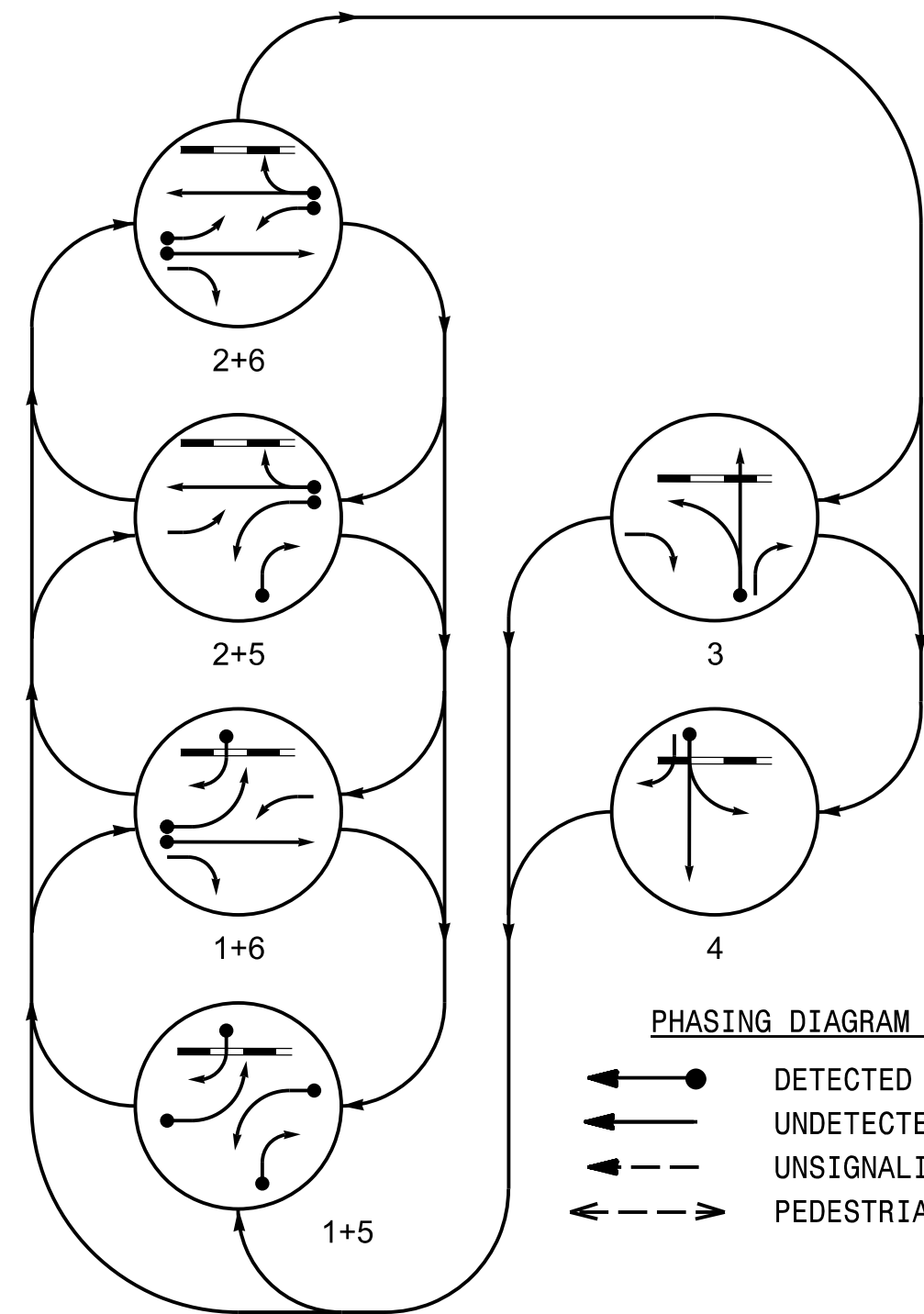
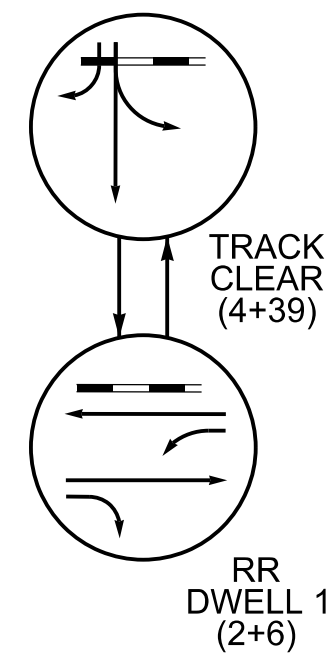


