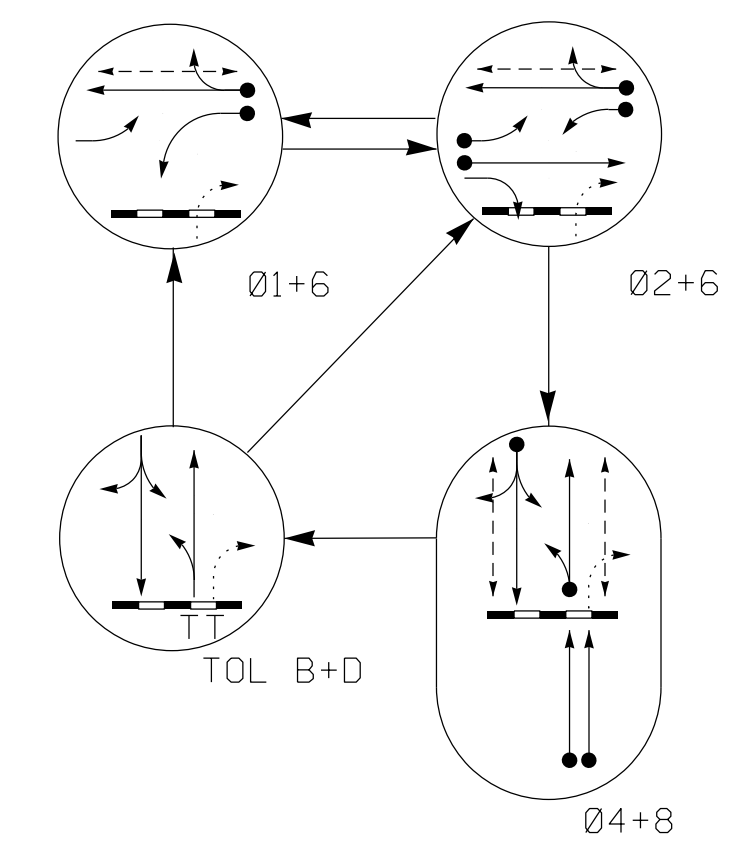


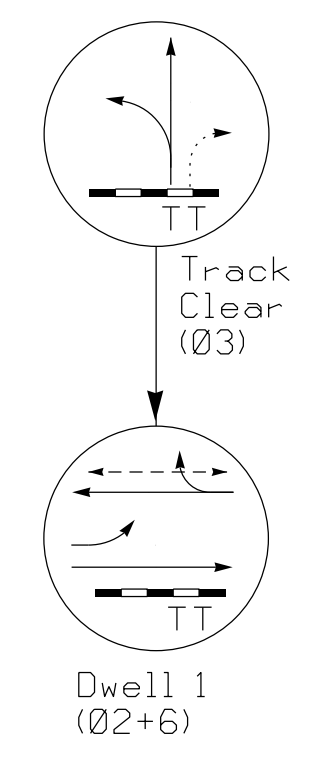
**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

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

**RAIL PREEMPT PHASES (High Priority)**



**TABLE OF OPERATION**

SIGNAL FACE	PHASE										
	01+6	02+6	04+8	TOL B	TOL D	DRK	DRK	DRK	DRK	DRK	DRK
21	R	G	R	R	R	R	R	R	R	R	R
22, 23	R	R	G	G	R	R	R	R	R	R	R
41, 42	R	R	G	G	R	R	R	R	R	R	R
II	---	---	---	---	---	---	---	---	---	---	---
61, 62	G	G	R	R	R	R	R	R	R	R	R
81	R	R	G	G	R	R	R	R	R	R	R
82	R	R	G	G	R	R	R	R	R	R	R
83, 84	R	R	G	G	R	R	R	R	R	R	R
P41, P42	DW	DW	W	DW	DW	DRK	DRK	DRK	DRK	DRK	DRK
P61, P62	W	W	DW	DW	DW	DRK	DRK	DRK	DRK	DRK	DRK
P81, P82	DW	DW	W	DW	DW	DRK	DRK	DRK	DRK	DRK	DRK
SIGN B	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON

