

3 Phase Fully Actuated Cornelius CLS D10-18

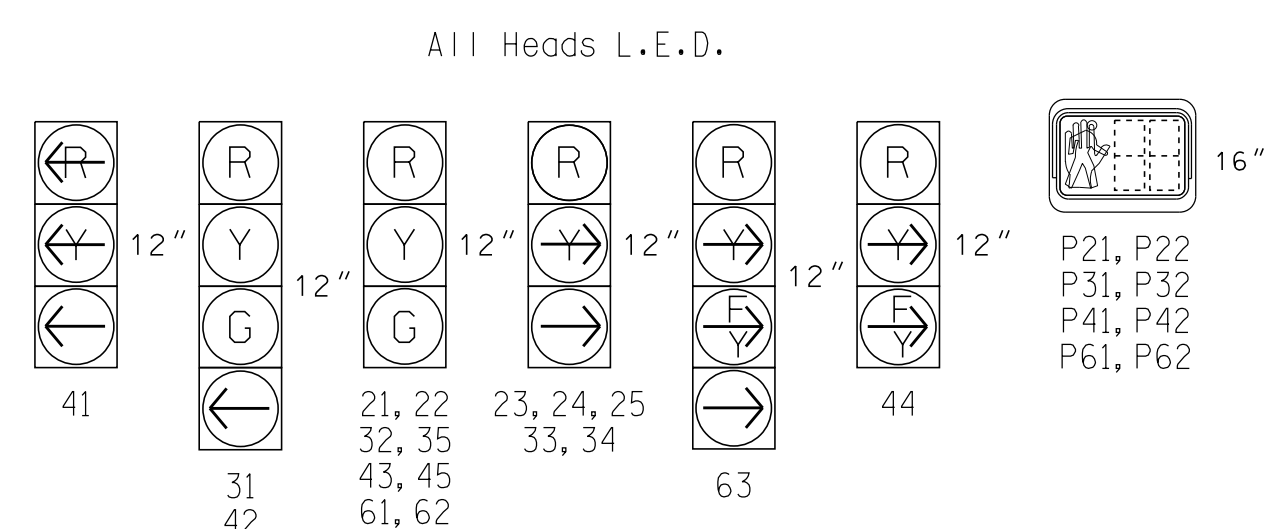
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018, and all applicable sections of the latest version of the generic Project Special Provisions.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- The order of Phase 3 and Phase 4 may be reversed.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Program controller to allow an Advanced Walk movement before serving the vehicle phase.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Portions of high-visibility crosswalk masked for clarity.
- The Division Traffic Engineer will determine pushbutton locations.
- See C-5621 pavement marking plans for existing and proposed pavement markings.

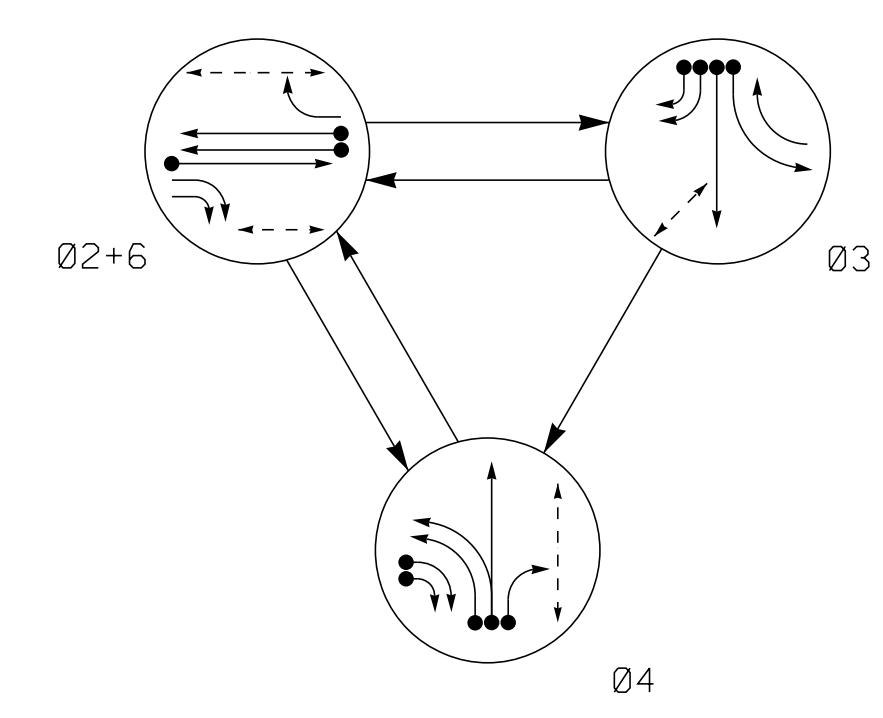
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
2A	6X6	70	5	X	2	YES	-	-	-	N	-	X
3A	6X40	0	2-4-2	X	3	YES	-	-	-	N	-	X
3B	6X40	0	2-4-2	X	3	YES	-	-	-	N	-	X
3C	6X40	0	2-4-2	X	3	YES	-	-	-	N	-	X
3D	6X40	0	2-4-2	X	3	YES	-	-	-	N	-	X
4A	6X40	0	2-4-2	X	4	YES	-	-	-	N	-	X
4B	6X40	0	2-4-2	X	4	YES	-	-	-	N	-	X
4C	6X40	0	2-4-2	X	4	YES	-	15	-	N	-	X
4D	6X40	0	2-4-2	X	4	YES	-	-	-	N	-	X
4E	6X40	0	2-4-2	X	4	YES	-	-	-	N	-	X
6A,6B	6X6	70	3	X	6	YES	-	-	-	N	-	X

