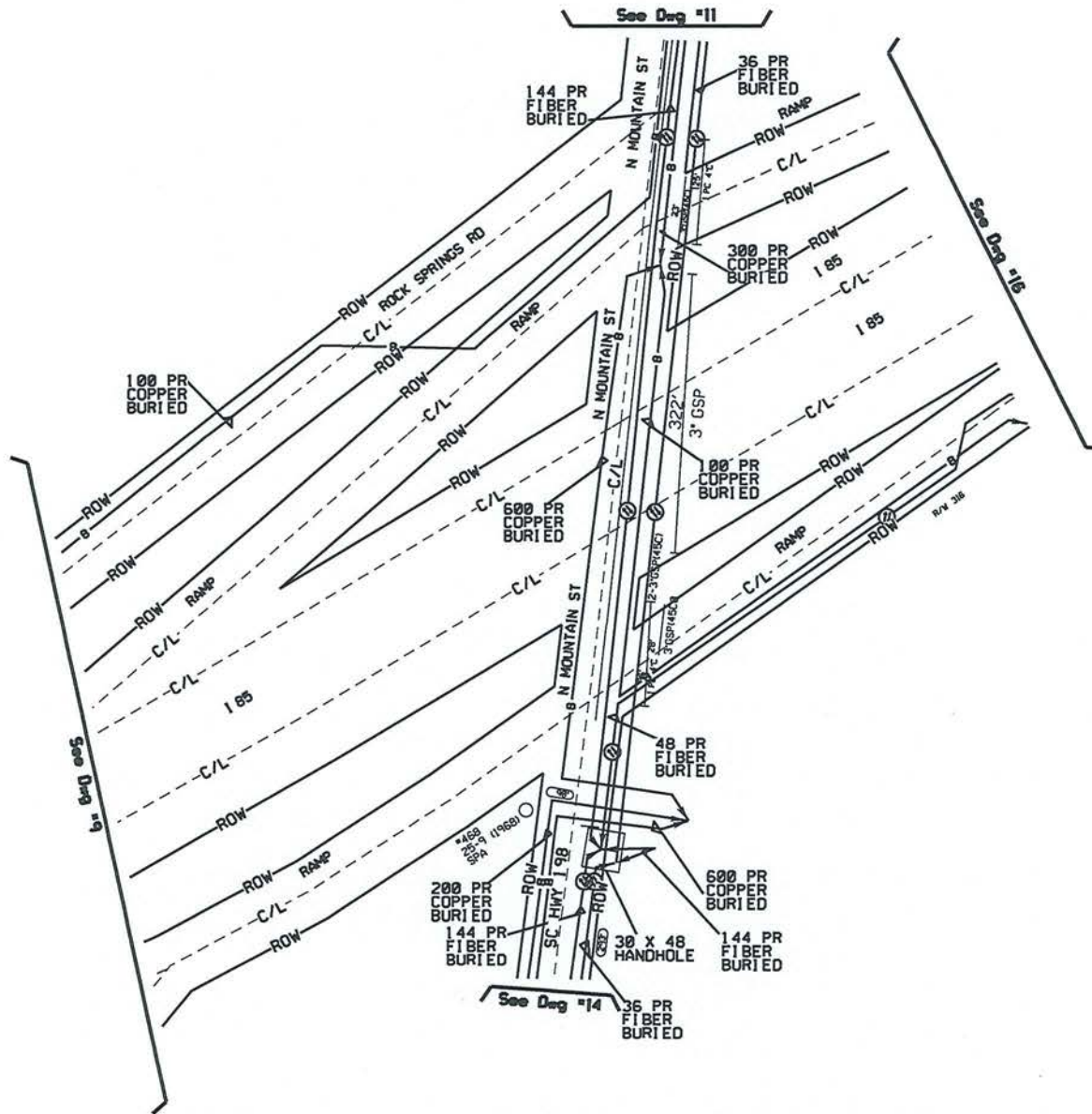
Phones:

Records Ref:

Job Descriptions

Job Number / CFAS Project Numbers
/

DWG 9 OF 33



ATTSE		
Construction Work Drawing		
PROPRIETARY INFORMATION <small>Not for disclosure outside the ATTSE family of companies except under written agreement.</small>		
State: Districts: Exchanges: Wire Ctr: BLBSCMA		
AA/Taper: Tax District: RZ/CZ: Serv Unit Type: NONE		
Designers:		
Phones:		
Records Ref:		
Job Description:		
Job Number / CFAS Project Number:		
Dwg 10 of 33		

ATTSE



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State:
District:
Exchange:
Wire Ctr: BLBSCMA

AA/Tapers:
Tax District:
RZ/CZ:
Serv Unit Type: NONE

Designer:

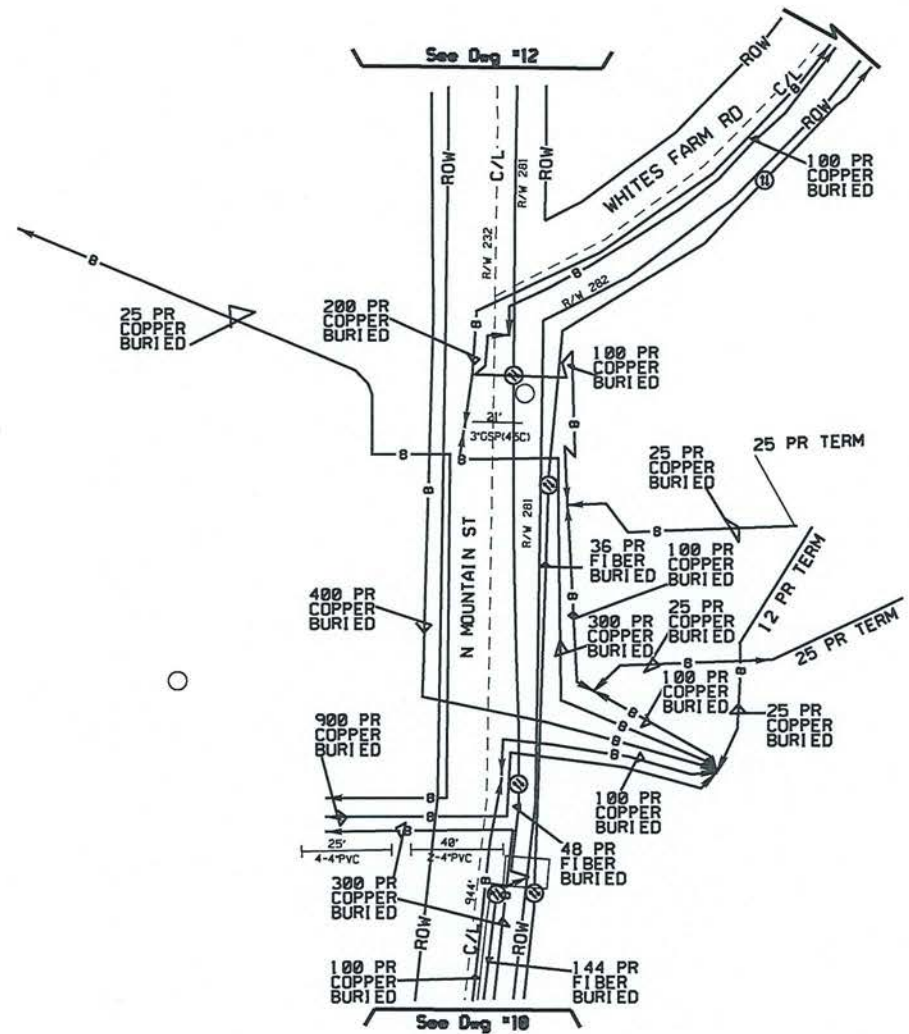
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Records Ref:

Job Description:

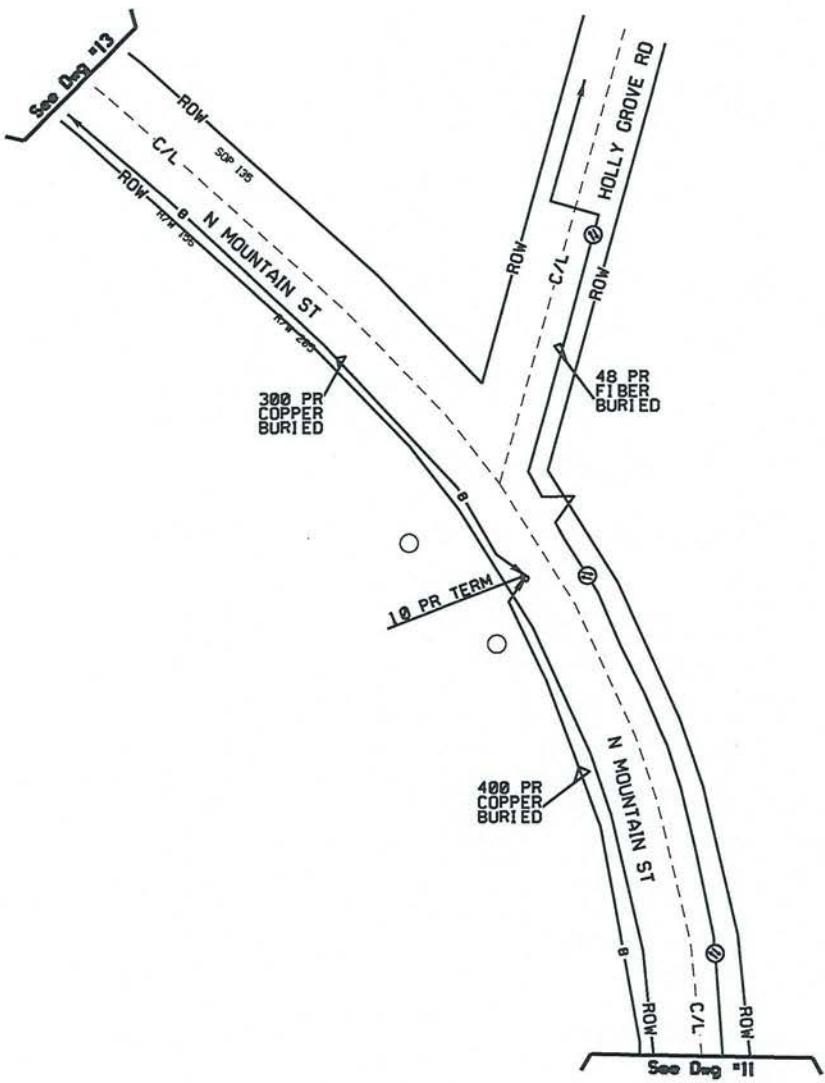
Job Number / CFAS Project Numbers

DWG 11 OF 33



See Dwg #12

See Dwg #10



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Construction Work Drawing		
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State: District: Exchange: Wire Ctr: BLBGSCMA		
AA/Tapers: Tax District: RZ/CZ: Serv Unit Type: NONE		
Designer:		
Phone:		
Records Ref:		
Job Description:		
Job Number / CFAS Project Number: /		
DWG <u>12</u> OF <u>33</u>		

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State:
District:
Exchange:
Wire Ctr: **BLBCSCMA**

AA/Topo:
Tax District:
RZ/CZ:
Serv Unit Type: **MONEW**

Designer:

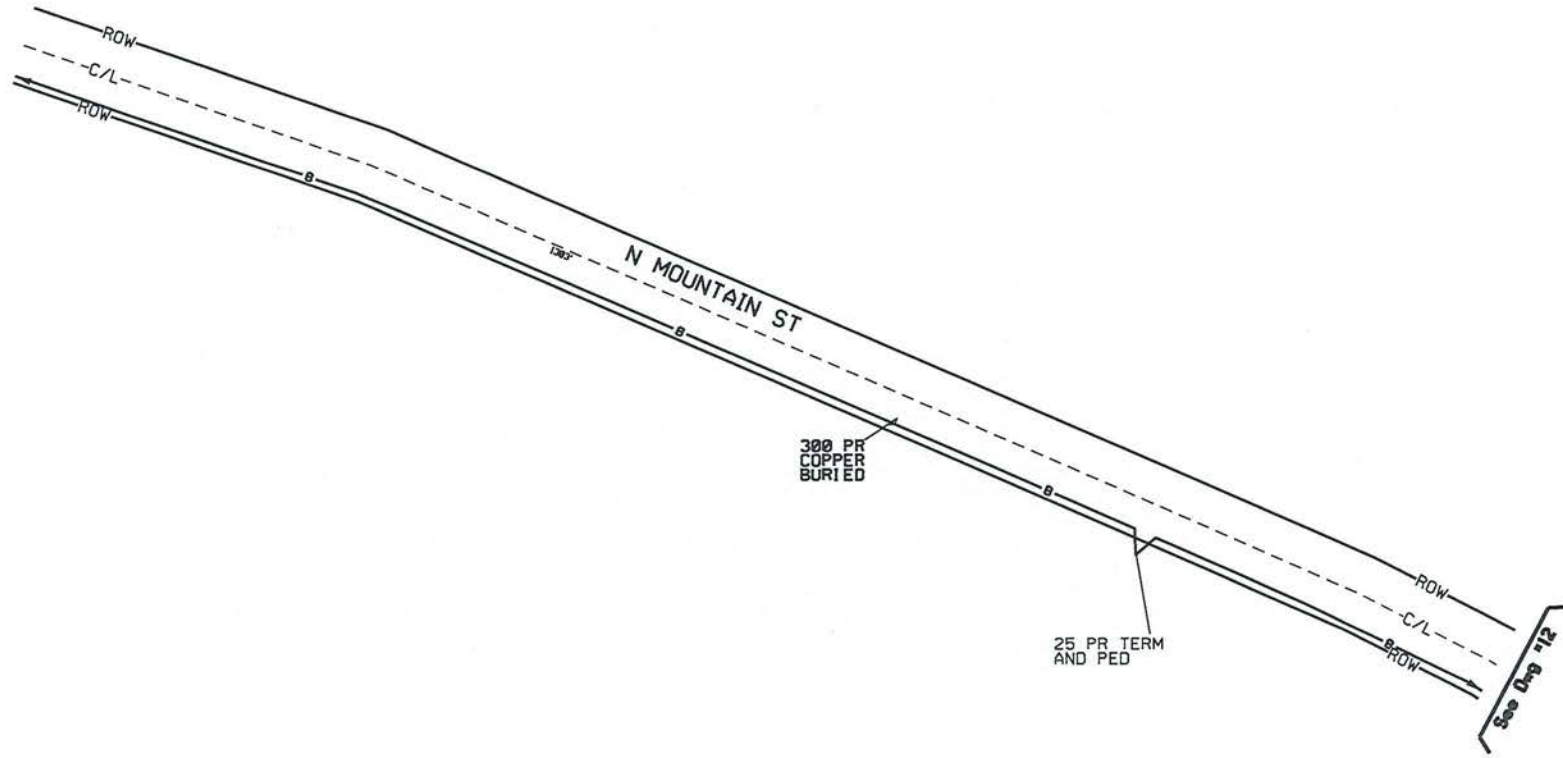
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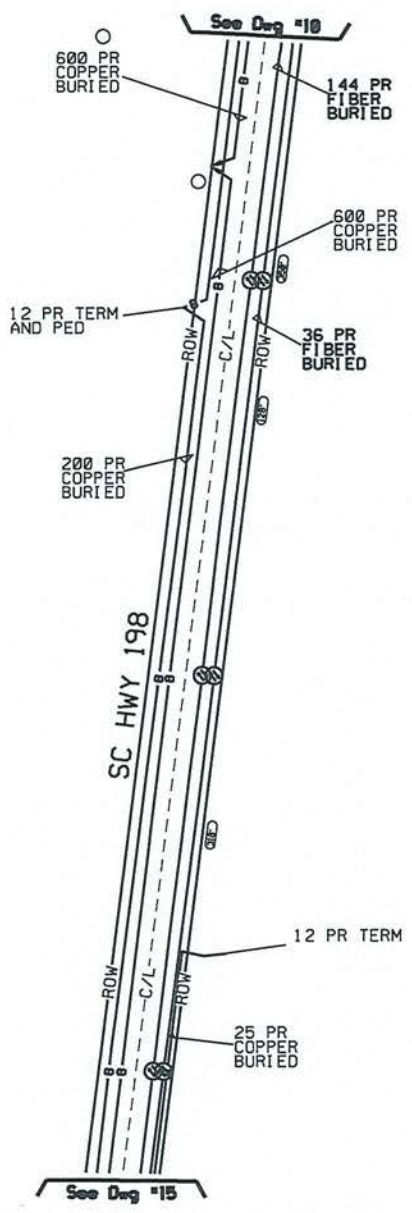
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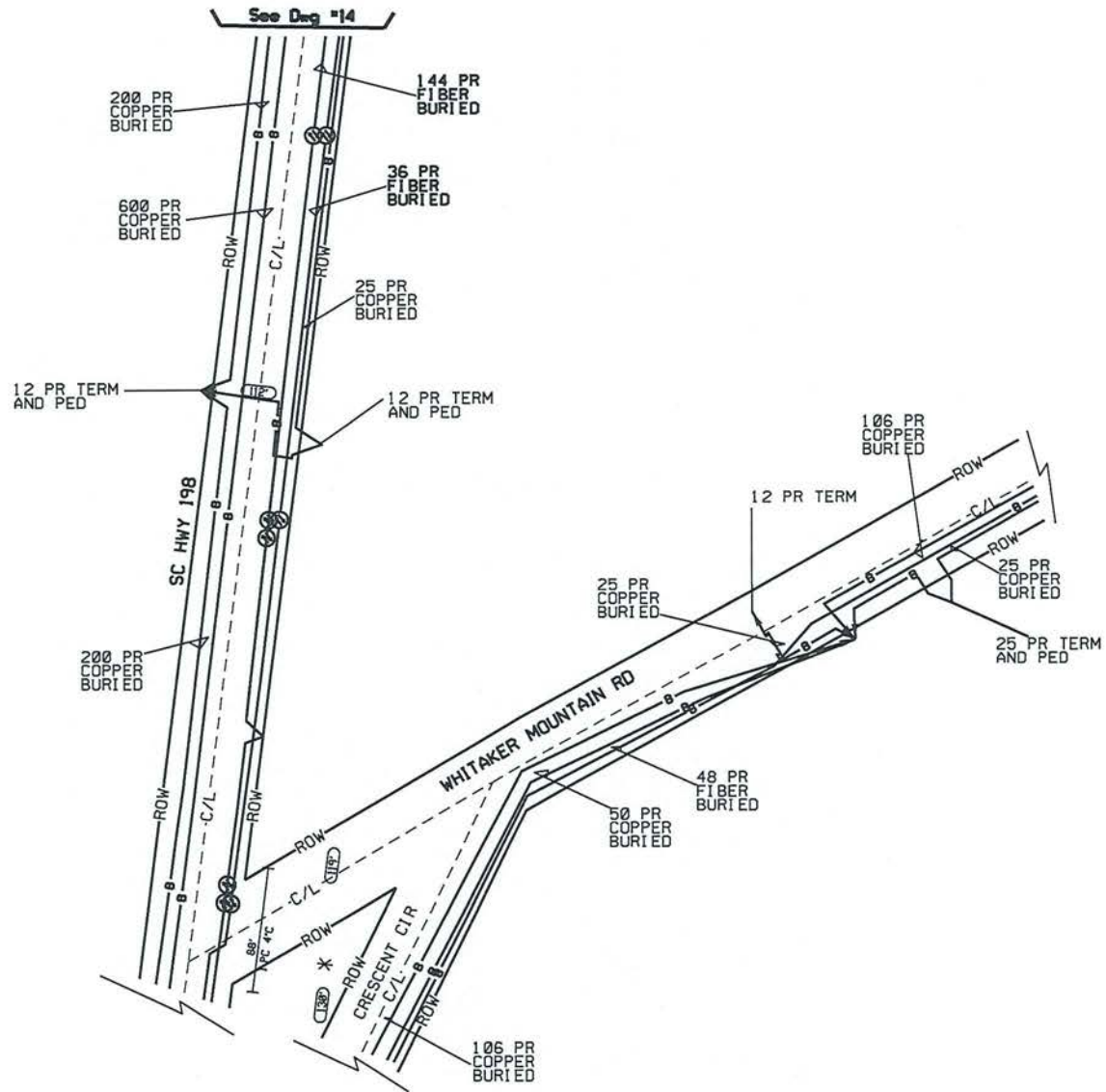
Job Number / CFAS Project Number:
/

DWG 13 OF 33





ATTSE		
Construction Work Drawing		
PROPRIETARY INFORMATION <small>Not for disclosure outside the ATTSE family of companies except under written agreement.</small>		
States: Districts: Exchanges: Wire Ctr: BLBSCMA		
AA/Tapers: Tax District: RZ/CZ: Serv Unit Types: NONE		
Designer:		
Phones:		
Records Ref:		
Job Descriptions:		
Job Number / CFAS Project Number:		
Dwg <u>14</u> OF <u>33</u>		



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State:
Districts:
Exchanges:
Wire Ctr: **BLBOSMA**

AA/Topos:
Tax Districts:
RZ/CZ:
Serv Unit Type: **NONE**

Designer:

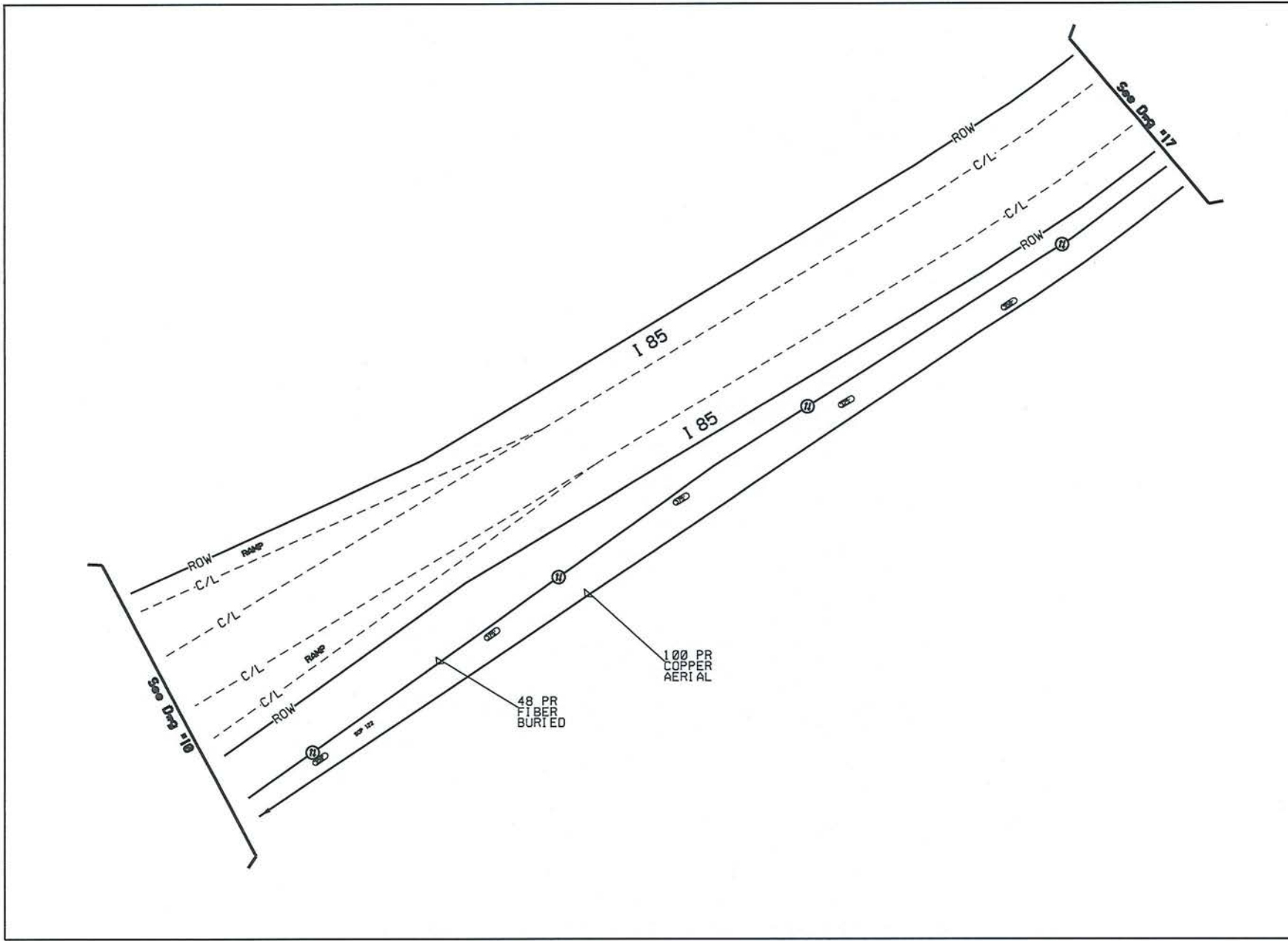
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Records Ref:

Job Description:

Job Number / CFAS Project Number:
/

DWG 15 OF 33



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Construction Work Drawing

PROPRIETARY INFORMATION

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State: Exchanges: Wire Ctr: **BLBSCMA**

