PROJECT REFERENCE NO.	SHEET NO.
U-4715B	Sig. 277.0

PHASING DIAGRAM

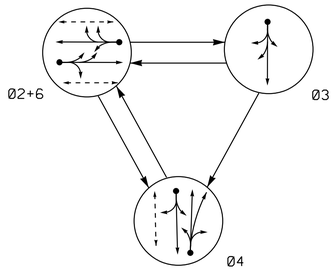
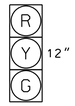


TABLE OF OPERATION				
SIGNAL FACE	PHASE Ø2+6	Ø3	Ø4	FLASH
21, 22	G	R	R	Y
31, 32	R	G	R	R
41,42,43,44,45	R	R	G	R
61, 62	G	R	R	Y
P21, P22	W	DW	DW	DRK
P41, P42	DW	DW	W	DRK
P61, P62	W	DW	DW	DRK

W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.D.

All Heads L.E.D.



21, 22
31 , 32
41, 42, 43, 44, 45
61 , 62

Accesible Pedestrian Signals

P21, P22
P41, P42
P61, P62

OASIS 2070E 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
2A	6x6	70	4	-	2	Y	Y	-	-	-	-	Y
3A	6x40	+5	2-4-2	-	3	Y	Y	-	-	3	-	Y
4A	6x40	+5	2-4-2	-	4	Y	Y	-	-	10	-	Y
4B	6x40	0	2-4-2	-	4	Y	Y	-	-	10	-	Y
6A	6x6	70	4	-	6	Y	Y	-	-	-	-	Y

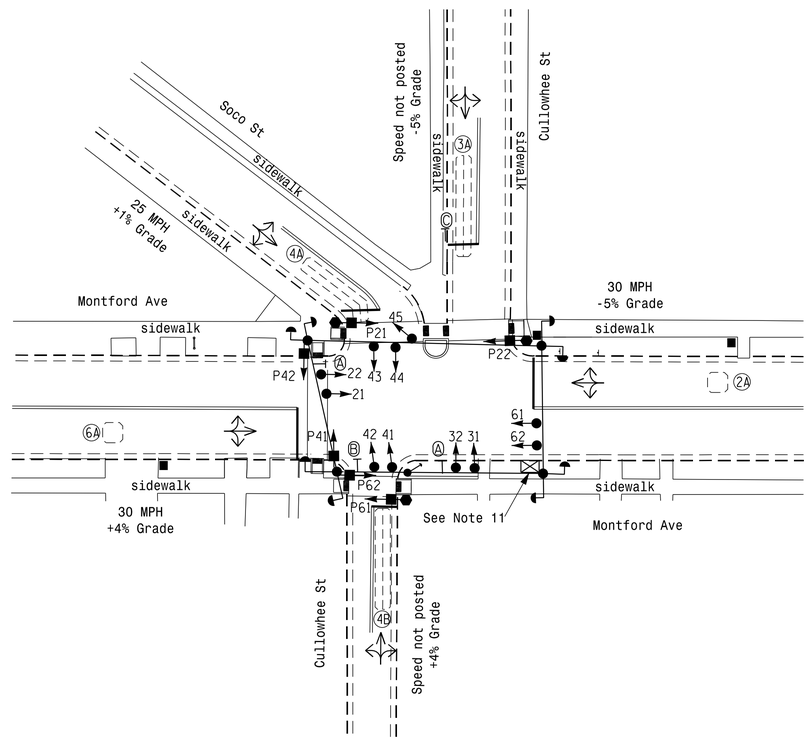
PHASING DIAGRAM DETECTION LEGEND

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

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION		
SIGNAL FACE	INTERVAL	MESSAGE/TONE*
P21, P22 P61, P62	Walk	Percussive tone repeated @ 8-10 ticks/sec
	Flashing Don't Walk/Don't Walk	Pushbutton Locator Tone Only**
P41, P42	Walk	Percussive tone repeated @ 8-10 ticks/sec
	Flashing Don't Walk/Don't Walk	Pushbutton Locator Tone Only**

* Volume should be set to 5 db over the ambient noise level.

** Pushbutton locator tones shallhave a duration of 0.15 seconds or less, and shallrepeat at 1-second intervals.



OASIS 2070E TIMING CHART				
FEATURE	PHASE 2	3	4	6
Min Green 1 *	10	7	7	10
Extension 1 *	3.0	2.0	2.0	3.0
Max Green 1 *	45	20	25	45
Yellow Clearance	3.8	3.5	3.0	3.3
Red Clearance	2.2	3.0	2.4	2.9
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	5	-	5	5
Don't Walk 1	15	-	9	4
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	-	-	-	-
Simultaneous Gap	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.

3 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. Set all detector units to presence mode.
4. 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.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Pavement markings are existing.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. The order of Phase 3 and Phase 4 may be reversed.
9. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
10. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
11. Locate new cabinet on existing foundation.
12. The yellow change interval for Phase 4 may be decreased by 0.2 seconds per week until the desired value is reached.

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	
	Signal Pedestal	
Ⓐ	"NO TURN ON RED" Sign (R10-11)	Ⓐ
Ⓑ	No U-Turn Sign (R3-4)	Ⓑ
Ⓒ	"STOP HERE ON RED" Sign (R10-6)	Ⓒ

Signal Upgrade

Prepared for the Offices of:

CITY OF ASHEVILLE NORTH CAROLINA

161 S.Charlotte St.Asheville NC 28802

Mattern & Craig
CONSULTING ENGINEERS • SURVEYORS
FIRM LICENSE No. C-1154
12 BROAD STREET
ASHEVILLE, NORTH CAROLINA 28801
(828) 254-2201
FAX (828) 254-4562

Montford Ave at Cullowhee St/Soco St

Division 13 Buncombe County Asheville

PLAN DATE:	JUNE 2016	REVIEWED BY:	SMH
PREPARED BY:	BGR	REVIEWED BY:	JBV

REVISIONS	INIT.	DATE

SCALE 0 30 1"=30'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022599 JAMES B. VOSO

Docusigned by: James Voso 160FD0D37BD34FE... SIGNATURE

12/13/2016 DATE

SIG. INVENTORY NO. COA-0411

8:57:22 AM
R:\3602 Asheville Signal System\DGN\COA-0411\COA-0411_sig_dsn.dgn
bgrass