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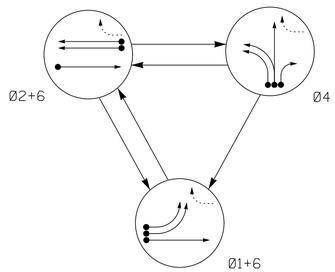
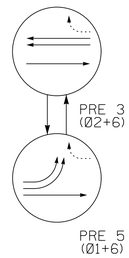
PROJECT REFERENCE NO.	SHEET NO.
I-5711	Sig 11.0

PHASING DIAGRAM



EV PREEMPT PHASES

(Medium Priority)



PHASING DIAGRAM DETECTION LEGEND

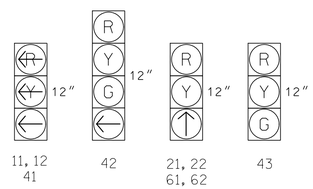
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø4	PHASE PRE3	PHASE PRE5	PHASE FLASH
11, 12	←	~~R~~	~~R~~	~~R~~	←	~~R~~
21, 22	R	↑	R	↑	R	Y
41	~~R~~	~~R~~	←	~~R~~	~~R~~	~~R~~
42	R	R	G ←	R	R	R
43	R	R	G	R	R	R
61, 62	↑	↑	R	↑	↑	Y

SIGNAL FACE I.D.

All Heads L.E.D.



ASC/3 DETECTOR INSTALLATION CHART

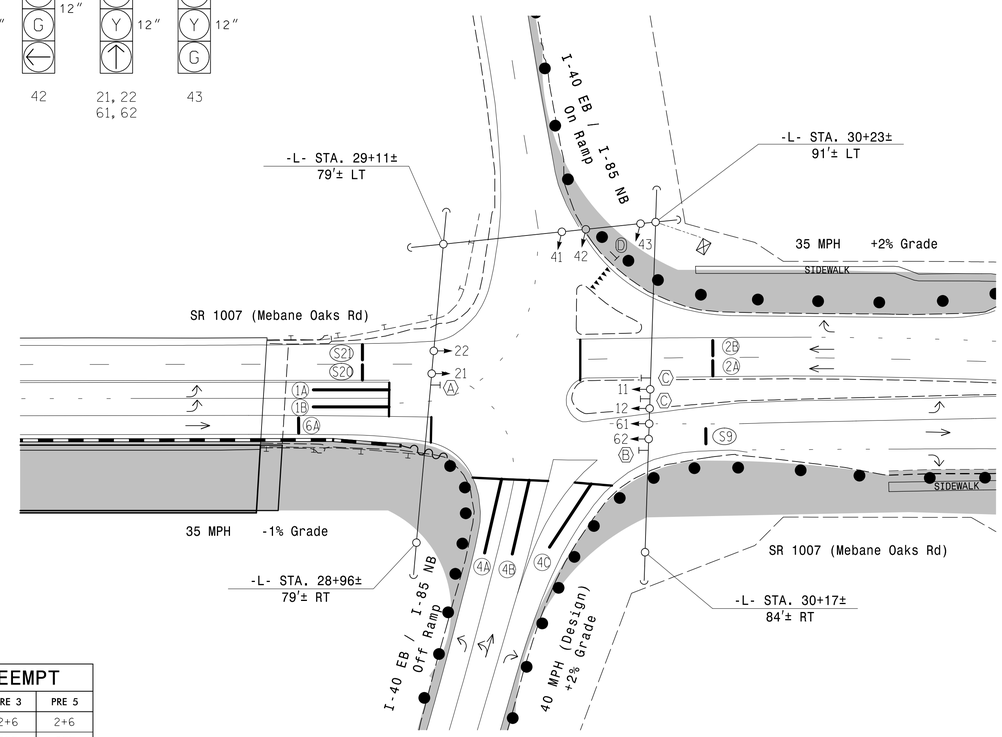
DETECTOR ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6x40	0	*	*	1	Yes	-	3	-	S	-	*
1B	6x40	0	*	*	1	Yes	-	-	-	S	-	*
2A	6x6	70	*	*	2	Yes	-	-	-	S	-	*
2B	6x6	70	*	*	2	Yes	-	-	-	S	-	*
4A	6x40	0	*	*	4	Yes	-	-	-	S	-	*
4B	6x40	0	*	*	4	Yes	-	-	-	S	-	*
4C	6x40	0	*	*	4	Yes	-	15	-	S	-	*
6A	6x6	70	*	*	6	Yes	-	-	-	S	-	*
S9	6x6	+145	*	*	-	No	-	-	-	N	X	*
S20	6x6	+115	*	*	-	No	-	-	-	N	X	*
S21	6x6	+115	*	*	-	No	-	-	-	N	X	*

* Video Detection Zone

3 Phase
Fully Actuated w/ Emergency Vehicle Preemption
SR 1007 (Mebane Oaks Rd) CLS
Signal System: 10705

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. The cabinet should be designed to include an Auxiliary Output File for future use.
7. Relocate the existing GPS Emergency Vehicle Preemption system.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data:
   Controller Asset #: 2025.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
	Construction Zone	
	Video Detection Area	
N/A	Curb Ramp	
N/A	Guardrail	
Ⓐ	No U Turn / No Left Turn Sign (R3-18)	Ⓐ
Ⓑ	No Right Turn Sign (R3-1)	Ⓑ
Ⓒ	Left Arrow "ONLY" Sign (R3-5L)	Ⓒ
Ⓓ	"YIELD" Sign (R1-2)	Ⓓ

ASC/3 TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 4	PHASE 6
Min Green *	7	10	7	10
Walk *	0	0	0	0
Ped Clear	0	0	0	0
Veh. Extension *	2.0	3.0	2.0	3.0
Max 1 *	35	60	35	60
Yellow	3.0	3.7	4.0	3.9
Red Clear	2.8	1.2	1.6	1.9
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds /Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	-	X	-	X
Recall Position	-	VEH. RECALL	-	VEH. RECALL
Dual Entry	-	-	-	-
Simultaneous Gap	X	X	X	X

* 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.

ASC/3 EV PREEMPT

FUNCTION	PRE 3	PRE 5
Exit Phase(s)	2+6	2+6
Preempt Override	OFF	OFF
Delay Time	0	0
Ped Clear Through Yellow	N	N
Terminate Phases	N	N
Entrance Walk	255*	255*
Entrance Ped Clear	255*	255*
Entrance Min Green	1	1
Entrance Yellow Clear	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*
Min Dwell Time	7	7
Preempt Input Extension Time	2	2
Preempt Max Time	120	120
Exit Yellow Clear	25.5*	25.5*
Exit Red Clear	25.5*	25.5*

* Time defaults to time used for phase during normal operation

(TMP Phase I)
Signal Upgrade - Temporary Design 1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PREPARED IN THE OFFICE OF:
Accelerate Engineering, PLLC
875 Walnut Street, Suite 316
Cary, NC 27511
Tel: 919.263.5678 Fax: 919.263.5687
NC License No. P-1442

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'

SR 1007 (Mebane Oaks Road)
at
I-40 EB / I-85 NB Ramps

Division 7 Alamance County Mebane

PLAN DATE: November 2019 REVIEWED BY: Z. "Gavin" Teng
PREPARED BY: Z. "Gavin" Teng REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032179 ENGINEER HAOLONG TENG

DocuSigned by: Haolong Teng 12/17/2019
SIGNATURE DATE

SIG. INVENTORY NO. 07-2025T1

$$$$$$SYSTIME$$$$
$$ $$ $$$$$$$$$$$$$$$$$$$$