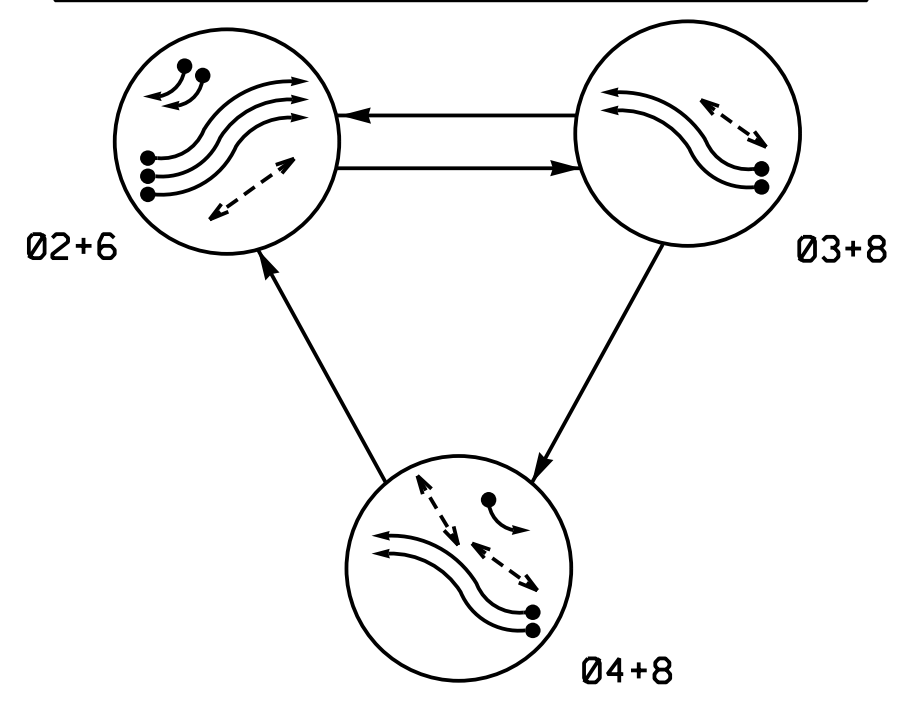


**PHASING DIAGRAM**  
Program all phases for "Red Rest".



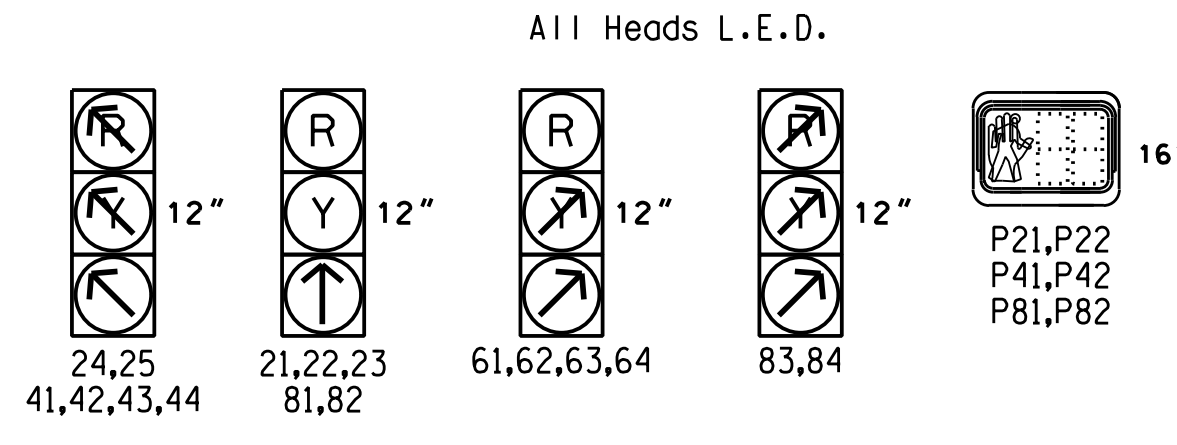
**PHASING DIAGRAM DETECTION LEGEND**

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

**TABLE OF OPERATION**

SIGNAL FACE	PHASE			
	02+6	03+8	04+8	FLASH
21,22,23		R	R	R
24,25	↘	R	R	R
41,42,43,44	↘	↘	↘	↘
61,62,63,64	↘	R	R	R
81,82	R			R
83,84	↘	↘	↘	↘
P21,P22	W	DW	DW	DRK
P41,P42	DW	DW	W	DRK
P81,P82	DW	W	W	DRK

