Standard Design Elements Feature Description	Level	Color	Line Wt.	Line Style
Existing Roads EOP	58150	4	4	0
Existing Roads Match Line	58151	3	4	0
Proposed Aerial Guy	58152	6	1	0
Existing Bridge	58153	6	3	0
Existing Sidewalk	58154	19	1	0
Proposed Construction Note Leader Line	58155	3	1	0
Proposed Attachment Note Leader Line	58156	3	1	0
Proposed Utility Adjustment Leader Line	58157	3	1	0

Text Feature Description	Level	Color	Line Wt.	Line Style	Font	Size (English) 30:1	40:1	50:1	60:1	70:1	80:1	90:1	100:1
Existing Road Text	58200	3	4	0	11	8	10	12	14	16	18	20	22
Existing Road Match Line Text	58201	13	4	0	11	8	10	12	14	16	18	20	22
Existing Sidewalk Text	58202	19	1	0	11	4	5	7	9	11	13	15	17
Proposed Slack Span Text	58203	3	1	0	11	4	5	7	9	11	13	15	17
Proposed Attachment Text	58204	3	1	0	11	6	8	10	12	14	16	18	20
Proposed Utility Adjustment Text	58205	3	1	0	11	8	10	12	14	16	18	20	22
Existing Railroad Text	58206	7	1	0	11	8	10	12	14	16	18	20	22
Existing Right of Way Text	58207	5	1	0	11	8	10	12	14	16	18	20	22
Existing Pole Text	58208	3	1	0	11	4	5	7	9	11	13	15	17
Proposed General Note Text	58209	3	1	0	11	8	10	12	14	16	18	20	22

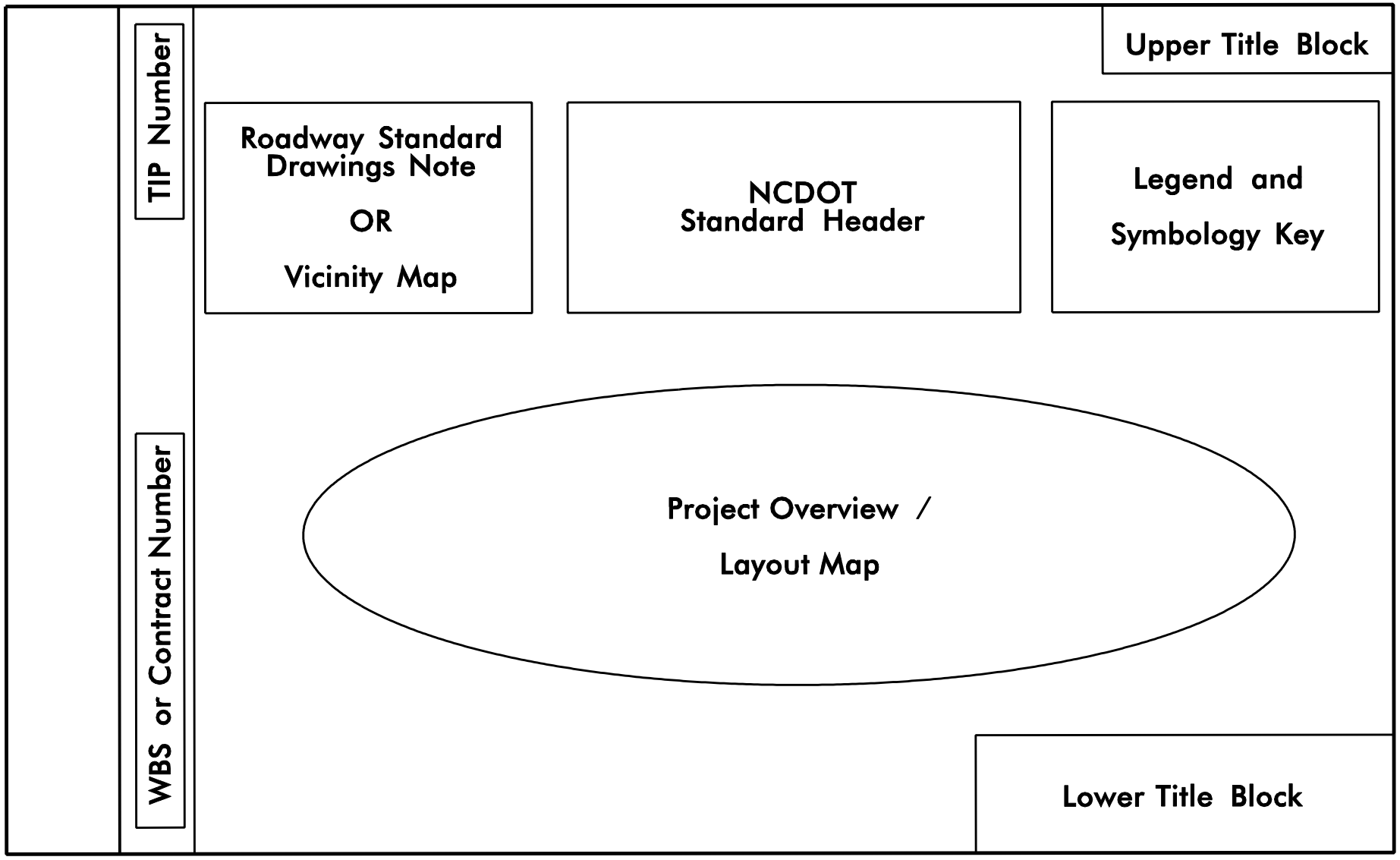
	Custom Line Styles Feature Description	Level	Color	Line Wt.	Line Style	Font	Scale 30:1	40:1	50:1	60:1	70:1	80:1	90:1	100:1
TMS Custom	Proposed Aerial Fiber Optic Cable	58000	3	0	Sig Com Cab FO		70	80	90	100	120	140	160	180
TMS Custom	Proposed Twisted Pair Cable	58001	4	0	Sig Com Cab Twi Pr Exi		70	80	90	100	120	140	160	180
TMS Custom	Existing Communications Cable	58002	1	0	Sig Com Cab Exi		70	80	90	100	120	140	160	180
TMS Custom	Remove Existing Communications Cable	58003	2	0	Sig Com Cab Rmv		70	80	90	100	120	140	160	180
TMS Custom	Proposed Conduit	58004	0	0	Sig Com Cab Nw Cond		70	80	90	100	120	140	160	180
TMS Custom	Existing Conduit	58005	6	0	Sig Com Cab Exi Cond		70	80	90	100	120	140	160	180
TMS Custom	Proposed Directional Drilled Conduit	58006	1	0	Sig Com Cab Dr Dri		70	80	90	100	120	140	160	180
TMS Custom	Proposed Jack and Bore Conduit	58007	120	0	Sig Com Cab Jac Bor		70	80	90	100	120	140	160	180
Other Custom	Existing Railroad Track	58008	7	2	(0) ncmap RR Gau Std		70	80	90	100	120	140	160	180
Other Custom	Existing Railroad Track (Title Sheet)	58009	0	1	(0) Sig Geo RR		1	1.5	2	2	2.5	2.5	3	3
Other Custom	Existing Railroad Gate	58010	3	1	(0) Sig Geo RR Gat		1	1.5	2	2	2.5	2.5	3	3
Other Custom	Existing Railroad Cantilever	58011	3	1	(0) Sig Geo RR Can		1	1.5	2	2	2.5	2.5	3	3
Other Custom	Existing Railroad Lights	58012	3	1	(0) Sig Geo RR Lit		1	1.5	2	2	2.5	2.5	3	3
Other Custom	Existing Right of Way	58013	5	1	(0) ncmap ROW Exi		30	40	50	60	70	80	90	100
Other Custom	Existing Guard Rail	58014	6	4	(0) Rdy GR Prop		30	40	50	60	70	80	90	100
Other Custom	Existing Fence Line	58015	0	1	(0) ncmap Fen		30	40	50	60	70	80	90	100
Other Custom	Existing Hedge Row	58016	153	1	(0) ncmap Hdg		30	40	50	60	70	80	90	100
Other Custom	Existing Woods	58017	153	1	(0) ncmap Wds		30	40	50	60	70	80	90	100
Other Custom	Existing Streams and Rivers	58018	99	1	2–5–2		1	1	1	1	1	1	1	1

