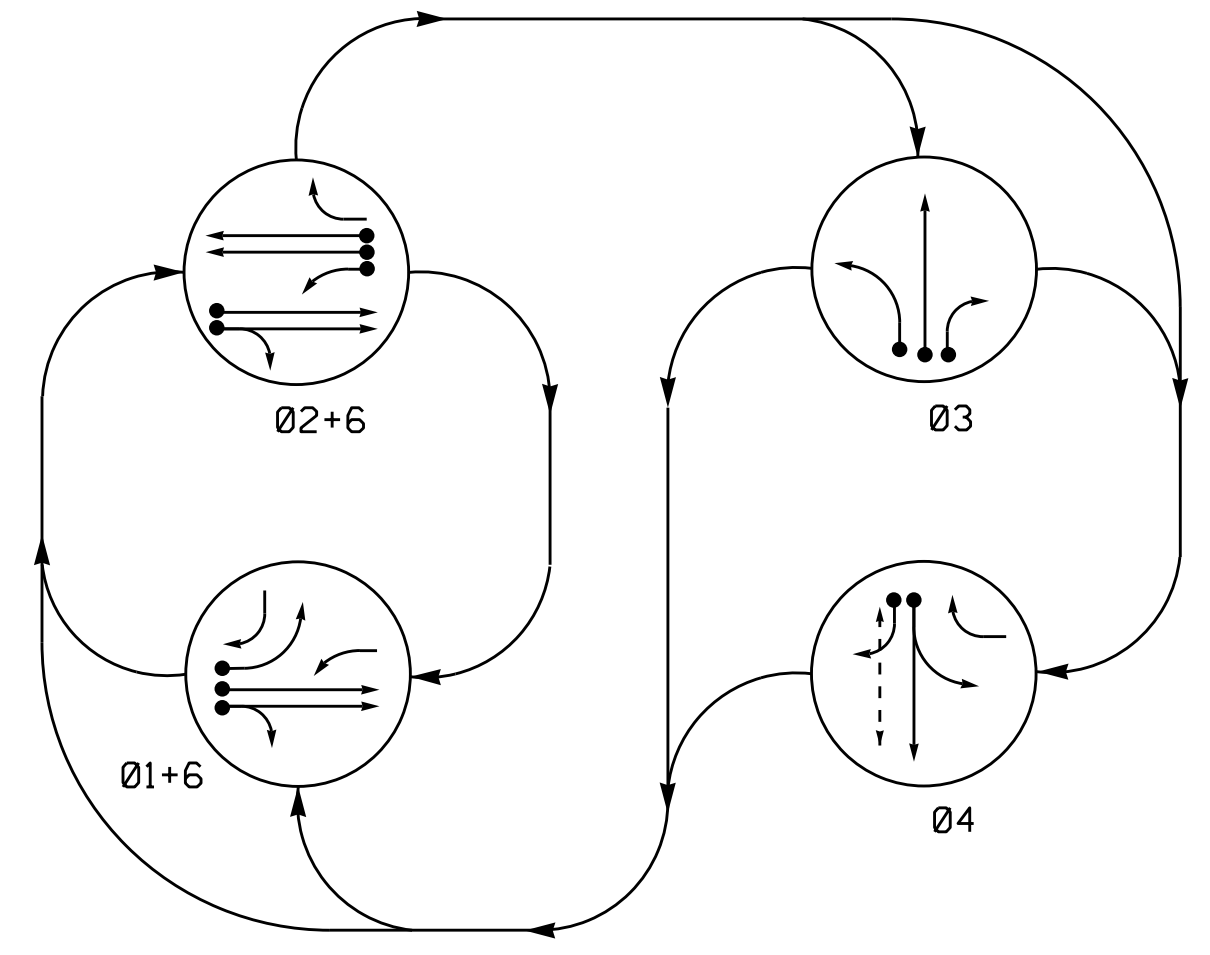


PHASING DIAGRAM



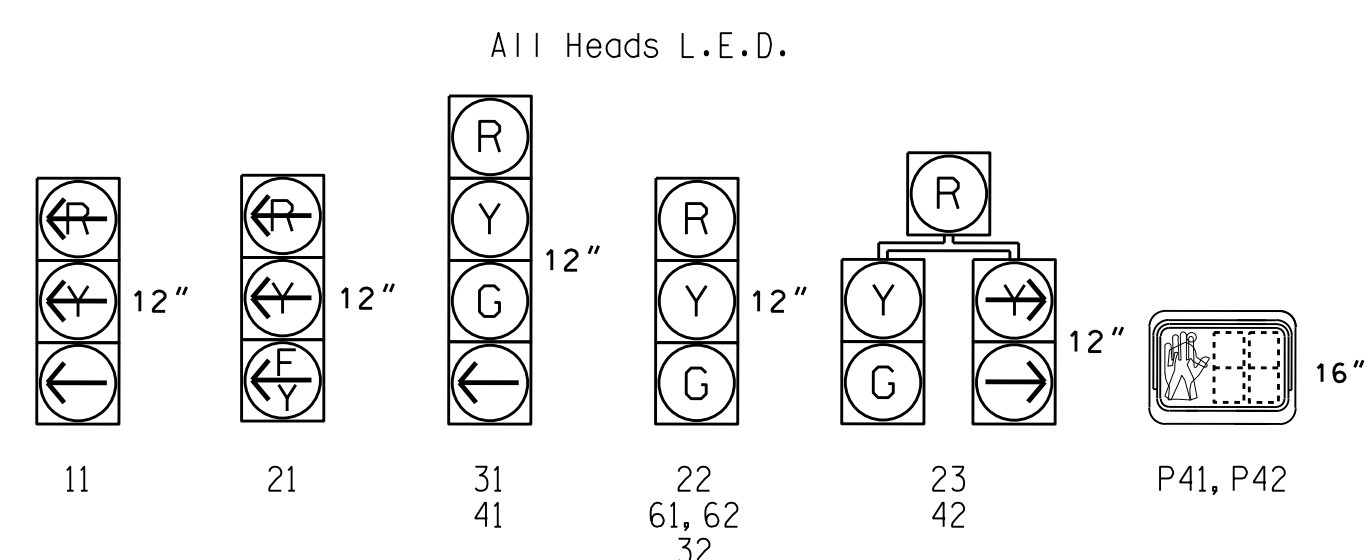
PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE				
	01+6	02+6	03	04	PEDEST
11	←	←	←	←	←
21	←	←	←	←	←
22	R	G	R	R	Y
23	R	G	R	R	Y
31	R	R	G	R	R
32	R	R	G	R	R
41	R	R	G	R	R
42	R	R	G	R	R
61, 62	G	G	R	R	Y
P41, P42	DW	DW	DW	W	DRK

SIGNAL FACE I.D.