**SIGNAL FACE I.D.**



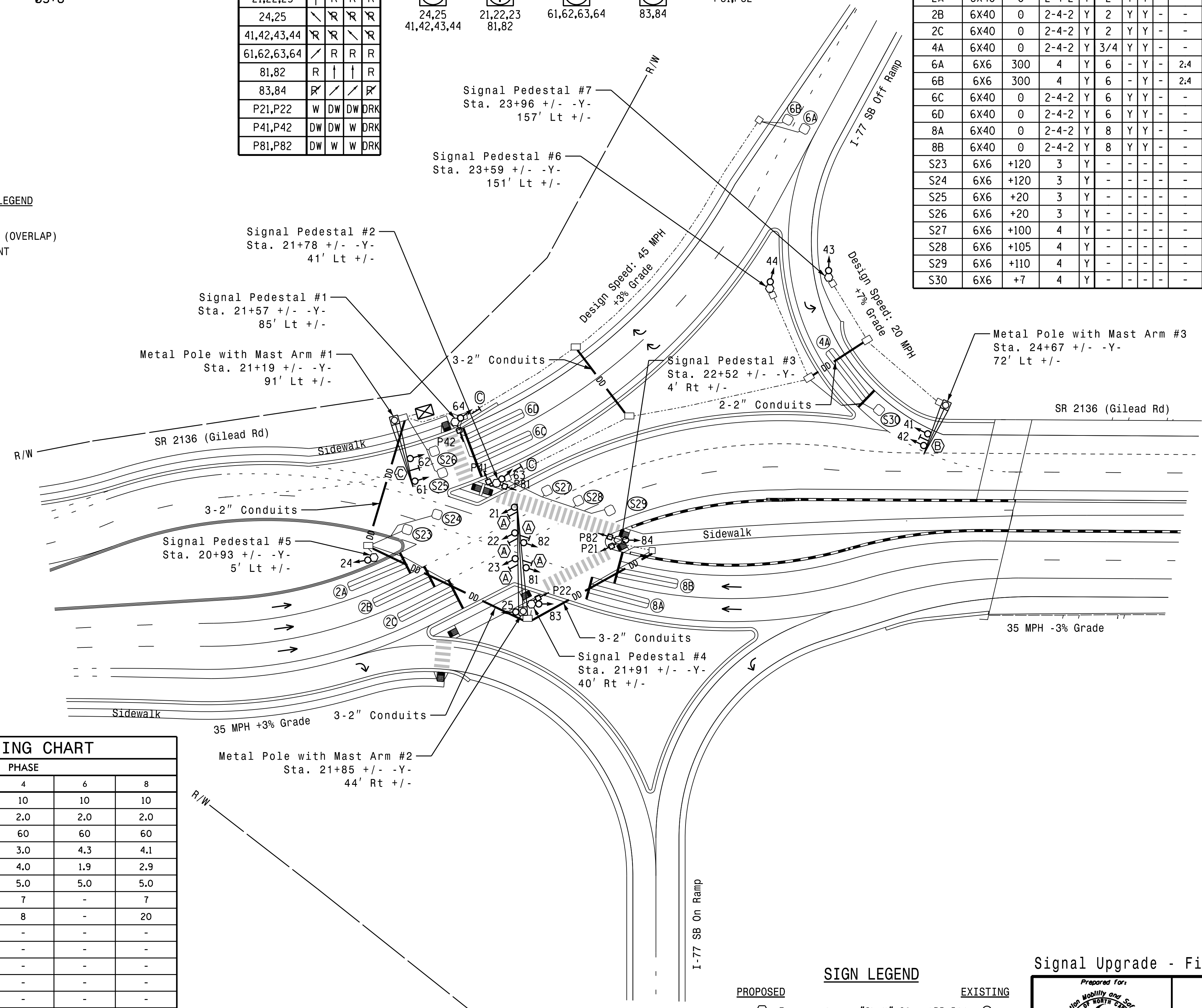
**OASIS 2070E LOOP & DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING								
				NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-	Y
2B	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-	Y
2C	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	3/4	Y	Y	-	-	-	-	Y
6A	6X6	300	4	Y	6	-	Y	-	2.4	-	-	Y
6B	6X6	300	4	Y	6	-	Y	-	2.4	-	-	Y
6C	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-	Y
6D	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	-	-	Y
8B	6X40	0	2-4-2	Y	8	Y	Y	-	-	-	-	Y
S23	6X6	+120	3	Y	-	-	-	-	-	-	-	Y
S24	6X6	+120	3	Y	-	-	-	-	-	-	-	Y
S25	6X6	+20	3	Y	-	-	-	-	-	-	-	Y
S26	6X6	+20	3	Y	-	-	-	-	-	-	-	Y
S27	6X6	+100	4	Y	-	-	-	-	-	-	-	Y
S28	6X6	+105	4	Y	-	-	-	-	-	-	-	Y
S29	6X6	+110	4	Y	-	-	-	-	-	-	-	Y
S30	6X6	+7	4	Y	-	-	-	-	-	-	-	Y

