

7 Phase Fully Actuated (Oak Street Closed Loop System)

PHASING DIAGRAM

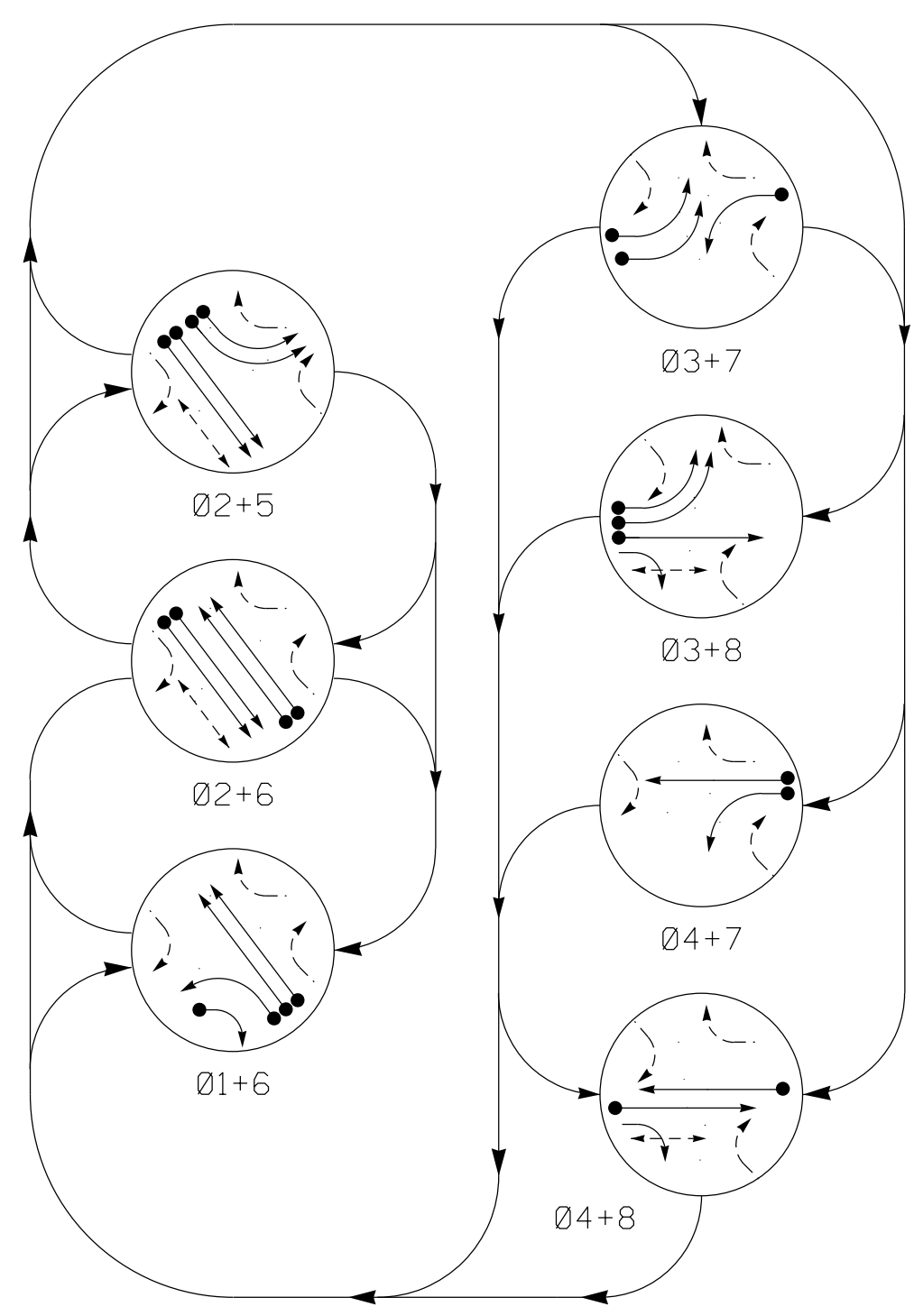
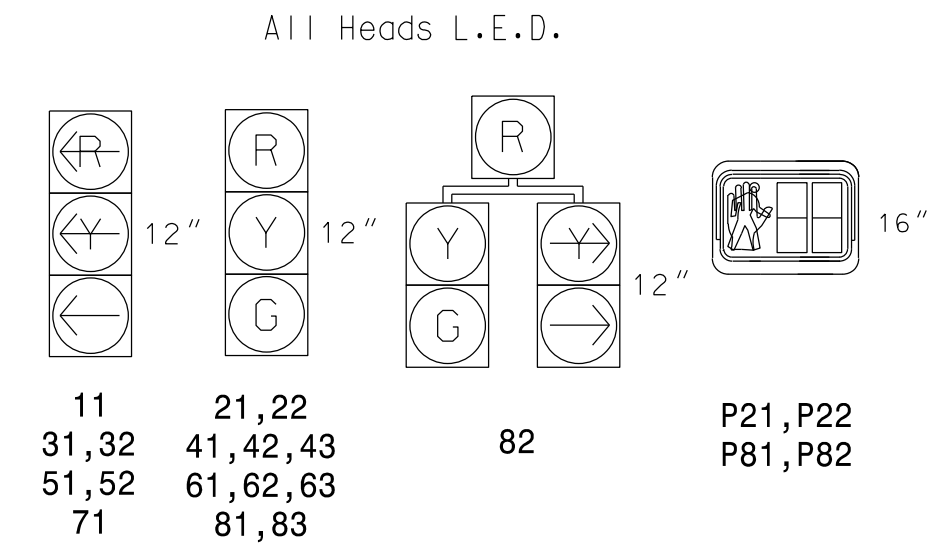


TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
11	←	←	←	←	←	←	←	←
21,22	R	G	G	R	R	R	R	Y
31,32	←	←	←	←	←	←	←	←
41,42,43	R	R	R	R	R	G	G	R
51,52	←	←	←	←	←	←	←	←
61,62,63	G	G	R	R	R	R	R	Y
71	←	←	←	←	←	←	←	←
81,83	R	R	R	R	G	R	G	R
82	←	R	R	R	G	R	G	R
P21,P22	DW	W	W	DW	DW	DW	DW	DRK
P81,P82	DW	DW	DW	DW	DW	W	W	DRK

SIGNAL FACE I.D.



OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

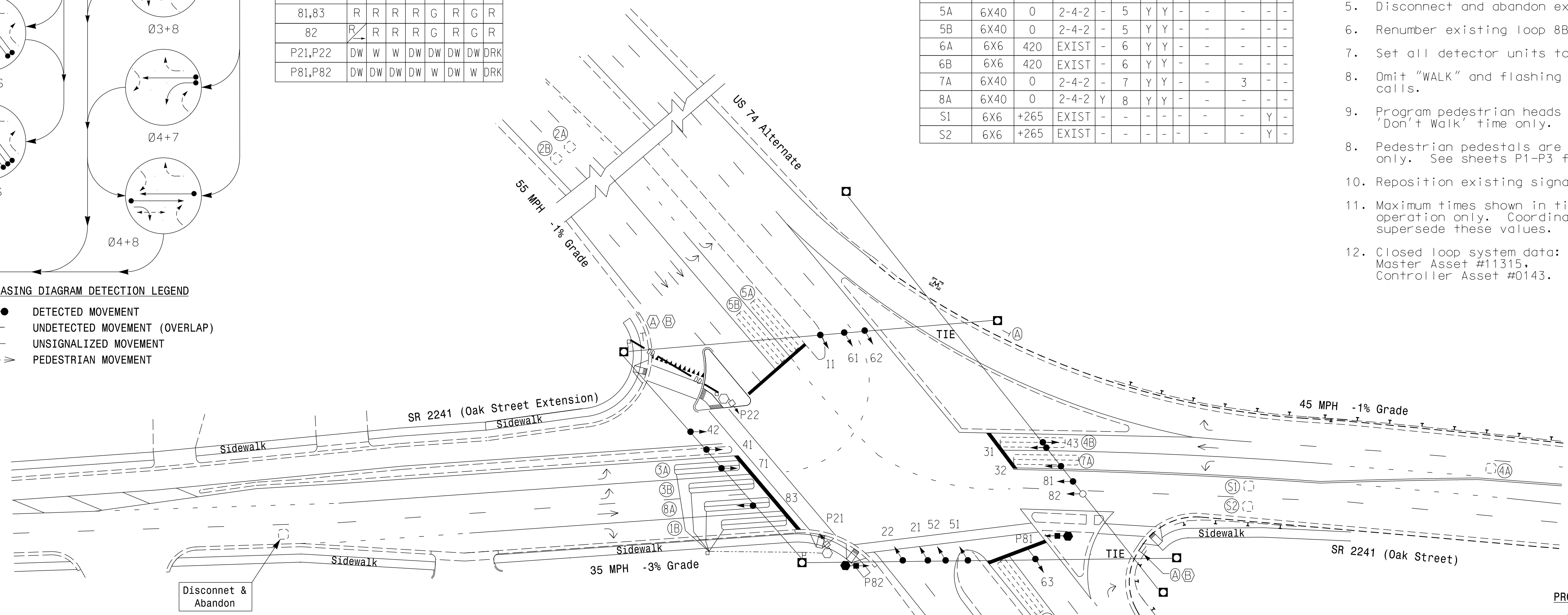
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING						
					PHASE	CALLING	EXTENSION	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	-	-
1B	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-
2A	6X6	420	EXIST	-	2	Y	Y	-	-	-	-
2B	6X6	420	EXIST	-	2	Y	Y	-	-	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-
3B	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-
4A	6X6	300	EXIST	-	4	-	Y	-	2.4	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	-	-
6A	6X6	420	EXIST	-	6	Y	Y	-	-	-	-
6B	6X6	420	EXIST	-	6	Y	Y	-	-	-	-
7A	6X40	0	2-4-2	-	7	Y	Y	-	-	3	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	-	-
S1	6X6	+265	EXIST	-	-	-	-	-	-	-	Y
S2	6X6	+265	EXIST	-	-	-	-	-	-	-	Y