AA/Tapers: Tax District: RZ/CZ: Serv Unit Types: **NONE**

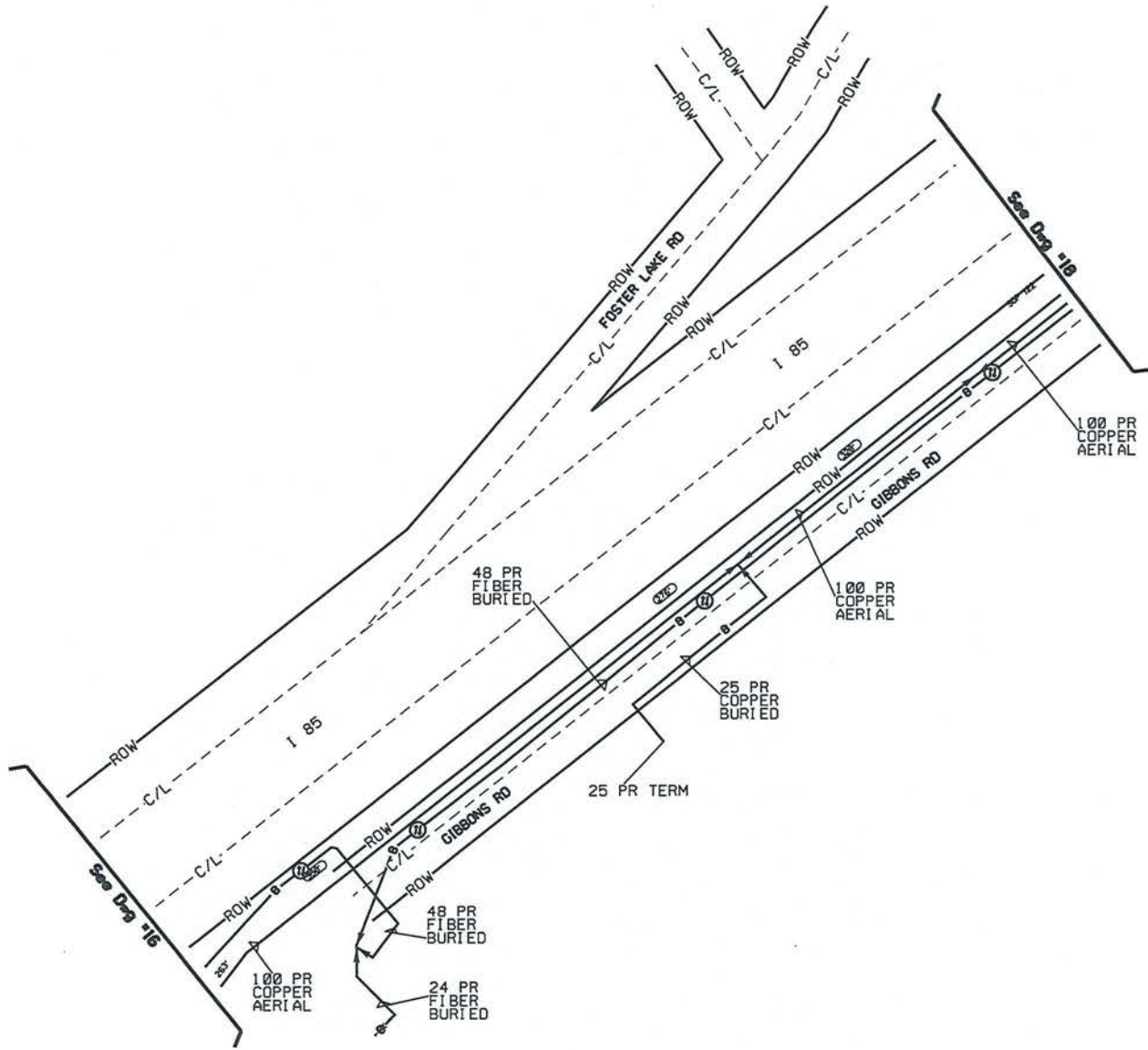
Designer:

Phones:

Records Ref:

Job Descriptions

Job Number / CFAS Project Number:



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Construction
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Drawing

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State:
Districts:
Exchanges:
Wire Ctr: **BLBSCMA**

AA/Tapers:
Tax Districts:
RZ/CZ:
Serv Unit Types: **NONE**

Designers:

Phones:

Records Ref:

Job Descriptions

Job Number / CFAS Project Number:

DWG 17 OF 33

ATTSE



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Work
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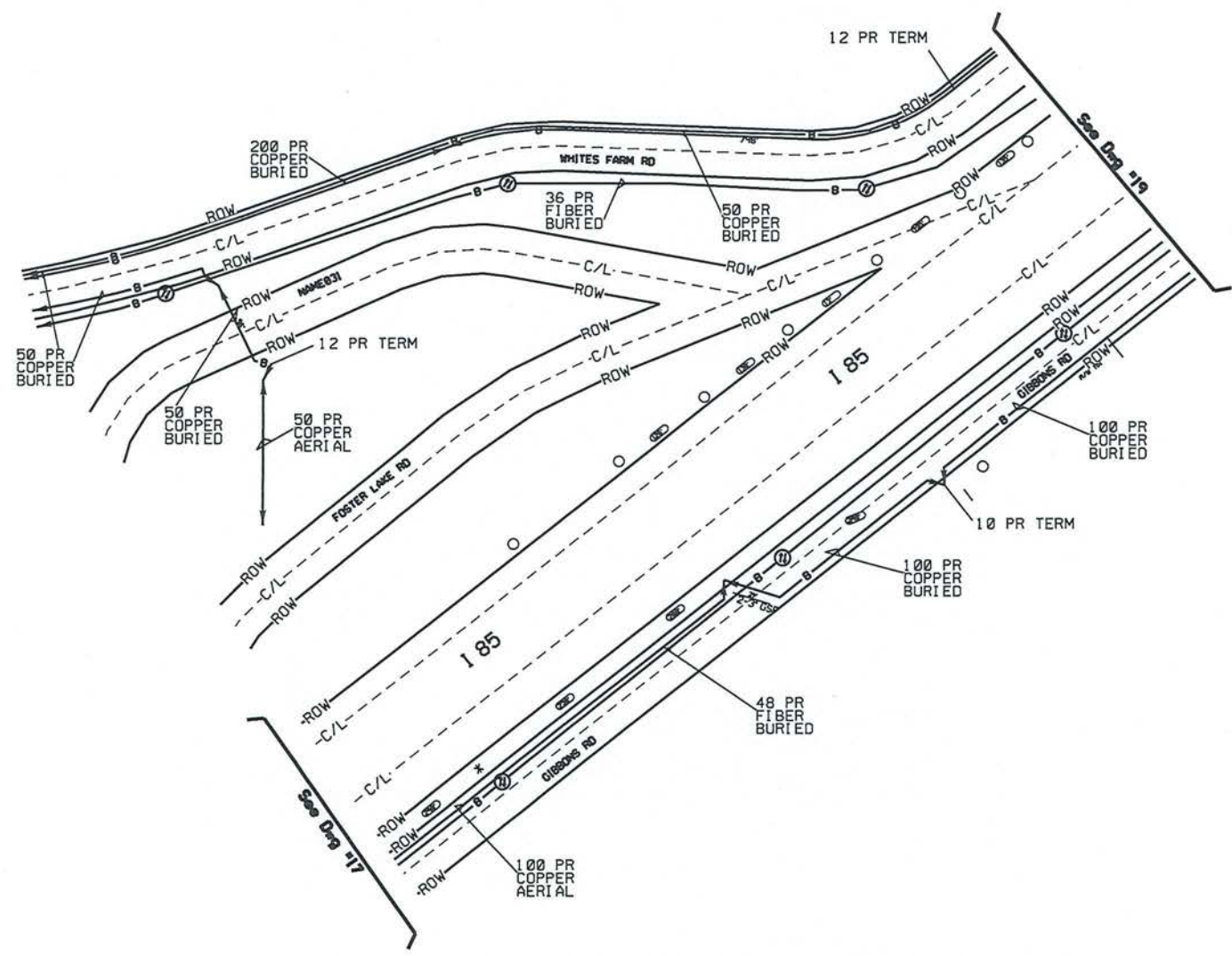
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Wire Ctr: **BLBOSMA**

AA/Topers:
Tax District:
RZ/CZ:
Serv Unit Type: **NONEW**

Designers:

Phones:

Records Refs:



Job Description:

Job Number / CFAS Project Number:

DWG 18 OF 33

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Construction
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State:
District:
Exchange:
Wire Ctr: **BLBSCMA**

AA/Taps:
Tax District:
RZ/CZ:
Serv Unit Type: **NONE**

Designers:

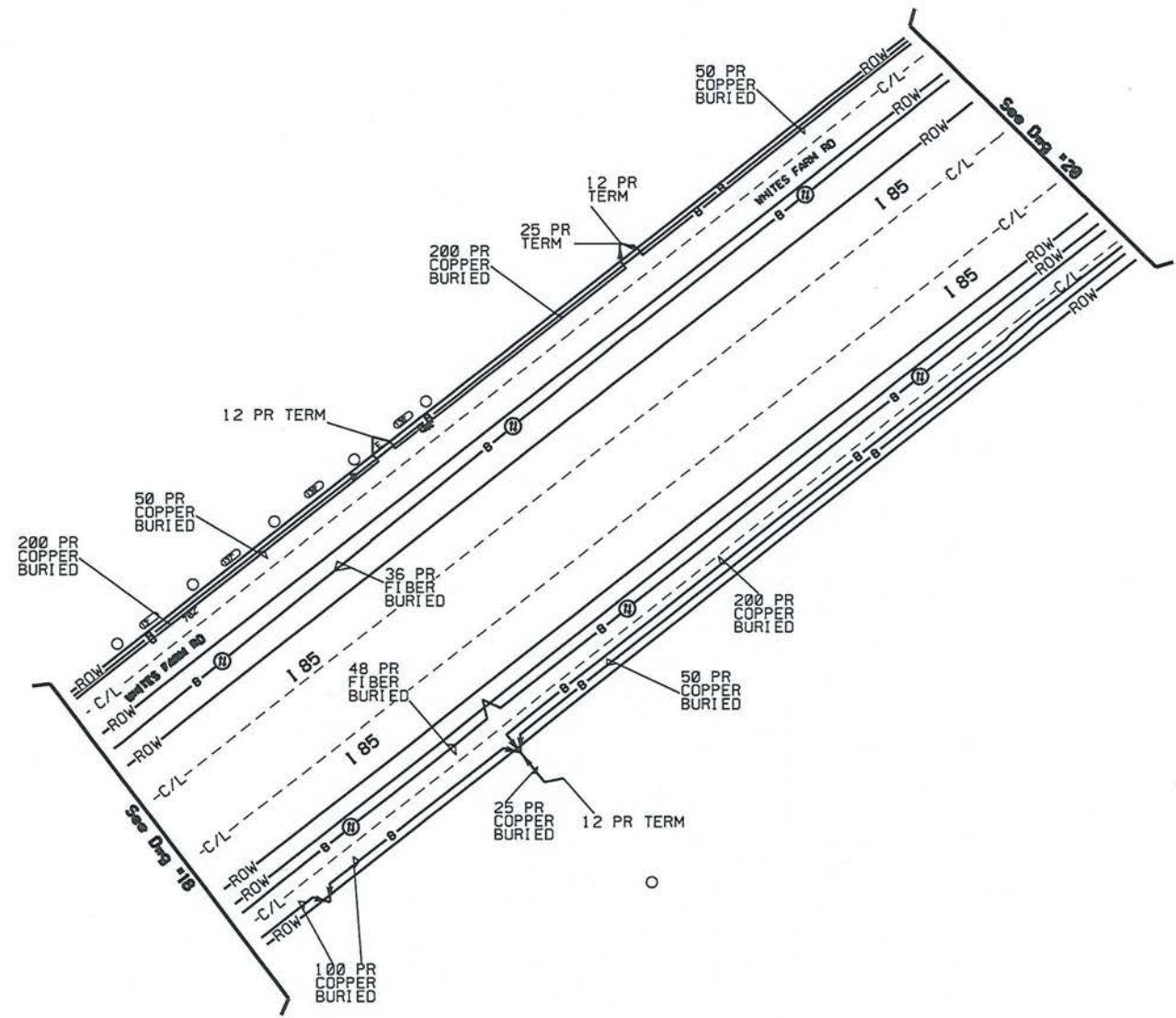
Phones:

Records Ref:

Job Descriptions

Job Number / CFAS Project Numbers

DWG 19 OF 33





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States
 Districts
 Exchanges
 Wire Ctrs: **BLBSCMA**

AA/Topers
 Tax Districts
 RZ/CZ
 Serv Unit Types: **NONEW**

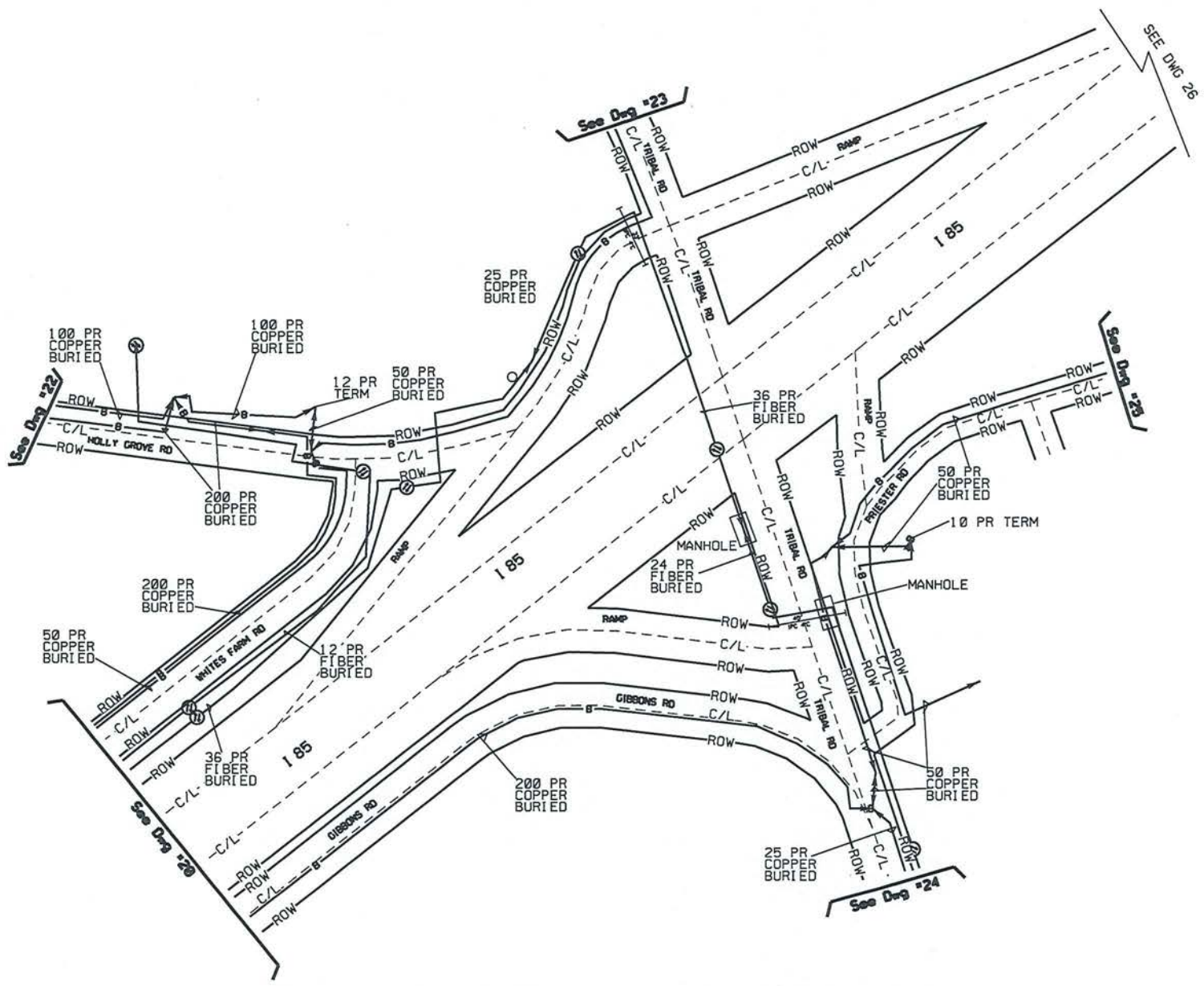
Designers

Phones

Records Refs

Job Descriptions

Job Number / CFAS Project Numbers
 /



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Construction
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PROPRIETARY INFORMATION

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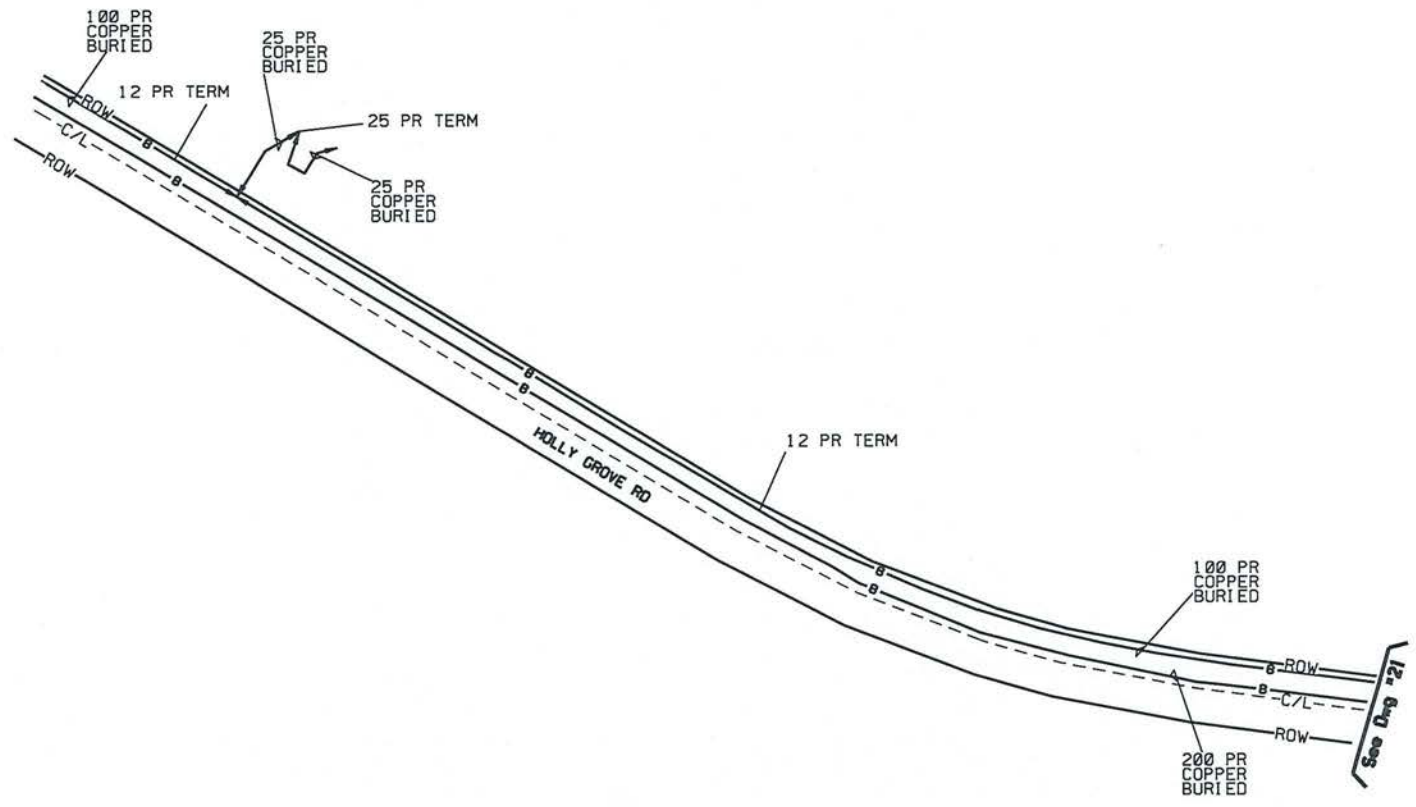
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Districts:
Exchanges:
Wire Ctr: **BLBCSCMA**

AA/Tapers:
Tax District:
RZ/CZ:
Serv Unit Types: **NONE**

Designer:

Phones:

Records Refs:



Job Description:

Job Number / CFAS Project Number:

DWG 22 OF 33

ATTSE



Construction
Work
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State:
District:
Exchange:
Wire Ctr: **ELBOSMA**

AA/Tapers:
Tax District:
RZ/CZ:
Serv Unit Type: **NONE**

Designer:

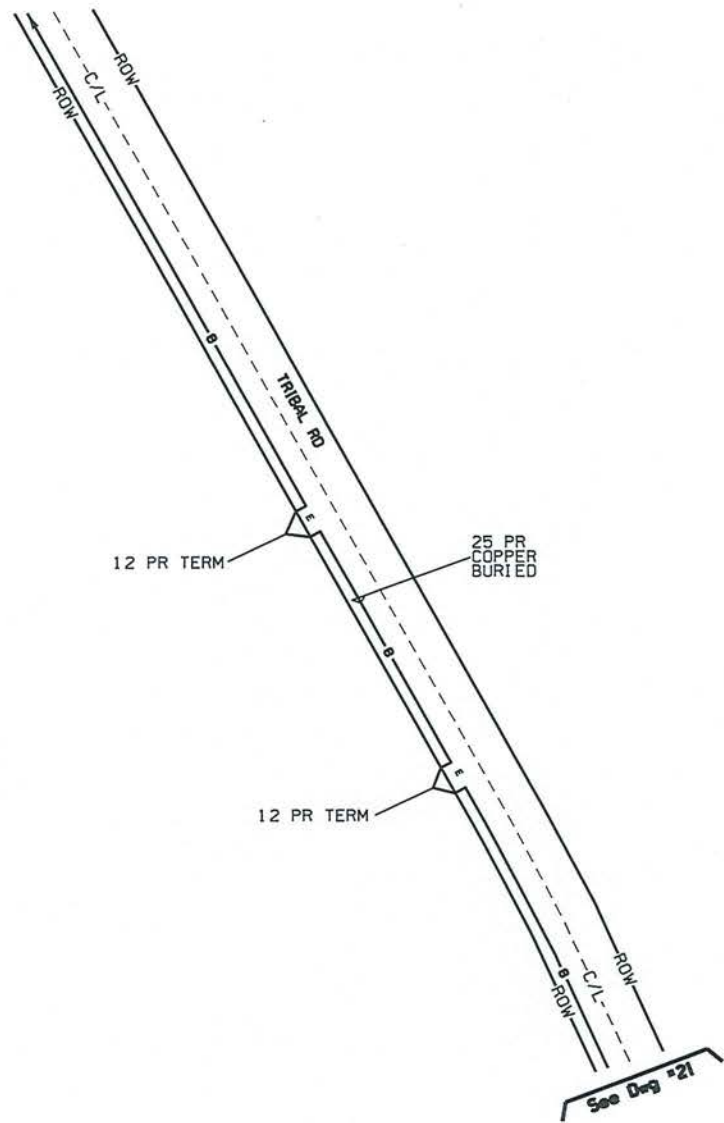
Phone:

Records Ref:

Job Description:

Job Number / CFAS Project Number:
/

DWG 23 OF 33



ATTSE



Construction
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States
Districts
Exchanges
Wire Ctr: BLBSCMA

AA/Tapers
Tax Districts
RZ/CZ:
Serv Unit Type: NONE

Designers

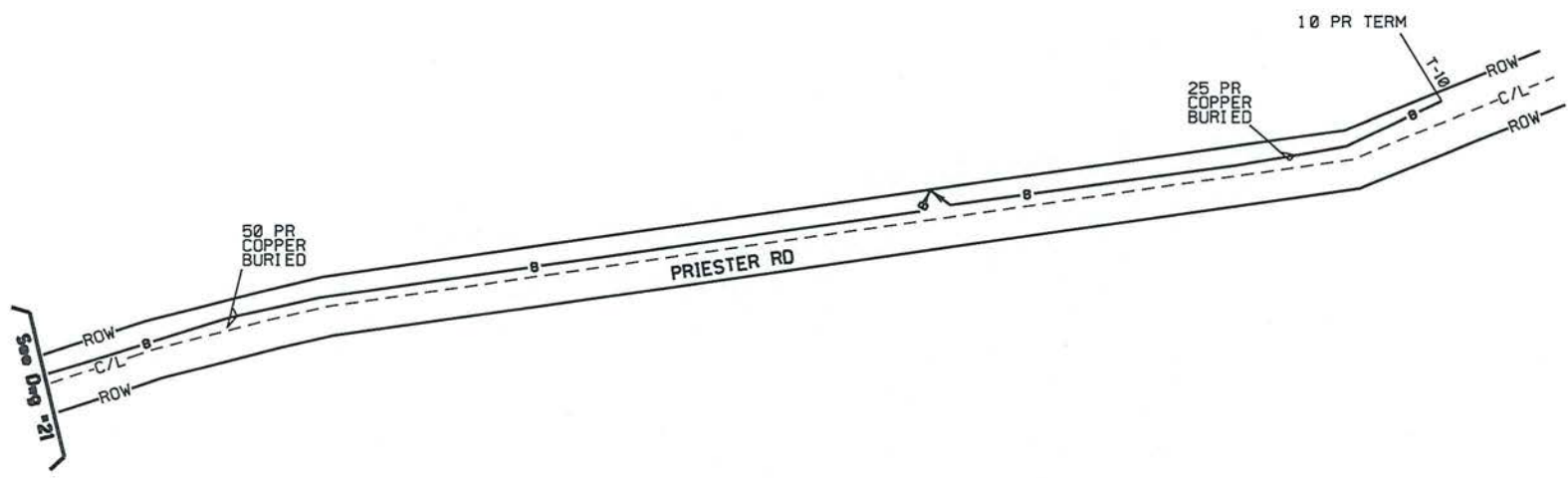
Phones

Records Ref:

Job Description:

Job Number / CFAS Project Numbers

DWG 25 OF 33





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State: District: Exchange: Wire Ctr: **GRVNCMA**

