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

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-2D
RW/SHEET NO.	
APPROVED: Rhonda B. Early	
DATE: 3/15/2018	
SEAL	

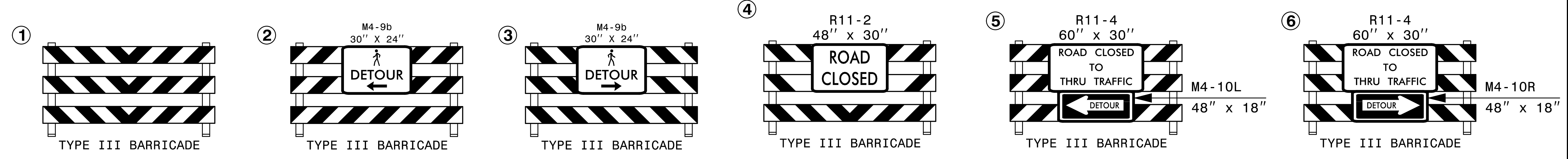
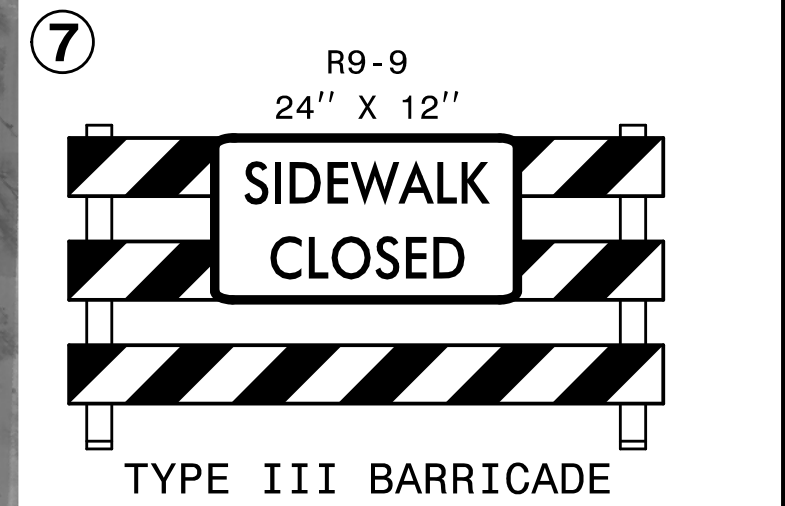
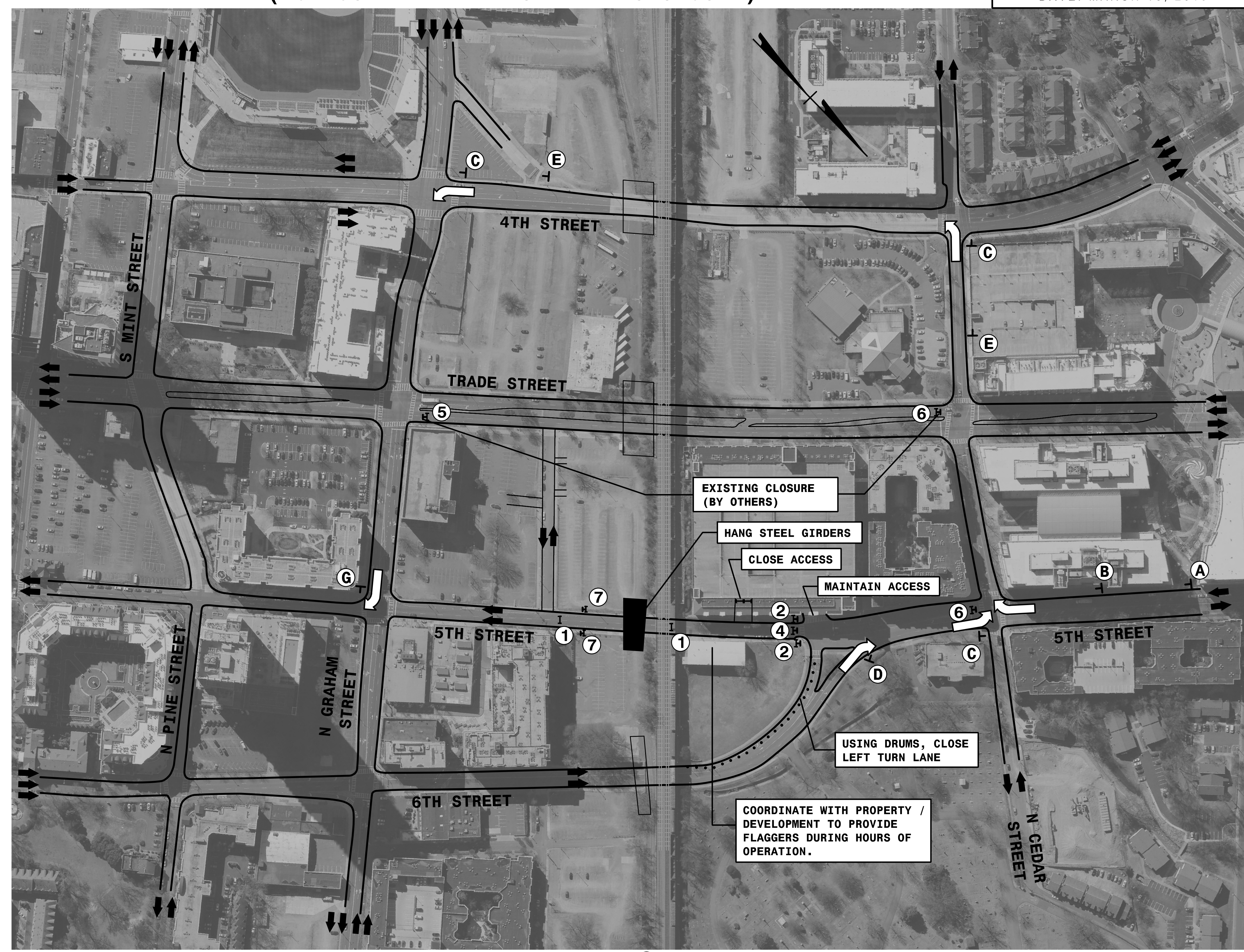


