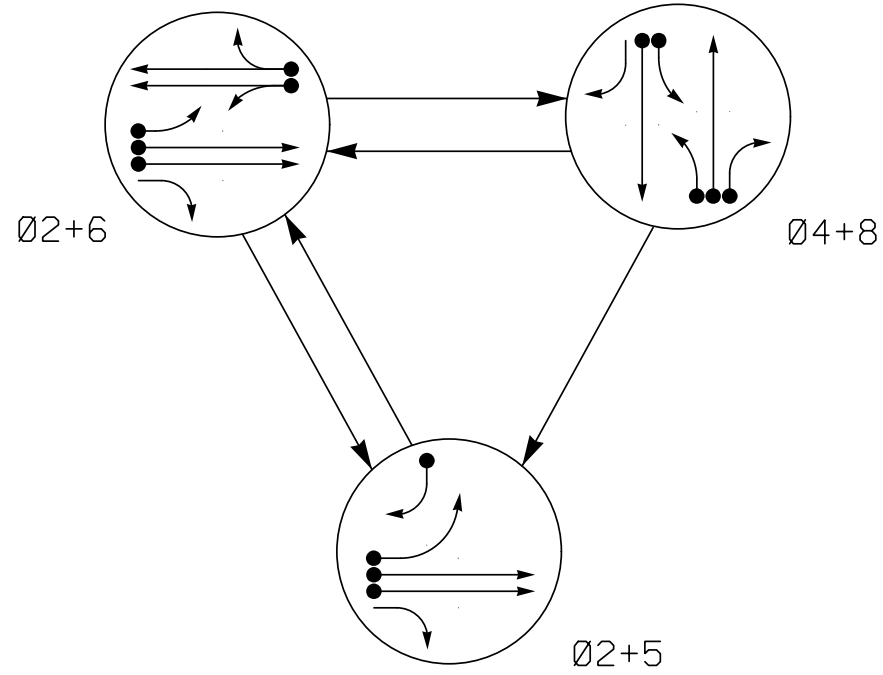
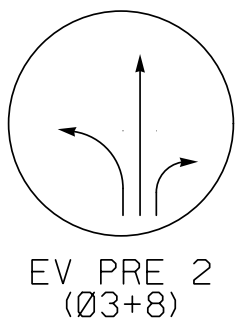


PHASING DIAGRAM



EV PREEMPT PHASE
(Medium Priority)

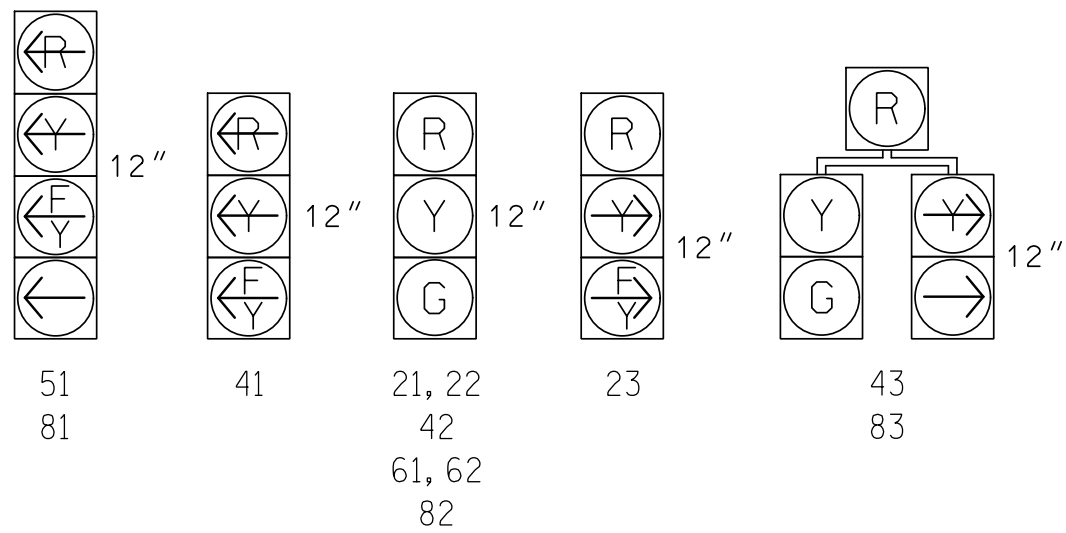


PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.



