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PROJECT REFERENCE NO.	SHEET NO.
I-2513 AA/AB	Sig 3.1

PHASING DIAGRAM

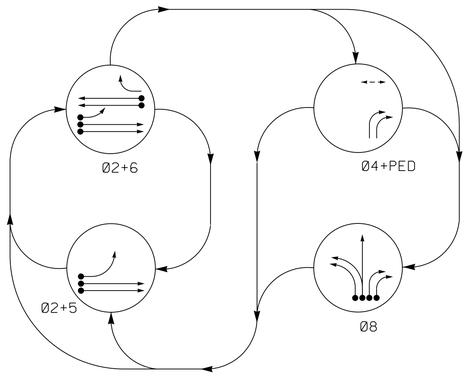
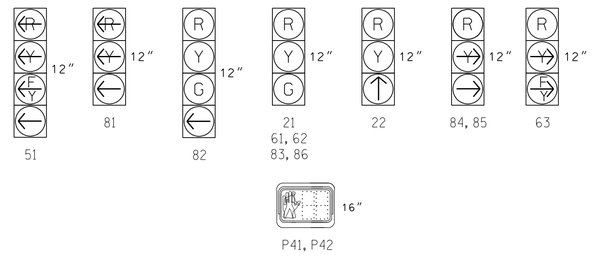


TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	Ø2+6	Ø4+PED	Ø8	FLASH
21	G	G	R	R	Y
22	↑	↑	R	R	Y
51	←	←Y	←R	←R	←Y
61, 62	R	G	R	R	Y
63	R	Y→	R	R	Y→
81	←R	←R	←R	←	←R
82	R	R	R	G←	R
83, 86	R	R	R	G	R
84, 85	R	R	→	→	R
P41, P42	DW	DW	W	DW	DRK
Sign "B"	OFF	OFF	ON	OFF	OFF

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME DETECTOR INSTALLATION CHART

DETECTOR: ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING: CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
2A *	6X6	250	*	*	2	-	1.3	X	-	X	-	*
2B *	6X6	250	*	*	2	-	1.3	X	-	X	-	*
2C *	6X6	80	*	*	2	-	-	X	-	X	-	*
2D *	6X6	80	*	*	2	-	-	X	-	X	-	*
5A *	6X40	0	*	*	5	15	-	X	-	X	-	*
					2	-	-	X	-	X	-	*
6A *	6X6	250	*	*	6	-	1.3	X	-	X	-	*
6B *	6X6	250	*	*	6	-	1.3	X	-	X	-	*
6C *	6X6	80	*	*	6	-	-	X	-	X	-	*
6D *	6X6	80	*	*	6	-	-	X	-	X	-	*
8A *	6X40	0	*	*	8	-	-	X	-	X	-	*
8B *	6X40	0	*	*	8	-	-	X	-	X	-	*
8C *	6X40	0	*	*	8	-	-	X	-	X	-	*
8D *	6X40	0	*	*	8	-	-	X	-	X	-	*
8E *	6X6	0	*	*	8	-	-	X	-	X	-	*