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNAGE IS COMPLETED

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

- NOTES:
- REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
 - USE 200' SIGN SPACING WHEN POSSIBLE.
 - IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.
 - 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
M4-9LA
30" X 24"
- F** DETOUR
M4-9RA
30" X 24"
- G** END DETOUR
M4-8 A
24" X 18"



TRADE 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

PROJECT REFERENCE NO. SHEET NO.
P-5705BA TMP-2E
RW SHEET NO.

DATE: MARCH 16, 2018

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

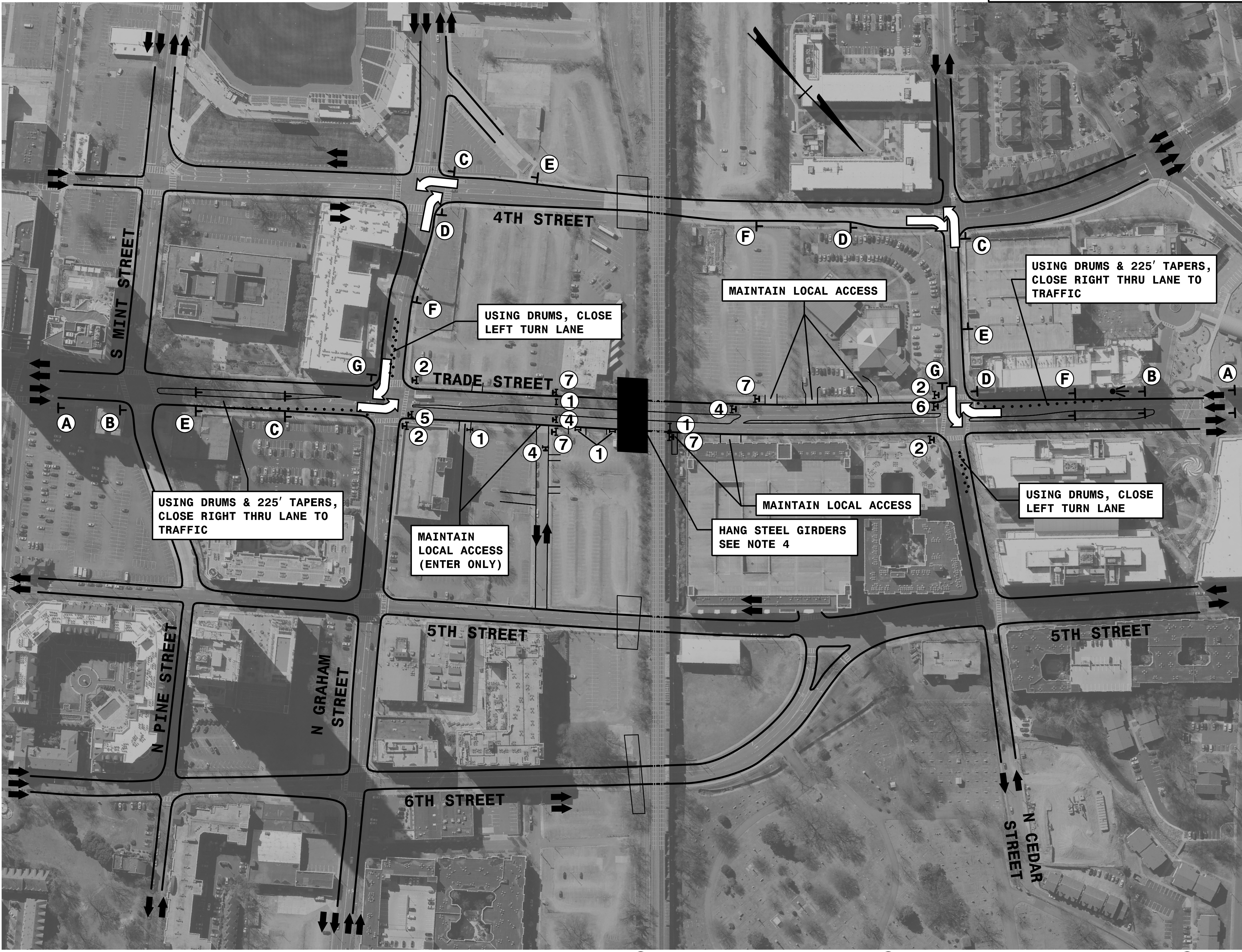


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UNLESS ALL SIGNAGE IS COMPLETED

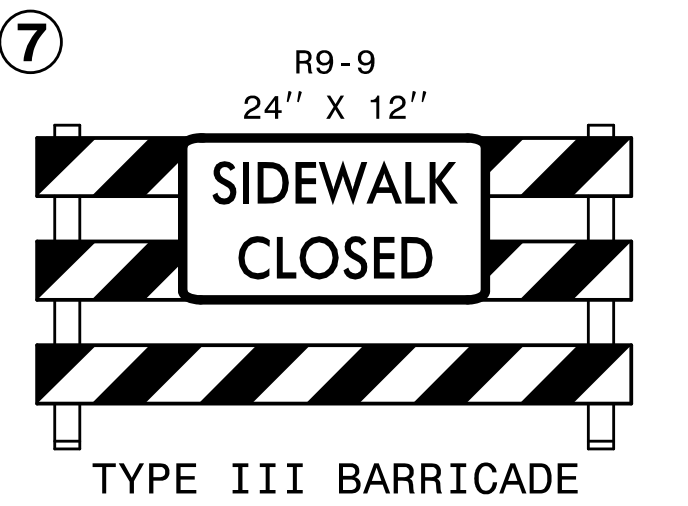
- T SIGNS
- I TYPE III BARRICADE
- H TYPE III BARRICADE W/ SIGN(S)
- DETOUR ROUTE
- ORIGINAL PATTERN
- FLASHING ARROW PANEL

- NOTES:
- REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
 - USE 200' SIGN SPACING WHEN POSSIBLE.
 - IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.
 - COORDINATE GIRDER ERECTION WITH GOLDLINE STREETCAR TIMES DUE TO ELECTRIFIED OVERHEAD CATENARY SYSTEM.