SIGNAL FACE	PHASE				
	Ø 2 + 5	Ø 2 + 6	Ø 4 + 8	PRE 2	FLASH
21, 22	G	R	R	R	R
23	F	F	R	R	R
41	R	R	F	R	R
42	R	R	G	R	R
43	R	R	G	R	R
51	F	F	R	R	R
61, 62	R	G	R	R	R
81	R	R	F	R	R
82	R	R	G	G	R
83	R	R	G	G	R

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING				
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND ADDED INITIAL	CALL DURING GREEN
4A	6X40	0	*	*	4	3	-	X	X
4B	6X40	0	*	*	4	-	-	X	X
5A	6X40	0	*	*	5	15	-	X	X
5B	6X40	0	*	*	2	-	-	X	X
8A	6X40	0	*	*	8	-	-	X	X
8B	6X40	0	*	*	8	-	-	X	X
8C	6X40	0	*	*	8	15	-	X	X

* Multi-zone Microwave Detection Zone

3 Phase
Fully Actuated with EV Preemption
D06-18 Lumberton NC 211 (N. Roberts Avenue)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Omit phase 5 during phase 6 on.
- Enable Backup Protect to allow the controller to clear from phase 2+6 to phase 2+5 by progressing through an all red display.
- Set all detector units to presence mode.
- The Division Traffic Engineer will determine the Delay Time and Minimum Dwell Time for the emergency vehicle preemption timing.
- This intersection uses microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Disconnect and bag existing signal head numbered 11.
- Disconnect and bag right turn arrows on existing head numbered 83.
- Renumber existing loop 1B to 8C.
- Emergency vehicle preemption switch is located inside rescue squad building. When switch is actuated, controller will display interval and then emergency preemption phasing.

RADAR DETECTION SYSTEM

FUNCTION	SENSOR 1 - (2A)	SENSOR 2 - (6A)
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	200 - 70	200 - 70
Enable Speed	Y	Y
Speed Range (mph)	25 - 100	25 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 5.5	2.5 - 5.5

MAXTIME TIMING CHART

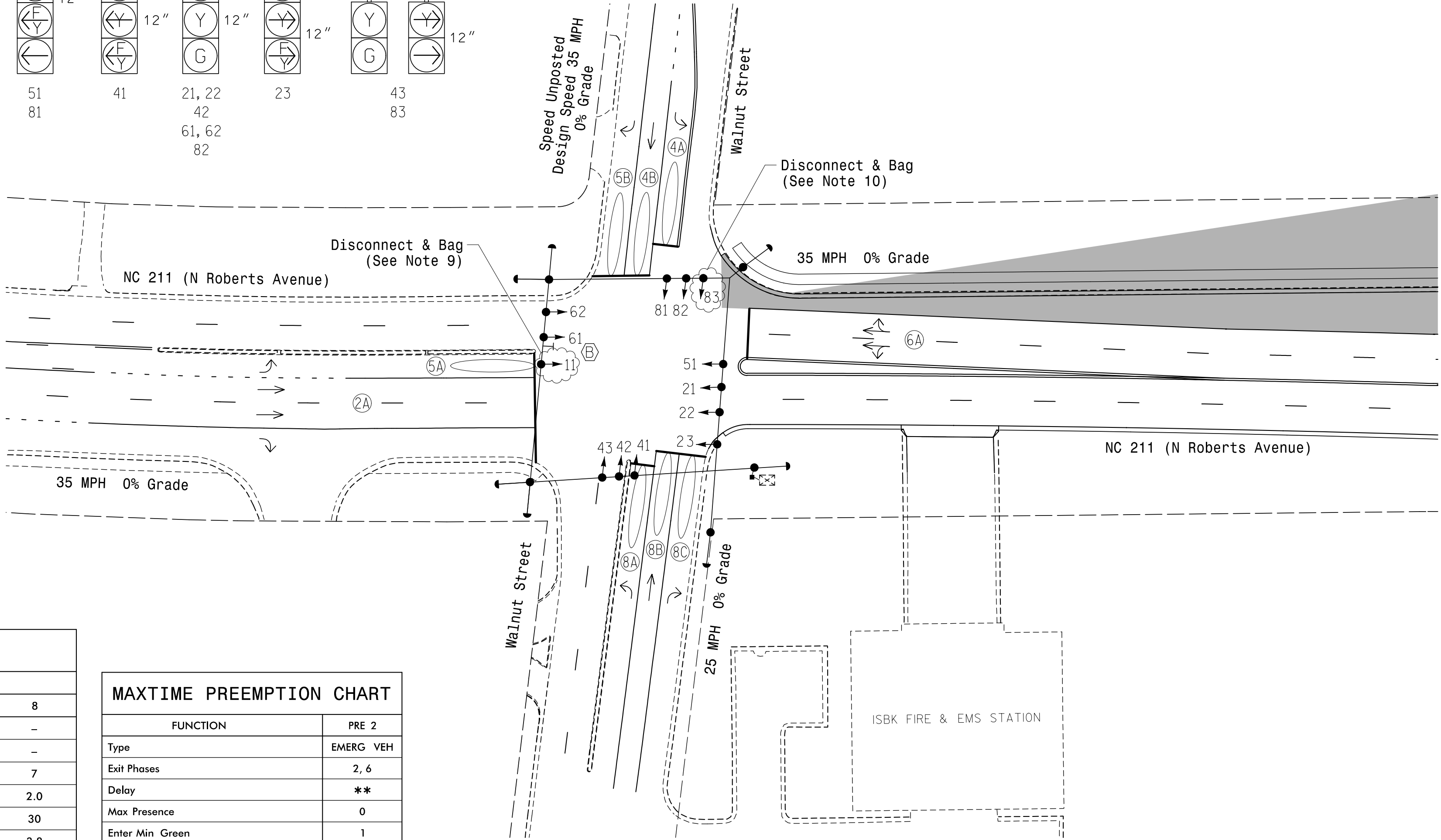
FEATURE	PHASE				
	2	4	5	6	8
Walk *	-	-	-	-	-
Ped Clear *	-	-	-	-	-
Min Green	10	7	7	10	7
Passage *	2.0	2.0	2.0	2.0	2.0
Max 1 *	90	30	20	90	30
Yellow Change	3.8	3.8	3.0	3.8	3.8
Red Clear	2.1	2.1	2.6	2.1	2.1
Red Revert	5.0	2.0	2.0	2.0	2.0
Added Initial *	-	-	-	-	-
Maximum Initial *	-	-	-	-	-
Time Before 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.

