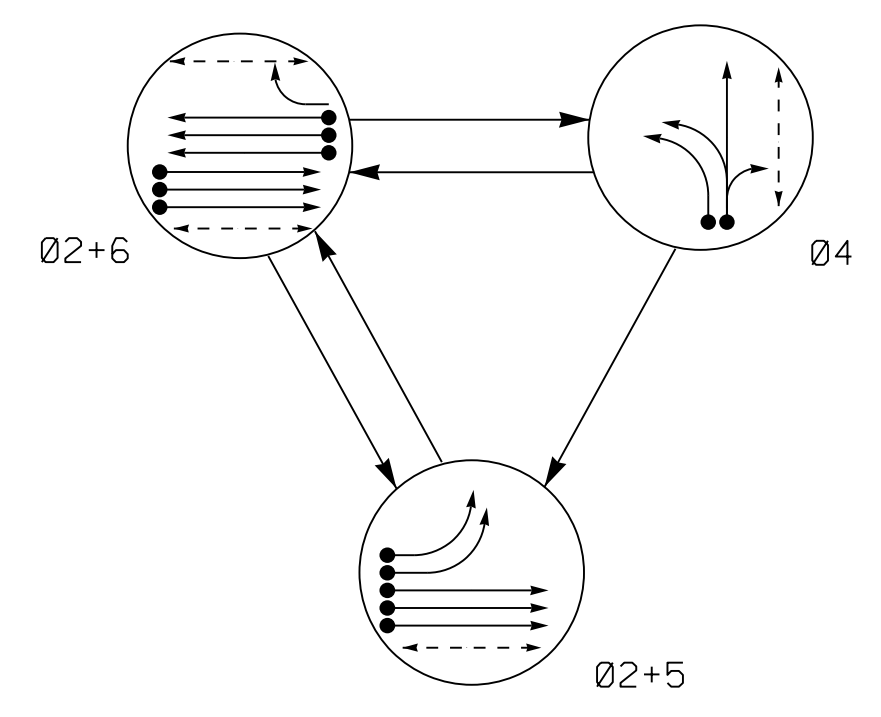


**PHASING DIAGRAM**



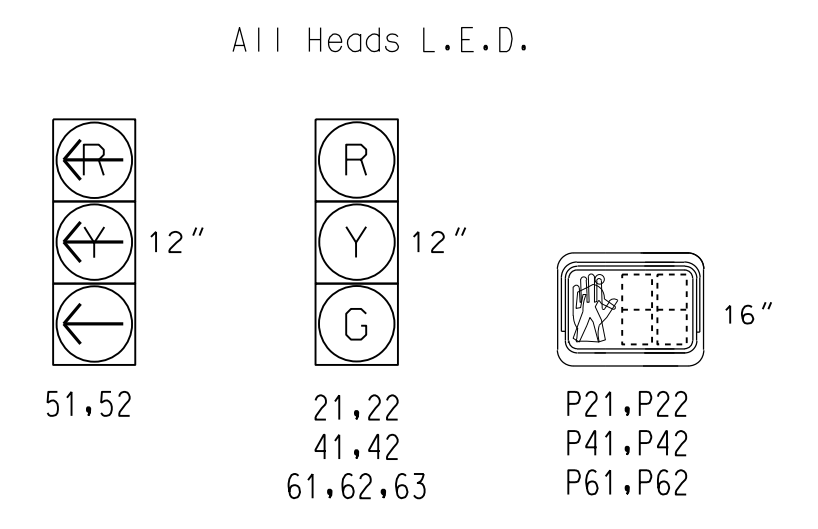
**PHASING DIAGRAM DETECTION LEGEND**

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

**TABLE OF OPERATION**

SIGNAL FACE	PHASE			
	02+5	02+6	04	FL HEADS
21,22	G	G	R	Y
41,42	R	R	G	R
51,52	←	←	←	←
61,62,63	R	G	R	Y
P21,P22	W	W	DW	DRK
P41,P42	DW	DW	W	DRK
P43,P44	DW	DW	W	DRK
P61,P62	DW	W	DW	DRK