PHASING DIAGRAM



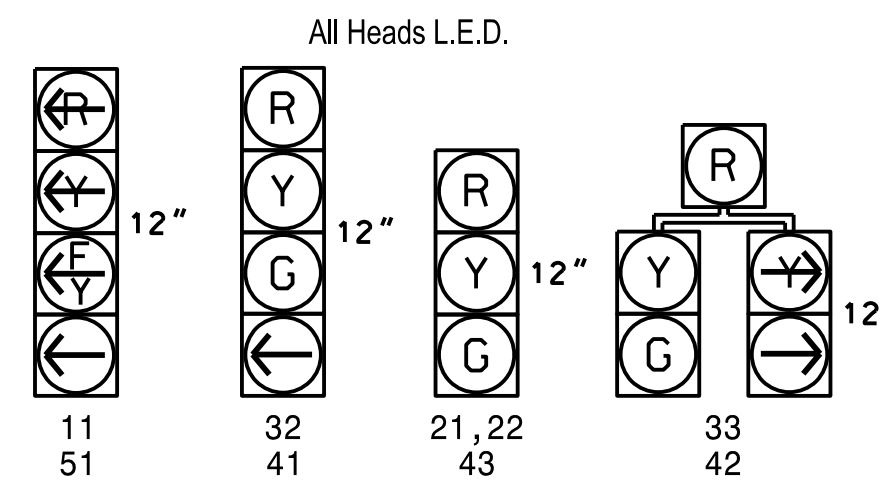
RAIL PREEMPT PHASES (High Priority)



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

\*See Note 7

SIGNAL FACE I.D.



MAXTIME DETECTOR INSTALLATION CHART

LOOP/ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	NEW CARD	
1A*	6X60	0	*	*	1	15.0	-	X	-	X	-	*
6					6	3.0	-	X	-	X	-	*
1B	6X40	+5 #	EXIST	-	1	15.0	2.0	X	-	X	-	*
1C*	6X20	0	*	*	1	15.0	-	X	-	X	-	*
2A*	6X6	300	*	*	2	-	-	X	X	X	-	*
3A*	6X40	0	*	*	3	3.0	-	X	-	X	-	*
4A	6X40	+5 #	EXIST	-	4	-	2.0	X	-	X	-	*
4B*	6X20	0	*	*	4	3.0	-	X	-	X	-	*
5A*	6X60	0	*	*	5	15.0	-	X	-	X	-	*
2					2	3.0	-	X	-	X	-	*
5B*	6X40	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.
- Reposition existing signal heads numbered 11,21,22, and 51.
- Set all detector units to presence mode.
- Ensure flashing operation does not alter operation of blankout 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.

