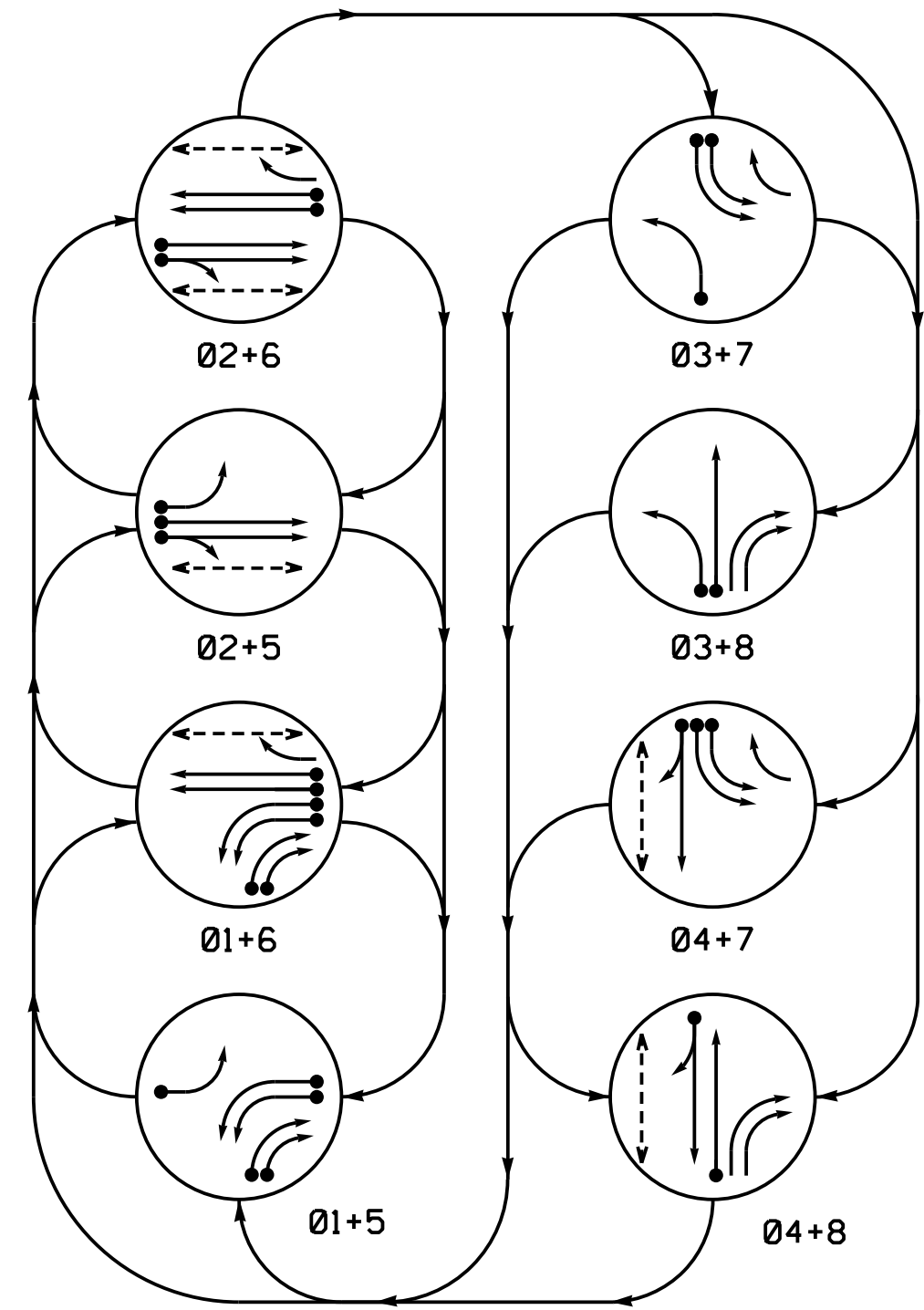


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

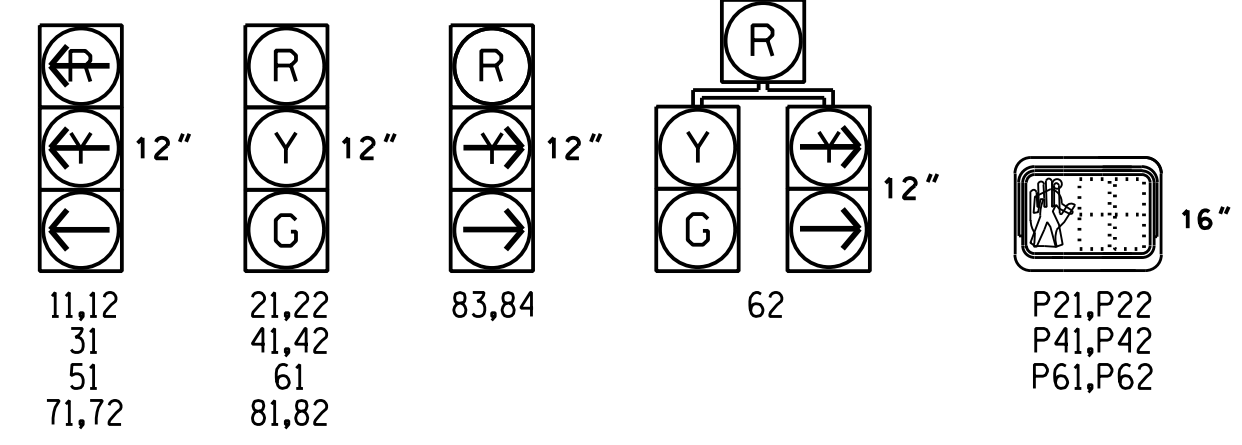
- ←● DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- ←..... UNSIGNALIZED MOVEMENT
- ←- - - PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+5	02+6	03+7	04+8	05+6	06+5	07+8	08+7
11,12	---	---	---	---	---	---	---	---
21,22	R	R	G	G	R	R	R	Y
31	---	---	---	---	---	---	---	---
41,42	R	R	R	R	R	R	G	G
51	---	---	---	---	---	---	---	---
61	R	G	R	G	R	R	R	Y
62	R	G	R	G	R	R	R	Y
71,72	---	---	---	---	---	---	---	---
81,82	R	R	R	R	R	G	R	G
83,84	---	---	R	R	---	R	---	R
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

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070E LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	FULL TIME DELAY		
1A	6X60	0	*	*	1	Y	Y	-	-	*
1B	6X60	0	*	*	1	Y	Y	-	-	*
1C	6X60	0	*	*	1	Y	Y	-	-	*
1D	6X60	0	*	*	1	Y	Y	-	15	*
2A/S31	6X10	70	*	*	2	Y	Y	-	-	Y*
2B/S32	6X10	70	*	*	2	Y	Y	-	-	Y*
3A	6X60	0	*	*	3	Y	Y	-	-	*
4A	6X60	0	*	*	4	Y	Y	-	10	*
5A	6X60	0	*	*	5	Y	Y	-	-	*
6A/S33	6X10	70	*	*	6	Y	Y	-	-	Y*
6B/S34	6X10	70	*	*	6	Y	Y	-	-	Y*
7A	6X60	0	*	*	7	Y	Y	-	-	*
7B	6X60	0	*	*	7	Y	Y	-	-	*
8A	6X60	0	*	*	8	Y	Y	-	-	*

