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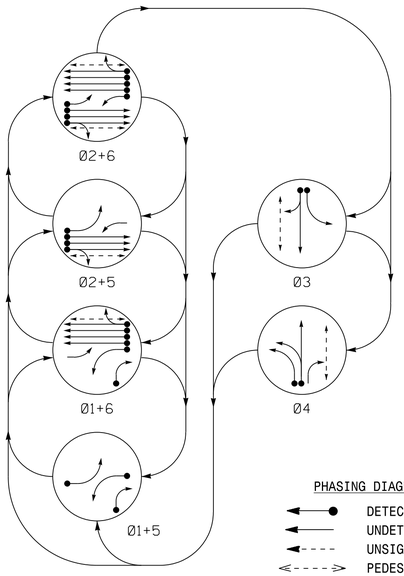
PROJECT REFERENCE NO.	SHEET NO.
U-4405	SIG-77.0

6 Phase Fully Actuated Fayetteville Signal System

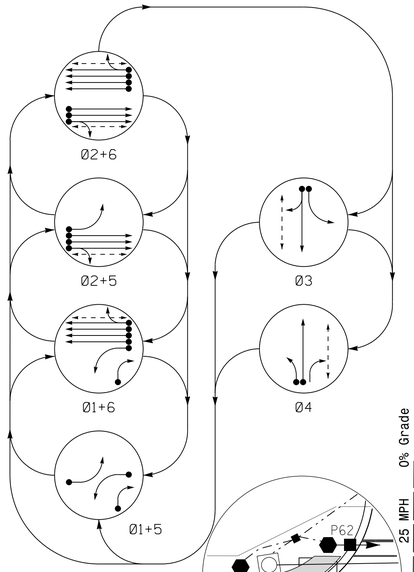
DEFAULT PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	Ø3	Ø4	FLASH
11	←●	←●	←FY	←FY	←R	←R	←Y
21,22	R	R	G	G	R	R	Y
31	R	R	R	R	G←	R	R
32	R	R	R	R	G	R	R
41	R	R	R	R	R	G←	R
42	R/→	R/→	R	R	R	G	R
51	←●	←FY	←●	←FY	←R	←R	←Y
61,62,63	R	G	R	G	R	R	Y
P21,P22	DW	DW	W	W	DW	DW	DRK
P31,P32	DW	DW	DW	DW	W	DW	DRK
P41,P42	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK

ALTERNATE PHASING DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	Ø3	Ø4	FLASH
11	←●	←●	←R	←R	←R	←R	←Y
21,22	R	R	G	G	R	R	Y
31	R	R	R	R	G←	R	R
32	R	R	R	R	G	R	R
41	R	R	R	R	R	G←	R
42	R/→	R/→	R	R	R	G	R
51	←●	←R	←●	←R	←R	←R	←Y
61,62,63	R	G	R	G	R	R	Y
P21,P22	DW	DW	W	W	DW	DW	DRK
P31,P32	DW	DW	DW	DW	W	DW	DRK
P41,P42	DW	DW	DW	DW	DW	W	DRK
P61,P62	DW	W	DW	W	DW	DW	DRK

ASC/3 DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						SYSTEM LOOP	NEW CARD
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE		
1A	6X40	0	2-4-2	X	1	Yes	-	15★	-	S	-	X
					6#	Yes	-	-	-	S	-	X
1B	6X40	0	2-4-2	X	1	Yes	-	15	-	S	-	X
2A	6X6	70	4	X	2	Yes	-	-	-	S	-	X
2B	6X6	70	4	X	2	Yes	-	-	-	S	-	X
2C	6X6	70	4	X	2	Yes	-	-	-	S	-	X
3A	6X40	0	2-4-2	X	3	Yes	-	3	-	S	-	X
3B	6X40	0	2-4-2	X	3	Yes	-	10	-	S	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	3	-	S	-	X
4B	6X40	0	2-4-2	X	4	Yes	-	-	-	S	-	X
5A	6X40	0	2-4-2	X	5	Yes	-	15★	-	S	-	X
					2#	Yes	-	-	-	S	-	X
6A	6X6	70	4	X	6	Yes	-	-	-	S	-	X
6B	6X6	70	4	X	6	Yes	-	-	-	S	-	X
6C	6X6	70	4	X	6	Yes	-	-	-	S	-	X
6D	6X6	70	4	X	6	Yes	-	-	-	S	-	X

#Disable Phase(s) call during Alternate Phasing Operation.
★Disable delay during Alternate Phasing Operation.

NOTES

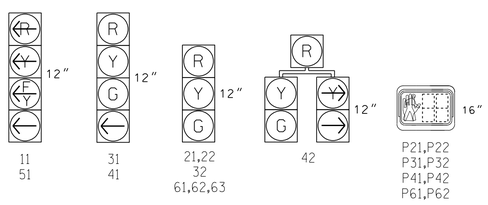
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or Phase 5 may be lagged.
4. The order of Phase 3 and Phase 4 may be reversed.
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. The Division (City) Traffic Engineer will determine hours of use for each phasing plan.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Pedestrian pedestals are conceptual and shown for reference only. See 2018 NDCOT Roadway Standard Drawings 1705.04 Sheets 1-3 for push button location details.