AA/Topo: Tax District: RZ/CZ: Serv Unit Type: **NONE**

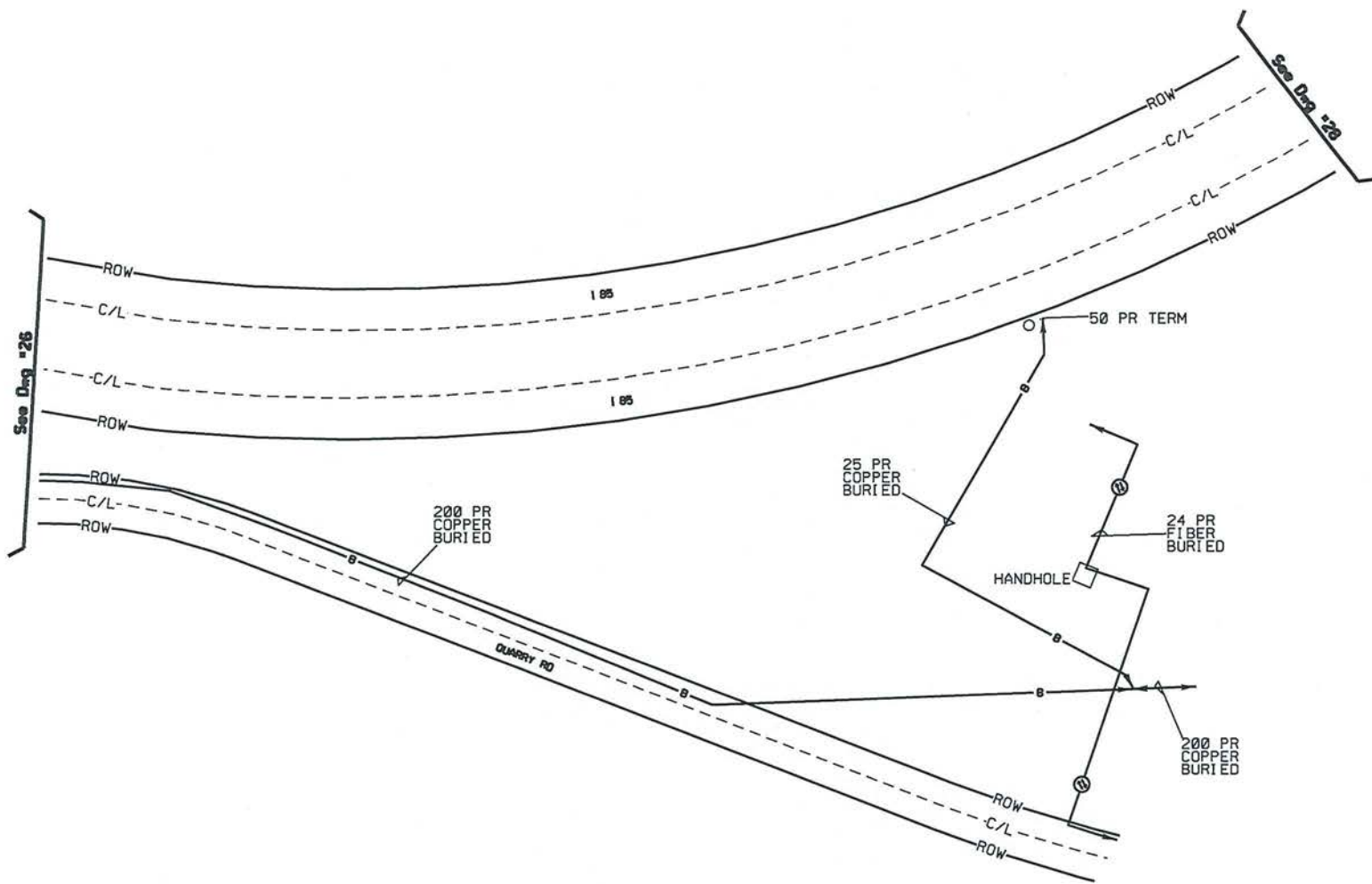
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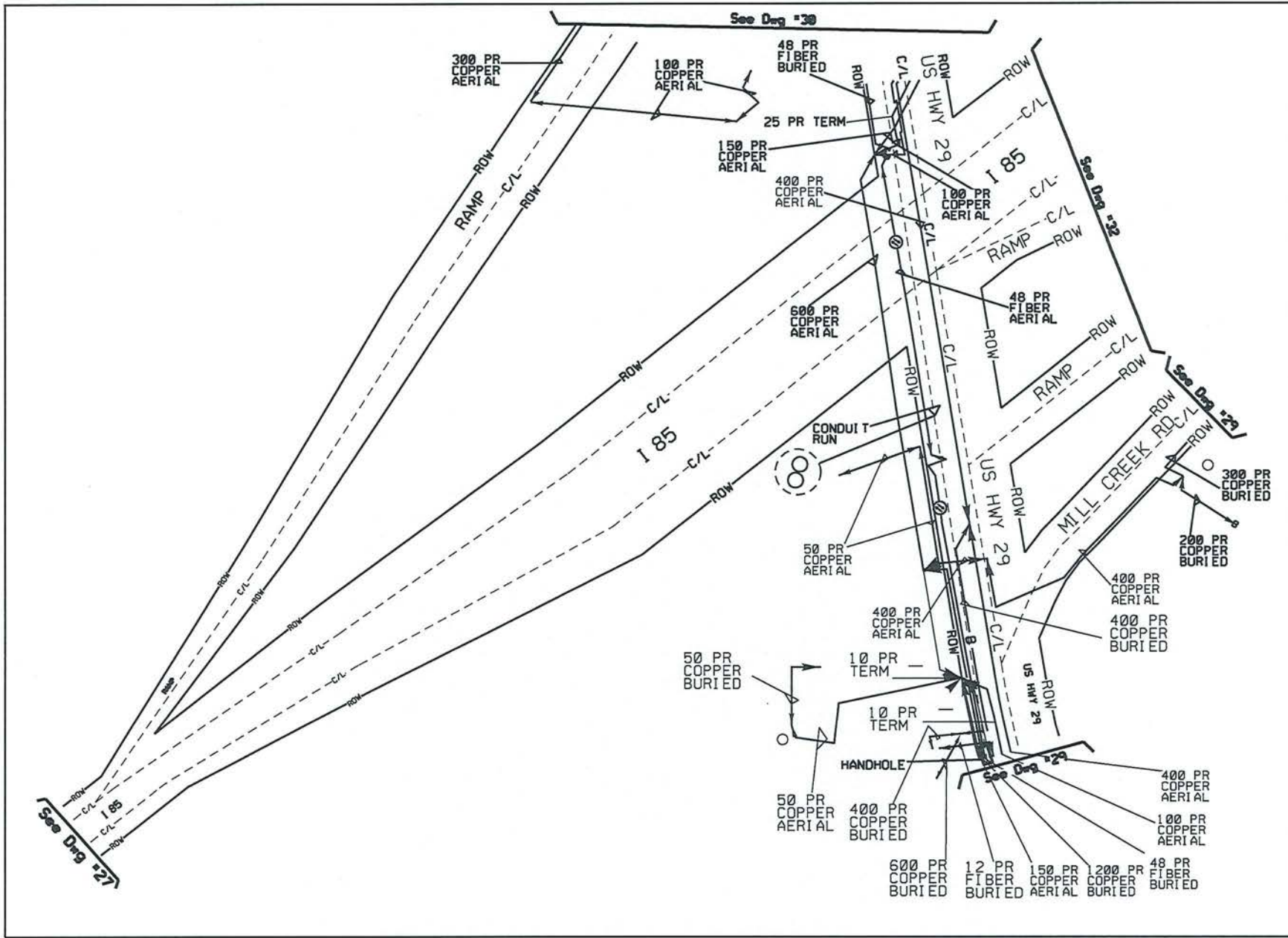
Phone:

Records Ref:

Job Description:

Job Number / CFAS Project Number: /





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Construction Work Drawing	
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State: _____ District: _____ Exchange: _____ Wire Ctr: GRVNCMA	
AA/Toppers: _____ Tax District: _____ RZ/CZ: _____ Serv Unit Type: NONE	
Designer: _____	
Phones: _____	
Records Ref: _____	
Job Description: _____	
Job Number / CFAS Project Number: _____	
Dwg <u>28</u> OF <u>33</u>	

ATTSE



Construction
Work
Drawing

PROPRIETARY INFORMATION
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State:
District:
Exchange:
Wire Ctr: CRYSTAL

AA/Tapers:
Tax District:
RZ/CZ:
Serv Unit Types: NONE

Designer:

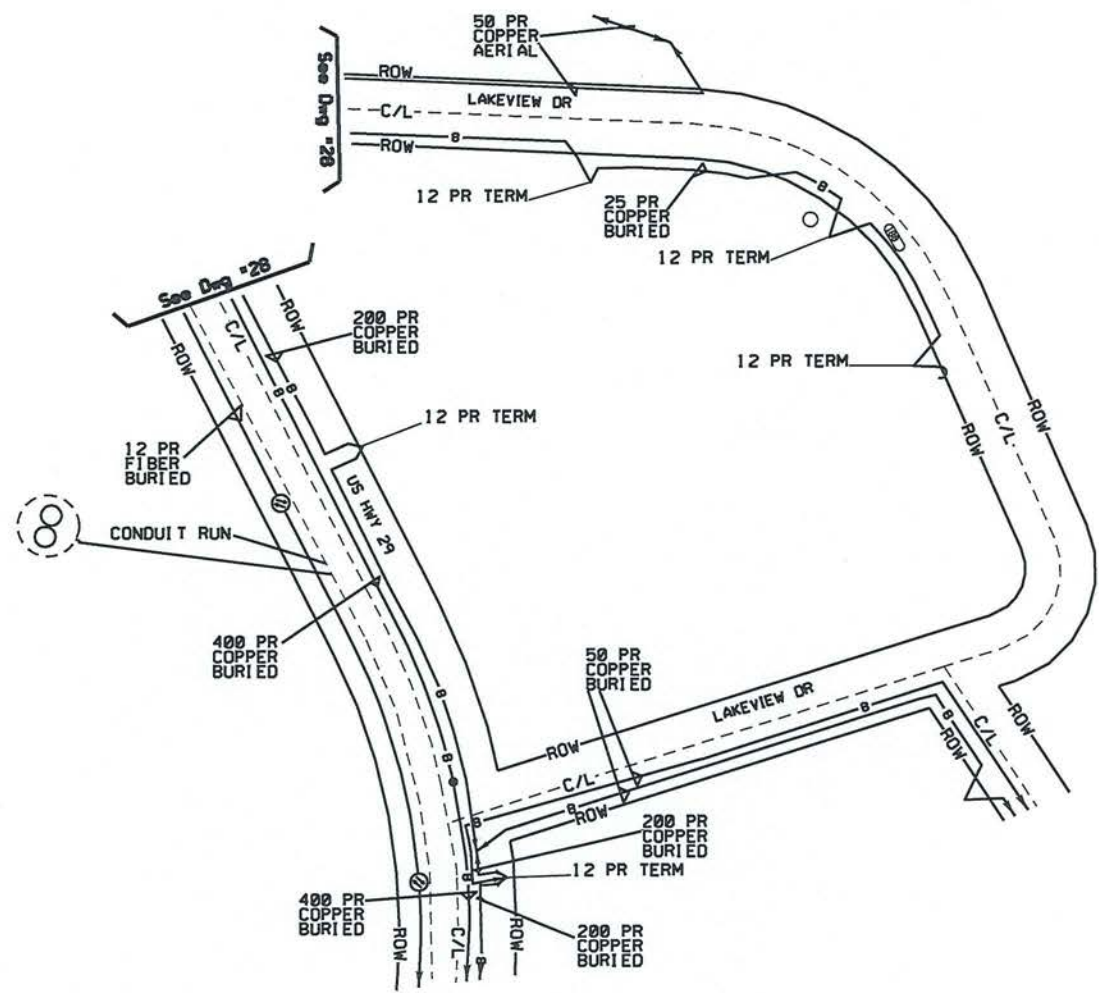
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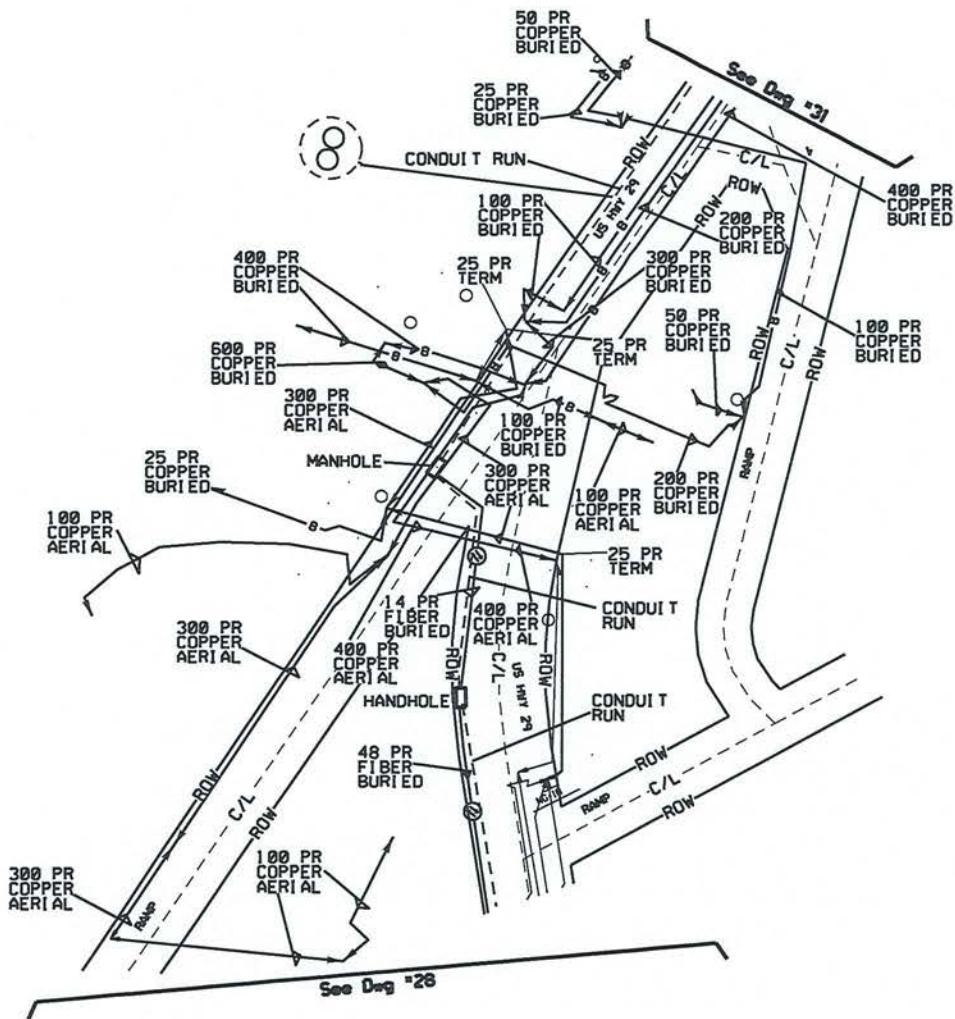
Records Ref:

Job Description:

Job Number / CFAS Project Number:

DWG 29 OF 33





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Construction
Work
Drawing

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State:
Districts:
Exchanges:
Wire Ctr: **GRYRNCMA**

AA/Taps:
Tax Districts:
RZ/CZ:
Serv Unit Types: **NONE**

Designers:

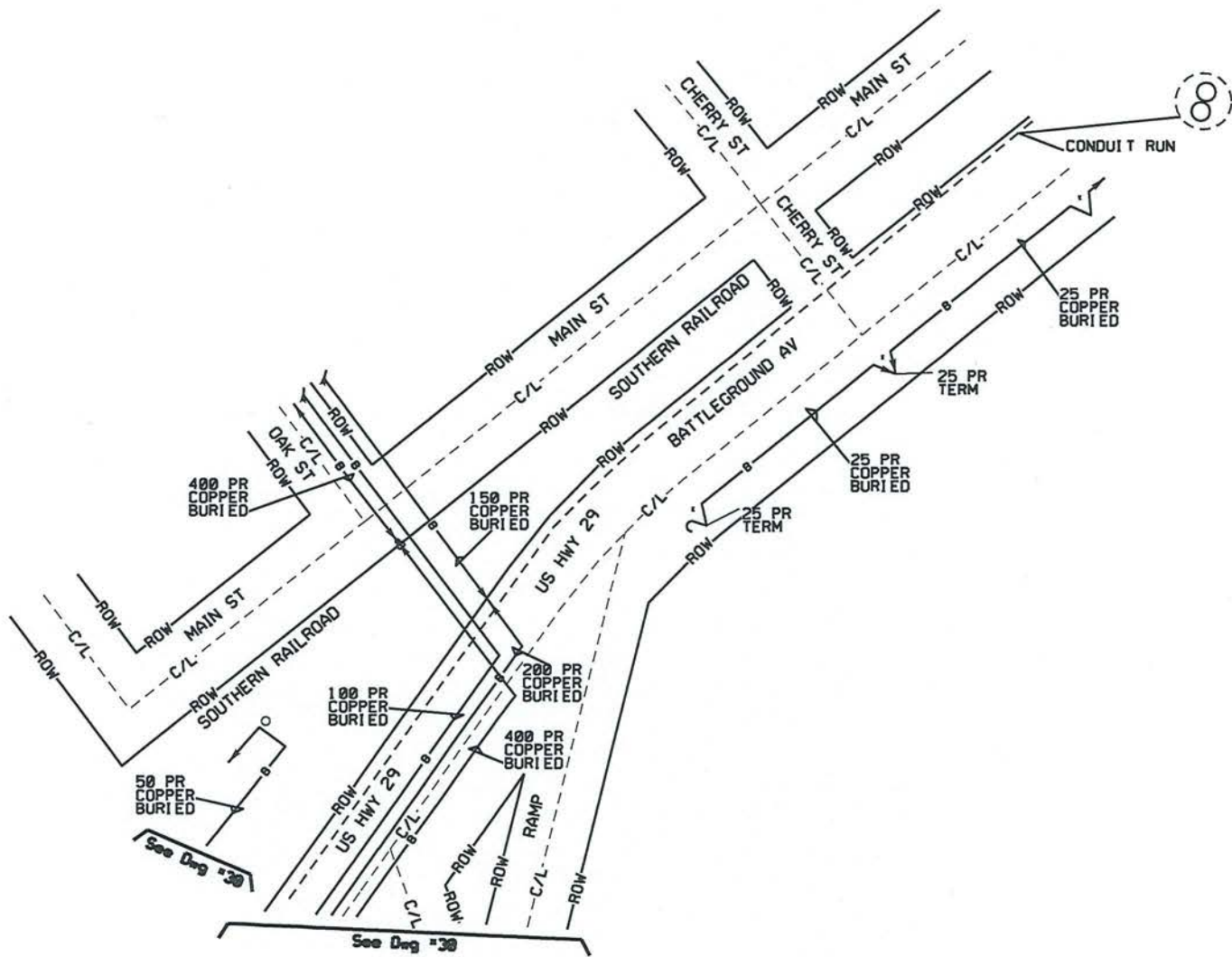
Phones:

Records Ref:

Job Description:

Job Number / CFAS Project Number:
/

DWG 30 OF 33



ATTSE



Construction
Work
Drawing

PROPRIETARY INFORMATION

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State:
District:
Exchanges:
Wire Co: GRYRMCMA

RA/Topers:
Tax District:
RZ/CZ:
Serv Unit Type: NONE

Designer:

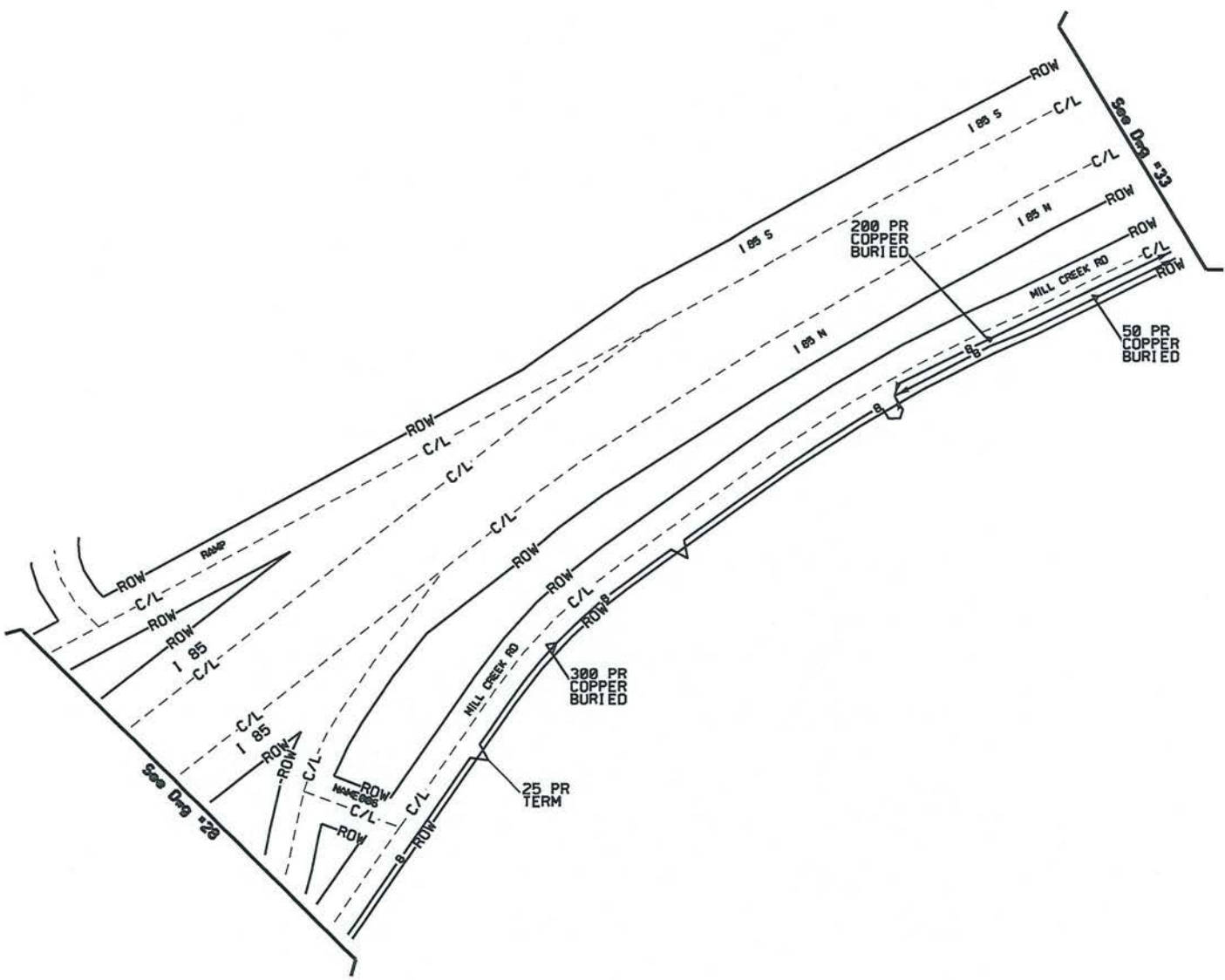
Phones:


Records Ref:

Job Descriptions

Job Number / CFAS Project Number:

DWG 31 OF 33



ATTSE	
Construction Work Drawing	
PROPRIETARY INFORMATION Not for disclosure outside the A&E family of companies except under written agreement.	
State: District: Exchange: Wire Ctr: GRVNCMA	
AA/Tapers: Tax District: RZ/CZ: Serv Unit Type: NONE	
Designers:	
Phones:	
Records Ref:	
Job Description:	
Job Number / CFAS Project Number:	
DNG <u>32</u> OF <u>33</u>	

ATTSE



Construction
Work
Drawing

PROPRIETARY INFORMATION

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State:
District:
Exchange:
Wire Ctr: **GRVRCMA**

AA/Taper:
Tax District:
RZ/CZ:
Serv Unit Type: **NONE**

Designer:

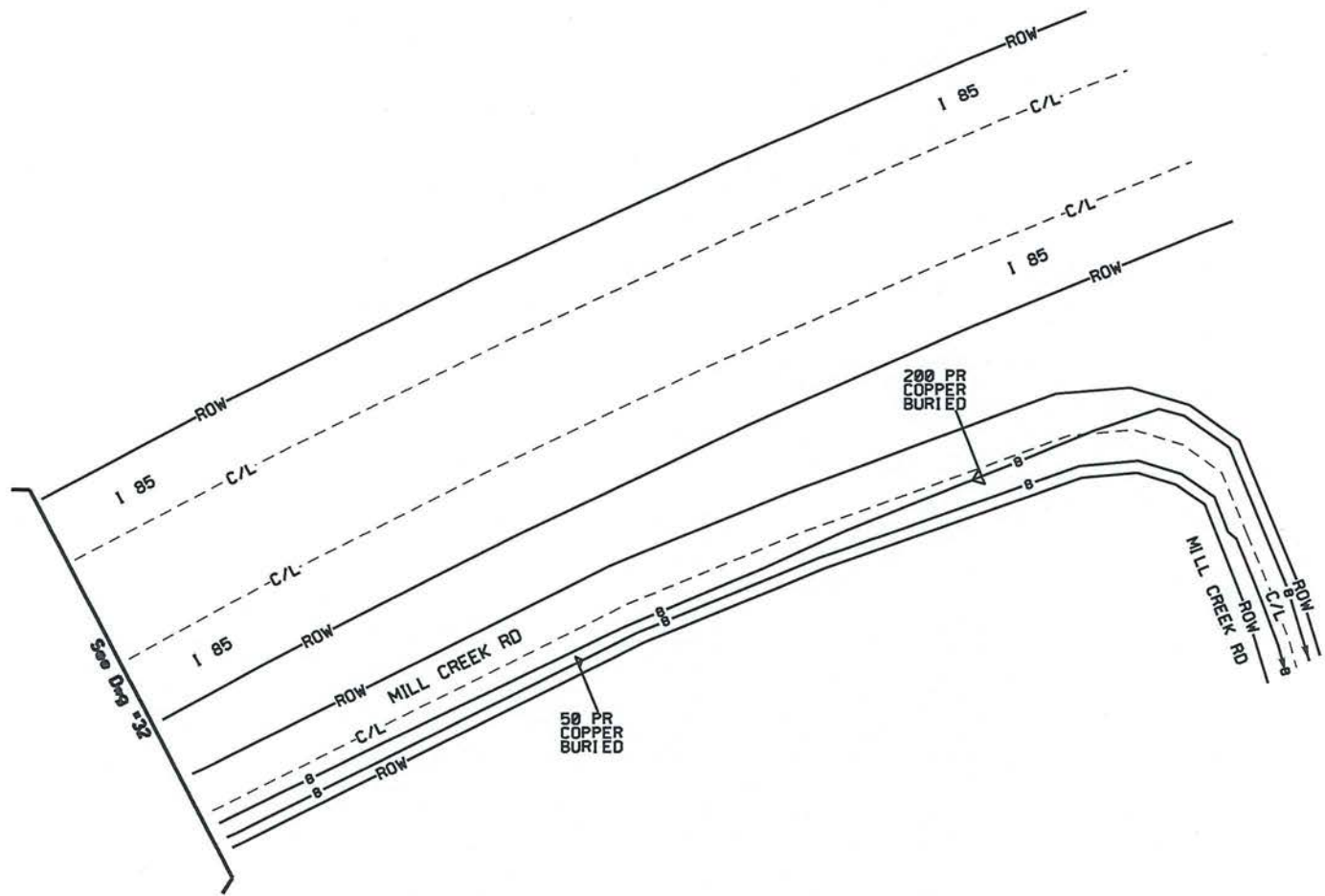
Phone:

