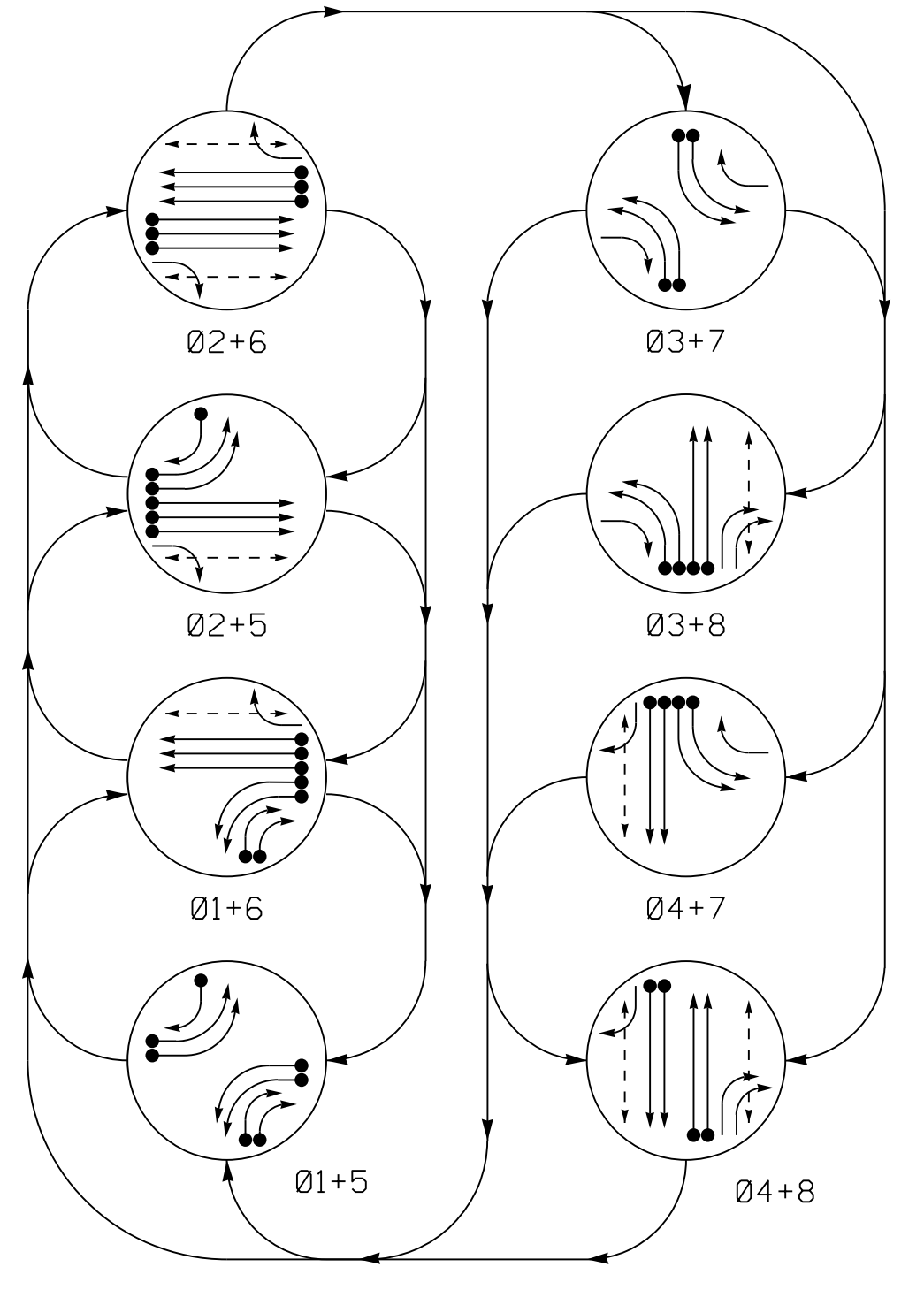


PHASING DIAGRAM

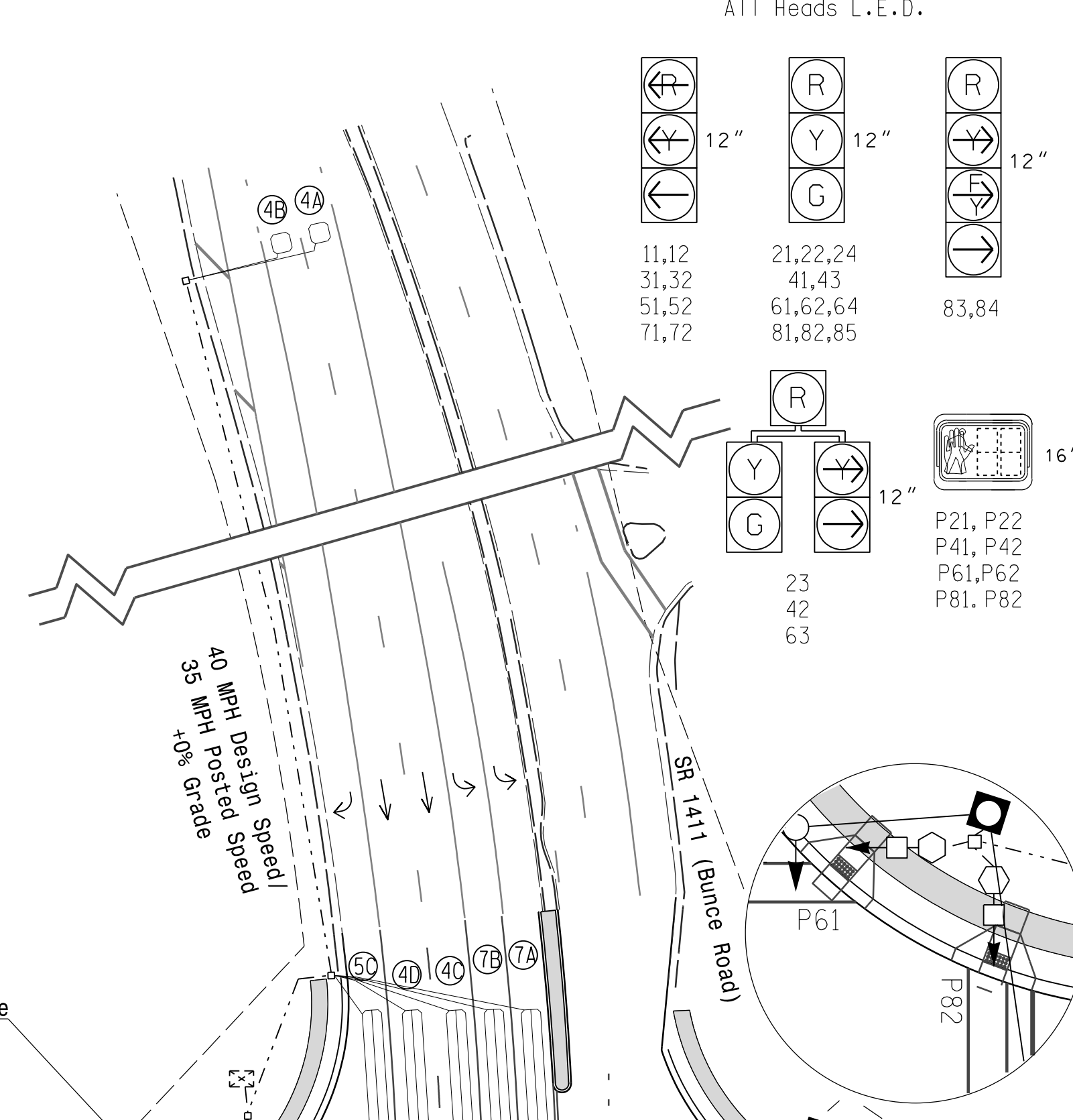


PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11,12	←	←	←	←	←	←	←	←
21,22,24	R	R	G	G	R	R	R	Y
23	R	R	G	G	R	R	R	Y
31,32	←	←	←	←	←	←	←	←
41,43	R	R	R	R	R	R	G	G
42	R	R	R	R	R	R	G	G
51,52	←	←	←	←	←	←	←	←
61,62,64	R	G	R	G	R	R	R	Y
63	R	G	R	G	R	R	R	Y
71,72	←	←	←	←	←	←	←	←
81,82,85	R	R	R	R	G	R	G	R
83,84	←	←	R	R	R	R	R	R
P21,22	DW	DW	W	W	DW	DW	DW	DRK
P41,42	DW	DW	DW	DW	DW	DW	W	DRK
P61,62	DW	W	DW	W	DW	DW	DW	DRK
P81,82	DW	DW	DW	DW	DW	W	DW	DRK

SIGNAL FACE I.D.