- 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
M4-9LA
30" X 24"
- F DETOUR
M4-9RA
30" X 24"
- G END DETOUR
M4-8 A
24" X 18"



- ① TYPE III BARRICADE
- ② M4-9b 30" X 24" TYPE III BARRICADE
- ③ M4-9b 30" X 24" TYPE III BARRICADE
- ④ R11-2 48" X 30" TYPE III BARRICADE
- ⑤ R11-4 60" X 30" TYPE III BARRICADE
- ⑥ R11-4 60" X 30" TYPE III BARRICADE
- M4-10L 48" X 18"
- M4-10R 48" X 18"



4TH 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

PROJECT REFERENCE NO. P-5705BA SHEET NO. TMP-2F
 R/W SHEET NO.
 DATE: MARCH 16, 2018

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

SEAL

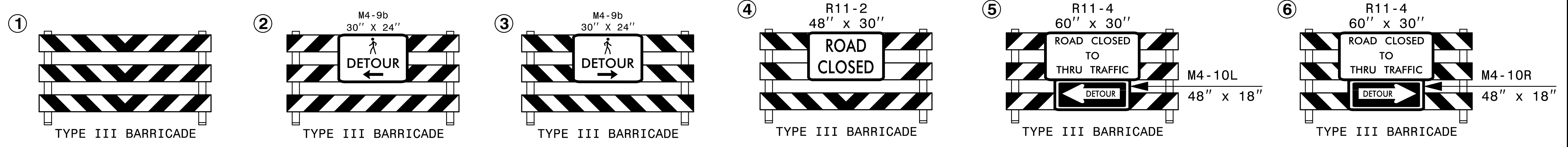
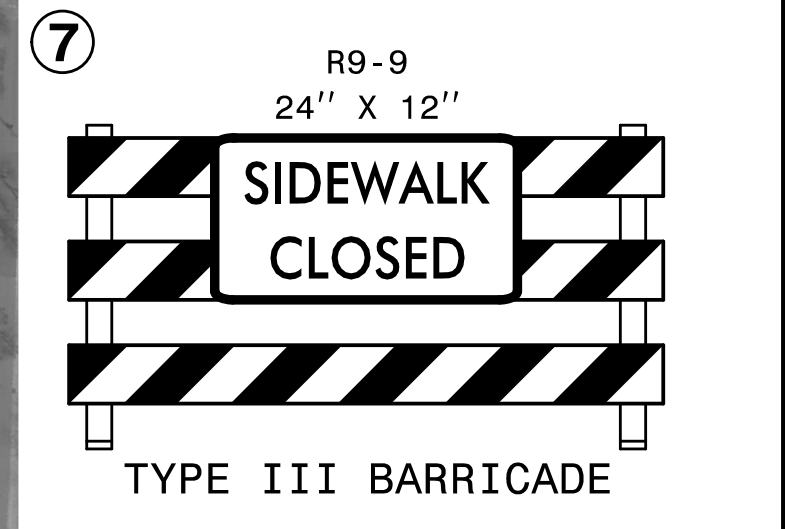
NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 023521
 RHONDA B. EARLY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNAGE IS COMPLETED

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

- NOTES:
- REFER TO WATCH-26 FOR GENERAL DETAIL AND NOTES.
 - USE 200' SIGN SPACING AS POSSIBLE.
 - IF TRADE STREET IS CLOSED, USE ALTERNATE DETOUR.
 - 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
M4-9LA
30" X 24"
- F DETOUR
M4-9RA
30" X 24"
- G END DETOUR
M4-8 A
24" X 18"



4TH STREET DETOUR ALTERNATE DETAIL (FOR USE IF TRADE STREET IS CLOSED)

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NC License No: C-1554
DATE: MARCH 16, 2018

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RW/SHEET NO.	
APPROVED: Rhonda B. Early 3/15/2018	
DATE: 3/15/2018	
SEAL	