\* SEE NOTE 15

**SCHOOL FLASHER TABLE OF OPERATION**

SIGNAL FACE	INTERVAL	
	1	2
101, 103	ON	OFF
102, 104	OFF	ON

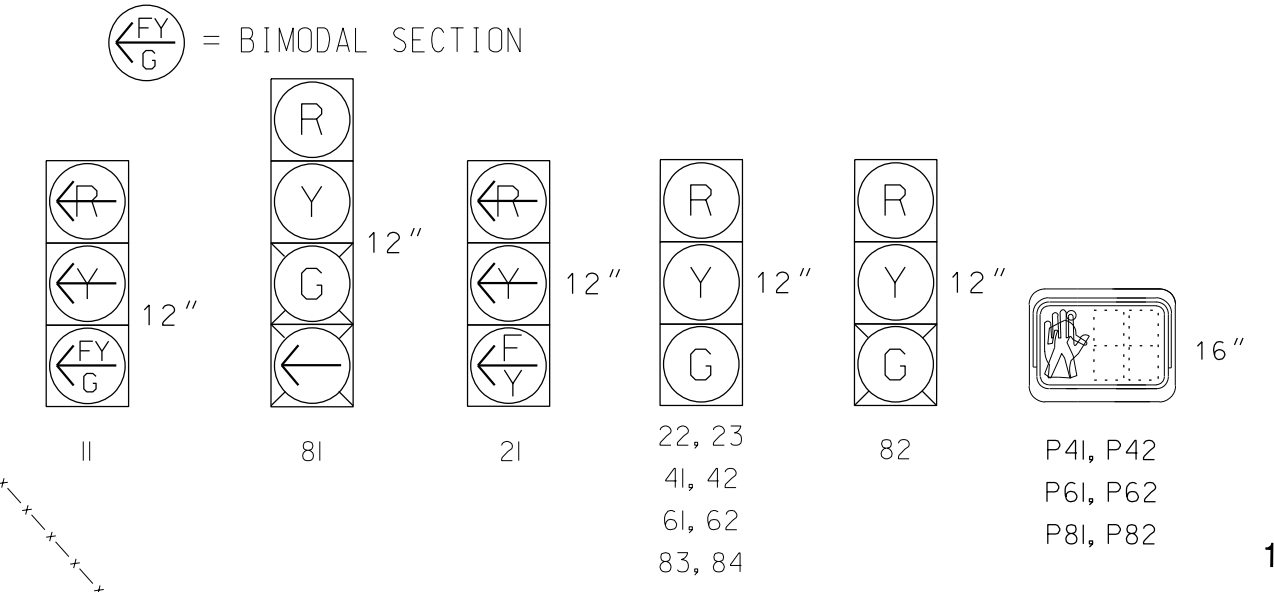
**OASIS 2070 LOOP & DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	FULL TIME DELAY				
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
2A	6X40	0	2-4-2	-	2	Y	Y	-	-	-	-	Y
2B	6X6	70	3	-	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-	Y
6A	6x6	70	3	-	6	Y	Y	-	-	-	-	Y
8A	6X40	0*	2-4-2	-	8	Y	Y	-	-	5	-	Y
8B	6X40	0*	2-4-2	-	8	Y	Y	-	-	5	-	Y
8C	6X25	+55*	2-4-2	-	8	Y	Y	-	-	5	-	Y
8D	6X25	0	2-4-2	-	8	Y	Y	-	-	-	-	Y

\* Located in relation to advance stopbar (NB)

**SIGNAL FACE I.D.**

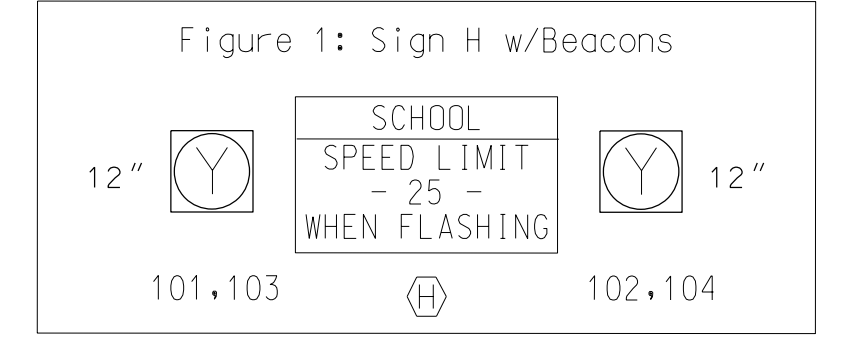
All Heads L.E.D. (Unless shown otherwise)  
 Denotes Optically Programmed Head  
 = BIMODAL SECTION



**4 Phase Fully Actuated w/Railroad Preemption (High Point Signal System)**

**NOTES**

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 may be lagged.
4. Set all detector units to presence mode.
5. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Install new signal cable for signal heads 11 and 21.
8. Program controller to start up in phase 4+8 green.
9. Reposition existing signal heads to countdown the flashing "Don't Walk" time only.
10. Omit "WALK" and "DON'T WALK" with no pedestrian calls.
11. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
12. Pavement markings are existing.
13. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
14. Program parent phases for Overlap "P" for all phases used in normal operation.
15. Ensure flashing operation does not alter operation of blackout signs.
16. Remove blackout sign G.
17. Program School Flashers to operate as directed by the Engineer.
18. The City Traffic Engineer will determine the hours of use for the school warning beacons.