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.
- The order of phase 1+6 and phase 2+5 may be reversed.
- Phase 3 and/or phase 7 may be lagged.
- Disconnect and abandon existing loop 8A.
- Renumber existing loop 8B to 8A.
- 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.
- Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
- Reposition existing signal heads numbered 31, 32, and 81.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Master Asset #11315, Controller Asset #0143.

PHASING DIAGRAM DETECTION LEGEND

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



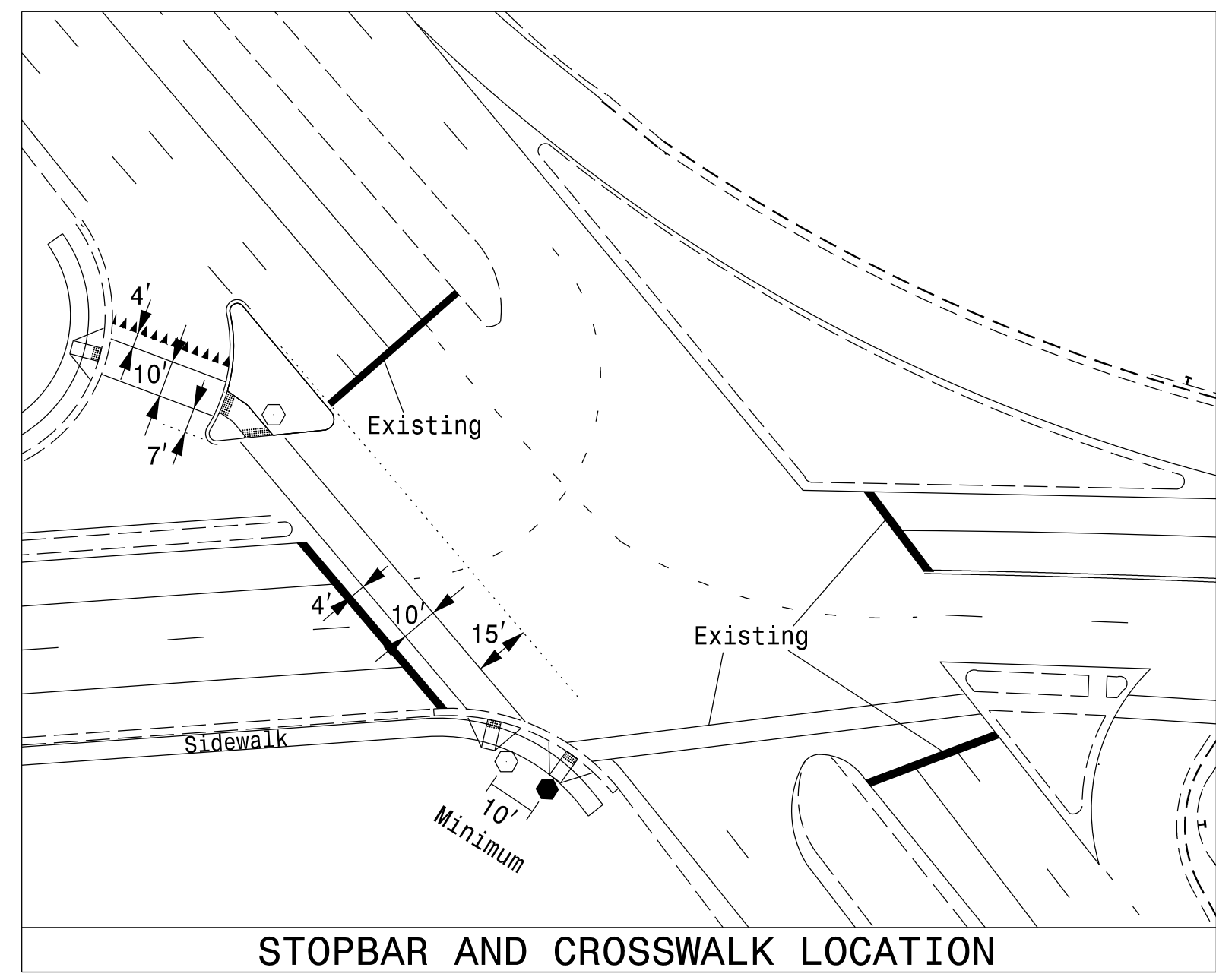
LEGEND

PROPOSED	EXISTING
○ → Traffic Signal Head	● → Traffic Signal Head
○ → Pedestrian Signal Head	● → Pedestrian Signal Head
□ → Pedestrian Signal Head With Push Button & Sign	□ → Pedestrian Signal Head With Push Button & Sign
□ → Inductive Loop Detector	□ → Inductive Loop Detector
□ → Controller & Cabinet	□ → Controller & Cabinet
□ → Master Controller & Cabinet	□ → Master Controller & Cabinet
□ → Junction Box	□ → Junction Box
□ → 2-in Underground Conduit	□ → 2-in Underground Conduit
— DD — Directional Drill	N/A
N/A	— G — Guardrail
→ Directional Arrow	→ Directional Arrow
○ Metal Strain Pole	○ Metal Strain Pole
○ Type II Signal Pedestal	○ Type II Signal Pedestal
○ "YIELD" Sign (R1-2)	○ "YIELD" Sign (R1-2)
○ "YIELD TO PEDESTRIANS WITHIN CROSSWALK" Sign (R1-6)	○ "YIELD TO PEDESTRIANS WITHIN CROSSWALK" Sign (R1-6)