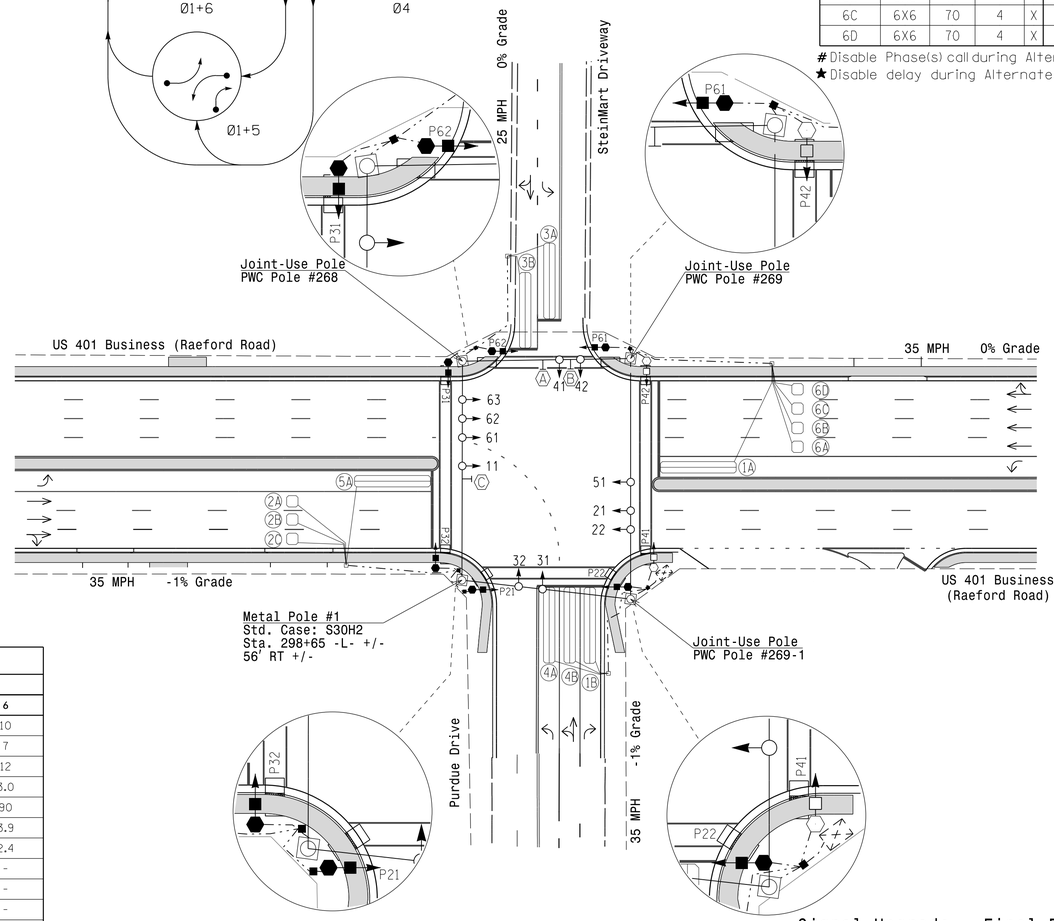
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.





LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□↓	Pedestrian Signal Head With Pushbutton & 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	⬢
Ⓐ	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
Ⓑ	Combined Through and Left Arrow Sign (R3-6L)	Ⓑ
Ⓒ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓒ

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green *	7	10	7	7	7	10
Walk *	-	7	7	7	-	7
Ped Clear	-	17	23	22	-	12
Veh. Extension *	2.0	3.0	2.0	2.0	2.0	3.0
Max 1 *	20	90	25	25	20	90
Yellow	3.0	3.9	3.2	3.9	3.0	3.9
Red Clear	3.1	2.4	3.2	2.7	3.3	2.4
Red Revert	-	-	-	-	-	-
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	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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Prepared for the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

US 401 Business (Raeford Road)
at
Purdue Drive/
SteinMart Driveway

Division 6 Cumberland County Fayetteville

PLAN DATE:	March 2018	REVIEWED BY:	E D Harris
PREPARED BY:	G B Spell	REVIEWED BY:	B L Watson

REVISIONS	INIT.	DATE

SCALE: 0 40 1"=40'

NORTH CAROLINA PROFESSIONAL SEAL 29449 ENGINEER BETSEY L. WATSON
Betsey L. Watson 3/29/2018
SIGNATURE DATE
SIG. INVENTORY NO. 06-0224

3/29/2018
10:27:54 AM
U:\Traffic\Signals\Designs\Signal Designs\Final Signal Designs\U-4405_sig_dsn_06-0224 Final.dgn
User:rmuncy