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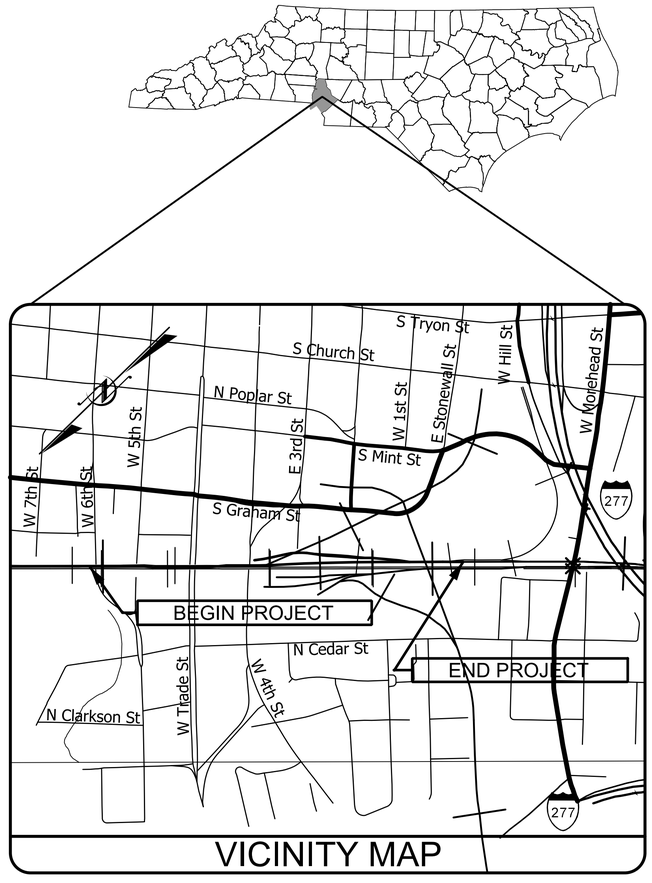
0012DEL_P28

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

MECKLENBURG COUNTY



VICINITY MAP

LOCATION: CHARLOTTE GATEWAY STATION – TRACK, STRUCTURE AND SIGNALS

TYPE OF WORK: DRAINAGE, PAVING, GRADING, STRUCTURE

NCDOT CONTACT: MATTHEW SIMMONS, P.E.
NCDOT PROJECT MANAGER

INDEX OF SHEETS

SHEET NO.
TMP-1

P-5707BA

TIP PROJECT:

R. B. EARLY, P.E. *TRAFFIC CONTROL PROJECT ENGINEER*
R. B. EARLY, P.E. *QUALITY CONTROL ENGINEER*
J. PHILLIPS *TRAFFIC CONTROL DESIGN ENGINEER*

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APPROVED Rhonda B. Early
F34CAF5AC68F48A...
DATE: 3/15/2018

SEAL

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3/15/2018
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DATE: MARCH 16, 2018

PROJECT REFERENCE NO.	SHEET NO.
P-5705BA	TMP-1A

R/W SHEET NO.

APPROVED: Rhonda B. Early
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CDOT – WORK AREA TRAFFIC CONTROL HANDBOOK

THE CHARLOTTE DEPARTMENT OF TRANSPORTATION - 2014 WORK AREA TRAFFIC CONTROL HANDBOOK ("WATCH") - IS APPLICABLE TO THIS PROJECT AND CONSIDERED A PART OF THESE PLANS.

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 JANAUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA
- REMOVAL
- INCIDENTAL STONE
- ONGOING CONSTRUCTION
- WEDGE / WIDEN (USING FLAGGERS)
- TEMPORARY PAVEMENT

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

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 STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
ALL ROADS	MONDAY THRU SUNDAY 5:00 AM - 9:00 PM	30 MINUTES BRIDGE DEMO & GIRDER INSTALL

LANE CLOSURE REQUIREMENTS

B) 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.