OASIS 2070L TIMING CHART

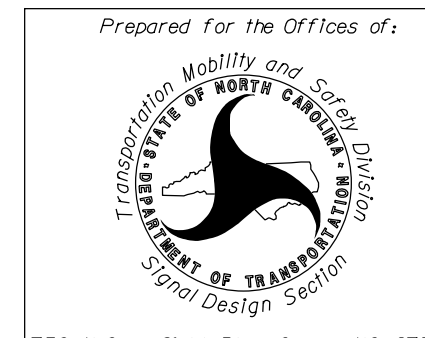
FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1 *	7	14	7	7	7	14	7	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max Green 1 *	20	90	20	30	20	90	20	30
Yellow Clearance	3.0	5.3	3.0	4.6	3.0	5.1	3.0	4.1
Red Clearance	4.4	1.7	3.4	2.4	4.4	1.2	2.8	2.9
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	7	-	-	-	-	-	7
Don't Walk 1	-	25	-	-	-	-	-	29
Seconds Per Actuation *	-	1.8	-	-	-	1.8	-	-
Max Variable Initial *	-	46	-	-	-	46	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.4	-	-	-	3.4	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

\* 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.



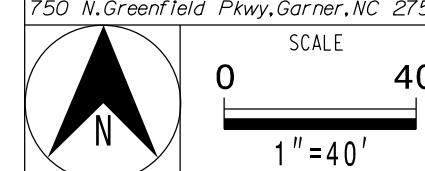
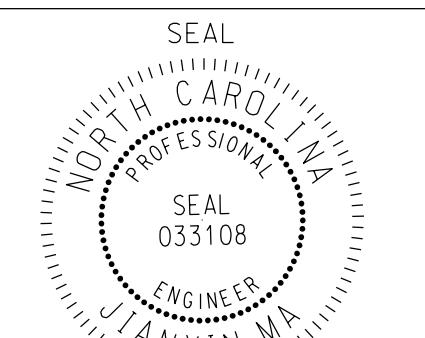
NC Dept of Transportation  
Division of Highways  
Final Drawing Date: 1/12/2018  
ITS & Signals Unit

Signal Upgrade



US 74 Alternate at SR 2241 (Oak Street Extension) / SR 2241 (Oak Street Extension)  
Division 13 Rutherford County Forest City  
PLAN DATE: Dec. 2017 REVIEWED BY: J.L. Lewis  
PREPARED BY: J. Ma VHB PROJECT NO.: 38536.09

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



REVISIONS	INIT.	DATE

Jianxin Ma  
2017.12.15  
10:17:46-05'00"  
SIG. INVENTORY NO. 13-0143

12/15/2017 12:15:20:17 \*\*\*hbrp01\*\*\*file:q:\38536\_09\_U-58333\_00k\_S1\_T05\*echas\signal\_dbs\q\3.0\_130143\_s.g.dsn.201712.dgn User: jmc