Records Ref:

Job Description:

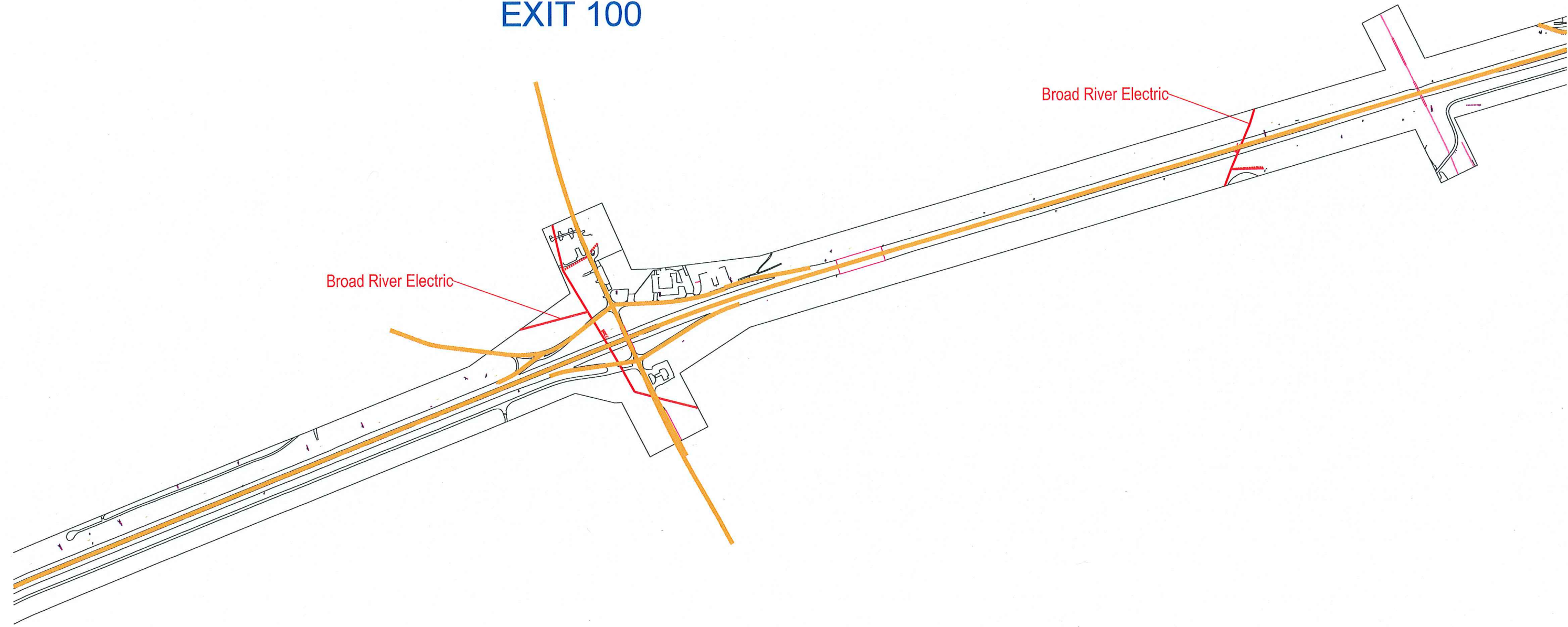
Job Number / CFAS Project Number:
/

DWG 33 OF 33



Broad River Electric Cooperative

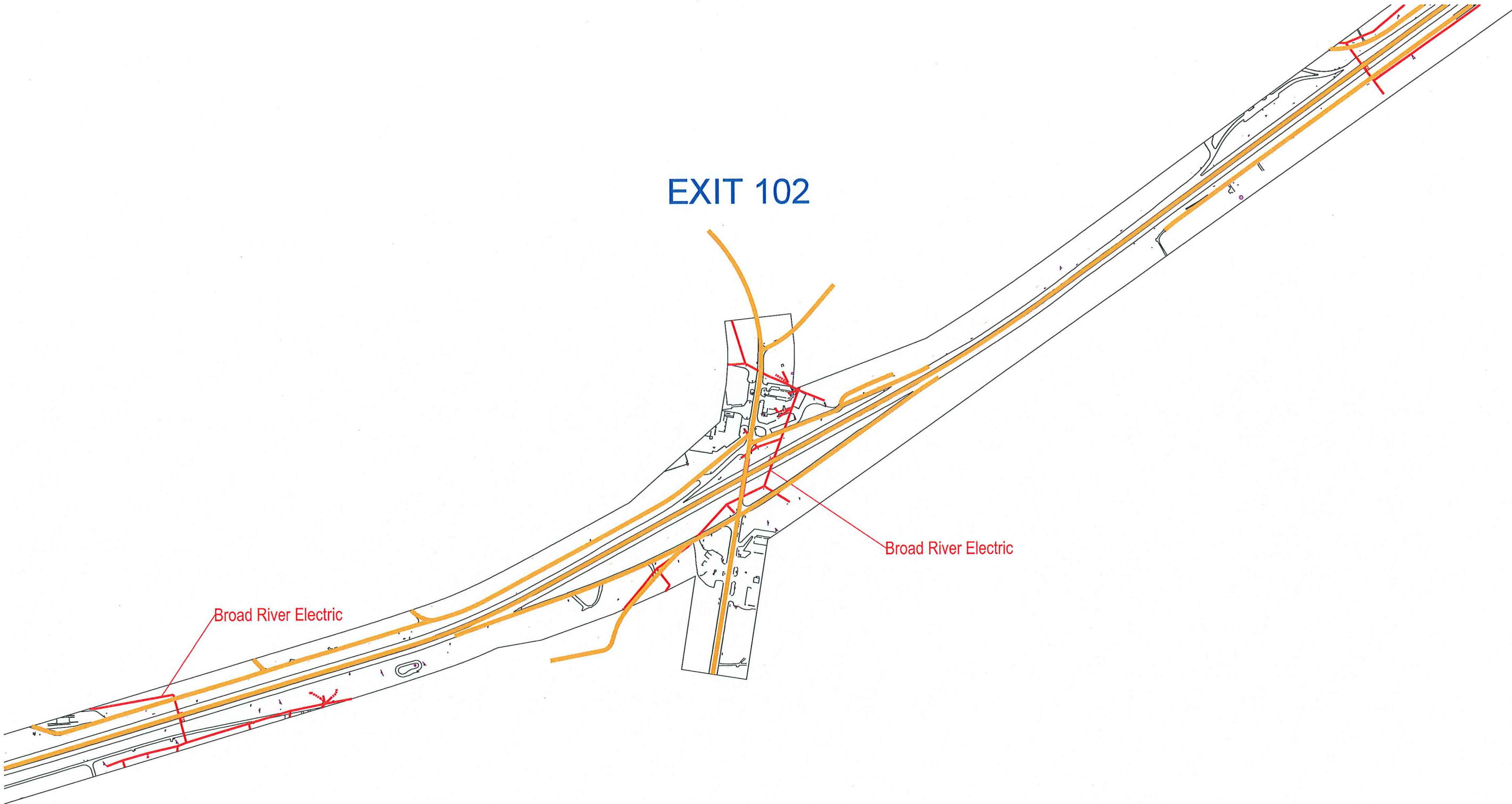
EXIT 100



Broad River Electric

Broad River Electric

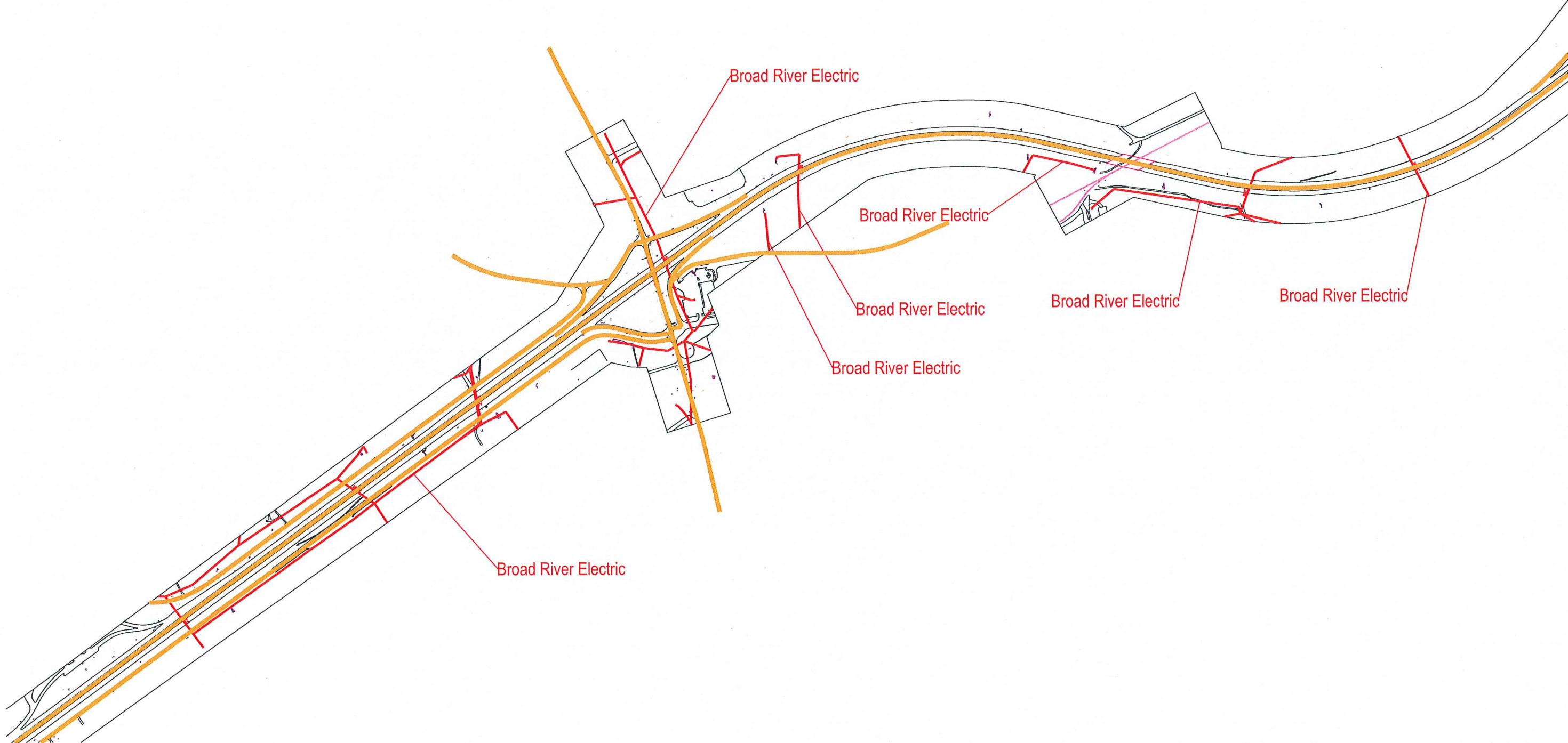
EXIT 102



Broad River Electric

Broad River Electric

EXIT 104



Broad River Electric

Broad River Electric

Broad River Electric

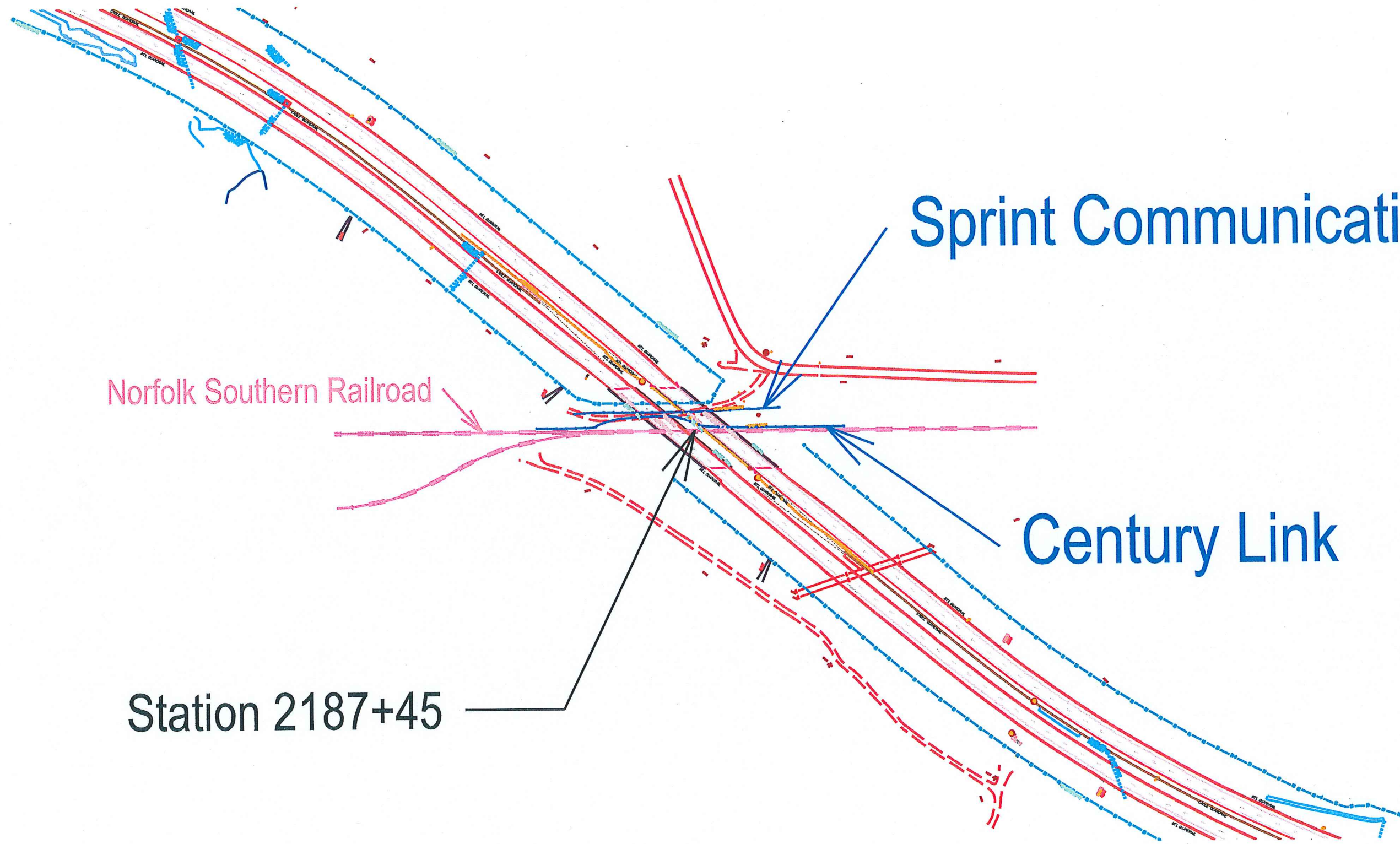
Broad River Electric

Broad River Electric

Broad River Electric

Broad River Electric

Century Link



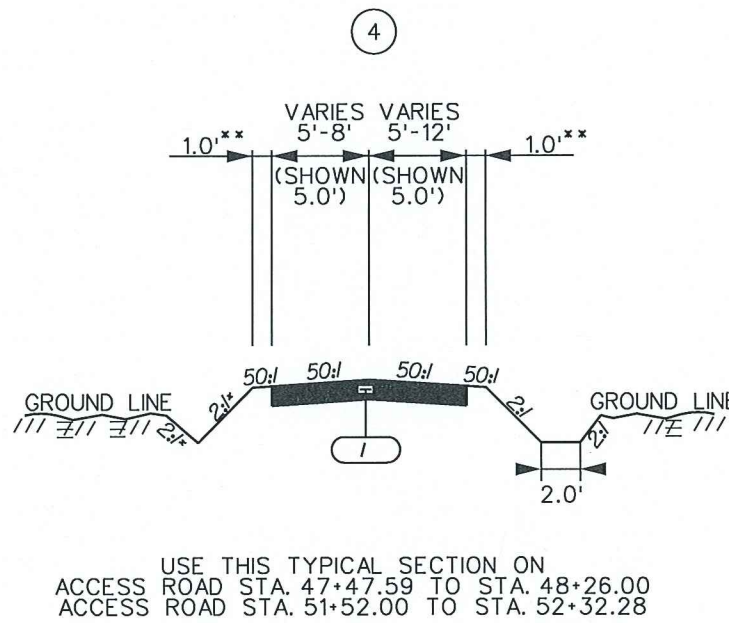
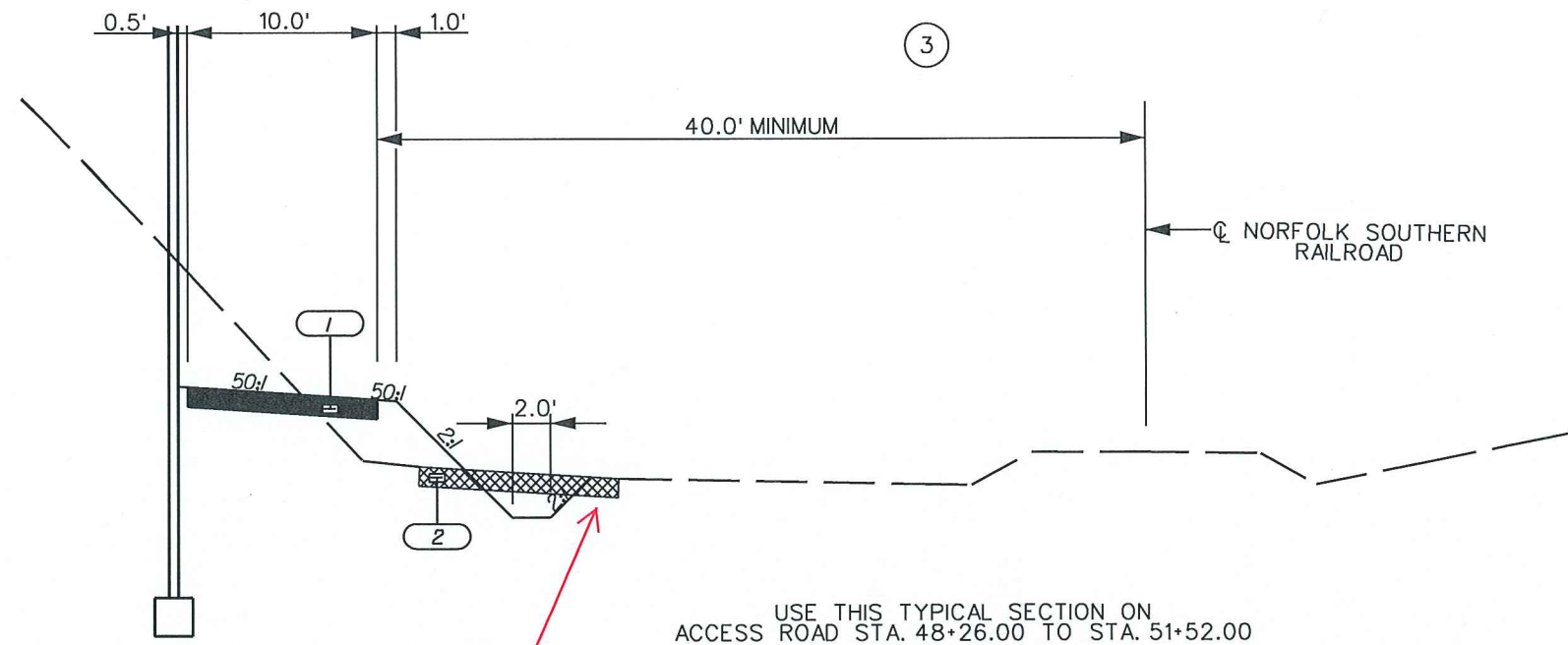
Sprint Communications

Norfolk Southern Railroad

Century Link

Station 2187+45

TYPICAL SECTION OF IMPROVEMENT SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION COLUMBIA, S.C.



* DITCH SLOPES MAY VARY. REFER TO CROSS SECTIONS FOR ADDITIONAL INFORMATION.

** SHOULDER WIDTHS MAY VARY. SEE CROSS SECTIONS.

Conflict Area

4			
3			
2			
1	DAM	10/19/15	RELEASED FOR CONSTRUCTION
REV. NO.	BY	DATE	DESCRIPTION OF REVISION



ICA Engineering Inc.
501 Huger St, Columbia SC, 29201

THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY:
DAVID A. MONTGOMERY
P.E. NO. 17997 ON 10-19-15

RTE.	ACCESS RD.		DESIGN SPEED	
	MPH	FROM STA.	TO STA.	
NA				
EXCEPTIONS TO DESIGN SPEED				

SOUTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBIA, S.C.

I-85 OVERPASS OVER
NORFOLK SOUTHERN RAILROAD

TYPICAL SECTION

SCALE 1"=2' SCALE 1"=5' DWG. NO. 3B

- 1 NEW UNPAVED ACCESS ROAD
- 2 EXISTING ACCESS ROAD

ATLANTA, GEORGIA

CHEROKEE COUNTY, SOUTH CAROLINA

WASHINGTON, D.C.

NOTE: QWEST COMMUNICATIONS CORPORATION IS NOT RESPONSIBLE FOR ANY UTILITY LOCATIONS SHOWN OR NOT SHOWN ON THIS DRAWING.

PROJECT: # 96390

SEGMENT: 1/SPAN E

ATLANTA, GA
TO
CHARLOTTE, NC

SECTION:
TOWNSHIP:
RANGE:

MATERIAL LIST	QUANTITY	
	QWEST	
CABLE	1124'	
HH 5' X 2.5' X 2.5'		
BUR. CA. MKRS.	3	
JOINT BSP		
JOINT GSP		
2" BLACK HDPE	1124'	
2" ORANGE HDPE	1124'	

Conflict Area

Under ground cable owned by Century Link with strands leased to Sprint



TITLE: FIBER OPTIC CABLE ROUTE
ATLANTA, GEORGIA
TO
WASHINGTON, D.C.

