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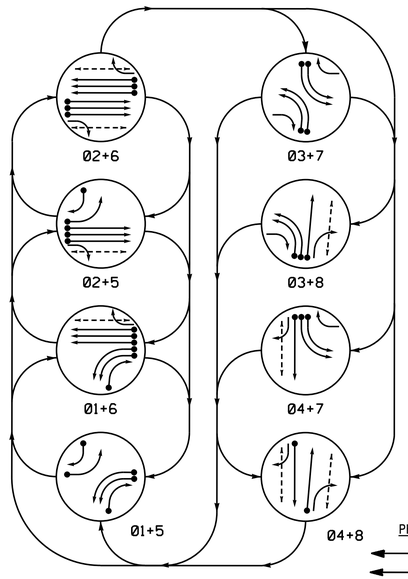
PROJECT REFERENCE NO.	SHEET NO.
U-4405A	SIG-14.0

8 Phase Fully Actuated Fayetteville Signal System

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

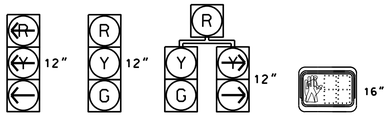
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
11,12	~~←~~	~~—~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21,22	R	R	G	G	R	R	R	R	Y
23	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	~~←~~	~~R~~	~~—~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
61,62	R	G	R	G	R	R	R	R	Y
63	R	G	R	G	R/—	R	R/—	R	Y
71,72	~~R~~	~~R~~	~~R~~	~~R~~	~~—~~	~~R~~	~~←~~	~~R~~	~~R~~
81	R	R	R	R	R	G	R	G	R
82	R/—	R/—	R	R	R	G	R	G	R
P21,P22	DW	DW	W	W	DW	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	W	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DW	DW	DRK
P81,P82	DW	DW	DW	DW	DW	W	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



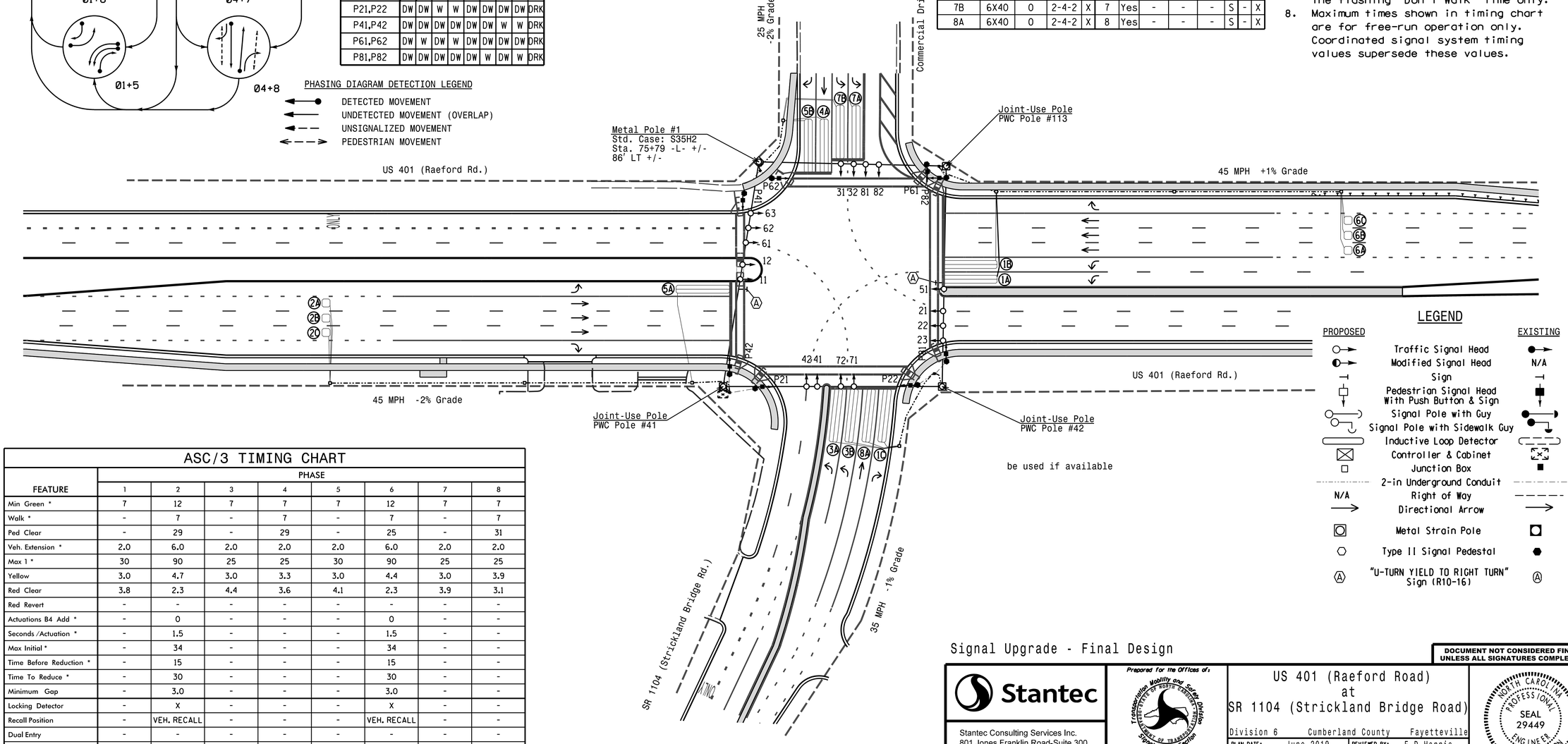
11,12	21,22	23	P21,P22
31,32	41	42	P41,P42
51	61,62	63	P61,P62
71,72	81	82	P81,P82

