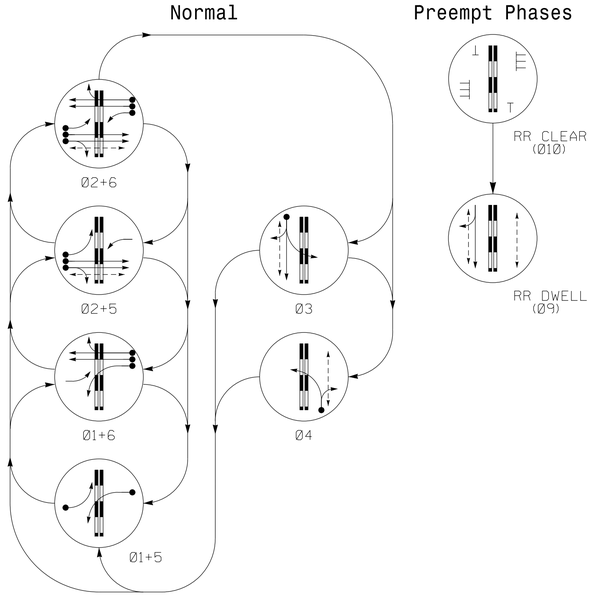
PROJECT REFERENCE NO.	SHEET NO.
U-5742	SIG.291.0

6 Phase
Fully Actuated W/RR Preemption
(Fayetteville Signal System)

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE									
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	CRRPR	CRRPL	FLASH
11	←	←	F Y	F Y	R	R	R	R	R
21, 22, 23	R	R	G	G	R	R	R	R	R
31	R	R	R	R	G ←	R	R	G	R
32	R	R	R	R	G	R	R	G	R
41	R	R	R	R	R	G ←	R	R	R
42	R	R	R	R	R	G	R	R	R
51	←	F Y	←	F Y	R	R	R	R	R
61, 62, 63	R	G	R	G	R	R	R	R	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DRK
P31, P32	DW	DW	DW	DW	W	DW	DW	W	DRK
P41, P42	DW	DW	DW	DW	DW	W	DW	W	DRK
Sign C	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	*

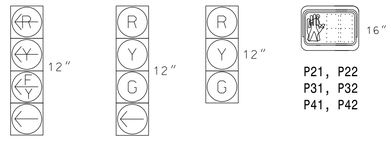
* See Note 9.

ASC/3 DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING					
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	Yes	-	15	S	-	Y
				-	6	Yes	-	-	S	-	Y
2A	6X60	0	2-4-2	-	2	Yes	-	-	S	-	Y
2B	6X60	0	2-4-2	-	2	Yes	-	-	S	-	Y
3A	6X60	0	2-4-2	-	6	Yes	-	10	S	-	Y
4A	6X40	0	2-4-2	-	4	Yes	-	10	S	-	Y
5A	6X60	0	2-4-2	-	5	Yes	-	15	S	-	Y
				-	2	Yes	-	-	S	-	Y
6A	6X60	0	2-4-2	-	6	Yes	-	-	S	-	Y
6B	6X60	0	2-4-2	-	6	Yes	-	-	S	-	Y

SIGNAL FACE I.D.

All Heads L.E.D.



