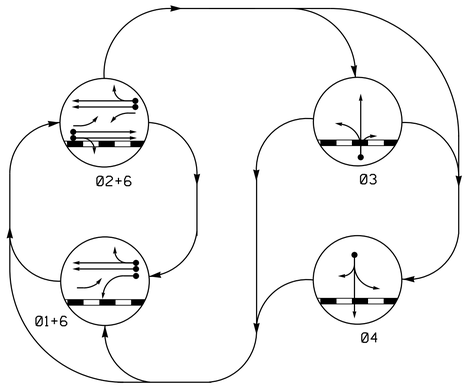
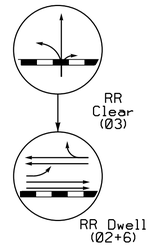
PROJECT REFERENCE NO.	SHEET NO.
U-4715 B	Sig. 155.0

PHASING DIAGRAM



RAIL PREEMPT PHASES

(High Priority)



PHASING DIAGRAM DETECTION LEGEND

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

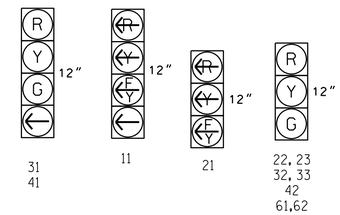
TABLE OF OPERATION

SIGNAL FACE	PHASE 01+6	02+6	03	04	RR CR	RR DWELL	FLASH
11	—	F Y	R	R	R	R	Y
21	F Y	F Y	R	R	R	Y	Y
22,23	R	G	R	R	R	G	Y
31	R	R	G	R	G	R	R
32,33	R	R	G	R	G	R	R
41	R	R	R	G	R	R	R
42	R	R	R	G	R	R	R
61, 62	G	G	R	R	R	G	Y
Sign (B)	OFF	OFF	OFF	OFF	ON	ON	*

* See Note 9

SIGNAL FACE I.D.

All Heads L.E.D.



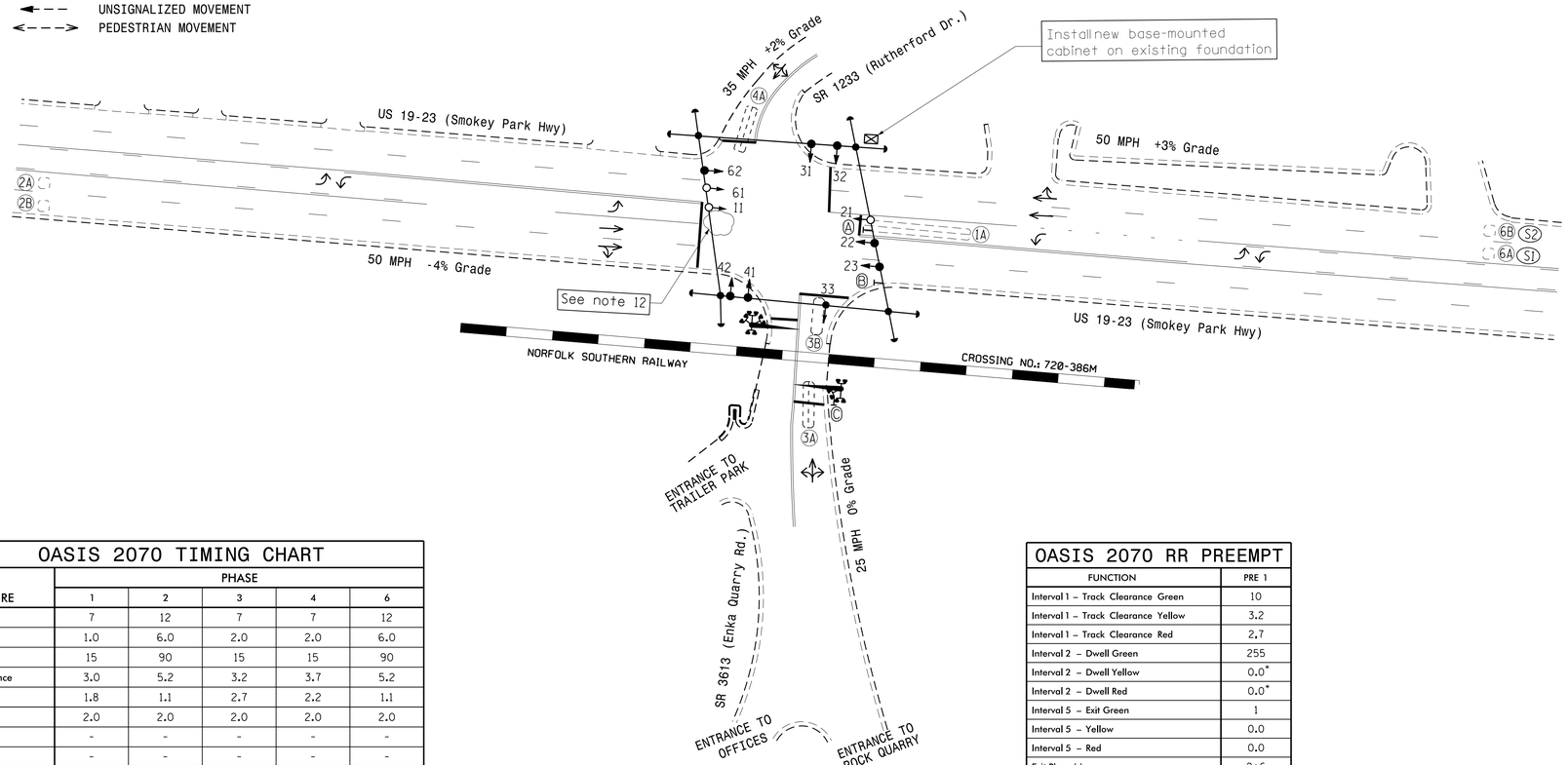
OASIS 2070 LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
					6	Y	Y	Y	-	3	-	Y
2A	6X6	355	6	-	2	Y	Y	-	-	-	-	Y
2B	6X6	355	6	-	2	Y	Y	-	-	-	-	Y
3A	6X25	+7	2-4-2	-	3	Y	Y	-	-	-	-	Y
3B	6X20	+5	2	-	3	Y	Y	-	-	5	-	Y
4A	6X25	+5	2-4-2	-	4	Y	Y	-	-	5	-	Y
6A/S1	6X6	355	5	-	6	Y	Y	-	-	-	Y	Y
6B/S2	6X6	355	5	-	6	Y	Y	-	-	-	Y	Y

