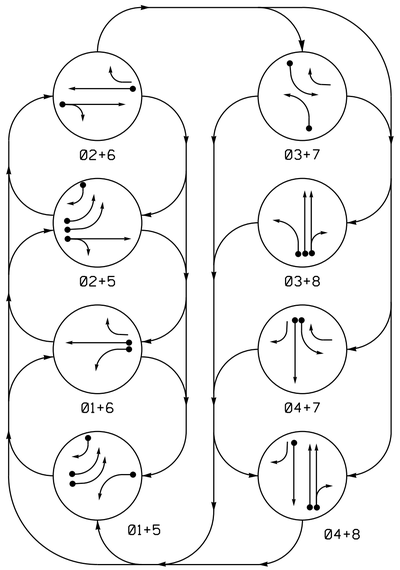
PROJECT REFERENCE NO.	SHEET NO.
U-4715 B	Sig. 89.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

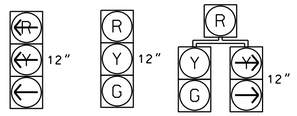
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+05	01+06	02+05	02+06	03+07	03+08	04+07	04+08	FLASH
11	—	—	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22	R	R	G	G	R	R	R	R	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	—	—	~~R~~	~~R~~	~~R~~
41	R	R	R	R	R	R	G	G	R
42	R⁄—	R	R⁄—	R	R	R	G	G	R
51, 52	—	~~R~~	—	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
61	R	G	R	G	R	R	R	R	Y
62	R	G	R	G	R⁄—	R	R⁄—	R	Y
71	~~R~~	~~R~~	~~R~~	~~R~~	—	~~R~~	—	~~R~~	~~R~~
81, 82	R	R	R	R	R	G	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.
*Backplates



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	+5	2-4-2	-	1	-	-	-	-	3	-	Y
2A	6X6	300	6	-	2	-	-	-	-	-	-	Y
2B	6X6	90	6	-	DISCONNECT & ABANDON							
3A	6X60	0	**	-	3	-	-	-	-	3	-	Y
4A	6X60	0	2-4-2	-	4	-	-	-	-	-	-	Y
5A	6X40	+5	2-4-2	-	5	-	-	-	-	3	-	Y
5B	6X40	+5	2-4-2	-	5	-	-	-	-	-	-	Y
5C	6X60	0	2-4-2	-	5	-	-	-	-	15	-	Y
6A	6X6	300	4	-	6	-	-	-	-	-	-	Y
6B	6X6	90	4	-	DISCONNECT & ABANDON							
7A	6X60	0	2-4-2	-	7	-	-	-	-	3	-	Y
8A	6X60	0	**	-	8	-	-	-	-	5	-	Y
8B	6X60	0	**	-	8	-	-	-	-	10	-	Y
S1	6X6	+200	4	-	-	-	-	-	-	-	Y	Y
S2	6X6	+200	4	-	-	-	-	-	-	-	Y	Y
S3	6X6	+120	4	-	-	-	-	-	-	-	Y	Y

** Matrix Detection Zone

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green 1 *	7	12	7	7	7	12	7	7
Extension 1 *	2.0	6.0	1.0	1.0	2.0	6.0	1.0	2.0
Max Green 1 *	15	90	15	25	20	90	15	25
Yellow Clearance	3.0	4.3	3.0	3.9	3.0	4.3	3.0	3.9
Red Clearance	3.3	1.3	2.8	1.8	2.9	1.3	2.9	1.8
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	-	2.5	-	-
Max Variable Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduction *	-	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	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.

8 Phase
Fully Actuated
Asheville Signal System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Disconnect and abandon existing loops 2B and 6B.
6. Set all detector units to presence mode.
7. 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.
8. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
9. Remove existing "LEFT TURN SIGNAL" Sign (R10-10).
10. Pavement markings are existing.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□↓	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	·-·-·
N/A	Right of Way	- - - - -
→	Directional Arrow	→
○◥	Out of Pavement Detector	●◥
▬	Radar Detection Zone	N/A
Ⓐ	Right Arrow "ONLY" Sign (R3-5R)	Ⓐ

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

NC 81/US 74A (Swannanoa River Rd.) at US 74A (S. Tunnel Rd.)/ SR 3276 (Wood Ave.)

Division 13 Buncombe County Asheville

PLAN DATE: June 2016 REVIEWED BY: P.L. Alexander

PREPARED BY: R.N. Zinser REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043914 ENGINEER RICHARD N. ZINSER

DocuSigned by: Richard N. Zinser 8/9/2016
F13B8973472248F DATE

SIG. INVENTORY NO. I3-0412

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