**OASIS 2070 TIMING CHART**

FEATURE	PHASE						
	1	2	4	6	8	TOL B	TOL D
Min Green 1 *	7	10	7	10	7	8	8
Extension 1 *	2.0	3.0	4.0	3.0	2.0	-	-
Max Green 1 *	15	45	35	45	35	-	-
Yellow Clearance	3.0	4.1	3.6	4.1	4.2	4.2	3.6
Red Clearance	2.1	1.4	1.5	1.4	1.2	1.2	1.5
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	4	4	4	-	-
Don't Walk 1	-	-	10	7	12	-	-
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	-	-	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.

**OASIS 2070 RR PREEMPT**

FUNCTION	PRE 1
Interval 1 - Track Clearance Green	18
Interval 1 - Track Clearance Yellow	4.2
Interval 1 - Track Clearance Red	1.2
Interval 2 - Dwell Green	255
Interval 2 - Dwell Yellow	0.0*
Interval 2 - Dwell Red	0.0*
Interval 5 - Exit Green	1
Interval 5 - Yellow	0.0
Interval 5 - Red	0.0
Exit Phase(s)	4+8
Priority	High
Delay Time	0.0
Min Green Before Pre	1
Ped Clear Before Pre	4
Yellow Clear Before Pre	4.1
Red Clear Before Pre	1.4
Dwell Min Time	7
Enable Backup Protection	N
Ped Clear Through Yellow	Y
Inhibit Overlap Green Extension	Y
Omit Overlaps	A, P

\* Time defaults to time used for phase during normal operation

This signal is designed for advance preemption.

**PROPOSED SIGN LEGEND**

- (A) Street Name Sign
- (B) "NO RIGHT TURN - TRAIN" LED Blankout Sign
- (C) "NO TURN ON RED" Sign (R10-11)
- (D) "STOP HERE ON RED" Sign (R10-6)
- (E) "DO NOT STOP ON TRACKS" Sign (R8-8)
- (F) "STOP HERE WHEN FLASHING" Sign (R8-10)
- (G) "NO LEFT TURN - TRAIN" LED Blankout Sign
- (H) "SCHOOL SPEED LIMIT 25 WHEN FLASHING" Sign (S5-1) w/ Beacons (See Figure 1)

**EXISTING**

- LEGEND**
- |     |                               |     |      |
|-----|-------------------------------|-----|------|
| ○   | Traffic Signal Head           | ●   | N/A  |
| ○   | Modified Signal Head          | ○   | Sign |
| ⊥   | Pedestrian Signal Head        | ⊥   | Sign |
| *   | Ped Pushbutton and Sign       | *   | Sign |
| ○   | Pedestal Pole                 | ○   | Sign |
| ○   | Signal Pole with Guy          | ○   | Sign |
| ○   | Signal Pole with Sidewalk Guy | ○   | Sign |
| ⊥   | Inductive Loop Detector       | ⊥   | Sign |
| ⊥   | Controller & Cabinet          | ⊥   | Sign |
| ⊥   | Junction Box                  | ⊥   | Sign |
| --- | 2-in Underground Conduit      | --- | Sign |
| --- | Right of Way                  | --- | Sign |
| →   | Directional Arrow             | →   | Sign |
| N/A | Railroad Cantilever           | N/A | Sign |
| N/A | Railroad Gate and Flasher     | N/A | Sign |
| N/A | Railroad Tracks               | N/A | Sign |

**Signal Upgrade**

Prepared for the Offices of:

**E. Washington Street / Gordon Street at N. Hoskins Street**

Division 07 Guilford County High Point

PLAN DATE: July 2014 REVIEWED BY: LM Moon

PREPARED BY: Lawson/Jones REVIEWED BY: MB Toth

REVISIONS: \_\_\_\_\_ INIT. DATE

SCALE: 1"=20'

Department of Transportation  
215 S. Hamilton Street  
High Point, NC 27260

Seal: MELISSA B. TOTH, ENGINEER, SEAL 025892

6/5/2015

05-JUN-2015 15:54 D:\Transportation\Projects\Curr\100037777 - High Point Sig Sys\Signal\Package\Package 2\HP1003.dgn