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PROJECT REFERENCE NO.	SHEET NO.
U-5748	Sig. 11.0

PHASING DIAGRAM

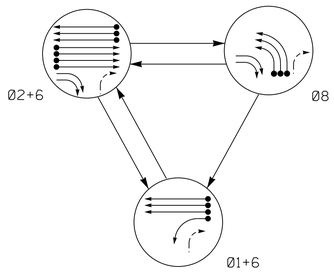


TABLE OF OPERATION				
SIGNAL FACE	PHASE Ø1+6	Ø2+6	Ø8	FLASH
11	←-	~~R~~	~~R~~	~~R~~
21	R	↑	R	Y
22,23,24,25	R	G	R	Y
26, 27	R	↗	↗	~~↗~~
28	R	→	→	~~→~~
61, 62, 63	G	G	R	Y
81, 82, 83	~~R~~	~~R~~	←-	~~R~~

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
							TIMING		OPERATION MODE											STATUS	
									0	1	2	3	4	5	6	7				
ZONE NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	1 CALL	STOP A	STOP B	PASS PER FOOTPER	LEFT FOOTPER THROUGH	AND	SWITCH SYSTEM LOOPS	NEW	EXISTING
1A✳	6X40	✳	0	✳	-	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2A✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2B✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2C✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2D✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
6A✳	6X6	✳	355	✳	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
6B✳	6X6	✳	355	✳	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
6C✳	6X6	✳	355	✳	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
8A✳	6X40	✳	0	✳	-	8	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
8B✳	6X40	✳	0	✳	-	8	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
8C✳	6X40	✳	0	✳	-	8	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-

✳ Video Detection Zone

3 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

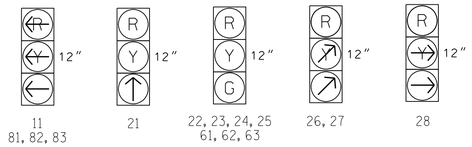
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 may be lagged.
4. Reposition existing signal heads numbered 11, 21, 22, 24, 61, 62, 63, 81, 82, and 83.
5. Reposition existing sign Ⓐ.
6. Remove existing signal head numbered 84.
7. Set all detector units to presence mode.
8. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Program phase 4 as a dummy phase for Ring 1.