SIGNAL FACE	PHASE			
	Ø 2 + 6	Ø 3	Ø 4	FLASH
21, 22	G	R	R	Y
23, 24, 25	→	R	→	→
31	R	G	R	R
32, 35	R	G	R	R
33, 34	R	→	R	R
41	R	R	←	←
42	R	R	G	R
43, 45	R	R	G	R
44	R	R	←	←
61, 62	G	R	R	Y
63	←	←	←	←
P21, P22	W	DW	DW	DRK
P31, P32	DW	W	DW	DRK
P41, P42	DW	DW	W	DRK
P61, P62	W	DW	DW	DRK

SIGNAL FACE I.D.

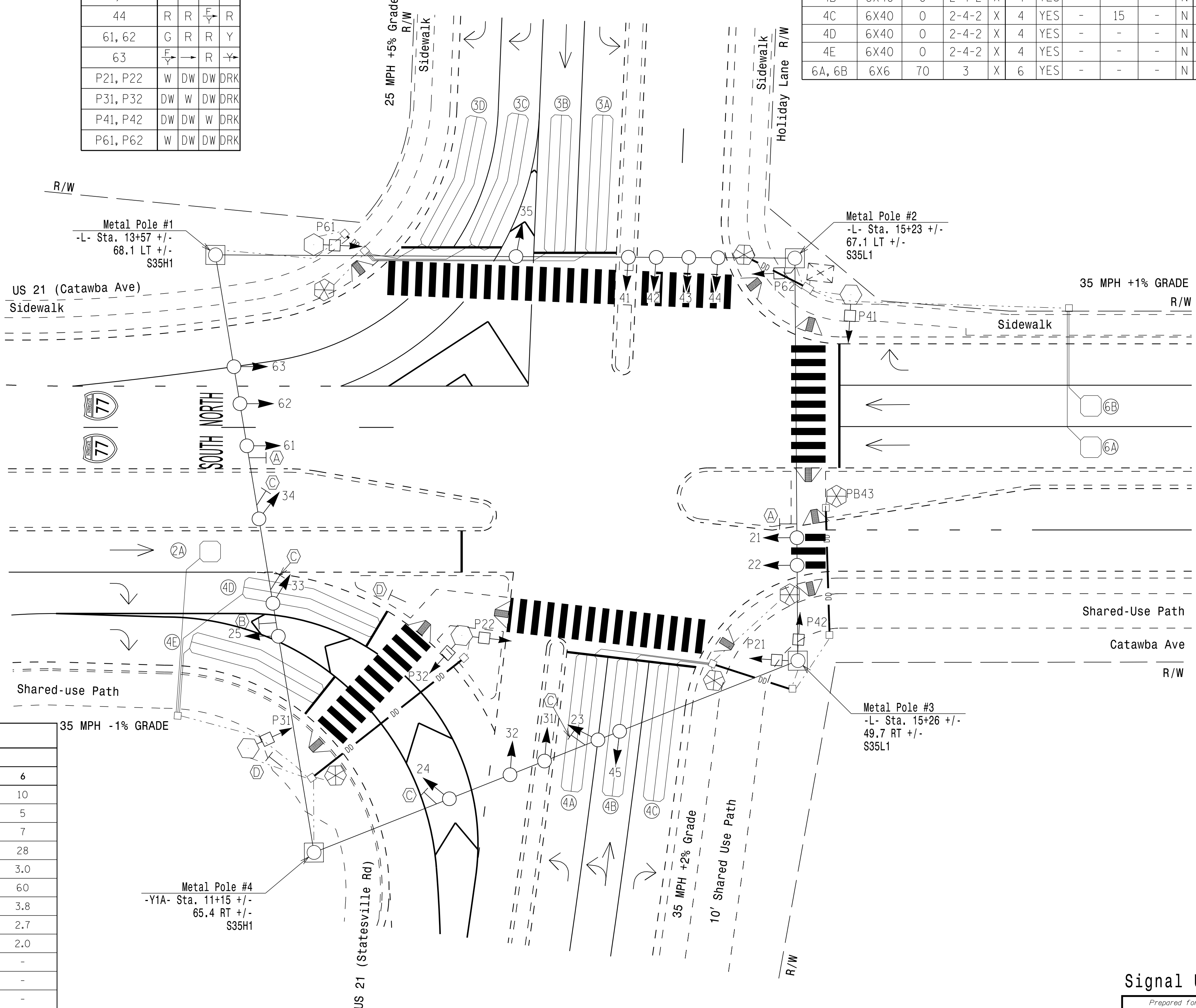


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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



ASC/3 TIMING CHART

FEATURE	PHASE			
	2	3	4	6
Min Green *	10	7	7	10
Delayed Green	-	-	5	5
Walk *	7	7	7	7
Ped Clear	14	9	17	28
Veh. Extension *	3.0	2.0	2.0	3.0
Max I *	60	30	30	60
Yellow	3.9	3.0	3.7	3.8
Red Clear	2.0	3.7	2.6	2.7
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.

LEGEND

- | | | | |
|-----|---|-----|---|
| ○ | Proposed Traffic Signal Head | ● | Existing Traffic Signal Head |
| ○ | Proposed Modified Signal Head | N/A | Existing Modified Signal Head |
| → | Proposed Sign | → | Existing Sign |
| ○ | Proposed Pedestrian Signal Head With Push Button & Sign | ○ | Existing Pedestrian Signal Head With Push Button & Sign |
| ○ | Proposed Signal Pole with Guy | ○ | Existing Signal Pole with Guy |
| ○ | Proposed Signal Pole with Sidewalk Guy | ○ | Existing Signal Pole with Sidewalk Guy |
| ⊗ | Proposed Inductive Loop Detector | ⊗ | Existing Inductive Loop Detector |
| ⊗ | Proposed Controller & Cabinet | ⊗ | Existing Controller & Cabinet |
