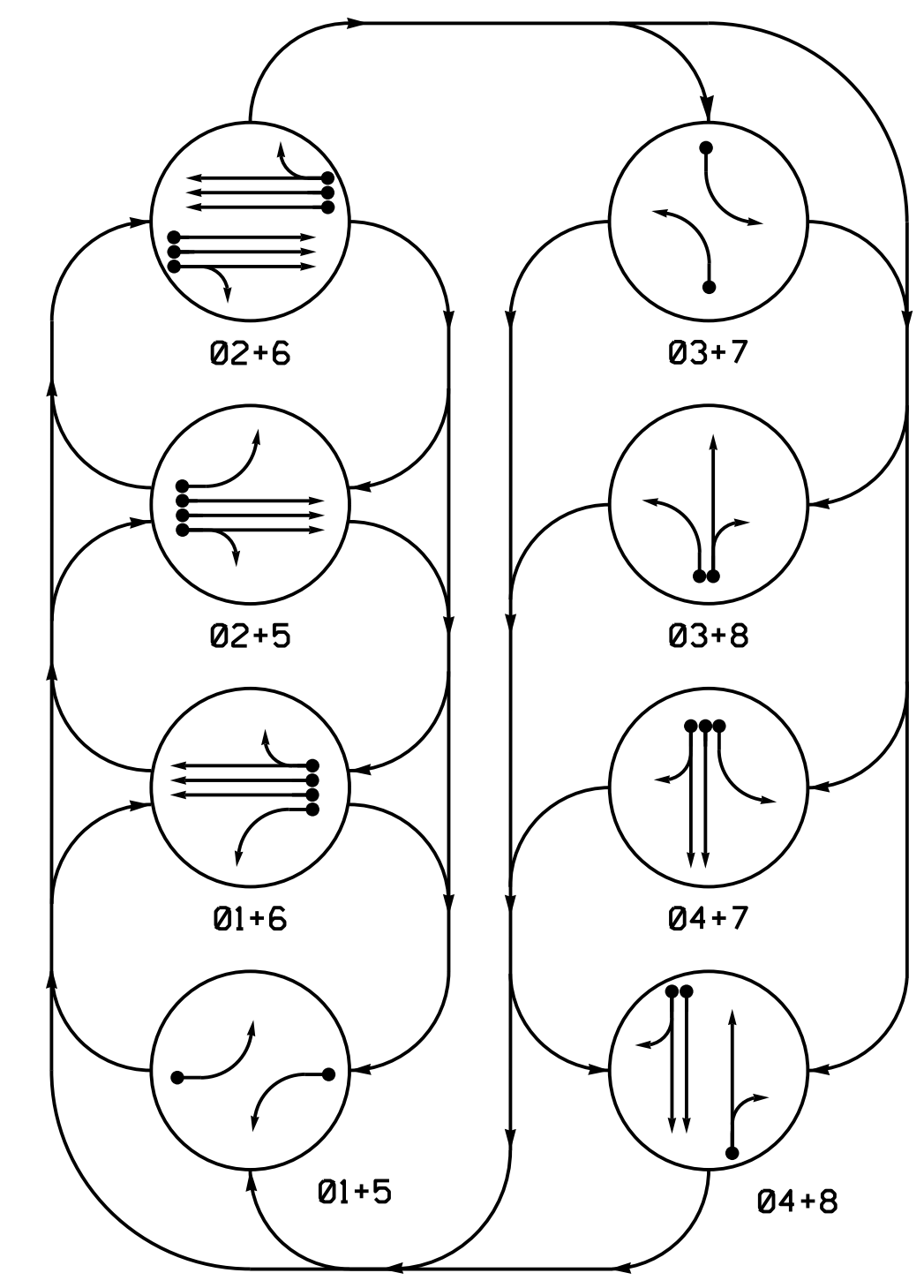


8 Phase Fully Actuated Belmont Signal System

PHASING DIAGRAM

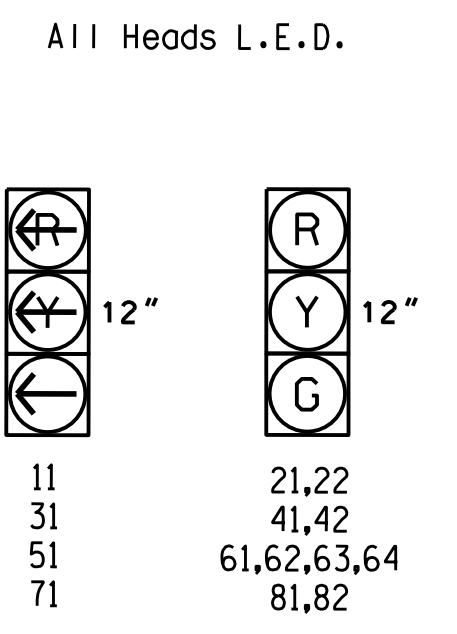


PHASING DIAGRAM DETECTION LEGEND

- ← ● → DETECTED MOVEMENT
- ← ○ → UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ← - - - → PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11	---	---	---	---	---	---	---	---
21,22	R	R	G	G	R	R	R	Y
31	---	---	---	---	---	---	---	---
41,42	R	R	R	R	R	R	G	G
51	---	---	---	---	---	---	---	---
61,62,63,64	R	G	R	G	R	R	R	Y
71	---	---	---	---	---	---	---	---
81,82	R	R	R	R	G	R	G	R

