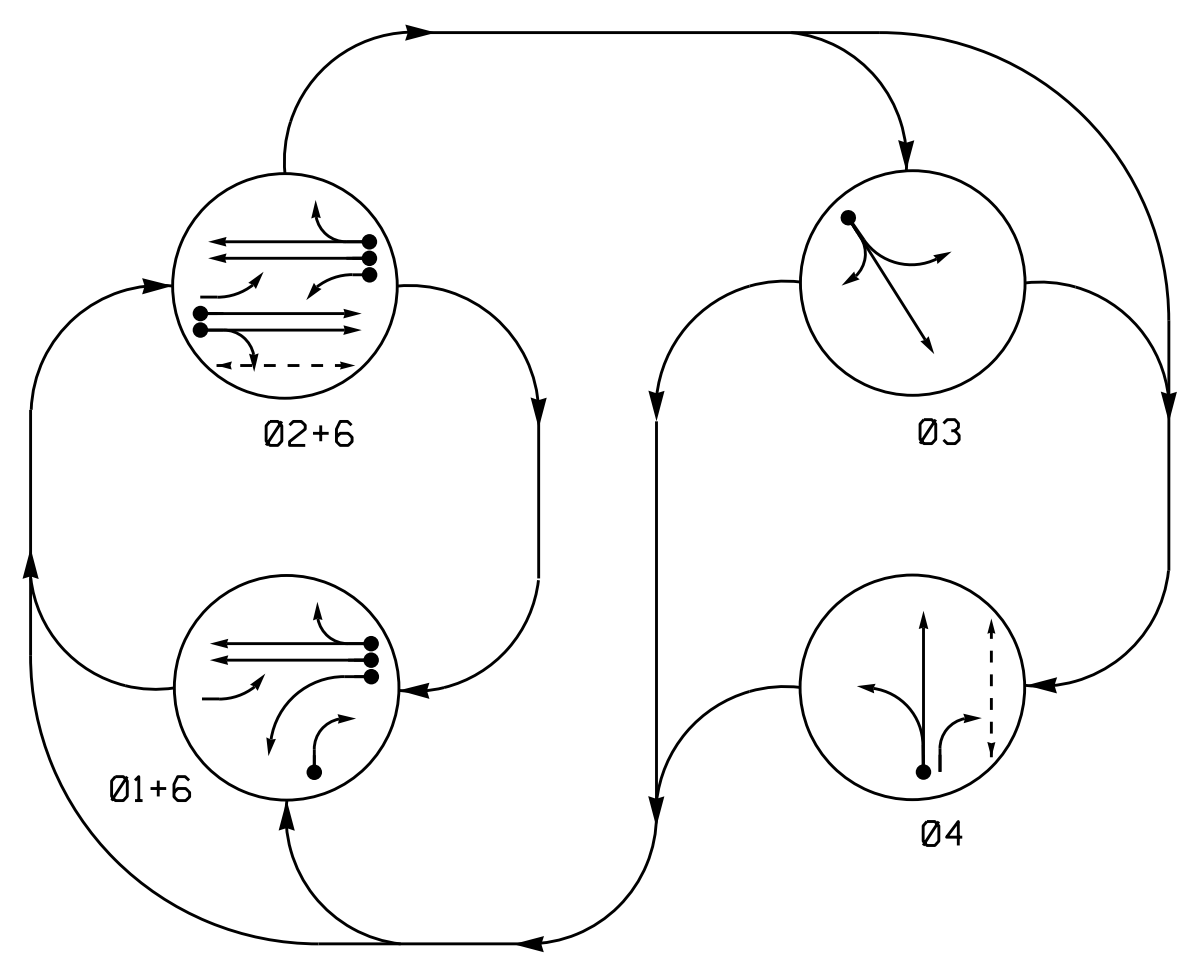


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

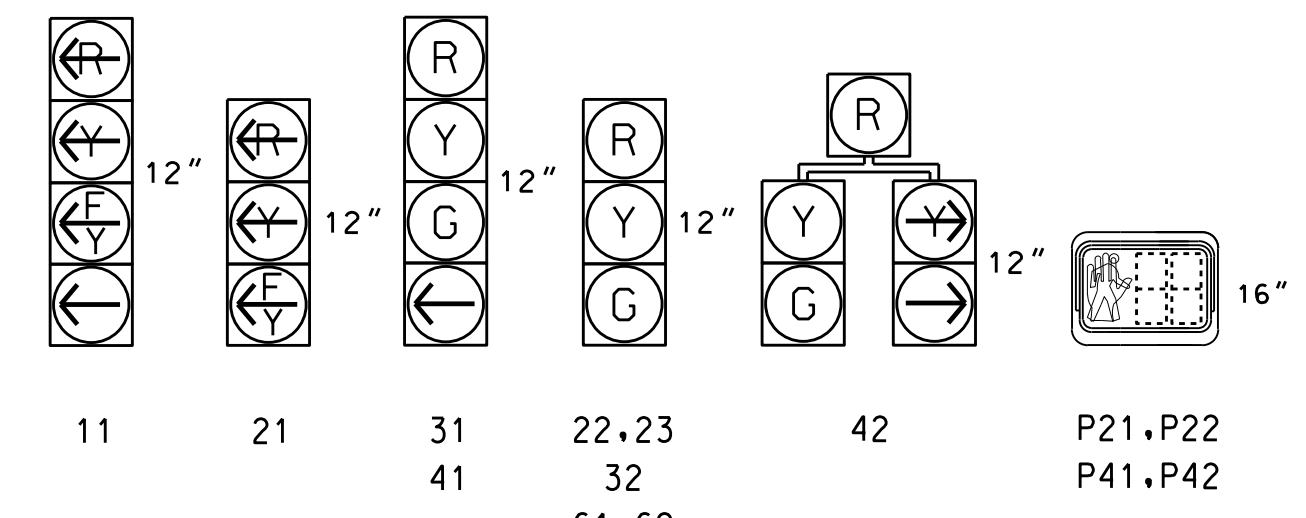
- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UN SIGNALIZED MOVEMENT
- ←- - -> PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE				
	Ø 1+6	Ø 2+6	Ø 3	Ø 4	F LASH
11	-	-	-	-	-
21	-	-	-	-	-
22, 23	R	G	R	R	Y
31	R	R	G	R	R
32	R	R	G	R	R
41	R	R	R	G	R
42	R	R	R	G	R
61, 62	G	G	R	R	Y
P21, P22	DW	W	DW	DW	DRK
P41, P42	DW	DW	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