**3 Phase Fully Actuated Gilead Road Closed Loop 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.
- Omit phase 4 during phase 2+6 on.
- Program controller to clear from phase 2+6 to phase 4 by progressing through phase 3.
- Omit phase 3 during phase 4 on.
- Phase 3 provides red clearance time for vehicles traveling Eastbound on Gilead Rd.
- Set all detector units to presence mode.
- Program all phases for "Red Rest".
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- The cabinet should be designed to include Auxiliary Output file for future use.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
- All pedestrian pushbuttons shall be located in the field by the Division Traffic Engineer before installation.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset #1106



**OASIS 2070E TIMING CHART**

FEATURE	PHASE				
	2	3 (DUMMY)	4	6	8
Min Green 1*	10	1	10	10	10
Extension 1*	2.0	0.0	2.0	2.0	2.0
Max Green 1*	60	1	60	60	60
Yellow Clearance	3.7	3.0	3.0	4.3	4.1
Red Clearance	1.9	3.4	4.0	1.9	2.9
Red Revert	5.0	5.0	5.0	5.0	5.0
Walk 1*	7	-	7	-	7
Don't Walk 1	14	-	8	-	20
Seconds Per Actuation*	-	-	-	-	-
Max Variable Initial*	-	-	-	-	-
Time Before Reduction*	-	-	-	-	-
Time To Reduce*	-	-	-	-	-
Minimum Gap	-	-	-	-	-
Recall Mode	-	-	-	-	-
Vehicle Call Memory	-	-	-	-	-
Dual Entry	ON	ON	ON	ON	ON
Simultaneous Gap	ON	ON	ON	ON	ON

\* 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.

**SIGN LEGEND**

PROPOSED	EXISTING
(A) Through Arrow "ONLY" Sign (R3-5A)	(A)
(B) Left Arrow "ONLY" Sign (R3-5L)	(B)
(C) "NO TURN ON RED" Sign (R10-11)	(C)

**LEGEND**

PROPOSED	EXISTING
○ → Traffic Signal Head	● →
⊥ Sign	⊥
⊥ Pedestrian Signal Head With Push Button & Sign	⊥
□ Inductive Loop Detector	□
⊠ Controller & Cabinet	⊠
□ Junction Box	□
□ Over-sized Junction Box	□
--- 2-in Underground Conduit	---
N/A Right of Way	---
→ Directional Arrow	→
--- Directional Drill	N/A
⊠ Metal Pole with Mastarm	⊠
○ Type II Signal Pedestal	○
⊠ Wheelchair Ramp	⊠
--- Concrete Barrier	N/A

**Signal Upgrade - Final Design**

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

SR 2136 (Gilead Road) at I-77 SB Ramps

Division 10 Mecklenburg Co. Huntersville  
 PLAN DATE: December 2017 REVIEWED BY: A.D. Klinksiek  
 PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons

SCALE: 1"=40'

4/23/2018

SIG. INVENTORY NO. 10-1106