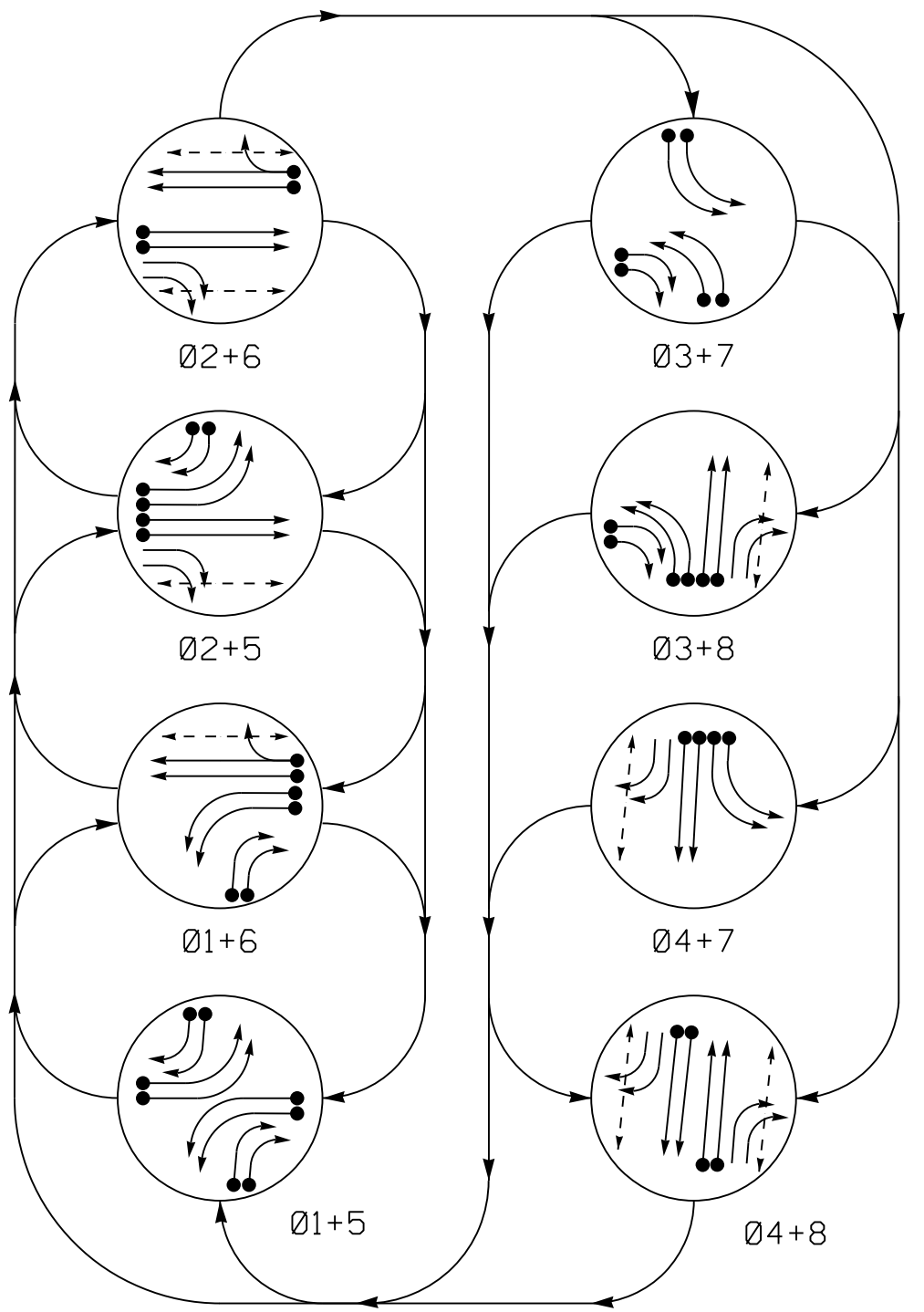


**PHASING DIAGRAM**

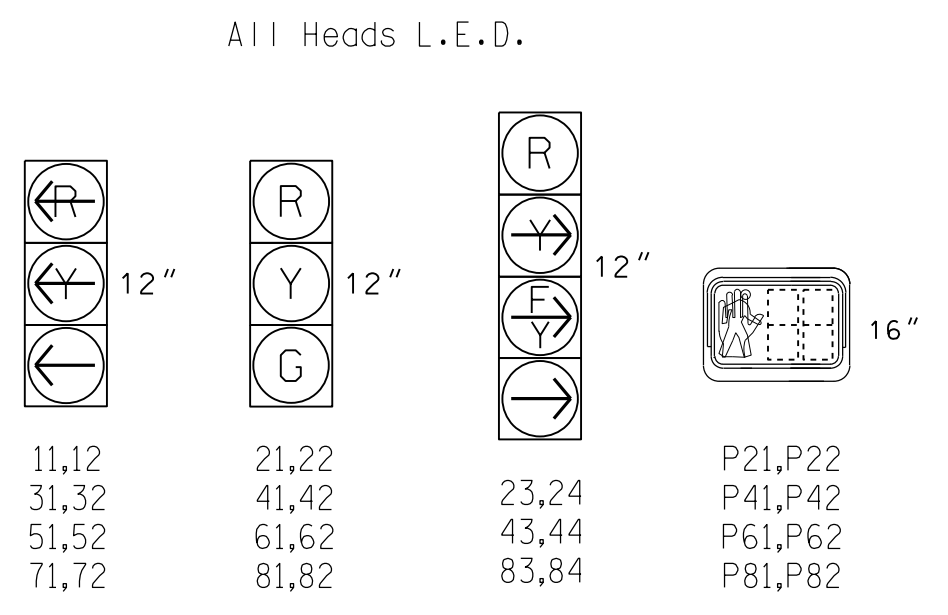


SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11,12	←	←	←	←	←	←	←	←
21,22	R	R	G	G	R	R	R	Y
23,24	R	R	←	←	←	←	←	←
31,32	←	←	←	←	←	←	←	←
41,42	R	R	R	R	R	R	G	G
43,44	←	←	←	←	←	←	←	←
51,52	←	←	←	←	←	←	←	←
61,62	R	G	R	G	R	R	R	Y
71,72	←	←	←	←	←	←	←	←
81,82	R	R	R	R	R	R	G	G
83,84	←	←	←	←	←	←	←	←
P21,P22	DW	DW	W	W	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DW	DRK
P81,P82	DW	DW	DW	DW	W	DW	W	DRK

**PHASING DIAGRAM DETECTION LEGEND**

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