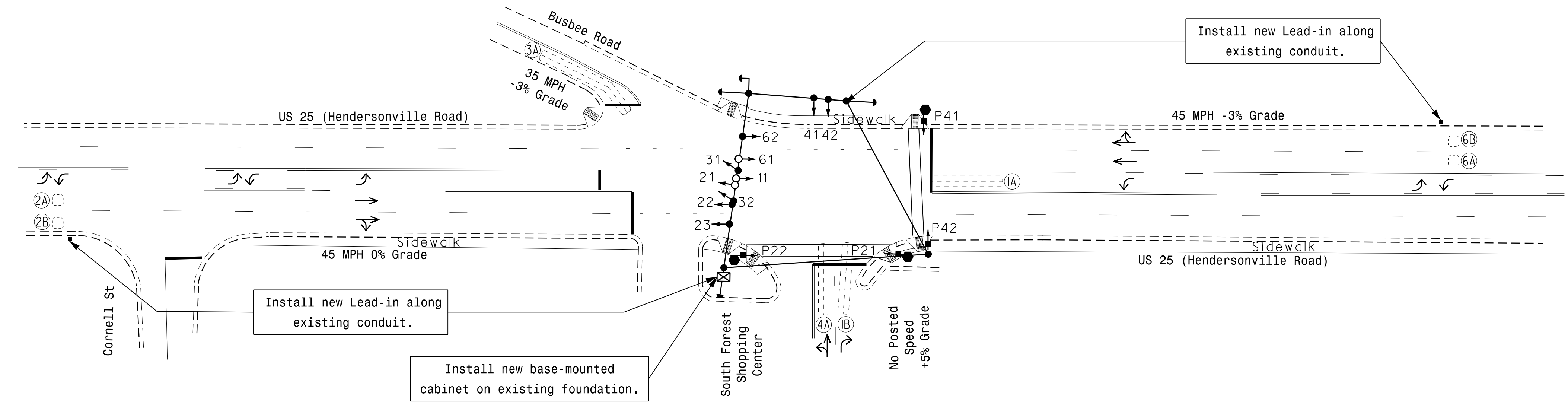
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING					SYSTEM LOOP	NEW CARD	
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME			DELAY TIME
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
1B	6X40	+12	2-4-2	-	1	Y	Y	-	-	3	-	Y
2A	6X6	320	EXIST	-	2	Y	Y	-	-	-	-	Y
2B	6X6	320	EXIST	-	2	Y	Y	-	-	-	-	Y
3A	6X60	+5	2-4-2	-	3	Y	Y	-	-	5	-	Y
4A	6X40	+12	2-4-2	-	4	Y	Y	-	-	3	-	Y
6A	6X6	290	EXIST	-	6	Y	Y	-	-	-	-	Y
6B	6X6	290	EXIST	-	6	Y	Y	-	-	-	-	Y

4 Phase Fully Actuated Asheville Signal System

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.
- Phase 1 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Reposition existing signal heads numbered 22, 23 & 62.
- Install separate lead-in cable for existing loops 2A, 2B, 6A & 6B.
- Set all detector units to presence mode.
- 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.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



OASIS 2070 TIMING CHART

FEATURE	PHASE				
	1	2	3	4	6
Min Green 1 *	7	12	7	7	12
Extension 1 *	2.0	6.0	2.0	2.0	6.0
Max Green 1 *	15	90	20	25	90
Yellow Clearance	3.0	4.8	4.1	3.0	4.8
Red Clearance	2.8	2.8	3.4	3.9	2.8
Red Revert	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	7	-	7	-
Don't Walk 1	-	17	-	16	-
Seconds Per Actuation *	-	1.5	-	-	1.5
Max Variable Initial *	-	36	-	-	33
Time Before Reduction *	-	15	-	-	15
Time To Reduce *	-	30	-	-	30
Minimum Gap	-	3.0	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-	-
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.

LEGEND

- | PROPOSED | EXISTING |
|--|---------------------------------|
| ○→ Traffic Signal Head | ●→ N/A |
| ●→ Modified Signal Head | ○→ N/A |
| ⊥ Sign | ⊥ N/A |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ N/A |
| ○ 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 | --- Right of Way |
| → Directional Arrow | → Directional Arrow |
| ○ Signal Pedestal | ● Signal Pedestal |

Signal Upgrade

Prepared In the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

US 25 (Hendersonville Road) at South Forest Shopping Center/ Busbee Road

Division 13 Buncombe County Asheville

PLAN DATE: February 2016 REVIEWED BY: P. Alexander

PREPARED BY: M. Mahbooba REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8/18/2016

SIG. INVENTORY NO. 13-0443

SCALE 0 40 1"=40'

16-000-2016 16:25
 S:\IT\ASIS\13-0443\13-0443_Sig.dgn
 Design: J. Williams
 System: Signal Design Section
 Region: Western Region
 Date: 8/18/2016
 User: mmahbooba