REVISIONS

DATE	DESCRIPTION	INITIAL
12/03	ADDED REVISION	SE

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF QWEST COMMUNICATIONS CORPORATION. BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE

B SIZE DWG: 1" = 100'
D SIZE DWG: 1" = 50'

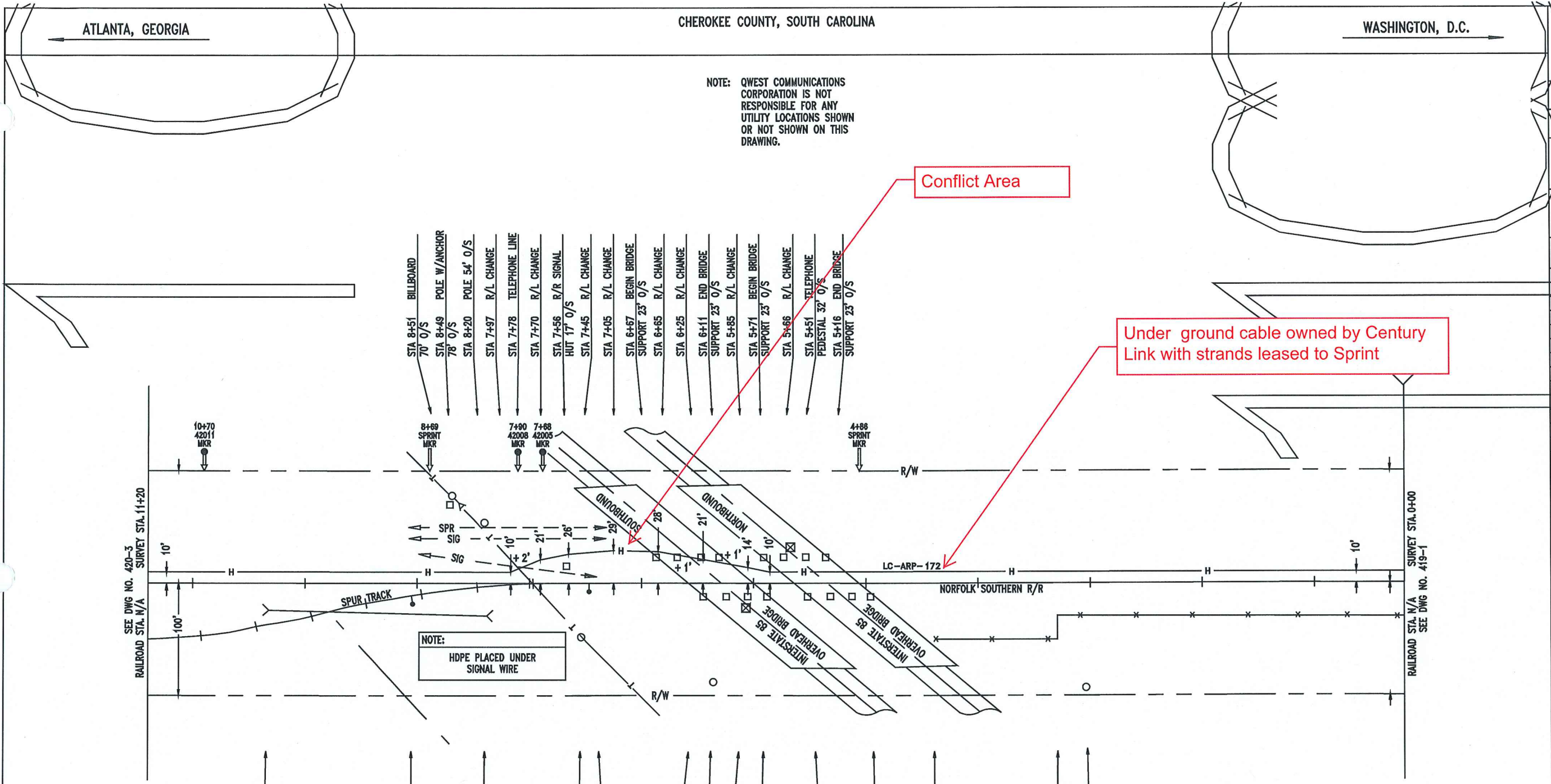
MP 421 TO MP 420

SHEET

DWG. NO.
420-4

NOTE: ADDED REVISION 12/03
RESTATED DRAWING

REVISED AS-BUILT	12/12/03
ORIGINAL AS-BUILT	03/29/00



NOTE:
HDPE PLACED UNDER SIGNAL WIRE

STA 10+12 BEGIN 36" CULVERT 24' O/S

STA 8+85 DERAIL SWITCH

STA 8+18 END 36" CULVERT 29' O/S

STA 7+34 POLE 48' O/S
STA 7+27 POINT OF SWITCH

STA 6+25 BEGIN BRIDGE SUPPORT 12' O/S
STA 6+16 POLE 88' O/S

STA 5+83 TELEPHONE PEDESTAL 22' O/S
STA 5+68 END BRIDGE SUPPORT 12' O/S

STA 5+32 BEGIN BRIDGE SUPPORT 12' O/S

STA 4+76 END BRIDGE SUPPORT 12' O/S

STA 4+18 BEGIN FENCE 50' O/S

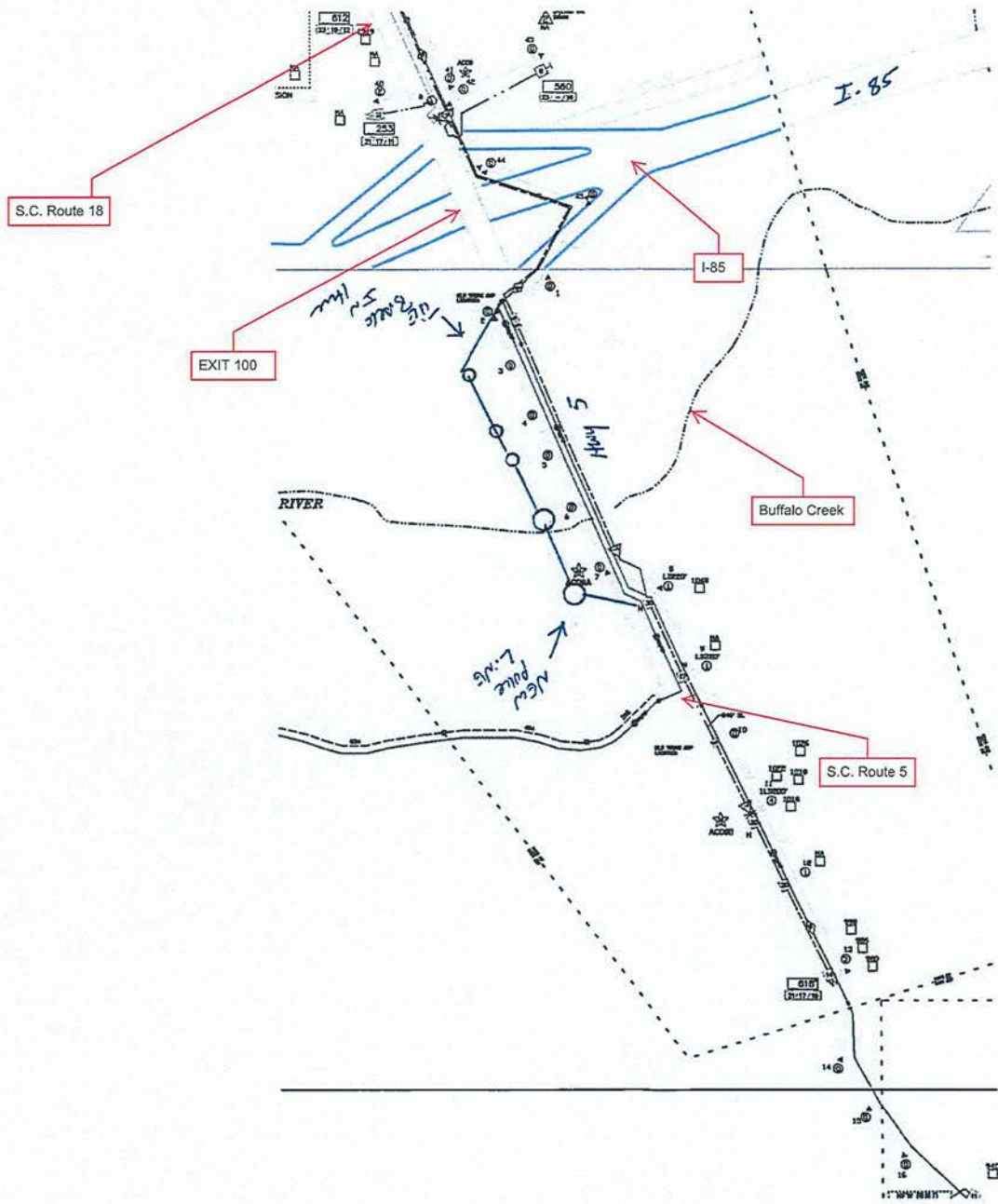
STA 3+08 FENCE LINE CHANGE 30' O/S
STA 2+84 POLE 93' O/S

- STA 8+51 BILLBOARD 70' O/S
- STA 8+49 POLE W/ANCHOR 78' O/S
- STA 8+20 POLE 54' O/S
- STA 7+97 R/L CHANGE
- STA 7+78 TELEPHONE LINE
- STA 7+70 R/L CHANGE
- STA 7+56 R/R SIGNAL HUT 17' O/S
- STA 7+45 R/L CHANGE
- STA 7+05 R/L CHANGE
- STA 6+67 BEGIN BRIDGE SUPPORT 23' O/S
- STA 6+65 R/L CHANGE
- STA 6+25 R/L CHANGE
- STA 6+11 END BRIDGE SUPPORT 23' O/S
- STA 5+85 R/L CHANGE
- STA 5+71 BEGIN BRIDGE SUPPORT 23' O/S
- STA 5+66 R/L CHANGE
- STA 5+51 TELEPHONE PEDESTAL 32' O/S
- STA 5+16 END BRIDGE SUPPORT 23' O/S

SEE DWG NO. 420-3 SURVEY STA. 11+20
RAILROAD STA. N/A

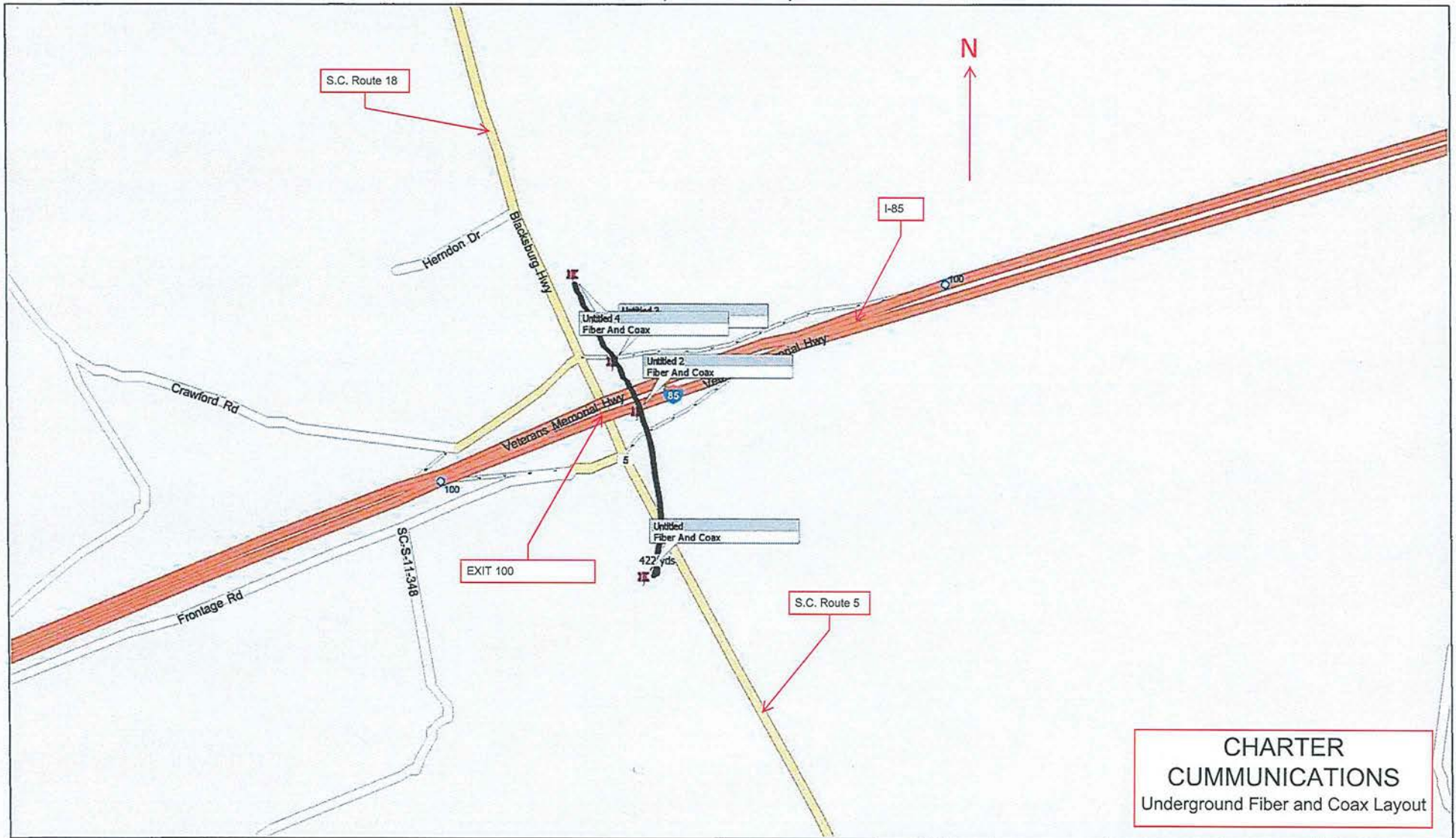
RAILROAD STA. N/A SURVEY STA. 0+00
SEE DWG NO. 419-1

Charter Communications



CHARTER
COMMUNICATIONS
Aerial Cable layout

South Carolina, United States, North America

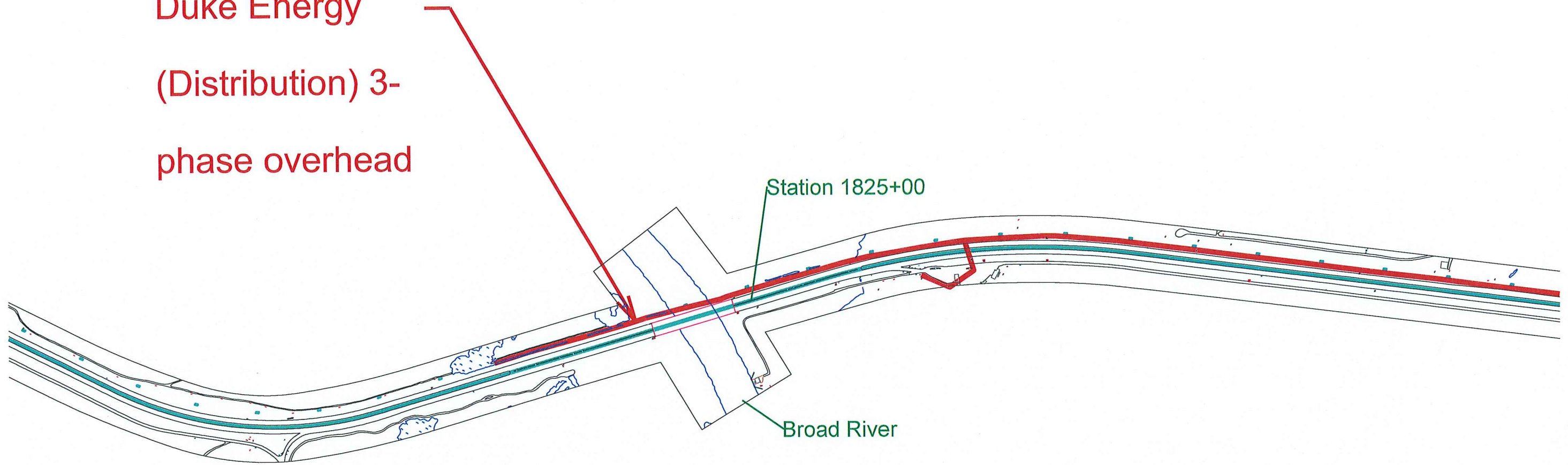


Duke Energy Distribution Carolinas West

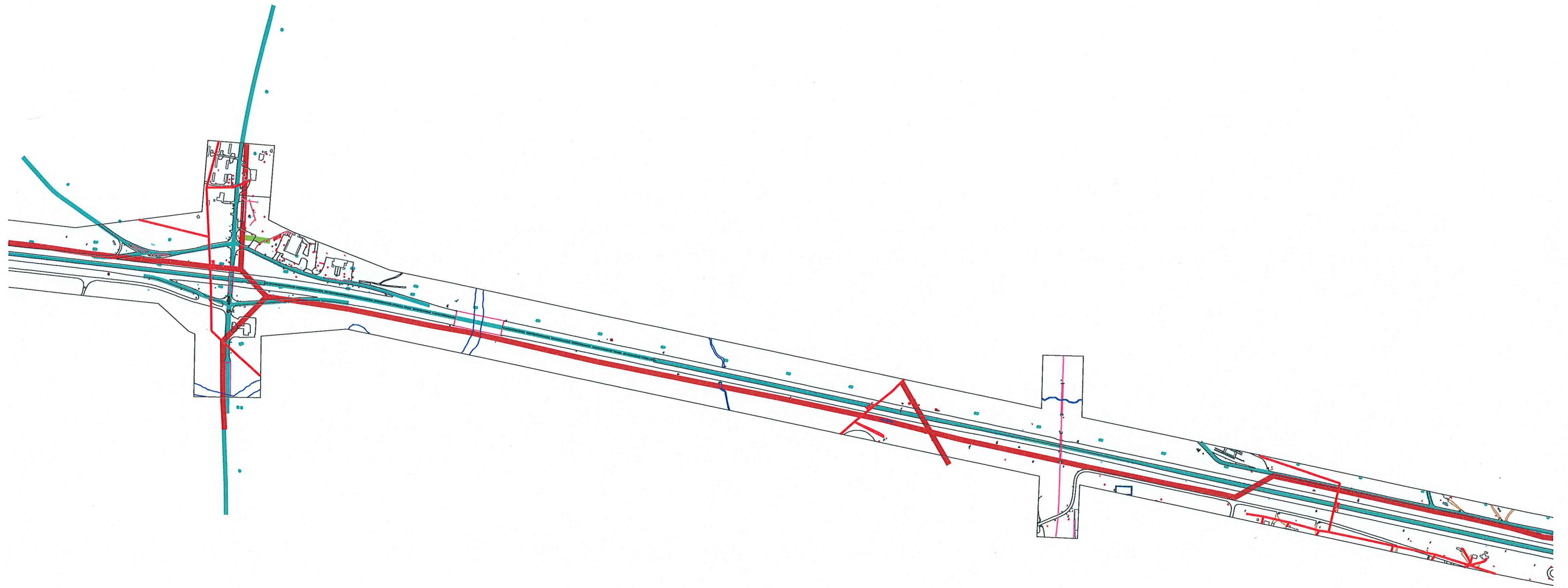
Duke Energy
(Distribution) 3-
phase overhead

Station 1825+00

Broad River



EXIT 100

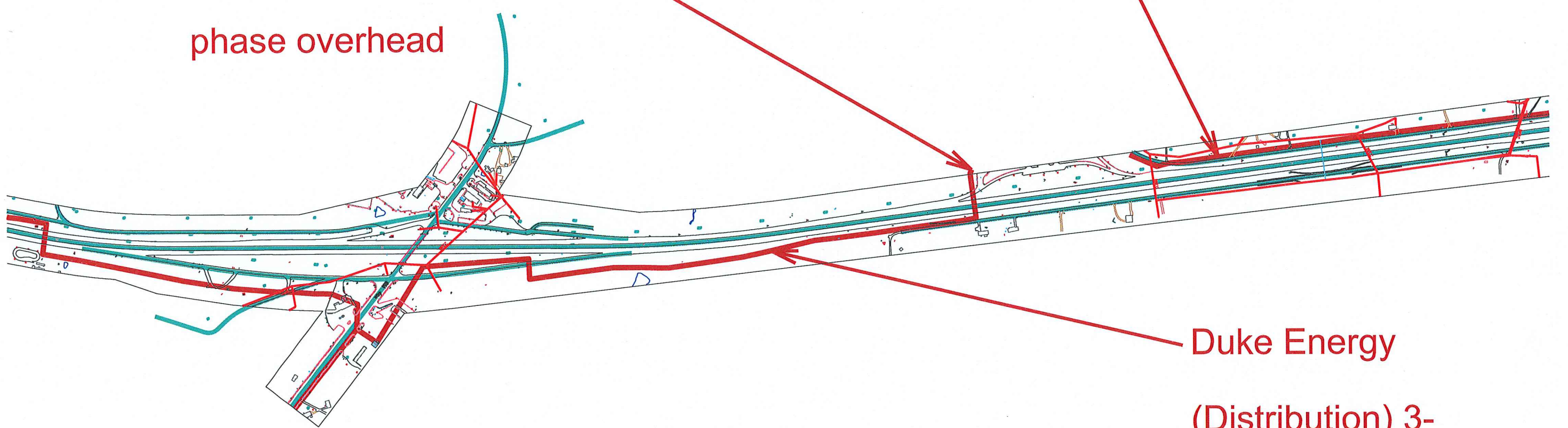


EXIT 102

Duke Energy
(Distribution) 3-
phase overhead

Duke Energy
(Distribution) 3-
phase overhead

Duke Energy
(Distribution) 3-
phase overhead

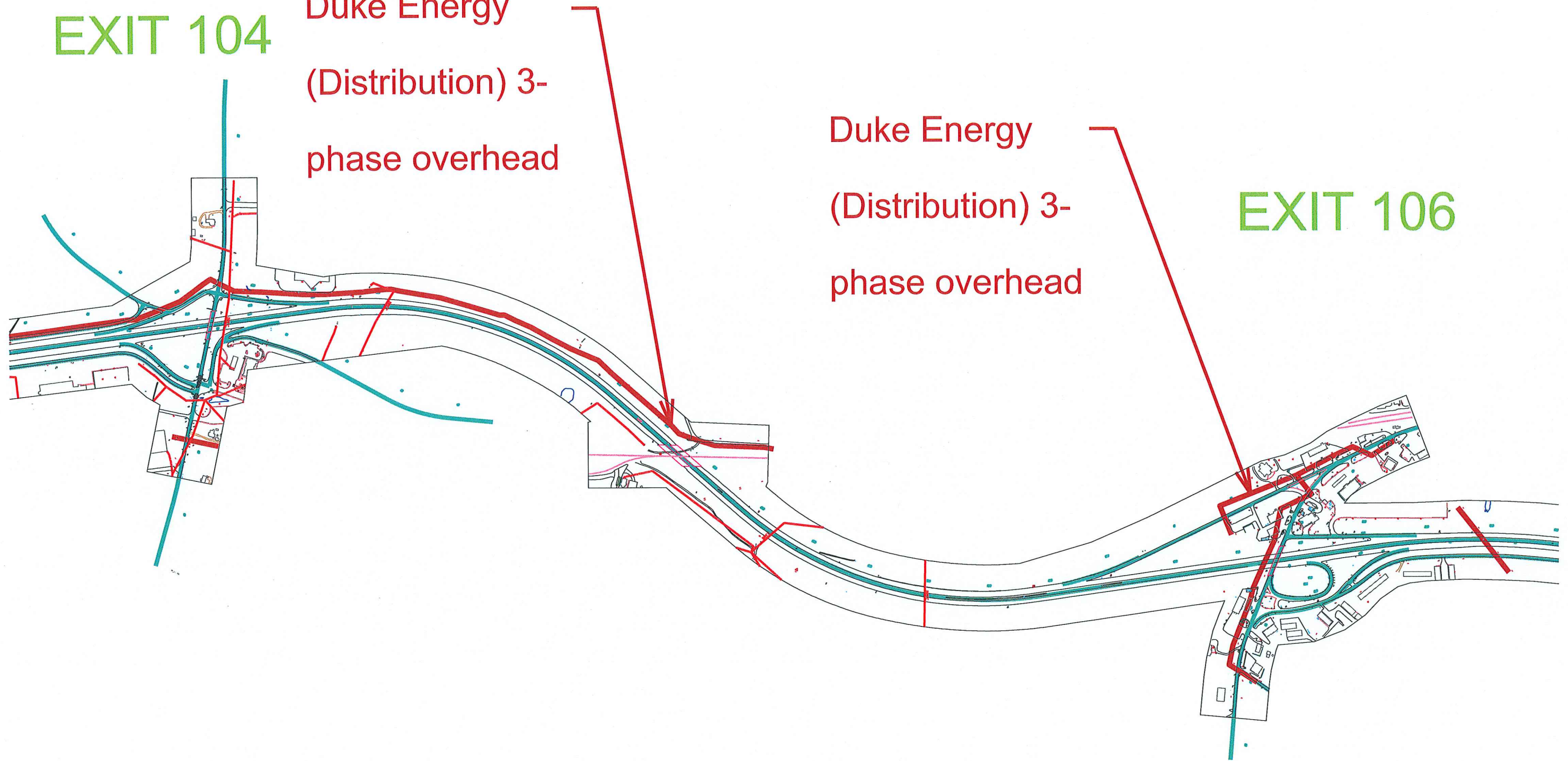


EXIT 104

Duke Energy
(Distribution) 3-
phase overhead

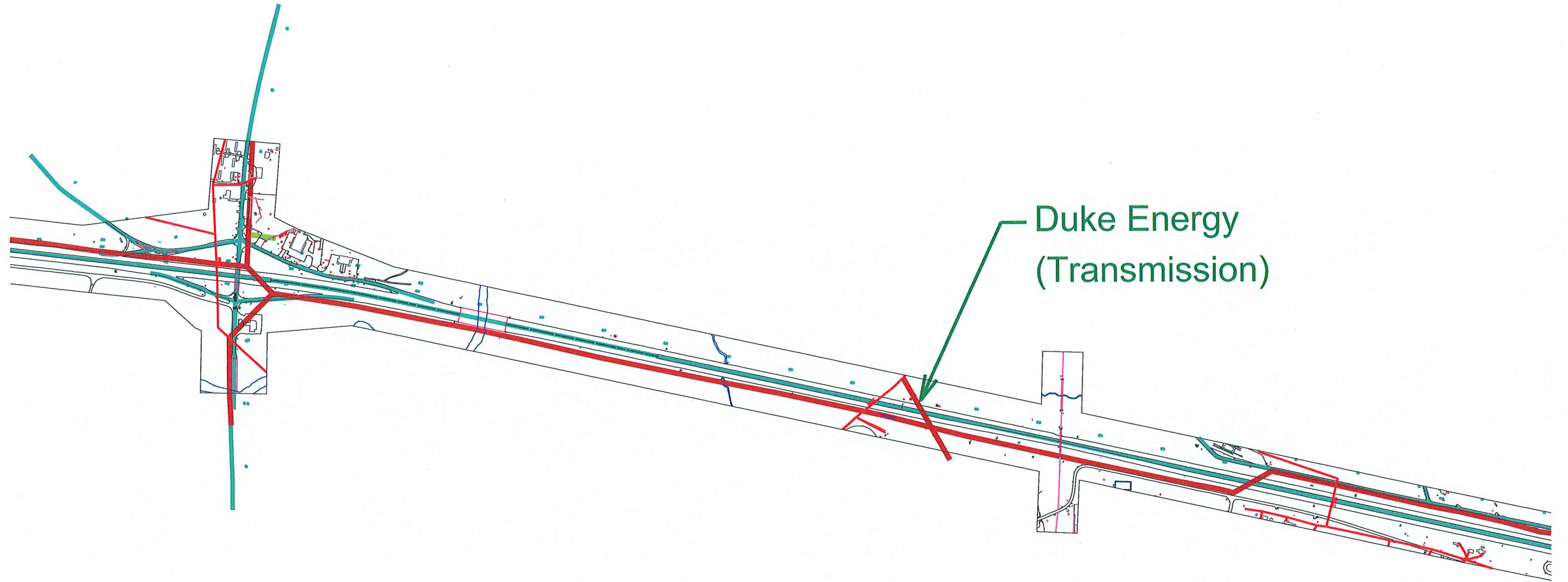
Duke Energy
(Distribution) 3-
phase overhead

