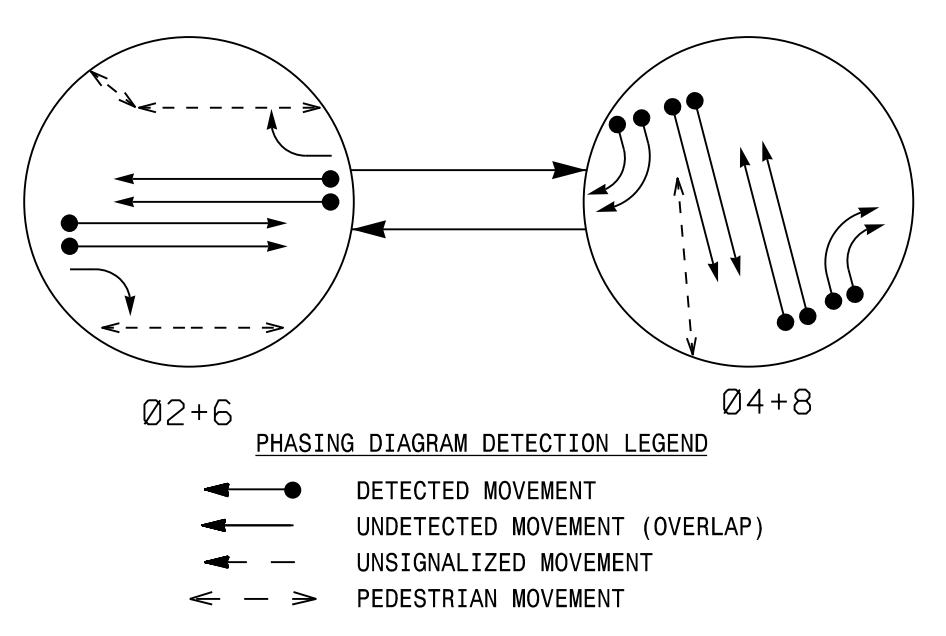
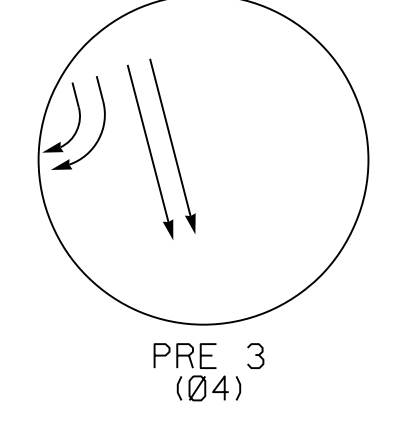


PHASING DIAGRAM



EV PREEMPT PHASES (Medium Priority)



SIGNAL FACE I.D.

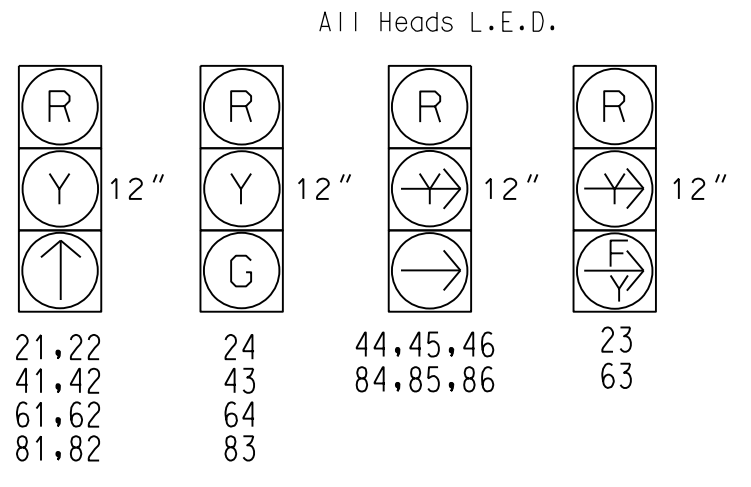


TABLE OF OPERATION

SIGNAL FACE	PHASE			
	02+6	04+8	P	F
21,22	↑	R	R	Y
23	↓	R	R	Y
24	G	R	R	Y
41,42	R	↑	↑	R
43	R	G	G	R
44,45,46	R	→	→	R
61,62	↑	R	R	Y
63	↓	R	R	Y
64	G	R	R	Y
81,82	R	↑	R	R
83	R	G	R	R
84,85,86	R	→	R	R
P21, P22, P23, P24	W	DW	DW	DRK
P41, P42, P43, P44	DW	W	DW	DRK
P61, P62, P63, P64, P65, P66	W	DW	DW	DRK

ASC/3 TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green *	12	7	12	7
Walk *	7	7	7	0
Ped Clear	29	25	23	0
Veh. Extension *	6.0	3.0	6.0	3.0
Max I *	90	60	90	60
Yellow	4.4	4.3	4.6	3.7
Red Clear	2.6	3.0	2.2	3.3
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds / Actuation *	1.5	-	1.5	-
Max Initial *	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	30	-	30	-
Minimum Gap	3.0	-	3.0	-
Locking Detector	X	-	X	-
Recall Position	VEH. RECALL	-	VEH. RECALL	-
Dual Entry	-	X	-	X
Simultaneous Gap	X	X	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.