Standard Sheet Layout – TMS Standard CADD Symbology

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.0
SHEET 1 OF 1



Standard Sheet Layout – UMR Title Sheet

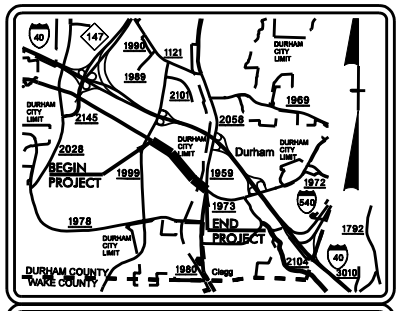
TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.1
SHEET 1 OF 5

R-2904

WBS: 34512



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DURHAM COUNTY

LOCATION: NC 54 FROM SR 1999 (DAVIS DRIVE) TO SR 1959 (MIAMI BOULEVARD)

TYPE OF WORK: UTILITY MAKE READY

PROJECT REFERENCE NO.	SHEET NO.
R-2904	UMR-0

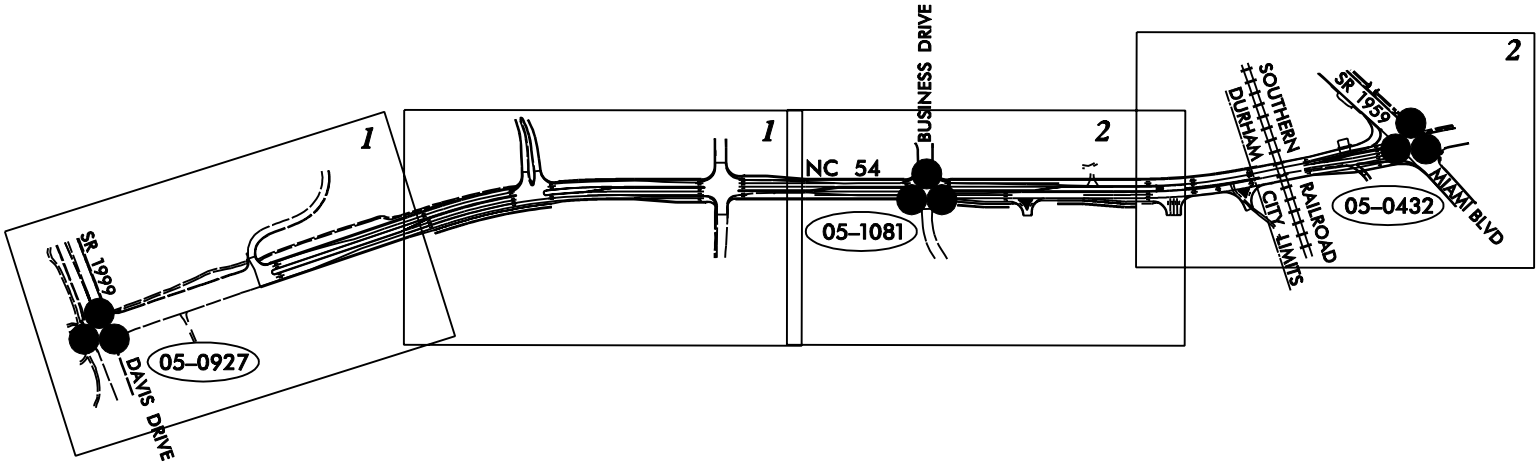
LEGEND

- NEW FIBER OPTIC COMMUNICATIONS CABLE
- EXISTING COMMUNICATIONS CABLE
- NEW CONDUIT
- EXISTING CONDUIT
- NEW DIRECTIONAL DRILLED CONDUIT
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- NEW WOOD POLE
- EXISTING WOOD POLE
- NEW METAL POLE
- EXISTING METAL POLE
- EXISTING CONTROLLER AND CABINET
- SP SIGNAL POLE
- XX-XXXX SIGNAL INVENTORY NUMBER
- SIGNALIZED INTERSECTION

