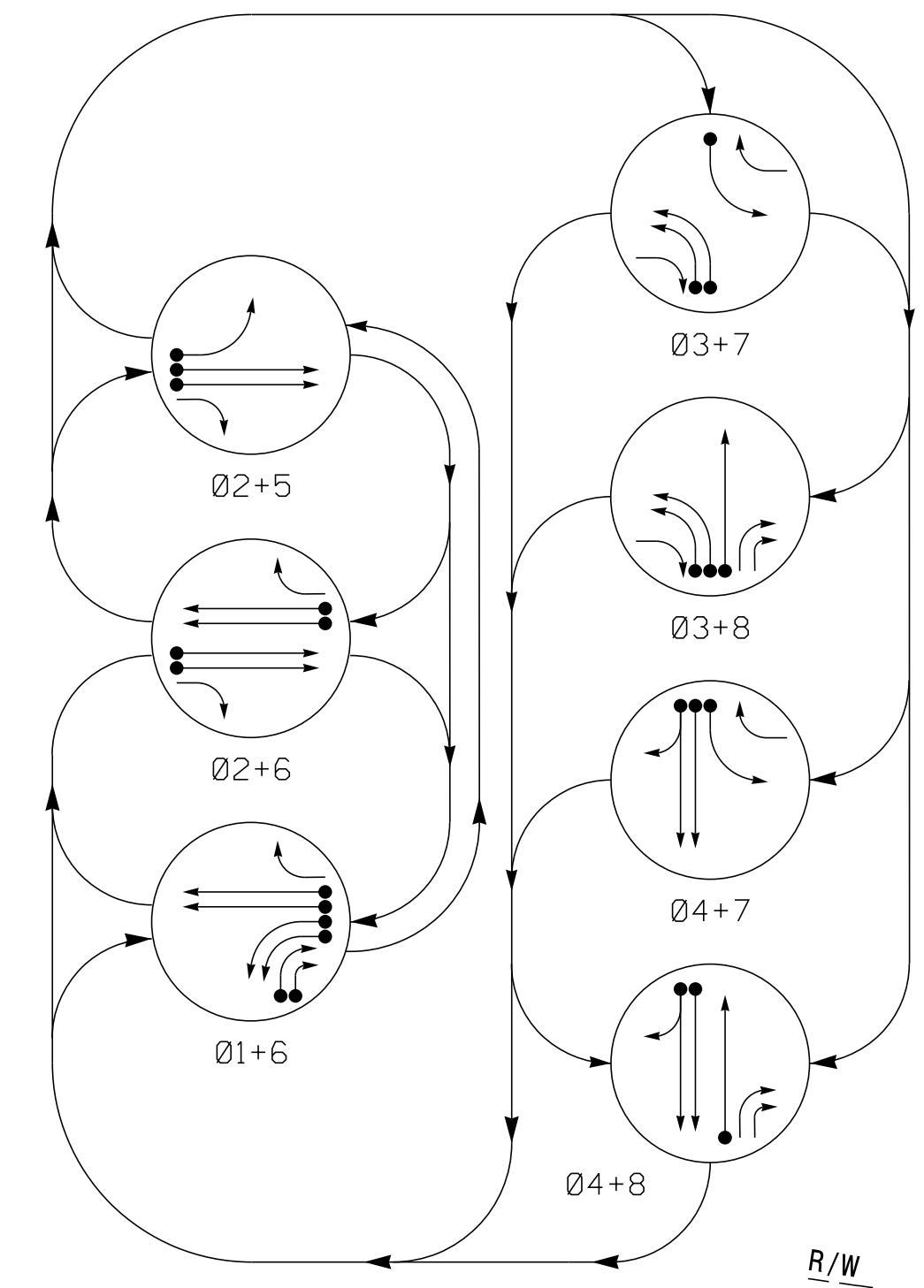


**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

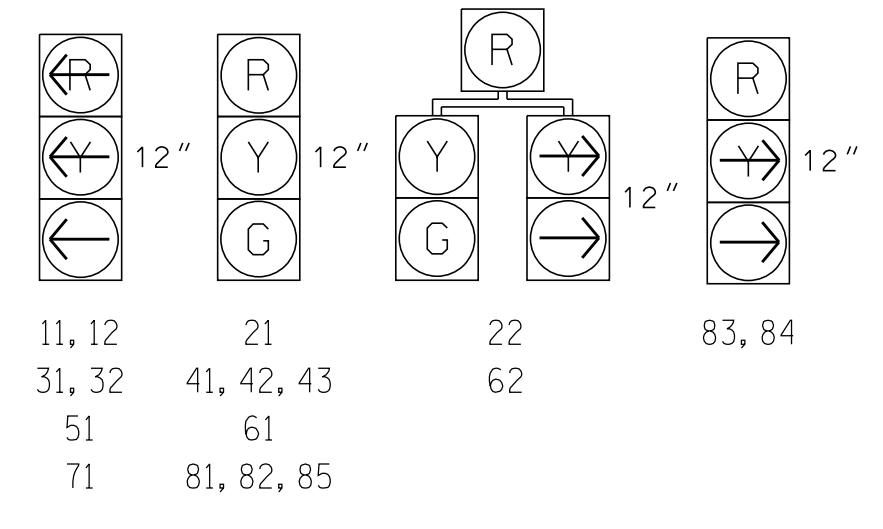
- DETECTED MOVEMENT
- ◄ UNDETECTED MOVEMENT (OVERLAP)
- ◄ UNSIGNALIZED MOVEMENT
- ◄ PEDESTRIAN MOVEMENT

**TABLE OF OPERATION**

SIGNAL FACE	PHASE							
	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
11, 12	←	←	←	←	←	←	←	←
21	R	G	G	R	R	R	R	Y
22	R	G	G	R	R	R	R	Y
31, 32	←	←	←	←	←	←	←	←
41, 42, 43	R	R	R	R	R	G	G	R
51	←	←	←	←	←	←	←	←
61	G	G	R	R	R	R	R	Y
62	G	G	R	R	R	R	R	Y
71	←	←	←	←	←	←	←	←
81, 82, 85	R	R	R	R	G	R	G	R
83, 84	←	R	R	R	←	←	←	←

**SIGNAL FACE I.D.**

All Heads L.E.D.



