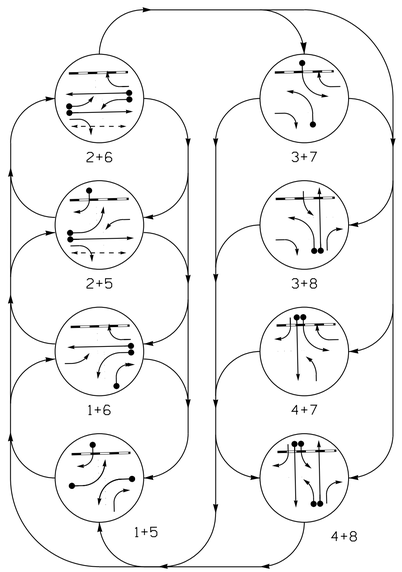
Docusign Envelope ID: E19845C9-1141-4BFE-BC9C-C469461FA476

PROJECT REFERENCE NO.	SHEET NO.
U-5760	Sig. 4.0

PHASING DIAGRAM

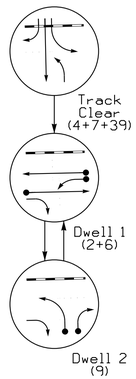


PHASING DIAGRAM DETECTION LEGEND

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

RAIL PREEMPT PHASES

(High Priority)



MAXTIME PREEMPTION CHART

FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	4,8
Delay	0
Call Extend Time	1.0
Max Presence	0
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	5
Enter Yellow Change	4.9
Enter Red Clear	3.3
Track Green	28
Track Yellow Change	4.4
Track Red Clear	2.3
Dwell Green	0
Exit Min Green	255 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Exit Type	EXIT PHASES
Ped Clear Through Yellow	Y
Require All Red Entry	–

* Controller uses lesser of time shown and the normal time used for all phases.

This signal was designed for advance preemption.

TABLE OF OPERATION

SIGNAL FACE	PHASE 1+5	1+6	2+5	2+6	3+7	3+8	4+7	4+8	RR CLR	RR DWELL 1	RR DWELL 2	FLASH
11	←	←	F	F	R	R	R	R	R	R	R	R
21	R	R	G	G	R	R	R	R	R	G	R	R
22	R	R	G	G	R/—	R/—	R	R	R	G	R/—	R
31	R	R	R	R	←	←	F	F	F	R	←	R
41	R	R	R	R	R	R	G	G	G	R	R	R
42	R/—	R	R/—	R	R	R	G	G	G	R	R	R
51	←	F	←	F	R	R	R	R	R	R	R	R
61	R	G	R	G	R	R	R	R	R	G	R	R
62	R	G	R	G	R/—	R	R/—	R	R	G	R	R
71	R	R	R	R	←	F	←	F	←	R	R	R
81	R	R	R	R	R	G	R	G	R	R	R	R
82	R/—	R/—	R	R	R	G	R	G	R	R	R/—	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DW	DW	DW	DRK
Sign A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	*

* See Note 8.

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						
LOOP/ ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP/ZONE	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	2-4-2	-	1	15.0	-	X	-	X	-	-
					6	3.0	-	X	-	X	X	-
1B	6X40	0	✳	-	1/9	15.0	-	X	-	X	-	-
2A	6X6	355	✳	-	2	-	-	X	X	X	-	-
3A	6X40	0	✳	-	3/9	15.0	-	X	-	X	-	-
					8	-	-	X	-	X	-	-
4A	6X40	0	2-4-2	-	4	-	-	X	-	X	-	-
4B	6X25	+12 #	2-4-2	-	4	-	-	X	-	X	-	-
4C	6X25	0 ##	2-4-2	-	4	-	-	X	-	X	-	-
4D	6X25	0 ##	2-4-2	-	4	5.0	-	X	-	X	-	-
5A	6X40	0	✳	-	5	15.0	-	X	-	X	-	-
					2	3.0	-	X	-	X	X	-
5B	6X40	0	2-4-2	-	5	15.0	-	X	-	X	-	-
5C	6X25	+12 #	2-4-2	-	5	10.0	-	X	-	X	-	-
6A	6X6	355	EXIST	-	6	-	-	X	X	X	-	-
7A	6X35	0	2-4-2	-	7	15.0	-	X	-	X	-	-
					4	3.0	-	X	-	X	-	-
7B	6X25	+12 #	2-4-2	-	7	3.0	-	X	-	X	-	-
7C	6X25	0 ##	2-4-2	-	7	3.0	-	X	-	X	-	-
8A	6X40	0	✳	-	8	-	-	X	-	X	-	-

\# From Stopbar at Railroad Gate.
\## From Stopbar at SR 2403.
✳ Video Detection Zone

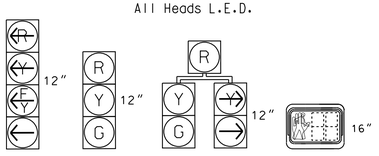
8 Phase
Fully Actuated
w/ Railroad Preemption
(Isolated)