**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	*	-	1	Yes	-	-	-	S	-
1B	6X40	0	*	-	1	Yes	-	-	-	S	-
1C	6X40	0	*	-	1	Yes	-	15	-	S	-
1D	6X40	0	*	-	1	Yes	-	15	-	S	-
2A	6X6	300	*	-	2	Yes	-	-	-	N	-
2B	6X6	300	*	-	2	Yes	-	-	-	N	-
2C	6X40	0	*	-	2	Yes	2.0	5	-	G	-
2D	6X40	0	*	-	2	Yes	2.0	5	-	G	-
3A	6X40	0	*	-	3	Yes	-	3	-	S	-
3B	6X40	0	*	-	3	Yes	-	-	-	S	-
4A	6X40	0	*	-	4	Yes	-	-	-	S	-
4B	6X40	0	*	-	4	Yes	-	-	-	S	-
5A	6X40	0	*	-	5	Yes	-	-	-	S	-
5B	6X40	0	*	-	5	Yes	-	-	-	S	-
5C	6X40	0	*	-	5	Yes	-	15	-	S	-
5D	6X40	0	*	-	5	Yes	-	15	-	S	-
6A	6X6	300	*	-	6	Yes	-	-	-	N	-
6B	6X6	300	*	-	6	Yes	-	-	-	N	-

