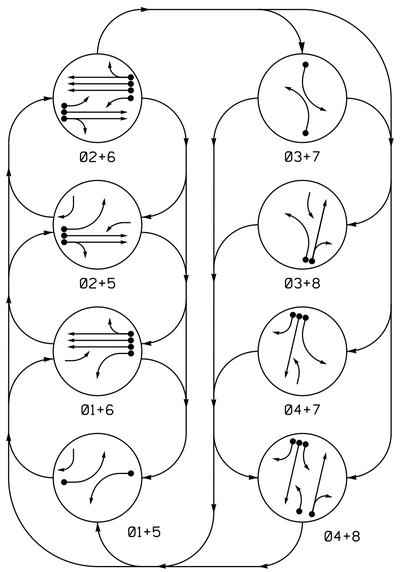
PROJECT REFERENCE NO.	SHEET NO.
U-5742	Sig. 11.0

4 Phase Fully Actuated with Railroad Preemption Fayetteville Signal System

PHASING DIAGRAM

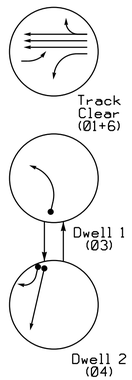


PHASING DIAGRAM DETECTION LEGEND

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

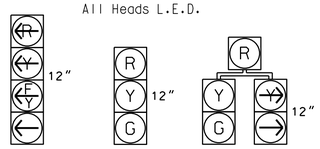
RAIL PREEMPT PHASES

(High Priority)



SIGNAL FACE I.D.

All Heads L.E.D.

