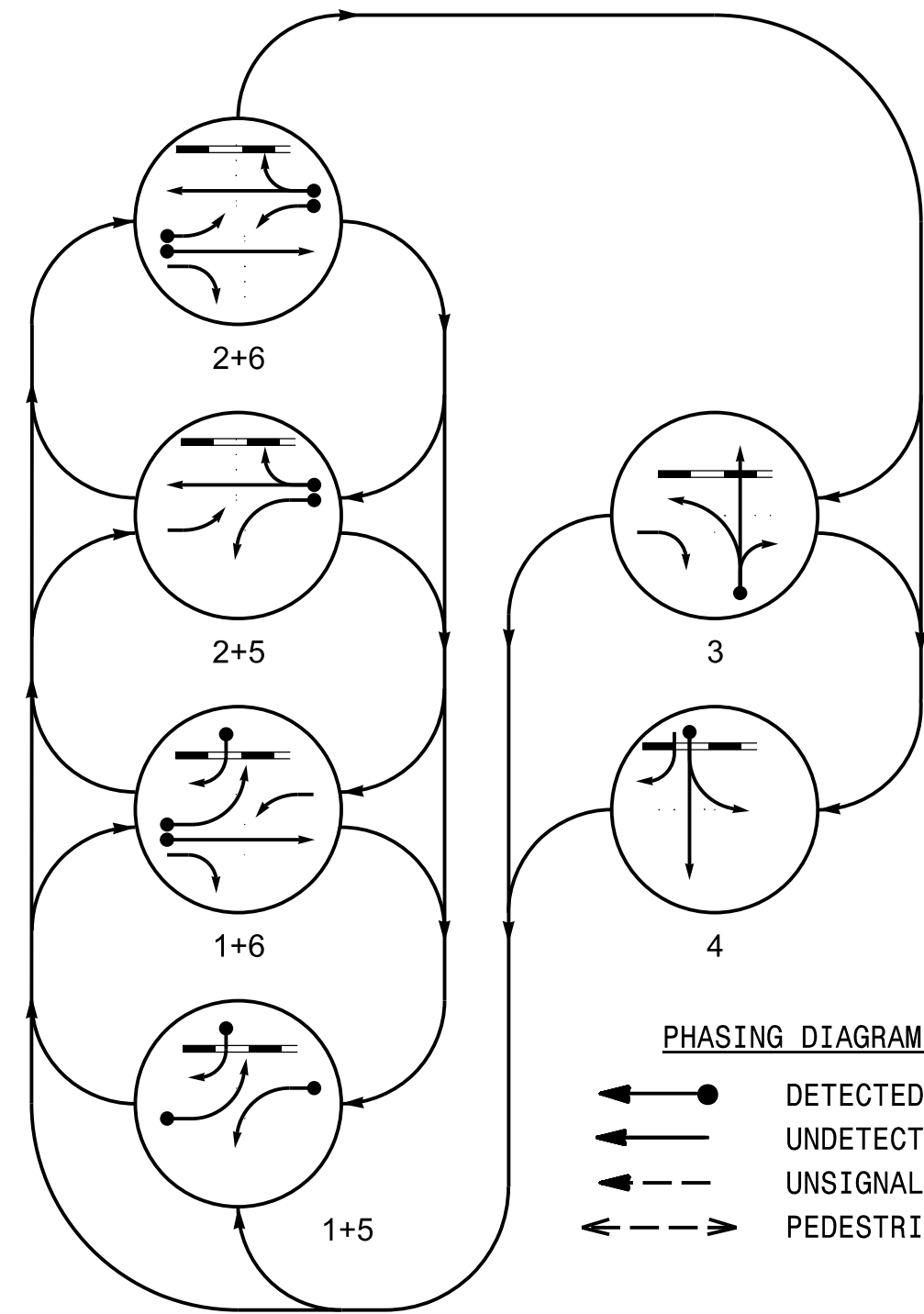
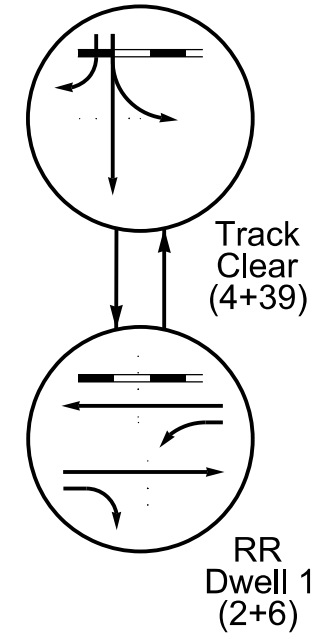


