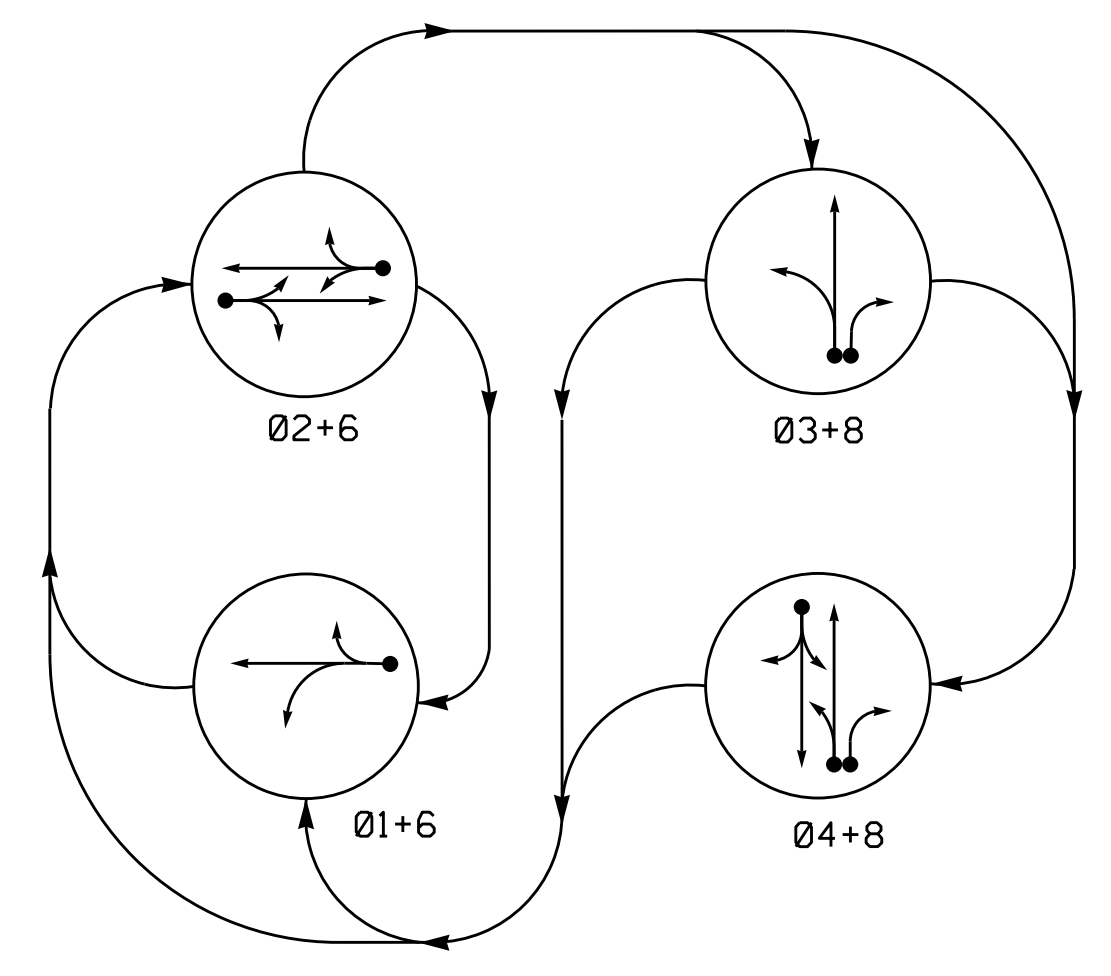


**4 Phase
Fully Actuated
Asheville Signal System**

PHASING DIAGRAM

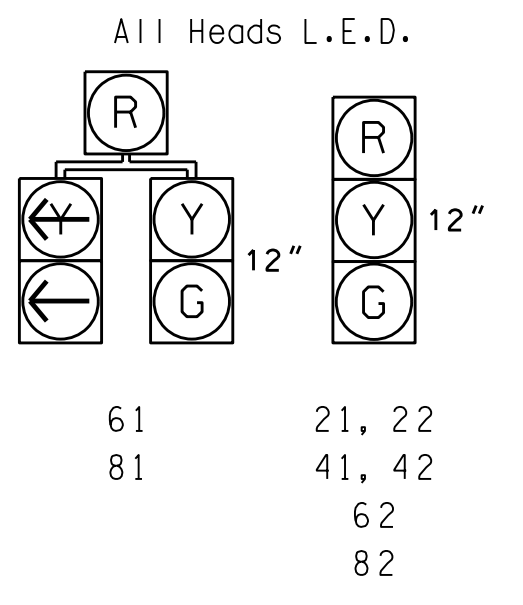


PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE				
	01+6	02+6	03+8	04+8	FLASH
21, 22	R	G	R	R	Y
41, 42	R	R	R	G	R
61	G	G	R	R	Y
62	G	G	R	R	Y
81	R	R	G	G	R
82	R	R	G	G	R

SIGNAL FACE I.D.

