PROJECT: BP-5500T

CONTRACT: DJ00128

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

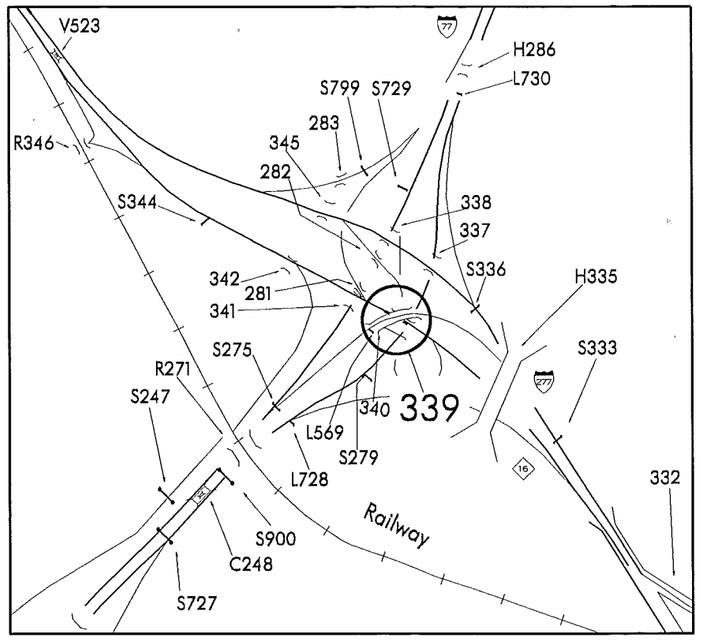
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP-5500T	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
50070.1.1		P.E.
50070.3.FD20	NHPP-0277(16)	CONST.

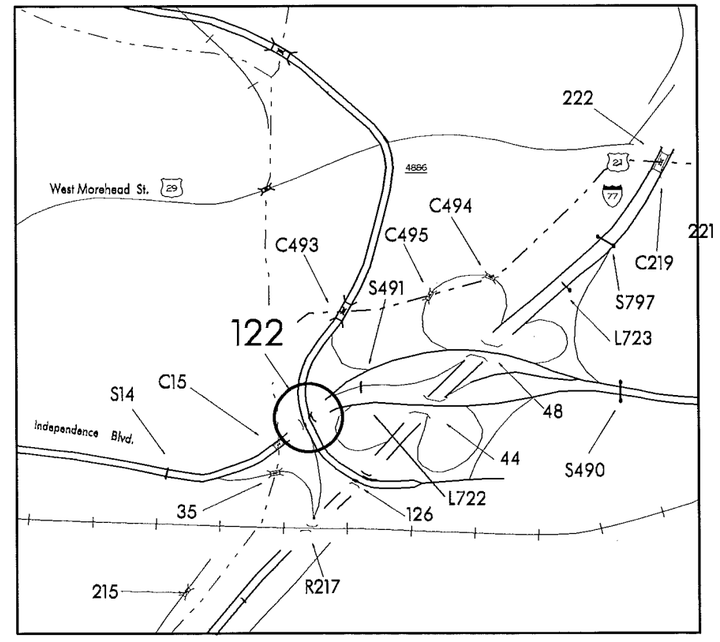
LOCATION: MECKLENBURG COUNTY:
BRIDGE #339 ON I-277/NC 16 OVER I-77
MECKLENBURG COUNTY:
BRIDGE #122 ON SR 4886 (FREEDOM DR.) OVER US-74

TYPE OF WORK: BRIDGE PRESERVATION - BRIDGE PRESERVATION WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH OVERLAY AND JOINT REPLACEMENT.

BRIDGE #339



BRIDGE #122



DESIGN DATA

MECKLENBURG
#339 ADT 2011 = 55000
MECKLENBURG
#122 ADT 2010 = 18000

PROJECT LENGTH

BRIDGE MECKLENBURG #339 = .041 MILE

BRIDGE MECKLENBURG #122 = .041 MILE

Prepared In the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

2012 STANDARD SPECIFICATIONS

LETTING DATE:
JULY 2, 2014

RICK NELSON, P.E.
PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

05/21/14

TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

SCOPE OF WORK:

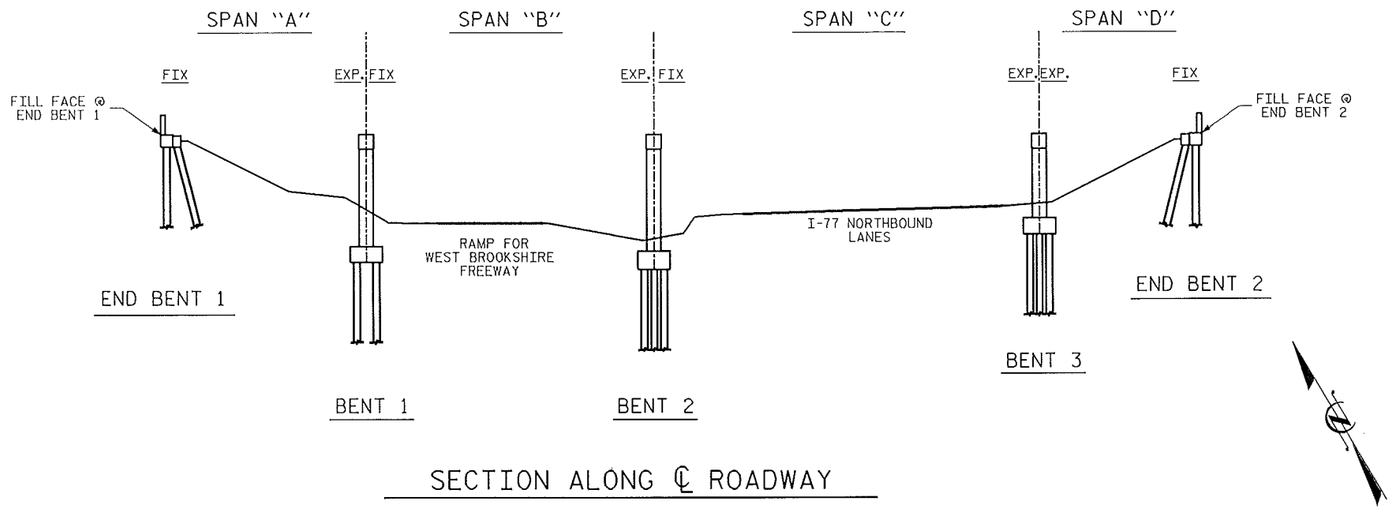
PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRODEMOLITION METHODS.

OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE OVERLAY VERY EARLY STRENGTH.

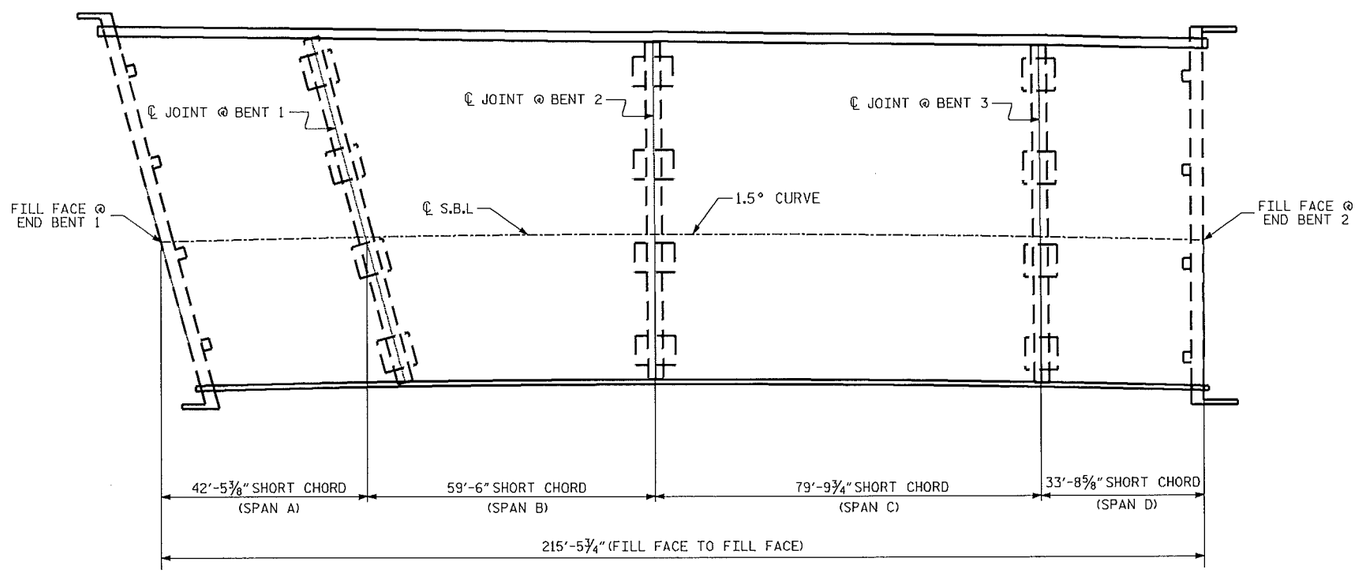
DEMOLISH EXISTING BRIDGE DECK JOINTS.

RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW JOINT SEALS.

GROOVE CONCRETE BRIDGE DECK.



SECTION ALONG ℄ ROADWAY



PLAN

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE 339 ON I-277
OVER I-77 NBL

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 2/14
DESIGN ENGINEER OF RECORD: - DATE : -

31-MAR-2014 08:14
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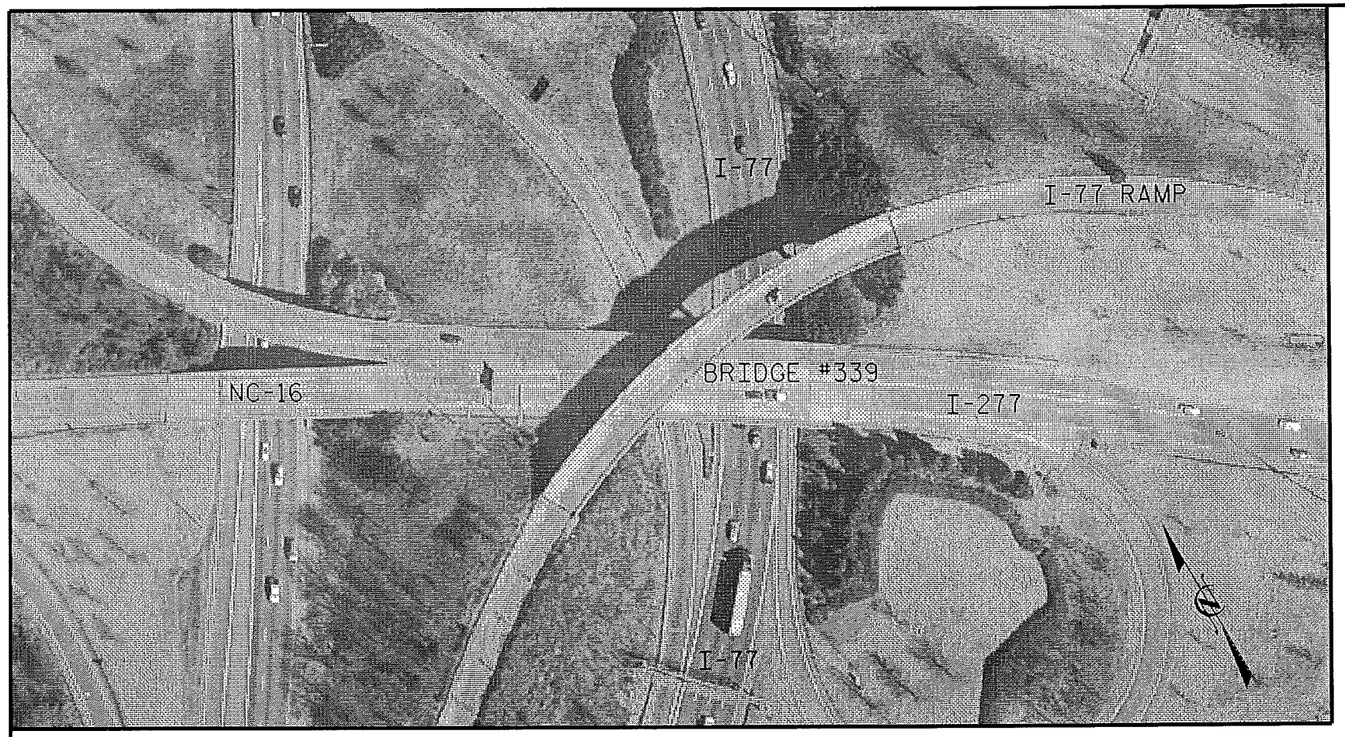
rnweisz



NOTES

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK,

FOR "SCARIFYING BRIDGE DECK", "HYDRO-DEMOLITION OF BRIDGE DECK", AND "CLASS II SURFACE PREPARATION" SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

FOR OVERLAY OF BRIDGE WITH "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

FOR "SUBMITTAL OF WORKING DRAWINGS", SEE SPECIAL PROVISIONS.

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

TOTAL BILL OF MATERIAL

GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	FOAM JOINT SEALS	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING & FINISHING LATEX MODIFIED CONCRETE -VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK
SQ. FT.	SQ.YDS.	LUMP SUM	C.Y.	SQ. FT.	SQ.YDS.	SQ.YDS.	SQ.YDS.
14288	4.3	LUMP SUM	80.9	319.5	1660.3	1660.3	1660.3

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE 339 ON I-277
OVER I-77 NBL

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ
3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
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31-MAR-2014 08:36
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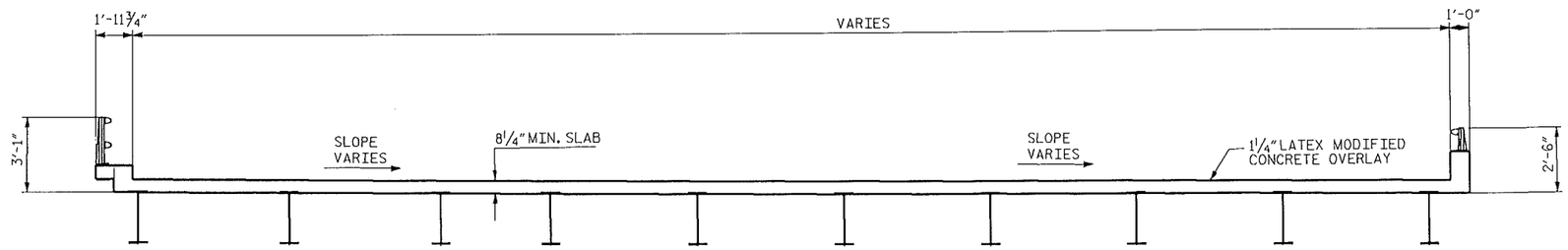
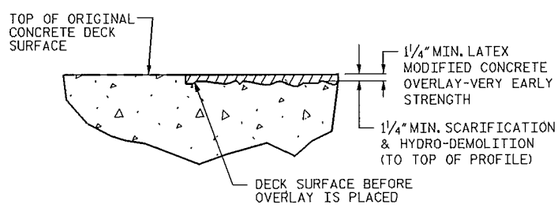
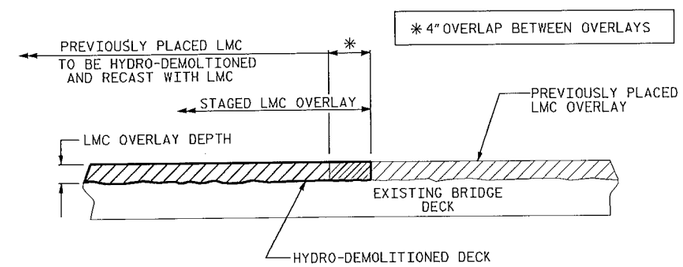


TYPICAL SECTION

REQUIRES STAGED CONSTRUCTION
SEE TRAFFIC MANAGEMENT PLANS



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY



SECTION THRU DECK

STAGED LMC OVERLAY JOINTS

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & LATEX MODIFIED CONCRETE DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ
3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 11/13
CHECKED BY : T.SHERRILL DATE : 11/13
DESIGN ENGINEER OF RECORD: - DATE : -

31-MAR-2014 08:16
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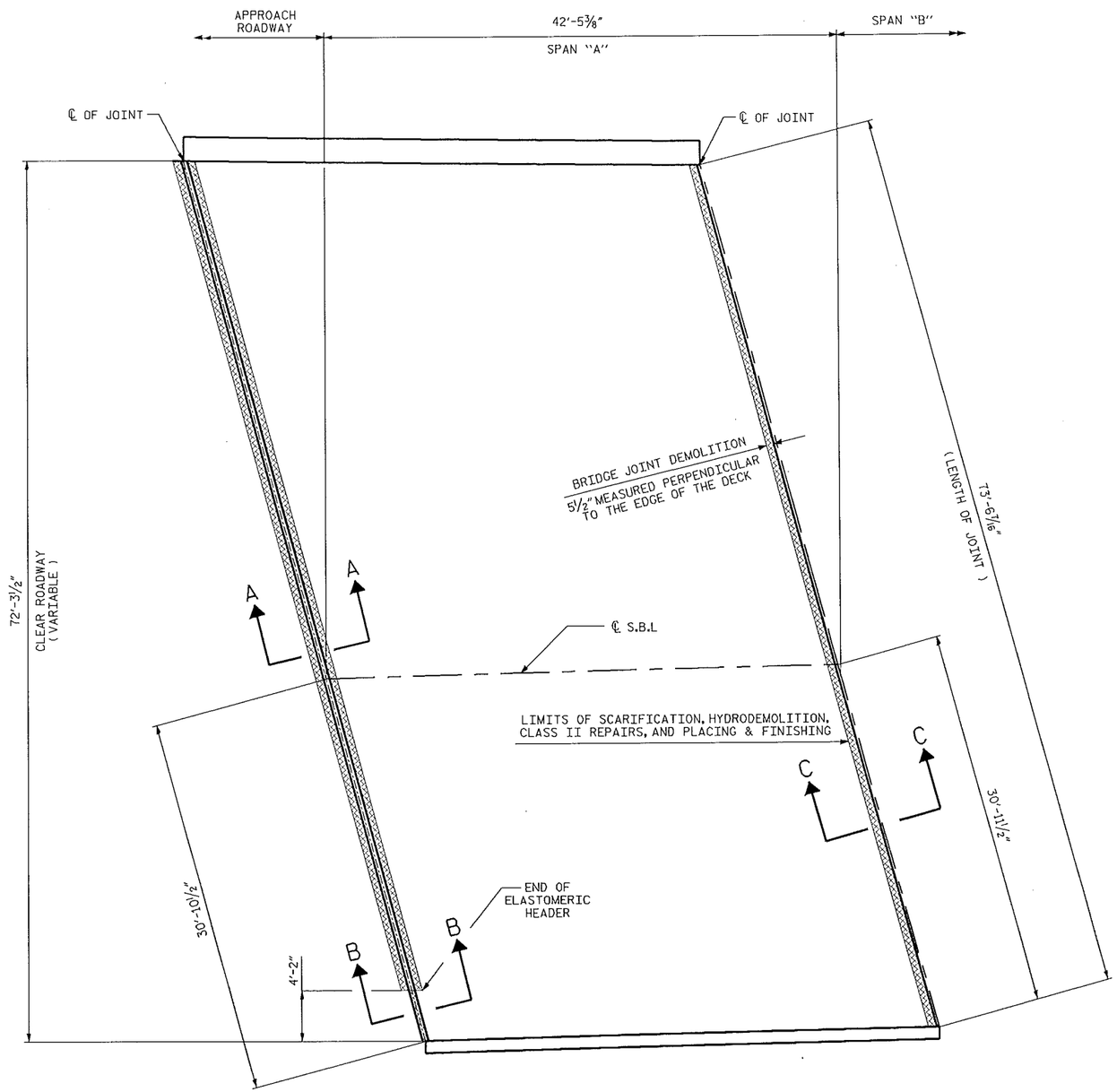
SUMMARY OF QUANTITIES FOR SPAN "A"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	329.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	329.3 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	98.5 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



PLAN OF SPAN "A"

(SEE SHEET S-8 FOR SECTION A-A & B-B & C-C)

SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "A"

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 2/14
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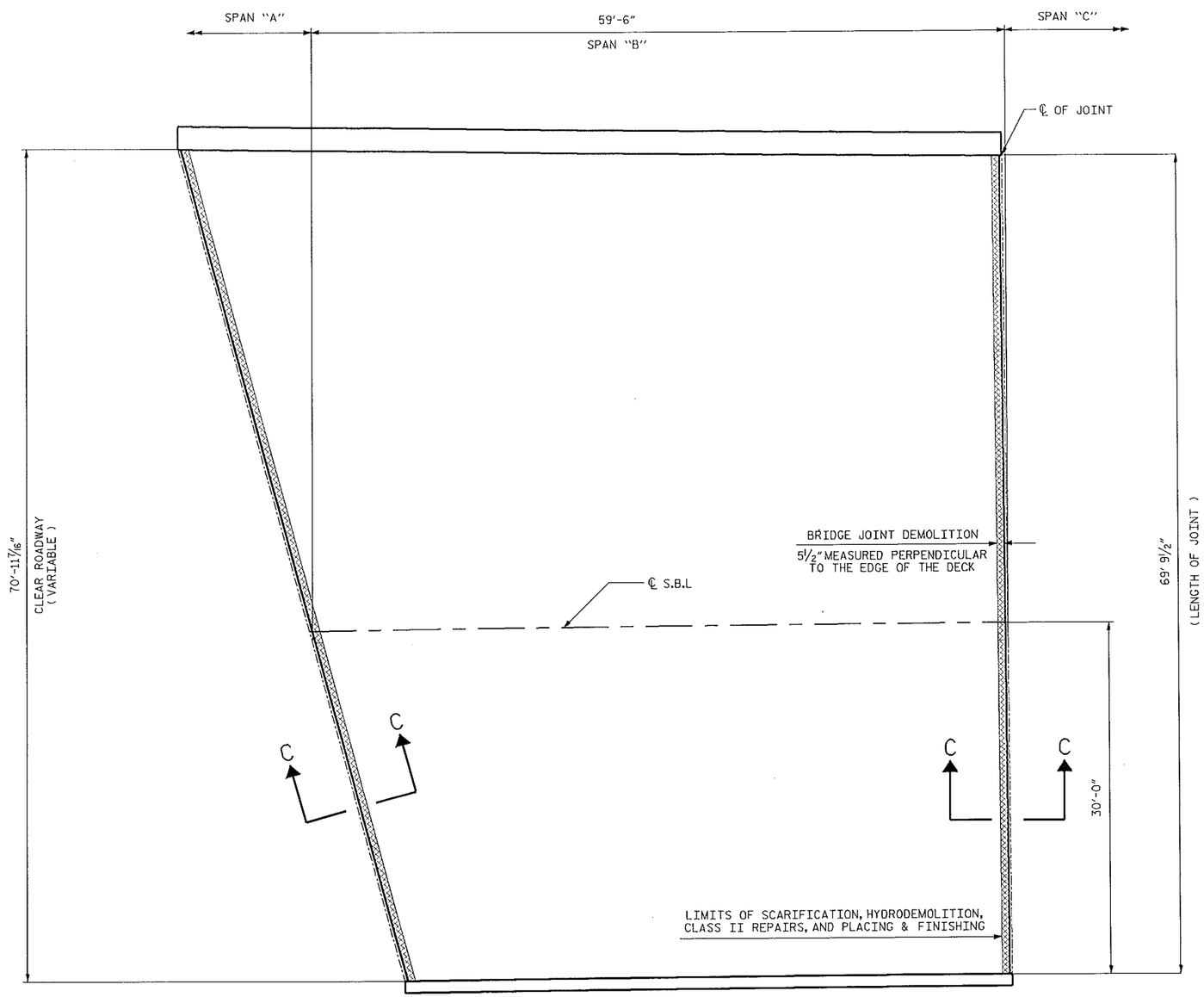
SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	470.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	470.0 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	65.7 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PLAN OF SPAN "B"

(SEE SHEET S-8 FOR SECTION C-C)