* Video Detection Zone

8 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.
- Phase 1 and/or 5 may be lagged.
- Phase 3 and/or 7 may be lagged.
- Reposition existing signal heads numbered 11,12,21,22,61,62, and sign 0.
- 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.
- Incorporate Video Detection system for vehicle detection.
- Provide the Engineer with the Manufacturer's approved Video Detection locations and mounting heights to obtain detection zones as shown.
- 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 #1753

LEGEND

- | PROPOSED | EXISTING |
|---|---|
| ○→ Traffic Signal Head | ●→ Traffic Signal Head |
| ○→ Modified Signal Head | N/A |
| ○→ Sign | ○→ Sign |
| ○→ Pedestrian Signal Head With Push Button & Sign | ○→ Pedestrian Signal Head With Push Button & Sign |
| ○→ Signal Pole with Guy | ○→ 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 |
| N/A | ○→ Right of Way |
| ○→ Directional Arrow | ○→ Directional Arrow |
| ○→ Video Detection Zone | ○→ Video Detection Zone |
| ○→ Directional Drill | N/A |
| ○→ Metal Strain Pole | ○→ Metal Strain Pole |
| ○→ Type II Signal Pedestal | ○→ Type II Signal Pedestal |
| ○→ Wheelchair Ramp | ○→ Wheelchair Ramp |