| ⊗ | Proposed Junction Box | ⊗ | Existing Junction Box |
| --- | Proposed 2-in Underground Conduit | --- | Existing 2-in Underground Conduit |
| --- | Proposed Right of Way | --- | Existing Right of Way |
| → | Proposed Directional Arrow | → | Existing Directional Arrow |
| ⊗ | Proposed Type I Pushbutton Post | ⊗ | Existing Type I Pushbutton Post |
| ○ | Proposed Type II Signal Pedestal | ○ | Existing Type II Signal Pedestal |
| (A) | Proposed No Left/U-Turn Sign (R3-18) | (A) | Existing No Left/U-Turn Sign (R3-18) |
| (B) | Proposed "RIGHT TURN SIGNAL" Sign (R10-10R) | (B) | Existing "RIGHT TURN SIGNAL" Sign (R10-10R) |
| (C) | Proposed "NO TURN ON RED" Sign (R10-11A) | (C) | Existing "NO TURN ON RED" Sign (R10-11A) |
| (D) | Proposed "STOP HERE ON RED" Sign (R10-6) | (D) | Existing "STOP HERE ON RED" Sign (R10-6) |

Signal Upgrade - Final

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

8521 SIX FORKS ROAD, SUITE 400
RALEIGH, NC 27615
(919) 926-4100

US 21 (Catawba Avenue) /
Catawba Avenue at
US 21 (Statesville Road) /
Holiday Lane

Division 10 Mecklenburg County Cornelius

PLAN DATE: February 2023 REVIEWED BY: S.G. Haynie

PREPARED BY: S.N. Matthews REVIEWED BY:

SEAL

SIGNATURE DATE

919-926-4100

This plan supersedes the signal plan signed and sealed by S. Nick Matthews, PE on 05/31/2022.

2: File: 23_13:31:31.dgn
 6: Plot: 23_13:31:31.dwg
 13:31:31