PROJECT NO. BP-5500T

MECKLENBURG COUNTY

BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE MOSS

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			16

DRAWN BY :	R.WEISZ	DATE :	2/14
CHECKED BY :	T.SHERRILL	DATE :	2/14
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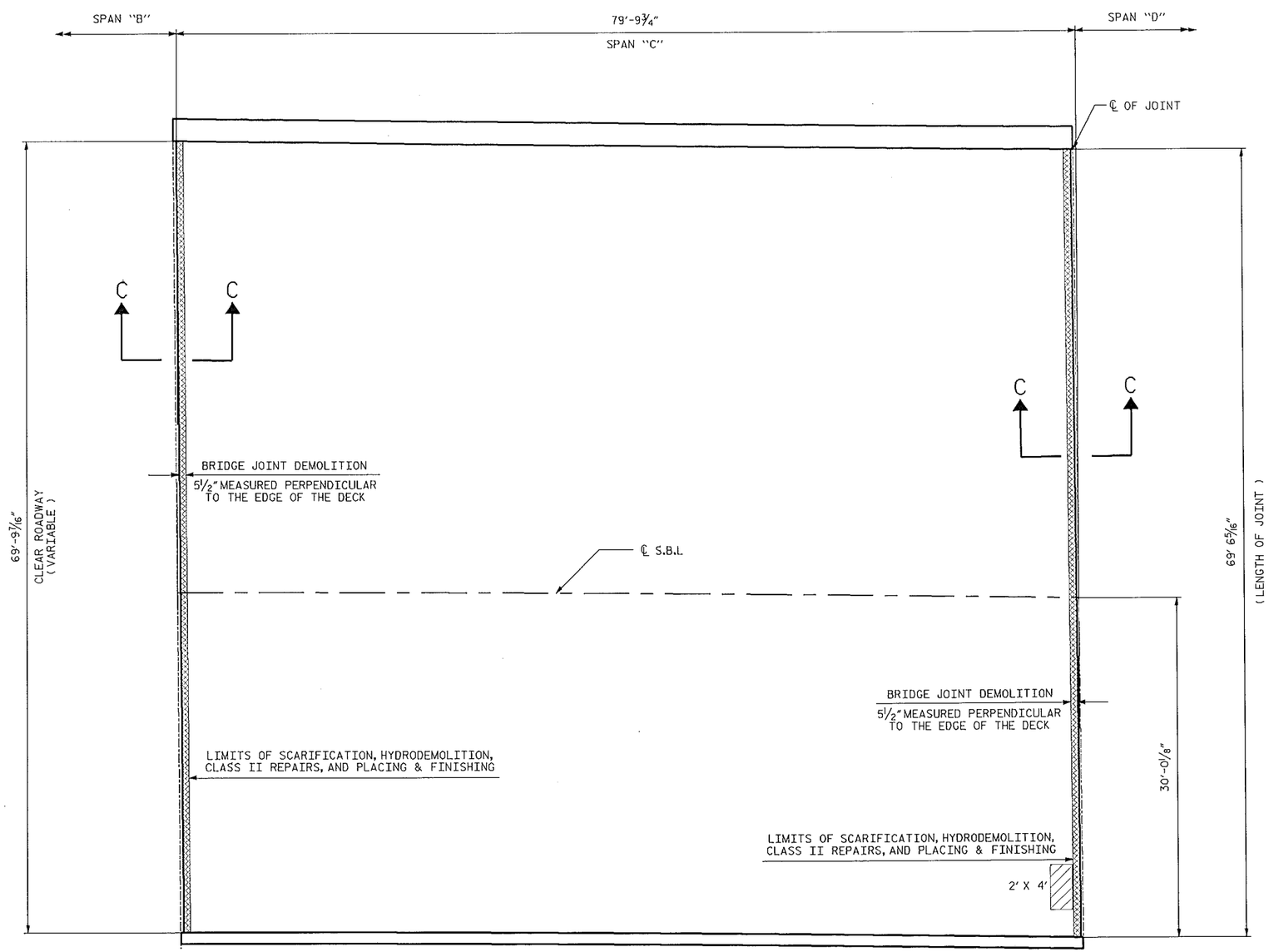

PLAN OF SPAN "C"

(SEE SHEET S-8 FOR SECTION C-C)

SUMMARY OF QUANTITIES FOR SPAN "C"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	608.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	608.3 SY	
CLASS II SURFACE PREPARATION	0.9 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	63.9 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "C"

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER RODGE MOSZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 2/14
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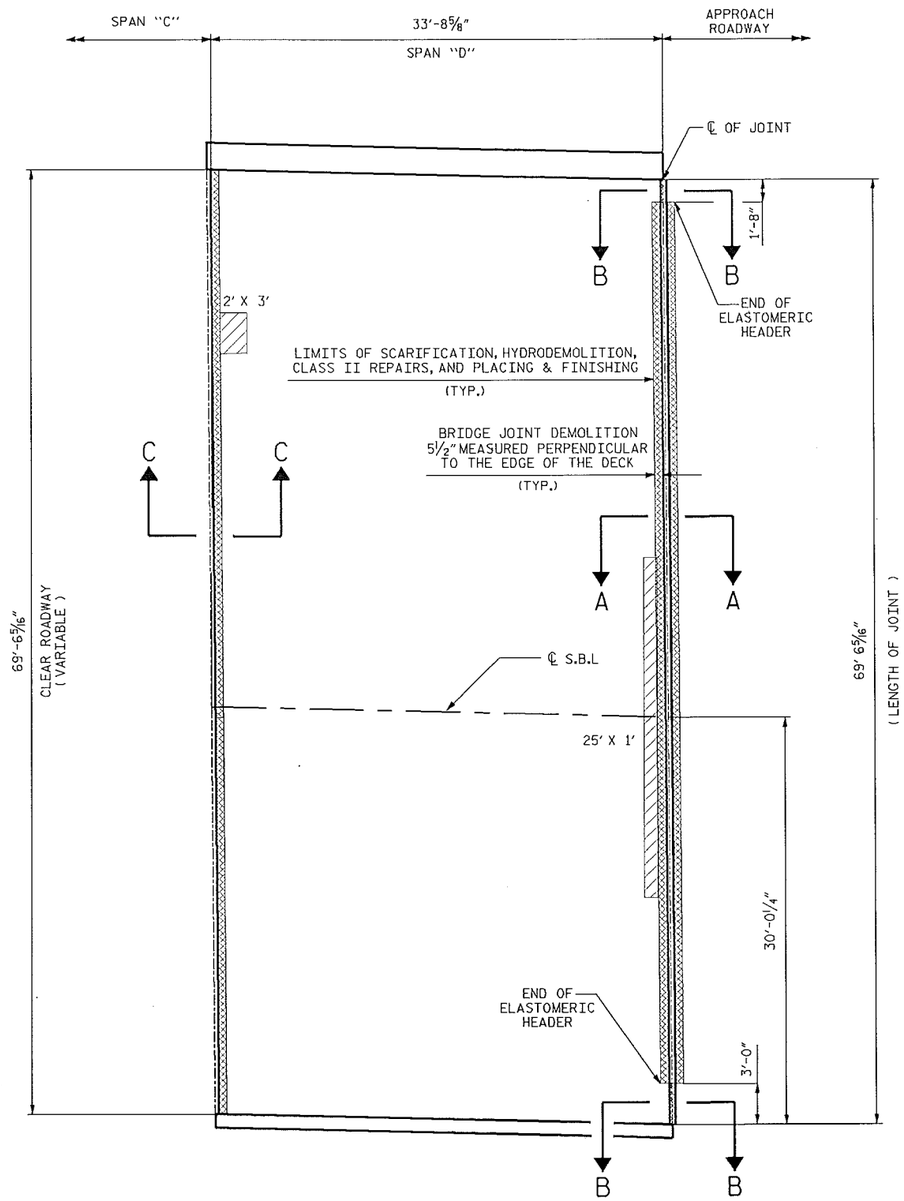

PLAN OF SPAN "D"

(SEE SHEET S-8 FOR SECTION A-A & B-B & C-C)

SUMMARY OF QUANTITIES FOR SPAN "D"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	252.7 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	252.7 SY	
CLASS II SURFACE PREPARATION	3.4 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	91.4 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "D"

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 2/14
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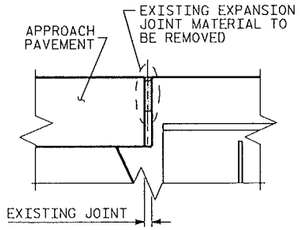
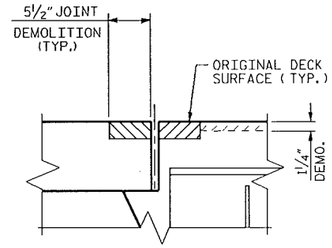
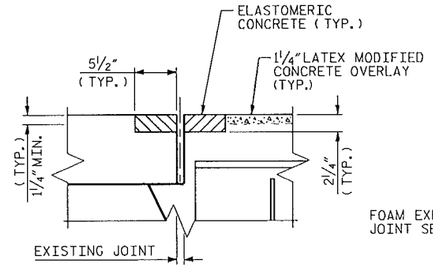


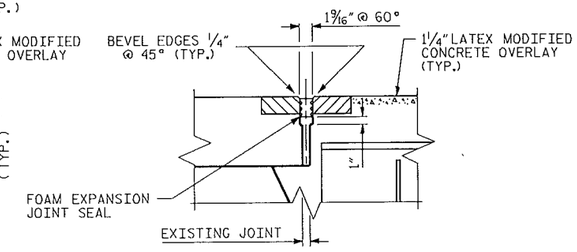
SECTION A-A
(EXISTING)



SECTION A-A
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



SECTION A-A
(PROPOSED FOAM JOINT SEAL)

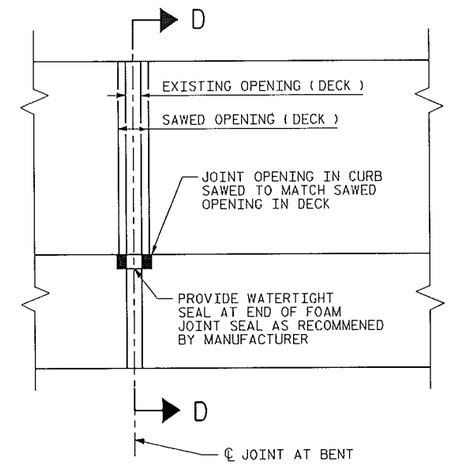
NOTES:

FOR "FOAM JOINT SEALS" SEE SPECIAL PROVISIONS.

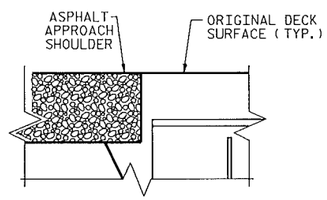
THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.



PLAN



SECTION B-B
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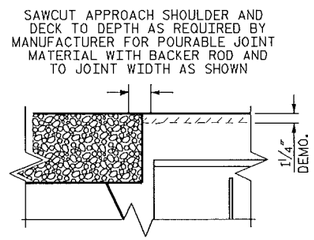
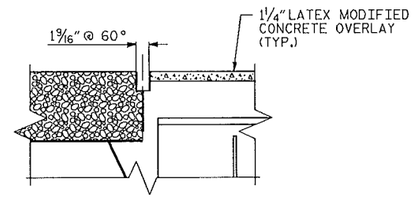
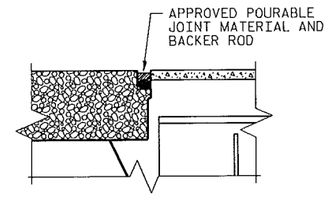


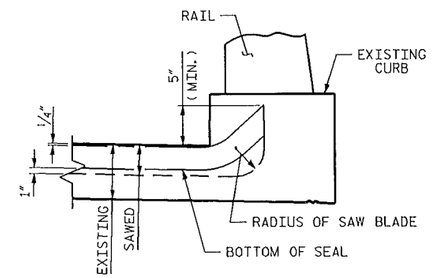
SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



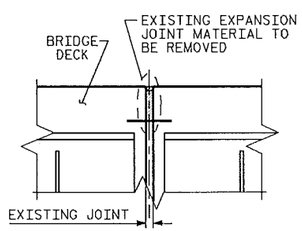
SECTION B-B
(PROPOSED SAWCUT WIDTH)



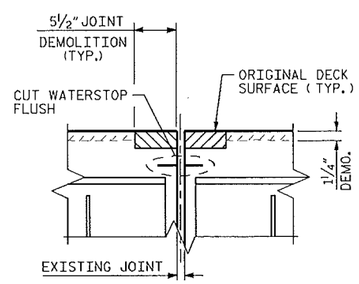
SECTION B-B
(PROPOSED POURABLE JOINT SEAL)



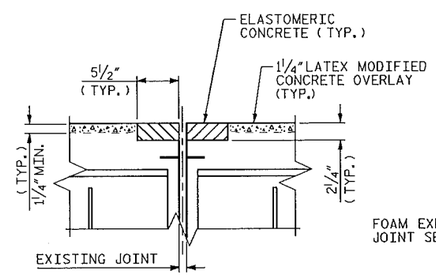
SECTION D-D



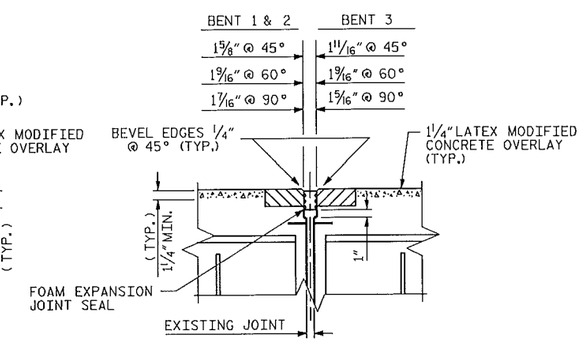
SECTION C-C
(EXISTING)



SECTION C-C
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION C-C
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



SECTION C-C
(PROPOSED FOAM JOINT SEAL)

IF THE EMBEDDED PORTION OF AN EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF REPAIR CONCRETE.

ELASTOMERIC CONCRETE	
	CU. FT.
END BENT 1	16.5
BENT 1	17.2
BENT 2	16.4
BENT 3	16.3
END BENT 2	15.0
TOTAL	81.4

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 339

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER RUDGE WEISZ
3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
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31-MAR-2014 08:22
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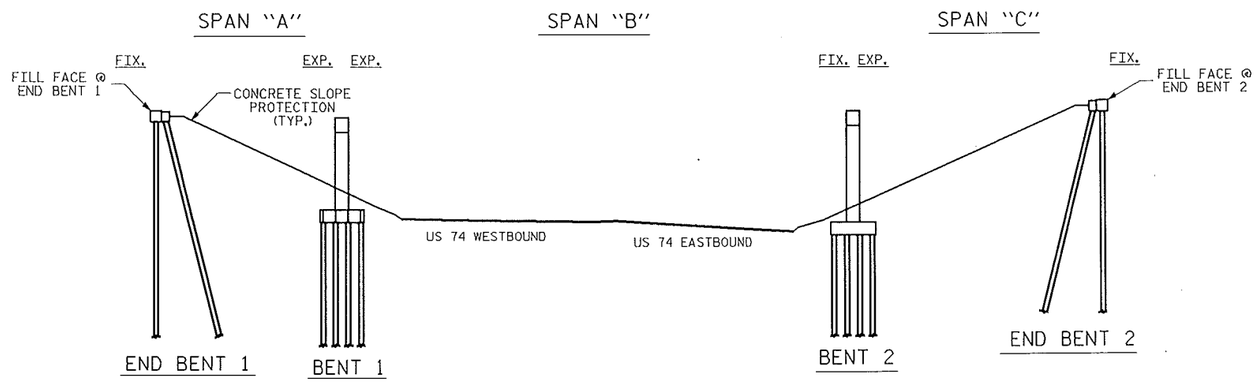
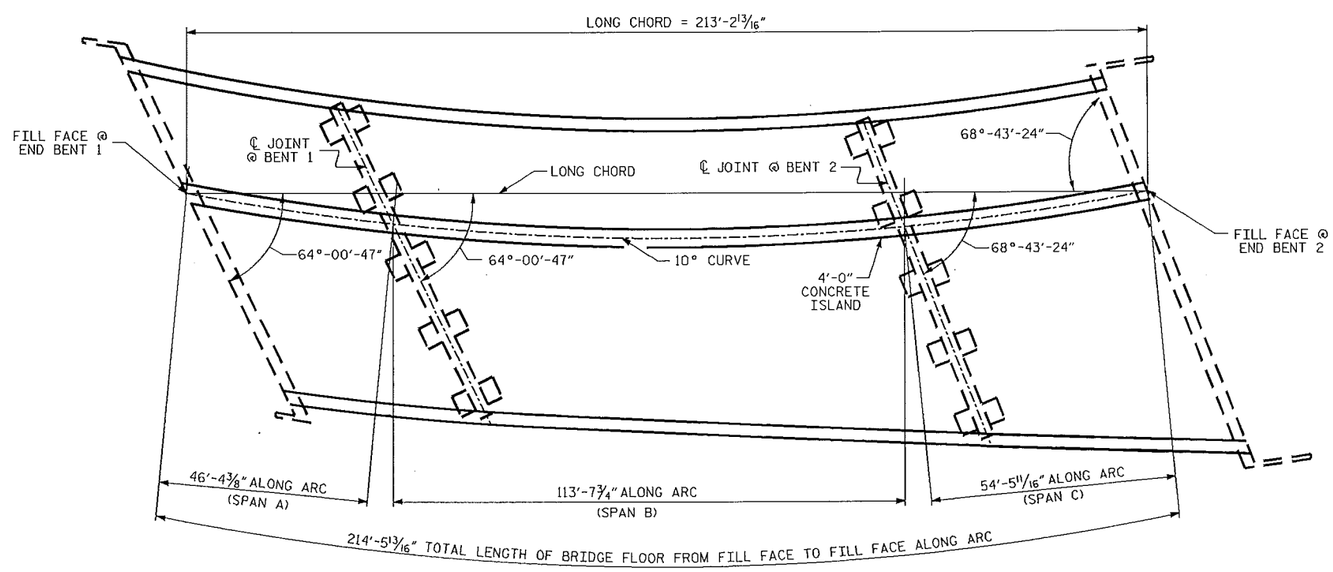


SECTION ALONG ℄ ROADWAY



PLAN

SCOPE OF WORK:

PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRODEMOLITION METHODS.

OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE OVERLAY VERY EARLY STRENGTH.

REMOVAL AND REPLACEMENT OF DAMAGED CONCRETE ISLAND AS INDICATED IN PLANS.

DEMOLISH EXISTING BRIDGE DECK JOINTS.

RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW JOINT SEALS.

GROOVE CONCRETE BRIDGE DECK.

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO.: 122

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE 122 ON SR 4886
OVER US-74

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			16

DRAWN BY :	R.WEISZ	DATE :	11/13
CHECKED BY :	T.SHERRILL	DATE :	11/13
DESIGN ENGINEER OF RECORD:		DATE :	

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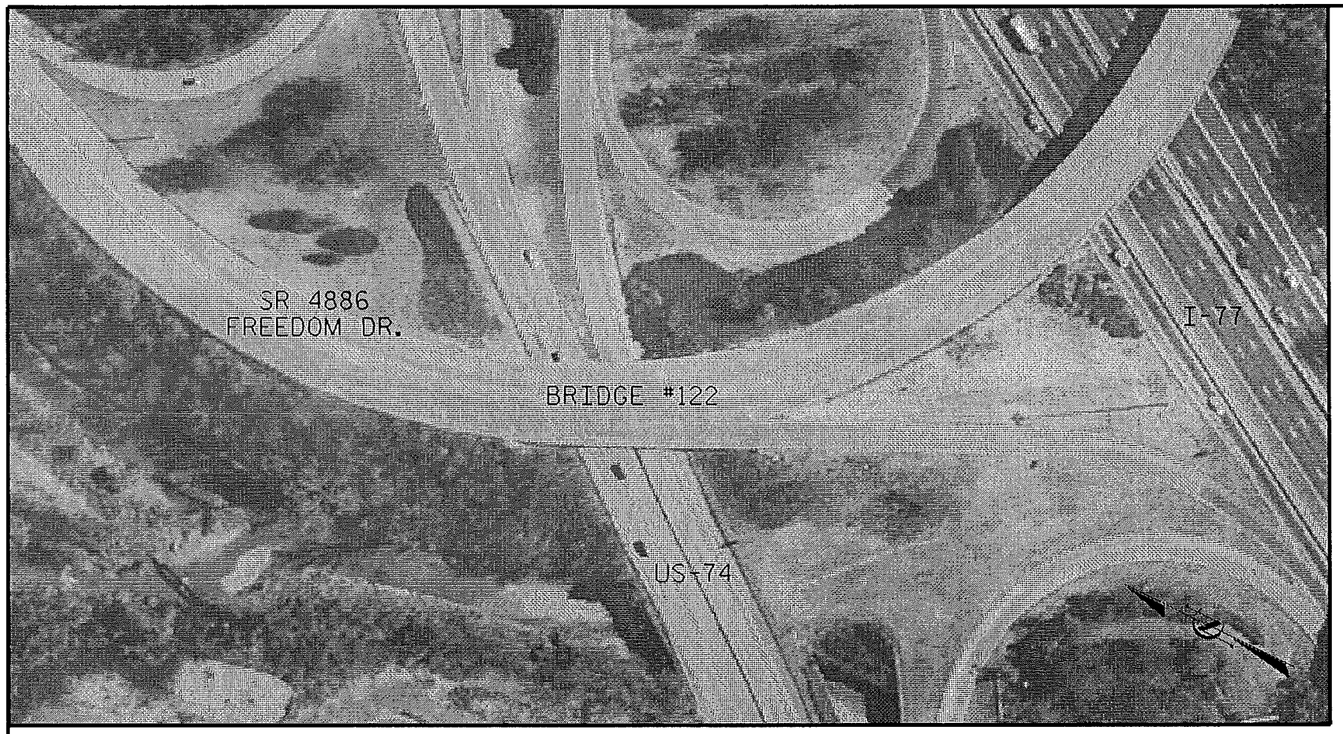

NOTES

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK,

FOR "SCARIFYING BRIDGE DECK", "HYDRO-DEMOLITION OF BRIDGE DECK", AND "CLASS II SURFACE PREPARATION" SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

FOR OVERLAY OF BRIDGE WITH "LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

FOR "SUBMITTAL OF WORKING DRAWINGS", SEE SPECIAL PROVISIONS.

FOR "FALSEWORK AND FORMWORK", SEE SPECIAL PROVISIONS.

FOR "CRANE SAFETY", SEE SPECIAL PROVISIONS.

FOR "GROUT FOR STRUCTURES", SEE SPECIAL PROVISIONS.

FOR "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

TOTAL BILL OF MATERIAL

REMOVE EXISTING ISLAND	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	FOAM JOINT SEALS	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING & FINISHING LATEX MODIFIED CONCRETE -VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK
SQ.YDS.	SQ.YDS.	SQ. FT.	SQ.YDS.	LUMP SUM	C.Y.	SQ. FT.	SQ.YDS.	SQ.YDS.	SQ.YDS.
1	1	12062	1.6	LUMP SUM	72.5	268.8	1489	1489	1489

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 122

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE 122 ON SR 4886
OVER US-74

NORTH CAROLINA SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			16

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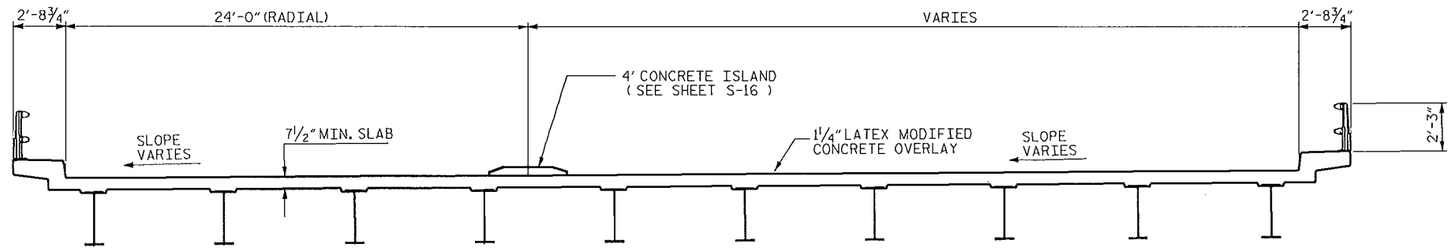
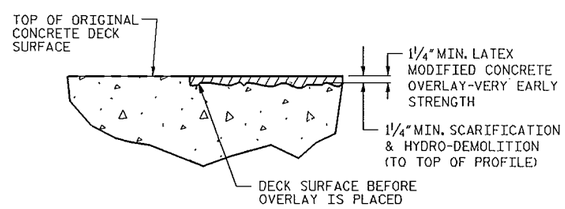
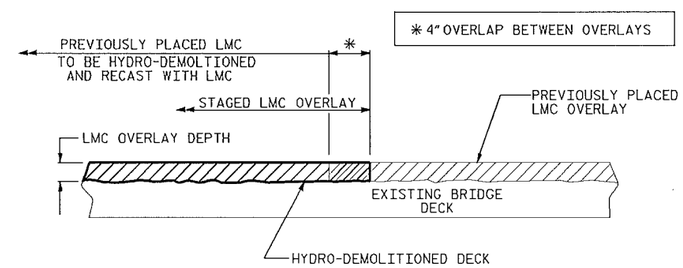


TYPICAL SECTION

REQUIRES STAGED CONSTRUCTION
SEE TRAFFIC MANAGEMENT PLANS



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY



SECTION THRU DECK

STAGED LMC OVERLAY JOINTS

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 122

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & LATEX MODIFIED CONCRETE DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
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2			4			16

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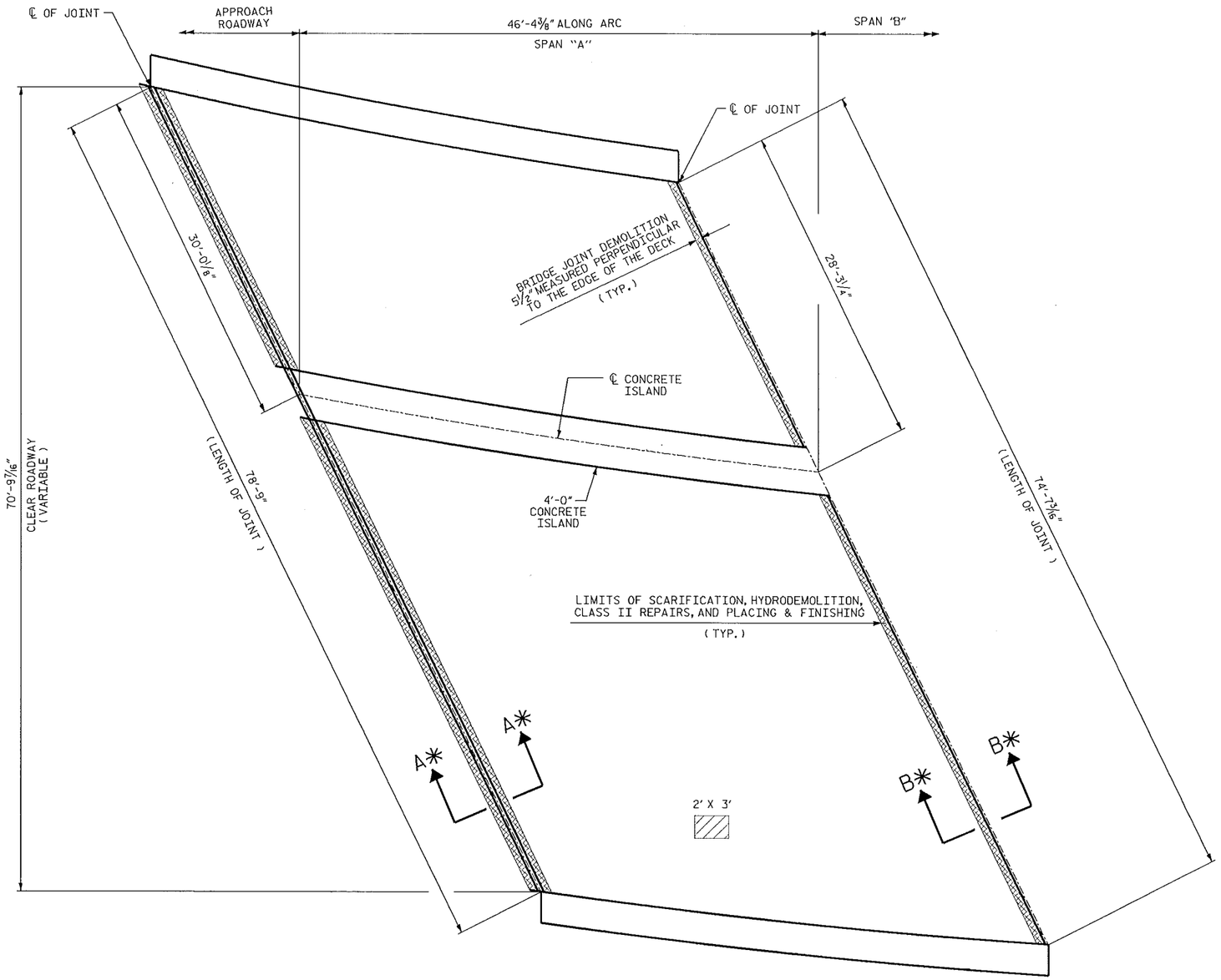