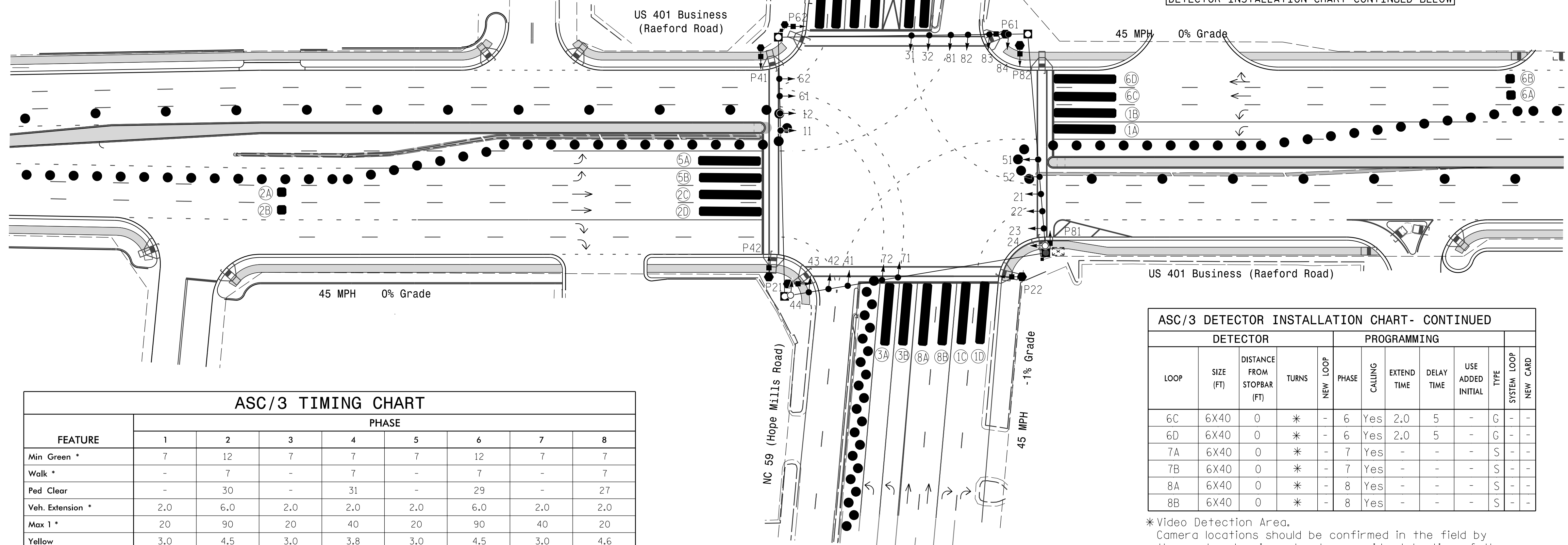
\*Video Detection Area. Camera locations should be confirmed in the field by the contractor in order to provide detection of the areas indicated.

DETECTOR INSTALLATION CHART CONTINUED BELOW

**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 heads 11, 12, 22, 23, 31, 32, 51, 52, 61, and 62.
- 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.



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
○	Metal Strain Pole	○	N/A
○	Type II Signal Pedestal	○	N/A
○	Video Detection Area	○	N/A
○	Construction Zone	○	N/A
○	Drums	○	N/A

FEATURE	ASC/3 TIMING CHART 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	-	30	-	31	-	29	-	27
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max I *	20	90	20	40	20	90	40	20
Yellow	3.0	4.5	3.0	3.8	3.0	4.5	3.0	4.6
Red Clear	4.3	2.8	4.2	3.1	3.9	2.8	4.0	2.4
Red Revert	-	-	-	-	-	-	-	-
Actuations B4 Add *	-	-	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Locking Detector	-	-	-	-	-	-	-	-
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.

ASC/3 DETECTOR INSTALLATION CHART- CONTINUED											
DETECTOR				PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	NEW CARD
6C	6X40	0	*	-	6	Yes	2.0	5	-	G	-
6D	6X40	0	*	-	6	Yes	2.0	5	-	G	-
7A	6X40	0	*	-	7	Yes	-	-	-	S	-
7B	6X40	0	*	-	7	Yes	-	-	-	S	-
8A	6X40	0	*	-	8	Yes	-	-	-	S	-
8B	6X40	0	*	-	8	Yes	-	-	-	S	-

\*Video Detection Area. Camera locations should be confirmed in the field by the contractor in order to provide detection of the areas indicated.

**Signal Upgrade Temporary Design 3 - TMP Phase III**

**Stantec**  
 Stantec Consulting Services Inc.  
 801 Jones Franklin Road-Suite 300  
 Raleigh, NC 27606  
 Tel. (919) 851-6866  
 Fax. (919) 851-7024  
 www.stantec.com  
 License No. F-0672

Prepared for the Offices of:  
 Transportation Mobility and Safety Division  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 STATE OF NORTH CAROLINA  
 Signal Design Section  
 750 N. Greenfield Pkwy, Garner, NC 27526  
 SCALE: 0 40  
 1" = 40'

**US 401 Business (Raeford Road) at NC 59 (Hope Mills Road) / SR 1592 (Glensford Drive)**  
 Division 6 Cumberland County Fayetteville  
 PLAN DATE: March 2018 REVIEWED BY: E D Harris  
 PREPARED BY: R M Muncey REVIEWED BY: B L Watson

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL 29449  
 PROFESSIONAL ENGINEER  
 JESSY L. WATSON  
 DATE: 3/29/2018  
 SIG. INVENTORY NO. 06-015513

3/29/2018 10:41:11 AM  
 User: rmmuncey  
 C:\Users\rmmuncey\Documents\Signal Design\Phase 3\U-4405\Signal Design\Phase 3\U-4405.dwg  
 User: rmmuncey