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

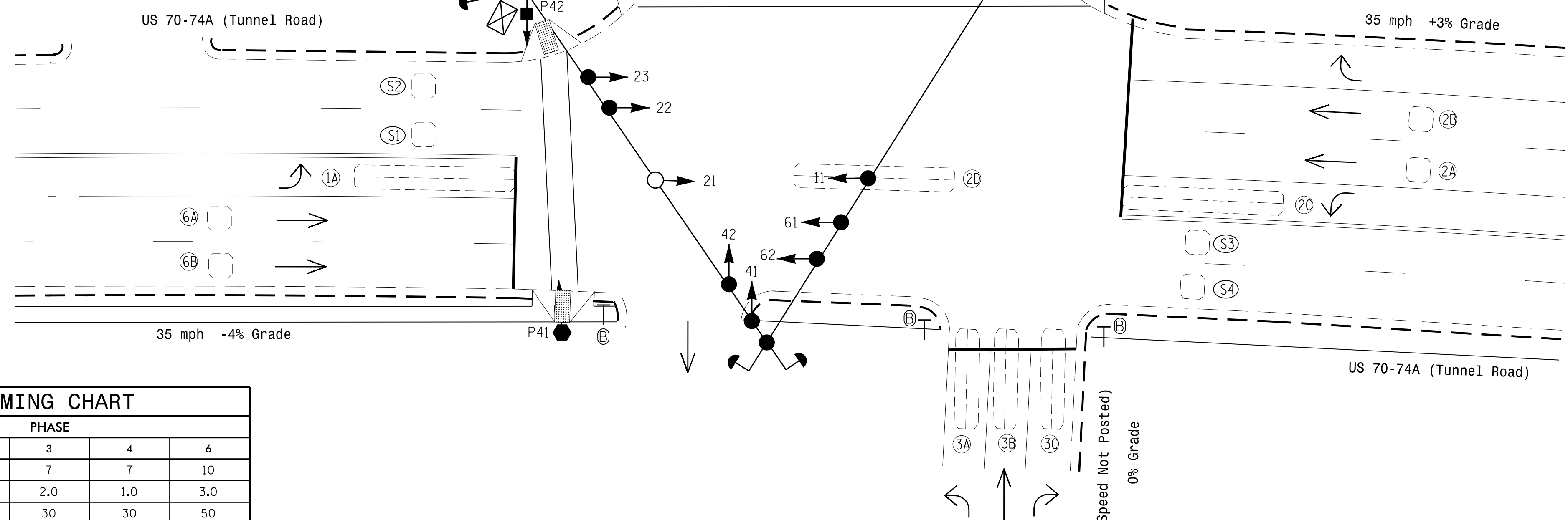
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	+5	2-4-2	-	1	Y	Y	-	-	3	-	Y
2A,2B	6X6	70	4	-	2	Y	Y	-	-	-	-	Y
2C	6X40	0	2-4-2	-	2	Y	Y	-	-	-	-	Y
2D	6X40	+70	2-4-2	-	2	Y	Y	-	-	3	-	Y
3A	6X25	+5	2-4-2	-	3	Y	Y	-	-	-	-	Y
3B	6X25	+5	2-4-2	-	3	Y	Y	-	-	-	-	Y
3C	6X25	+5	2-4-2	-	3	Y	Y	-	-	15	-	Y
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-	Y
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	15	-	Y
6A,6B	6X6	65	4	-	6	Y	Y	-	-	-	-	Y
S1	6X6	+150	4	-	-	-	-	-	-	-	-	Y
S2	6X6	+150	4	-	-	-	-	-	-	-	-	Y
S3	6X6	+150	4	-	-	-	-	-	-	-	-	Y
S4	6X6	+150	4	-	-	-	-	-	-	-	-	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.
- 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.

Install new base-mounted cabinet on existing foundation.



OASIS 2070 TIMING CHART

FEATURE	PHASE				
	1	2	3	4	6
Min Green 1 *	7	10	7	7	10
Extension 1 *	1.0	3.0	2.0	1.0	3.0
Max Green 1 *	30	50	30	30	50
Yellow Clearance	3.0	4.1	3.2	3.9	4.1
Red Clearance	3.3	2.8	3.5	2.5	2.8
Red Revert	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	7	-
Don't Walk 1	-	-	-	13	-
Seconds Per Actuation *	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-
Time To Reduction *	-	-	-	-	-
Minimum Gap	-	-	-	-	-
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

- | | | | |
|----|--|-----|----------|
| ○→ | Traffic Signal Head | ●→ | EXISTING |
| ○→ | Modified Signal Head | N/A | |
| ○→ | Signal | ○→ | |
| ○→ | Pedestrian Signal Head With Push Button & Sign | ○→ | |
| ○→ | Signal Pole with Guy | ○→ | |
| ○→ | Signal Pole with Sidewalk Guy | ○→ | |
| ○→ | Inductive Loop Detector | ○→ | |
| ○→ | Controller & Cabinet | ○→ | |
| ○→ | Junction Box | ○→ | |
| ○→ | 2-in Underground Conduit | ○→ | |
| ○→ | Directional Arrow | ○→ | |
| ○→ | Pavement Marking Arrow | ○→ | |
| ○→ | Type II Signal Pedestal | ○→ | |
| ○→ | Keep Right Sign (R4-7A) | ○→ | |
| ○→ | "DO NOT ENTER" Sign (R5-1) | ○→ | |

Signal Upgrade

US 70-74A (Tunnel Road) at I-240 (EB Off Ramp) and Entrance to Car Wash

Division 13 Buncombe County Asheville

PLAN DATE: June 2016 REVIEWED BY: T.J. Williams

PREPARED BY: R.N. Zinser REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

Richard N. Zinser 8/22/2016

SIG. INVENTORY NO. 13-0435

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE 0 20 1"=20'

31-AUG-2016 13:06
 S:\ITS\ASU\ITS_Signal\Signal\Region01\13-AUG-17155 (Asheville) Signal System\Signal_Design\Signal_Design\13-0435\130435_sig_dsn_2016mdd-dgn.rvt
 R.N.Zinser