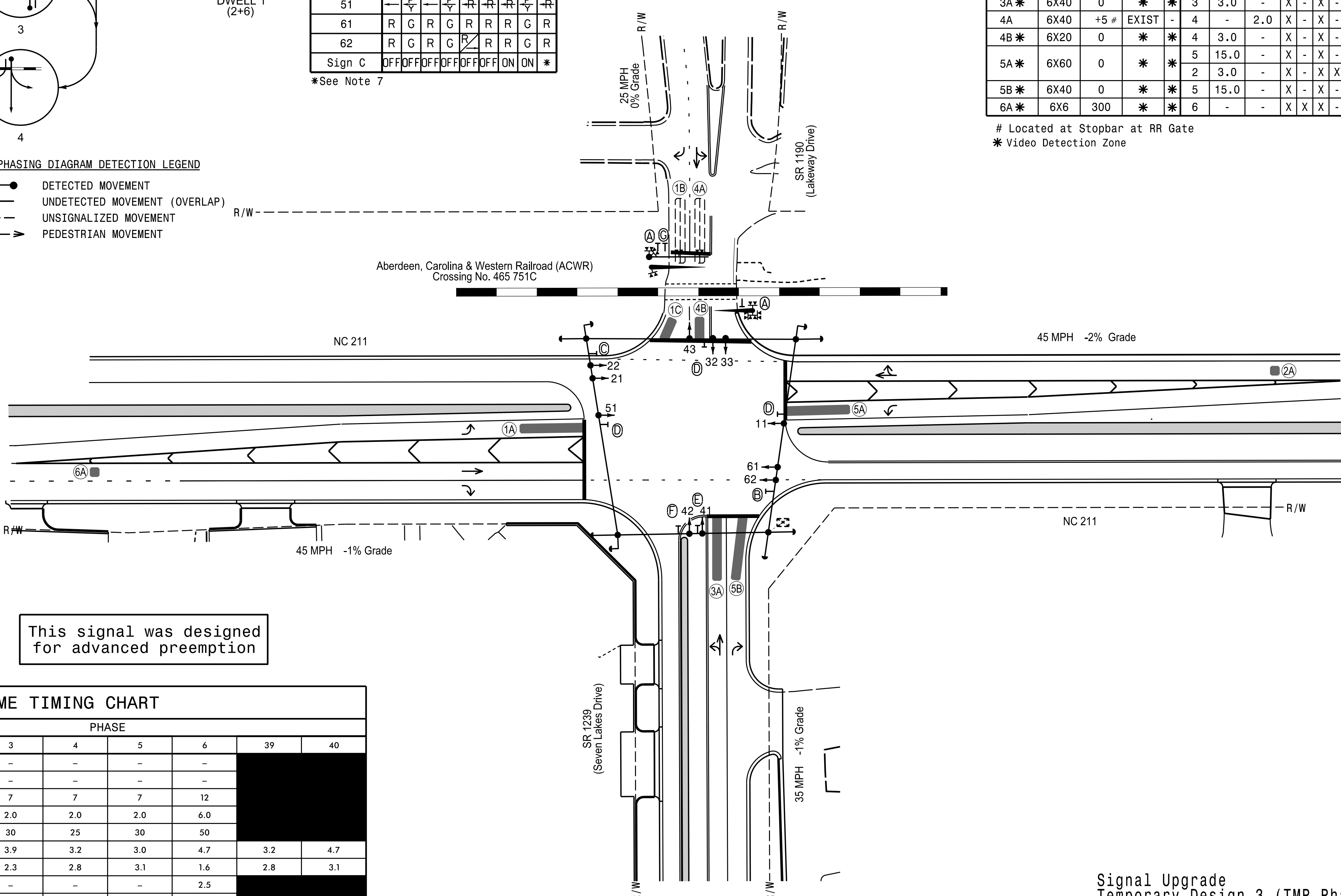
MAXTIME PREEMPTION CHART

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	3.1*
Track Green	22
Track Yellow Change	3.2
Track Red Clear	2.8
Dwell Green	0
Exit Min Green	25.5*
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						39	40
	1	2	3	4	5	6		
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	3.1	1.6	2.3	2.8	3.1	1.6	2.8	3.1
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		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

PROPOSED		EXISTING	
	Traffic Signal Head		Modified Signal Head
	Pedestrian Signal Head With Push Button & Sign		Signal Pole with Sidewalk Guy
	Inductive Loop Detector		Controller & Cabinet
	Junction Box		2-in Underground Conduit
	Right of Way		Directional Arrow
	Construction Zone		Non-Intrusive Detection 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
	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)		Dual Turn and Through Arrows Sign (R3-6L)
	Right Arrow "ONLY" Sign (R3-5R)		"STOP HERE ON RED" Sign (R10-6)

Signal Upgrade Temporary Design 3 (TMP Phase III)

**MOTT MACDONALD**  
750 N. Greenfield Pkwy, Garner, NC 27529  
MOTT MACDONALD I & E, LLC  
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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: *Lois B. Stouchko*  
DATE  
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED  
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034437  
SIG. INVENTORY NO. 08-0410T3