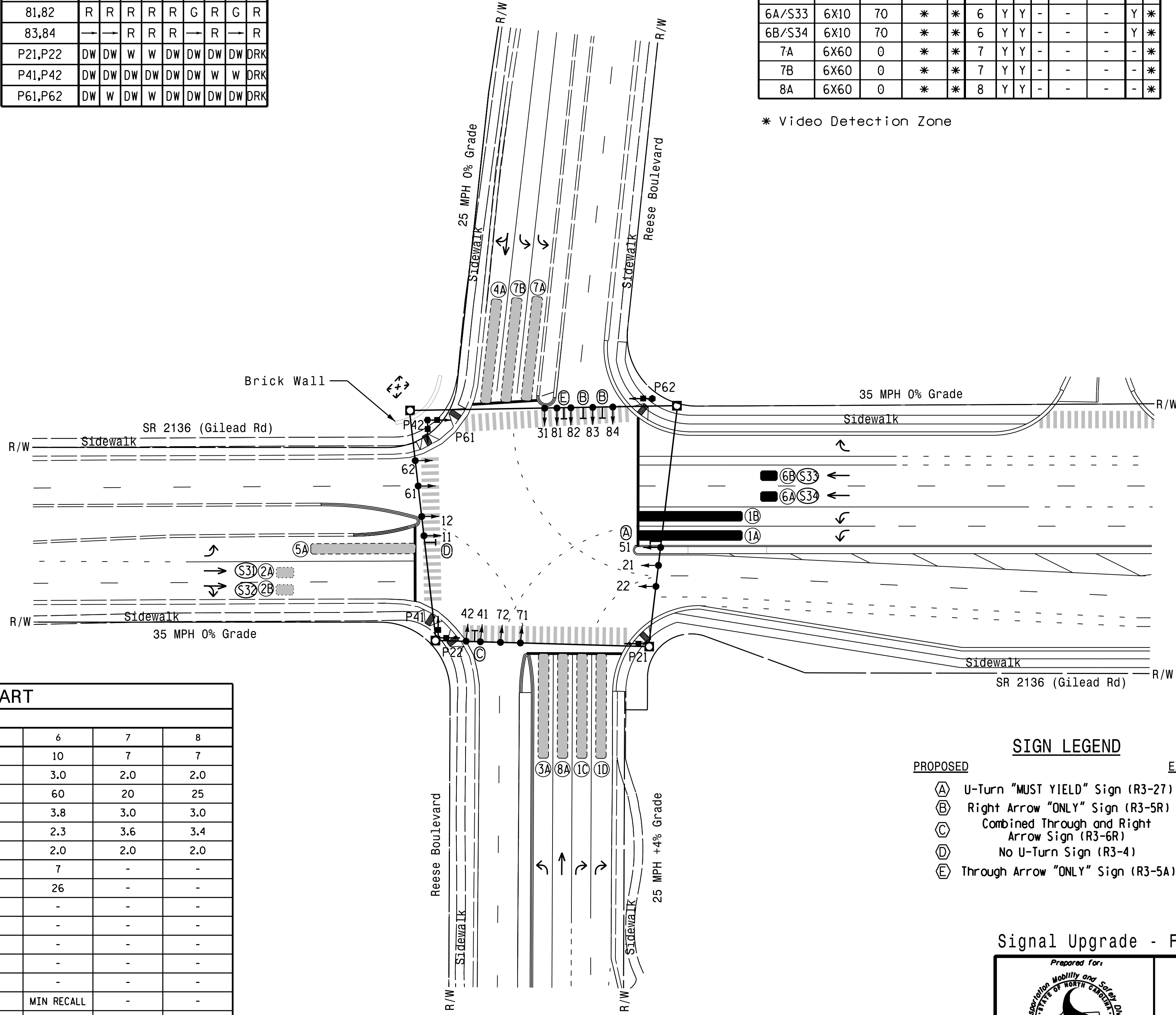
SIGN LEGEND

- | PROPOSED | EXISTING |
|---|---|
| (A) U-Turn "MUST YIELD" Sign (R3-27) | (A) U-Turn "MUST YIELD" Sign (R3-27) |
| (B) Right Arrow "ONLY" Sign (R3-5R) | (B) Right Arrow "ONLY" Sign (R3-5R) |
| (C) Combined Through and Right Arrow Sign (R3-6R) | (C) Combined Through and Right Arrow Sign (R3-6R) |
| (D) No U-Turn Sign (R3-4) | (D) No U-Turn Sign (R3-4) |
| (E) Through Arrow "ONLY" Sign (R3-5A) | (E) Through Arrow "ONLY" Sign (R3-5A) |

OASIS 2070E TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1 *	7	10	7	7	7	10	7	7
Extension 1 *	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Max Green 1 *	30	60	15	25	15	60	20	25
Yellow Clearance	3.0	3.8	3.0	3.2	3.0	3.8	3.0	3.0
Red Clearance	3.3	2.4	3.4	3.3	3.4	2.3	3.6	3.4
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	7	-	7	-	7	-	-
Don't Walk 1	-	27	-	25	-	26	-	-
Seconds Per Actuation *	-	-	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	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.

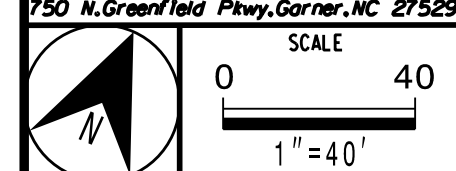


Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	SR 2136 (Gilead Road) at Reese Boulevard		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031464 M. T. SIMMONS R. SIMMONS
	Division 10 Mecklenburg Co. Huntersville PLAN DATE: December 2017 REVIEWED BY: A.D. Klinksiek PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons	REVISIONS INIT. DATE _____ _____	

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DocuSigned by:
M. T. Simmons
4/23/2018
DATE
SIG. INVENTORY NO. 10-1753