11
51

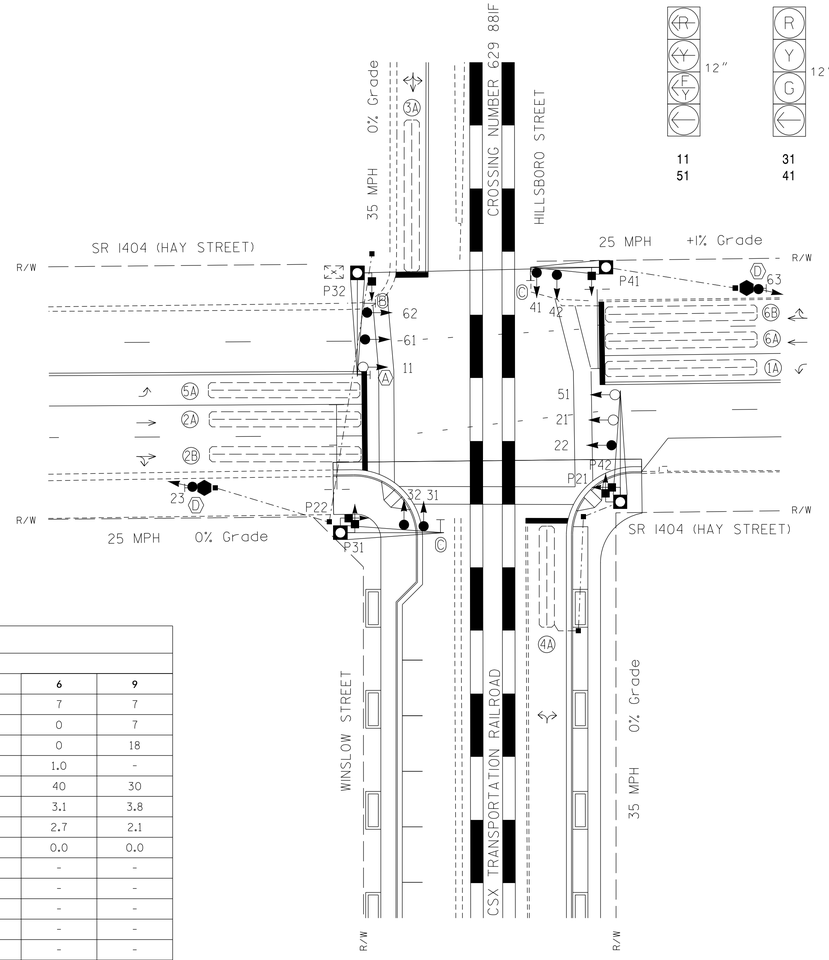
31
41

21, 22, 23
32
42
61, 62, 63

P21, P22
P31, P32
P41, P42

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 and/or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
8. Ensure flashing operations does not alter operation of blankout signs.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supercede these values.
10. Program phase 1 and 6 for Startup Red Clear.
11. Program phase 2 and 6 for First Phases.



ASC/3 RR PREEMPT

FUNCTION	PRE 1
Exit Phase(s)	2,6
Preempt Override	ON
Delay Time	0
Ped Clear Through Yellow	Y
Terminate Phases	N
Track Clear Reservice	Y
Entrance Walk	255*
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Track Clear Min Green	10
Track Clear Yellow Change	25.5*
Track Clear Red Clear	25.5*
Min Dwell Time	10
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Allows normal phase times to be used.

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□↓	Pedestrian Signal Head With Push Button & Sign	■↓
○)	Signal Pole with Guy	●)
○)	Signal Pole with Sidewalk Guy	●)
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
----------	2-in Underground Conduit	----------
N/A	Right of Way	— — —
→	Directional Arrow	→
○◁	Metal Pole with Mastarm	■◁
⬡	Signal Pedestal	●
N/A	Railroad Cantilever	✕✕
———	Directional Drill	N/A
Ⓐ	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
Ⓑ	"NO TURN ON RED" Sign (R10-11a)	Ⓑ
Ⓒ	"NO LEFT TURN - TRAIN" L.E.D. Blankout Sign	Ⓒ
Ⓓ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓓ

ASC/3 TIMING CHART

FEATURE	PHASE						
	1	2	3	4	5	6	9
Min Green *	7	7	7	7	7	7	7
Walk *	0	7	7	0	0	0	7
Ped Clear	0	17	18	718	0	0	18
Veh. Extension *	1.0	1.0	1.0	2.0	1.0	1.0	-
Max 1 *	15	40	30	30	15	40	30
Yellow	3.0	3.1	3.8	3.8	3.0	3.1	3.8
Red Clear	2.8	2.7	2.1	2.3	1.6	2.7	2.1
Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Actuations B4 Add *	-	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-
Locking Detector	-	-	-	-	-	-	-
Recall Position	-	MIN RECALL	-	-	MIN RECALL	-	-
Dual Entry	-	-	-	-	-	-	-
Simultaneous Gap	X	X	X	X	X	X	X

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

Prepared In the Offices of:

Hatch Mott MacDonald
PO Box 700
Fuquay-Varina, NC 27526
www.hatchmott.com

HATCH MOTT MACDONALD I & E, LLC
LICENSE NO. P-0669

Fayetteville North Carolina

SR 1404 (Hay Street)
at
Winslow Street and
Hillsboro Street

DIV 06 CUMBERLAND COUNTY FAYETTEVILLE

PLAN DATE: NOVEMBER 2016 REVIEWED BY: RWT

PREPARED BY: RTP REVIEWED BY:

SCALE 0 30

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036842 ENGINEER RICHARD T PATE

DocuSigned by: Richard T Pate 11/22/2016

SIGNATURE DATE

SIG. INVENTORY NO. C030

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