EXIT 106



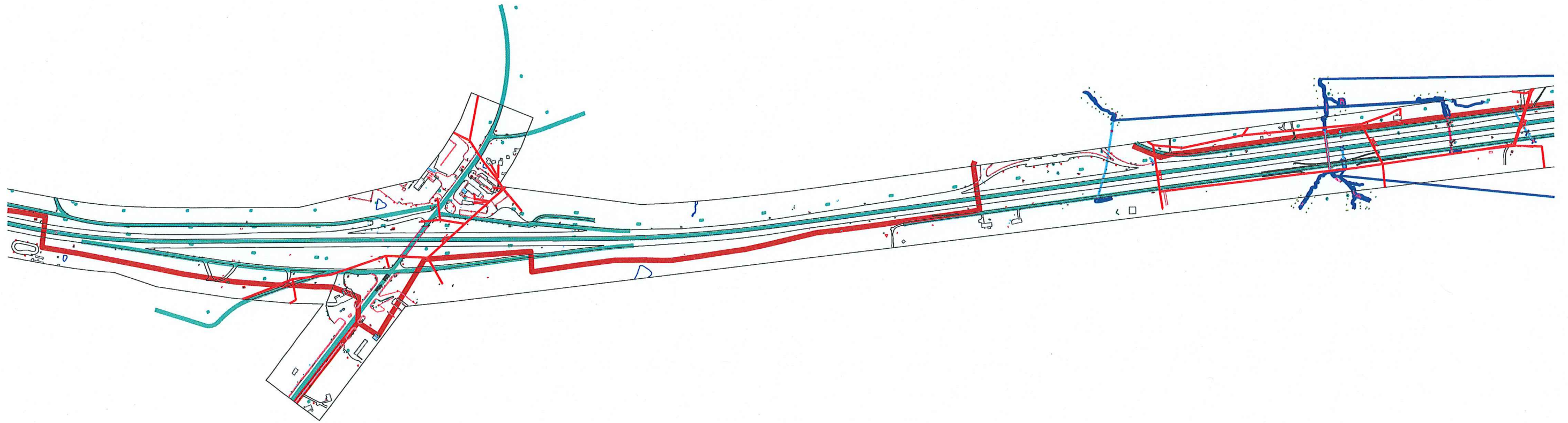
Duke Energy Transmission

EXIT 100



Duke Energy
(Transmission)

EXIT 102

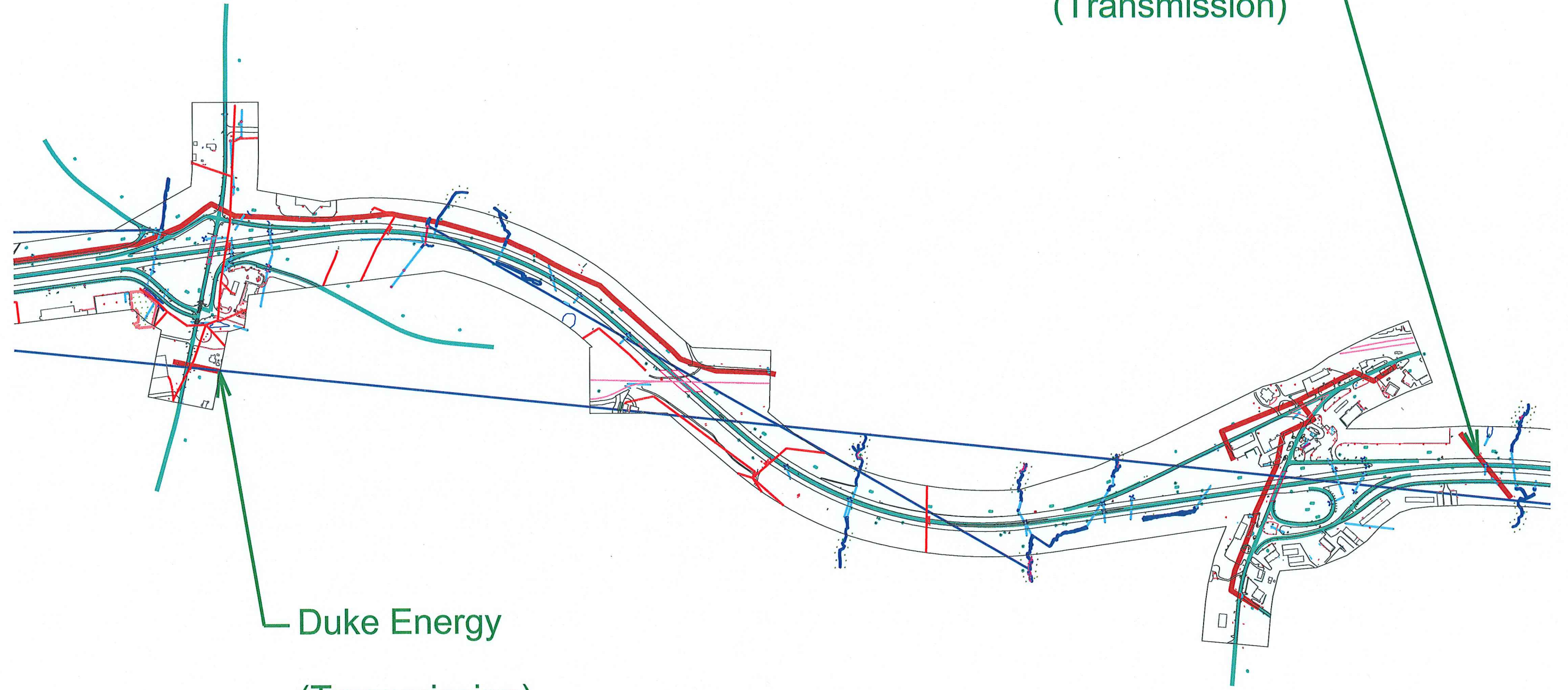


EXIT 104

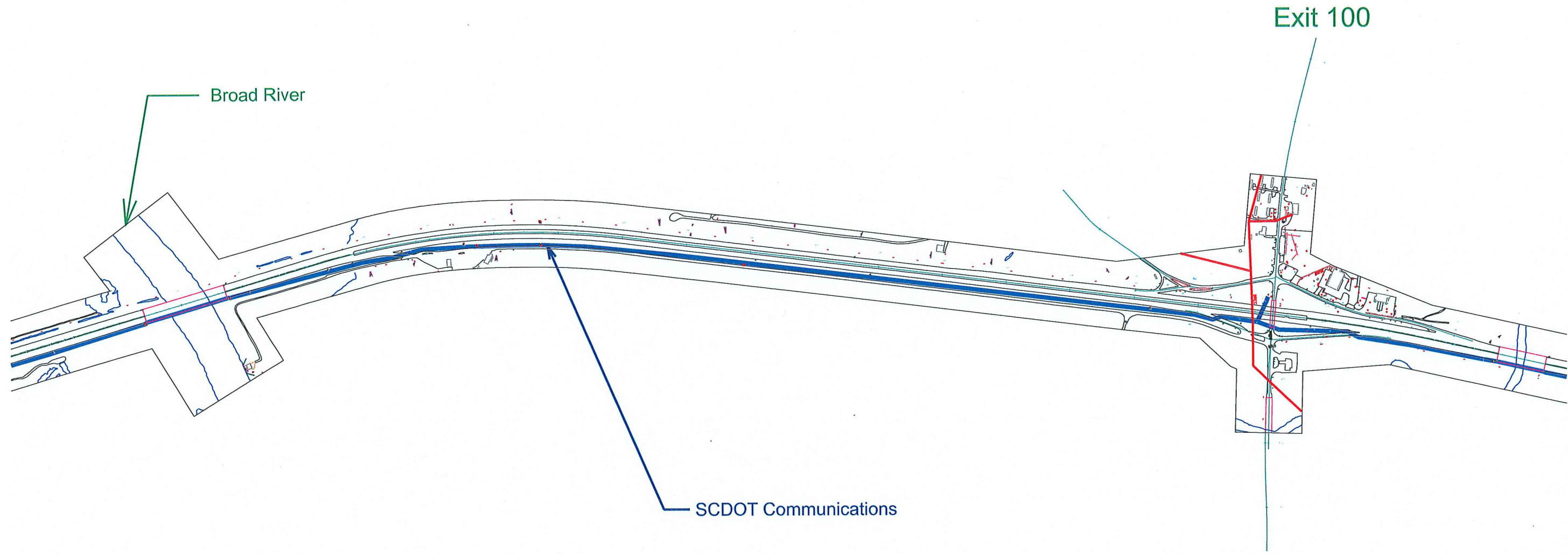
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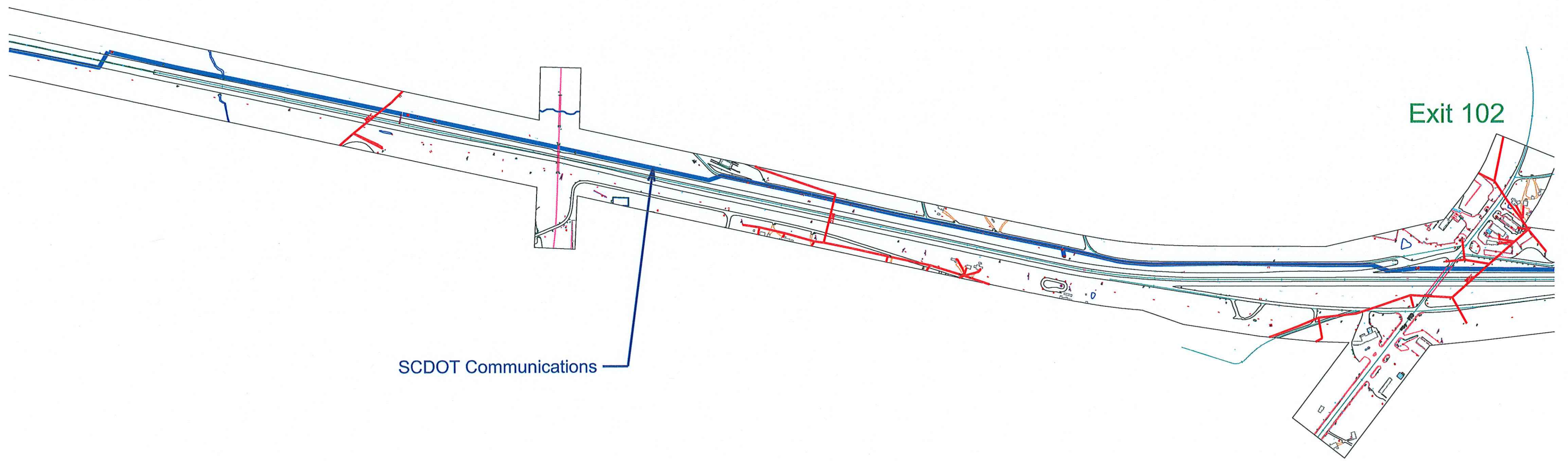
Duke Energy
(Transmission)

Duke Energy
(Transmission)



SCDOT ITS





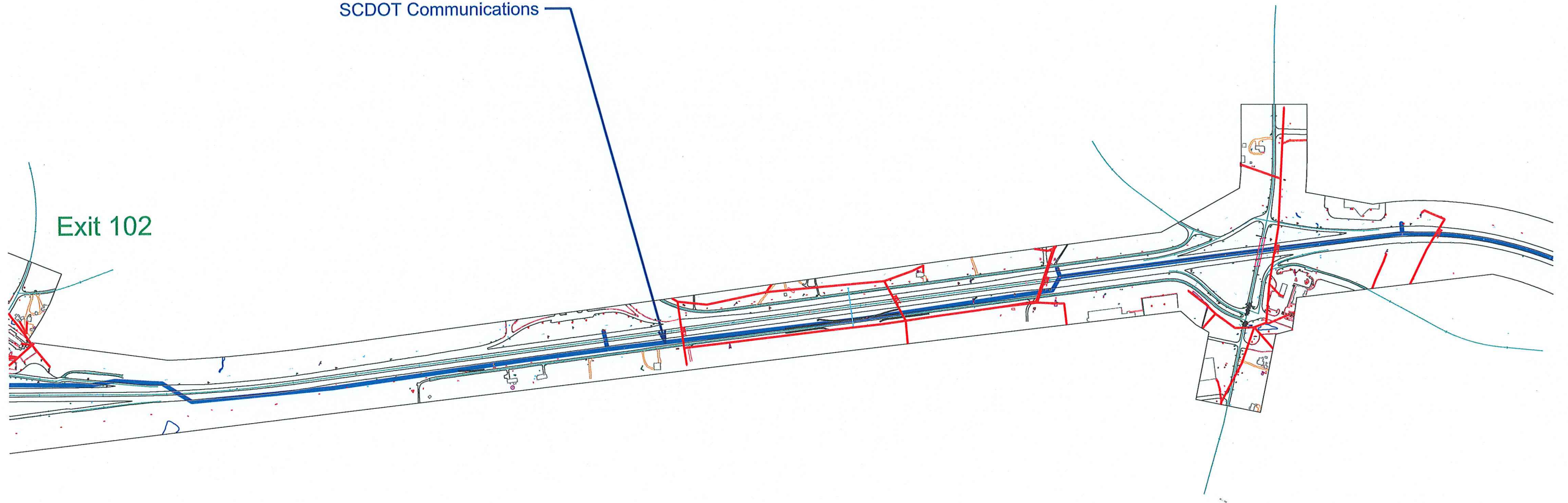
Exit 102

SCDOT Communications

Exit 103

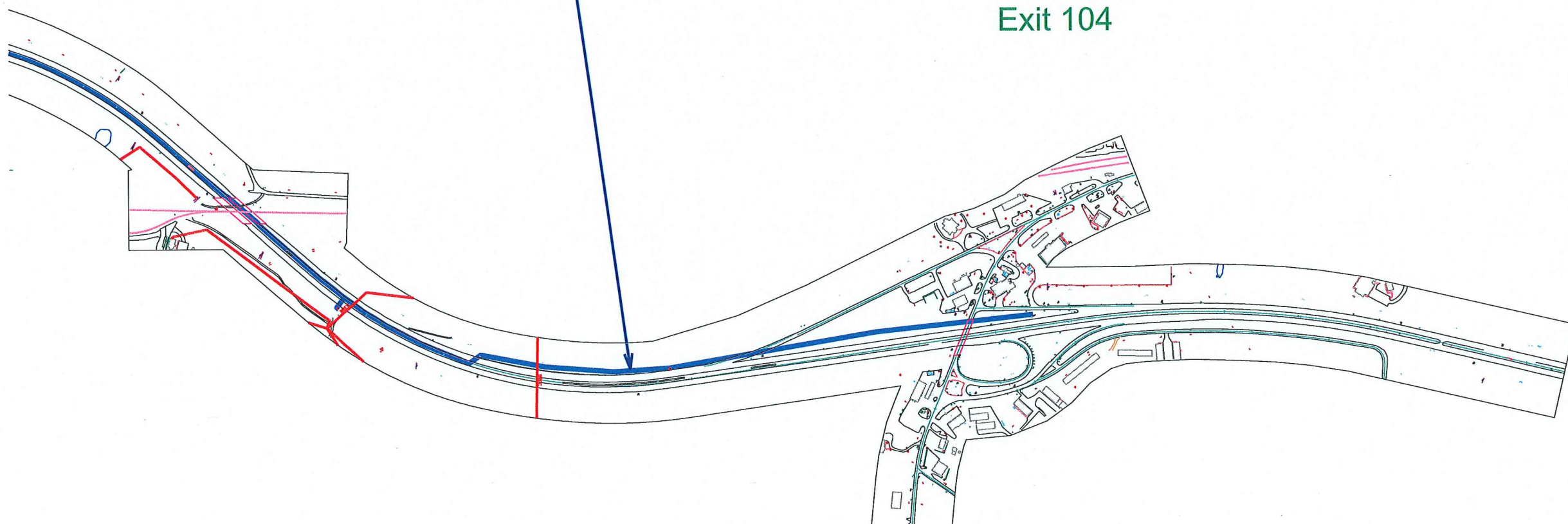
SCDOT Communications

Exit 102

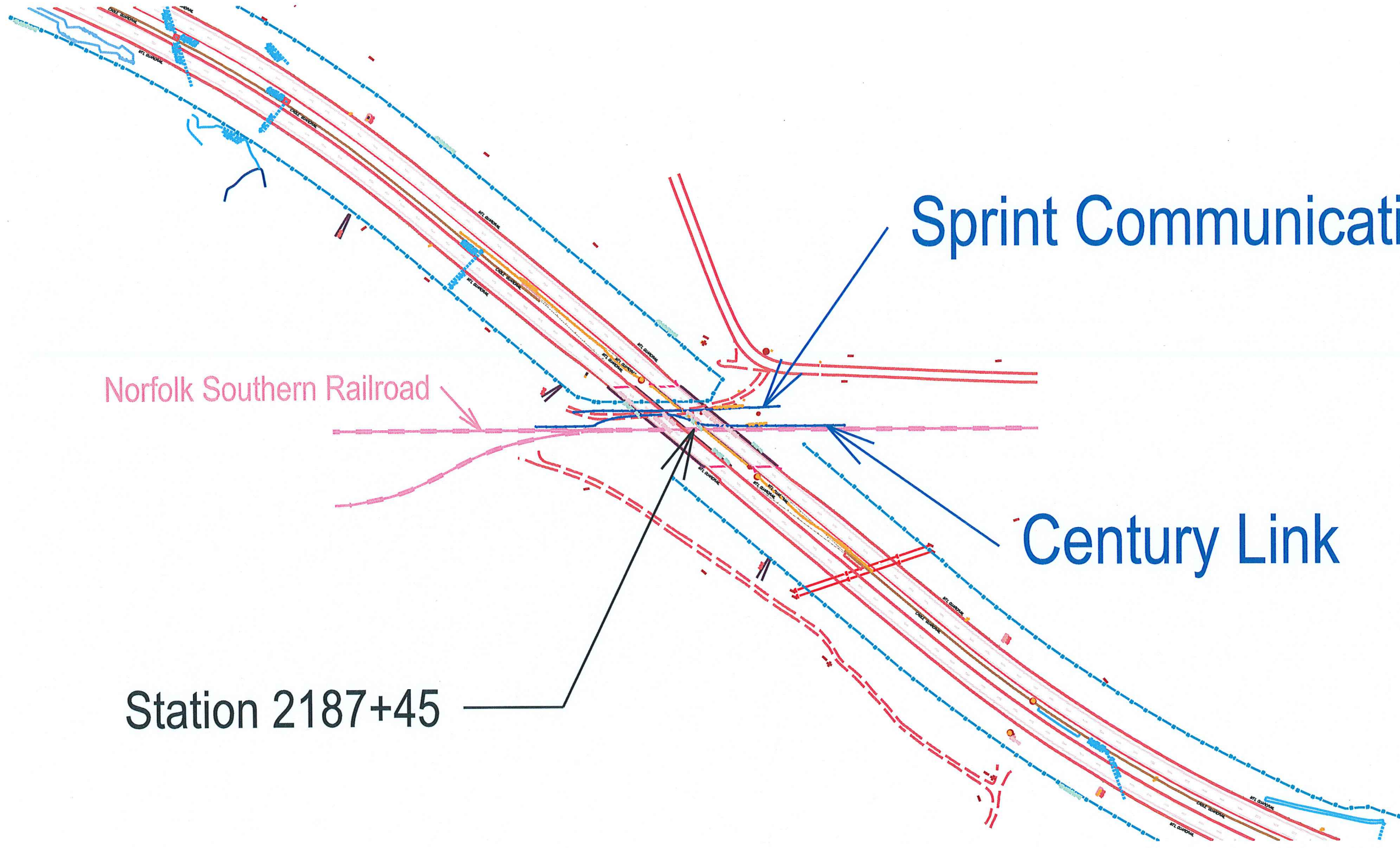


SCDOT Communications

Exit 104



Sprint Communications



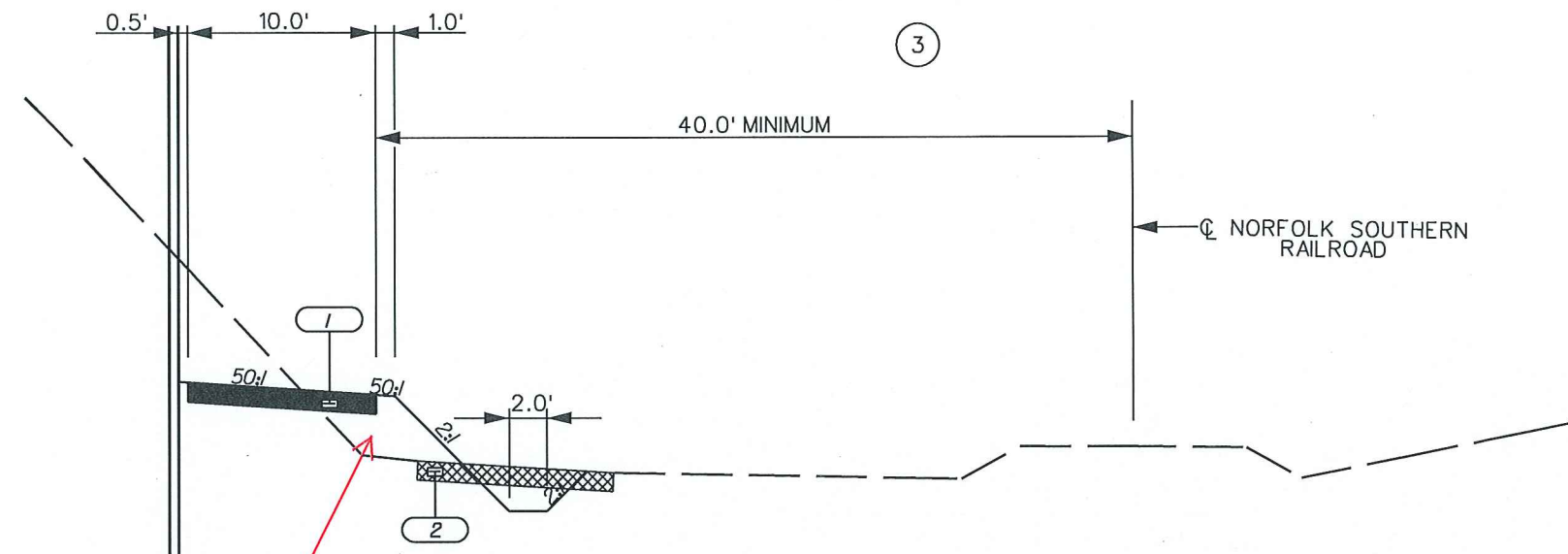
Sprint Communications

Norfolk Southern Railroad

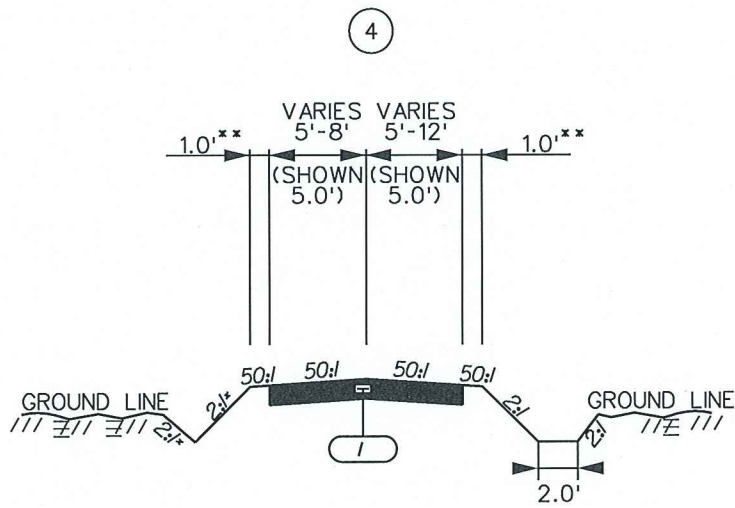
Century Link

Station 2187+45

TYPICAL SECTION OF IMPROVEMENT SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION COLUMBIA, S.C.



USE THIS TYPICAL SECTION ON
ACCESS ROAD STA. 48+26.00 TO STA. 51+52.00



USE THIS TYPICAL SECTION ON
ACCESS ROAD STA. 47+47.59 TO STA. 48+26.00
ACCESS ROAD STA. 51+52.00 TO STA. 52+32.28

* DITCH SLOPES MAY VARY. REFER TO CROSS SECTIONS FOR ADDITIONAL INFORMATION.
** SHOULDER WIDTHS MAY VARY. SEE CROSS SECTIONS.