C) 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 REMAINS WITHIN THE CLOSED TRAVEL LANE.

TRAFFIC PATTERN ALTERATIONS

D) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

E) 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.

F) 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.

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

H) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

I) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

TRAFFIC BARRIER (CONTINUED)

J) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

K) 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 OPENED TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES), AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

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

MISCELLANEOUS

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

O) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION, AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT AND 1000 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

P) COORDINATE WITH ENGINEER FOR APPROPRIATE DETOUR SIGNING IN THE EVENT THAT TRADE STREET IS CLOSED FOR CONSTRUCTION ON ADJACENT PROJECT.

Q) PRIOR TO DISTURBING EXISTING MARKINGS, CONTRACTOR SHALL RECORD LOCATION OF EXISTING MARKINGS.

R) THE CONTRACTOR SHALL PLACE PROPOSED MARKING IN EXISTING LOCATION UNLESS OTHERWISE NOTED IN THE PAVEMENT MARKING PLANS.

S) CITY OF CHARLOTTE TO COMPLETE PERMANENT REMOVAL OF PARKING METERS PRIOR TO PROJECT. COORDINATE TEMPORARY REMOVAL & TEMPORARY COVERING OF EXISTING PARKING METERS WITH THE CITY OF CHARLOTTE AT LEAST 14 DAYS IN ADVANCE. (NOTIFY JIMMY RHYNE AT 704-336-3905.)

T) THE CONTRACTOR SHALL PROVIDE TWO (2) CHANGEABLE MESSAGE BOARDS TO BE USED AT THE ENGINEER'S DISCRETION.

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R/W SHEET NO.	

APPROVED: Rhonda B. Early
DocuSigned by:
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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THESE NOTES MUST APPEAR ON ANY TRAFFIC CONTROL PLAN

A. Street space is at a minimum so no more space should be used for construction or maintenance work than is absolutely necessary. Through barricading and channelization, the remaining street space is to be used to carry the traffic around the work area in the best way possible under prevailing conditions.

B. Traffic control devices shall be set up prior to the start of construction or maintenance operations, and shall be removed or relocated as the work is finished or work conditions change. The agency doing the work shall patrol the work site as required to ensure that all traffic control devices are in place and operating at all times.

C. All traffic control signs for the work area shall be reflectorized. The reflective materials used shall be equal to or better than the Type 1, Level A reflective sheeting requirements in Section 633 of the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-74).

D. At night, adequate barricades with reflectorized material and lights are required to call attention to and to indicate the actual location of obstructions and hazards.

E. When not in use during work hours or construction inactivity, equipment shall be parked a minimum of 10' away from the travel lane in such a manner as to not create a sight distance problem for motorists.

F. The minimum width for temporary travel lanes is 10'; however, a 12' lane is advisable and should be provided whenever possible.

G. Whenever traffic must be routed across the centerline the two directions of traffic must be physically separated. Traffic cones can be effectively used for this purpose during daylight hours; reflectorized drums must be used at night.

H. Traffic shall not be routed across centerline with cones or drums during non-working hours. Contractor must be on site or change pavement marking appropriately.

I. Generally, the peak flow of traffic occurs in Charlotte between the hours of 7-9 a.m. and 4:30-6:30 p.m., (4-6 p.m. in the CBD) Monday through Friday. During these hours construction activity that involves a lane closure will not be allowed on thoroughfare streets except in emergency situations or with approval from the Charlotte Department of Transportation.

J. The agency doing the work shall provide flaggers and/or Police control when required. Contractor may also be required to provide a uniformed officer to control traffic when working in and around a signalized intersection.

K. Every attempt shall be made to schedule and expedite the work to cause the least inconvenience to the traveling public.

L. In situations not covered in this design, the protection of the traveling public and the protection of the workers on site will dictate the measures to be taken consistent with the City of Charlotte Work Area Traffic Control Handbook (WATCH).