PHASING DIAGRAM



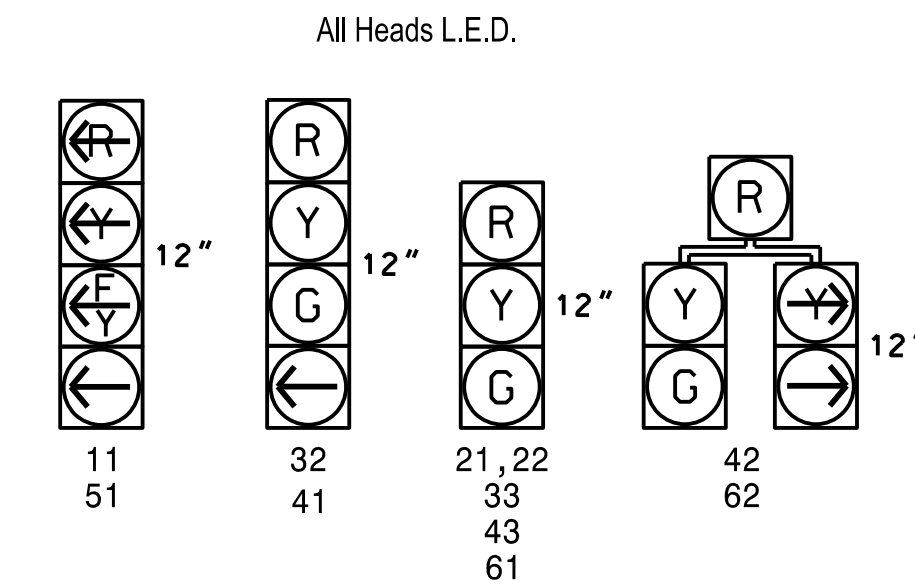
RAIL PREEMPT PHASES (High Priority)



SIGNAL FACE	PHASE									
	1+5	1+6	2+5	2+6	3	4	RR Dwell 1	RR Dwell 2	RR Dwell 3	RR Dwell 4
11										
21,22	R	R	G	G	R	R	R	G	R	R
32	R	R	R	R	G	R	R	R	R	R
33	R	R	R	R	G	R	R	R	R	R
41	R	R	R	R	R	G	G	R	R	R
42	R	R	R	R	R	G	G	R	R	R
43	R	R	R	R	R	G	G	R	R	R
51										
61	R	G	R	G	R	R	R	G	R	R
62	R	G	R	G	R	R	R	G	R	R
Sign C	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	*

*See Note 7

SIGNAL FACE I.D.



MAXTIME DETECTOR INSTALLATION CHART											
DETECTOR						PROGRAMMING					
LOOP / ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	NEW CARD
1A*	6X60	0	*	*	1	15.0	-	X	-	X	*
1B	6X40	#+5	EXIST	-	1	15.0	2.0	X	-	X	X
1C*	6X20	0	*	*	1	15.0	-	X	-	X	*
1D*	6X15	0	*	*	1	15.0	-	X	-	X	*
2A*	6X6	300	*	*	2	-	-	X	X	X	*
3A*	6X60	0	*	*	3	3.0	-	X	-	X	*
4A	6X40	#+5	EXIST	-	4	-	2.0	X	-	X	X
4B*	6X20	0	*	*	4	3.0	-	X	-	X	*
5A*	6X60	0	*	*	5	15.0	-	X	-	X	*
6A*	6X6	300	*	*	6	-	-	X	X	X	*

Located at Stopbar at RR Gate
* Video Detection Zone

6 Phase Fully Actuated W/ Railroad Preemption (Isolated)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Ensure flashing operation does not alter operation of blackout signs.
- Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with Phase 40 and included as a track clear phase.
- This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Remove existing metal strain pole foundation of existing damaged/removed metal strain pole in northwest quadrant.