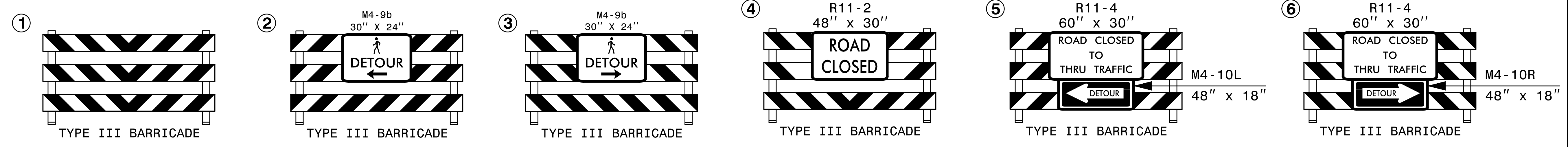
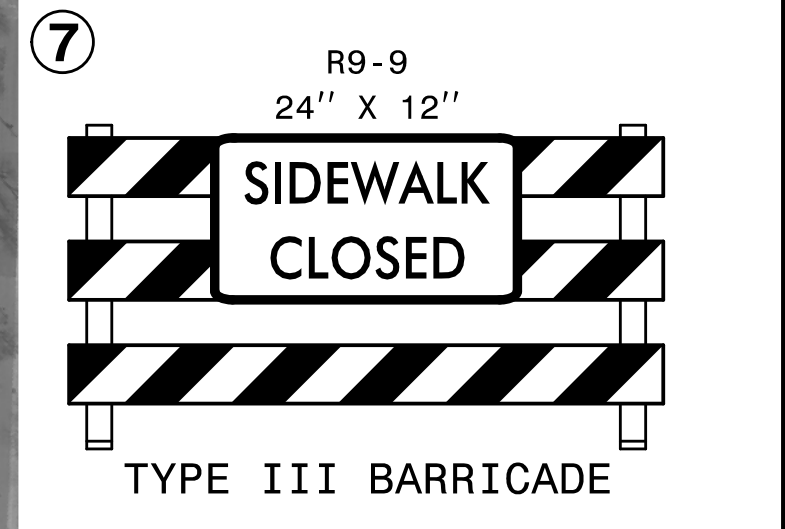
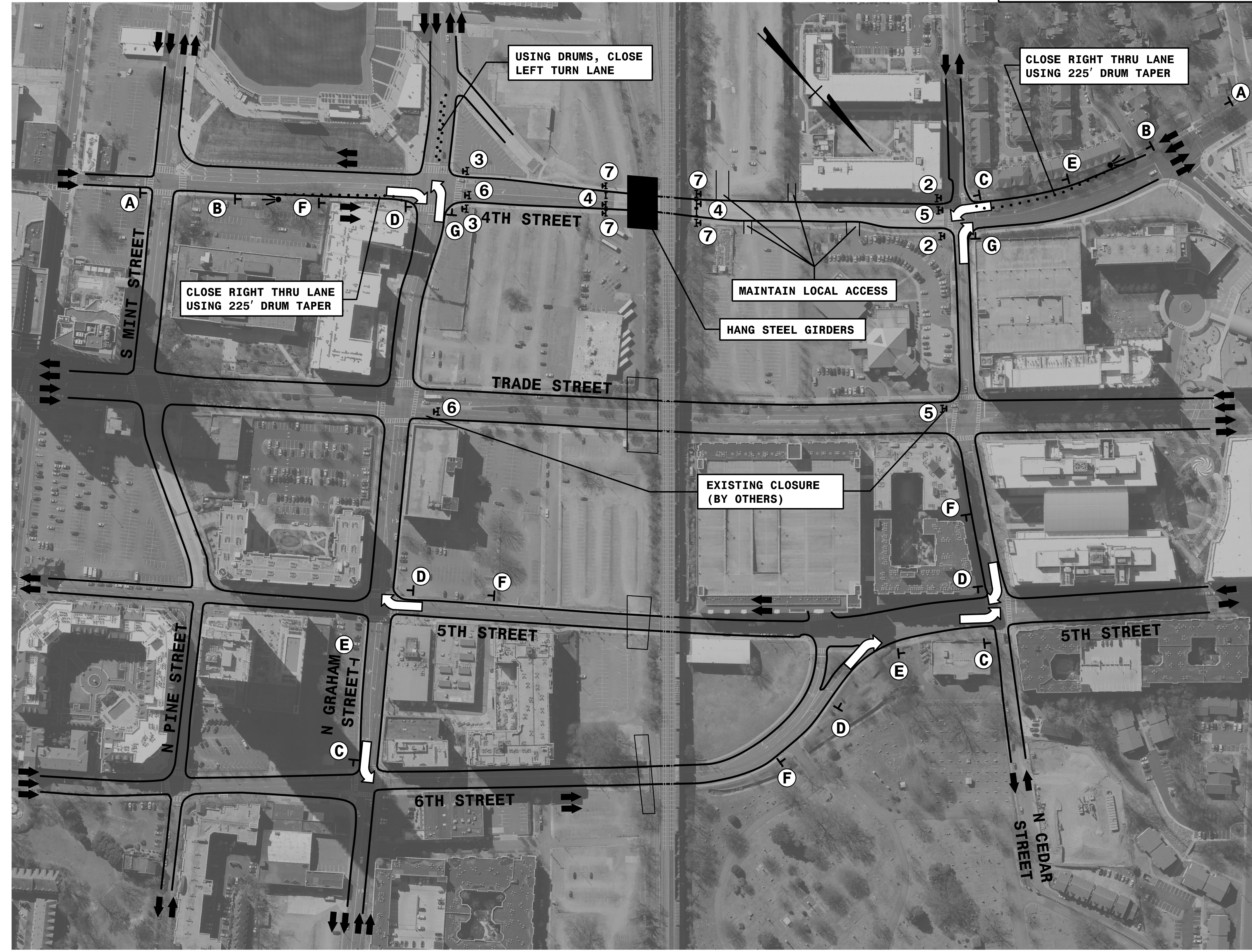