M. The contractor, utility company, or governmental agency involved in the work shall notify the Charlotte Department of Transportation (Jimmy Rhyne at 704-336-3905) of the construction start date and any major work where the number of travel lanes are reduced [Continued next column] from normal conditions or the street is required to be closed. Except in emergencies, the following notification is required:
- *Construction start date - 5 working days in advance
- *Closing 1 or more travel lanes during Peak Travel Times - 5 working days prior to the scheduled work
- *Closing a street - 10 working days prior to the scheduled work.

This lead-time is necessary for planning and notifying the public of expected changes in the normal traffic conditions.

N. Where complete street closure is necessary, the Department of Transportation will coordinate closure of the street and, if necessary, fully sign a detour route.

O. The City Engineer or Director of the Department of Transportation or their representatives are authorized to stop any construction or maintenance activity which is not properly signed and barricaded as required by this standard, the WATCH, and/or the MUTCD until such requirements are met.

P. This design standard cannot be used for all roadway construction situations. it is intended only to be used as a guideline. Specific situations may require engineering judgment in the placement of traffic control devices because of limited vertical and/or horizontal sight distance.

Q. When personnel and/or equipment are within 2' of the edge of an open travel lane, the contractor shall refer to the WATCH for proper lane closure.

R. Operational signs are generally mounted on portable supports. These are usually used for short-term operations to warn and guide traffic. Advanced warning signs (Construction Ahead) shall be mounted on stationary supports seven days prior to the beginning of construction of the roadway.

S. All drums shall be ballasted in such a manner that they will be stable under wind and vehicle action. Ballasting shall be done with sandbags or other yielding material situated in the base of the drums.

T. Construction work shall not be allowed on both sides of the road simultaneously within the same area, unless the roadway is median divided.

U. At the end of each work day the contractor shall backfill up to the edge and elevation of the existing pavement areas within 2 feet of an open travel lane that include a drop off of more than 3 inches in accordance with the WATCH (see Detail)

V. Pavement markings are to be installed by the contractor. Pre-lines must be approved by CDOT prior to placement of the pavement markings. The contractor shall notify Jimmy Rhyne (704-336-3905) of CDOT 5 working days in advance of placing the pre-lines.

W. Traffic Signal work is to be performed by CDOT. The contractor shall notify Jimmy Rhyne (704-336-3905) of CDOT at least 60 days in advance of needed signal work. If a traffic signal uses steel poles and/or mast arms, at least 90 days' advance notice is required.

BARRICADE WARNING LIGHTS

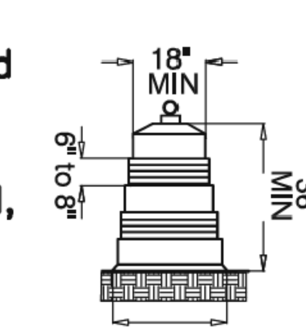
	Low Intensity Type A	High Intensity Type B	Steady Burn Type C
Hours of Operation	Dusk to Dawn	24 Hrs/Day	Dusk to Dawn
Minimum Beam Candle Power **	-	-	2 Candles
Minimum Effective Intensity **	4.0 Candelas	35 Candelas	-
Flash Duration	10%	8%	Constant
Flash Rate/Minute ***	55 to 75	55 to 75	Constant
Lens Directional Faces	1 or 2	1	1 or 2

** These values must be maintained within a full 9 degrees on each side of the vertical axis, and 5 degrees above and 5 degrees below the horizontal axis.

*** Length of time that instantaneous intensity is equal to or greater than effective intensity.

TYPE C STEADY BURN WARNING LIGHTS are most commonly mounted on separate portable supports or on Type I or Type II barricades and are inteded to continually warn the driver that he is approaching or adjacent to a hazardous area. Barricade warning lights are portable, lens directed, enclosed lights. The color of the light emitted shall be yellow.

