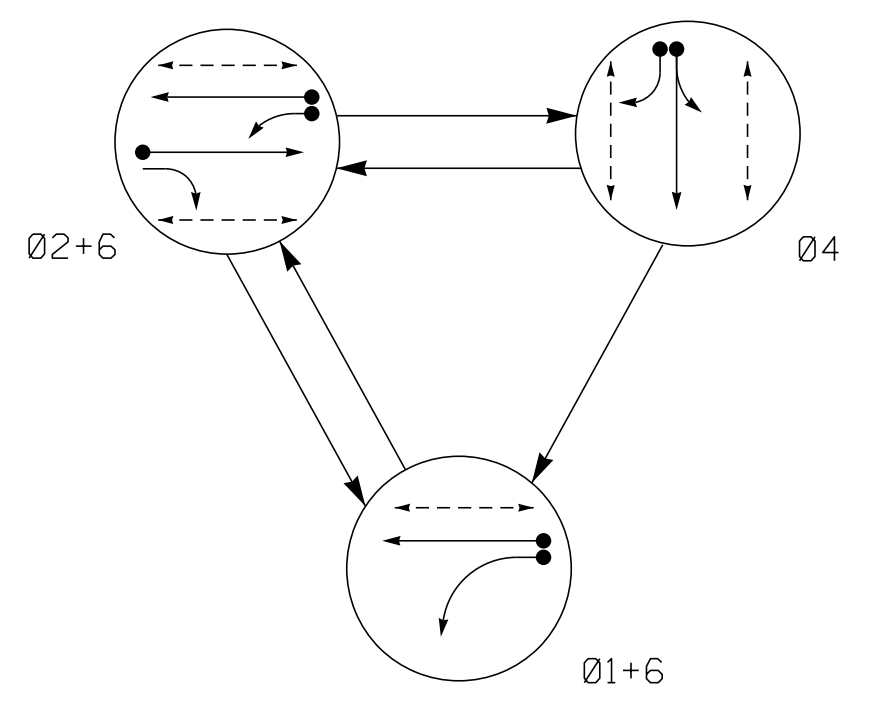


PHASING DIAGRAM



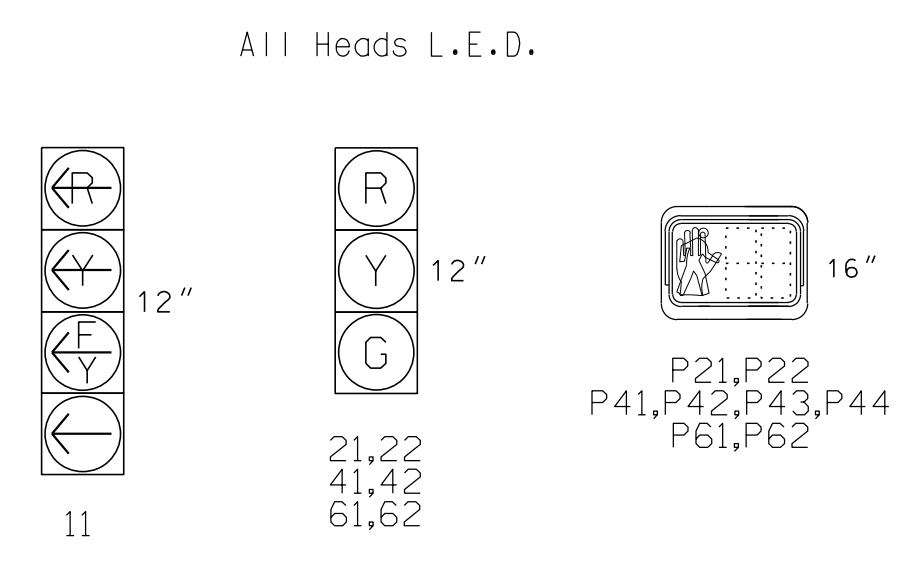
PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE			
	Ø 1 + 6	Ø 2 + 6	Ø 4	F L S B
11	←	→	→	→
21,22	R	G	R	Y
41,42	R	R	G	R
61,62	G	G	R	Y
P21,P22	DW	W	DW	DRK
P41,P42 P43,P44	DW	DW	W	DRK
P61,P62	W	W	DW	DRK

SIGNAL FACE I.D.



