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PROJECT REFERENCE NO.	SHEET NO.
U-5748	Sig. 17.0

PHASING DIAGRAM

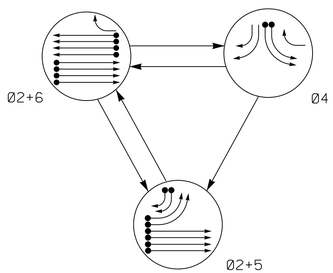


TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	PHASE Ø2+6	PHASE Ø4	FLASH
21	↑	↑	R	Y
22, 23, 24	G	G	R	Y
41, 42	↰R	↰R	←	↰R
43, 44	→	R	→	R
51, 52	←	↰R	↰R	↰R
61	R	↑	R	Y
62, 63, 64	R	G	R	Y
65	R	→	→	↰Y

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING															
							TIMING		OPERATION MODE										STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROT/PER LEFT	6 PROT/PER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
2A	6X6	5	355	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2B	6X6	5	355	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2C	6X6	5	355	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2D	6X6	5	355	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4A	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4B	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5A	6X40	2-4-2	0	X	-	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5B	6X40	2-4-2	0	X	-	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5C	6X40	2-4-2	0	X	-	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5D	6X40	2-4-2	0	X	-	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A	6X6	5	355	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6B	6X6	5	355	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6C	6X6	5	355	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6D	6X6	5	355	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-

3 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

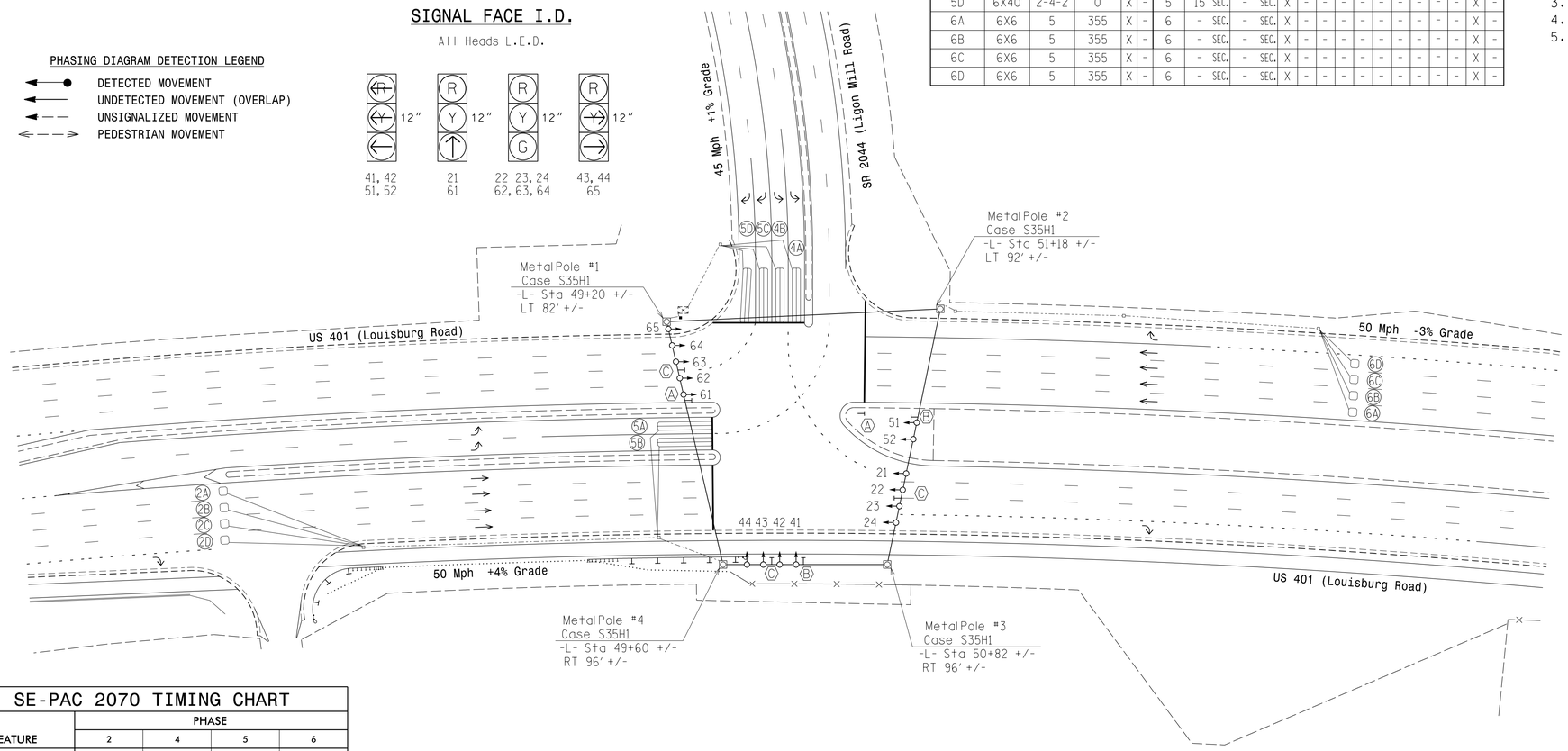
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

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	
	Metal Strain Pole	
N/A	Noise Wall	
N/A	Guardrail	
Ⓐ	No U-Turn Sign (R3-4)	Ⓐ
Ⓑ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ
Ⓒ	Street Name Sign By Others (D3-1)	Ⓒ

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green *	14	7	7	14
Passage Gap *	6.0	2.0	2.0	6.0
Maximum Green *	120	30	35	120
Yellow Change	4.5	3.0	3.0	5.1
Red Clear	1.5	3.5	3.8	1.5
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	LOCK	NON-LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-	-
Simultaneous Gap	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.

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

US 401 (Louisburg Road)
at
SR 2044 (Ligon 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
SIGNATURE/DATE

SIG. INVENTORY NO. 05-1252

1/24/2023
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michael.cavenaugh