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PROJECT REFERENCE NO.	SHEET NO.
U-3330	Sig. 7.9

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

PHASING DIAGRAM

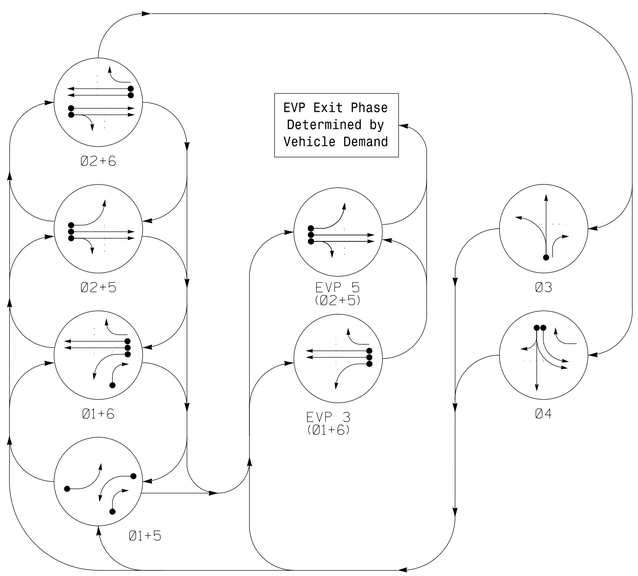
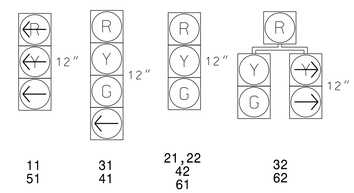


TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	EVP 3	EVP 5	FLASH
11	←●	←●	~~R~~	~~R~~	~~R~~	~~R~~	←●	~~R~~	~~R~~
21,22	R	R	G	G	R	R	R	G	Y
31	R	R	R	R	G ←	R	R	R	R
32	R/~~R~~		R	R	G	R	R	R	R
41	R	R	R	R	G ←	R	R	R	R
42	R	R	R	R	G	R	R	R	R
51	←●	~~R~~	←●	~~R~~	~~R~~	~~R~~	~~R~~	←●	~~R~~
61	R	G	R	G	R	R	G	R	Y
62	R	G	R	G	R	R/~~R~~	G	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070 DETECTION INSTALLATION CHART

DETECTION ZONES					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	*	Y	1	Y	Y	-	-	-	-	*
1B	6x40	0	*	-	1	Y	Y	-	-	15	-	*
2A/S21	6x6	300	*	-	2	Y	Y	-	-	-	Y	*
2B/S22	6x6	300	*	-	2	Y	Y	-	-	-	Y	*
2C	6x40	0	*	-	2	Y	Y	Y	2	5	-	*
2D	6x40	0	*	-	2	Y	Y	Y	2	5	-	*
3A	6x40	0	*	-	3	Y	Y	-	-	-	-	*
4A	6x40	0	*	-	4	Y	Y	-	-	-	-	*
4B	6X40	0	*	-	4	Y	Y	-	-	5	-	*
5A	6x40	0	*	-	5	Y	Y	-	-	-	-	*
6A	6x6	300	*	Y	6	Y	Y	-	-	-	-	*
6B	6x6	300	*	Y	6	Y	Y	-	-	-	-	*
6C	6x40	0	*	Y	6	Y	Y	Y	2	5	-	*
6D	6x40	0	*	Y	6	Y	Y	Y	2	5	-	*