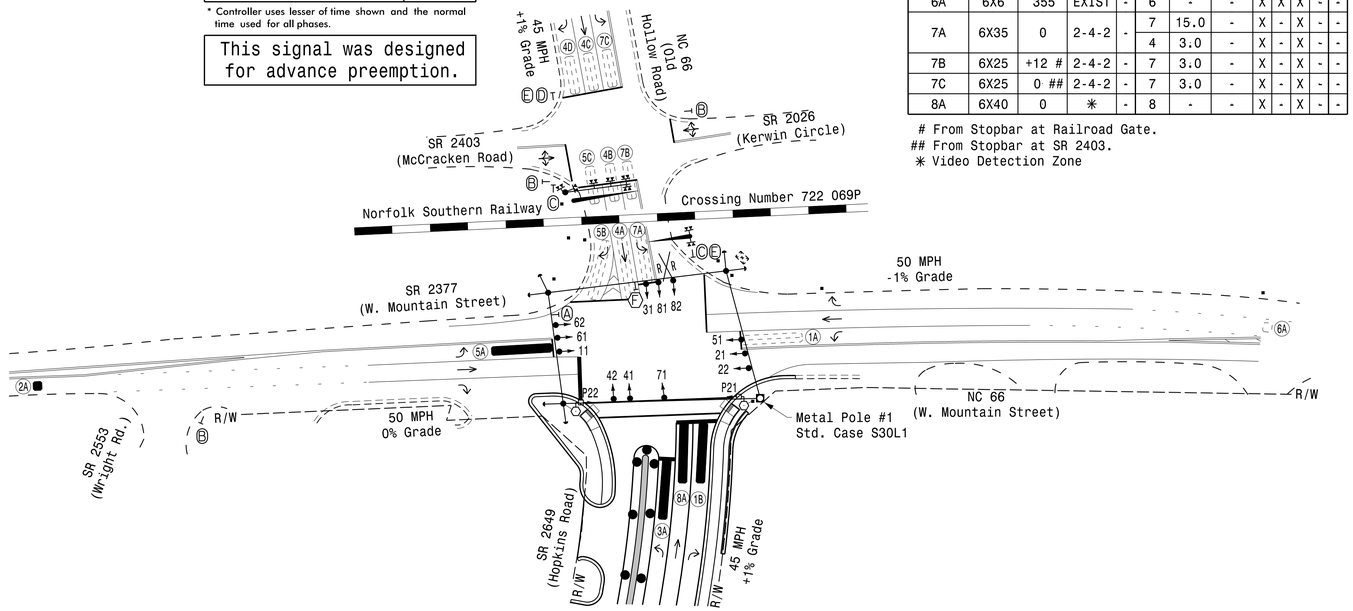
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
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. Set all detector units to presence mode.
6. 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.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Ensure flashing operation does not alter operation of blank out signs.
9. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
10. Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
11. Reposition existing signal heads numbered 41 and 42.
12. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
13. Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with phase 40 and included as a track clear phase.

SIGNAL FACE I.D.

All Heads L.E.D.





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	●
▣	Metal Strain Pole	■
▭	Inductive Loop Detector	▭
▬	Non-intrusive Detection Area	▬
⊠	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	◥
▭	Construction Zone	▭
● ●	Construction Zone Drums	● ●
Ⓐ	"NO RIGHT TURN - TRAIN" L.E.D. Blankout Sign	Ⓐ
Ⓑ	"STOP" Sign (R1-1)	Ⓑ
Ⓒ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓒ
Ⓓ	"DO NOT BLOCK INTERSECTION" Sign (R10-7)	Ⓓ
Ⓔ	"STOP HERE WHEN FLASHING" Sign (R8-10)	Ⓔ
Ⓕ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓕ

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8	9	39	40
Walk *	–	14	–	–	–	–	–	–	–		
Ped Clear	–	22	–	–	–	–	–	–	–		
Min Green *	7	14	7	7	7	14	7	7	7		
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0	2.0		
Max 1 *	20	60	20	30	30	60	40	30	20		
Yellow Change	3.0	4.9	3.0	4.4	3.0	4.9	3.0	4.4	3.0	4.4	4.9
Red Clear	2.4	1.3	3.3	1.9	2.9	1.3	2.3	1.9	3.3	2.3	3.3
Added Initial *	–	2.5	–	–	–	2.5	–	–	–		
Maximum Initial *	–	40	–	–	–	40	–	–	–		
Time Before Reduction *	–	15	–	–	–	15	–	–	–		
Time To Reduce *	–	20	–	–	–	20	–	–	–		
Minimum Gap	–	3.0	–	–	–	3.0	–	–	–		
Advance Walk	–	7	–	–	–	–	–	–	–		
Non Lock Detector	X	–	X	X	X	–	X	X	X		
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL	–	–	–		MIN RECALL
Dual Entry	–	–	–	X	–	–	–	X	–		

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

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

Signal Upgrade - Temporary Design 3
(TMP Phase 3)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For: Transportation Mobility and Safety Division, State of North Carolina Department of Transportation, Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 66/SR 2377 (W. Mountain St.) at NC 66 (Old Hollow Road) and SR 2649 (Hopkins Road)

Division 9 Forsyth County Kernersville

PLAN DATE: August 2024 REVIEWED BY: KP Baumann
PREPARED BY: CF Davis REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN
DocuSigned by: 5DC70DA868CB447...
SIGNATURE 7/14/2025 DATE

SIG. INVENTORY NO. 09-0567T3

K:\RAL_Roadway\011036312 - U-5760 Big Mill Farm Road\Traffic Signal\SG4 - Signal Design\090567-2024g-r3.dgn
9:01:09 AM Craig.Davis
7/14/2025