PLAN OF SPAN "A"

(* SEE SHEET S-15 FOR SECTION A-A & B-B AND SEE SHEET S-16 FOR BRIDGE JOINT DEMOLITION AT CONCRETE ISLAND AND FOR REMOVAL AND REPLACEMENT OF THE CONCRETE ISLAND)

SUMMARY OF QUANTITIES FOR SPAN "A"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	297.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	297.0 SY	
CLASS II SURFACE PREPARATION	0.7 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	99.7 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 122

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "A"

NORTH CAROLINA SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-12
1			3				TOTAL SHEETS
2			4				16

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CHECKED BY : T.SHERRILL DATE : 3/14
DESIGN ENGINEER OF RECORD: - DATE : -

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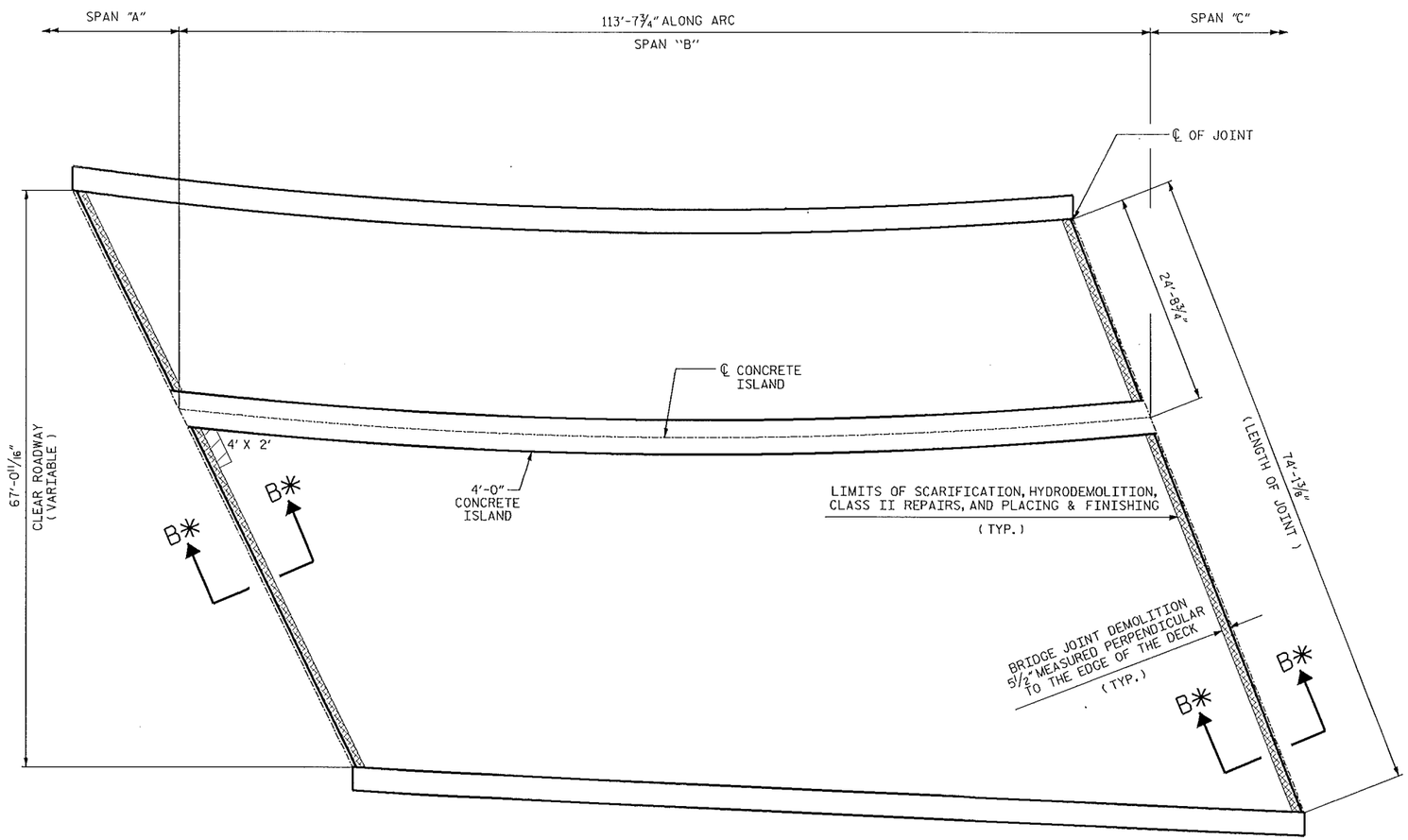
SUMMARY OF QUANTITIES FOR SPAN "B"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	762.9 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	762.9 SY	
CLASS II SURFACE PREPARATION	0.9 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	64.1 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PLAN OF SPAN "B"

(* SEE SHEET S-15 FOR SECTION B-B AND SEE SHEET S-16 FOR BRIDGE JOINT DEMOLITION AT CONCRETE ISLAND AND FOR REMOVAL AND REPLACEMENT OF THE CONCRETE ISLAND)

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 122

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

NORTH CAROLINA SEAL 039163 ENGINEER ROBBIE WEISZ

3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			16

DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 3/14
DESIGN ENGINEER OF RECORD: - DATE : -

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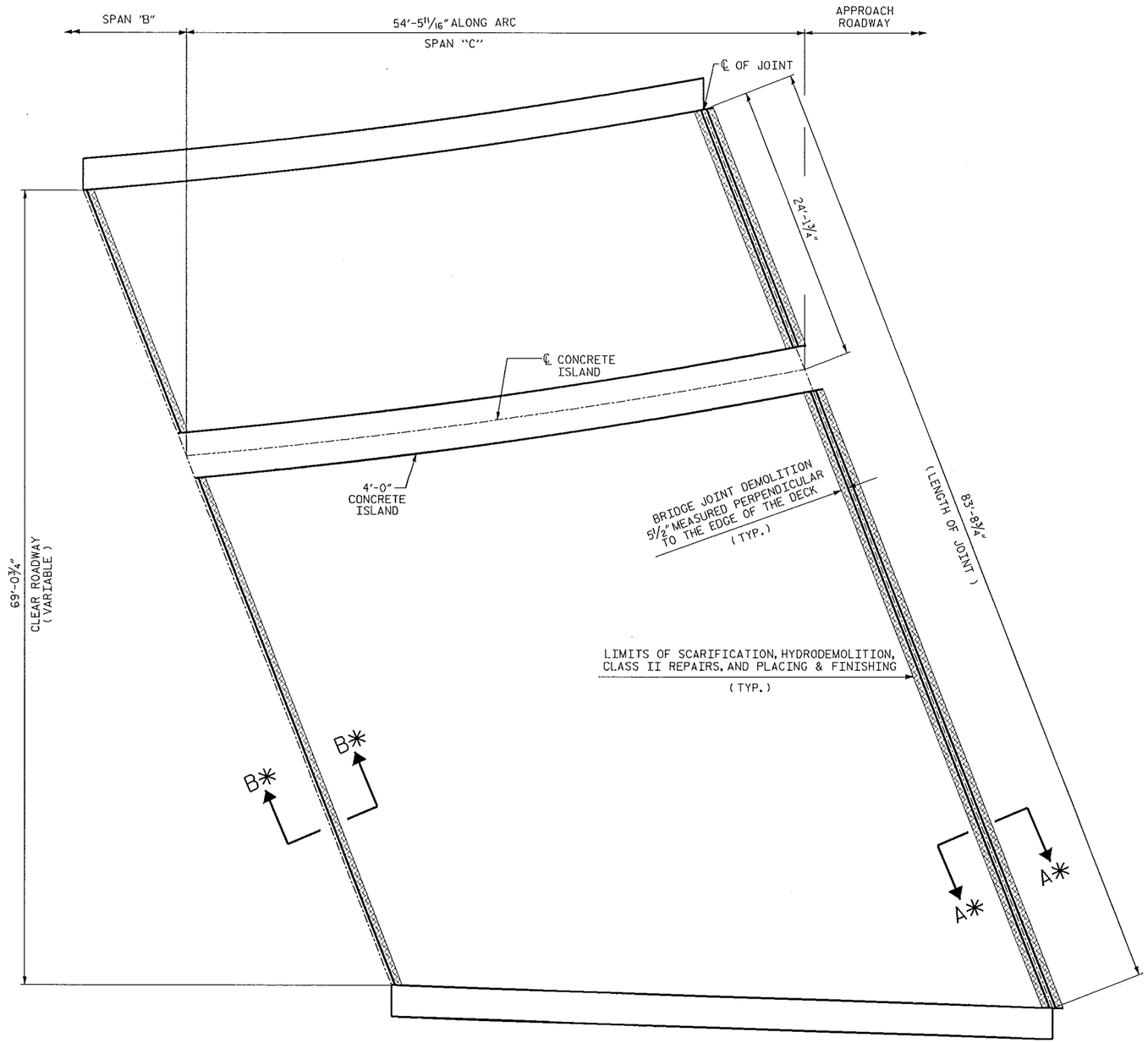
SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	429.1 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	429.1 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
BRIDGE JOINT DEMOLITION	105.0 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



SCARIFYING BRIDGE DECK

APPROX. AREA CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO. 122

PLAN OF SPAN "C"

(* SEE SHEET S-15 FOR SECTION A-A & B-B AND SEE SHEET S-16 FOR BRIDGE JOINT DEMOLITION AT CONCRETE ISLAND AND FOR REMOVAL AND REPLACEMENT OF THE CONCRETE ISLAND)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "C"

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBBIE WEISZ
3/31/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			16

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CHECKED BY : T.SHERRILL DATE : 3/14
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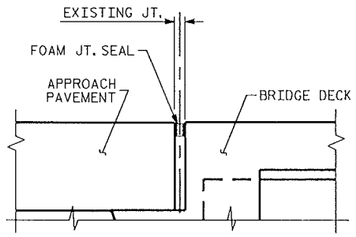
NOTES:

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

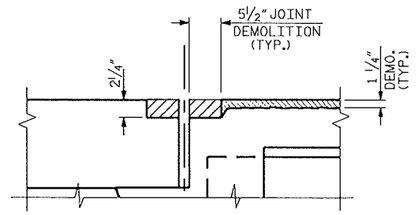
THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2" AT THE END BENTS AND BENT 2 AND 2½" AT BENT 1.

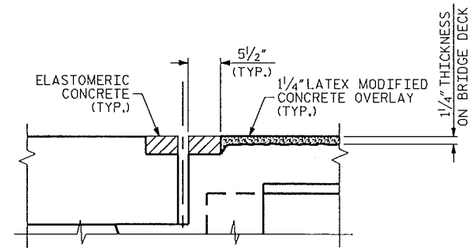
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.



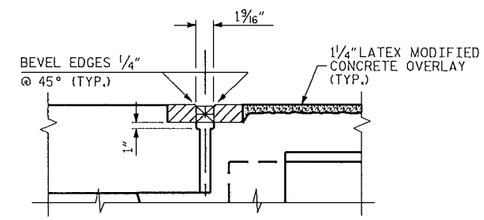
SECTION A-A
(EXISTING JOINT)



SECTION A-A
(MINIMUM EXISTING JOINT DEMOLITION)

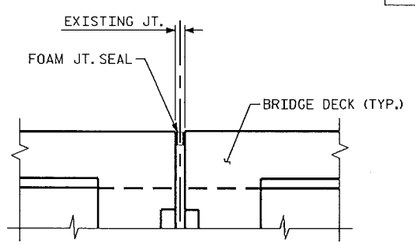


SECTION A-A
(PROPOSED FOAM JOINT SEAL PRE-SAWED DIMENSIONS)

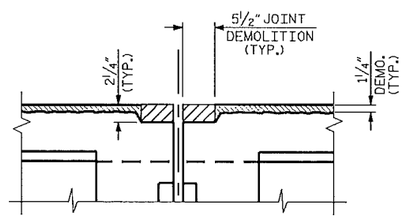


SECTION A-A
(PROPOSED FOAM JOINT SEAL FIXED)

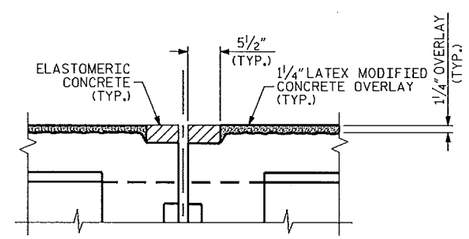
IF THE EMBEDDED PORTION OF AN EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED



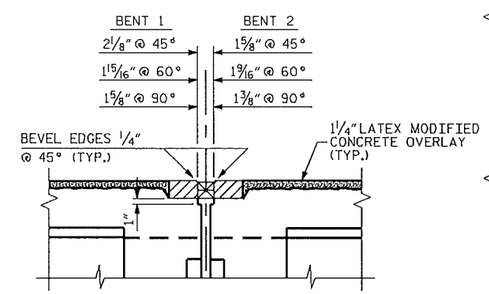
SECTION B-B
(EXISTING JOINT)



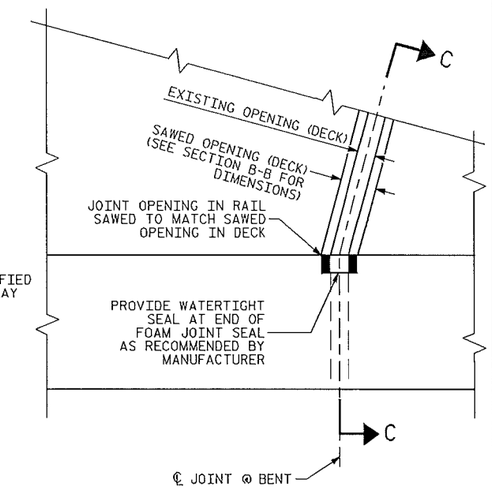
SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION B-B
(PROPOSED FOAM JOINT SEAL PRE-SAWED DIMENSIONS)



SECTION B-B
(PROPOSED FOAM JOINT SEAL EXPANSION)

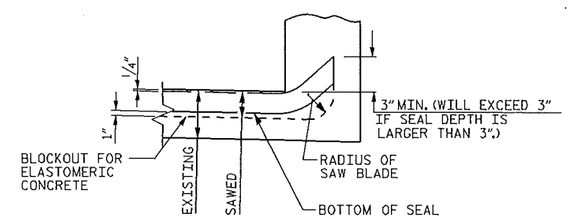


PLAN

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF REPAIR CONCRETE.

ELASTOMERIC CONCRETE		
END BENTS AND BENTS	49.3	(CU. FT.)
* TOTAL	49.3	(CU. FT.)

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



SECTION C-C

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO.: 122

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

NORTH CAROLINA SEAL 039163 ENGINEER ROBBIE WEISZ
3/31/14

DRAWN BY : R.WEISZ	DATE : 11/13
CHECKED BY : T.SHERRILL	DATE : 3/14

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-15
1			3				TOTAL SHEETS
2			4				16

31-MAR-2014 08:27
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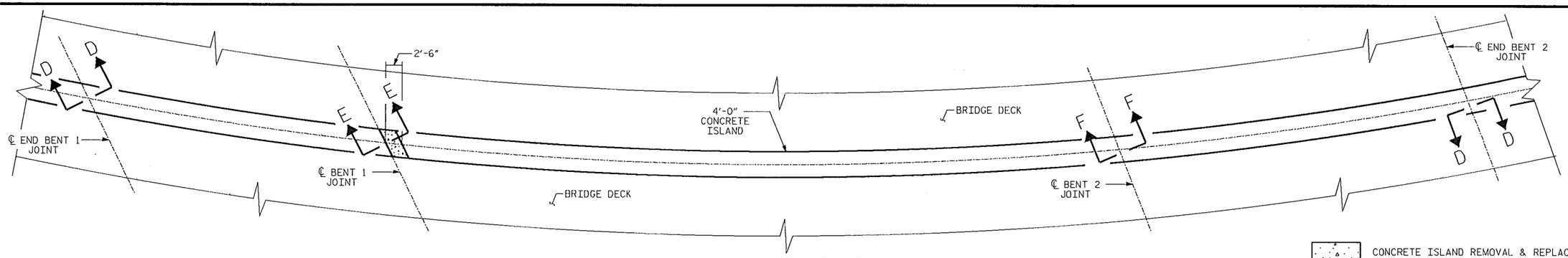
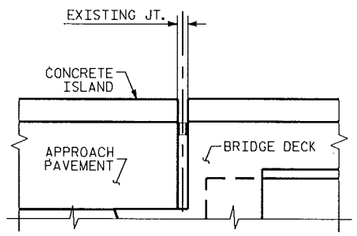
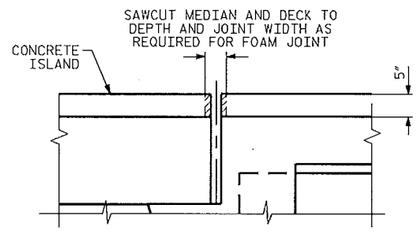


PLAN OF CONCRETE ISLAND

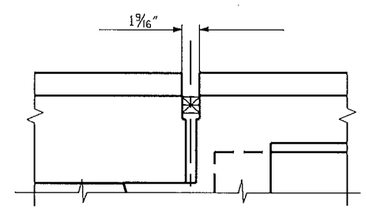
CONCRETE ISLAND REMOVAL & REPLACEMENT



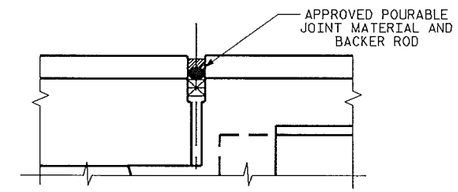
SECTION D-D
(EXISTING JOINT)



SECTION D-D
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION D-D
(PROPOSED FOAM JOINT SEAL)



SECTION D-D
(PROPOSED FOAM JOINT SEAL AND ADDITIONAL APPROVED JOINT MATERIAL)

NOTES:

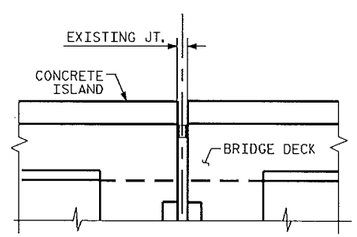
FOR "FOAM JOINT SEALS" AND APPROVED JOINT MATERIAL WITH BACKER ROD, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

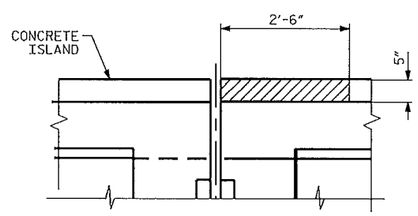
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2" AT THE END BENTS AND BENT 2 AND 2½" AT BENT 1.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE FOAM JOINT SEAL IN LIEU OF SAWING THE JOINT.

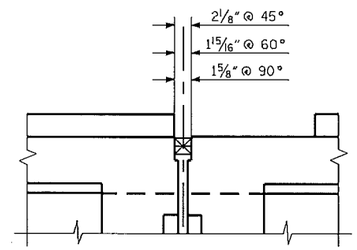
FOR CONCRETE ISLAND REMOVAL AND REPLACEMENT, SEE SPECIAL PROVISIONS.



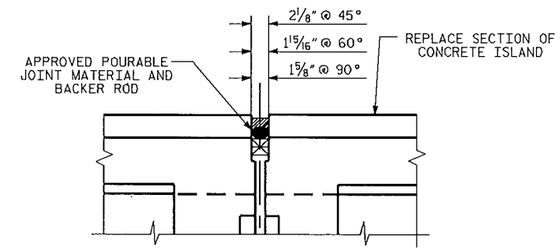
SECTION E-E
(EXISTING JOINT)



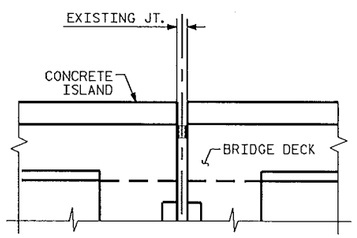
SECTION E-E
(MINIMUM EXISTING JOINT DEMOLITION AND REMOVAL OF DAMAGED CONCRETE ISLAND)



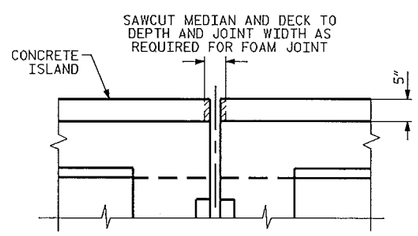
SECTION E-E
(PROPOSED FOAM JOINT SEAL EXPANSION)



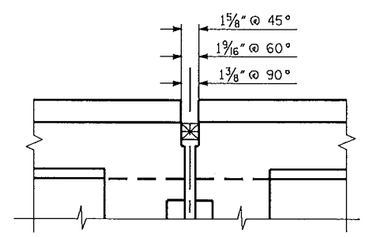
SECTION E-E
(PROPOSED FOAM JOINT SEAL AND ADDITIONAL APPROVED POURABLE JOINT MATERIAL)



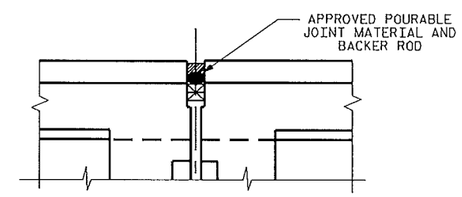
SECTION F-F
(EXISTING JOINT)



SECTION F-F
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION F-F
(PROPOSED FOAM JOINT SEAL)



SECTION F-F
(PROPOSED FOAM JOINT SEAL AND ADDITIONAL APPROVED PORABLE JOINT MATERIAL)

PROJECT NO. BP-5500T
MECKLENBURG COUNTY
BRIDGE NO.: 122

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONCRETE ISLAND REMOVAL AND REPLACEMENT WITH JOINT DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 039163 ENGINEER ROBERT WEISZ
3/31/14

REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.	S-16
1			3			TOTAL SHEETS	16
2			4				

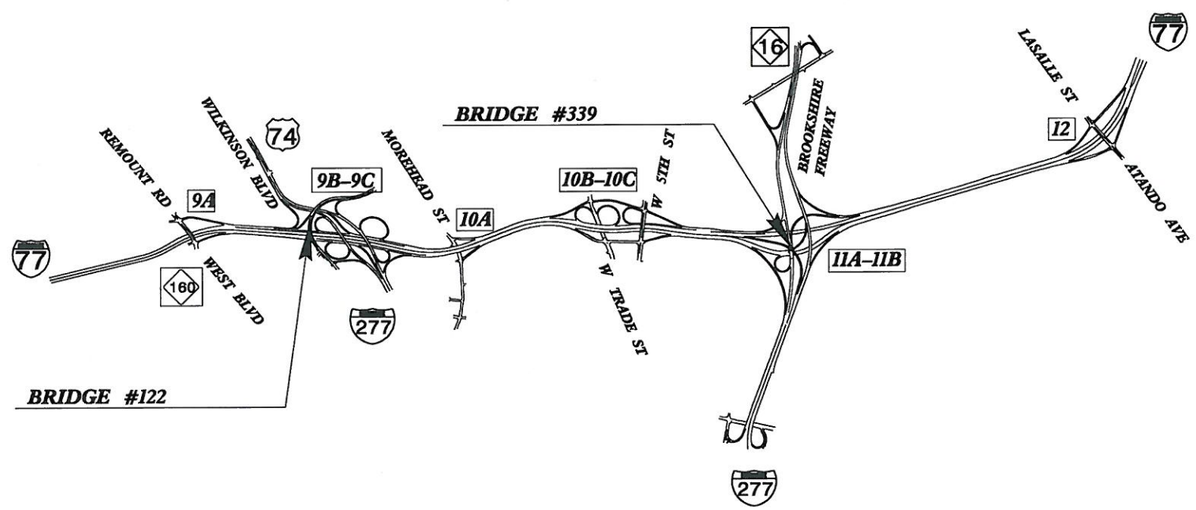
DRAWN BY : R.WEISZ DATE : 2/14
CHECKED BY : T.SHERRILL DATE : 3/14

31-MAR-2014 08:27
S:\PRS\PROC\Squad C\Preservation_Projects\BP-5500\BP5500TMECKLENBURG\LMCOVERLAYMECK122.dgn
rnweisz