MAXTIME PREEMPTION CHART

FUNCTION	PRE 2
Type	EMERG VEH
Exit Phases	2, 6
Delay	**
Max Presence	0
Enter Min Green	1
Enter Walk	0
Enter Ped Clear	255 *
Enter Yellow Change	25.5 *
Enter Red Clear	25.5 *
Dwell Green	**
Exit Min Green	255 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Call Extend Time	1.0
Exit Type	EXIT PHASES
Ped Clear Through Yellow	N
Require All Red Entry	N

* Directs controller to use default phase timing.
** See Note 6.

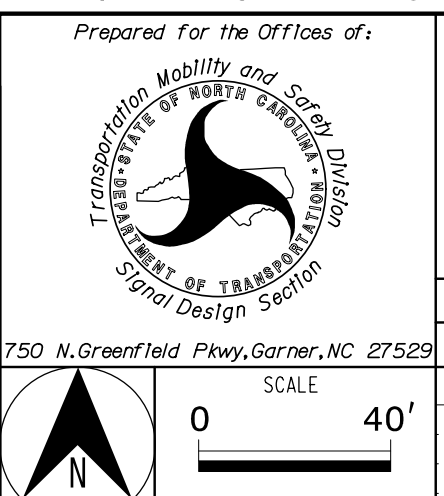


LEGEND

- | PROPOSED | EXISTING |
|--|--|
| Traffic Signal Head | Modified Signal Head |
| Signal Pole with Guy | Signal Pole with Sidewalk Guy |
| Inductive Loop Detector | Controller & Cabinet |
| Junction Box | Junction Box |
| 2-in Underground Conduit | Right of Way |
| Directional Arrow | Microwave Detection Zone |
| Construction Zone | Construction Zone |
| Left Arrow "ONLY" Sign (R3-5L) | Left Arrow "ONLY" Sign (R3-5L) |
| "LEFT TURN YIELD ON GREEN" Sign (R10-12) | "LEFT TURN YIELD ON GREEN" Sign (R10-12) |

Signal Upgrade
Temporary Design 3 - TMP Phase VI, Step 1

stv
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
(704) 372-1885
NC License Number F-0991



NC 211 (N Roberts Avenue) at Walnut Street		
Division 6	Robeson County	Lumberton
PLAN DATE: Feb 2025	REVIEWED BY: H.M. Surti	
PREPARED BY: J.C. Grimm	REVIEWED BY: T.M. Moody	
REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
Trent M. Moody
040329
03/19/2025
DATE
SIG. INVENTORY NO. 06-089773