ASC/3 DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	UUSE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-	X
1B	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-	X
1C	6X40	0	2-4-2	X	1	Yes	-	15	-	S	-	X
2A	6X6	300	4	X	2	Yes	-	-	X	N	-	X
2B	6X6	300	4	X	2	Yes	-	-	X	N	-	X
2C	6X6	300	4	X	2	Yes	-	-	X	N	-	X
3A	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-	X
3B	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	S	-	X
5A	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-	X
5B	6X40	0	2-4-2	X	5	Yes	-	15	-	S	-	X
6A	6X6	300	4	X	6	Yes	-	-	X	N	-	X
6B	6X6	300	4	X	6	Yes	-	-	X	N	-	X
6C	6X6	300	4	X	6	Yes	-	-	X	N	-	X
7A	6X40	0	2-4-2	X	7	Yes	-	3	-	S	-	X
7B	6X40	0	2-4-2	X	7	Yes	-	-	-	S	-	X
8A	6X40	0	2-4-2	X	8	Yes	-	-	-	S	-	X

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 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. 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	
	Metal Strain Pole	
	Type II Signal Pedestal	
(A)	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	(A)

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	-	7	-	7	-	7	-	7
Ped Clear	-	29	-	29	-	25	-	31
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max 1 *	30	90	25	25	30	90	25	25
Yellow	3.0	4.7	3.0	3.3	3.0	4.4	3.0	3.9
Red Clear	3.8	2.3	4.4	3.6	4.1	2.3	3.9	3.1
Red Revert	-	-	-	-	-	-	-	-
Actuations B4 Add *	-	0	-	-	-	0	-	-
Seconds /Actuation *	-	1.5	-	-	-	1.5	-	-
Max Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	X	X	X	X	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.

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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License No. F-0672

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

SCALE 0 40 1"=40'

US 401 (Raeford Road)
at
SR 1104 (Strickland Bridge Road)

Division 6 Cumberland County Fayetteville

PLAN DATE:	June 2019	REVIEWED BY:	E D Harris
PREPARED BY:	A D Smith	REVIEWED BY:	B L Watson

REVISIONS	INIT.	DATE

NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSY L. WATSON

DocuSigned by: Betsy L Watson 6/5/2019
SIGNATURE DATE

SIG. INVENTORY NO. 06-0596

6/5/2019
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