ASC/3 DETECTOR INSTALLATION CHART

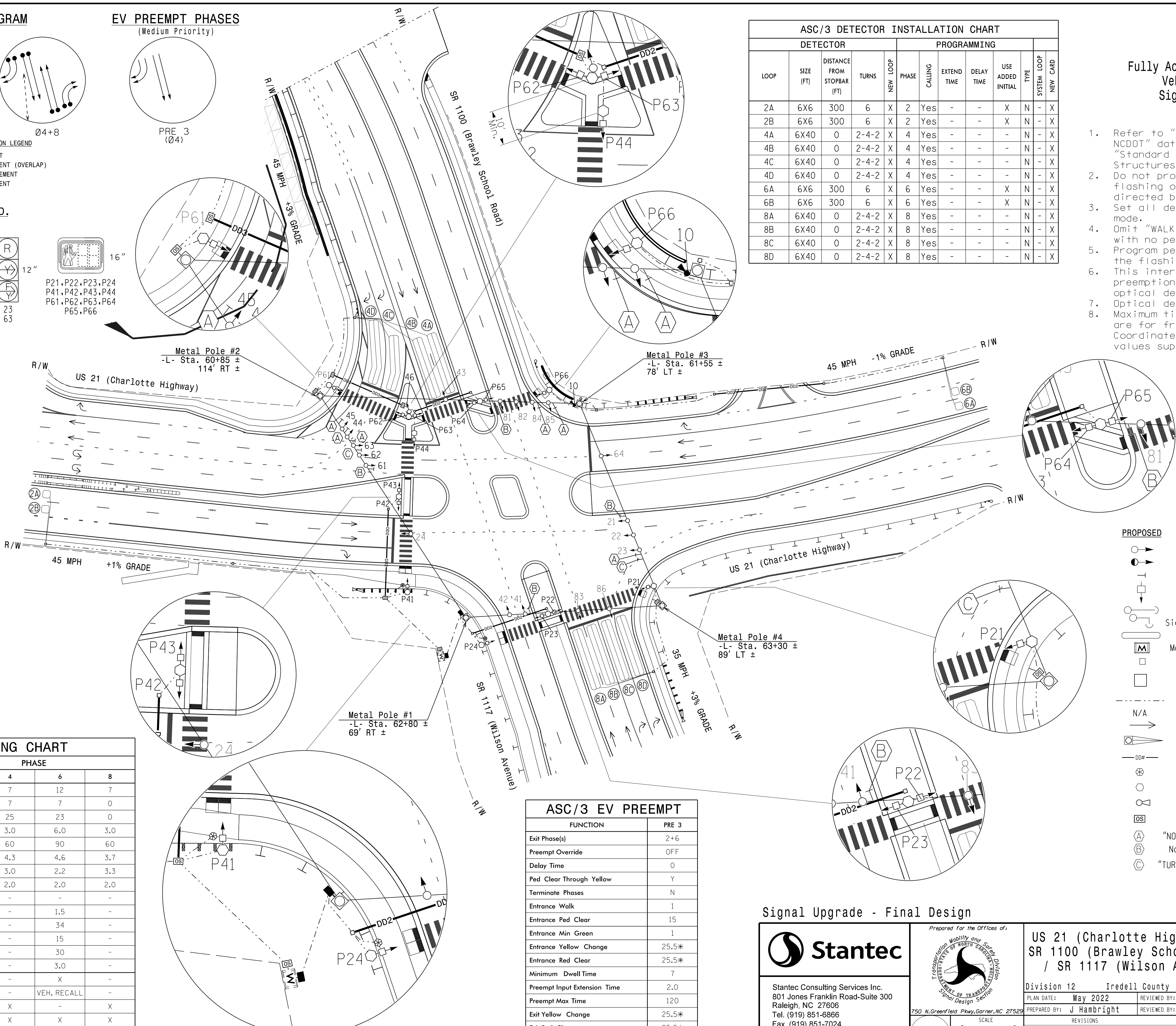
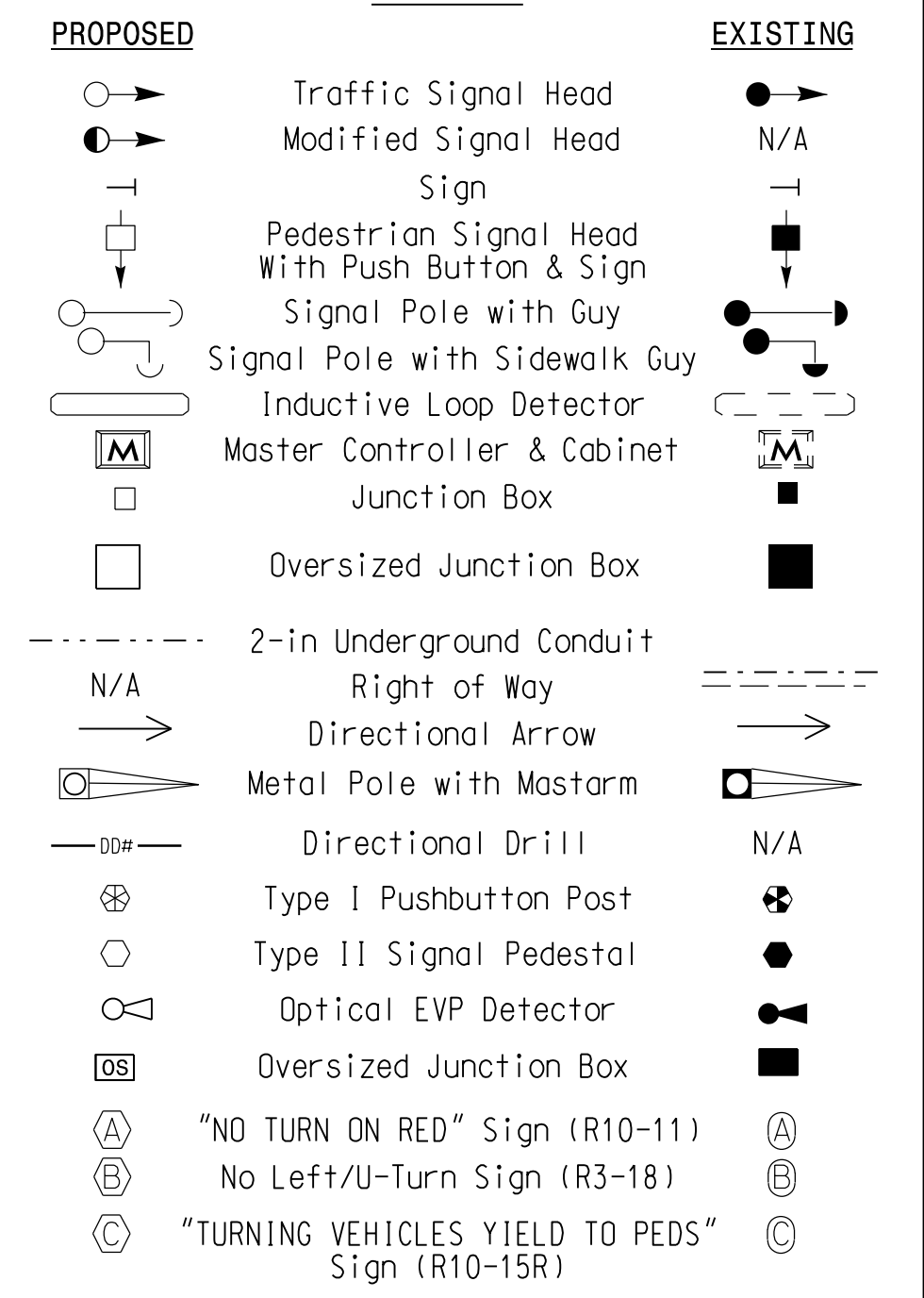
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	SYSTEM LOOP	NEW CARD	
2A	6X6	300	6	X	2	Yes	-	-	X	N	-	X
2B	6X6	300	6	X	2	Yes	-	-	X	N	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-	X
4B	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-	X
4C	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-	X
4D	6X40	0	2-4-2	X	4	Yes	-	-	-	N	-	X
6A	6X6	300	6	X	6	Yes	-	-	X	N	-	X
6B	6X6	300	6	X	6	Yes	-	-	X	N	-	X
8A	6X40	0	2-4-2	X	8	Yes	-	-	-	N	-	X
8B	6X40	0	2-4-2	X	8	Yes	-	-	-	N	-	X
8C	6X40	0	2-4-2	X	8	Yes	-	-	-	N	-	X
8D	6X40	0	2-4-2	X	8	Yes	-	-	-	N	-	X