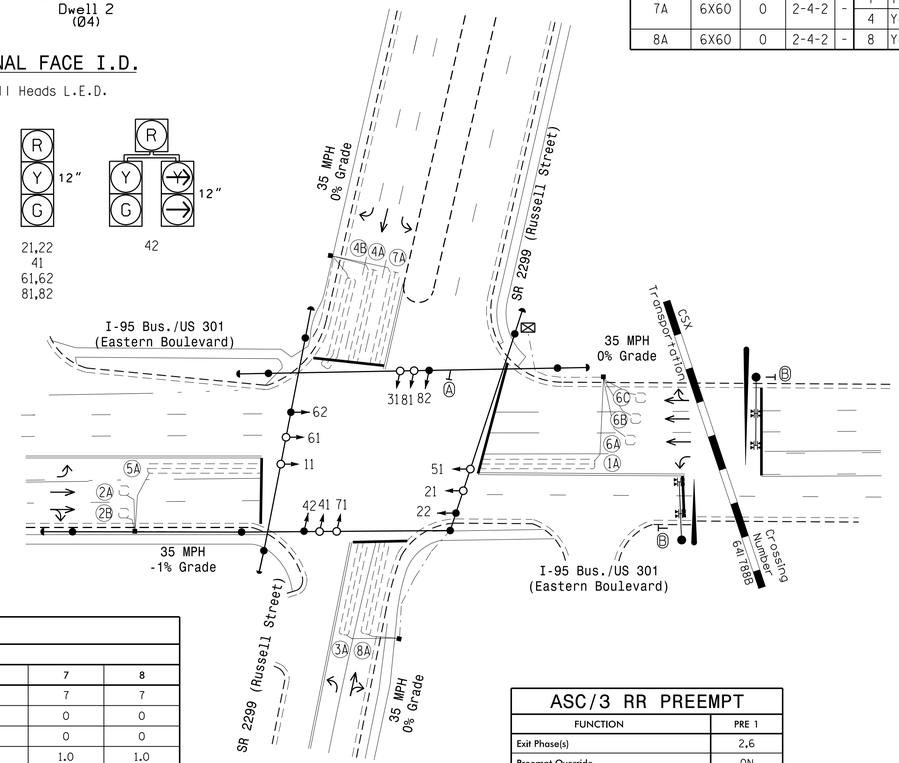


11, 31, 51, 71 — 21,22, 41, 61,62, 81,82 — 42

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	TCRLEACKR	DWELL	DWELL2	FLASH
11	↚	↚	F Y	F Y	R̸	R̸	R̸	R̸	←	R̸	R̸	Y̸
21,22	R	R	G	G	R	R	R	R	R	R	Y	
31	R̸	R̸	R̸	R̸	↚	↚	F Y	F Y	R̸	↚	R̸	R̸
41	R	R	R	R	R	R	G	G	R	R	G	R
42	R̸ /	R	R̸ /	R	R	R	G	G	R	R	G	R
51	↚	F Y	↚	F Y	R̸	R̸	R̸	R̸	F Y	R̸	R̸	Y̸
61,62	R	G	R	G	R	R	R	R	G	R	R	Y
71	R̸	R̸	R̸	R̸	↚	F Y	↚	F Y	R̸	R̸	R̸	R̸
81,82	R	R	R	R	R	G	R	G	R	R	R	R
SIGN A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	•

* See Note 10.



ASC/3 DETECTOR INSTALLATION CHART

DETECTOR LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING PHASE	CALLING	EXTEND TIME	DELAY TIME	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2		1	Yes	-	15	S	-	X
					6	Yes	-	-	S	-	X
2A	6X6	70	4	-	2	Yes	-	-	S	-	X
2B	6X6	70	4	-	2	Yes	-	-	S	-	X
3A	6X60	0	2-4-2	-	3	Yes	-	15	S	-	X
				-	8	Yes	-	3	S	-	X
4A	6X60	0	2-4-2	-	4	Yes	-	-	S	-	X
4B	6X60	+5	2-4-2	-	4	Yes	-	-	S	-	X
5A	6X60	0	2-4-2	-	5	Yes	-	15	S	-	X
					2	Yes	-	-	S	-	X
6A	6X6	70	3	-	6	Yes	-	-	S	-	X
6B	6X6	70	3	-	6	Yes	-	-	S	-	X
6C	6X6	70	3	-	6	Yes	-	-	S	-	X
7A	6X60	0	2-4-2	-	7	Yes	-	15	S	-	X
					4	Yes	-	3	S	-	X
8A	6X60	0	2-4-2	-	8	Yes	-	-	S	-	X

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. Phase 3 and/or phase 7 may be lagged.
5. Reposition existing signal heads numbered 22, 42, 62.
6. Set all detector units to presence mode.
7. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
8. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
9. Pavement markings are existing.
10. Ensure flashing operation does not alter operation of blankout signs.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

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	
N/A	Railroad Tracks	
N/A	Railroad Cantilever	
N/A	Railroad Gate and Flasher	
Ⓐ	"NO RIGHT TURN - TRAIN"	Ⓐ
Ⓑ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓑ

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green *	7	10	7	7	7	10	7	7
Walk *	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0
Veh. Extension *	1.0	3.0	1.0	1.0	1.0	3.0	1.0	1.0
Max 1 *	20	45	30	20	20	45	20	30
Yellow	3.0	3.9	3.0	3.8	3.0	3.9	3.0	3.8
Red Clear	2.8	2.0	2.4	1.7	2.8	2.0	2.1	1.7
Actuations B4 Add *	-	-	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	X	-	-	-	X
Simultaneous Gap	X	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.

ASC/3 RR PREEMPT

FUNCTION	PRE 1
Exit Phase(s)	2,6
Preempt Override	ON
Delay Time	0
Ped Clear Trough Yellow	N
Terminate Phases	N
Track Clear Reservice	Y
Entrance Walk	-
Entrance Ped Clear	-
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Track Clear Min Green	19
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.

SIMULTANEOUS PREEMPT

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

I-95 Business / US 301 (Eastern Boulevard) at SR 2299 (Russell Street)

Division 6 Cumberland County Fayetteville

PLAN DATE:	April 2016	REVIEWED BY:	JPG
PREPARED BY:	KGP, Jr.	REVIEWED BY:	

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029904 ENGINEER JASON P. GALLOWAY
DocuSigned by: Jason P. Galloway 10/14/2016
E7D0EA7D4B1B41D... DATE

SIG. INVENTORY NO. 06-0016

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