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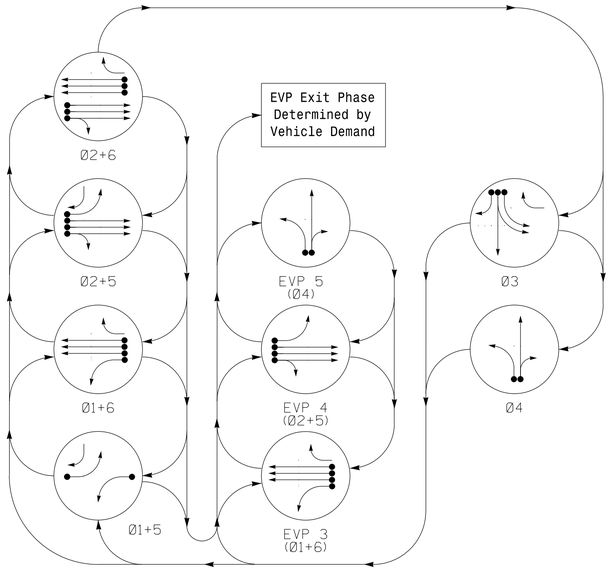
PROJECT REFERENCE NO.	SHEET NO.
U-3330	Sig. 10.6

6 Phase W/ EV Preempt
Fully Actuated
Rocky Mount Signal System

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

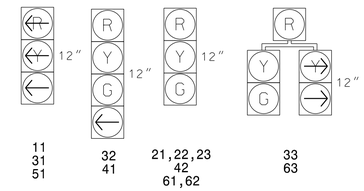
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	EVP 3	EVP 4	EVP 5	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~	~~R~~
21, 22, 23	R	R	G	G	R	R	R	G	R	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
32	R	R	R	R	G ←	R	R	R	R	R
33	R/→	R	R/→	R	G	R	R	R	R	R
41	R	R	R	R	R	G ←	R	R	G ←	R
42	R	R	R	R	R	G	R	R	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~
61, 62	R	G	R	G	R	R	G	R	R	Y
63	R	G	R	G	R/→	R	G	R	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.