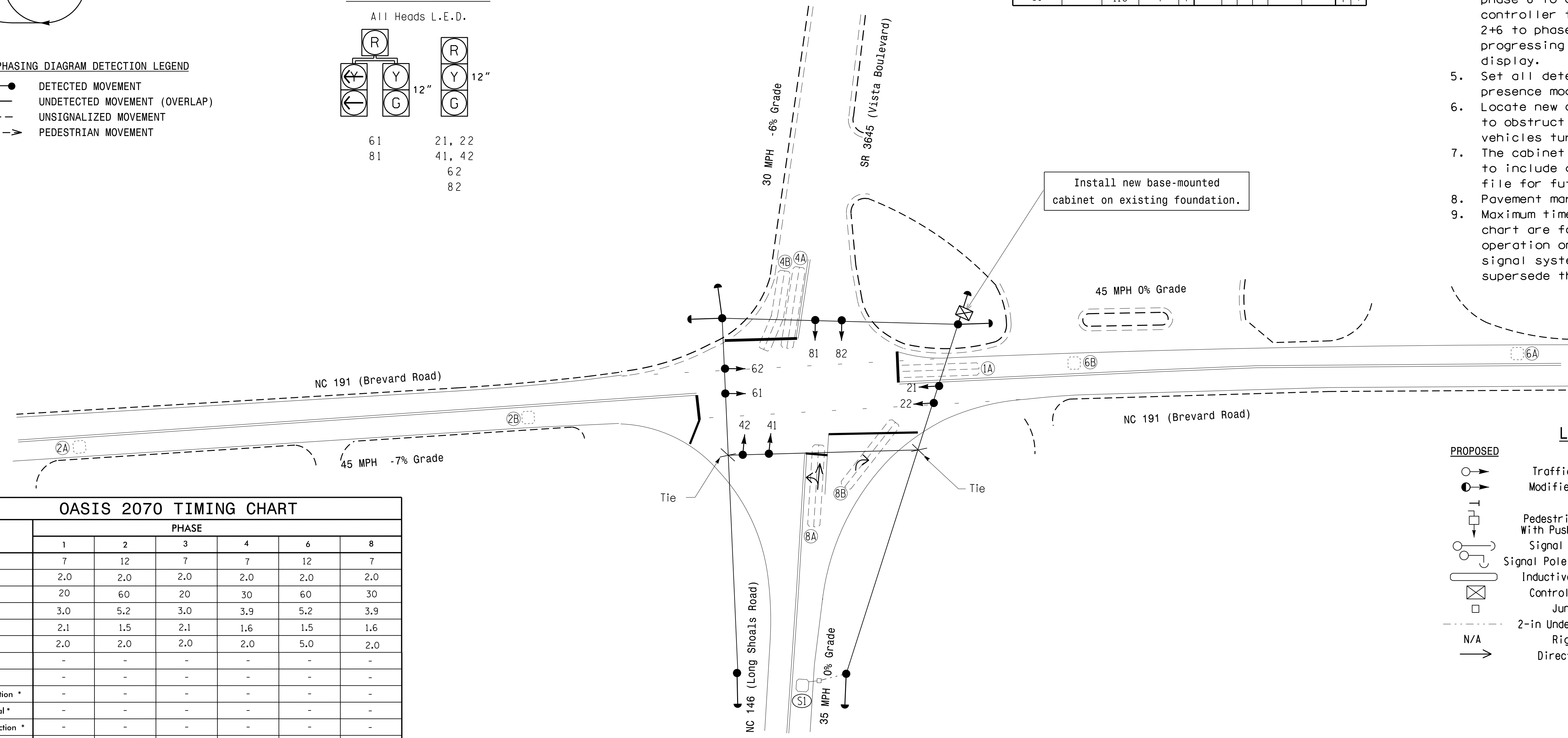


OASIS 2070 LOOP & DETECTOR INSTALLATION CHART												
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
2A	6X6	300	5	-	2	Y	Y	-	1.7	-	-	Y
2B	6X6	80	4	-	2	Y	Y	-	-	-	-	Y
4A	6X40	+5	2-4-2	-	4	Y	Y	-	-	10	-	Y
4B	6X40	+5	2-4-2	-	4	Y	Y	-	-	15	-	Y
6A	6X6	300	5	-	6	Y	Y	-	1.7	-	-	Y
6B	6X6	83	4	-	6	Y	Y	-	-	-	-	Y
8A	6X40	+5	2-4-2	-	8	Y	Y	-	-	15	-	Y
8B	6X40	+5	2-4-2	-	8	Y	Y	-	-	15	-	Y
SI	6X6	110	4	Y	-	-	-	-	-	-	-	Y

- NOTES**
- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
 - Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
 - Omit phase 3 during phase 4 on.
 - Enable Backup Protect for phase 6 to allow the controller to clear from phase 2+6 to phase 1+6 by progressing through an all red display.
 - Set all detector units to presence mode.
 - Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
 - The cabinet should be designed to include an Auxiliary Output file for future use.
 - Pavement markings are existing.
 - Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

FEATURE	PHASE					
	1	2	3	4	6	8
Min Green 1 *	7	12	7	7	12	7
Extension 1 *	2.0	2.0	2.0	2.0	2.0	2.0
Max Green 1 *	20	60	20	30	60	30
Yellow Clearance	3.0	5.2	3.0	3.9	5.2	3.9
Red Clearance	2.1	1.5	2.1	1.6	1.5	1.6