POLE INVENTORY SYMBOLOGY

ATTACHMENT HEIGHT	EXISTING UTILITY
XX' - XX"	POWER
XX' - XX"	XXXXX
XX' - XX"	XXXXX
XX' - XX"	XXXXX
XX' - XX"	XXXXX
XX' - XX"	XXXXX
XX' - XX"	XXXXX

SEPARATION



UTILITY MAKE READY PLANS

DIVISION 05 DURHAM COUNTY DURHAM

PLAN DATE: JANUARY 2004 REVIEWED BY: T. N. AVERY

PREPARED BY: J. HOOKER REVIEWED BY:

REVISIONS | INIT. | DATE

SCALE: 0

SEAL

SIGNATURE DATE

CAD Filename:

Standard Sheet Layout – Sample UMR Title Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO. 9.1

SHEET 2 OF 5

NOTES

NUMBER UMR PLAN SHEETS IN THE
UPPER TITLE BLOCK

UTILITY MAKE READY PLANS ARE
NOT SEALED BY A PROFESSIONAL ENGINEER
DO NOT INCLUDE SEAL IN LOWER TITLE BLOCK

PROJECT REFERENCE NO.	SHEET NO.
R-2904	UMR 0

TYPICAL UPPER TITLE BLOCK

TYPICAL LOWER TITLE BLOCK

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Traffic Management Systems
122 N. McDowell St., Raleigh, NC 27603

UTILITY MAKE READY PLANS

DIVISION 05 DURHAM COUNTY DURHAM

PLAN DATE: JANUARY 2004 REVIEWED BY: I. N. AVERY

PREPARED BY: J. HOOKER REVIEWED BY:

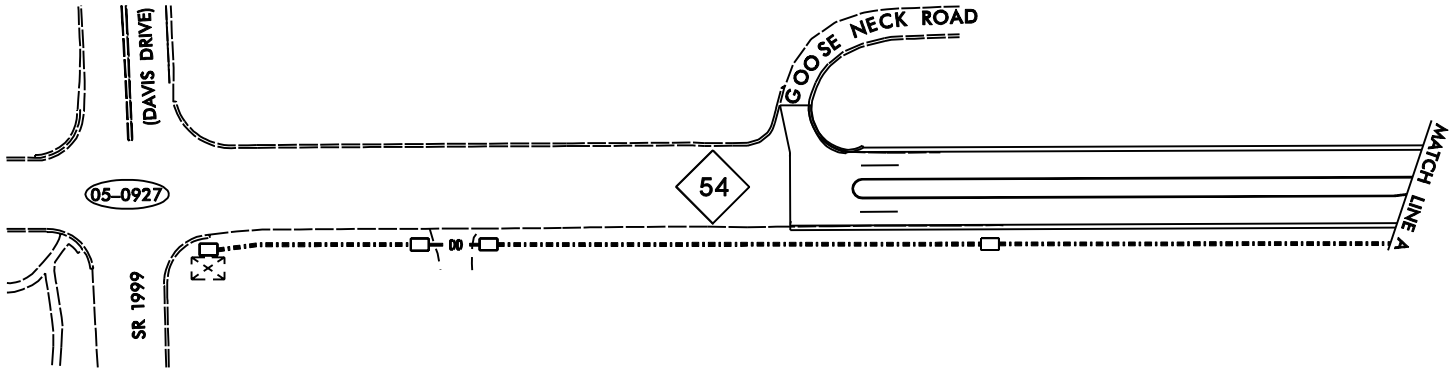
SCALE 0

REVISIONS	INIT.	DATE

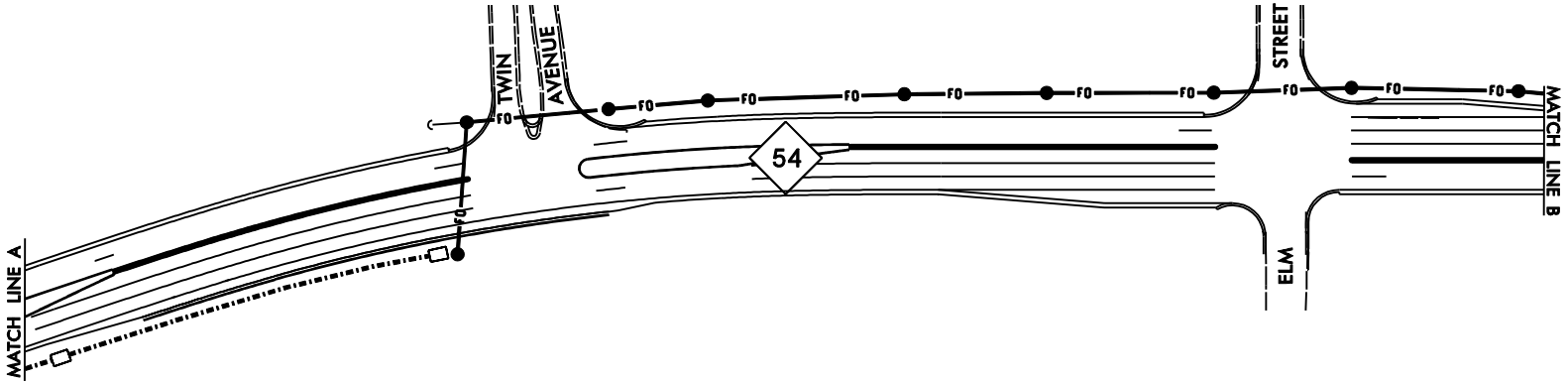
SEAL

SIGNATURE DATE

CADD Filename:



NO UTILITY MAKE READY WORK REQUIRED THIS SHEET



UTILITY MAKE READY PLANS

DIVISION 05 DURHAM COUNTY DURHAM

PLAN DATE: JANUARY 2004 REVIEWED BY: T. N. AVERY

PREPARED BY: J. HOOKER REVIEWED BY:

REVISIONS | INIT. | DATE

SEAL

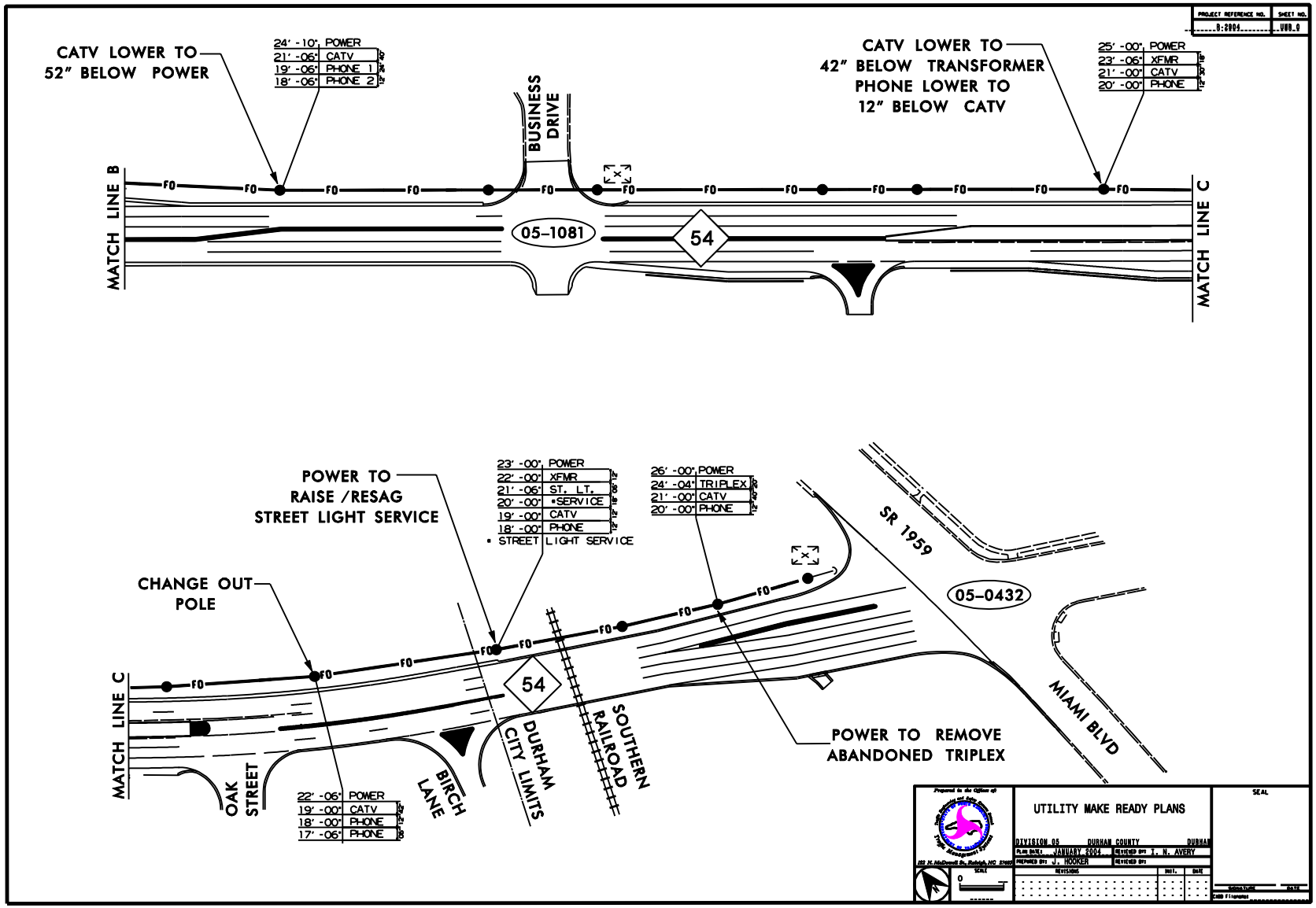
SIGNATURE DATE

Standard Sheet Layout – Sample UMR Plan Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO. 9.1