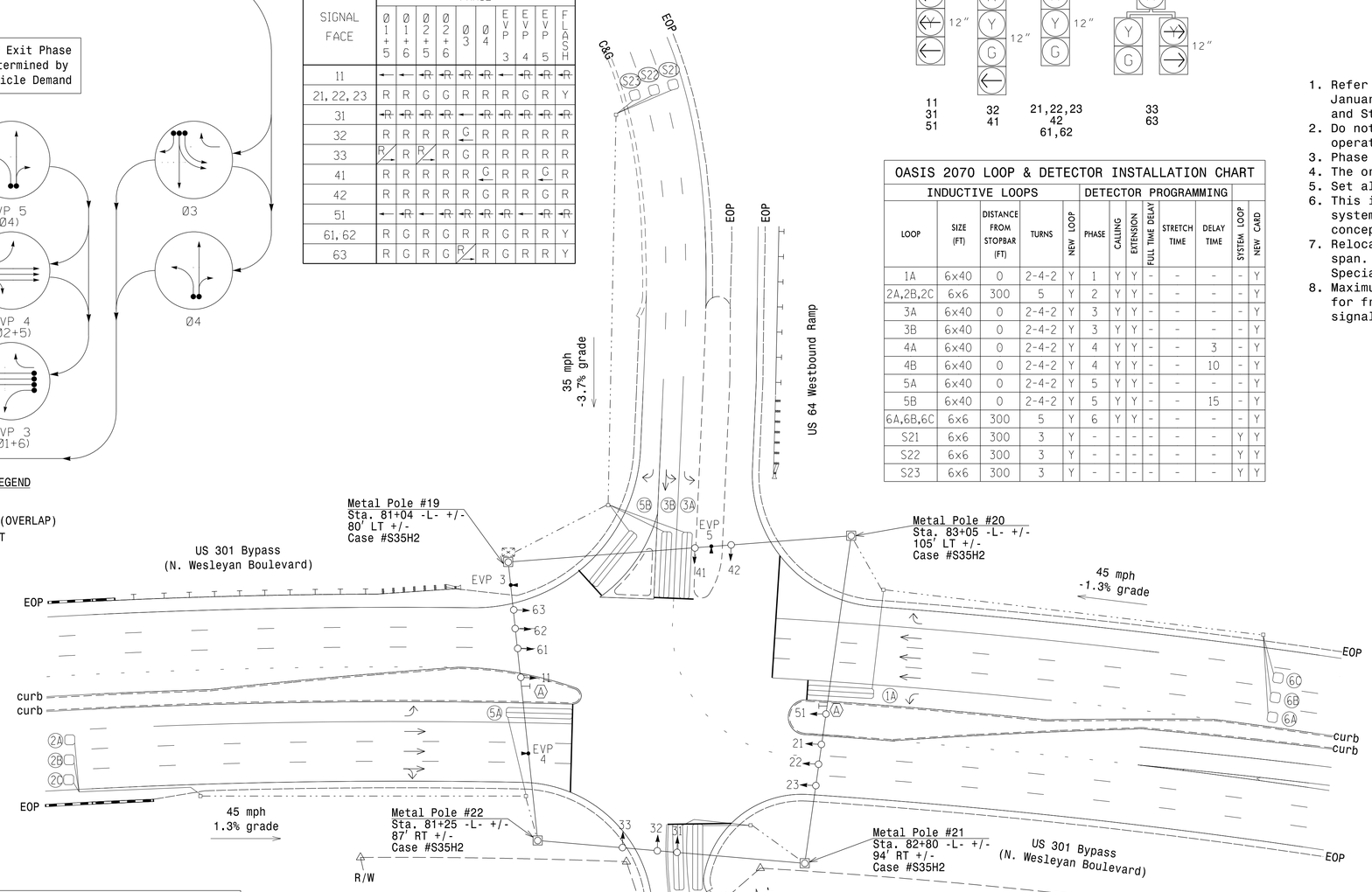


NOTES

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. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
7. Relocate EVP 3, EVP 4 and EVP 5 detectors to new span. Reuse existing Phase Selectors. See Project Special Provisions.
8. Maximum times shown in timing charts are for free-run operation only. Coordinated signal timing values supersede these values.

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	0	2-4-2	Y	1	Y	Y	-	-	-	-	Y
2A,2B,2C	6x6	300	5	Y	2	Y	Y	-	-	-	-	Y
3A	6x40	0	2-4-2	Y	3	Y	Y	-	-	-	-	Y
3B	6x40	0	2-4-2	Y	3	Y	Y	-	-	-	-	Y
4A	6x40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6x40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
5A	6x40	0	2-4-2	Y	5	Y	Y	-	-	-	-	Y
5B	6x40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
6A,6B,6C	6x6	300	5	Y	6	Y	Y	-	-	-	-	Y
S21	6x6	300	3	Y	-	-	-	-	-	-	Y	Y
S22	6x6	300	3	Y	-	-	-	-	-	-	Y	Y
S23	6x6	300	3	Y	-	-	-	-	-	-	Y	Y



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Metal Strain Pole	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Emergency Vehicle Detector	
N/A	Guardrail	
	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	

OASIS 2070E TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0
Max Green 1 *	15	90	25	25	30	90
Yellow Clearance	3.0	4.4	4.1	4.0	3.0	4.7
Red Clearance	3.4	1.4	2.4	2.7	3.6	1.2
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5
Max Variable Initial *	-	34	-	-	-	34
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	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.

OASIS 2070 EV PREEMPT

FUNCTION	PRE 3	PRE 4	PRE 5
Interval 1 – Dwell Green	255	255	255
Interval 1 – Dwell Yellow	0.0*	0.0*	0.0*
Interval 1 – Dwell Red	0.0*	0.0*	0.0*
Interval 5 – Exit Green	0	0	0
Interval 5 – Yellow	0.0	0.0	0.0
Interval 5 – Red	0.0	0.0	0.0
Exit Phase(s)	-	-	-
Priority	MED	MED	MED
Delay Time	0.0	0.0	0.0
Min Green Before Pre	1	1	1
Ped Clear Before Pre	0	0	0
Yellow Clear Before Pre	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*
Dwell Min Time	12	12	7
Enable Backup Protection	N	N	N
Ped Clear Through Yellow	N	N	N
Omit Overlaps	-	C	-
Preempt Extend**	5	5	5

* Time defaults to time used for phase during normal operation
** Program Timing on Optical Detection Unit

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Upgrade - Final Design

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

SCALE 0 40 1"=40'

US 301 Byp. (N. Wesleyan Blvd) at US 64 Byp Westbound Ramp/ Rowe Drive

Division 04 Nash County Rocky Mount

PLAN DATE: November 2016 REVIEWED BY: MB Toth
PREPARED BY: AM Encarnacion REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 025892 ENGINEER MELISSA B. TOTH

Designed by: Melissa B. Toth 1/30/2017
CHECKED BY SIGNATURE DATE
SIG. INVENTORY NO. 04-0617

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

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