Barricade warning lights shall be in accordance with the requirements of the Institute of Transportation Engineers' (ITE) Standard for Flashing and Steady Burn Barricade Warning Lights (1971).



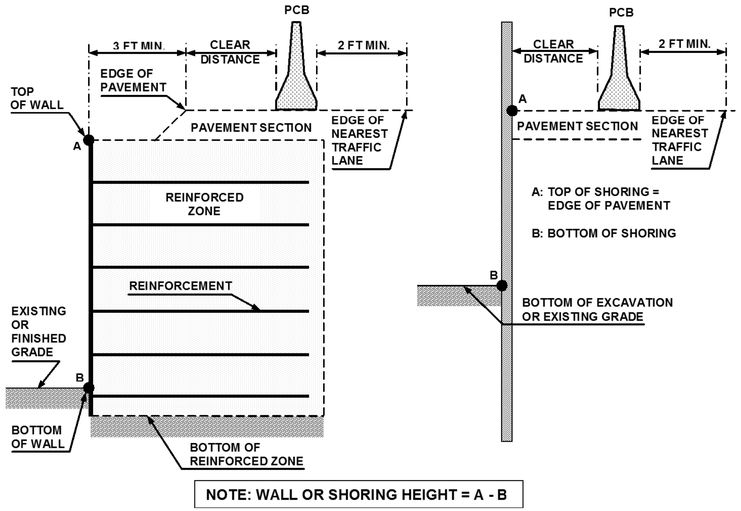
21" TO 24"
NON-METALLIC DRUM

Connecting Charlotte

Charlotte Department of Transportation

WORK ZONE TRAFFIC CONTROL NOTES

DATE	REVISION
7/29/04	INITIAL VERSION
11/15/04	CHANGED NOTE "M", ADDED NOTES "V" & "W"



NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).

3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.

9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

PROJ. REFERENCE NO.	SHEET NO.
P-5705BA	TMP-2

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

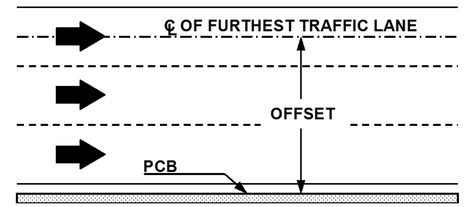


FIGURE B

APPROVED: DATE: 3/30/2018

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

0012DEL_P28

SIXTH STREET DETOUR DETAIL

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LEGEND
- SIGNS
- TYPE III BARRICADE
- TYPE III BARRICADE W/ SIGN(S)
- DETOUR ROUTE
- ORIGINAL PATTERN
- FLASHING ARROW PANEL

NOTES:
1. REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
2. USE 200' SIGN SPACING WHEN POSSIBLE.
3. IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.

(A) ROAD CLOSED AHEAD — W20-3, 48" X 48"

(B) DETOUR AHEAD — W20-2, 48" X 48"

(C) DETOUR (left arrow) — C21L (M4-9L), 30" X 24"

(D) DETOUR (right arrow) — C21R (M4-9R), 30" X 24"

(E) DETOUR (left turn arrow) — M4-9LA, 30" X 24"

(F) DETOUR (right turn arrow) — M4-9RA, 30" X 24"

(G) END DETOUR — M4-8 A, 24" X 18"

(7) R9-9, 24" X 12" — SIDEWALK CLOSED — TYPE III BARRICADE

(1) TYPE III BARRICADE

(2) M4-9b, 30" X 24" — DETOUR (left arrow) — TYPE III BARRICADE

(3) M4-9b, 30" X 24" — DETOUR (right arrow) — TYPE III BARRICADE

(4) R11-2, 48" x 30" — ROAD CLOSED — TYPE III BARRICADE

(5) R11-4, 60" x 30" — ROAD CLOSED TO THRU TRAFFIC; M4-10L, 48" x 18" DETOUR — TYPE III BARRICADE

(6) R11-4, 60" x 30" — ROAD CLOSED TO THRU TRAFFIC; M4-10R, 48" x 18" DETOUR — TYPE III BARRICADE

SIXTH STREET DETOUR ALTERNATE DETAIL
(FOR USE IF TRADE STREET IS CLOSED)