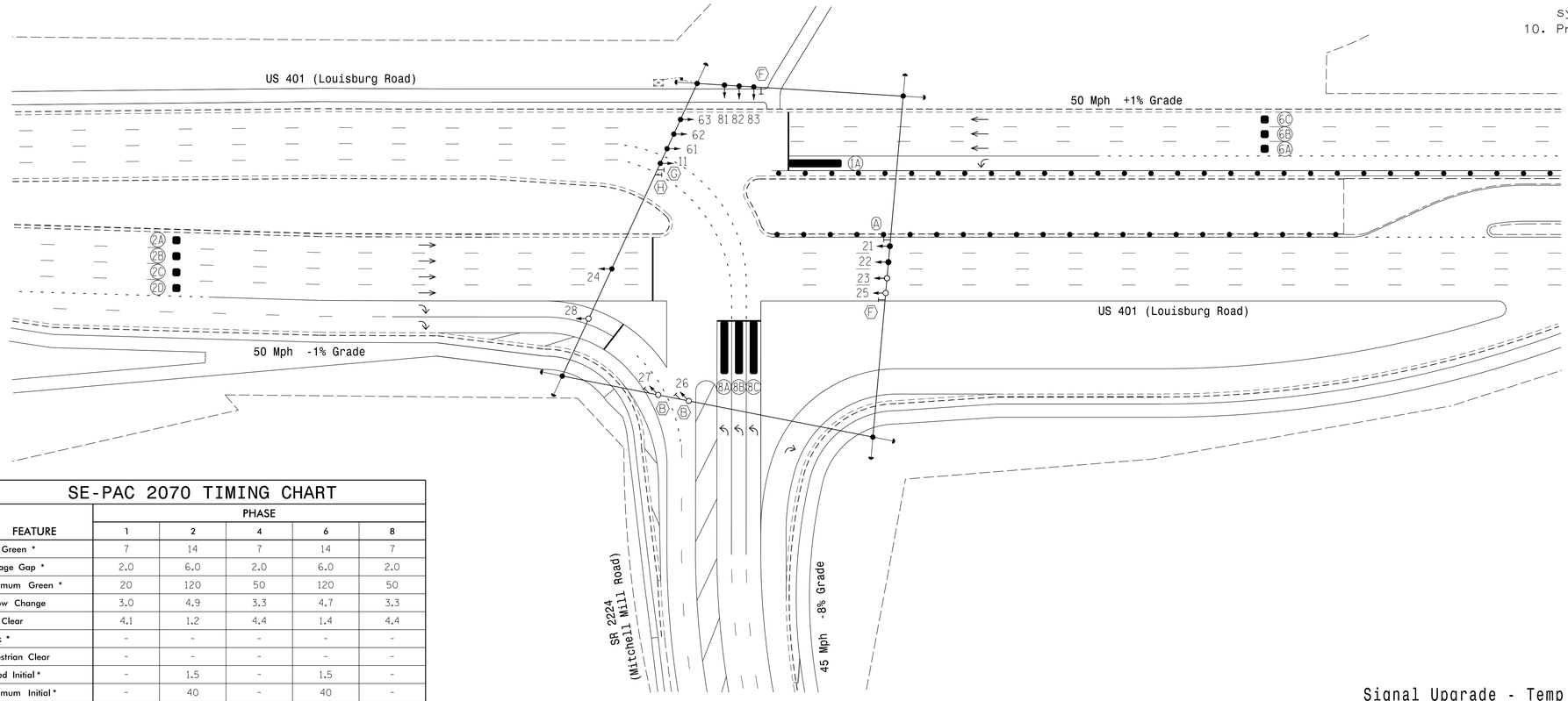
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.





LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□→	Pedestrian Signal Head	■
○	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	→
▬	Video Detection Zone	▬
▭	Construction Zone	▭
●●	Construction Zone Drums	●●
Ⓐ	"NO U-TURN/NO LEFT TURN" Sign (R3-18)	Ⓐ
Ⓑ	"NO TURN ON RED" Sign (R10-11)	Ⓑ
Ⓕ	No Right Turn Sign (R3-1)	Ⓕ
Ⓖ	No U-Turn Sign (R3-4)	Ⓒ
Ⓗ	Left Arrow "ONLY" Sign (R3-5L)	Ⓗ

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	4	6	8
Min Green *	7	14	7	14	7
Passage Gap *	2.0	6.0	2.0	6.0	2.0
Maximum Green *	20	120	50	120	50
Yellow Change	3.0	4.9	3.3	4.7	3.3
Red Clear	4.1	1.2	4.4	1.4	4.4
Walk *	-	-	-	-	-
Pedestrian Clear	-	-	-	-	-
Added Initial *	-	1.5	-	1.5	-
Maximum Initial *	-	40	-	40	-
Time Before Reduction *	-	20	-	20	-
Time To Reduce *	-	40	-	40	-
Minimum Gap	-	3.0	-	3.0	-
Recall Mode	-	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON

* 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.

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Signal Upgrade - Temp Design 3 (TMP Phase IV)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

US 401 (Louisburg Road) at SR 2224 (Mitchell Mill Road)

Division 5 Wake County Raleigh

PLAN DATE: Jan 2023 REVIEWED BY: F.A. Campbell

PREPARED BY: H.M. Surti REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034481 ENGINEER HEMANG M. SURTI

DocuSigned by: Hemang M. Surti 1/24/2023

SIG. INVENTORY NO. 05-198273

1/24/2023
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mitchell.covenaugh