4 Phase
Fully Actuated
W/RR Preemption
Asheville Signal System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Reposition existing signal heads numbered 22, 23 & 62.
6. Set all detector units to presence mode.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Pavement markings are existing.
9. Ensure flashing operation does not alter operation of blankout signs.
10. Program parent phases for Overlap "P" for all phases used in normal operation.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
12. Remove "NO LEFT TURN-TRAIN" LED Blank-Out Sign.



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	
	Pavement Marking Arrow	
N/A	Railroad Tracks	
N/A	Railroad Gate and Flasher	
(A)	Left Arrow "ONLY" Sign (R3-5L)	(A)
(B)	"NO RIGHT TURN-TRAIN" LED Blank-Out Sign	(B)
(C)	"DO NOT STOP ON TRACKS" Sign (R8-8)	(C)

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	6
Min Green 1 *	7	12	7	7	12
Extension 1 *	1.0	6.0	2.0	2.0	6.0
Max Green 1 *	15	90	15	15	90
Yellow Clearance	3.0	5.2	3.2	3.7	5.2
Red Clearance	1.8	1.1	2.7	2.2	1.1
Red Revert	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-
Don't Walk 1	-	-	-	-	-
Seconds Per Actuation *	-	1.8	-	-	1.8
Max Variable Initial *	-	40	-	-	40
Time Before Reduction *	-	15	-	-	15
Time To Reduce *	-	40	-	-	40
Minimum Gap	-	3.1	-	-	3.1
Recall Mode	-	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-	-
Simultaneous Gap	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.

This traffic signal is designed for simultaneous preemption.

OASIS 2070 RR PREEMPT

FUNCTION	PRE 1
Interval 1 – Track Clearance Green	10
Interval 1 – Track Clearance Yellow	3.2
Interval 1 – Track Clearance Red	2.7
Interval 2 – Dwell Green	255
Interval 2 – Dwell Yellow	0.0*
Interval 2 – Dwell Red	0.0*
Interval 5 – Exit Green	1
Interval 5 – Yellow	0.0
Interval 5 – Red	0.0
Exit Phase(s)	2+6
Priority	High
Delay Time	0.0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	5.2
Red Clear Before Pre	1.1
Dwell Min Time	12
Enable Backup Protection	N
Ped Clear Through Yellow	N
Omit Overlaps	A,P

* Time defaults to time used for phase during normal operation

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared In the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 19-23 (Smokey Park Hwy.)
at
SR 3613 (Enka Quarry Rd.)/
SR 1233 (Rutherford Rd.)

Division 13 Buncombe County Enka

PLAN DATE: March 2016 REVIEWED BY:
PREPARED BY: C. Pierce REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 24393 ENGINEER TIMOTHY J. WILLIAMS

DocuSigned by: T. J. Williams 11/2/2016
97AD792EBE984CA DATE

SIG. INVENTORY NO. 13-0816

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