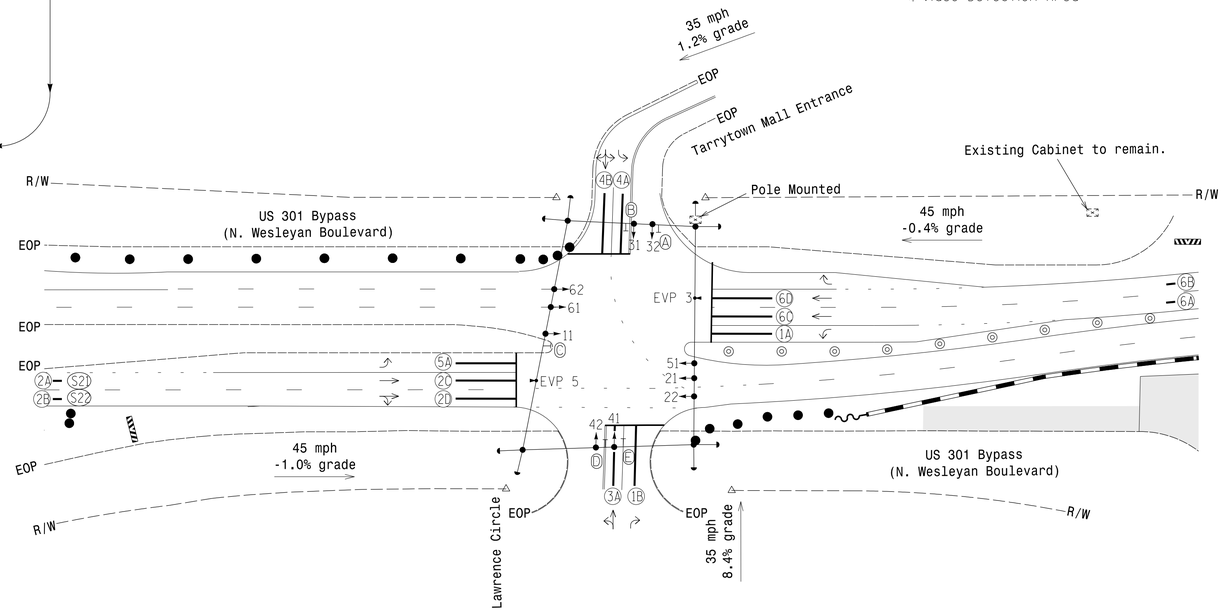
* Video Detection Area

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. Reposition existing signal head numbered 11, 21 and 22 as shown.
6. Set all loop emulators to presence mode.
7. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
8. Reuse EVP 3 and EVP 5 detectors. Reuse Phase Selectors. See Project Special Provisions.
9. Maximum times shown in timing charts are for free-run operation only. Coordinated signal timing values supersede these values.

PHASING DIAGRAM DETECTION LEGEND

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



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	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	
	Emergency Vehicle Detector	
N/A	Guardrail	
	Construction Zone	
	Construction Barricade	
	Crash Cushion	
	Portable Concrete Barrier	
	Video Detection Area	
Ⓐ	Right Arrow "ONLY" Sign (R3-5R)	Ⓐ
Ⓑ	Combined Through and Left Arrow Sign (R3-6L)	Ⓑ
Ⓒ	U-Turn "MUST YIELD" Sign (R3-27)	Ⓒ
Ⓓ	Dual Turn and Through Arrows Sign (R3-19)	Ⓓ
Ⓔ	Left Arrow "ONLY" Sign (R3-5L)	Ⓔ

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	3.0	2.0	2.0	6.0
Max Green 1 *	30	90	15	25	15	90
Yellow Clearance	3.0	4.6	3.4	3.8	3.0	4.6
Red Clearance	3.2	1.5	2.2	2.5	3.4	1.4
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
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	-	-	-	-	-	-
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.

2070 EV PREEMPT

FUNCTION	PRE 3	PRE 5
Interval 1 – Dwell Green	255	255
Interval 1 – Dwell Yellow	0.0*	0.0*
Interval 1 – Dwell Red	0.0*	0.0*
Interval 5 – Exit Green	0	0
Interval 5 – Yellow	0.0	0.0
Interval 5 – Red	0.0	0.0
Exit Phase(s)	-	-
Priority	MED	MED
Delay Time	0.0	0.0
Min Green Before Pre	1	1
Ped Clear Before Pre	0	0
Yellow Clear Before Pre	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*
Dwell Min Time	12	12
Enable Backup Protection	N	N
Ped Clear Through Yellow	N	N
Omit Overlaps	A	-
Preempt Extend**	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 - Temporary Design 4 (Area 2 TMP Phase III)

Prepared for the Offices of: Transportation Mobility and Safety Division, Signal Design Section, 750 N.Greenfield Pkwy, Garner, NC 27529

US 301 Byp (N. Wesleyan Blvd) at Lawrence Circle / Tarrytown Mall Entrance

Division 04 Nash County Rocky Mount

PLAN DATE: November 2016 REVIEWED BY: MB Toth

PREPARED BY: AM Encarnacion REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS | INIT. | DATE

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

Designed by: Melissa B. Toth 1/30/2017 SIGNATURE DATE

SIG. INVENTORY NO. 04-0169T4

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

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