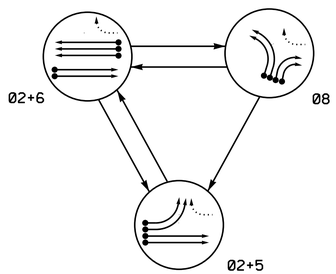
PROJECT REFERENCE NO.	SHEET NO.
U-6038	Sig 3.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 08	FLASH
21,22	G	G	R	Y
51,52	~~←~~	~~R~~	~~R~~	~~R~~
61,62,63	R	G	R	Y
81,82,83	R	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.

21,22
61,62,63
81,82,83

51,52

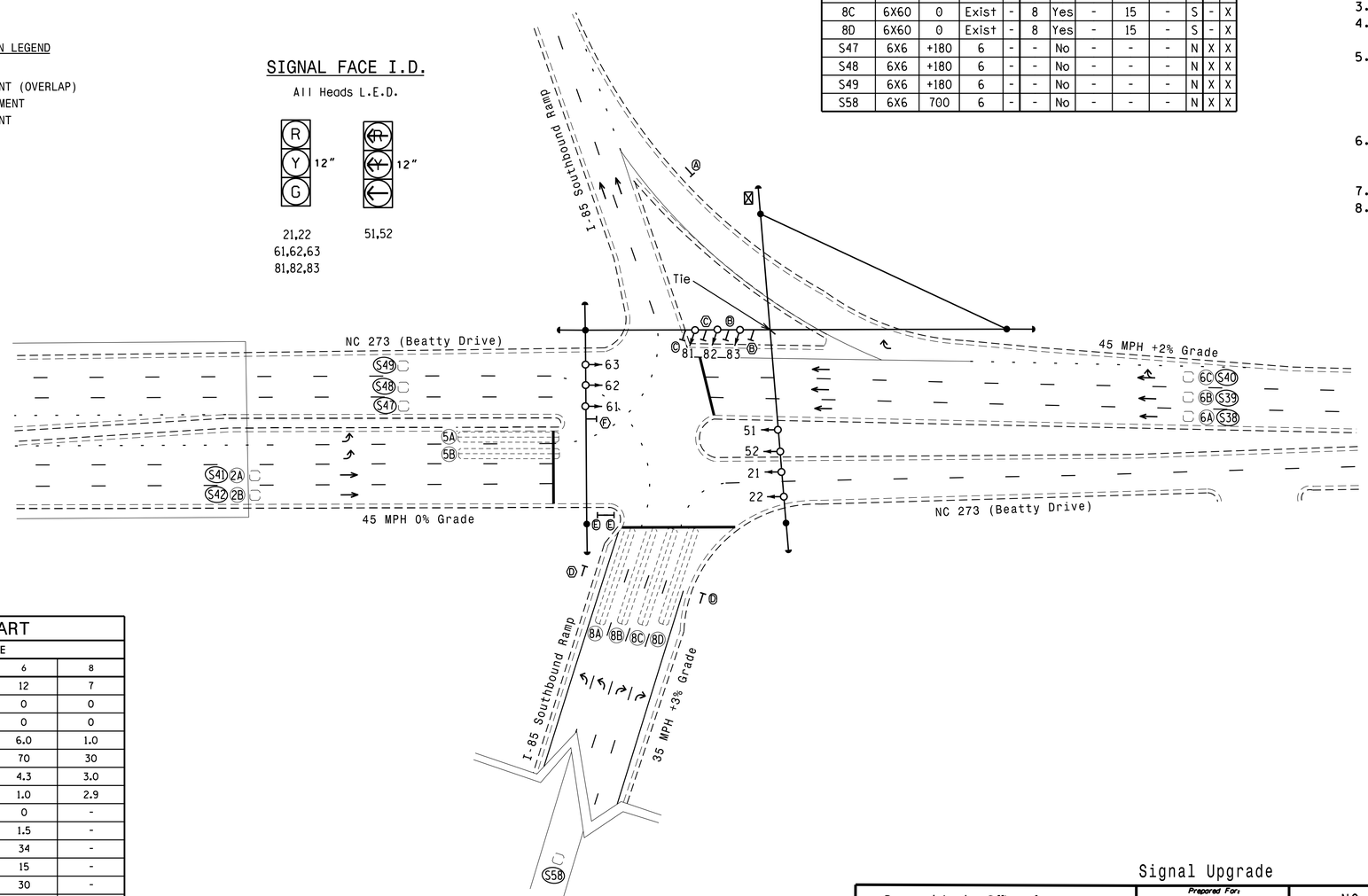
ASC/3 DETECTOR INSTALLATION CHART

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
2A/S41	6X6	180	6	-	2	Yes	-	-	X	N	X	X
2B/S42	6X6	180	6	-	2	Yes	-	-	X	N	X	X
5A	6X60	+5	Exist	-	5	Yes	-	-	-	S	-	X
5B	6X60	+5	Exist	-	5	Yes	-	-	-	S	-	X
6A/S38	6X6	300	6	-	6	Yes	-	-	X	N	X	X
6B/S39	6X6	300	6	-	6	Yes	-	-	X	N	X	X
6C/S40	6X6	300	6	-	6	Yes	-	-	X	N	X	X
8A	6X60	0	Exist	-	8	Yes	-	-	-	S	-	X
8B	6X60	0	Exist	-	8	Yes	-	-	-	S	-	X
8C	6X60	0	Exist	-	8	Yes	-	15	-	S	-	X
8D	6X60	0	Exist	-	8	Yes	-	15	-	S	-	X
S47	6X6	+180	6	-	-	No	-	-	-	N	X	X
S48	6X6	+180	6	-	-	No	-	-	-	N	X	X
S49	6X6	+180	6	-	-	No	-	-	-	N	X	X
S58	6X6	700	6	-	-	No	-	-	-	N	X	X

3 Phase
Fully Actuated
Belmont Signal System

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 5 may be lagged.
4. Set all detector units to presence mode.
5. 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.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Pavement markings are existing.
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	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	Right Arrow "ONLY" Sign (R3-5R)	Ⓑ
Ⓒ	Left Arrow "ONLY" Sign (R3-5L)	Ⓒ
Ⓓ	"DO NOT ENTER" Sign (R5-1)	Ⓓ
Ⓔ	"ONE WAY" Sign (R6-1)	Ⓔ
Ⓕ	No Left Turn Sign (R3-2)	Ⓕ

ASC/3 TIMING CHART

FEATURE	PHASE 2	PHASE 5	PHASE 6	PHASE 8
Min Green *	12	7	12	7
Walk *	0	0	0	0
Ped Clear	0	0	0	0
Veh. Extension *	6.0	1.0	6.0	1.0
Max 1 *	70	25	70	30
Yellow	4.5	3.0	4.3	3.0
Red Clear	1.6	3.2	1.0	2.9
Actuations B4 Add *	0	-	0	-
Seconds /Actuation *	1.5	-	1.5	-
Max Initial *	22	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	30	-	30	-
Minimum Gap	1.0	-	3.0	-
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.

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