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

MECKLENBURG COUNTY



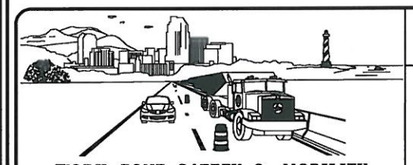
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-3 THRU TMP-5	BRIDGE #122 OFF SITE DETOUR ROUTES
TMP-6 THRU TMP-14	BRIDGE #122 TRAFFIC CONTROL DETAIL
TMP-15 THRU TMP-20	BRIDGE #339 OFF SITE DETOUR ROUTES
TMP-21 THRU TMP-33	BRIDGE #339 TRAFFIC CONTROL DETAIL

SHEET NO.
TMP-1

BP-5500T

TIP PROJECT:



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
LAWRENCE GETTIER, P.E. — *TRAFFIC CONTROL PROJECT ENGINEER*
JESSE W. GILSTRAP — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
_____ — *TRAFFIC CONTROL DESIGN ENGINEER*

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

Prepared In the Office of:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey
DATE: 01/05/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS -PERMANENT AND TEMPORARY

SIGN DESIGN

SIGN NUMBER: DETOUR
TYPE: D
QUANTITY: 2

SIGN WIDTH: 2'-6"
HEIGHT: 2'-3"
TOTAL AREA: 5.6 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0.47"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

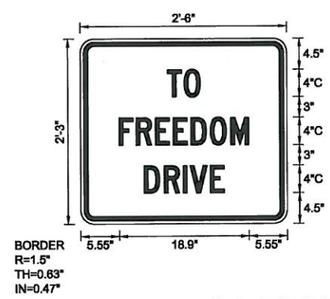
BACKG COLOR: Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY:
PROJECT ID:
CHECKED BY:
DIV: DIV
DATE: Jan 02, 2014

NOTES:
1. Legend and border shall be direct applied Type IX reflective sheeting.
2. Background shall be Type IX reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter widths are shown

																											Series/Size Text Length
	T	O																									C 2000
	2	2.4																									4.8
	F	R	E	E	D	O	M																				C 2000
	2	2.2	2	2	2.2	2.4	2.6																				18.9
	D	R	I	V	E																						C 2000
	2.2	2.2	0.6	2.5	2																						11.6

FILENAME: Hammond Rd

NORTH CAROLINA D.O.T. SIGN DETAIL

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT WEDGING

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-1B

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES (INCLUDING ALL ASSOCIATED RAMPS/LOOPS) AS FOLLOWS:

ROAD NAME		DAY AND TIME RESTRICTIONS
I-277SB		MONDAY-FRIDAY: 6:00 AM TO 8:00 PM SATURDAY AND SUNDAY: 9:00 AM TO 6:00 PM
I-77NB	(ONE LANE)	MONDAY-FRIDAY: 6:00 AM TO 9:00 PM SATURDAY AND SUNDAY: 9:00 AM TO 6:00 PM
I-77NB	(TWO OR MORE LANES)	MONDAY-SUNDAY: 5:00 AM TO 11:00 PM
US 74 EB & WB		MONDAY-FRIDAY: 6:00 AM TO 9:00 AM MONDAY-FRIDAY: 4:00 PM TO 9:00 PM
FREEDOM DRIVE		MONDAY-FRIDAY: 6:00 AM TO 9:00 AM MONDAY-FRIDAY: 4:00 PM TO 7:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

"ALL "

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00AM DECEMBER 31st TO 9:00PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00AM THURSDAY AND 9:00PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00AM FRIDAY TO 9:00PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00AM THE DAY BEFORE INDEPENDENCE DAY AND 9:00PM THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00PM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00AM FRIDAY AND 9:00PM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00AM TUESDAY TO 9:00PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR NASCAR RACING EVENTS: 6:00 A.M. THE THURSDAY OF THE WEEK OF THE EVENT UNTIL 8:00 P.M. THE FOLLOWING MONDAY AFTER THE RACE.
10. FOR CAROLINA PANTHERS FOOTBALL GAMES AND EVENTS AT THE BOBCATS ARENA: THREE (3) HOURS BEFORE THE GAME UNTIL THREE (3) HOURS AFTER THE GAME.
11. FOR EVENTS AT BANK OF AMERICA STADIUM AND/OR EVENTS AT THE CHARLOTTE CONVENTION CENTER OR OTHER ARENAS : THREE (3) HOURS BEFORE THE EVENT UNTIL THREE (3) HOURS AFTER THE EVENT.

C) DO NOT CLOSE THE FOLLOWING RAMPS OR ROADS MONDAY THROUGH SUNDAY BETWEEN 5:00 AM AND 11:00 PM:

1. OFF-RAMP FROM I-77NB TO I-277NB/NC 16
2. ON-LOOP FROM I-277SB TO I-77NB
3. ON-RAMP FROM I-77SB TO I-277SB
4. ON-RAMP FROM I-77SB TO US 74WB
5. OFF-RAMP FROM FREEDOM DRIVE TO I-77SB
6. SOUTH CLARKSON STREET WB/FREEDOM DRIVE NB AT THE INTERSECTION WITH THE ON-RAMP TO I-277SB. MAINTAIN ACCESS TO DRIVEWAYS BEYOND CLOSURE POINT WITH FLAGGERS.
7. ON-RAMP FROM W. 5TH STREET TO I-77NB

D) TRAFFIC SHALL NOT BE STOPPED ON ANY ROADWAY, RAMP OR LOOP AT ANY TIME.

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

   WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

   PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

   COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

Q) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

R) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

S) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

MISCELLANEOUS

T) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

PAVEMENT MARKINGS AND MARKERS

U) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

V) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS.

W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

X) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 01/05/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-2

PHASING

CONTRACTOR WILL NOT BE ALLOWED TO WORK ON BRIDGES #122 AND #339 SIMULTANEOUSLY. CONTRACTOR SHALL CLOSE AFFECTED LANES UNDERNEATH BRIDGE DURING REHAB CONSTRUCTION OPERATIONS TO PREVENT POSSIBILTY OF BLOW THROUGH DEBRIS ONTO OPEN TRAVEL LANES.

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN THE PROJECT LIMITS AS SHOWN IN ROADWAY STANDARD DRAWING NO. 1101.01, SHEET 1 OF 3.

BRIDGE #122

STEP 2: CONTRACTOR SHALL COMPLETE ALL OF THE WORK REQUIRED OF BRIDGE #122 AS SHOWN IN THE STRUCTURE PLANS. UTILIZE THE OFF SITE DETAILS SHOWN IN SHEETS TMP-3 THRU TMP-5 AND THE LANE CLOSURE DETAILS SHOWN IN SHEETS TMP-6 THRU TMP-14 FOR CLOSING AFFECTED TRAVEL LANES WHILE COMPLETING THE WORK REQUIRED OF THE STRUCTURE PLANS. TEMPORARY PAINT PAVEMENT MARKINGS SHALL BE INSTALLED BACK TO THE ORIGINAL PATTERN ON THE BRIDGE DECK BEFORE OPENING CLOSED SECTIONS BACK TO TRAFFIC.

BRIDGE #339

STEP 2: CONTRACTOR SHALL COMPLETE ALL OF THE WORK REQUIRED OF BRIDGE #339 AS SHOWN IN THE STRUCTURE PLANS. UTILIZE THE OFF SITE DETAILS SHOWN IN SHEETS TMP-15 THRU TMP-20 AND THE LANE CLOSURE DETAILS SHOWN IN SHEETS TMP-21 THRU TMP-33 FOR CLOSING AFFECTED TRAVEL LANES WHILE COMPLETING THE WORK REQUIRED OF THE STRUCTURE PLANS. TEMPORARY PAINT PAVEMENT MARKINGS SHALL BE INSTALLED BACK TO THE ORIGINAL PATTERN ON THE BRIDGE DECK BEFORE OPENING CLOSED SECTIONS BACK TO TRAFFIC.

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

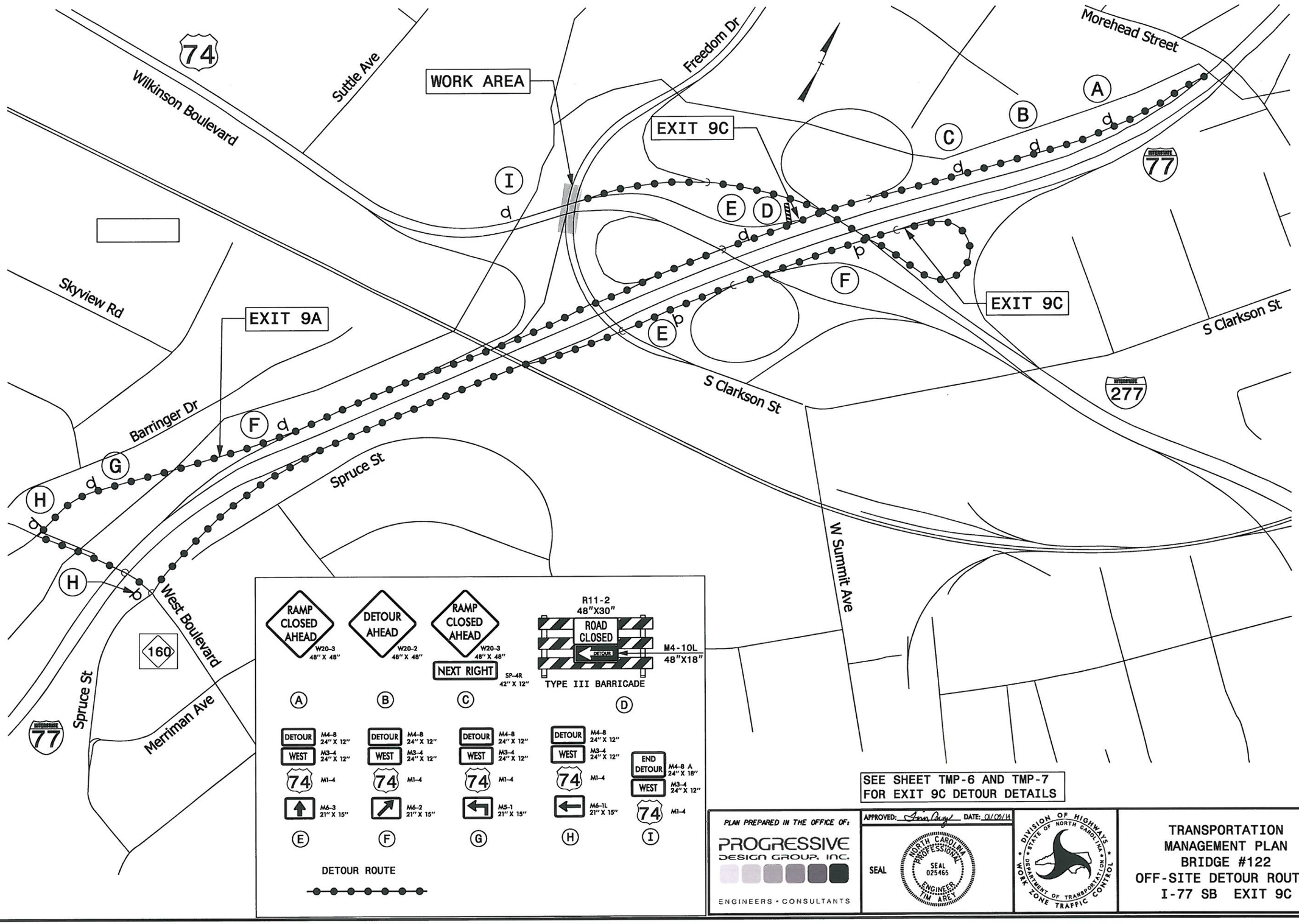
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
PHASING

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-3



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/03/14

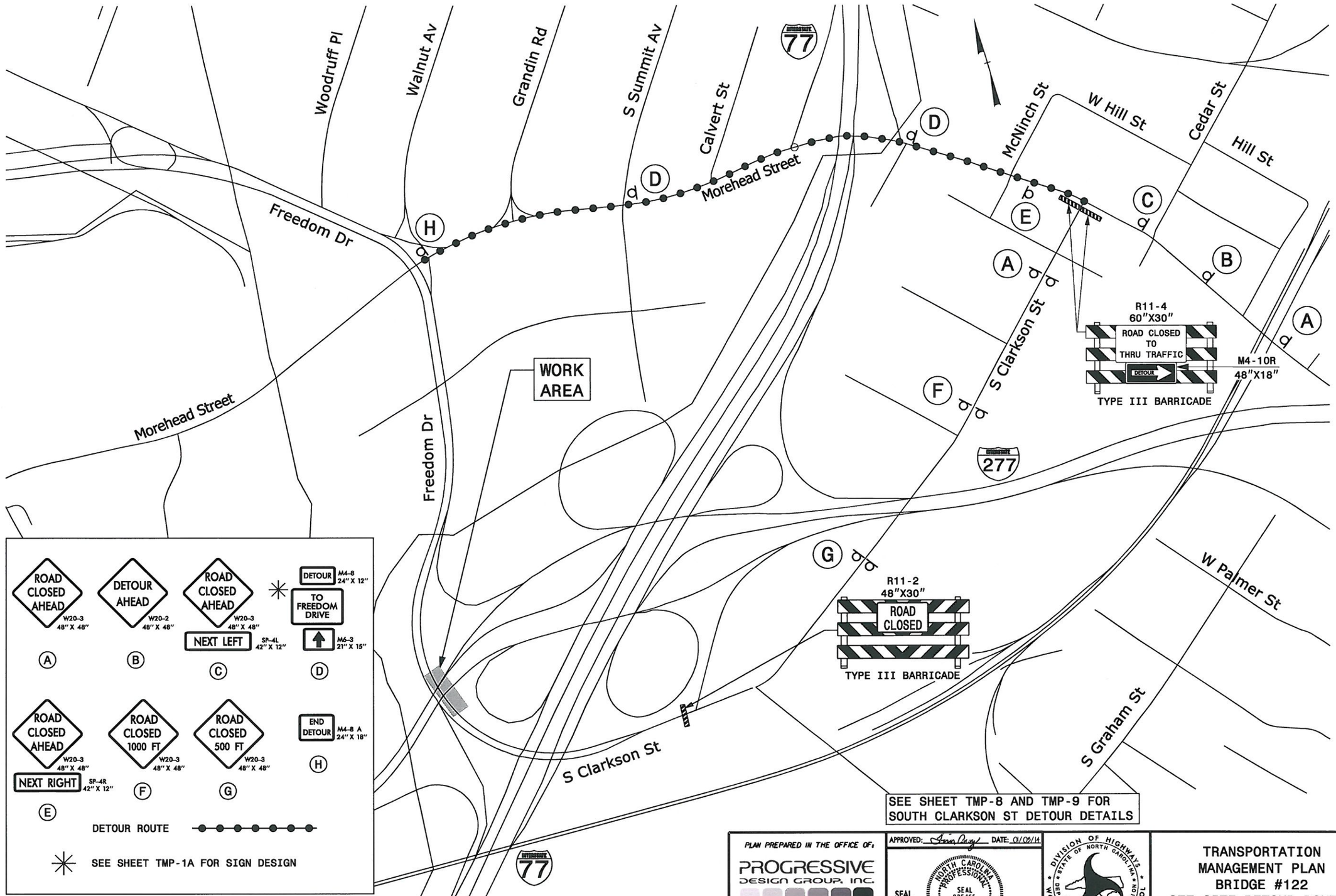
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
OFF-SITE DETOUR ROUTES
I-77 SB EXIT 9C

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-4



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/02/14

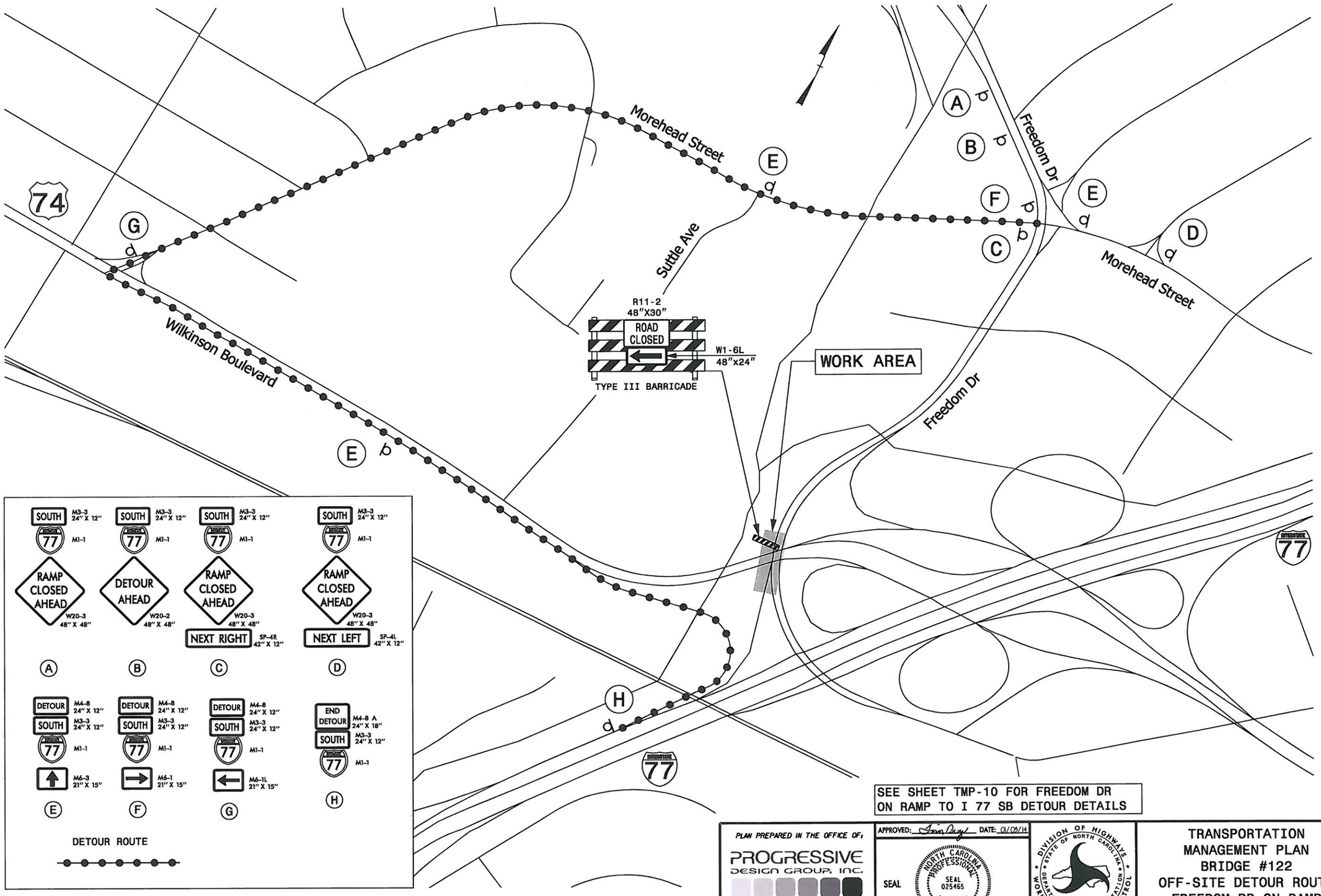
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
OFF-SITE DETOUR ROUTES
SOUTH CLARKSON ST

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-5



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

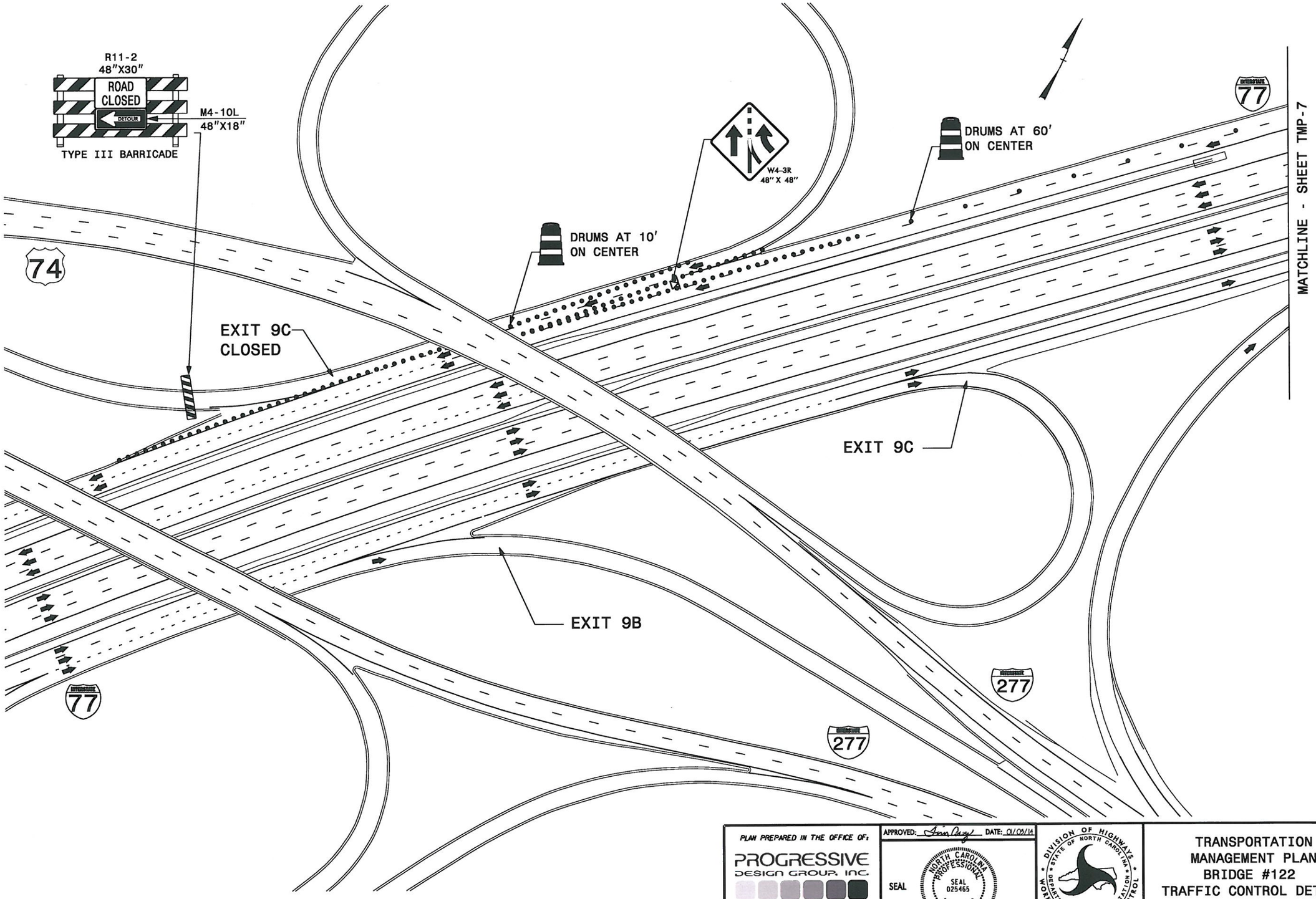
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
OFF-SITE DETOUR ROUTES
FREEDOM DR ON-RAMP
TO I-77 SB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-6



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

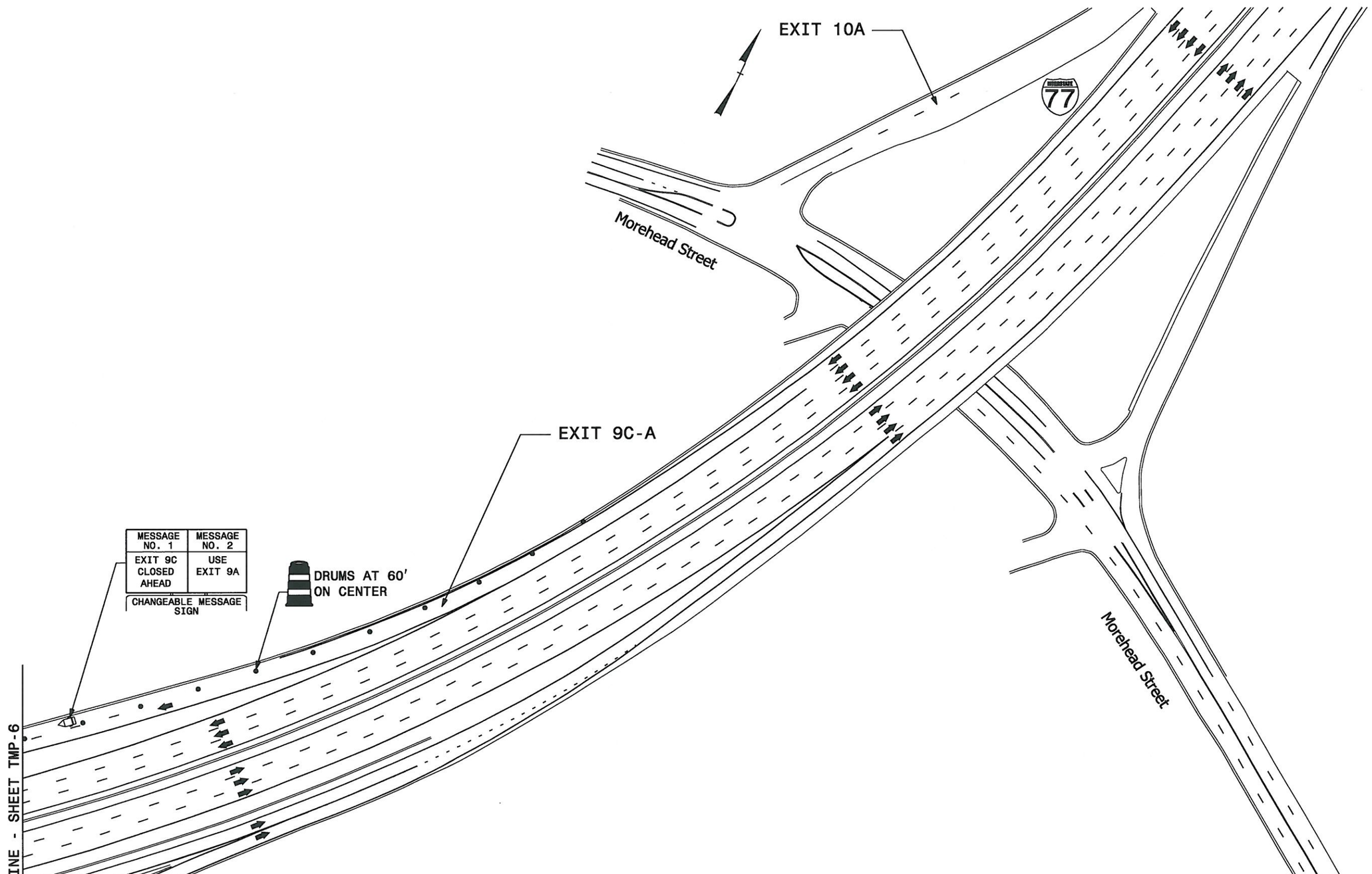
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-77 SB EXIT 9C DETOUR