**SIGNAL FACE I.D.**



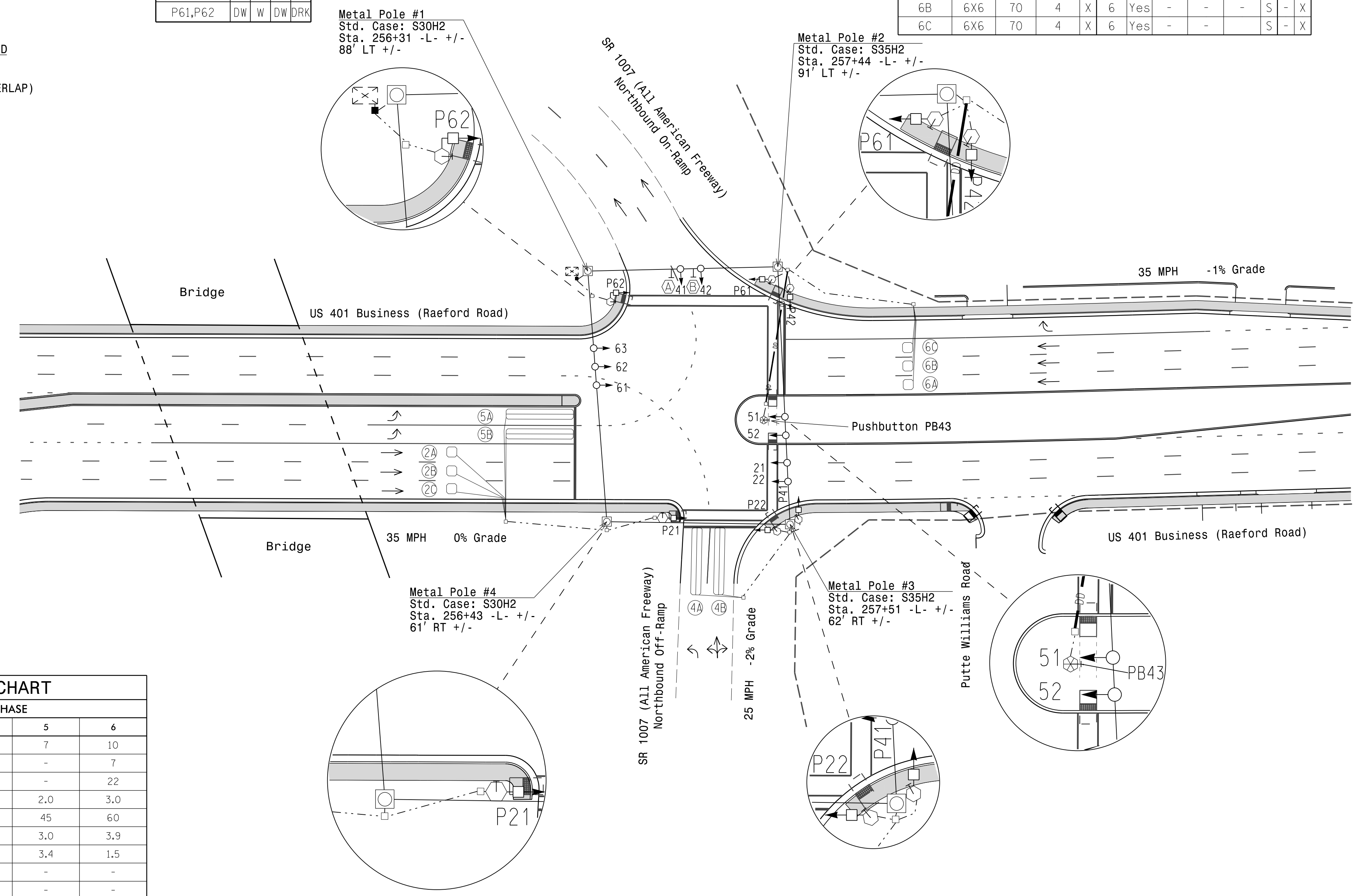
**ASC/3 DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP	NEW CARD
2A	6X6	70	4	X	2	Yes	-	-	-	S	-	X
2B	6X6	70	4	X	2	Yes	-	-	-	S	-	X
2C	6X6	70	4	X	2	Yes	-	-	-	S	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	S	-	X
4B	6X40	0	2-4-2	X	4	Yes	-	10	-	S	-	X
5A	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-	X
5B	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-	X
6A	6X6	70	4	X	6	Yes	-	-	-	S	-	X
6B	6X6	70	4	X	6	Yes	-	-	-	S	-	X
6C	6X6	70	4	X	6	Yes	-	-	-	S	-	X