Red Revert	2.0	2.0	2.0	2.0	5.0	2.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
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	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.



LEGEND

	PROPOSED Traffic Signal Head		EXISTING Traffic Signal Head
	PROPOSED Modified Signal Head		EXISTING N/A
	PROPOSED Pedestrian Signal Head With Push Button & Sign		EXISTING N/A
	PROPOSED Signal Pole with Guy		EXISTING
	PROPOSED Signal Pole with Sidewalk Guy		EXISTING
	PROPOSED Inductive Loop Detector		EXISTING
	PROPOSED Controller & Cabinet		EXISTING
	PROPOSED Junction Box		EXISTING
	PROPOSED 2-in Underground Conduit		EXISTING
	PROPOSED Right of Way		EXISTING
	PROPOSED Directional Arrow		EXISTING

Signal Upgrade

Prepared in the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

NC 191 (Brevard Road)
at
NC 146 (Long Shoals Road) /
SR 3645 (Vista Boulevard)

Division 13 Buncombe County W. of Skyland
PLAN DATE: May 2016 REVIEWED BY: P. Alexander

PREPARED BY: M. Mahbooba REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
JIMMY J. WILLIAMS
SEAL 024393

DocuSigned by:
J. J. Williams
8/18/2016

SIG. INVENTORY NO. 13-0555

SCALE 0 30
1"=30'

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