ASC/3 DETECTOR INSTALLATION CHART											
DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	NEW CARD
1A	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-
1B	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-
1C	6X40	0	2-4-2	X	1	Yes	-	15	-	S	-
1D	6X40	0	2-4-2	X	1	Yes	-	15	-	S	-
2A	6X6	300	5	X	2	Yes	-	-	X	N	-
2B	6X6	300	5	X	2	Yes	-	-	X	N	-
2C	6X6	300	5	X	2	Yes	-	-	X	N	-
3A	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-
3B	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-
4A	6X6	250	4	X	4	No	-	-	-	N	-
4B	6X6	250	4	X	4	No	-	-	-	N	-
4C	6X40	0	2-4-2	X	4	Yes	2.0	5	-	G	-
4D	6X40	0	2-4-2	X	4	Yes	2.0	5	-	G	-
5A	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-
5B	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-
5C	6X40	0	2-4-2	X	5	Yes	-	15	-	S	-
6A	6X6	300	5	X	6	Yes	-	-	X	N	-
6B	6X6	300	5	X	6	Yes	-	-	X	N	-
6C	6X6	300	5	X	6	Yes	-	-	X	N	-
7A	6X40	0	2-4-2	X	7	Yes	-	-	-	S	-
7B	6X40	0	2-4-2	X	7	Yes	-	-	-	S	-
8A	6X6	300	5	X	8	No	-	-	-	N	-
8B	6X6	300	5	X	8	No	-	-	-	N	-
8C	6X40	0	2-4-2	Y	8	Yes	2.0	5	-	G	-
8D	6X40	0	2-4-2	X	8	Yes	2.0	5	-	G	-

8 Phase Fully Actuated Fayetteville Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer. Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Reposition existing signal head numbered #51.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Pedestrian pedestals are conceptual and shown for reference only. See 2018 NCDOT Roadway Standard Drawings 1705.04 Sheets 1-3 for push button location details.

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	-	7	-	7	-	7	-	7
Ped Clear	-	35	-	36	-	36	-	38
Veh. Extension *	2.0	6.0	2.0	6.0	2.0	6.0	2.0	6.0
Max 1 *	20	60	30	40	20	60	30	40
Yellow	3.0	4.4	3.0	4.2	3.0	4.5	3.0	4.4
Red Clear	4.4	2.7	4.3	3.1	4.0	2.7	4.1	2.8
Red Revert	-	-	-	-	-	-	-	-
Actuations B4 Add *	-	0	-	-	-	0	-	-
Seconds / Actuation *	-	1.5	-	-	-	1.5	-	-
Max Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	5	-	15	-	5
Time To Reduce *	-	30	-	20	-	30	-	20
Minimum Gap	-	3.0	-	3.0	-	3.0	-	3.0
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	-	-	-	-	-
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 | EXISTING |
|--|----------|
| ○ Traffic Signal Head | ● N/A |
| ○ Modified Signal Head | ○ N/A |
| ○ Sign | ○ N/A |
| ○ Pedestrian Signal Head With Push Button & Sign | ○ N/A |
| ○ Signal Pole with Guy | ○ N/A |
| ○ Signal Pole with Sidewalk Guy | ○ N/A |
| ○ Inductive Loop Detector | ○ N/A |
| ○ Controller & Cabinet | ○ N/A |
| ○ Junction Box | ○ N/A |
| ○ 2-in Underground Conduit | ○ N/A |
| ○ Right of Way | ○ N/A |
| ○ Directional Arrow | ○ N/A |
| ○ Directional Drill | ○ N/A |
| ○ Metal Strain Pole | ○ N/A |
| ○ Type II Signal Pedestal | ○ N/A |
| ○ "U-Turn Yield to Right Turn" (R10-16) | ○ N/A |
| ○ Right Arrow "ONLY" Sign (R3-5R) | ○ N/A |
| ○ Turning Vehicles Yield to Peds Sign (R10-15) | ○ N/A |

THIS PLAN SUPERSEDES THE PLAN SIGNED AND SEALED ON 06/05/2019

Signal Upgrade - Final Design

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Prepared for the Offices of:

 Betsy L. Watson
 Professional Engineer
 No. 29449

US 401 (Raeford Road) at NC 162 (Bunce Road) / SR 1411 (Bunce Road)
 Division 6 Cumberland County Fayetteville
 PLAN DATE: July 2021 REVIEWED BY: E D Harris
 PREPARED BY: R M Muncey REVIEWED BY: B L Watson

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS	INIT.	DATE

DocuSigned by:
 Betsy L. Watson
 7/1/2021 10:00 AM
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 User: jhamer.rgh