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-7



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

SEAL

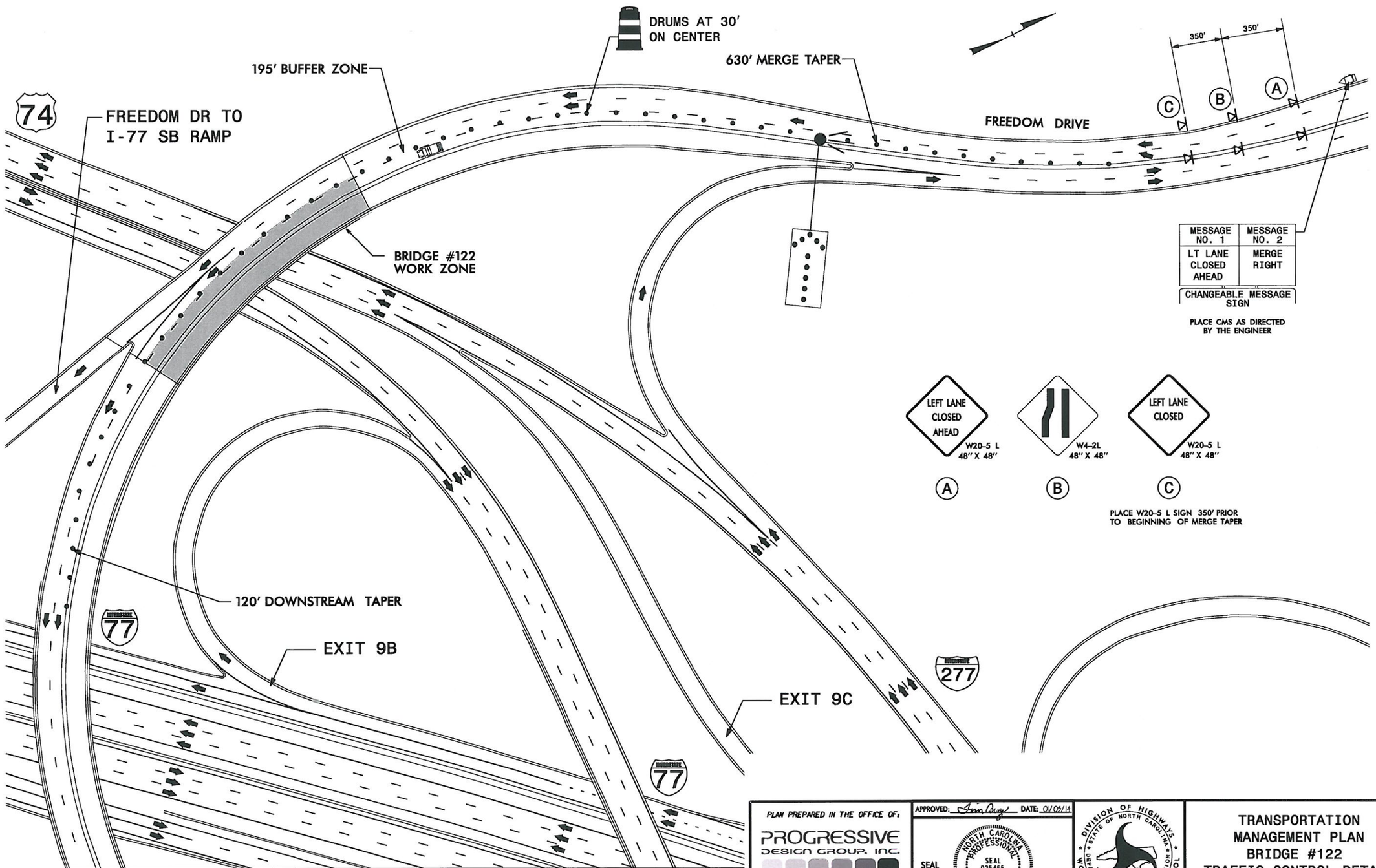
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-77 SB EXIT 9C DETOUR

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-8



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 01/06/14

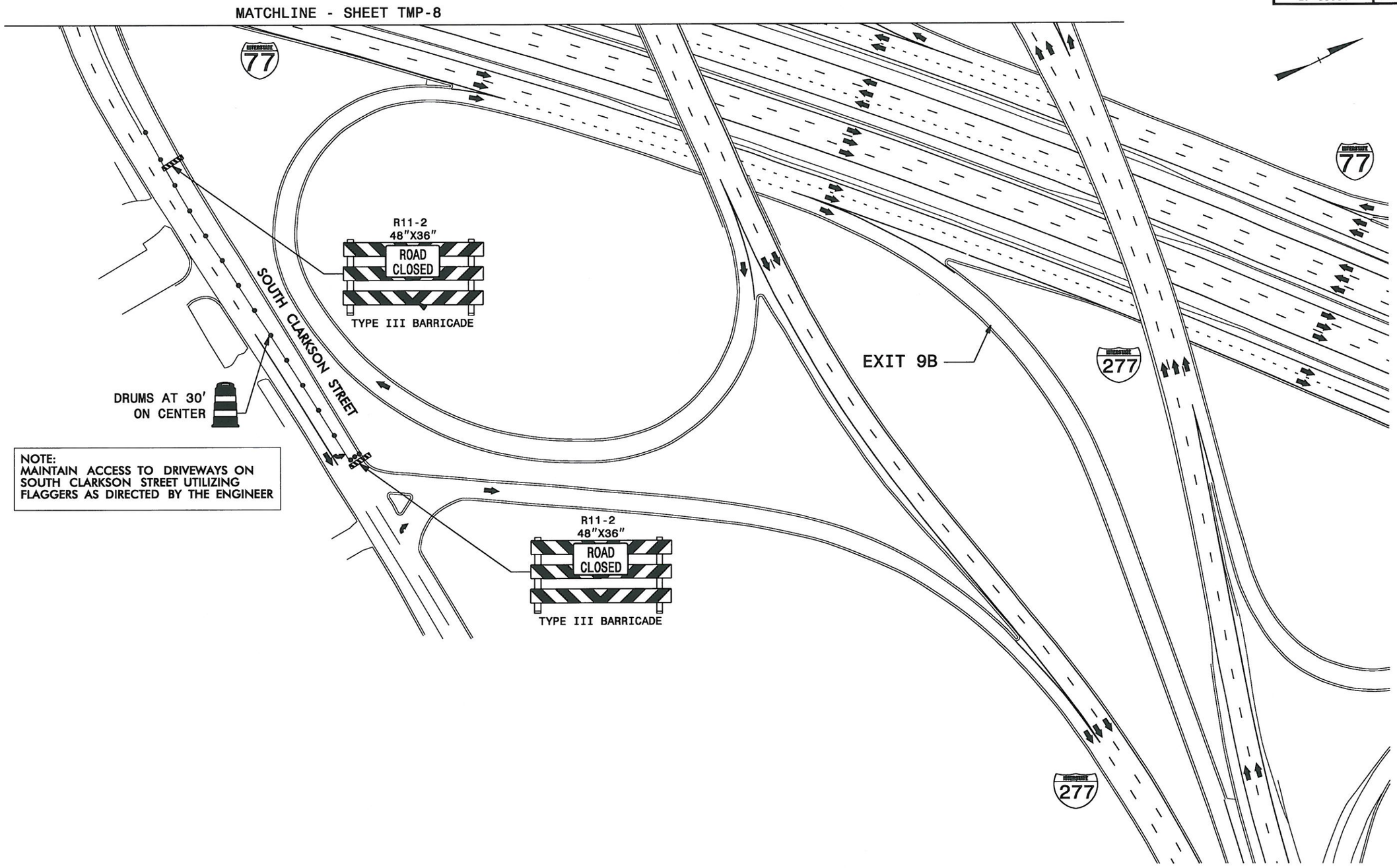
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
FREEDOM DR NB CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-9



NOTE:
MAINTAIN ACCESS TO DRIVEWAYS ON SOUTH CLARKSON STREET UTILIZING FLAGGERS AS DIRECTED BY THE ENGINEER

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

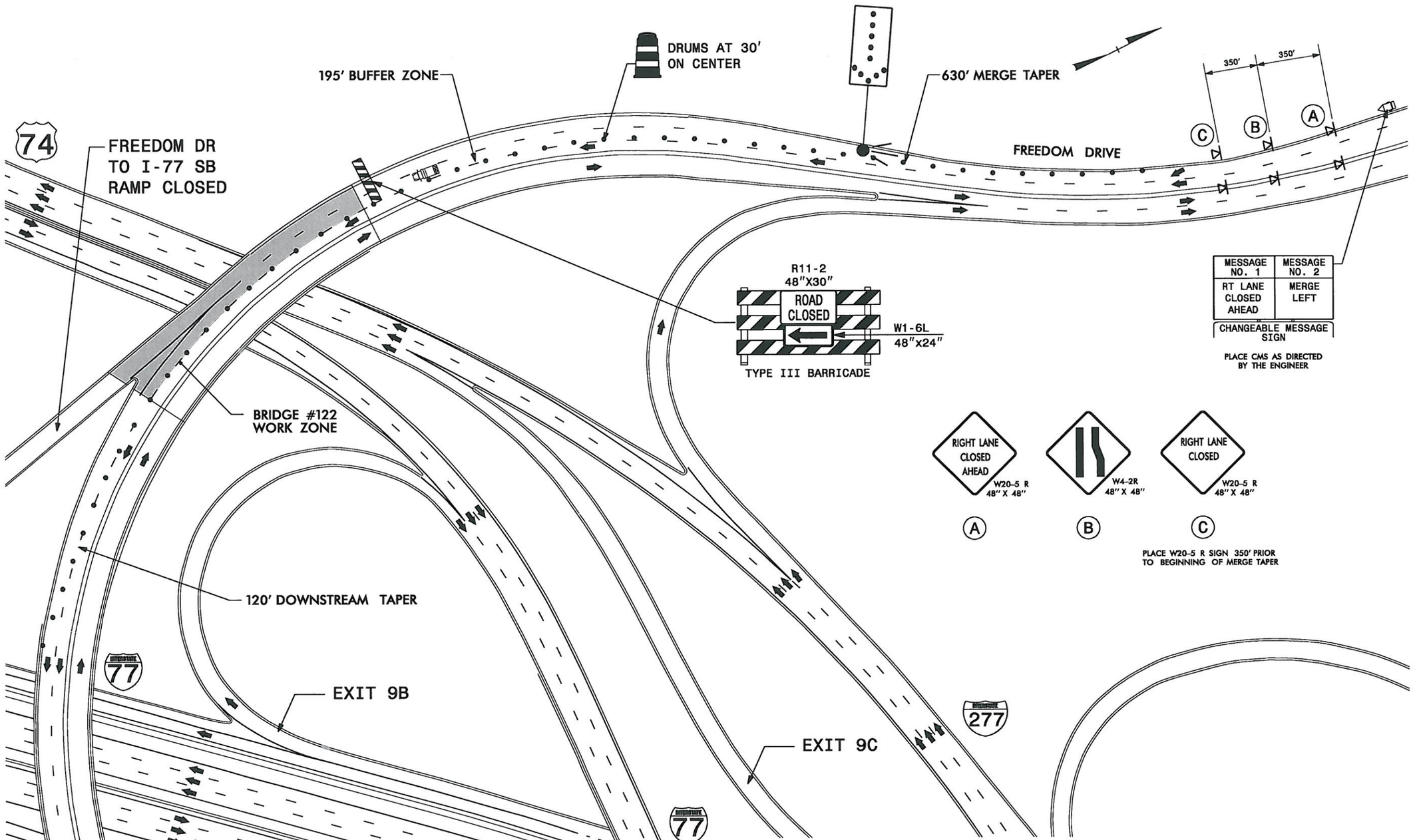
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
FREEDOM DR NB CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-10



MESSAGE NO. 1	MESSAGE NO. 2
RT LANE CLOSED AHEAD	MERGE LEFT

CHANGEABLE MESSAGE SIGN

PLACE CMS AS DIRECTED BY THE ENGINEER

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

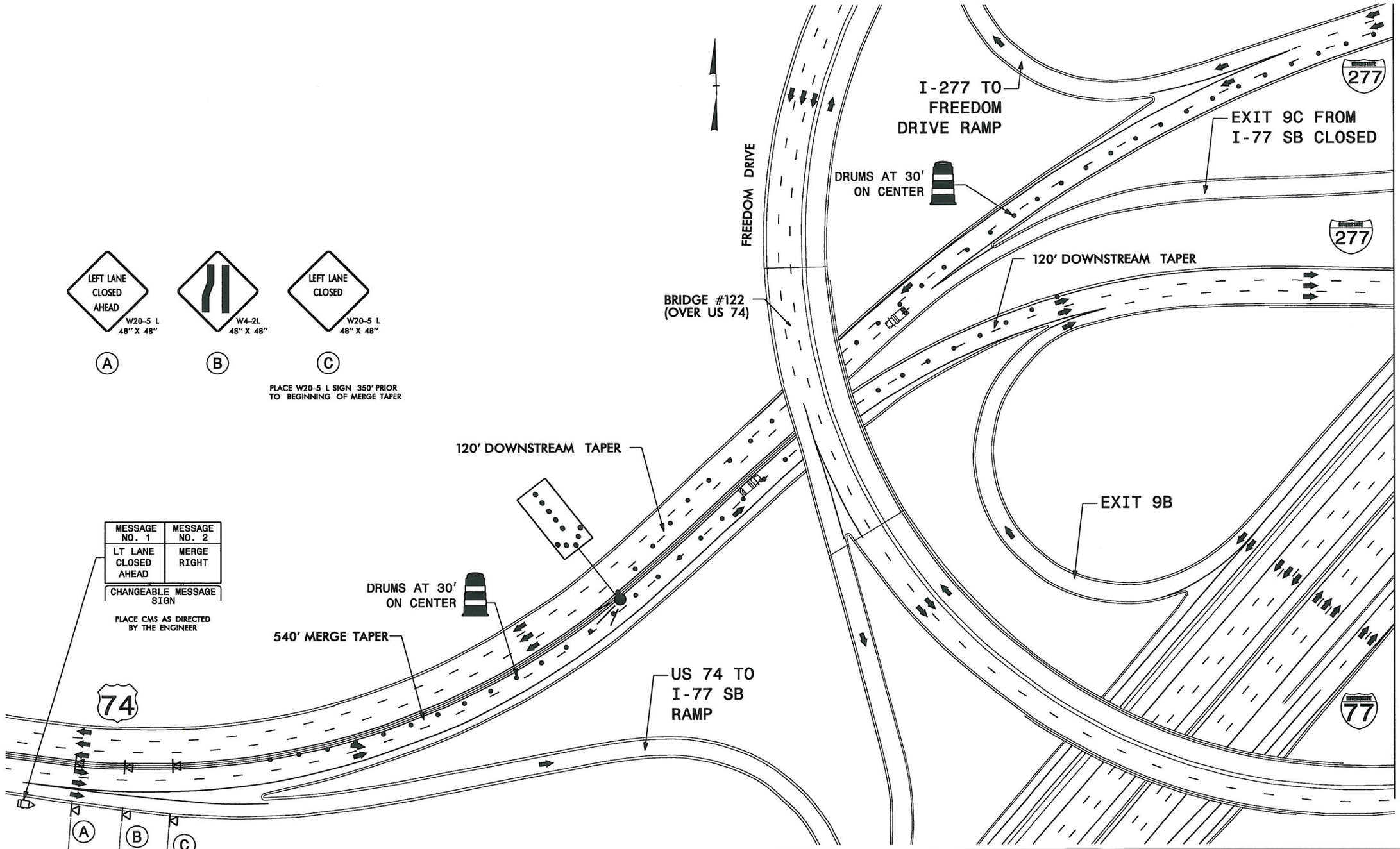
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
FREEDOM DR NB CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-11



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS - CONSULTANTS

APPROVED: DATE: 01/05/14

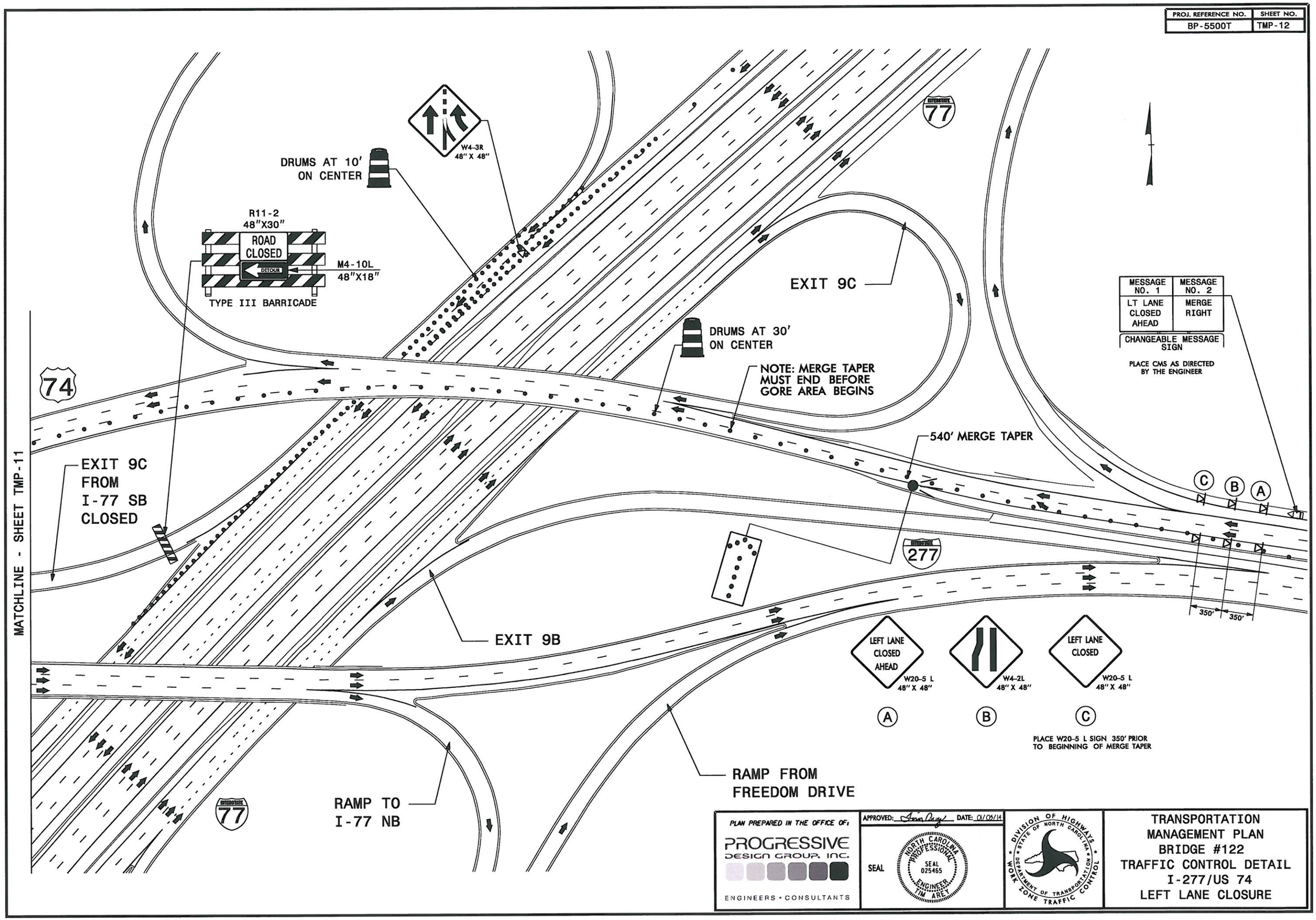
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-277/US 74
LEFT LANE CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-12



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 01/05/14

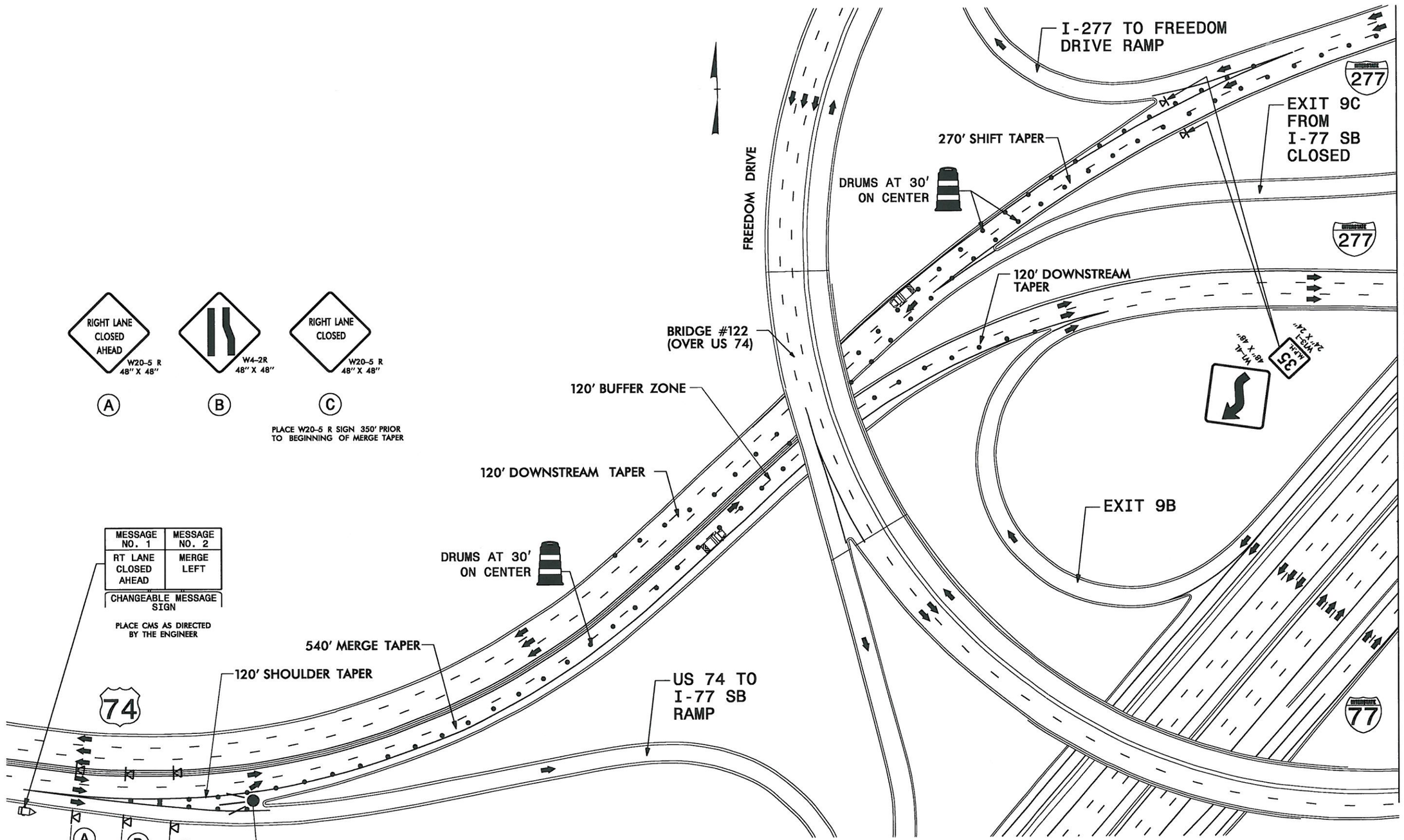
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARET

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-277/US 74
LEFT LANE CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-13