Conflict Area

2/25/2016 L:\150100_03B typic01.dgn 3-E.DEN-V-85\Plan\SH1 03B typic01.dgn

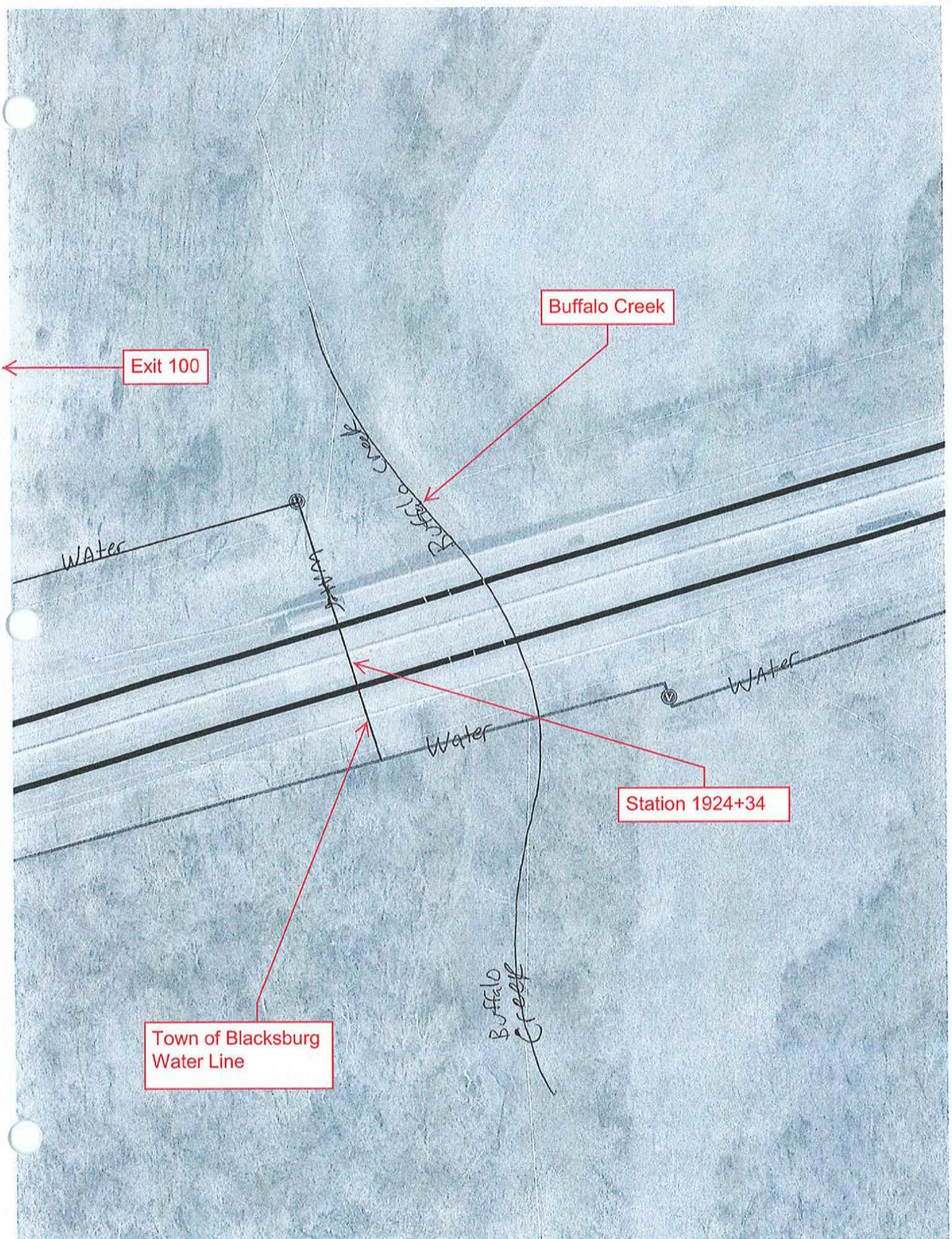
1		NEW UPAVED ACCESS ROAD
2		EXISTING ACCESS ROAD

4			
3			
2			
1	DAM	10/19/15	RELEASED FOR CONSTRUCTION
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

 ICA Engineering Inc. 501 Huger St, Columbia SC, 29201	THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY: DAVID A. MONTGOMERY P.E. NO. 17997 ON 10-19-15	<table border="1" style="width: 100%;"> <tr> <th>RTE. ACCESS RD.</th> <th>DESIGN SPEED</th> </tr> <tr> <td>MPH</td> <td>FROM STA. TO STA.</td> </tr> <tr> <td>NA</td> <td></td> </tr> </table>	RTE. ACCESS RD.	DESIGN SPEED	MPH	FROM STA. TO STA.	NA		SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION COLUMBIA, S.C. I-85 OVERPASS OVER NORFOLK SOUTHERN RAILROAD TYPICAL SECTION
			RTE. ACCESS RD.	DESIGN SPEED						
MPH	FROM STA. TO STA.									
NA										
			SCALE 1"V=2' SCALE 1"=5' DWG. NO. 3B							