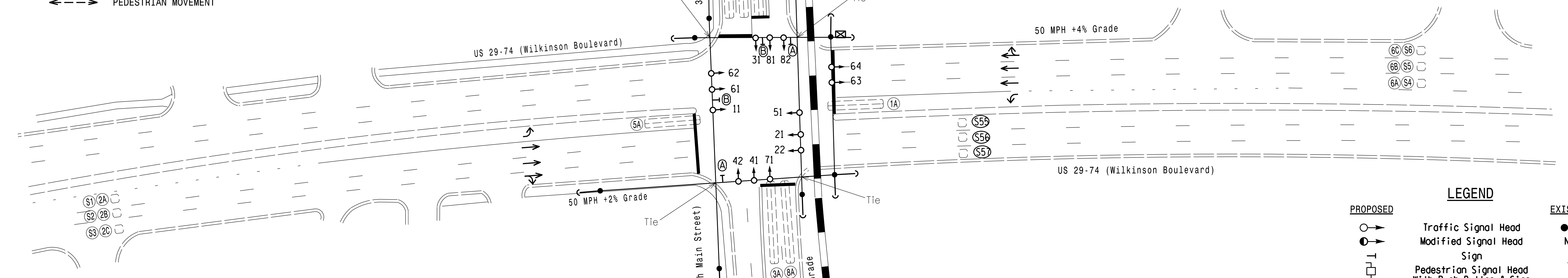
SIGNAL FACE I.D.



ASC/3 DETECTOR INSTALLATION CHART												
DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	+5	Exist	-	1	Yes	-	-	-	S	-	X
2A/S1	6X6	400	Exist	-	2	Yes	-	-	X	N	X	X
2B/S2	6X6	400	Exist	-	2	Yes	-	-	X	N	X	X
2C/S3	6X6	400	Exist	-	2	Yes	-	-	X	N	X	X
3A	6X60	+5	Exist	-	3	Yes	-	3	-	S	-	X
4A	6X40	10	Exist	-	4	Yes	-	-	-	S	-	X
4B	6X40	10	Exist	-	4	Yes	-	-	-	S	-	X
5A	6X40	+5	Exist	-	5	Yes	-	-	-	S	-	X
6A/S4	6X6	405	Exist	-	6	Yes	-	-	X	N	X	X
6B/S5	6X6	405	Exist	-	6	Yes	-	-	X	N	X	X
6C/S6	6X6	405	Exist	-	6	Yes	-	-	X	N	X	X
7A	6X40	0	Exist	-	7	Yes	-	3	-	S	-	X
8A	6X60	+5	Exist	-	8	Yes	-	-	-	S	-	X
S55	6X6	190	6	-	No	-	-	-	-	N	X	X
S56	6X6	190	6	-	No	-	-	-	-	N	X	X
S57	6X6	190	6	-	No	-	-	-	-	N	X	X

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



ASC/3 TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	14	7	7	7	14	7	7
Walk *	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0
Veh. Extension *	2.0	6.0	1.0	2.0	2.0	6.0	2.0	1.0
Max I *	25	90	25	45	25	90	25	45
Yellow	3.0	4.6	3.0	3.8	3.0	4.5	3.0	3.8
Red Clear	2.6	1.0	2.4	2.0	2.8	1.1	2.9	1.9
Actuations B4 Add *	-	0	-	-	-	0	-	-
Seconds / Actuation *	-	1.5	-	-	-	1.5	-	-
Max Initial *	-	44	-	-	-	44	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	45	-	-	-	45	-	-
Minimum Gap	-	3.8	-	-	-	3.8	-	-
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.

LEGEND

- | PROPOSED | EXISTING |
|--|--|
| ○ → Traffic Signal Head | ● → Traffic Signal Head |
| ○ → Modified Signal Head | N/A |
| ⊥ Sign | ⊥ Sign |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ Pedestrian Signal Head With Push Button & Sign |
| ⊥ Signal Pole with Guy | ⊥ Signal Pole with Guy |
| ⊥ Signal Pole with Sidewalk Guy | ⊥ Signal Pole with Sidewalk Guy |
| ⊥ Inductive Loop Detector | ⊥ Inductive Loop Detector |
| ⊥ Controller & Cabinet | ⊥ Controller & Cabinet |
| ⊥ Junction Box | ⊥ Junction Box |
| --- 2-in Underground Conduit | --- 2-in Underground Conduit |
| N/A Right of Way | --- Right of Way |
| N/A Directional Arrow | → Directional Arrow |
| N/A Railroad Tracks | --- Railroad Tracks |
| Ⓐ "NO TURN ON RED" Sign (R10-11) | Ⓐ "NO TURN ON RED" Sign (R10-11) |
| Ⓑ Street Name Sign | Ⓑ Street Name Sign |

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of: NC FIRM LICENSE No: P-0339 504 Meadowlands Drive Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX)		US 29-74 (Wilkinson Boulevard) at NC 7 (North Main Street)	
		Division 12 Gaston County Belmont PLAN DATE: December 2018 REVIEWED BY: E. Sirgany PREPARED BY: M. Parker REVIEWED BY:	SEAL EDWARD W. SIRGANY ENGINEER 2/7/2019 DATE SIG. INVENTORY NO. 12-0561