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: Jim Arey DATE: 01/05/14

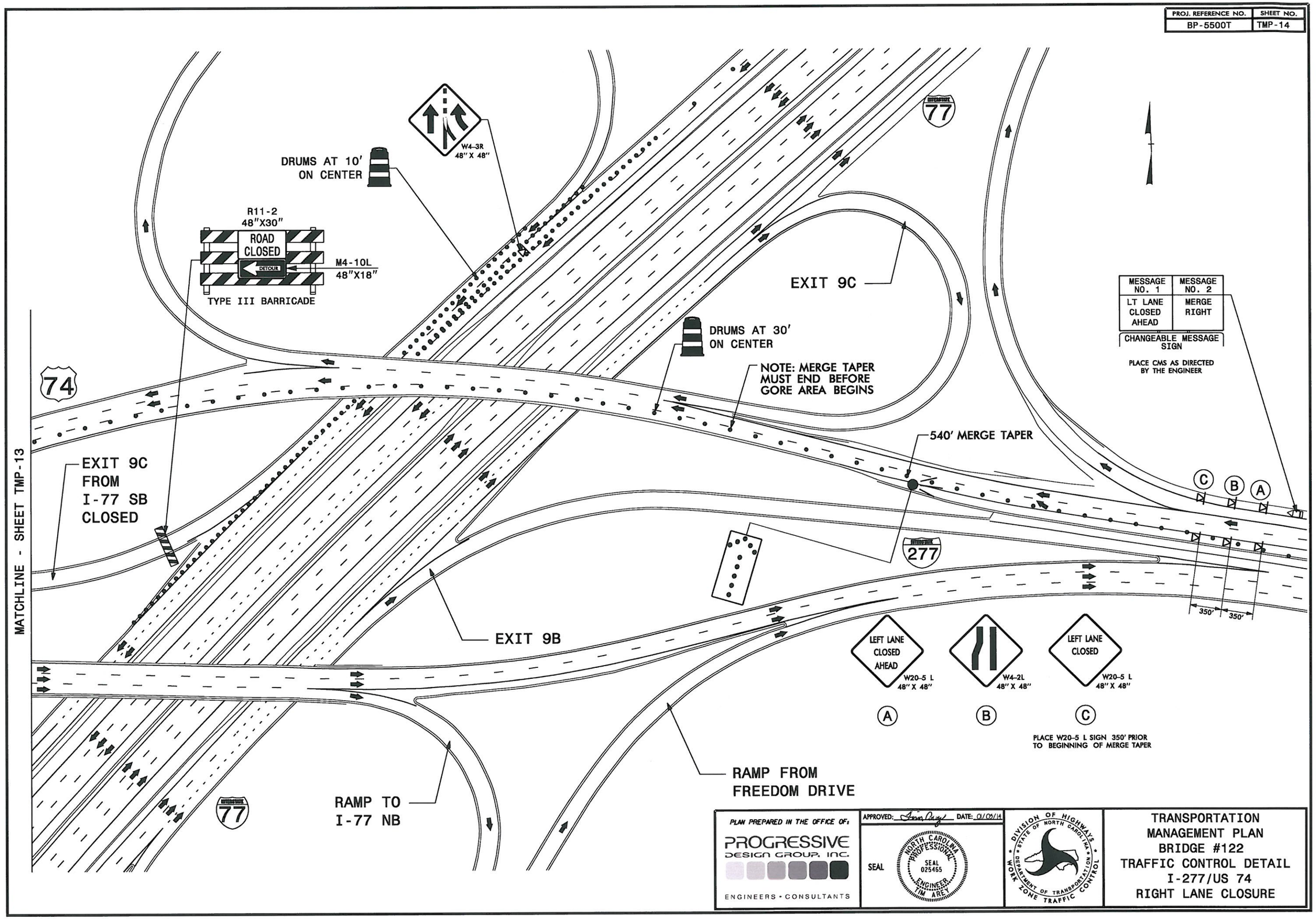
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025455 ENGINEER JIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-277/US 74
RIGHT LANE CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-14



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

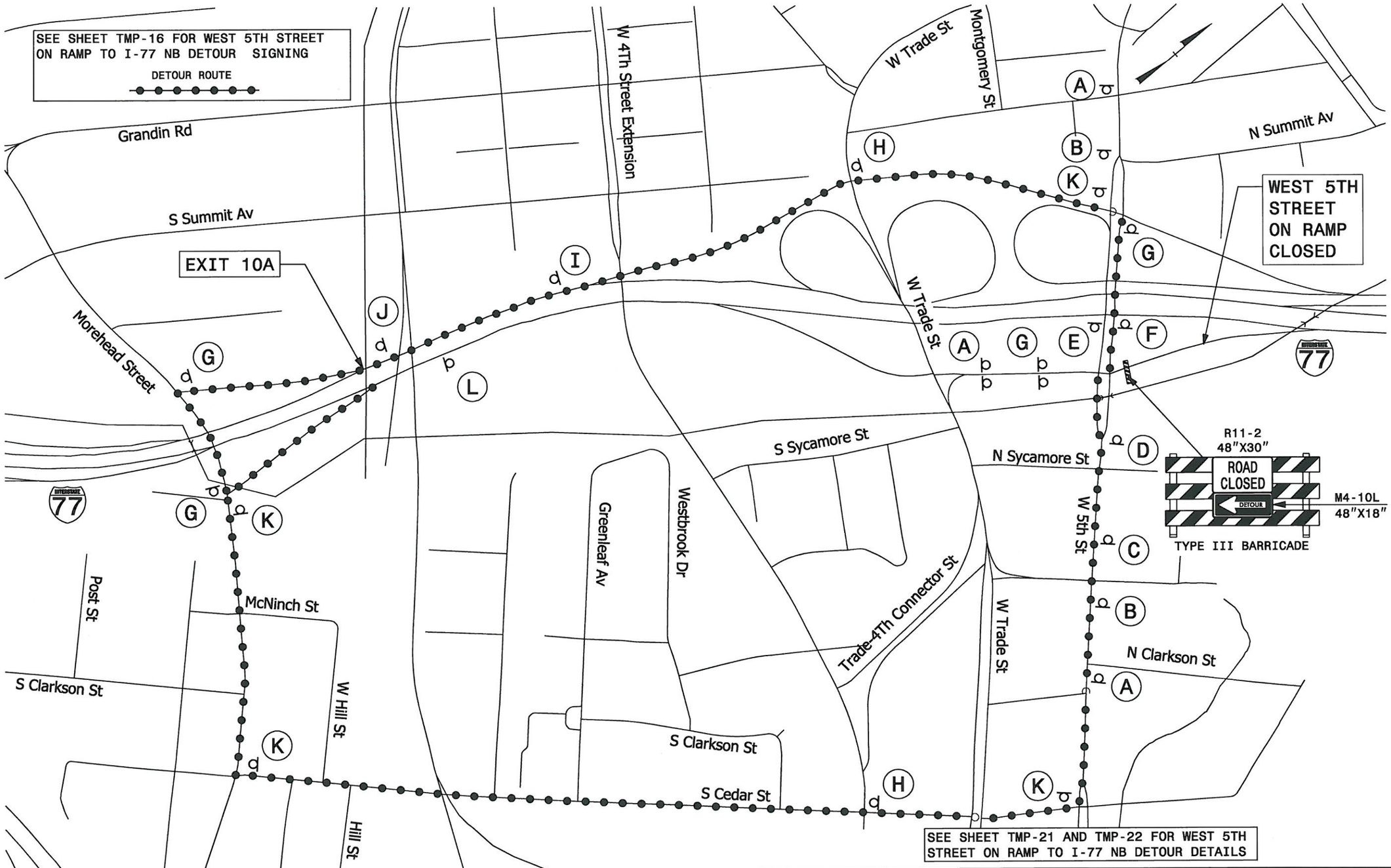
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL UNIT

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #122
TRAFFIC CONTROL DETAIL
I-277/US 74
RIGHT LANE CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-15



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS · CONSULTANTS

APPROVED: Tim Arey DATE: 01/09/14

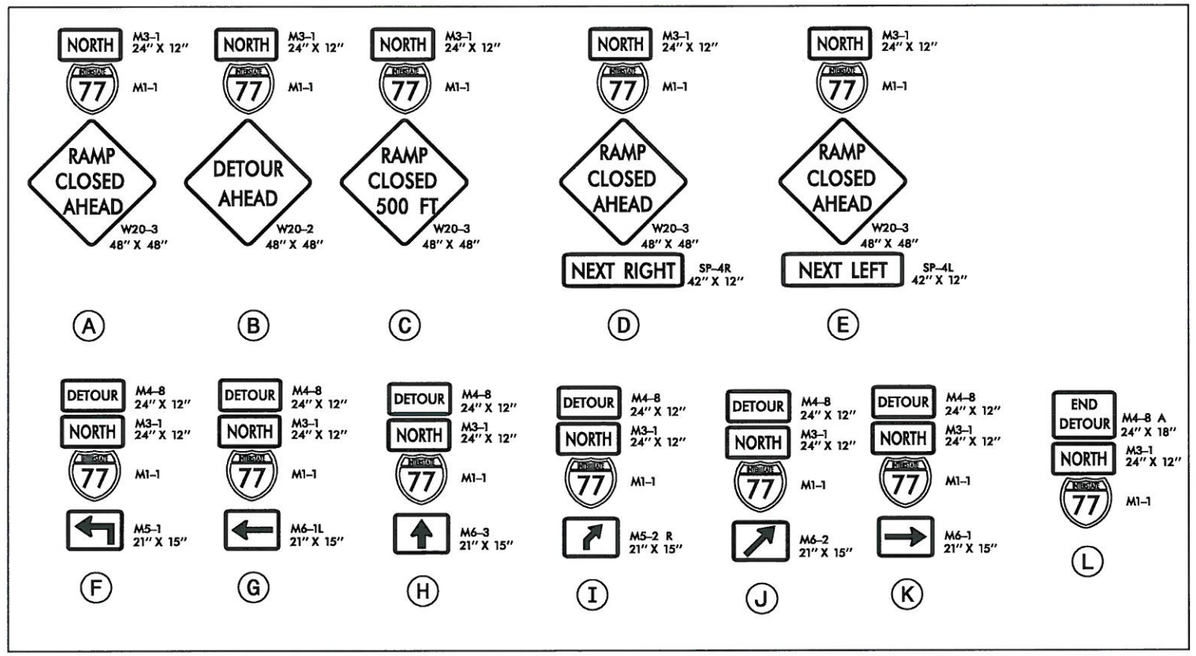
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

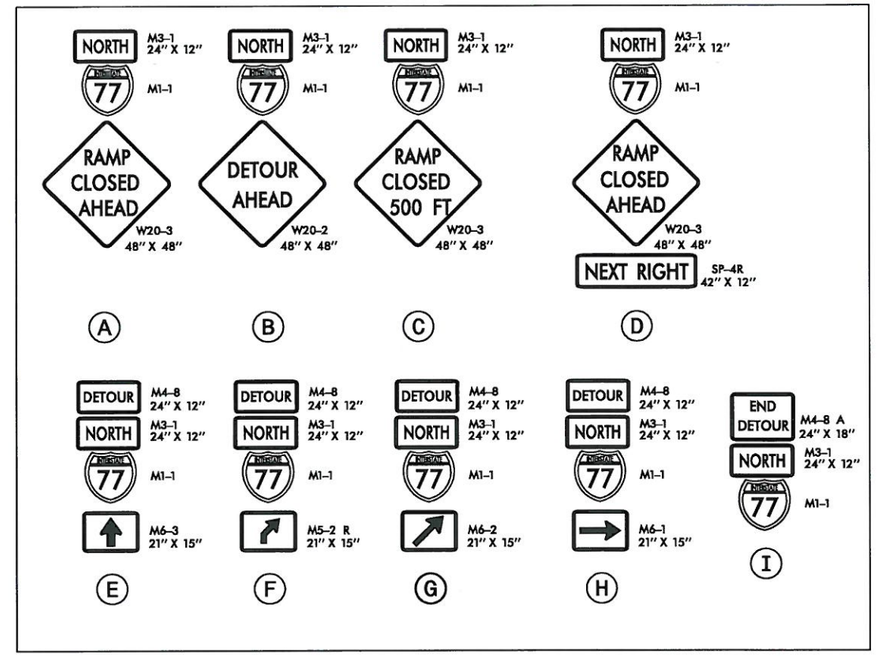
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
WEST 5TH STREET
ON RAMP TO I-77 NB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-16



WEST 5TH STREET ON RAMP
TO I-77 NB DETOUR SIGNING

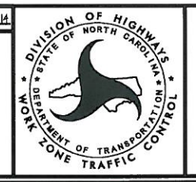


NC-16 SB ON RAMP TO
I-77 NB DETOUR SIGNING

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

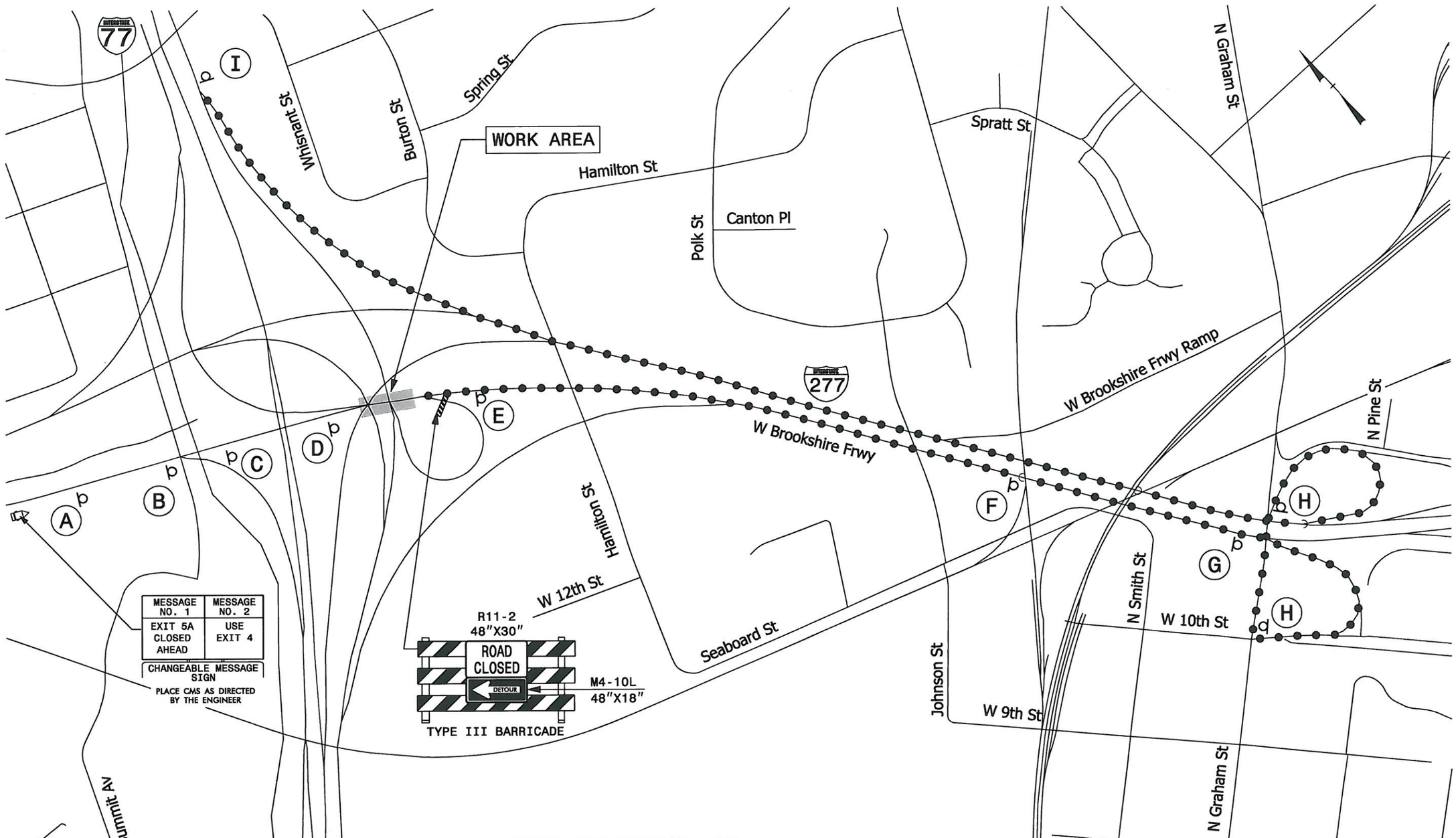
APPROVED: [signature] DATE: 01/05/14

SEAL



TRANSPORTATION
MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
DETOUR SIGNING

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-17



SEE SHEET TMP-16 FOR NC 16 NB ON RAMP TO I-77 NB DETOUR SIGNING

DETOUR ROUTE

SEE SHEET TMP-24, TMP 32 AND TMP-33 FOR NC-16 SB ON RAMP TO I-77 NB DETOUR DETAILS

PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/09/14

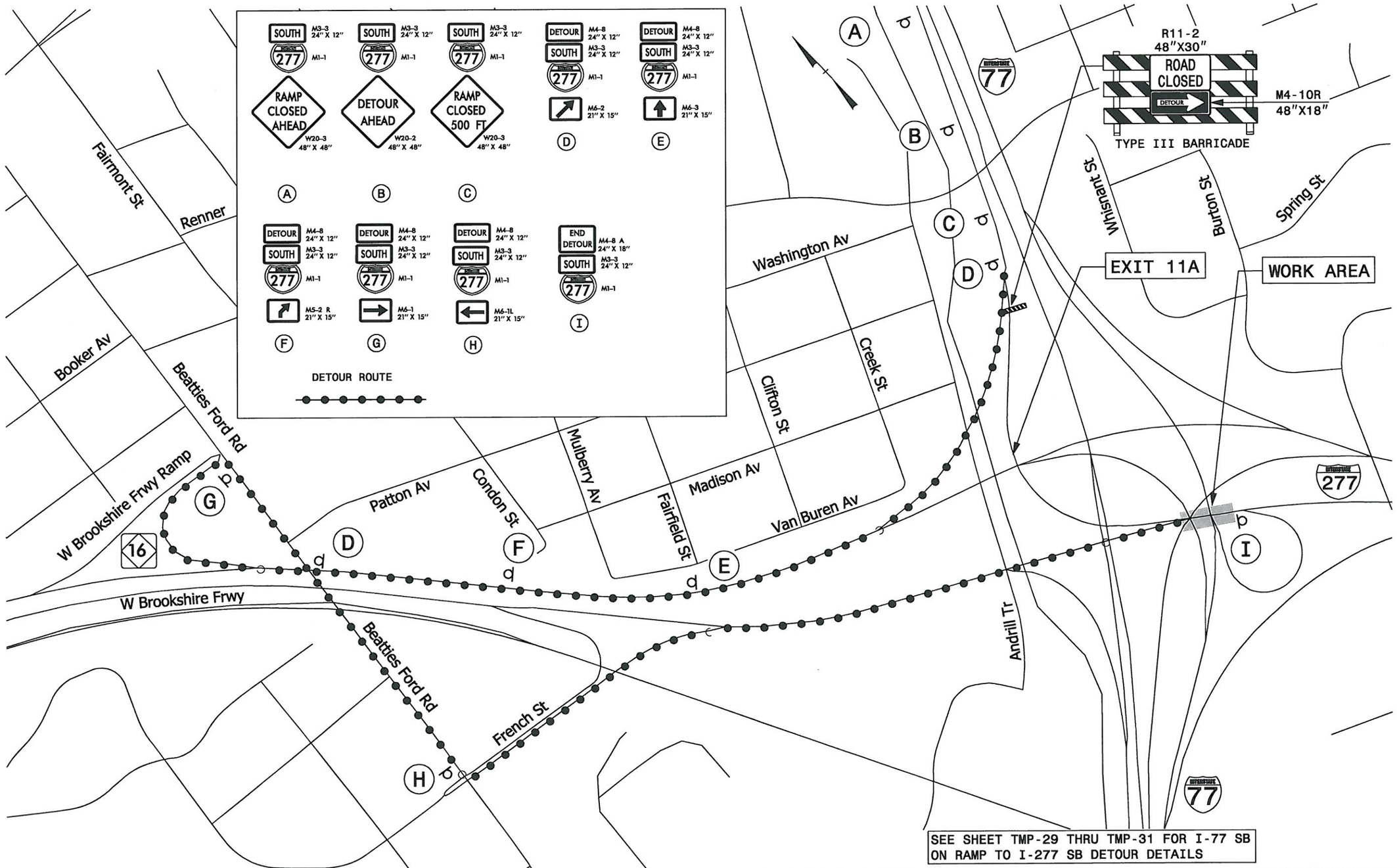
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
NC-16 SB ON RAMP
TO I-77 NB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-18



SEE SHEET TMP-29 THRU TMP-31 FOR I-77 SB ON RAMP TO I-277 SB DETOUR DETAILS

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

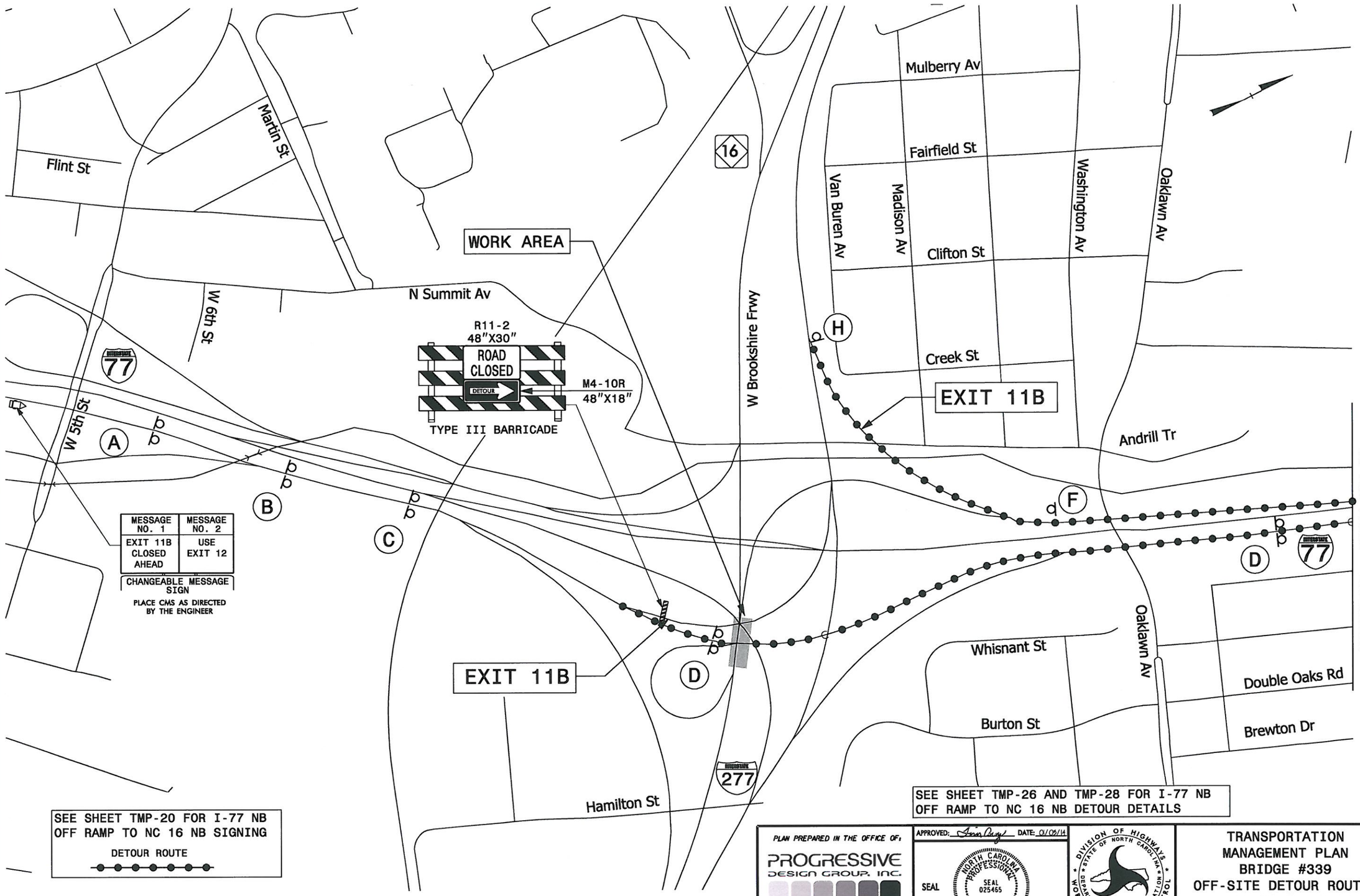
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
I-77 SB ON RAMP
TO I-277 SB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-19



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

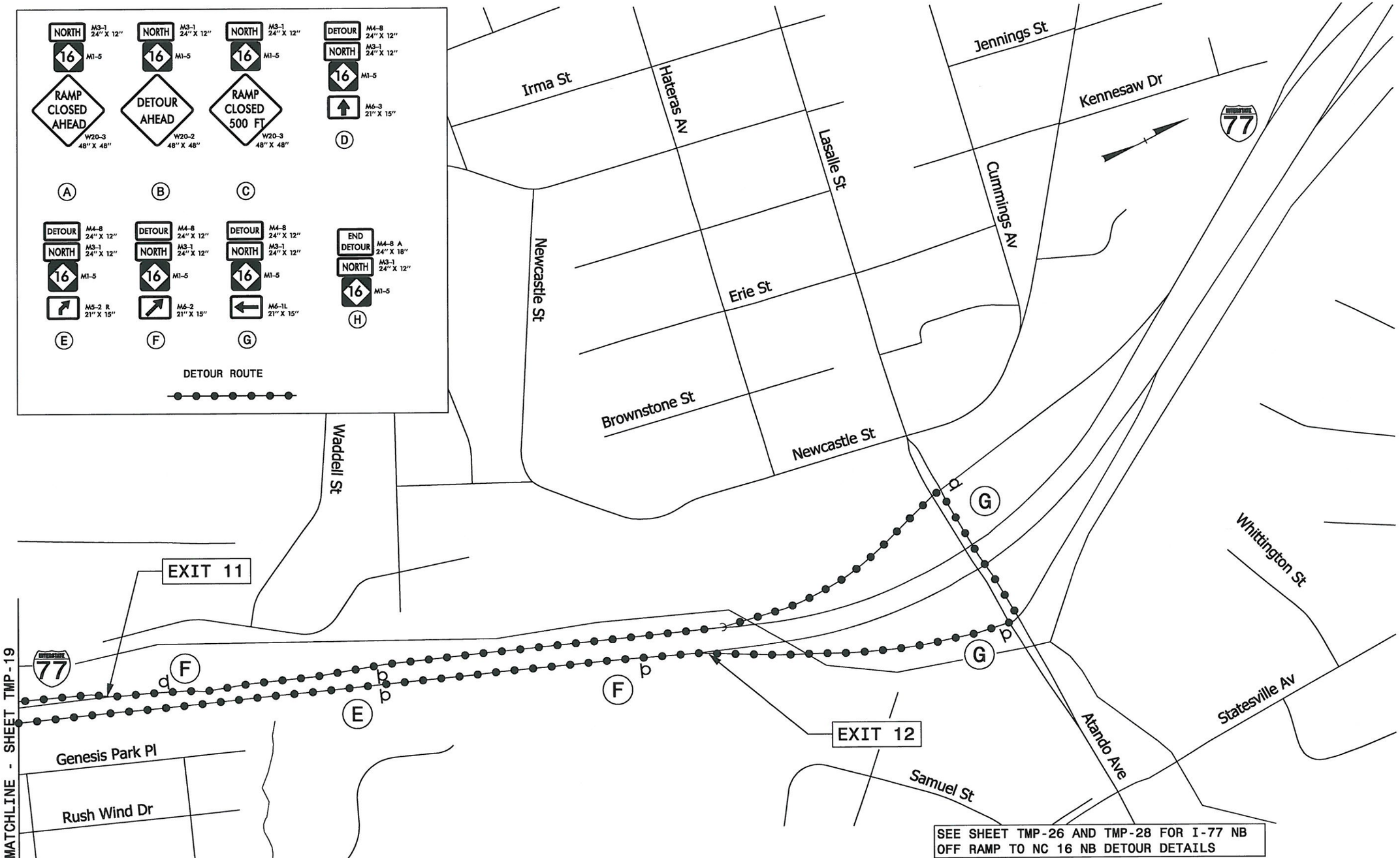
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
I-77 NB OFF RAMP
TO NC-16 NB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-20