* Video Detection Zone

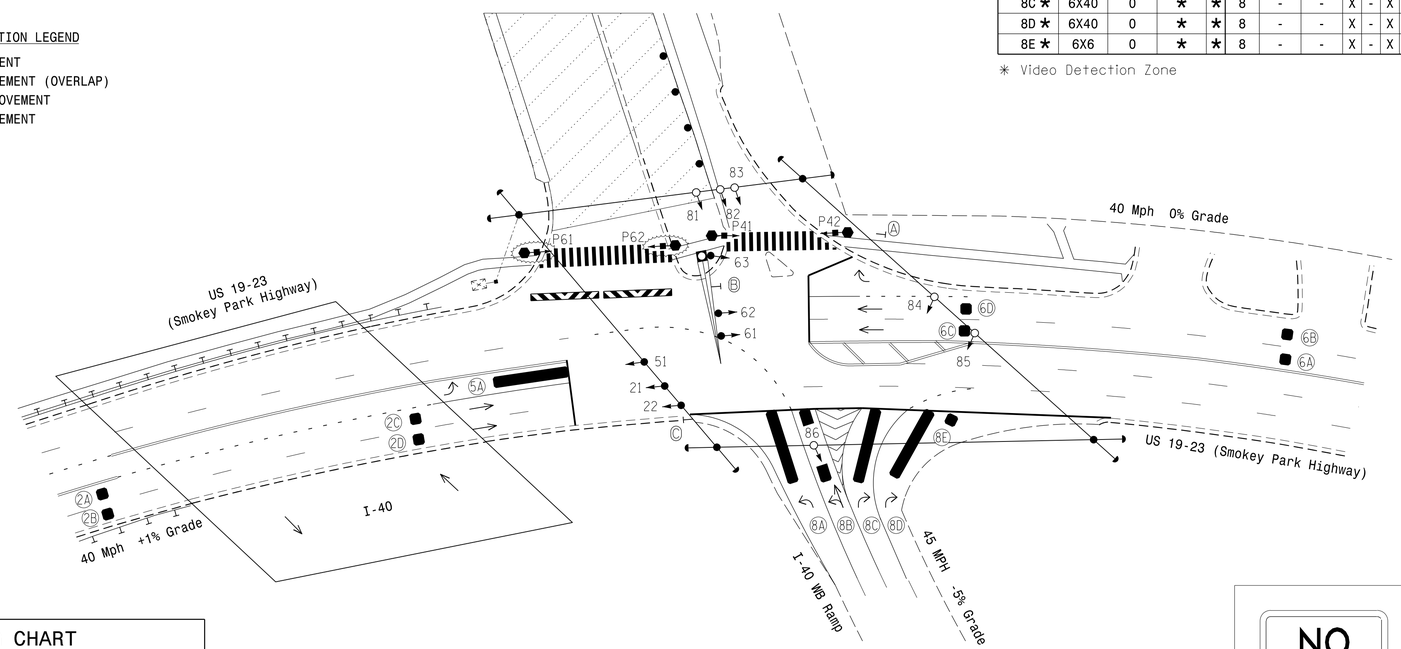
4 Phase
Fully Actuated
(Asheville Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Disconnect and bag signals P61 and P62.
4. Phase 5 may be lagged.
5. Remove existing signal heads numbered 41, 42, 43, and 44.
6. Set all detector units to presence mode.
7. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

PHASING DIAGRAM DETECTION LEGEND

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



Sign "B"

Figure 1

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	
	Metal Pole with Mastarm	
	Type II Signal Pedestal	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Video Detection Zone	
	Construction Zone	
	Construction Zone Drums	
Ⓐ	Pedestrian Crossing Sign (W11-2) w/ Arrow Plaque (W16-7P)	Ⓐ
Ⓑ	"NO RIGHT TURN" LED Blankout Sign (See Figure 1)	Ⓑ
Ⓒ	"NO RIGHT TURN" (R3-1)	Ⓒ

MAXTIME TIMING CHART

FEATURE	PHASE 2	4	5	6	8
Walk *	–	7	–	–	–
Ped Clear *	–	13	–	–	–
Min Green	12	–	7	12	7
Passage *	2.0	–	2.0	2.0	2.0
Max 1 *	70	–	25	70	35
Yellow Change	4.2	3.0	3.0	4.2	5.0
Red Clear	3.2	0.0	3.6	3.2	1.9
Added Initial *	–	–	–	–	–
Maximum Initial *	–	–	–	–	–
Time Before Reduction *	–	–	–	–	–
Time To Reduce *	–	–	–	–	–
Minimum Gap	–	–	–	–	–
Advance Walk	–	–	–	–	–
Non Lock Detector	–	X	X	–	X
Vehicle Recall	MIN RECALL	–	–	MIN RECALL	–
Dual Entry	–	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
Temporary Design 2 (TMP Phases III - V)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

US 19-23 (Smokey Park Highway)
at
I-40 WB Ramps

Division 13 Buncombe County Asheville

PLAN DATE:	December 2023	REVIEWED BY:	R. Garrett
PREPARED BY:	M. Tindal	REVIEWED BY:	

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026679 ENGINEER ROCHELLE GARRETT

DocuSigned by: Rochelle Garrett 12/5/2023
SIGNATURE DATE

SIG. INVENTORY NO. I3-0468T2

12/5/2023
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Tindal M