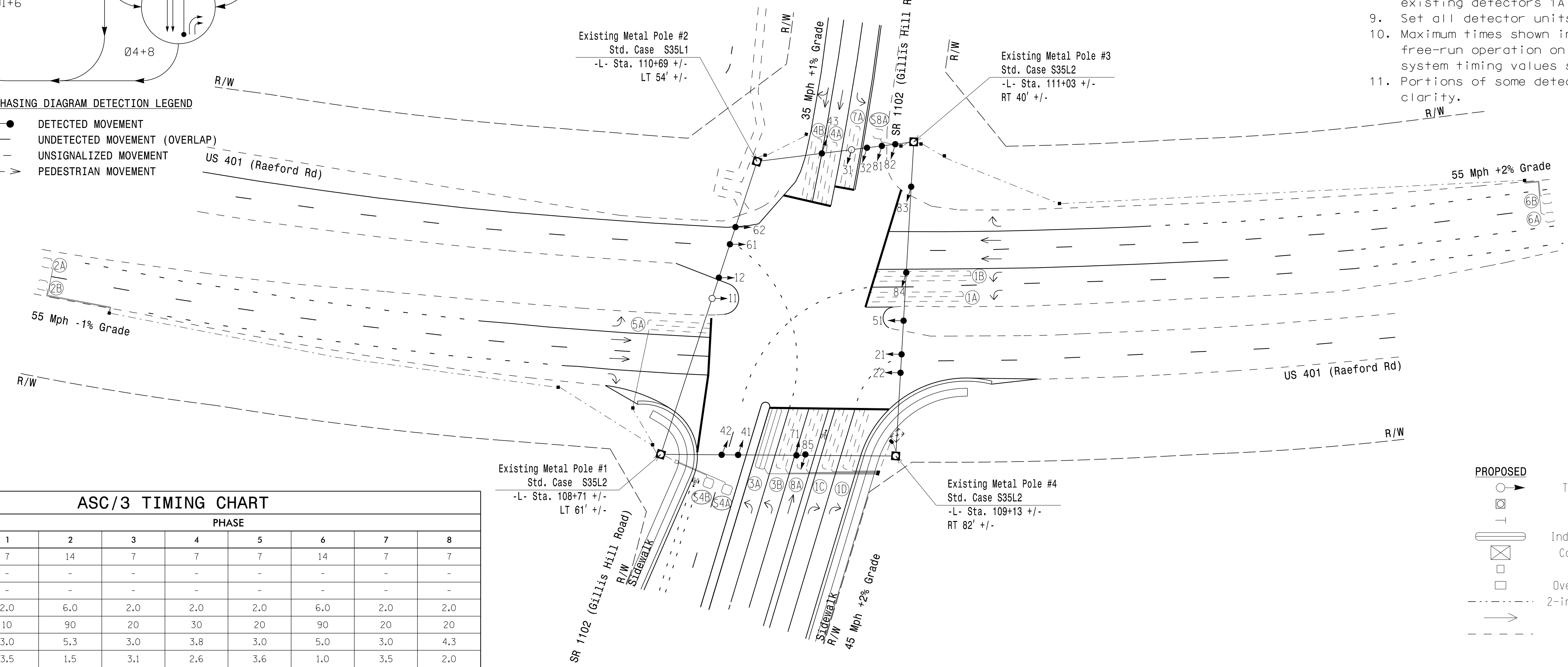
**ASC/3 DETECTOR INSTALLATION CHART**

LOOP	DETECTOR				PROGRAMMING							
	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	YES	-	-	-	N	-	-
1B	6X60	0	2-4-2	-	1	YES	-	-	-	N	-	-
1C	6X40	0	2-4-2	-	1	YES	-	15	-	N	-	-
1D	6X40	0	2-4-2	-	1	YES	-	15	-	N	-	-
2A	6X6	420	6	-	2	YES	-	-	X	N	-	-
2B	6X6	420	6	-	2	YES	-	-	-	X	N	-
3A	6X40	0	2-4-2	X	3	YES	-	-	-	N	-	-
3B	6X40	0	2-4-2	-	3	YES	-	-	-	N	-	-
4A	6X40	0	2-4-2	-	4	YES	-	-	-	N	-	-
4B	6X40	0	2-4-2	-	4	YES	-	10	-	N	-	-
5A	6X40	0	2-4-2	-	5	YES	-	-	-	N	-	-
6A	6X6	420	6	-	6	YES	-	-	X	N	-	-
6B	6X6	420	6	-	6	YES	-	-	X	N	-	-
7A	6X40	0	2-4-2	-	7	YES	-	3	-	N	-	X
8A	6X40	0	2-4-2	-	8	YES	-	-	-	N	-	-
S4A	6X6	+180	4	X	-	NO	-	-	-	N	X	X
S4B	6X6	+180	3	X	-	NO	-	-	-	N	X	X
S8A	6X6	+175	4	-	-	NO	-	-	-	N	X	-

**7 Phase Fully Actuated Fayetteville 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 3 and/or phase 7 may be lagged.
4. The order of phase 1 and phase 5 may be reversed, but phase 1 and phase 5 shall not operate concurrently.
5. Rename existing signal head 31 to 32. Rename existing signal head 11 to 12.
6. Rename existing detector 7A to 4A.
7. Reposition existing signal heads 41, 42, and 71.
8. Install new lead-in cable and connect to existing detectors 1A and 7A.
9. Set all detector units to presence mode.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
11. Portions of some detectors not shown for clarity.



**ASC/3 TIMING CHART**

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	14	7	7	7	14	7	7