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

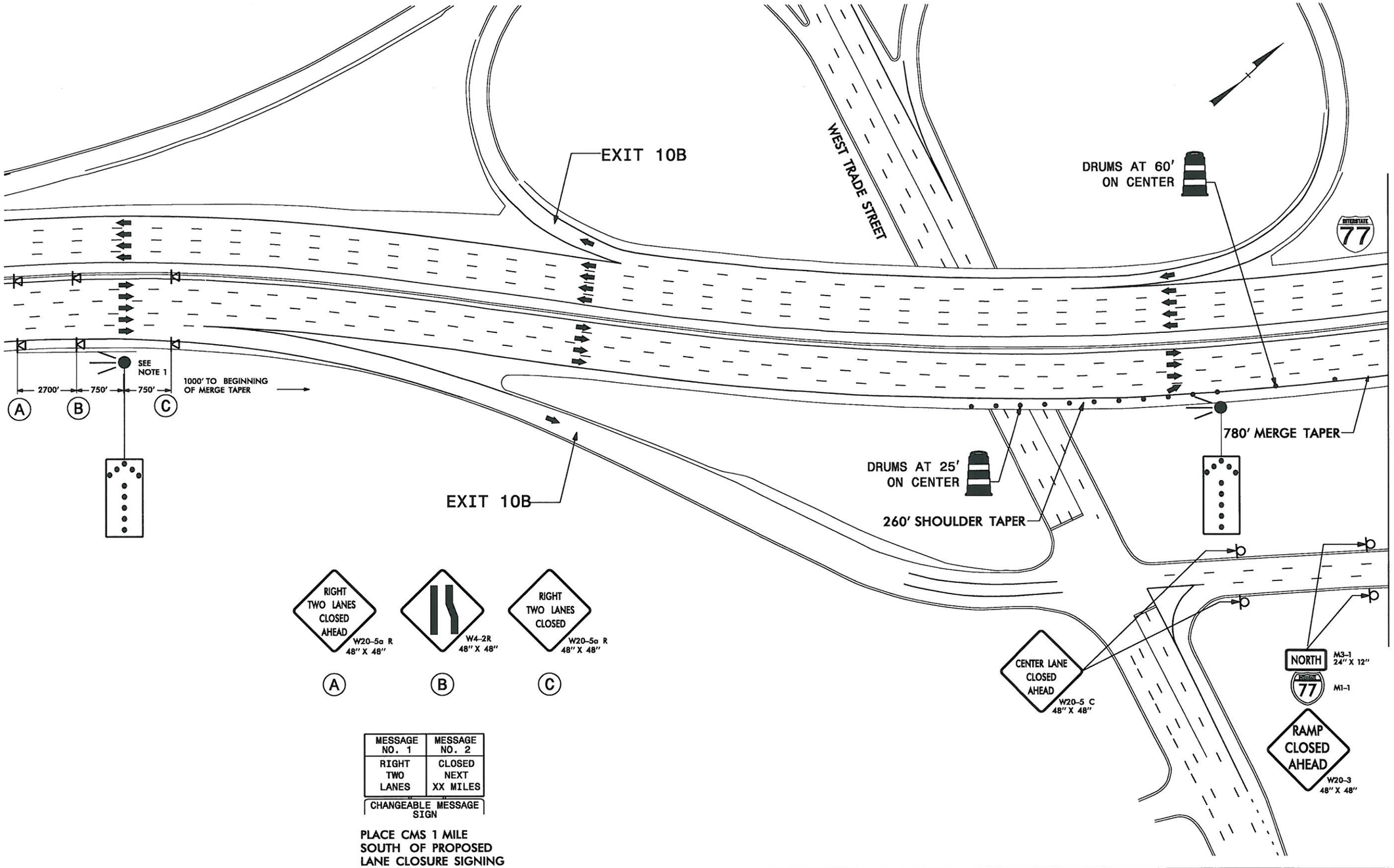
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
OFF-SITE DETOUR ROUTES
I-77 NB OFF RAMP
TO NC-16 NB

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-21



MESSAGE NO. 1	MESSAGE NO. 2
RIGHT TWO LANES	CLOSED NEXT XX MILES

CHANGEABLE MESSAGE SIGN

PLACE CMS 1 MILE SOUTH OF PROPOSED LANE CLOSURE SIGNING

NOTE 1 – PLACE DRUMS TO PROTECT FLASHING ARROW PANEL 260' SHOULDER TAPER LENGTH WITH DRUMS AT 25' ON CENTER

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

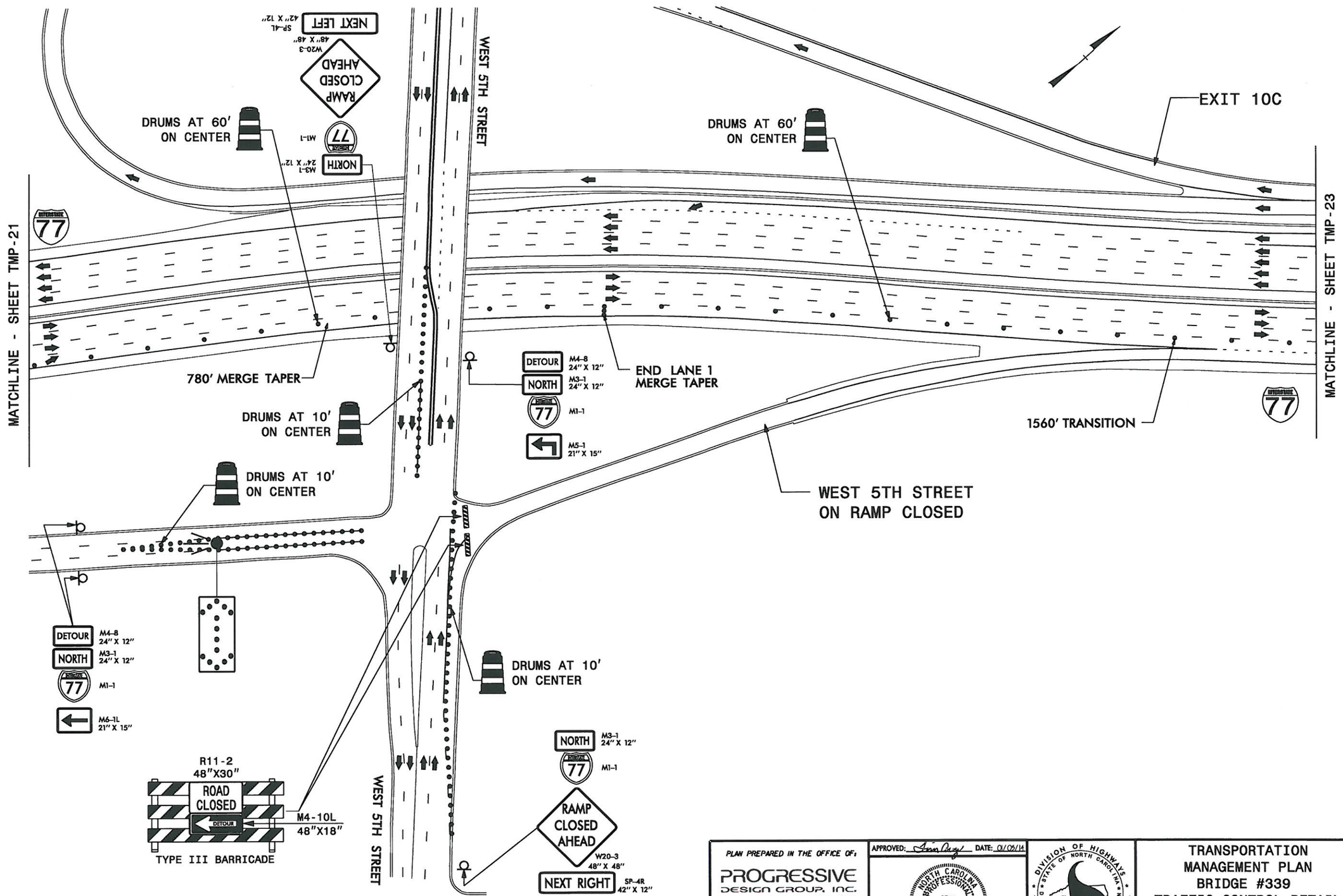
APPROVED: DATE: 01/05/14

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO RIGHT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-22



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: [signature] DATE: 01/05/14

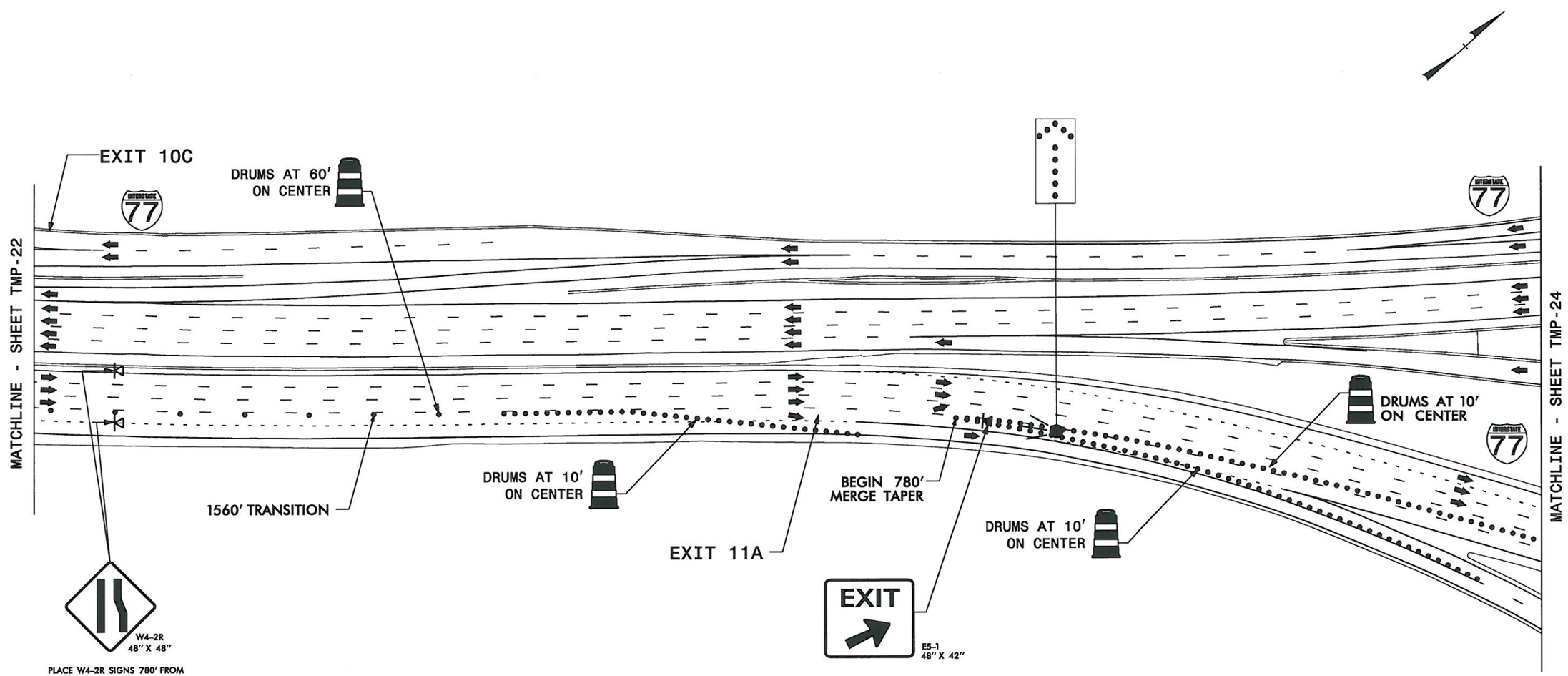
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO RIGHT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-23



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: _____ DATE: 01/05/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO RIGHT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
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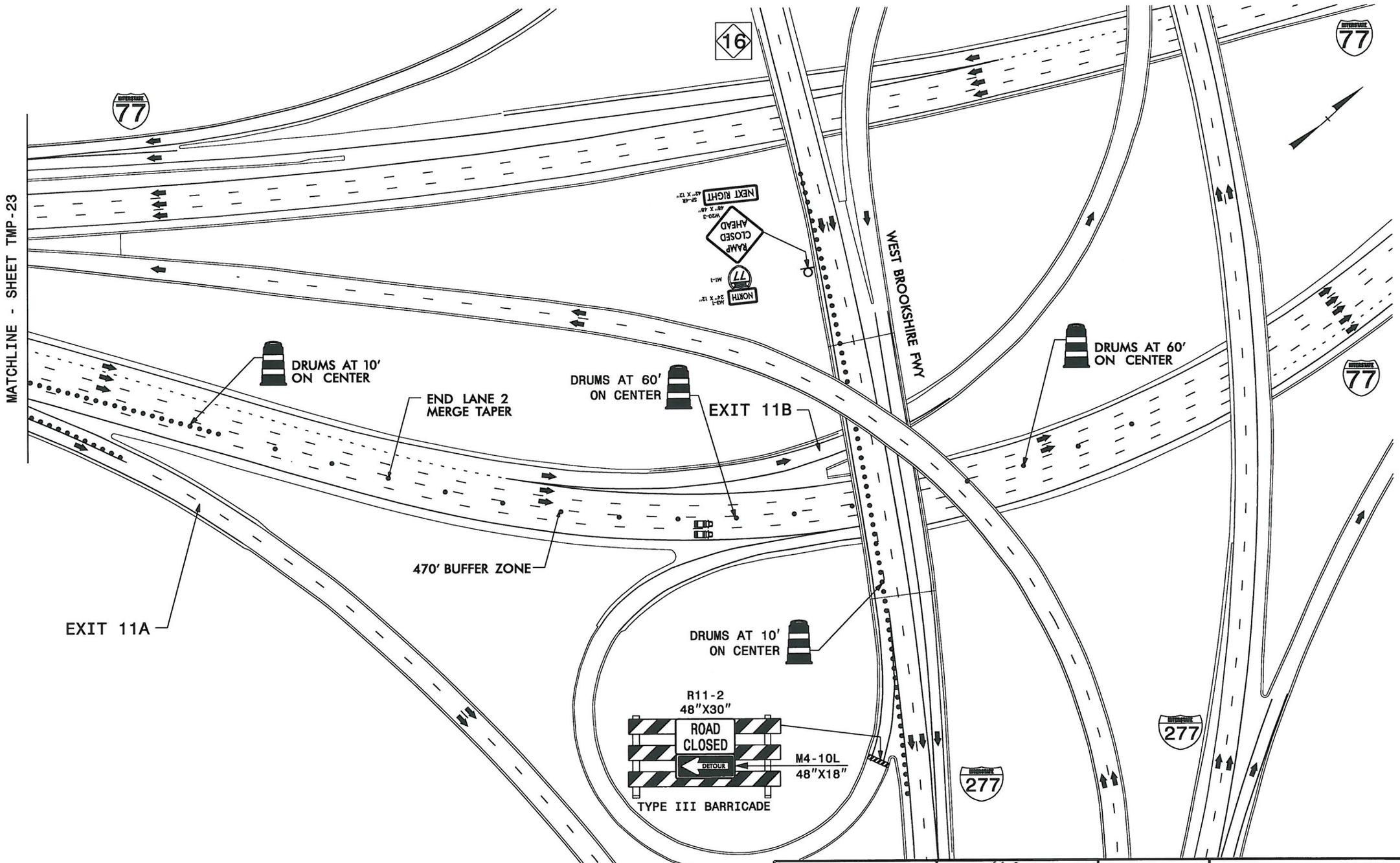


PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

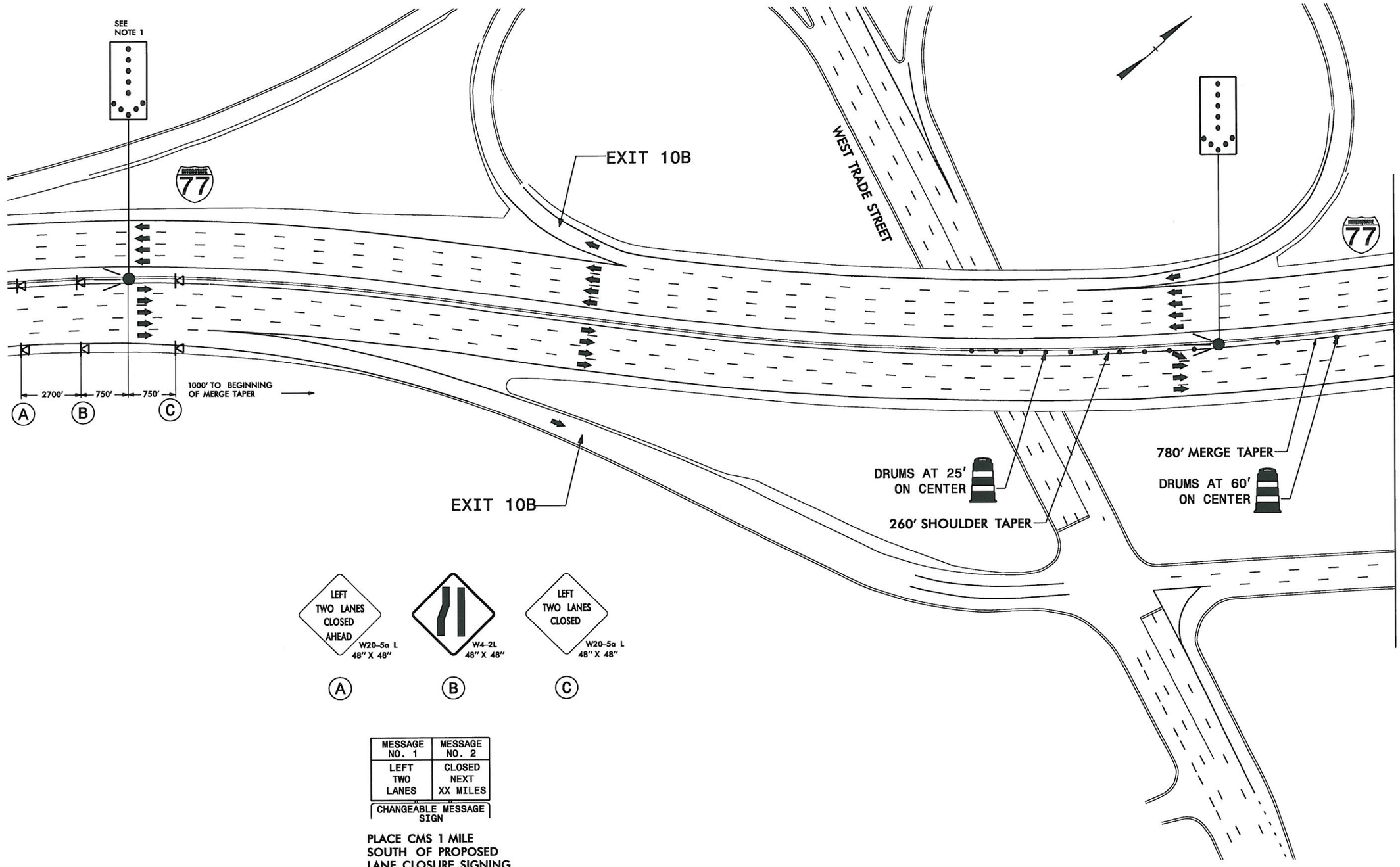
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025455 ENGINEER TIM ARE

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO RIGHT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-25



MESSAGE NO. 1	MESSAGE NO. 2
LEFT TWO LANES	CLOSED NEXT XX MILES

CHANGEABLE MESSAGE SIGN

PLACE CMS 1 MILE SOUTH OF PROPOSED LANE CLOSURE SIGNING

NOTE 1 – CONTRACTOR SHALL PLACE FLASHING ARROW BOARD AT LOCATION THAT HAS ADEQUATE SHOULDER WIDTH TO ENSURE THAT IT DOES NOT ENCROACH ON LEFT TRAVEL LANE. LOCATION MUST BE APPROVED BY THE ENGINEER. PLACE DRUMS TO PROTECT FLASHING ARROW PANEL 260' SHOULDER TAPER LENGTH WITH DRUMS AT 25' ON CENTER.

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

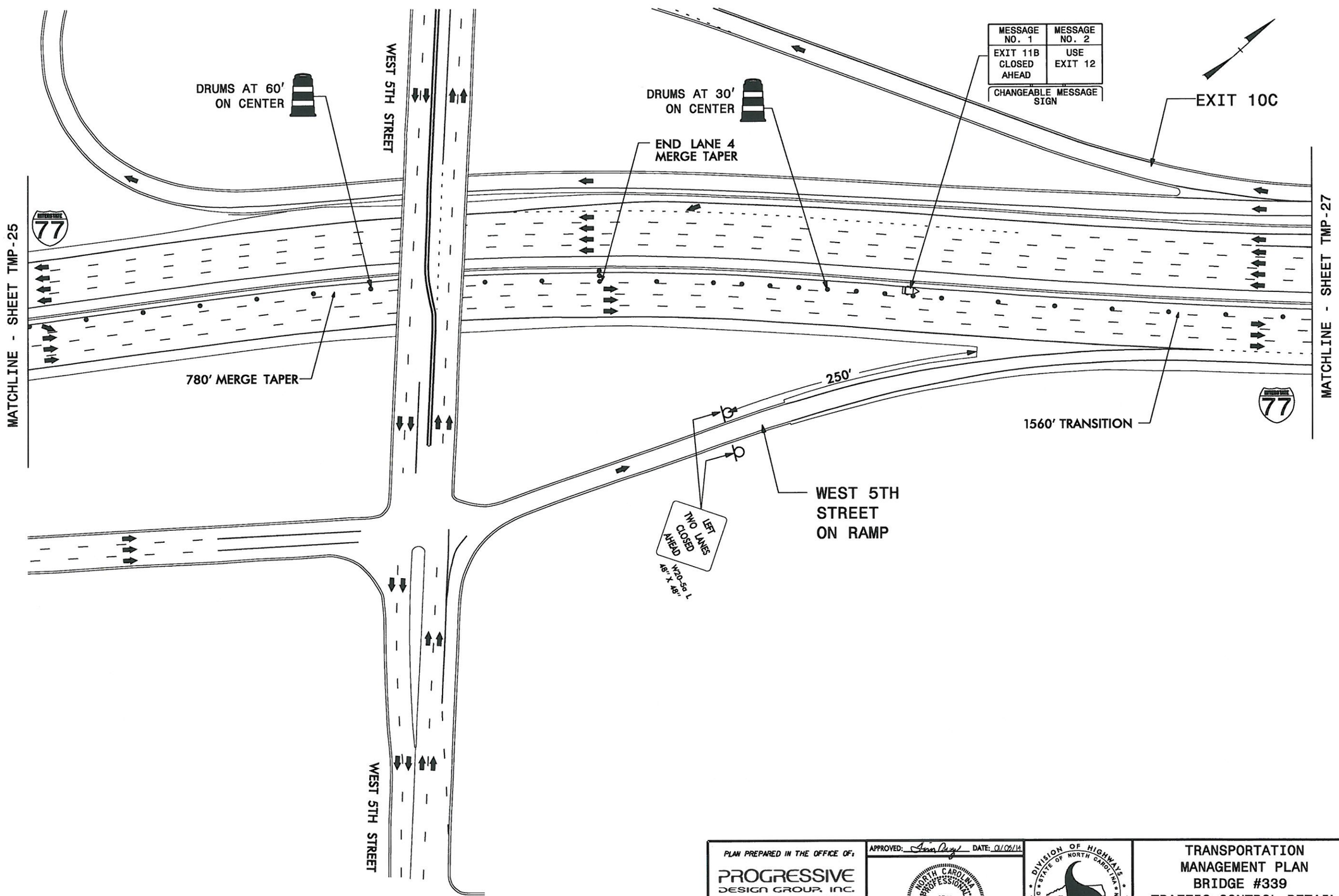
APPROVED: [signature] DATE: 01/05/14

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO LEFT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-26