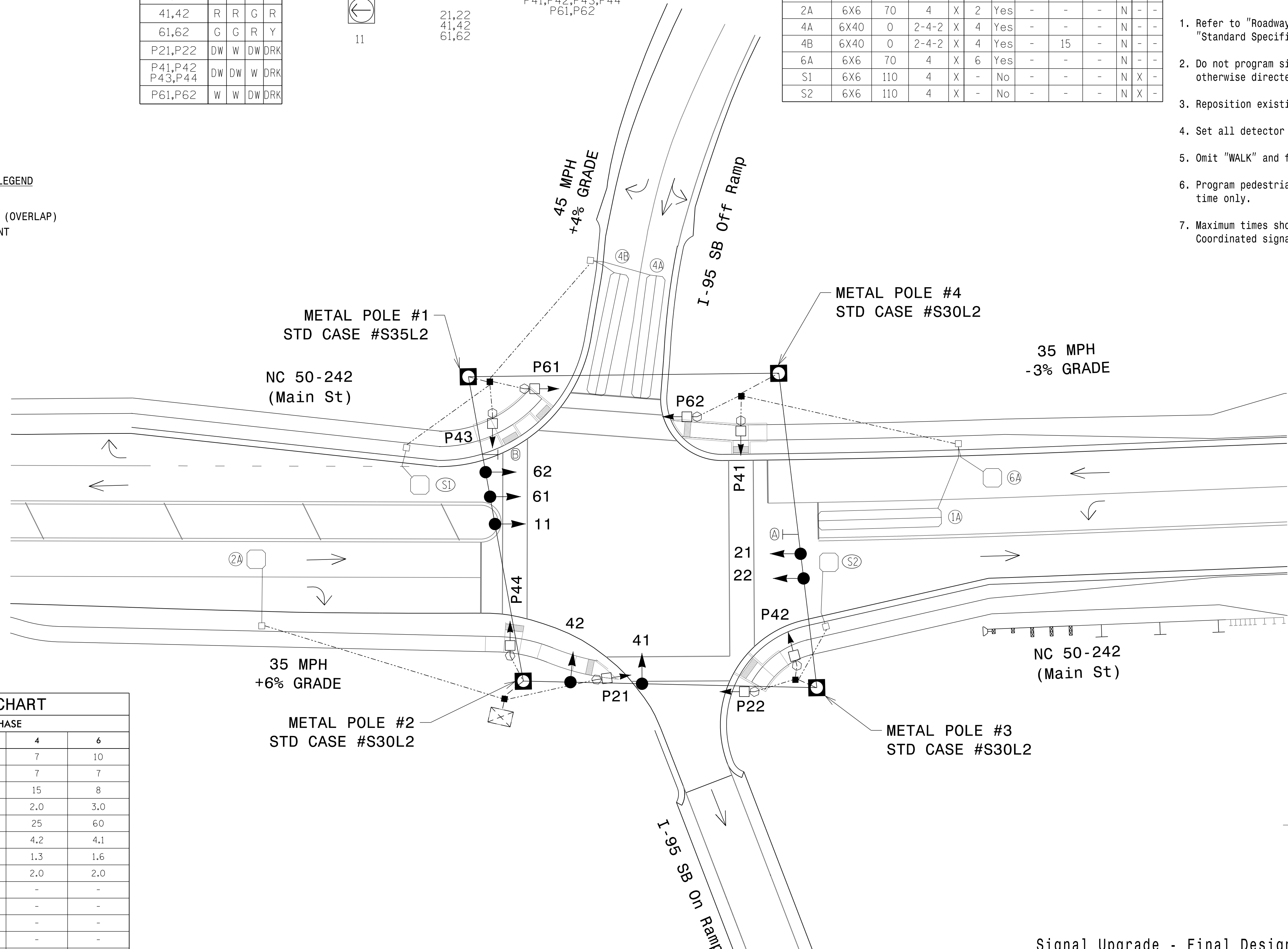
ASC/3 DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING						
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP
1A	6X40	0	2-4-2	X	1	Yes	-	15	-	N	-
2A	6X6	70	4	X	2	Yes	-	-	-	N	-
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-
4B	6X40	0	2-4-2	X	4	Yes	-	15	-	N	-
6A	6X6	70	4	X	6	Yes	-	-	-	N	-
S1	6X6	110	4	X	-	No	-	-	-	N	X
S2	6X6	110	4	X	-	No	-	-	-	N	X

3 Phase Fully Actuated Signal System #D04-20 Benson NC 50-242 (Main St)

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.
- Reposition existing signal heads numbered 42, 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 Coordinated signal system timing values superseded these values.



ASC/3 TIMING CHART

FEATURE	PHASE			
	1	2	4	6
Min Green *	7	10	7	10
Walk *	-	7	7	7
Ped Clear	-	8	15	8
Veh. Extension *	2.0	3.0	2.0	3.0
Max I *	25	60	25	60
Yellow	3.0	4.1	4.2	4.1
Red Clear	2.3	1.6	1.3	1.6
Red Revert	2.0	2.0	2.0	2.0
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

* 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	○
○ Pedestrian Signal Head With Push Button & Sign	○
○ Signal Pole with Guy	○
○ Signal Pole with Sidewalk Guy	○
○ Metal Strain Pole	○
○ Type II Signal Pedestal	○
○ Inductive Loop Detector	○
○ Controller & Cabinet	○
○ Junction Box	○
○ 2-in Underground Conduit	○
○ Right of Way	○
○ Directional Arrow	○
○ No Left Turn (R3-2) Sign	○
○ No Right Turn (R3-1) Sign	○
○ Wheelchair Ramp	○

Signal Upgrade - Final Design

Michael Baker INTERNATIONAL
 8000 Regency Pkwy, Ste. 600, Cary, NC 27518
 Phone: (919) 463-5490 - MBAKERINTL.COM
 NC License No. : F-1084

Prepared for:
 TRANSPORTATION MOBILITY AND SAFETY DIVISION
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 SIGNAL DESIGN SECTION

NC 50-252 (Main St) at I-95 SB Ramps

Division 4 Johnston County Benson

PLAN DATE: March 2021 REVIEWED BY: A Donald

PREPARED BY: K M Cory REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KELLY M. CORY
 038970

SIGNATURE: Kelly M Cory DATE: 4/26/2021

SIG. INVENTORY NO. 04-0218