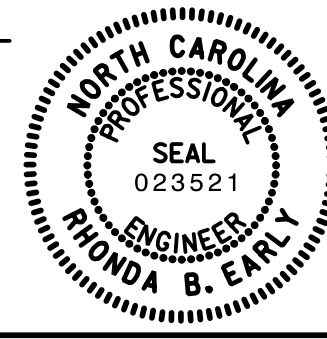
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48" X 48"
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C21R (M4-9R)
30" X 24"
- E** DETOUR
M4-9LA
30" X 24"
- F** DETOUR
M4-9RA
30" X 24"
- G** END DETOUR
M4-8 A
24" X 18"



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	P-5705BA	TMP-2H
DATE: MARCH 16, 2018		R/W SHEET NO.
APPROVED: <i>Rhonda B. Early</i>		DATE: 3/15/2018
SEAL		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE PIER INSTALLATION FROM STATION -Y3- 11+76.7+/-, 11.9'+/- LT, TO STATION -Y3- 12+55.9+/-, 11.9'+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y3- 11+76.7+/-, 11.9'+/- LT., TO STATION -Y3- 12+55.9+/-, 11.9'+/- LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION.

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 34 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 712 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y3- 11+76.7+/-, 11.9'+/- LT, TO STATION -Y3- 12+55.9+/-, 11.9'+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y3- 11+76.7+/-, 11.9'+/- LT, TO STATION -Y3- 12+55.9+/-, 11.9'+/- LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y3- 11+76.7+/-, 11.9'+/- LT, TO STATION -Y3- 12+55.9+/-, 11.9'+/- LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE PIER INSTALLATION FROM STATION -Y3- 11+78.3+/-, 11.9'+/- RT, TO STATION -Y3- 12+54.8+/-, 11.9'+/- RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y3- 11+78.3+/-, 11.9'+/- RT, TO STATION -Y3- 12+54.8+/-, 11.9'+/- RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION.

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 34 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 712 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y3- 11+78.3+/-, 11.9'+/- RT, TO STATION -Y3- 12+54.8+/-, 11.9'+/- RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y3- 11+78.3+/-, 11.9'+/- RT, TO STATION -Y3- 12+54.8+/-, 11.9'+/- RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y3- 11+78.3+/-, 11.9'+/- RT, TO STATION -Y3- 12+54.8+/-, 11.9'+/- RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE PIER INSTALLATION FROM STATION -Y1- 12+23.5+/-, 19.5'+/- LT, TO STATION -Y1- 13+20.8+/-, 18.7'+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y1- 12+23.5+/-, 19.5'+/- LT, TO STATION -Y1- 13+20.8+/-, 18.7'+/- LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION.

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 32 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 710 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y1- 12+23.5+/-, 19.5'+/- LT, TO STATION -Y1- 13+20.8+/-, 18.7'+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1- 12+23.5+/-, 19.5'+/- LT, TO STATION -Y1- 13+20.8+/-, 18.7'+/- LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y1- 12+23.5+/-, 19.5'+/- LT, TO STATION -Y1- 13+20.8+/-, 18.7'+/- LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT IS DATED 11/07/2017 AND SEALED BY SHIPING YANG, Ph.D., P.E., LICENSE #030943.