Spring

Town of Blacksburg



Exit 100

Buffalo Creek

Station 1924+34

Town of Blacksburg
Water Line

Water

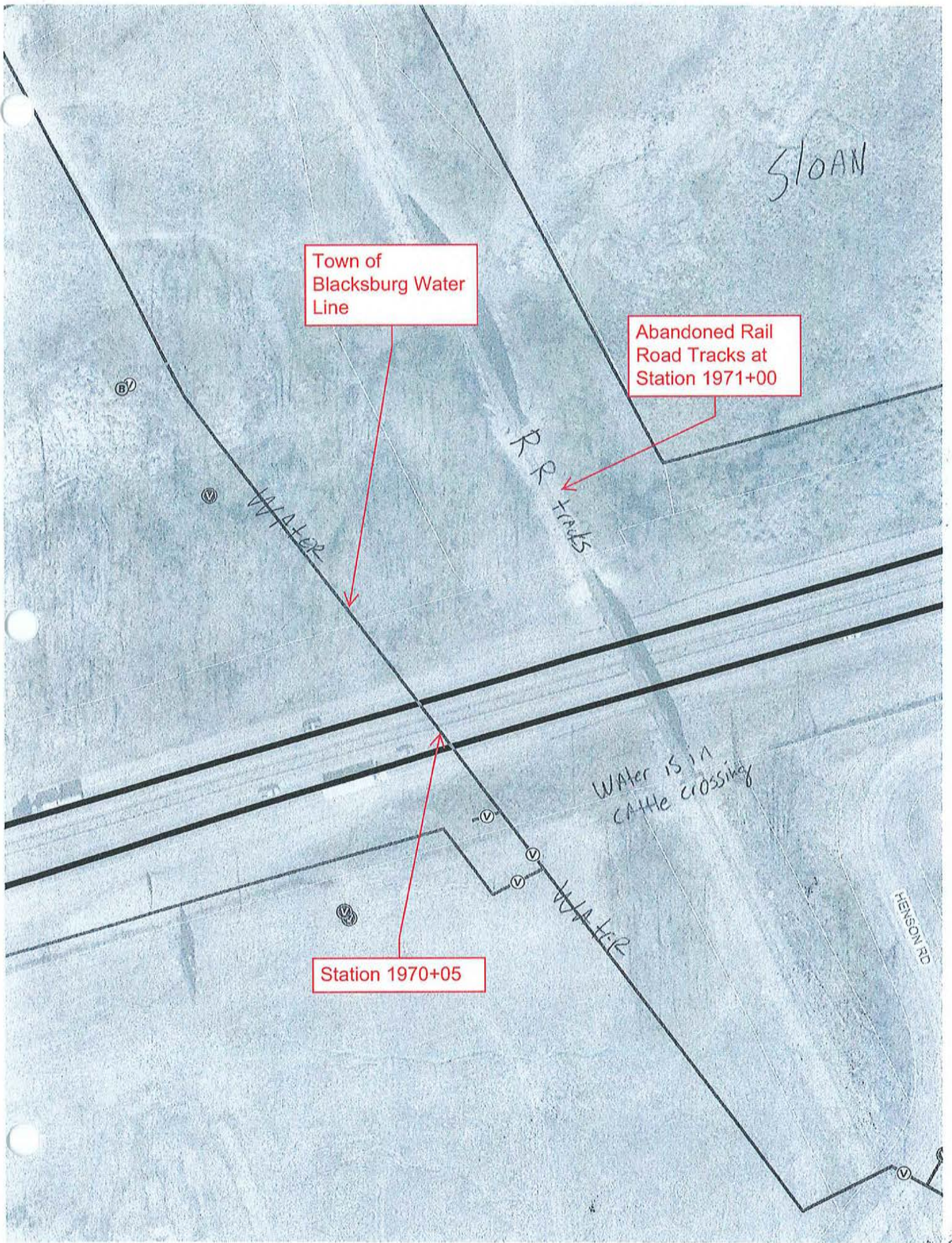
Water

Buffalo Creek

Water

Water

Buffalo
Creek



SLOAN

Town of Blacksburg Water Line

Abandoned Rail Road Tracks at Station 1971+00

RR TRACKS

WATER

WATER 15 IN CATTLE CROSSING

WATER

HENSON RD

Station 1970+05

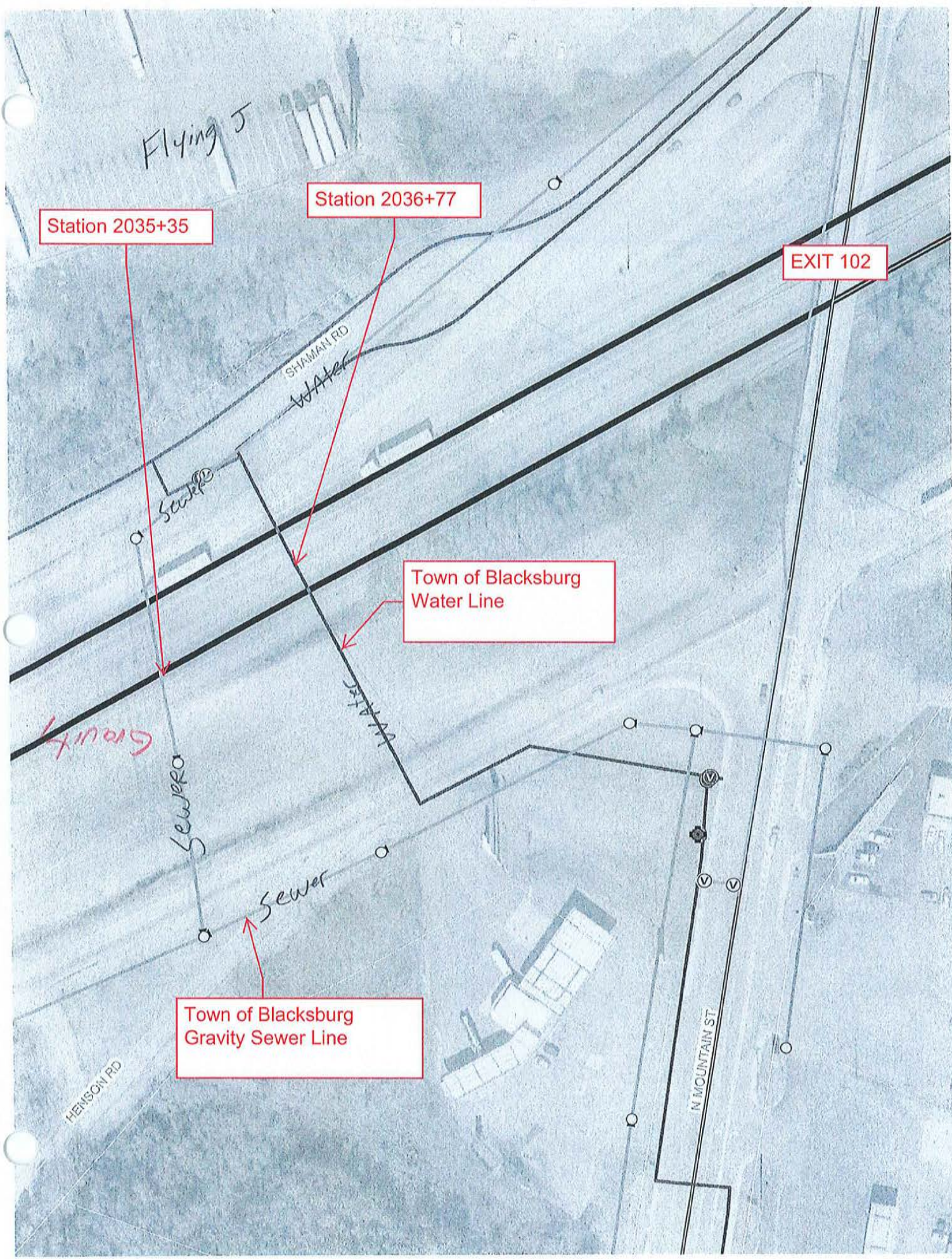
B

V

V

V

V



Flying J

Station 2035+35

Station 2036+77

EXIT 102

SHAMAN RD
Water

Sewer

Town of Blacksburg
Water Line

Gravity

Sewer

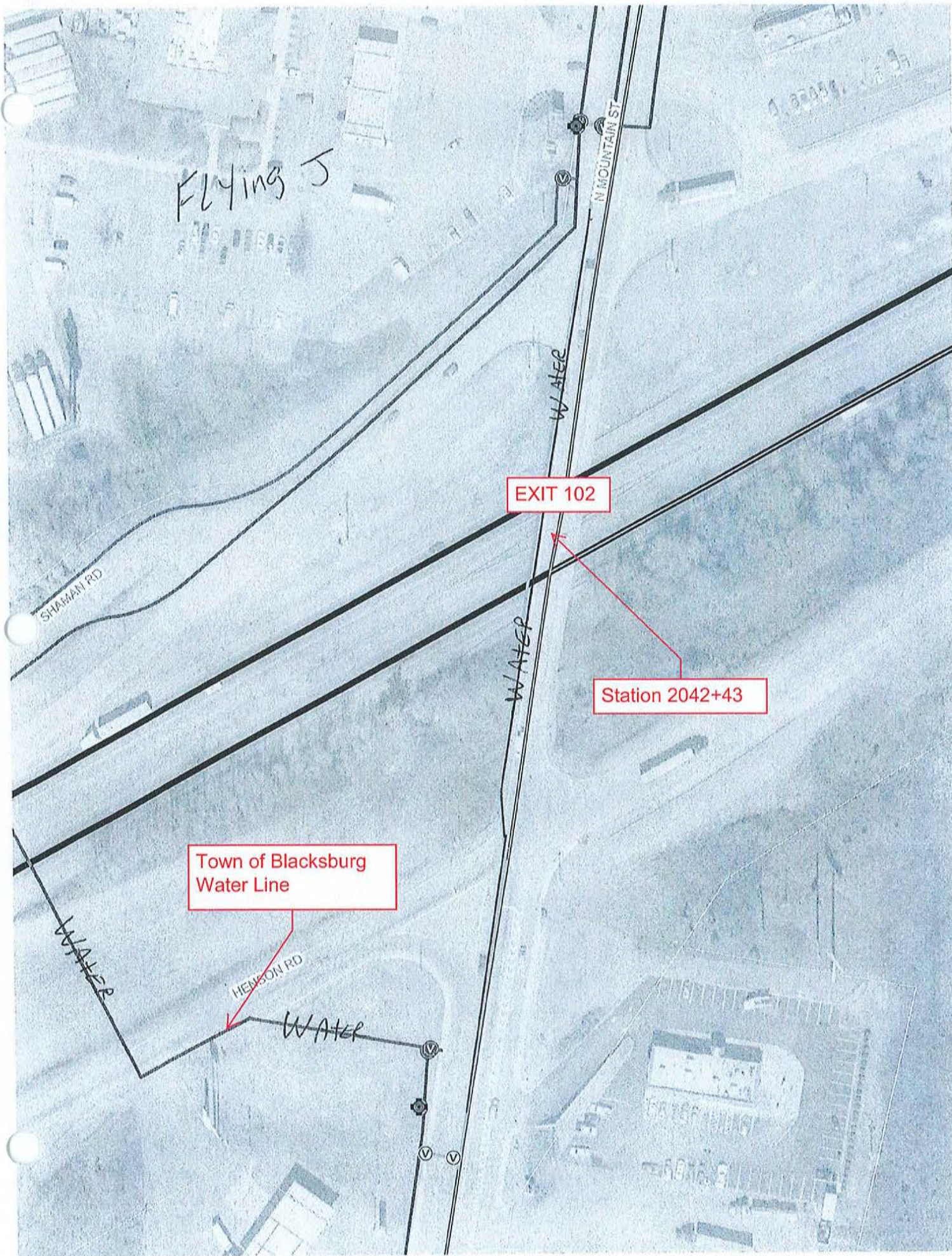
Water

Sewer

Town of Blacksburg
Gravity Sewer Line

HENSON RD

N MOUNTAIN ST



FLYING J

SHAMAN RD

N MOUNTAIN ST

WATER

WATER

WATER

HENSON RD

WATER

EXIT 102

Station 2042+43

Town of Blacksburg Water Line

WASTEQUIP

Town of Blacksburg
Sewer Force Main

Station 2125+00

Sewer Force Main
WHITES FARM RD

Water
Sewer

WATER
Water and Sewer in
CATTLE CROSSING

GIBBONS RD

ATLAS

Town of
Blacksburg Water
Line

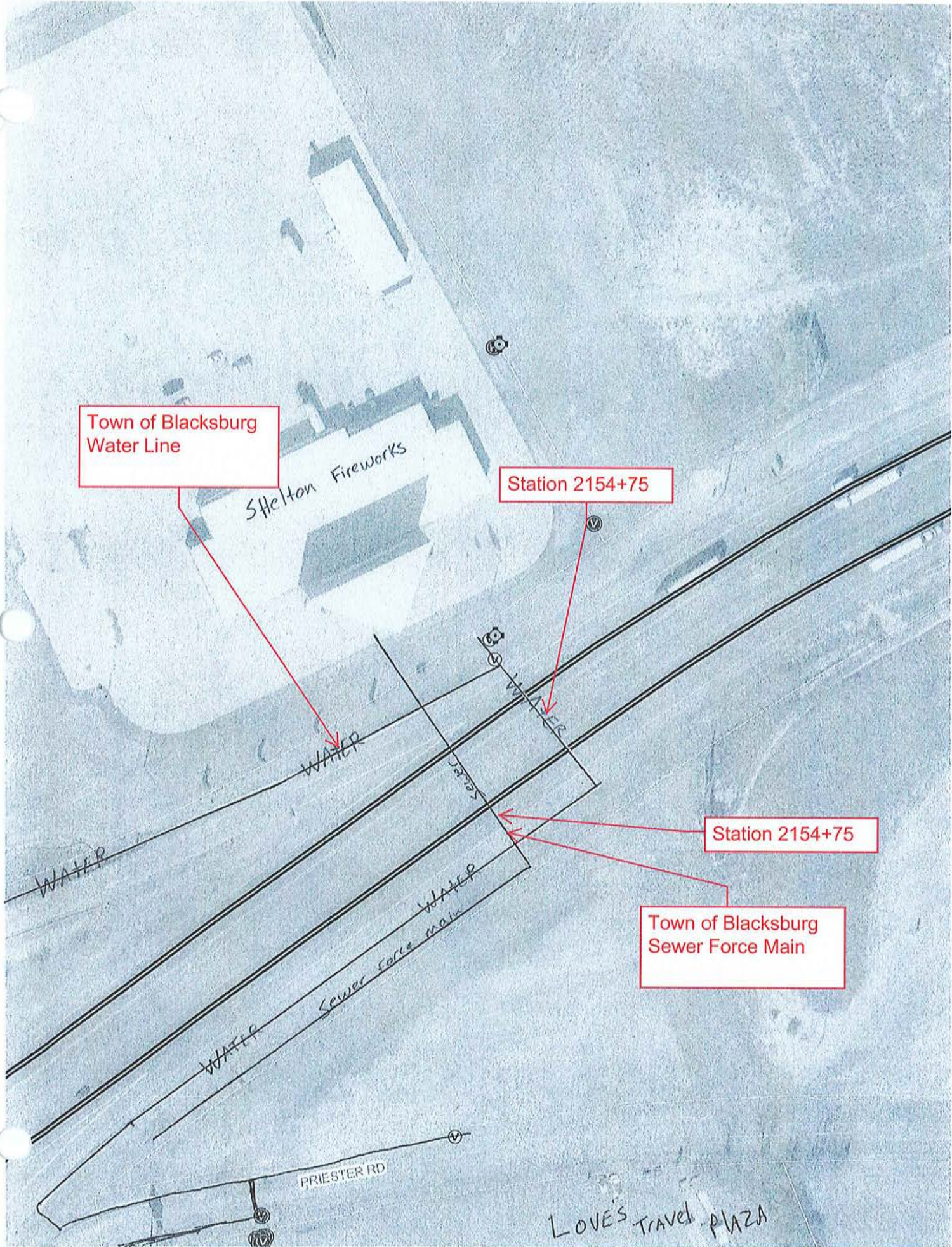
Town of Blacksburg
Water Line

Shelton Fireworks

Station 2154+75

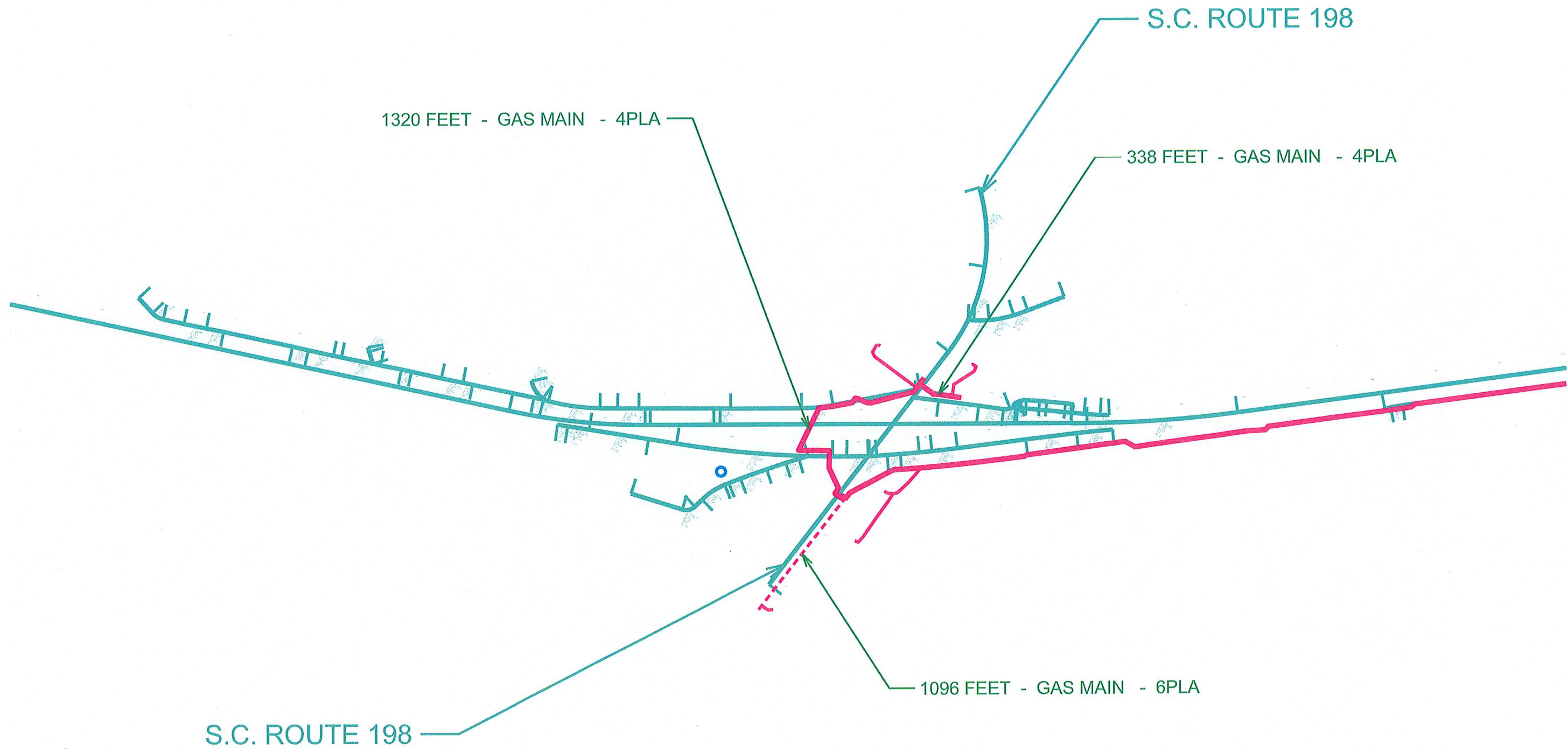
Station 2154+75

Town of Blacksburg
Sewer Force Main

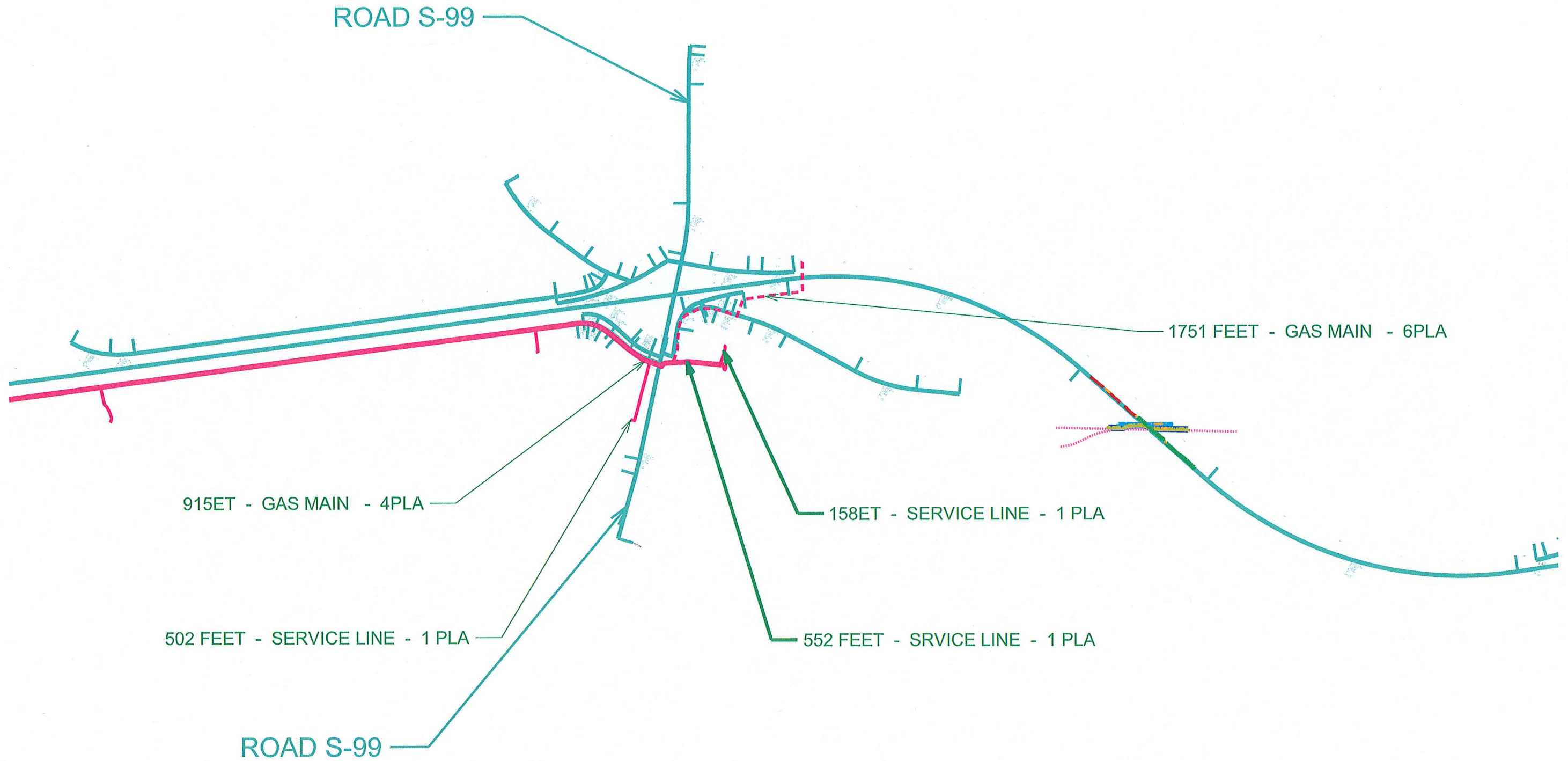


York County Natural Gas

EXIT 102



EXIT 104



TOWN OF BLACKSBURG, SOUTH CAROLINA

GAS LINE TO I-85/EXIT 104

1999
EDA PROJECT NO. 04-01-04311



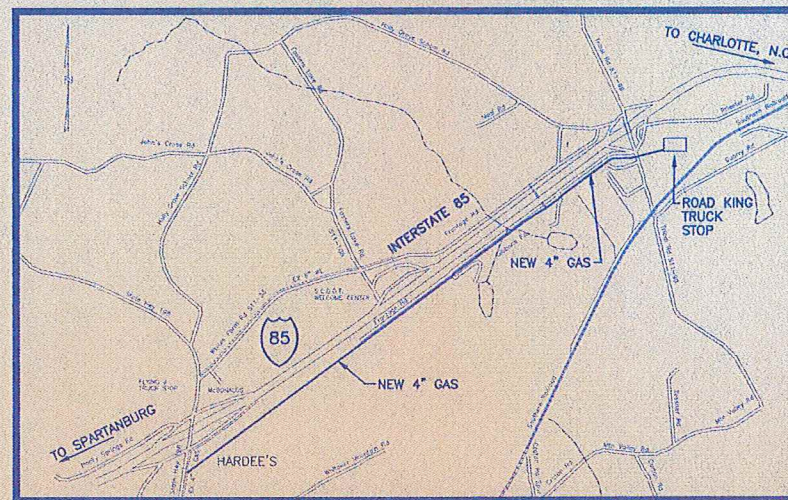
TOWN OF BLACKSBURG, SOUTH CAROLINA

MAYOR
DAVID A. HOGUE

COUNCIL MEMBERS
JOE ROSS JOE WHITENER
MIKE PATTERSON MCKINLEY CORRY

ADMINISTRATOR
TRUDY U. MARTIN

CLERK & TREASURER
DELL BAGWELL



VICINITY MAP

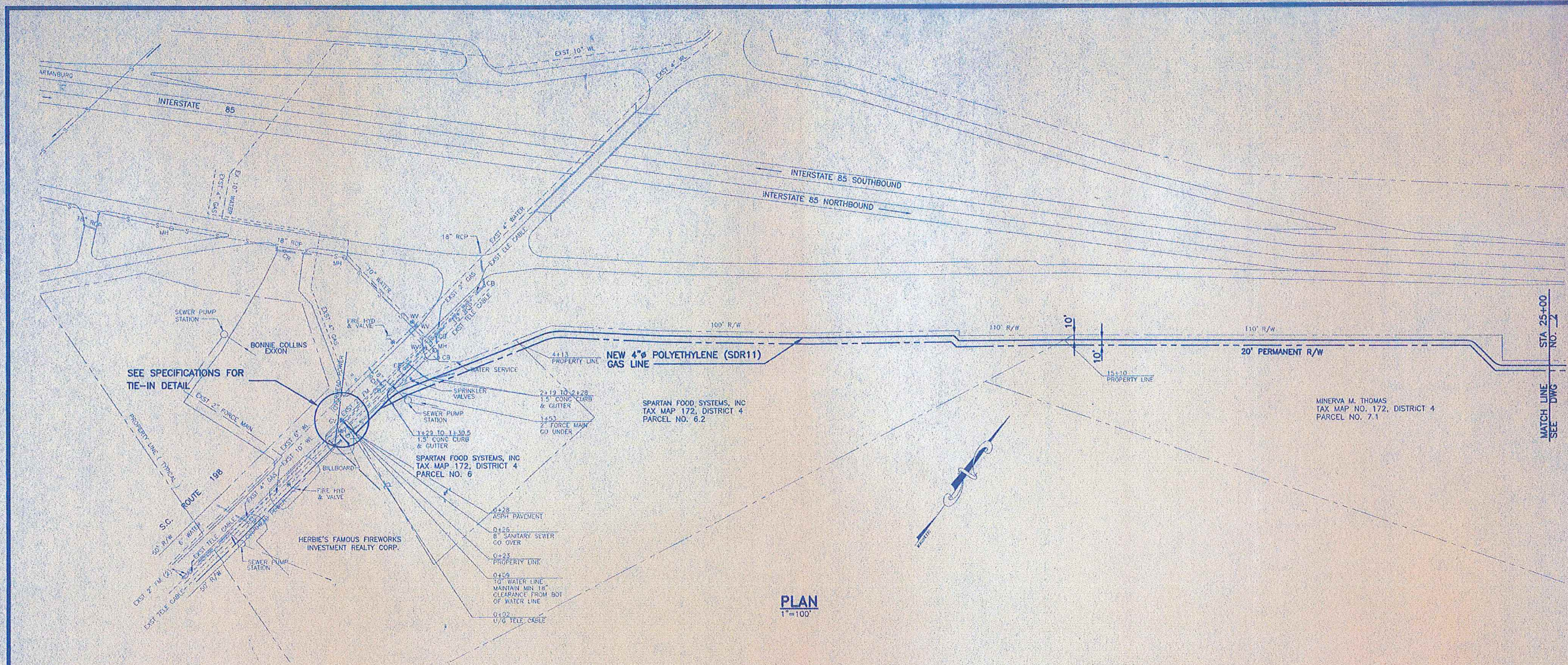
Hayes, Seay, Mattern & Mattern, Inc.

ARCHITECTS • ENGINEERS • PLANNERS
SPARTANBURG, SOUTH CAROLINA
COMMISSION NO. 7538

ISSUED FOR BIDS
Date: 11-10-99



DWG. NO. G1 OF



NOTE:
 ALL EXISTING UTILITIES SHOWN IN PLAN & PROFILE ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

NOTE:
 ALL STANDARD DETAILS FOR GAS MAINS ARE LOCATED IN THE PROJECT MANUAL ALONG WITH THE SPECIFICATIONS.

NO.	DATE	BY	REVISION

Hayes, Seay, Mattern, & Mattern, Inc.
 ARCHITECTS ♦ ENGINEERS ♦ PLANNERS
 SPARTANBURG, SOUTH CAROLINA

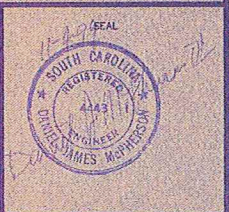
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 SCALE: AS NOTED
 DRAWN BY: DNF
 DESIGNED BY: RAA
 PROJECT MANAGER: DJM

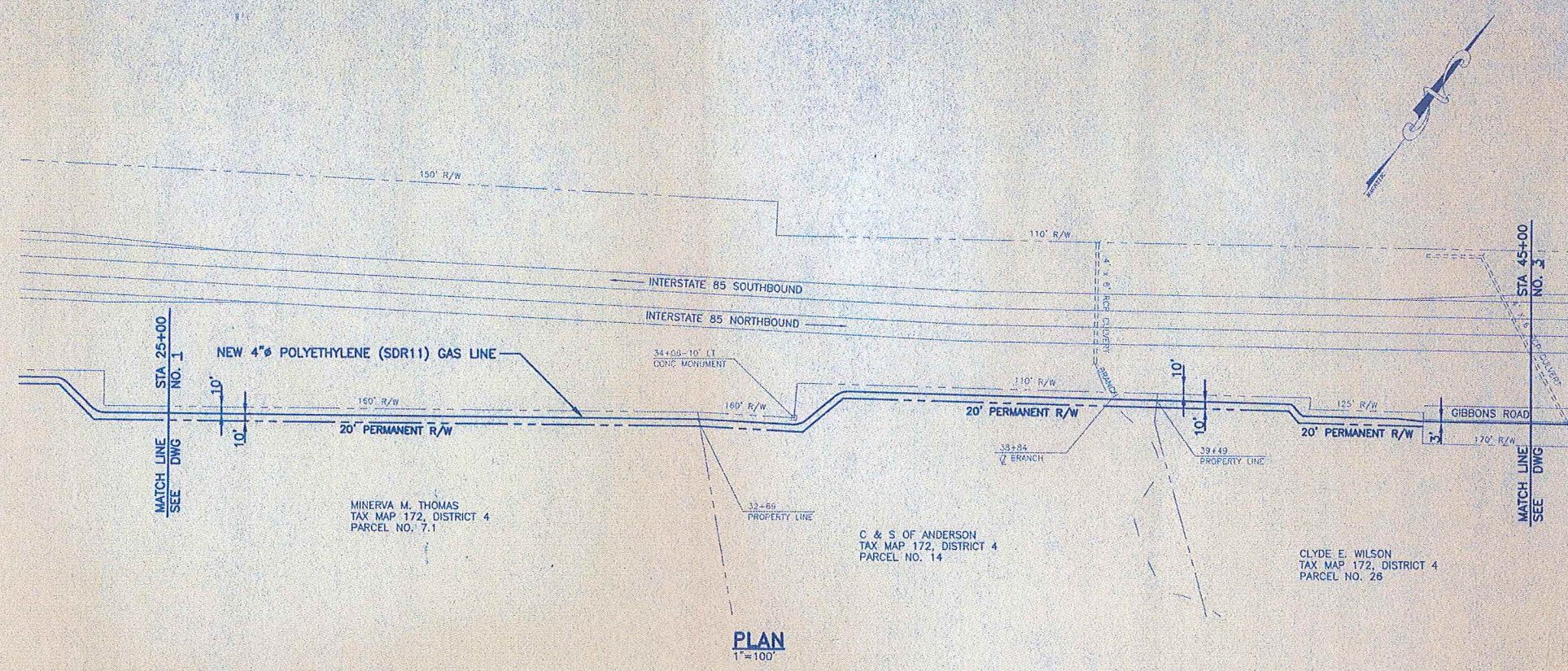
COMMISSION NO. 7538
 FILE NAME

EDA PROJECT NO. 04-01-04311
TOWN OF BLACKSBURG
GAS LINE TO I-85/EXIT 104
 NEW 4" GAS LINE
 PLAN
 STA 0+00 TO 25+00

DRAWING NO. 1 OF

SEQUENCE NO. 1 OF





NOTE:
 ALL EXISTING UTILITIES SHOWN IN PLAN & PROFILE ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

NOTE:
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NO.	DATE	BY	REVISION

Hayes, Seay, Mattern, & Mattern, Inc.
 ARCHITECTS • ENGINEERS • PLANNERS
 SPARTANBURG, SOUTH CAROLINA

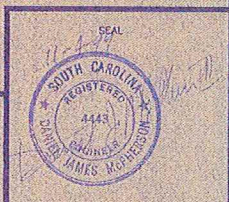
DATE: OCTOBER, 1999
 SCALE: AS NOTED
 DRAWN BY: DNF
 DESIGNED BY: RAA
 PROJECT MANAGER: DJM

COMMISSION NO.: 7538
 FILE NAME:

EDA PROJECT NO. 04-01-04311
TOWN OF BLACKSBURG
GAS LINE TO I-85/EXIT 104
 NEW 4" GAS LINE
 PLAN
 STA 25+00 TO 45+00

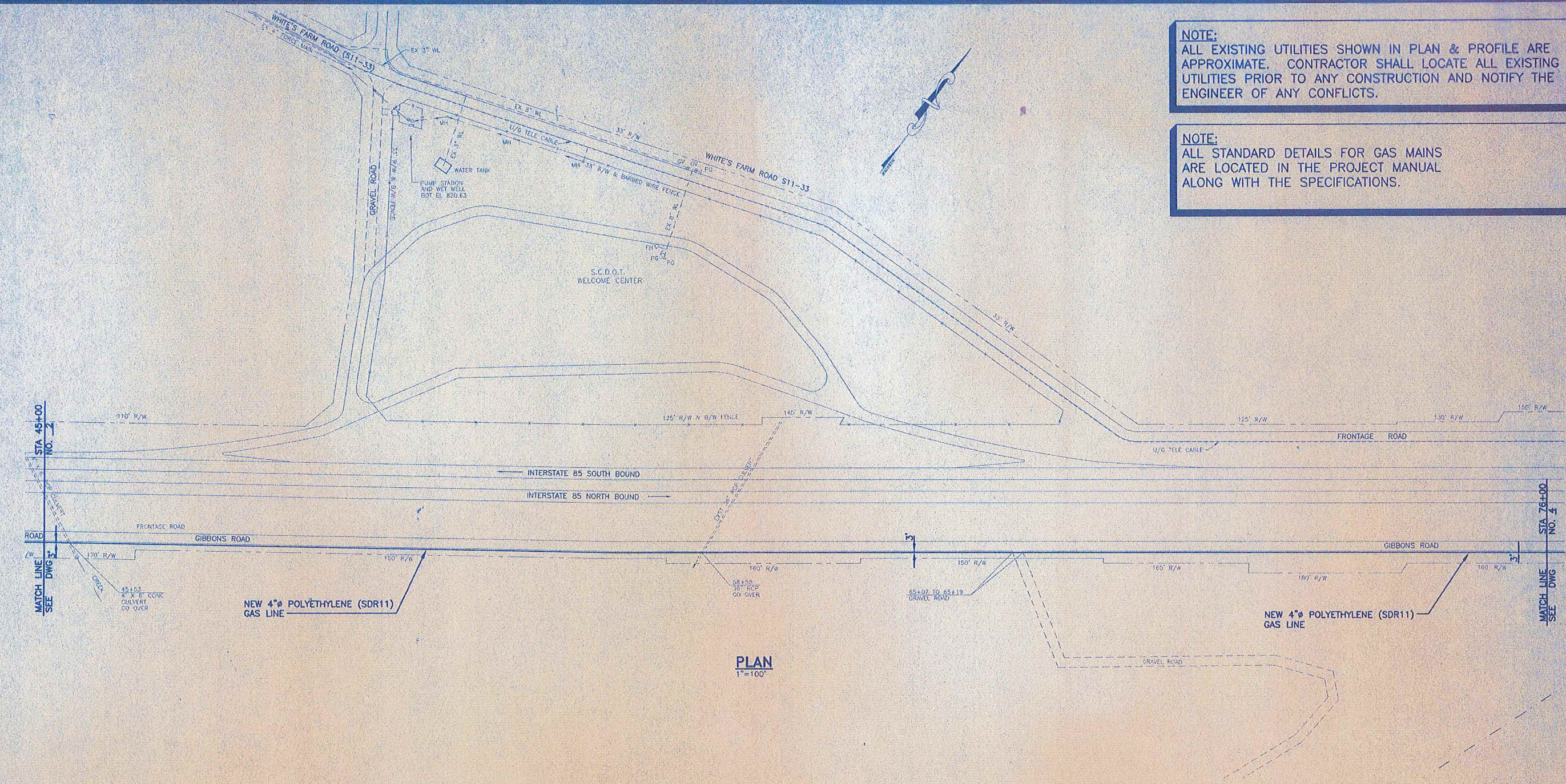
DRAWING NO.: 2 OF

SEQUENCE NO.: OF



NOTE:
 ALL EXISTING UTILITIES SHOWN IN PLAN & PROFILE ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

NOTE:
 ALL STANDARD DETAILS FOR GAS MAINS ARE LOCATED IN THE PROJECT MANUAL ALONG WITH THE SPECIFICATIONS.



PLAN
 1"=100'

NO.	DATE	BY	REVISION

Hayes, Seay, Mattern, & Mattern, Inc.
 ARCHITECTS ♦ ENGINEERS ♦ PLANNERS
 SPARTANBURG, SOUTH CAROLINA

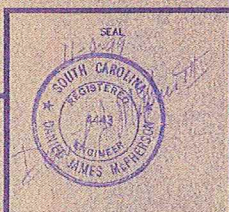
DATE: OCTOBER, 1999
 SCALE: AS NOTED
 DRAWN BY: DNF
 DESIGNED BY: RAA
 PROJECT MANAGER: DJM

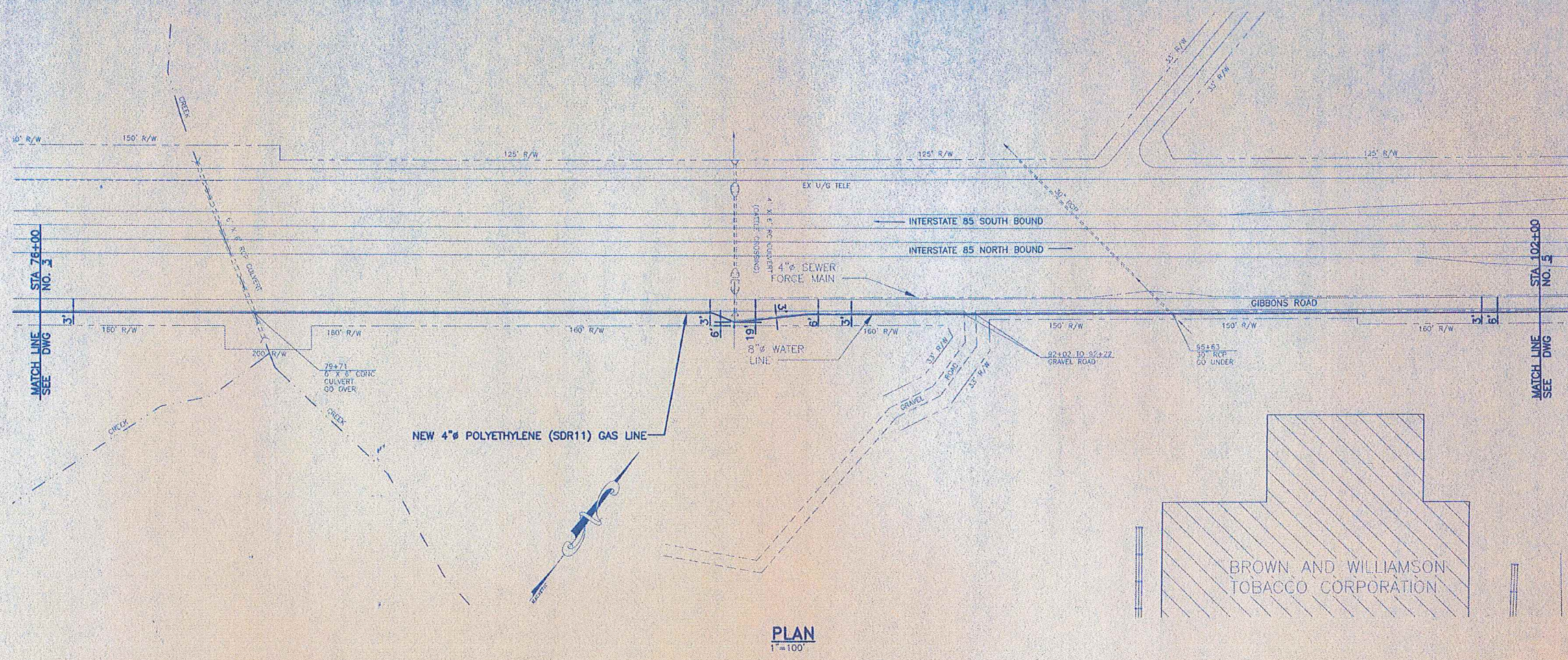
COMMISSION NO.
 7538
 FILE NAME

EDA PROJECT NO. 04-01-04311
TOWN OF BLACKSBURG
GAS LINE TO I-85/EXIT 104

NEW 4" GAS LINE
 PLAN AND PROFILE
 45+00 TO 76+00

DRAWING NO.
 3
 OF
 SEQUENCE NO.
 OF





PLAN
1"=100'

NOTE:
ALL EXISTING UTILITIES SHOWN IN PLAN & PROFILE ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

NOTE:
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NO.	DATE	BY	REVISION

Hayes, Seay, Mattern, & Mattern, Inc.
ARCHITECTS ♦ ENGINEERS ♦ PLANNERS
SPARTANBURG, SOUTH CAROLINA

DATE OCTOBER, 1999
SCALE AS NOTED
DRAWN BY DNF
DESIGNED BY RAA
PROJECT MANAGER DJM

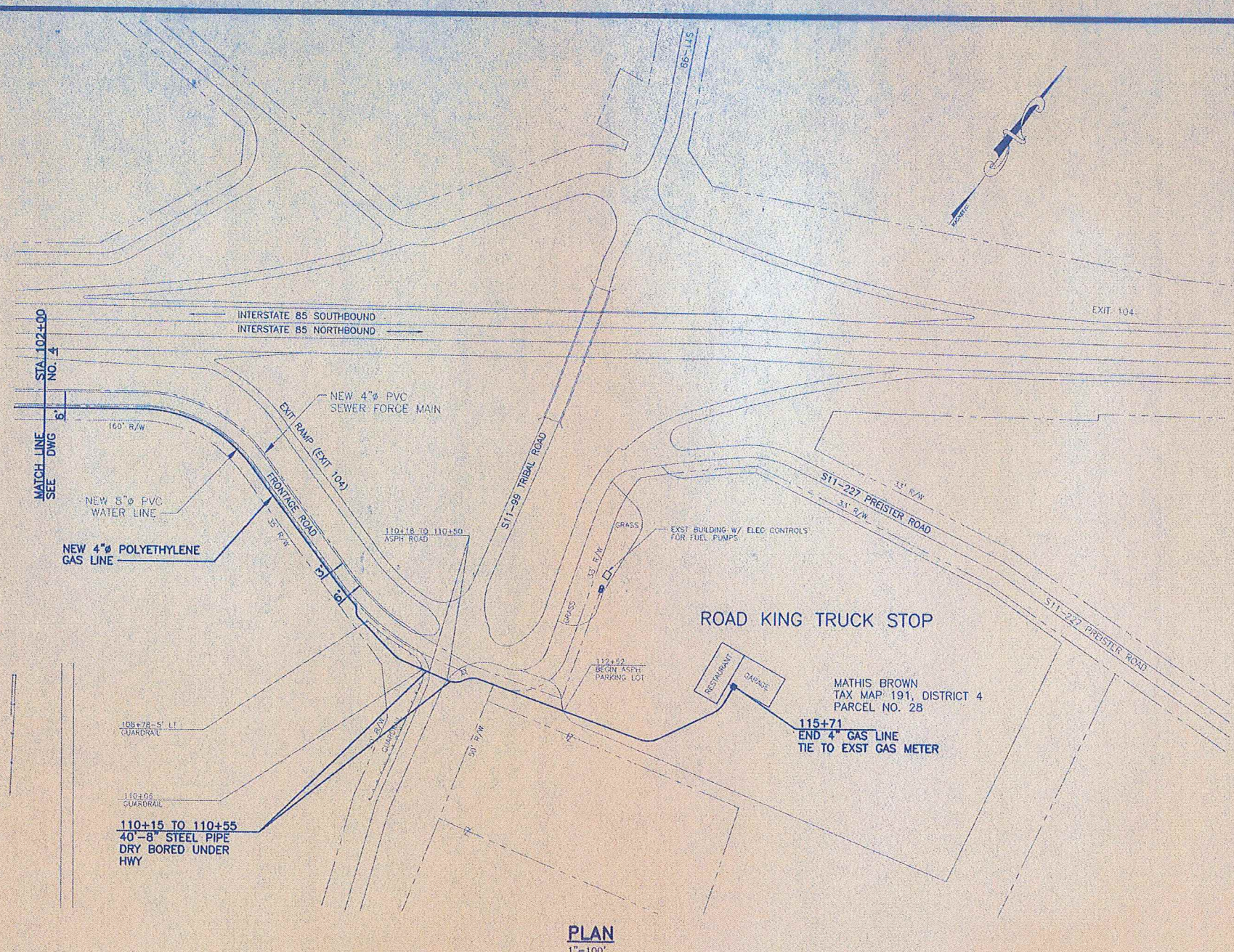
COMMISSION NO. 7538
FILE NAME

EDA PROJECT NO. 04-01-04311
TOWN OF BLACKSBURG
GAS LINE TO I-85/EXIT 104
NEW 4" GAS LINE
PLAN
STA 76+00 TO 102+00

DRAWING NO. 4 OF

SEQUENCE NO.





PLAN
1"=100'

NOTE:
ALL EXISTING UTILITIES SHOWN IN PLAN & PROFILE ARE APPROXIMATE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

NOTE:
ALL STANDARD DETAILS FOR GAS MAINS ARE LOCATED IN THE PROJECT MANUAL ALONG WITH THE SPECIFICATIONS.

NO.	DATE	BY	REVISION

Hayes, Seay, Mattern, & Mattern, Inc.
ARCHITECTS ♦ ENGINEERS ♦ PLANNERS
SPARTANBURG, SOUTH CAROLINA

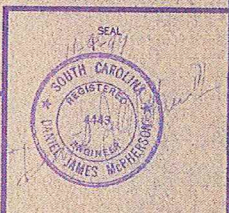
DATE: OCTOBER, 1999
SCALE: AS NOTED
DRAWN BY: DNF
DESIGNED BY: RAA
PROJECT MANAGER: DJM

COMMISSION NO.: 7538
FILE NAME:

EDA PROJECT NO. 04-01-04311
TOWN OF BLACKSBURG
GAS LINE TO I-85/EXIT 104
NEW 4" GAS LINE
PLAN
102+00 TO 115+71 (END)

DRAWING NO.
5 OF

SEQUENCE NO.
OF





C E Civil Engineering
C S Consulting Services, Inc.