Walk *	-	-	-	-	-	-	-	-
Ped Clear	-	-	-	-	-	-	-	-
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max I *	10	90	20	30	20	90	20	20
Yellow	3.0	5.3	3.0	3.8	3.0	5.0	3.0	4.3
Red Clear	3.5	1.5	3.1	2.6	3.6	1.0	3.5	2.0
Actuations B4 Add *	-	0	-	-	-	0	-	-
Seconds / Actuation *	-	1.8	-	-	-	1.8	-	-
Max Initial *	-	46	-	-	-	46	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	45	-	-	-	45	-	-
Minimum Gap	-	3.4	-	-	-	3.4	-	-
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.

**LEGEND**

○	PROPOSED Traffic Signal Head	●	EXISTING Traffic Signal Head
□	PROPOSED Strain Pole	□	EXISTING Strain Pole
+	PROPOSED Sign	+	EXISTING Sign
▭	PROPOSED Inductive Loop Detector	▭	EXISTING Inductive Loop Detector
⊠	PROPOSED Controller & Cabinet	⊠	EXISTING Controller & Cabinet
□	PROPOSED Junction Box	■	EXISTING Junction Box
□	PROPOSED Oversized Junction Box	■	EXISTING Oversized Junction Box
---	PROPOSED 2-in Underground Conduit	---	EXISTING 2-in Underground Conduit
→	PROPOSED Directional Arrow	→	EXISTING Directional Arrow
---	PROPOSED Right of Way	---	EXISTING Right of Way

**Signal Upgrade - Final**

NC FIRM LICENSE No: F-0493  
8521 SIX FORKS ROAD, SUITE 400  
RALEIGH, NC 27615  
(919) 926-4100

US 401 (S Raeford Road)  
at  
SR 1102 (Gillis Hill Road)

Division 6 Cumberland County Fayetteville

PLAN DATE: January 2022 REVIEWED BY: S.G. Haynie

PREPARED BY: S. N. Matthews REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

1/5/2022

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