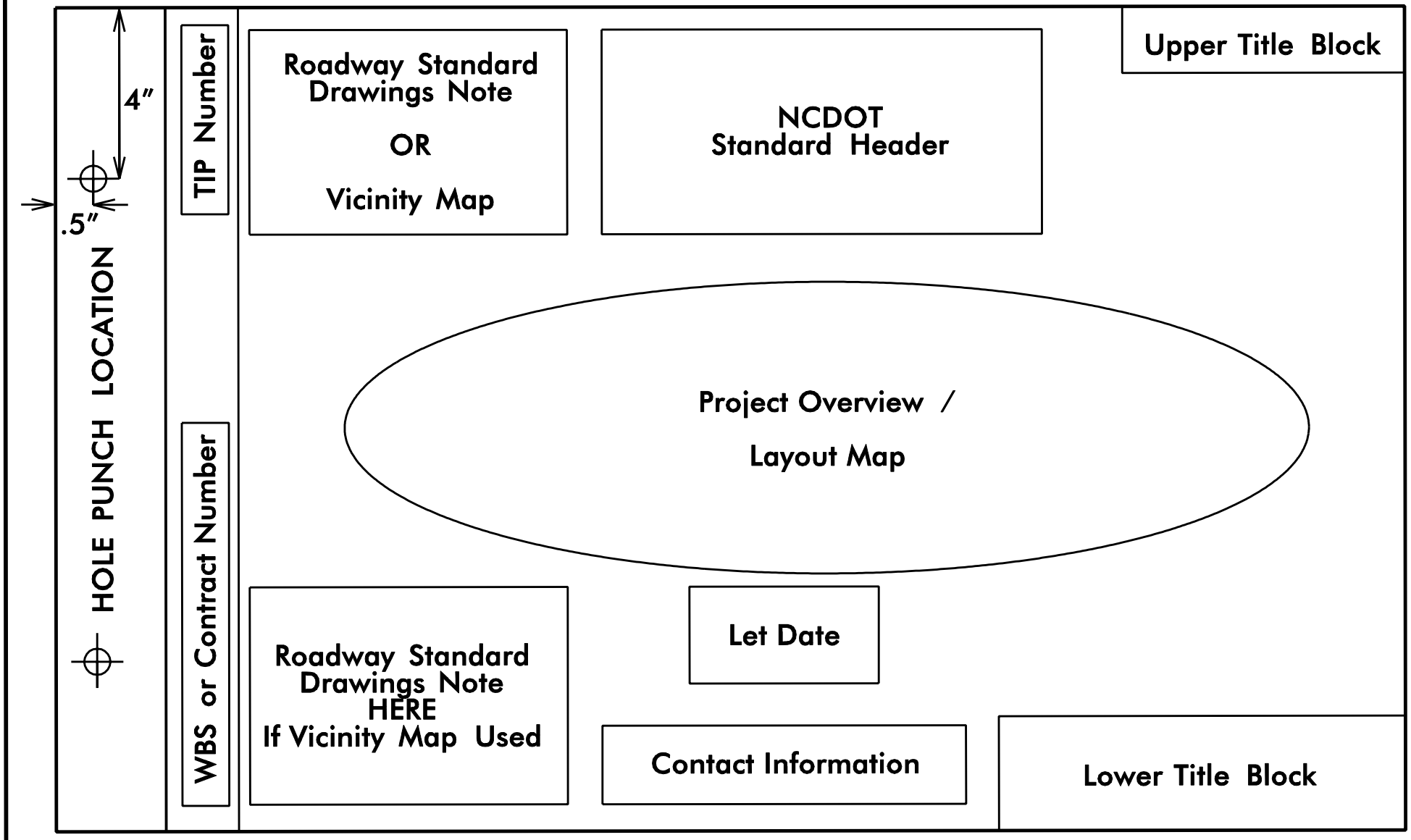


Standard Sheet Layout – Sample UMR Plan Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.1
SHEET 5 OF 5



Standard Sheet Layout – Cable Routing Title Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

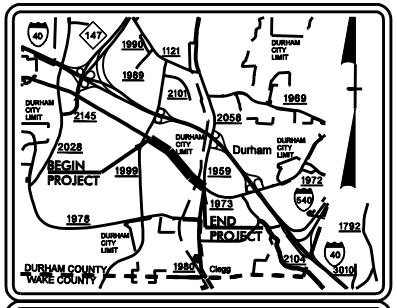
7-04

STD. NO.
9.2
SHEET 1 OF 5

R-2904

WBS: 34512

PROJECT REFERENCE NO.	SHEET NO.
R-2904	TMS-1



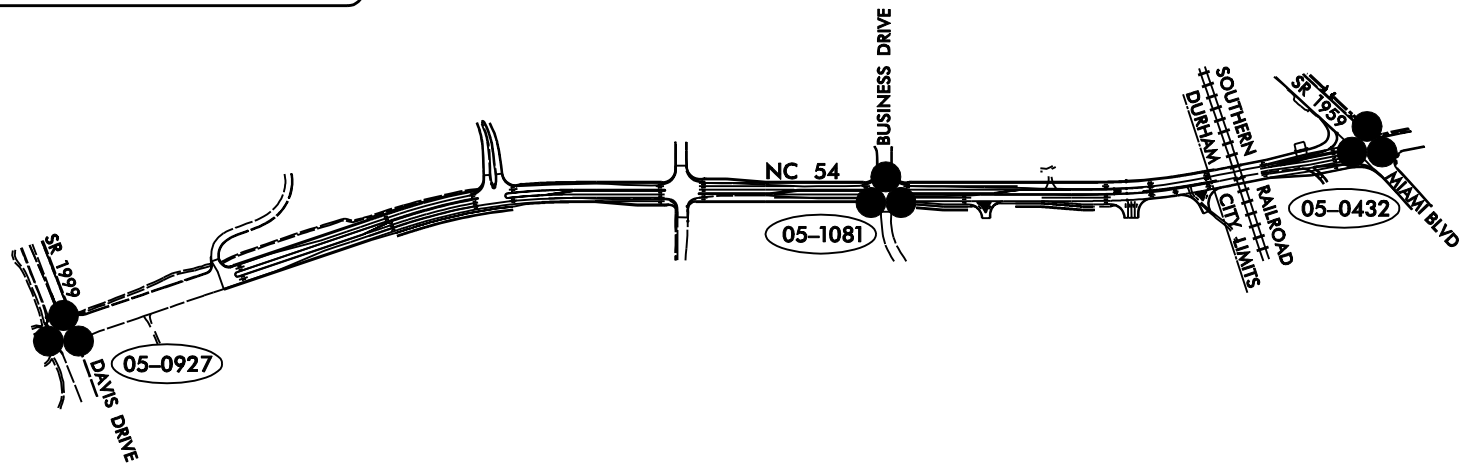
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DURHAM COUNTY

LOCATION: NC 54 FROM SR 1999 (DAVIS DRIVE) TO SR 1959 (MIAMI BOULEVARD)

TYPE OF WORK: COMMUNICATIONS CABLE AND CONDUIT ROUTING



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS". ROADWAY DESIGN UNIT – N.C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JANUARY 2002 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1715.01	UNDERGROUND CONDUIT
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1721.01	GUY ASSEMBLIES
1730.01	FIBER OPTIC CABLE – SPARE CABLE STORAGE
1730.02	FIBER OPTIC CABLE – CONDUIT INSTALLATION
1733.01	DELINEATOR MARKERS
1740.01	METAL POLES

LET DATE: 12/14/04

NCDOT CONTACT:
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
G.G. MURR, JR., PE – TRAFFIC MANAGEMENT SYSTEMS ENGINEER

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 05	DURHAM COUNTY		DURHAM
PLAN DATE: JANUARY 2004	REVISED BY: T. N. AVERY		
PREPARED BY: J. HOOKER	REVISED BY: J.O. ENGINEER		
REVISIONS		INIT.	DATE

SEAL

JOHN O. ENGINEER

Standard Sheet Layout – Sample Cable Routing Title Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO. 9.2

NOTES

NUMBER CABLE ROUTING PLAN SHEETS IN THE UPPER TITLE BLOCK

FOR CLOSED LOOP SYSTEM PROJECTS DO NOT NUMBER THE SHEETS. THEY ARE NUMBERED LATER AS PART OF A LARGER PLAN PACKAGE.