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 01/05/14

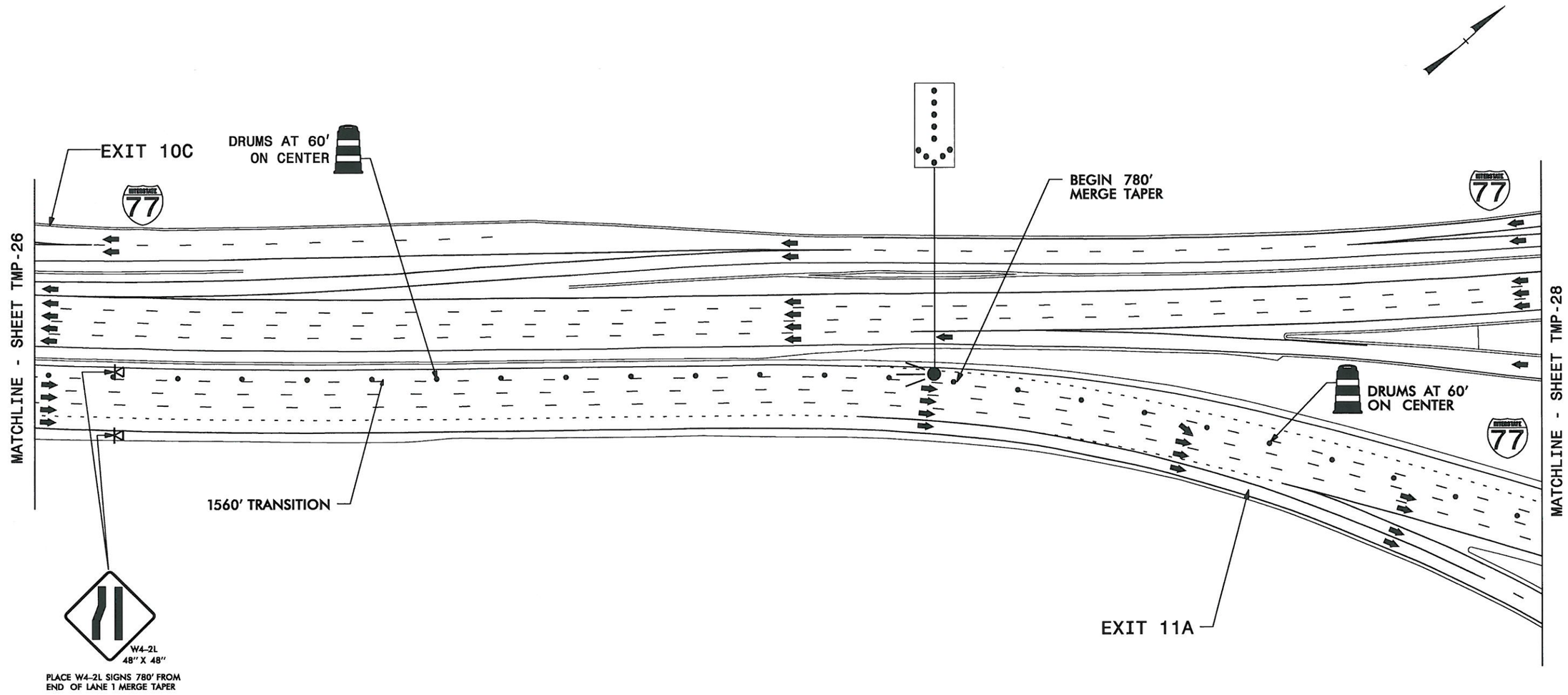
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO LEFT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-27



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

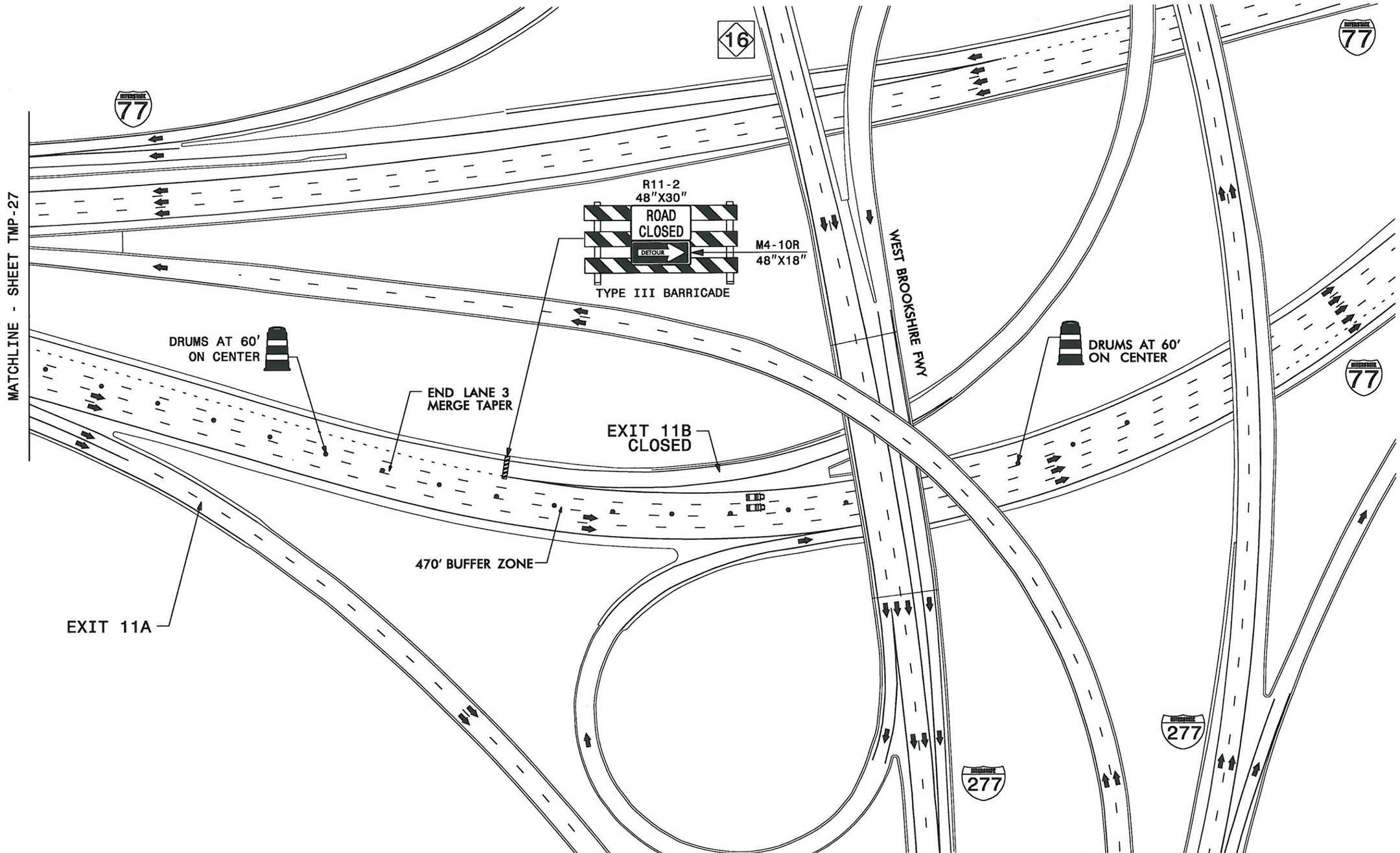
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO LEFT LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-28



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/09/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

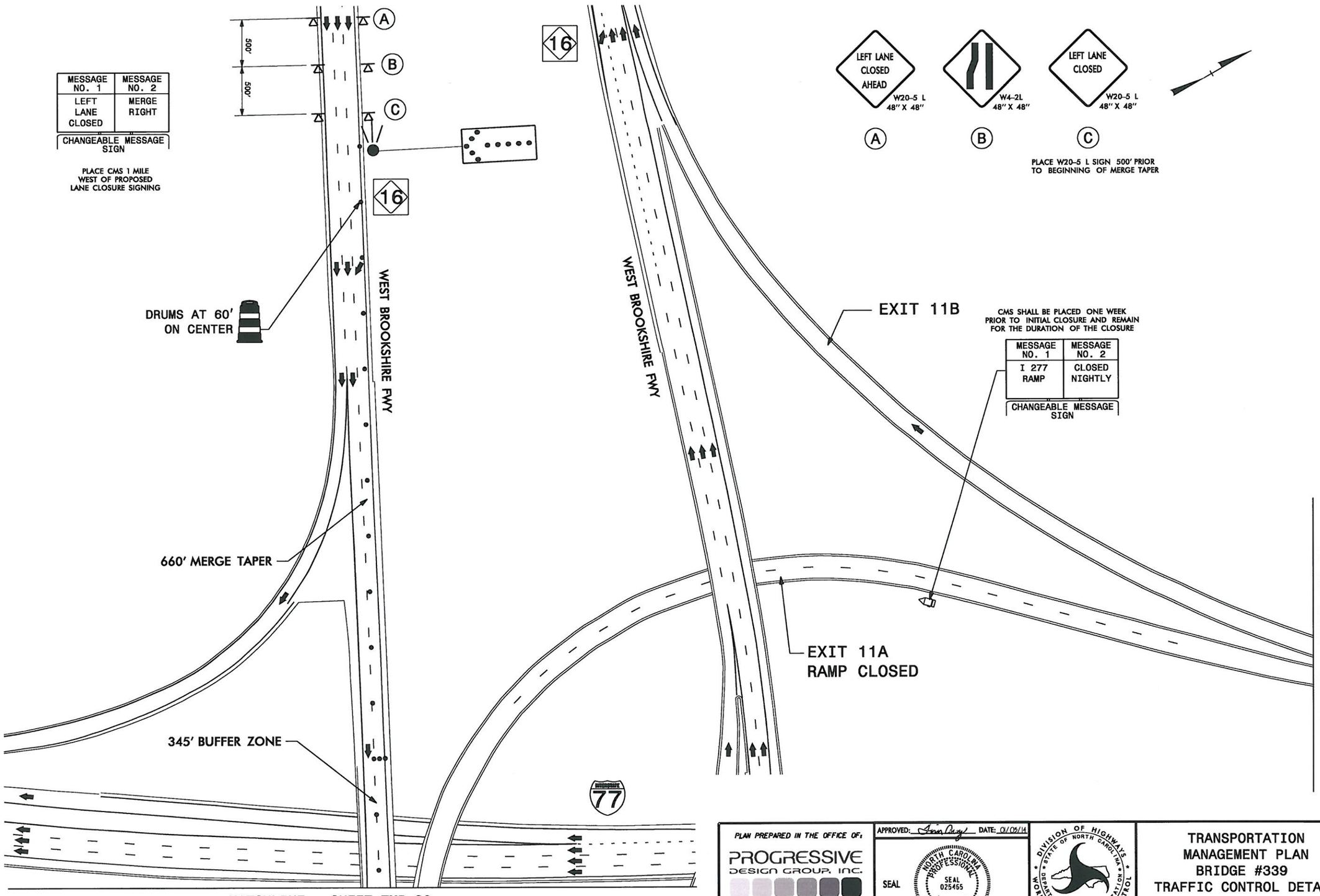
TRANSPORTATION
MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 NB TWO LEFT
LANES CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-29

MESSAGE NO. 1	MESSAGE NO. 2
LEFT LANE CLOSED	MERGE RIGHT

CHANGEABLE MESSAGE SIGN

PLACE CMS 1 MILE WEST OF PROPOSED LANE CLOSURE SIGNING



PLACE W20-5 L SIGN 500' PRIOR TO BEGINNING OF MERGE TAPER

CMS SHALL BE PLACED ONE WEEK PRIOR TO INITIAL CLOSURE AND REMAIN FOR THE DURATION OF THE CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I 277 RAMP	CLOSED NIGHTLY

CHANGEABLE MESSAGE SIGN

PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/02/14

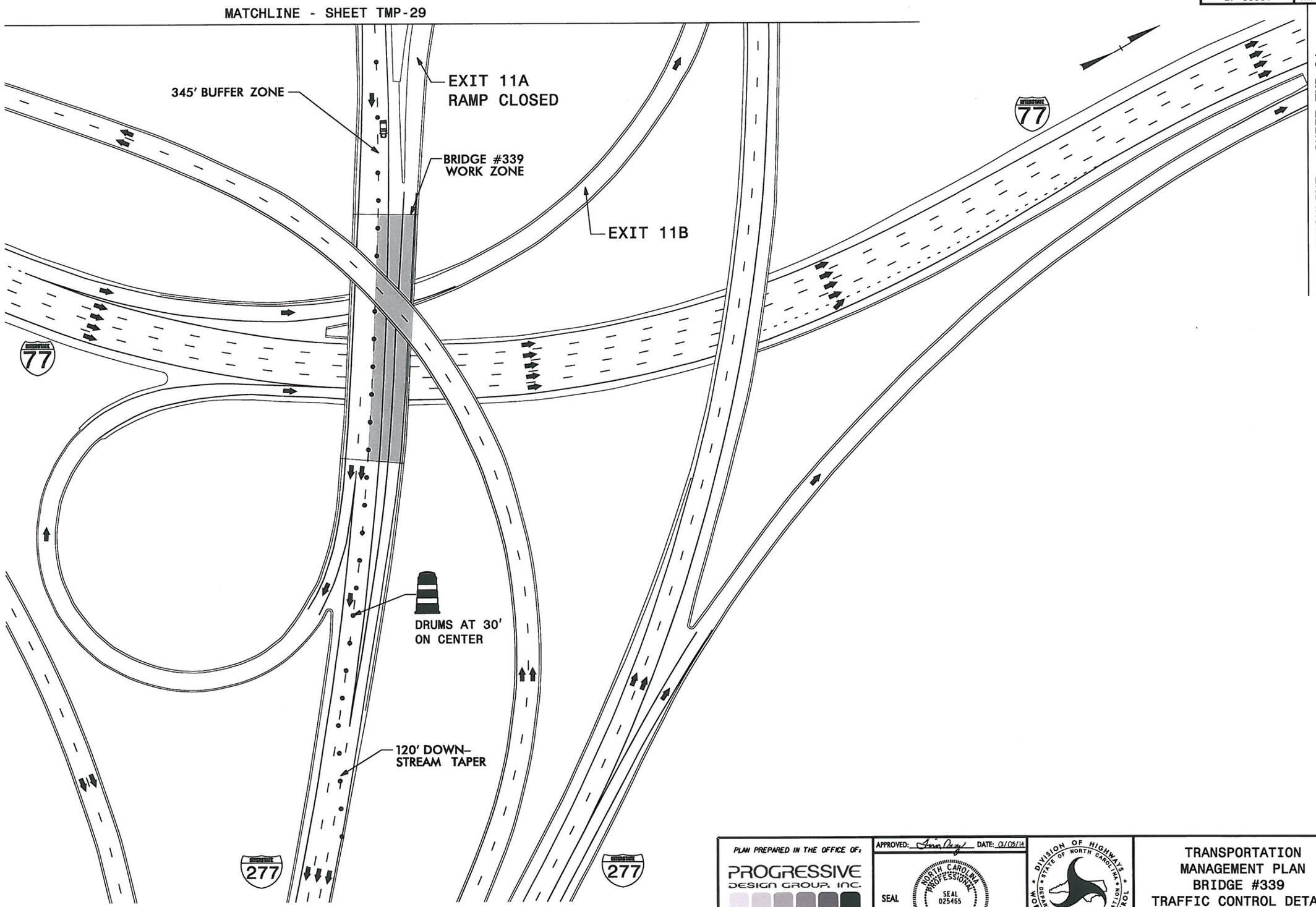
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 SB EXIT 11A CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-30



PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: Tim Arey DATE: 01/05/14

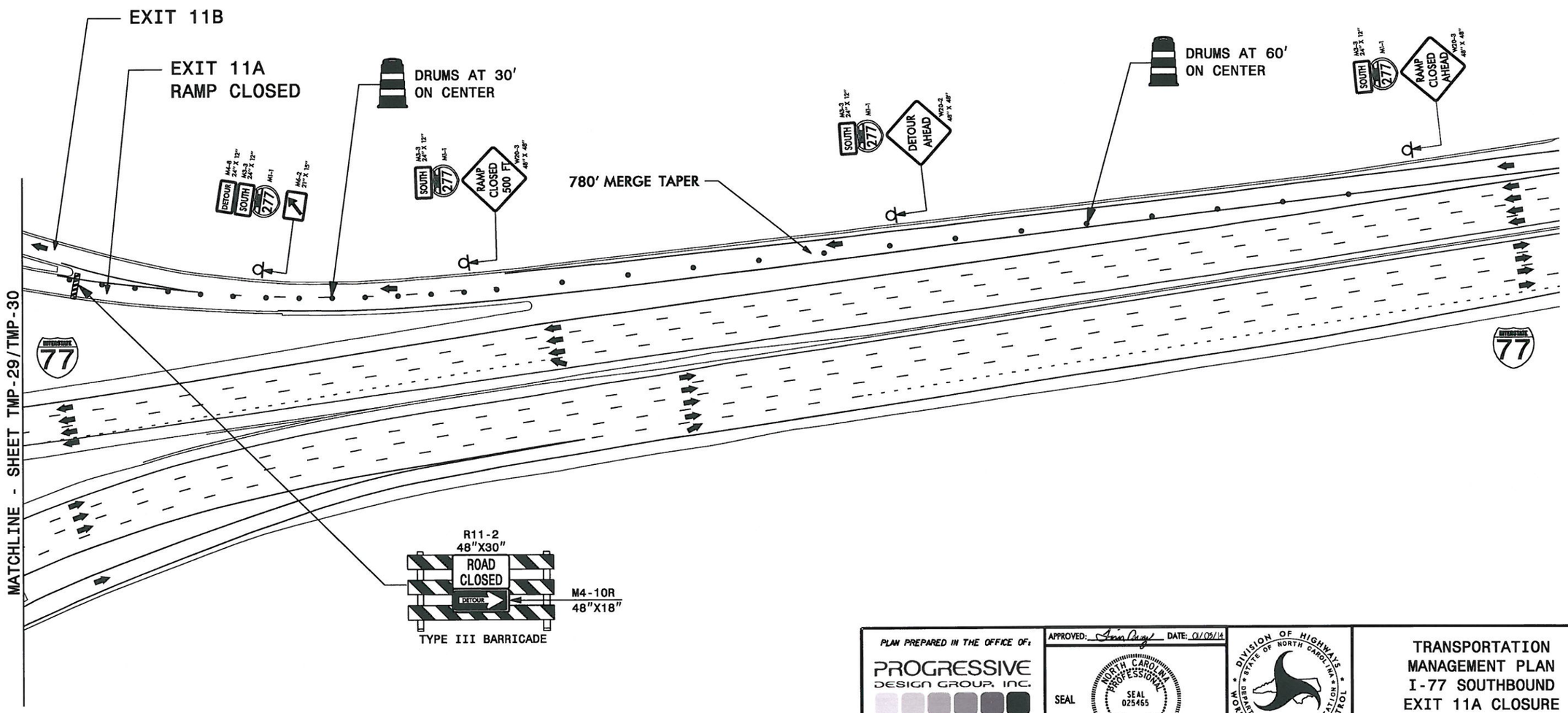
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
I-77 SB EXIT 11A CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-31



PLAN PREPARED IN THE OFFICE OF:
PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: DATE: 01/05/14

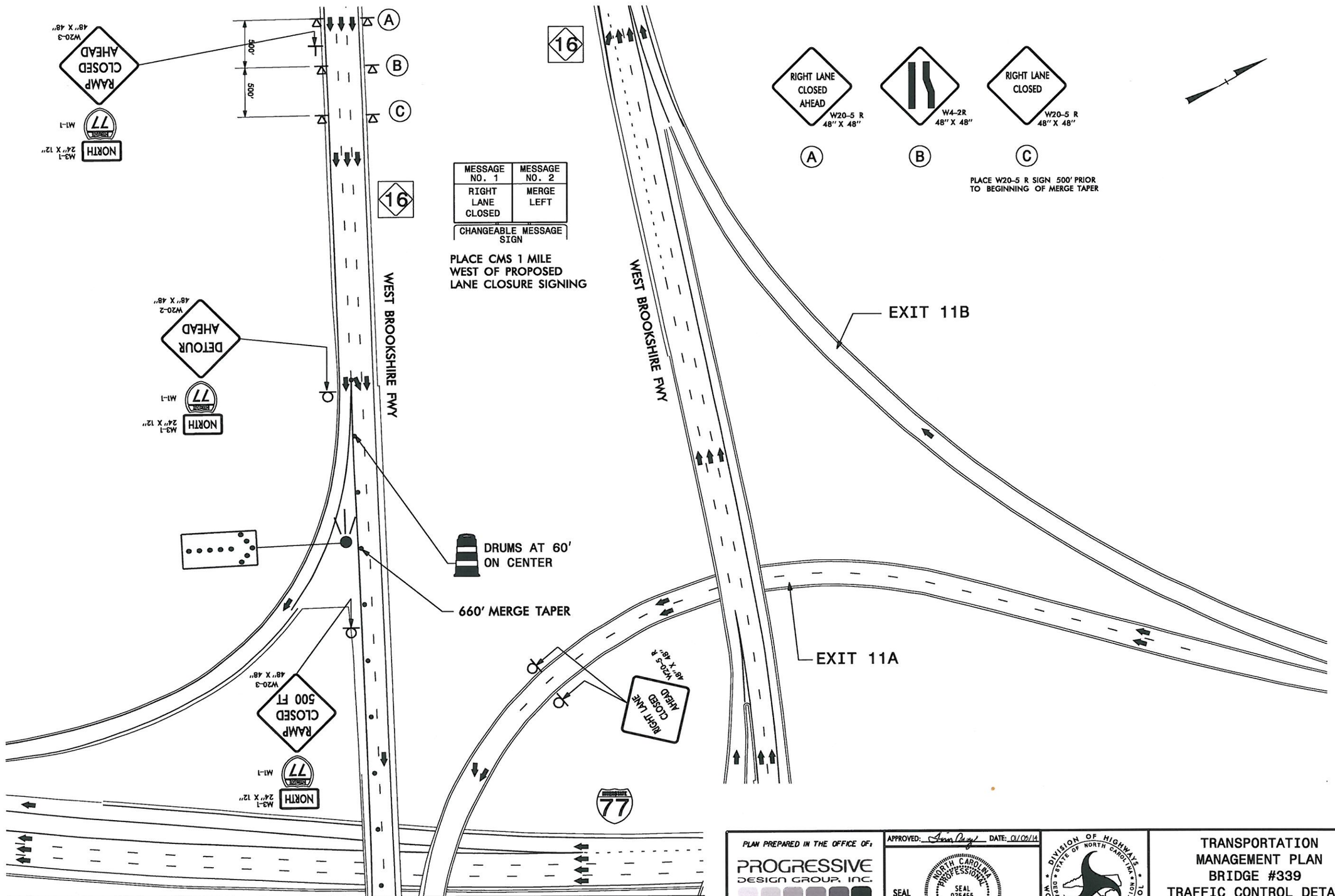
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ARE

DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

TRANSPORTATION
MANAGEMENT PLAN
I-77 SOUTHBOUND
EXIT 11A CLOSURE
BRIDGE #339 DETAIL

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-32



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APPROVED: DATE: 01/05/14

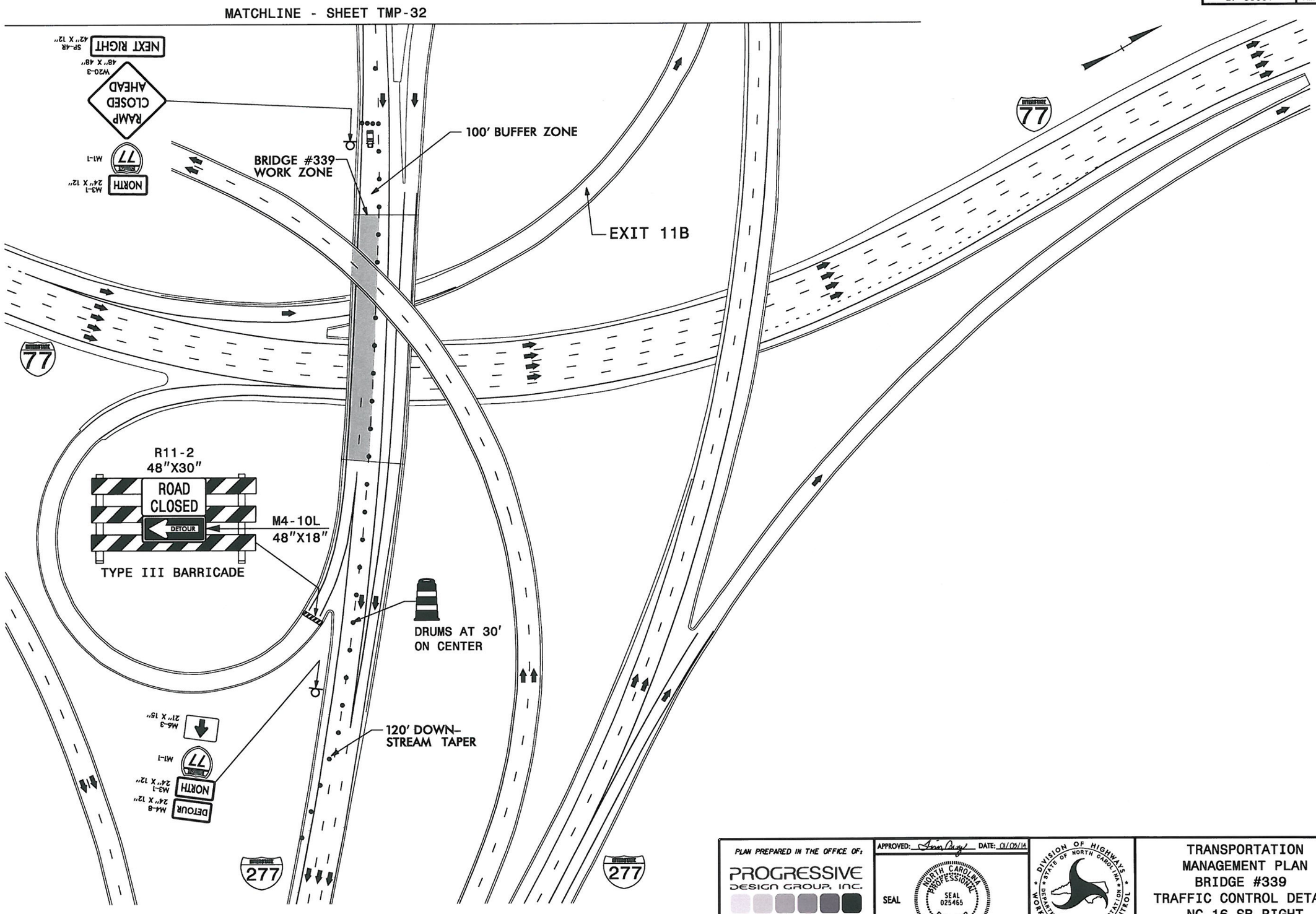
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
NC 16 SB RIGHT
LANE CLOSURE

PROJ. REFERENCE NO.	SHEET NO.
BP-5500T	TMP-33



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APPROVED: DATE: 01/05/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
BRIDGE #339
TRAFFIC CONTROL DETAIL
NC 16 SB RIGHT
LANE CLOSURE