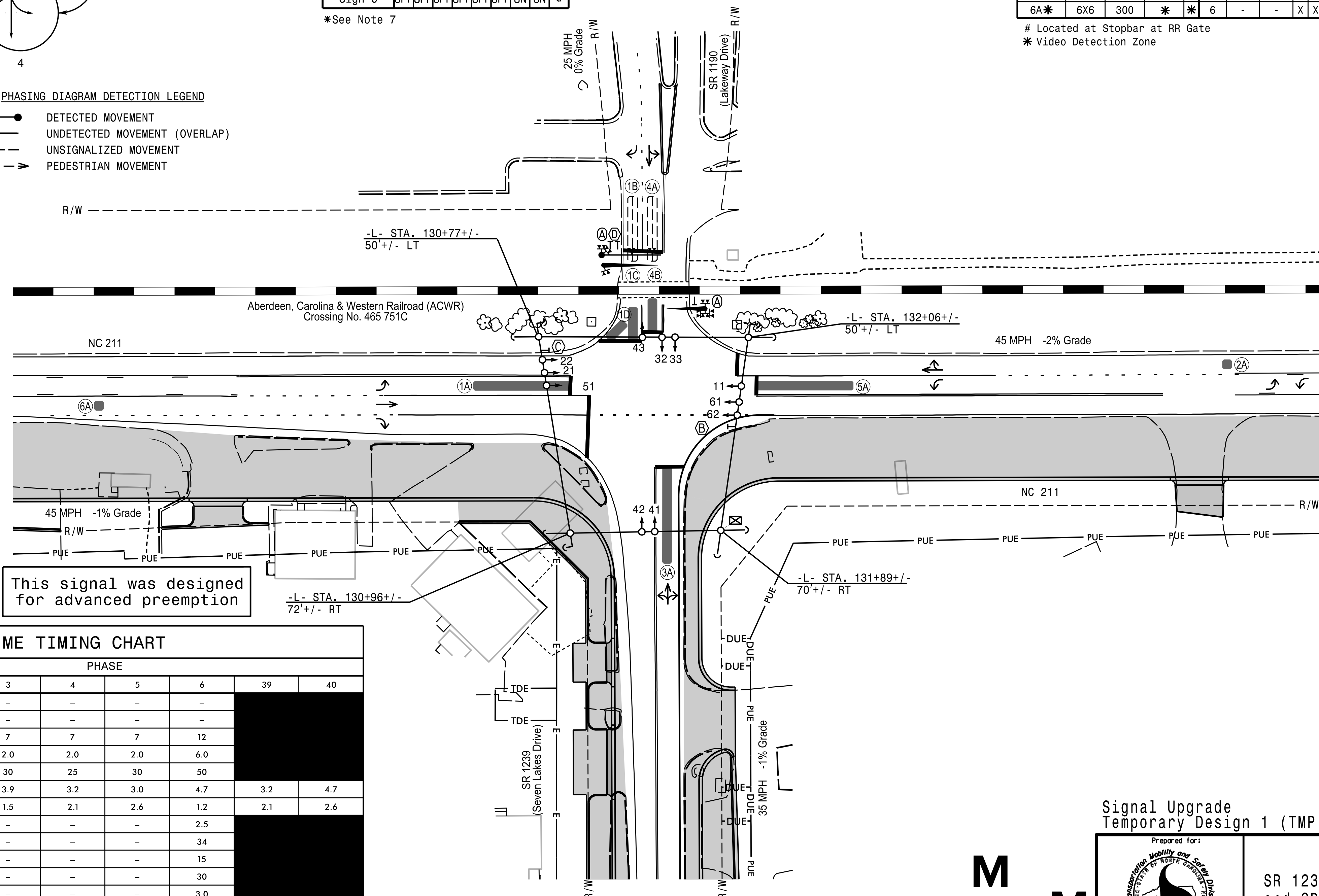
MAXTIME PREEMPTION CHART

FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	4
Delay	0
Max Presence	0
Enter Min Green	1
Enter Walk	0
Enter Ped Clear	0
Enter Yellow Change	4.7*
Enter Red Clear	2.6*
Track Green	18
Track Yellow Change	3.2
Track Red Clear	2.1
Dwell Green	0
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	-
Require All Red Entry	-

MAXTIME TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	39	40
Walk *	-	-	-	-	-	-	-	-
Ped Clear *	-	-	-	-	-	-	-	-
Min Green *	7	12	7	7	7	12	-	-
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	-	-
Max 1 *	30	50	30	25	30	50	-	-
Yellow Change	3.0	4.7	3.9	3.2	3.0	4.7	3.2	4.7
Red Clear	2.4	1.2	1.5	2.1	2.6	1.2	2.1	2.6
Added Initial *	-	2.5	-	-	-	2.5	-	-
Maximum Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Advance Walk	-	-	-	-	-	-	-	-
Non Lock Detector	X	-	X	X	X	-	-	-
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Dual Entry	-	-	-	-	-	-	-	-

* These values may be field adjusted. Do not adjust Min Green and Passage 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 signal was designed for advanced preemption

LEGEND

PROPOSED	EXISTING
	Traffic Signal Head
	Modified Signal Head
	Signal
	Pedestrian Signal Head With Push Button & Sign
	Signal Pole with Guy
	Inductive Loop Detector
	Controller & Cabinet
	Junction Box
	2-in Underground Conduit
	Right of Way
	Permanent Utility Easement
	Temporary Construction Easement
	Permanent Drainage/Utility Easement
	Temporary Drainage Easement
	Directional Arrow
	Construction Zone
	Railroad Cantilever
	Railroad Gate and Flasher
	Railroad Tracks
	"DO NOT STOP ON TRACKS" Sign (R8-8)
	"NO TURN ON RED" Sign (R10-11)
	"NO RIGHT TURN - TRAIN" LED Blankout Sign
	"STOP HERE ON RED" Sign (R10-6)

Signal Upgrade Temporary Design 1 (TMP Phase I)

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
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Suite 200
RALEIGH, NC 27606
License No. F-0669

Prepared for: NC 211 at SR 1239 (Seven Lakes Drive) and SR 1190 (Lakeway Drive)
Division 8 Moore County Seven Lakes
PLAN DATE: June 2024 REVIEWED BY: R. Mullinax
PREPARED BY: LD Stouchko REVIEWED BY:
SCALE: 1" = 40'
REVISIONS: INIT. DATE
SIGNATURE: Loni D. Stouchko
DATE: 08-041011

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEERS AND SURVEYORS
SEAL 034437
LONI D. STOUCHKO
SIGNATURE DATE