PROJECT REFERENCE NO.	SHEET NO.
R-2904	TMS 1

TYPICAL UPPER TITLE BLOCK

TYPICAL LOWER TITLE BLOCK

Prepared in the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Safety Systems Branch
Traffic Management Systems
122 N. McDowell St., Raleigh, NC 27603

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 05 DURHAM COUNTY DURHAM

PLAN DATE: JANUARY 2004	REVIEWED BY: I. N. AVERY
PREPARED BY: J. HOOKER	REVIEWED BY: J.Q. ENGINEER

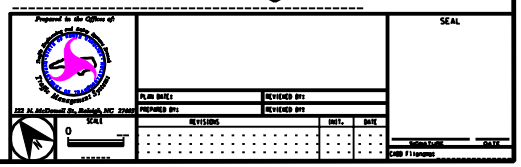
SCALE 0

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 00000 ENGINEER
JOHN Q. ENGINEER

SIGNATURE DATE

CADD Filename:

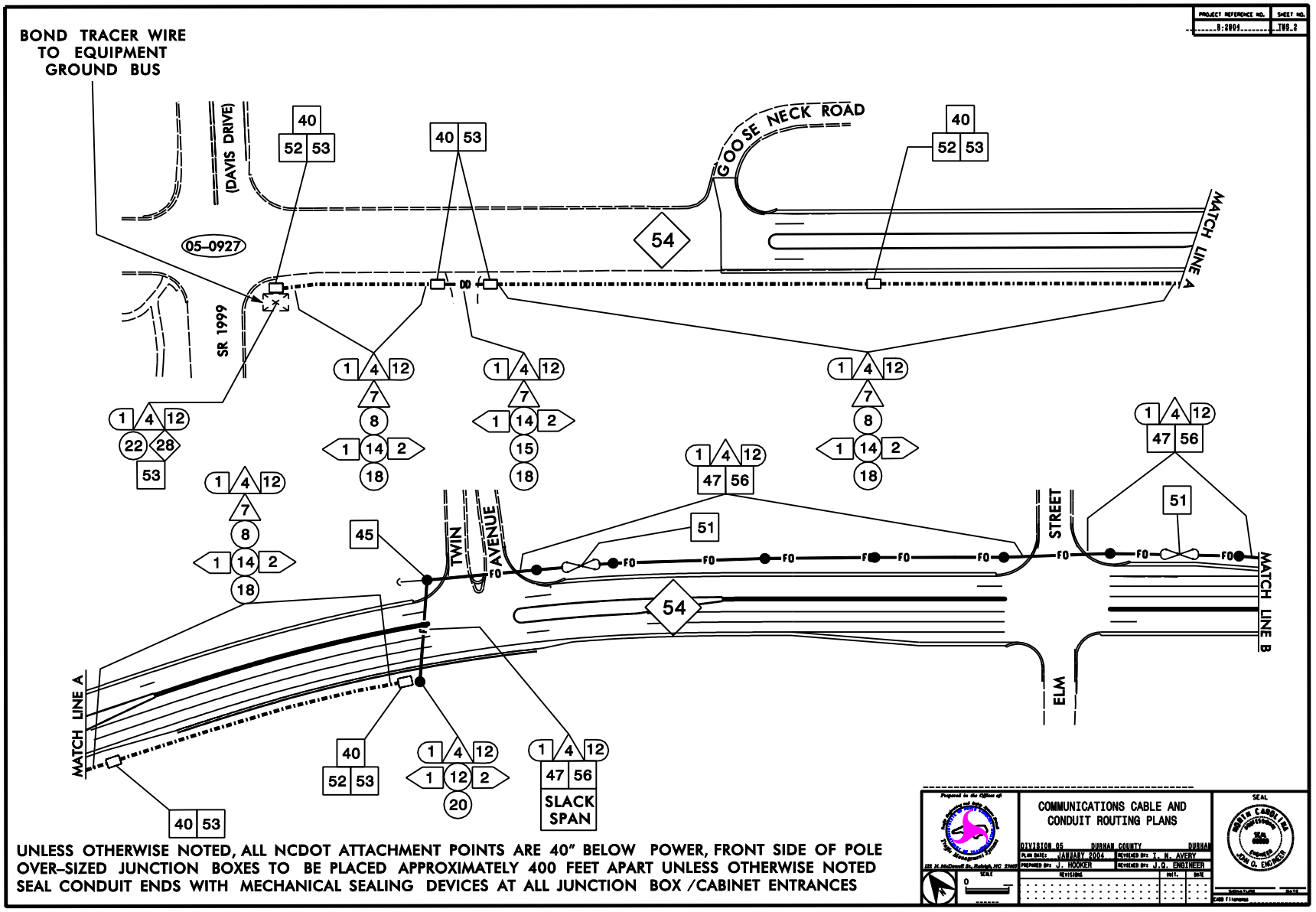


Standard Sheet Layout – Title Blocks – Cable Routing

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.2
SHEET 3 OF 5



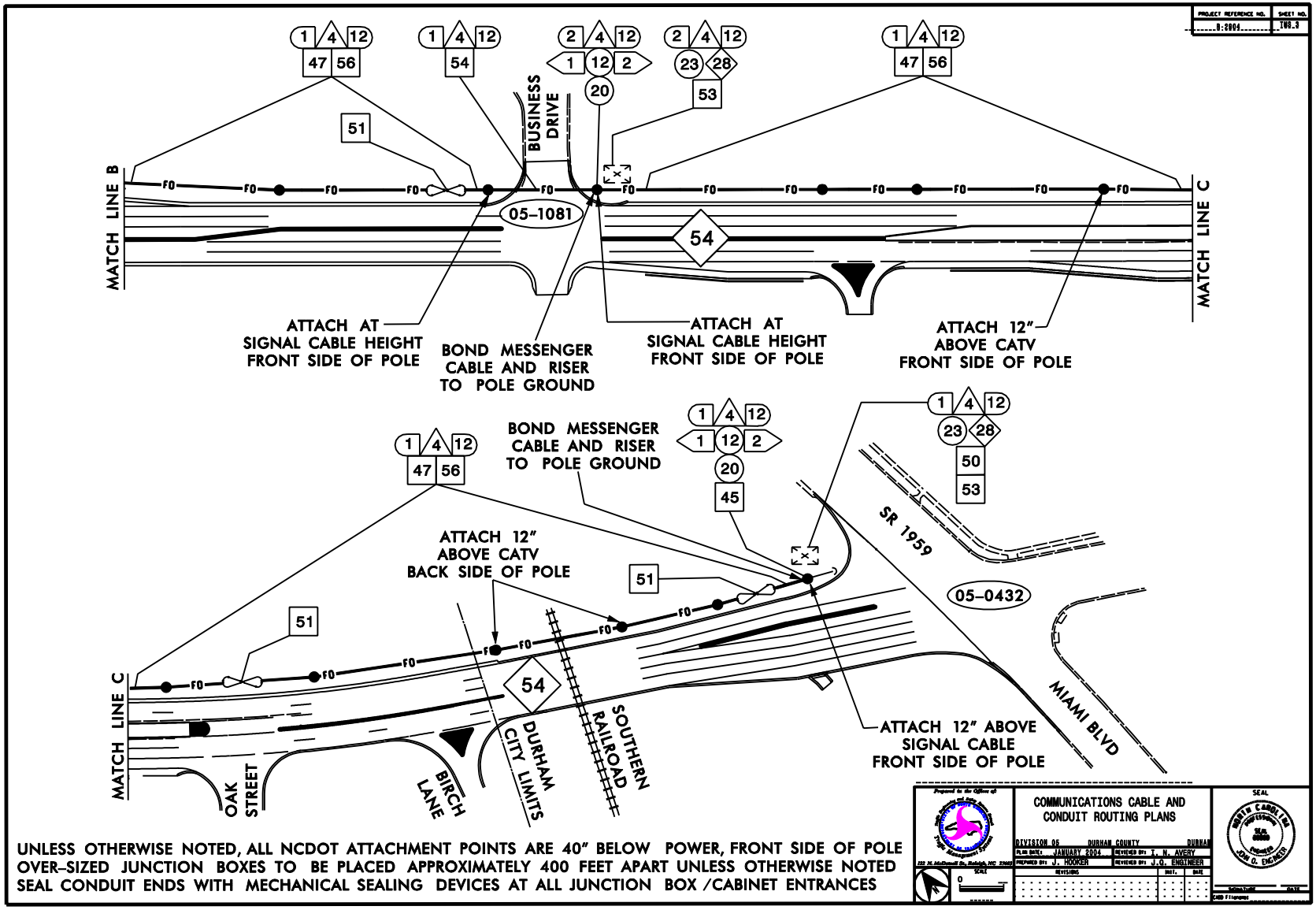