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Ⓐ ROAD CLOSED AHEAD — W20–3, 48″ X 48″

Ⓑ DETOUR AHEAD — W20–2, 48″ X 48″

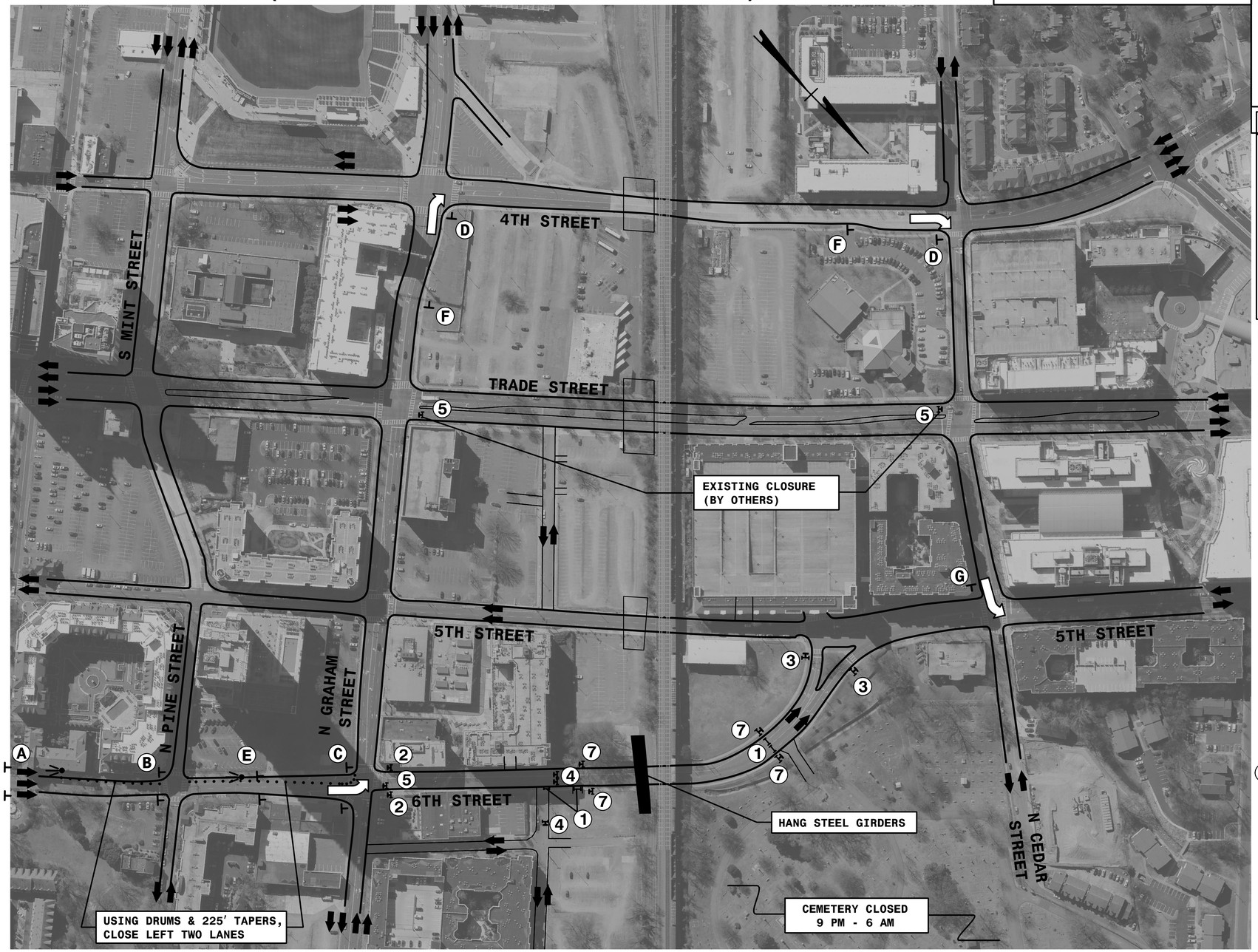
Ⓒ DETOUR — C21L (M4–9L), 30″ X 24″

Ⓓ DETOUR — C21R (M4–9R), 30″ X 24″

Ⓔ DETOUR — M4–9LA, 30″ X 24″

Ⓕ DETOUR — M4–9RA, 30″ X 24″

Ⓖ END DETOUR — M4–8 A, 24″ X 18″



⑦ R9-9, 24″ X 12″ — SIDEWALK CLOSED — TYPE III BARRICADE

① TYPE III BARRICADE

② M4-9b, 30″ X 24″ — DETOUR ← — TYPE III BARRICADE

③ M4-9b, 30″ X 24″ — DETOUR → — TYPE III BARRICADE

④ R11-2, 48″ x 30″ — ROAD CLOSED — TYPE III BARRICADE

⑤ R11-4, 60″ x 30″ — ROAD CLOSED TO THRU TRAFFIC — DETOUR ← — M4-10L, 48″ x 18″ — TYPE III BARRICADE

⑥ R11-4, 60″ x 30″ — ROAD CLOSED TO THRU TRAFFIC — DETOUR → — M4-10R, 48″ x 18″ — TYPE III BARRICADE

⊤	SIGNS
I	TYPE III BARRICADE
H	TYPE III BARRICADE W/ SIGN(S)
	DETOUR ROUTE
	ORIGINAL PATTERN
	FLASHING ARROW PANEL

NOTES:
1. REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
2. USE 200′ SIGN SPACING WHEN POSSIBLE.
3. IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.
4. SEE GENERAL NOTE P.

0012DEL_P28

FIFTH STREET DETOUR DETAIL

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: MARCH 16, 2018

PROJECT REFERENCE NO.	SHEET NO.
P-5705BA	TMP-2C
R/W SHEET NO.	