2 Phase Fully Actuated with Emergency Vehicle Preemption Signal System 11210

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.
- 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.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Optical detector 10 calls PRE 3.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

LEGEND



ASC/3 EV PREEMPT

FUNCTION	PRE 3
Exit Phase(s)	2+6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	Y
Terminate Phases	N
Entrance Walk	1
Entrance Ped Clear	15
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	7
Preempt Input Extension Time	2.0
Preempt Max Time	120
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Time defaults to time used for phase during normal operation.

Signal Upgrade - Final Design

Stantec Consulting Services Inc.
801 Jones Franklin Road-Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

Prepared for the Offices of:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Signal Design Section

750 N. Greenfield Pkwy, Garner, NC 27526

SCALE: 0 40
1" = 40'

US 21 (Charlotte Highway) at SR 1100 (Brawley School Road) / SR 1117 (Wilson Avenue)

Division 12 Iredell County Mooresville

PLAN DATE: May 2022 REVIEWED BY: E D Harris

PREPARED BY: J Hanbright REVIEWED BY: R M Muncy

REVISIONS: _____

INITIALS: _____ DATE: _____

SEAL

Derrick Waller
Professional Engineer
License No. 042678

DocuSigned by:
Derrick Waller
3/22/2023

SIG. INVENTORY NO. 12-1369