UNLESS OTHERWISE NOTED, ALL NCDOT ATTACHMENT POINTS ARE 40" BELOW POWER, FRONT SIDE OF POLE
OVER-SIZED JUNCTION BOXES TO BE PLACED APPROXIMATELY 400 FEET APART UNLESS OTHERWISE NOTED
SEAL CONDUIT ENDS WITH MECHANICAL SEALING DEVICES AT ALL JUNCTION BOX /CABINET ENTRANCES

Standard Sheet Layout – Sample Cable Routing Plan Sheet

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.2
SHEET 4 OF 5



UNLESS OTHERWISE NOTED, ALL NCDOT ATTACHMENT POINTS ARE 40" BELOW POWER, FRONT SIDE OF POLE
OVER-SIZED JUNCTION BOXES TO BE PLACED APPROXIMATELY 400 FEET APART UNLESS OTHERWISE NOTED
SEAL CONDUIT ENDS WITH MECHANICAL SEALING DEVICES AT ALL JUNCTION BOX /CABINET ENTRANCES

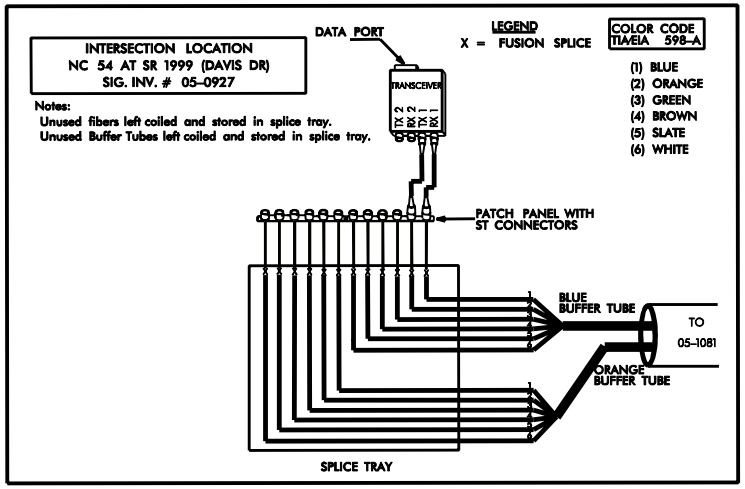
Standard Sheet Layout – Sample Cable Routing Plan Sheet

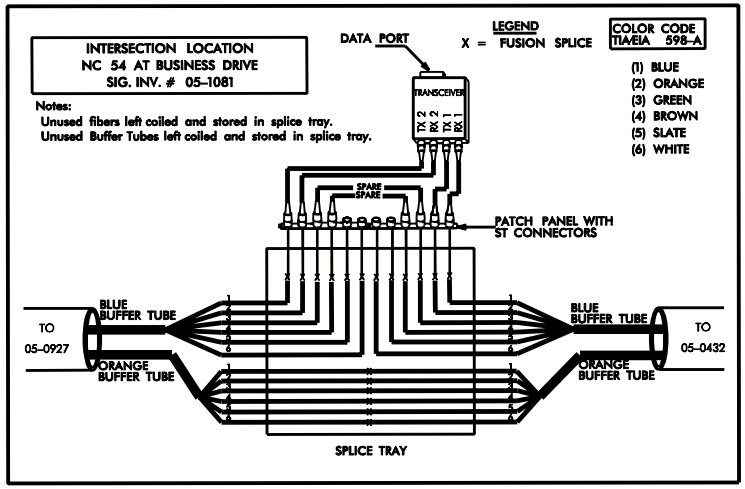
TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