**3 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 5 may be lagged.
- 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.



**ASC/3 TIMING CHART**

FEATURE	PHASE			
	2	4	5	6
Min Green *	10	7	7	10
Walk *	7	7	-	7
Ped Clear	12	34	-	22
Veh. Extension *	3.0	2.0	2.0	3.0
Max I *	60	30	45	60
Yellow	3.8	3.3	3.0	3.9
Red Clear	2.3	3.4	3.4	1.5
Red Revert	-	-	-	-
Actuations B4 Add *	-	-	-	-
Seconds / Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	X	-	-	X
Recall Position	VEH. RECALL	-	-	VEH. RECALL
Dual Entry	-	-	-	-
Simultaneous Gap	X	X	X	X

**LEGEND**

PROPOSED	EXISTING
○ → Traffic Signal Head	● → Traffic Signal Head
○ → Modified Signal Head	N/A
○ → Pedestrian Signal Head With Push Button & Sign	○ → Pedestrian Signal Head
○ → Signal Pole with Guy	○ → Signal Pole with Sidewalk Guy
○ → Signal Pole with Sidewalk Guy	○ → Inductive Loop Detector
○ → Inductive Loop Detector	○ → Controller & Cabinet
○ → Controller & Cabinet	○ → Junction Box
○ → Junction Box	○ → 2-in Underground Conduit
○ → 2-in Underground Conduit	○ → Right of Way
○ → Right of Way	○ → Directional Arrow
○ → Directional Arrow	○ → Directional Drill
○ → Directional Drill	N/A
○ → Metal Strain Pole	○ → Metal Strain Pole
○ → Type I Pushbutton Post	○ → Type II Signal Pedestal
○ → Type II Signal Pedestal	○ → Left Arrow "ONLY" Sign (R3-5L)
○ → Left Arrow "ONLY" Sign (R3-5L)	○ → Dual Turn and Through Arrows Sign
○ → Dual Turn and Through Arrows Sign	○ → Dual Turn and Through Arrows Sign

**Signal Upgrade - Final Design**

**Stantec**

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Prepared for the Offices of:  
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North Carolina Department of Transportation  
Signal Design Section

750 N. Greenfield Pkwy, Garner, NC 27526

SCALE  
0 40  
1" = 40'

**US 401 Business (Raeford Road) at SR 1007 (All American Freeway) Northbound Ramps**

Division 6 Cumberland County Fayetteville

PLAN DATE: March 2018 REVIEWED BY: E D Harris

PREPARED BY: J HAMBRIGHT REVIEWED BY: B L Watson

REVISIONS	INIT.	DATE

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

North Carolina Professional Engineer  
SEAL 29449  
JESSY L. WATSON

DATE: 3/29/2018  
SIG. INVENTORY NO. 06-0323

3/29/2018 10:41:00 AM  
 User: rfmancey  
 C:\Users\rfmancey\Documents\Signal Design\4405\sig\_dsn\_06-0323\_Final.dgn

\* 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.