APPROVED: Rhonda B. Early
DATE: 3/15/2018

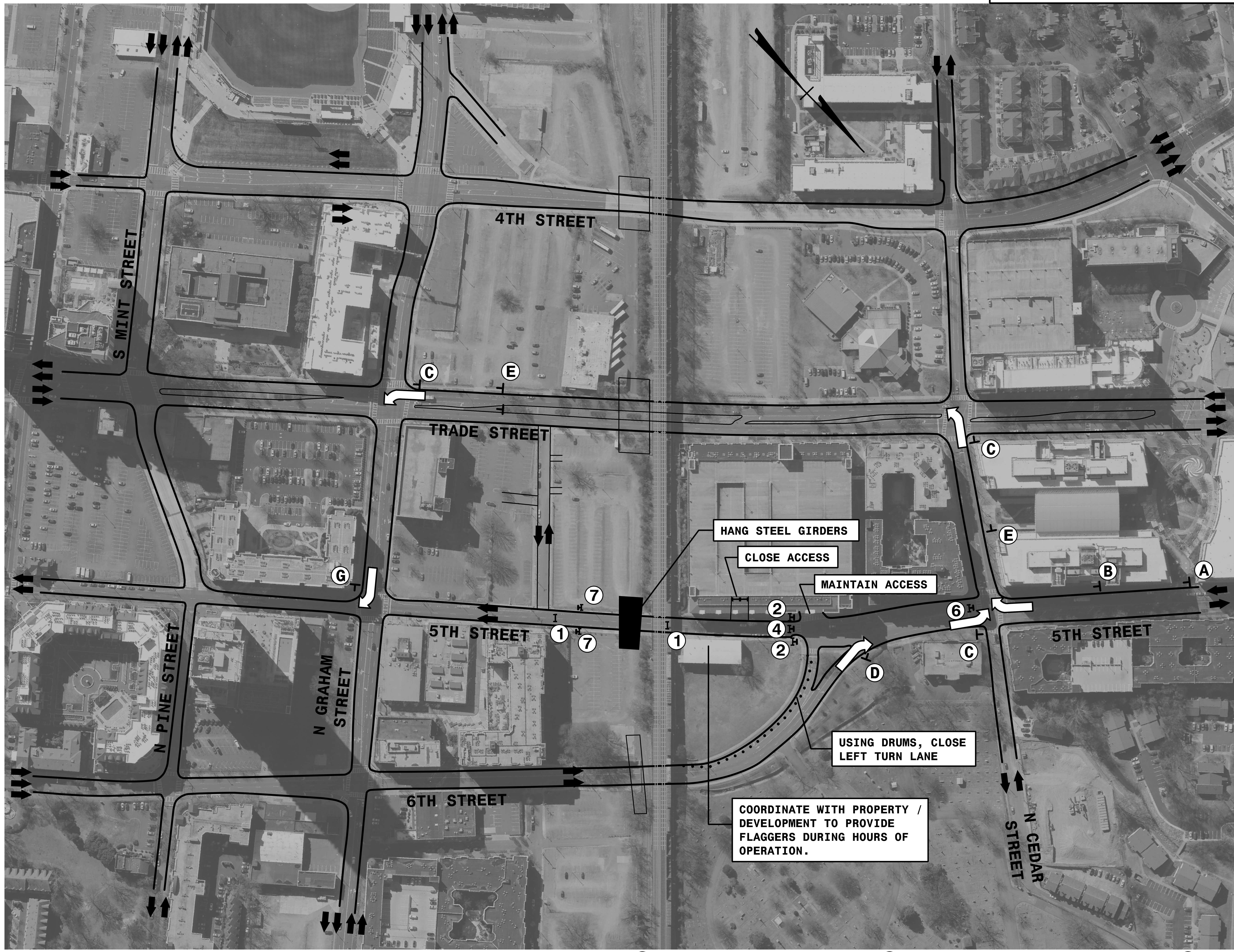
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023521 RHONDA B. EARLY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LEGEND

- SIGNS
- TYPE III BARRICADE
- TYPE III BARRICADE W/ SIGN(S)
- DETOUR ROUTE
- ORIGINAL PATTERN

NOTES:
1. REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
2. USE 200' SIGN SPACING WHEN POSSIBLE.
3. IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.
4. SEE GENERAL NOTE P.



(A) ROAD CLOSED AHEAD — W20-3, 48" X 48"

(B) DETOUR AHEAD — W20-2, 48" X 48"

(C) DETOUR ← — C21L (M4-9L), 30" X 24"

(D) DETOUR → — C21R (M4-9R), 30" X 24"

(E) DETOUR (left turn arrow) — M4-9LA, 30" X 24"

(F) DETOUR (right turn arrow) — M4-9RA, 30" X 24"

(G) END DETOUR — M4-8 A, 24" X 18"

(1) TYPE III BARRICADE

(2) M4-9b, 30" X 24" — DETOUR ← — TYPE III BARRICADE

(3) M4-9b, 30" X 24" — DETOUR → — TYPE III BARRICADE

(4) R11-2, 48" x 30" — ROAD CLOSED — TYPE III BARRICADE

(5) R11-4, 60" x 30" — ROAD CLOSED TO THRU TRAFFIC; M4-10L, 48" x 18" — DETOUR — TYPE III BARRICADE

(6) R11-4, 60" x 30" — ROAD CLOSED TO THRU TRAFFIC; M4-10R, 48" x 18" — DETOUR — TYPE III BARRICADE

(7) R9-9, 24" X 12" — SIDEWALK CLOSED — TYPE III BARRICADE