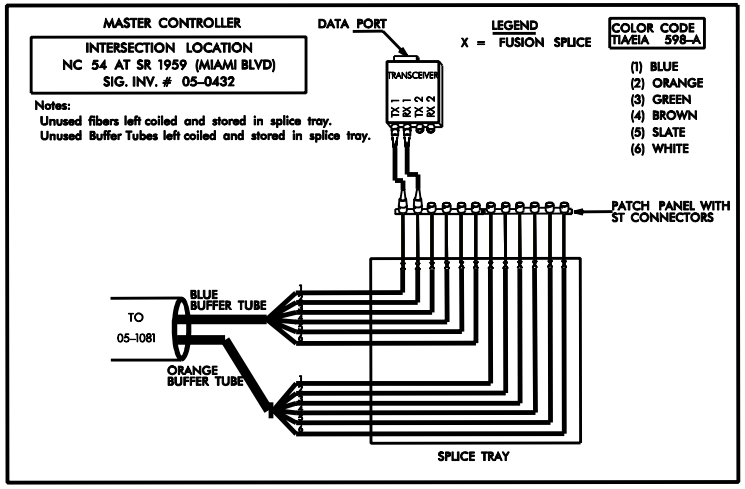
7-04

STD. NO.
9.2
SHEET 5 OF 5

FIBER OPTIC CABLE







TRANSCEIVER TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING \ ENSURING PROPER TERMINATIONS

PROJECT REFERENCE NO. B-2804 | SHEET NO. STG:

SPLICE DETAIL

DIVISION 05 DURHAM COUNTY DURHAM
PLAN DATE: JANUARY 2004 REVIEWED BY: I. N. AVERY
PREPARED BY: J. HOOKER REVIEWED BY: J.O. ENGINEER
REVISIONS | INIT. | DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 000000 ENGINEER JOHN O. ENGINEER
SIGNATURE DATE

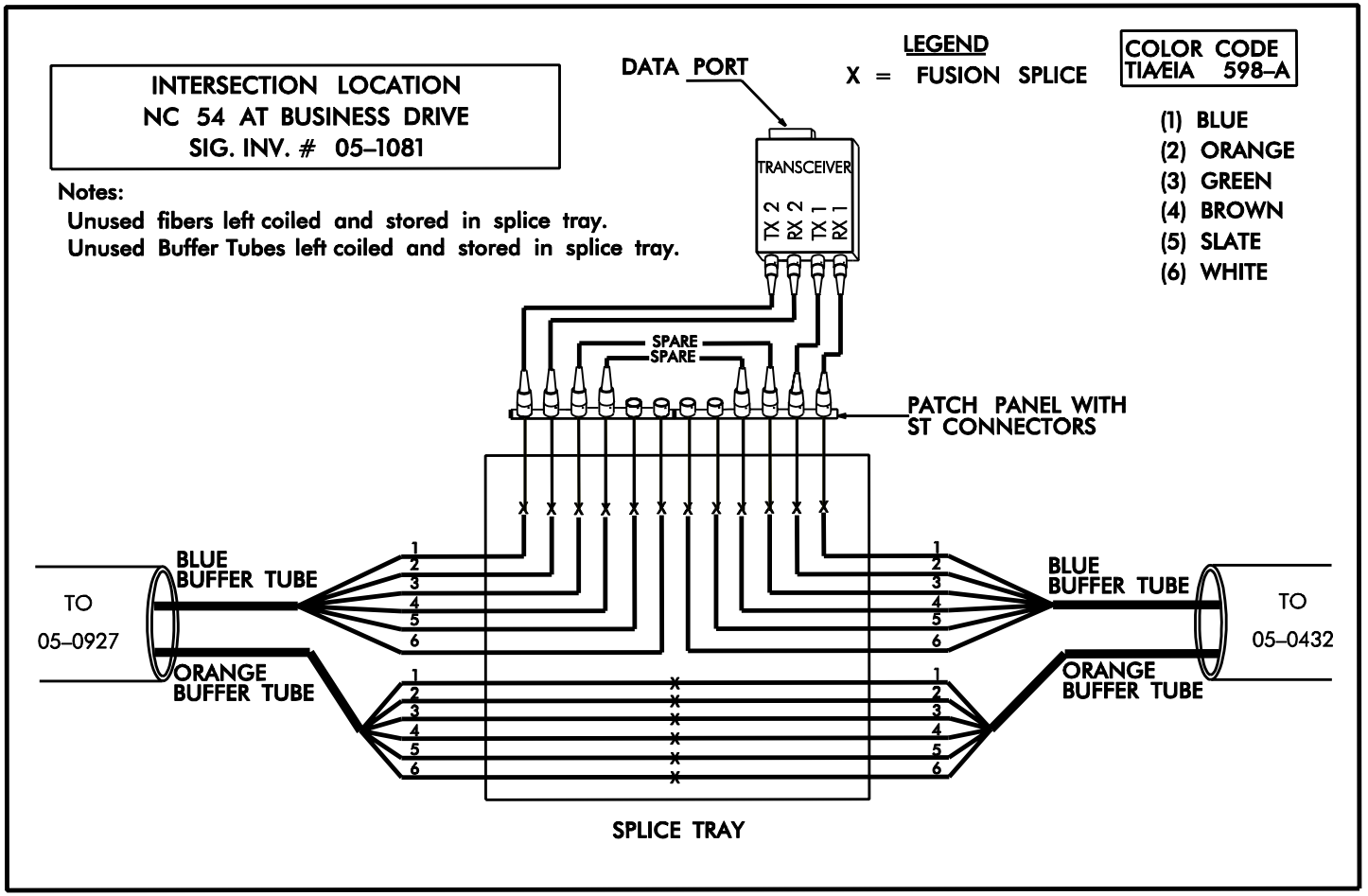
Standard Sheet Layout – Splice Plan

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO.
9.3
SHEET 1 OF 2

FIBER OPTIC CABLE



TRANSCEIVER TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING \ ENSURING PROPER TERMINATIONS

SPLICE DETAIL

DIVISION 05 DURHAM COUNTY DURHAM

PLAN DATE: JANUARY 2004 REVIEWED BY: T. N. AVERY

PREPARED BY: J. HOOKER REVIEWED BY: J.O. ENGINEER

REVISIONS

Standard Sheet Layout – Splice Plan – Exploded View

TRAFFIC MANAGEMENT SYSTEMS SECTION
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

7-04

STD. NO. 9.3