

SIGNAL EQUIPMENT										
EXISTING CONTROLLER IS POLE MOUNTED 170										
SIGNAL HEAD DISPLAY CHART										
HEAD NUMBER	2	3A	3B	4A	4B	6	6A	P2	P4	P6
DISPLAY (LED)										
PHASE	2	3	3	4	4	6	6	P2	P4	P6
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"
QUANTITY	2	NEW-1	NEW-1	REPLACE-1	REPLACE-1	1	1	NEW-2	NEW-2	NEW-2

- PROJECT INSTALLATION NOTES**
- A PRECONSTRUCTION MEETING SHALL BE HELD ON SITE WITH THE SCDOT SIGNAL INSPECTOR BEFORE ANY CONSTRUCTION BEGINS. THE MEETING MUST BE SCHEDULED AT LEAST 48 HOURS IN ADVANCE.
 - ALL EQUIPMENT, MATERIALS, AND INSTALLATION PROCEDURES SHALL ADHERE TO THE SCDOT SIGNAL EQUIPMENT SPECIFICATIONS. FOR THE LATEST VERSION, CONTACT SCDOT TRAFFIC ENGINEERING IN COLUMBIA (803) 737-1646 OR OBTAIN FROM SCDOT INTERNET SITE.
 - EACH LOOP SHALL BE INSTALLED IN A SEPARATE SAW SLOT, A MINIMUM OF ONE FOOT SEPARATION SHALL BE MAINTAINED FOR EACH LOOP AND LEAD TO PREVENT CROSS TALK.
 - INSTALL (1) 8 CONDUCTOR SIGNAL CABLE FOR SIGNAL HEADS ON EACH APPROACH.
 - PEDESTRIAN PUSH BUTTONS ARE TO BE ADA (AMERICANS WITH DISABILITIES ACT) APPROVED AND INSTALLED PER SCDOT SPECIFICATIONS.
 - SCDOT INSPECTOR SHALL BE PRESENT FOR ALL LOOP CUTTING. PRIOR TO CUTTING LOOPS, 24 HOUR ADVANCE NOTICE SHALL BE GIVEN BY CONTRACTOR TO INSPECTOR.
 - EXISTING PAVEMENT MARKINGS IN CONFLICT WITH NEW MARKINGS TO BE REMOVED BY METHOD ACCEPTABLE TO SCDOT.
 - PERMITEE SHALL BE RESPONSIBLE FOR ANY REQUIRED UTILITY LOCATIONS AND FOR ANY LOOPS OR OTHER SIGNAL OPERATIONS DISTURBED DURING CONSTRUCTION.
 - PERMITEE SHALL BE RESPONSIBLE FOR SECURING EASEMENT SHOWN.
 - WORK INCLUDES:
 - MAINTAIN EXISTING SIGNAL OPERATION DURING CONSTRUCTION
 - INSTALL NEW BACK GUY ON WOOD POLE AS NEEDED
 - INSTALL 2 LOOP DETECTOR AMPLIFIERS AND 1 LOAD SWITCH FOR NEW PHASE 3. INSTALL 1 LOOP DETECTOR FOR ADDITIONAL LOOP FOR PHASE 2.
 - INSTALL NEW LOOPS 3A, 3B AND 1.
 - INSTALL NEW SPAN WIRE, SIGNAL CABLE, AND SIGNAL HEADS 3A AND 3B FOR NEW PHASE 3. NO SPLICES IN EXISTING SIGNAL CABLE.
 - INSTALL NEW LIGHTED "NO RIGHT TURN ON RED" SIGN TO COME ON WITH PHASE 3 AND WHEN P6 IS CALLED.
 - INSTALL NEW SIGNAL HEADS 4A AND 4B AND RAISE TO PROVIDE MINIMUM CLEARANCE OVER NEW DRIVEWAY. NO SPLICES ON EXISTING CABLE ALLOWED.
 - INSTALL NEW LOOP LEAD-IN CABLE, PEDESTRIAN PUSH BUTTON CABLE.
 - INSTALL PEDESTRIAN PUSH BUTTON AND SIGN ASSEMBLIES WITH R10-3 SIGNS, AS SHOWN.
 - PROVIDE ALL MATERIALS AND WORK TO MAKE ALL OPERATIONAL.

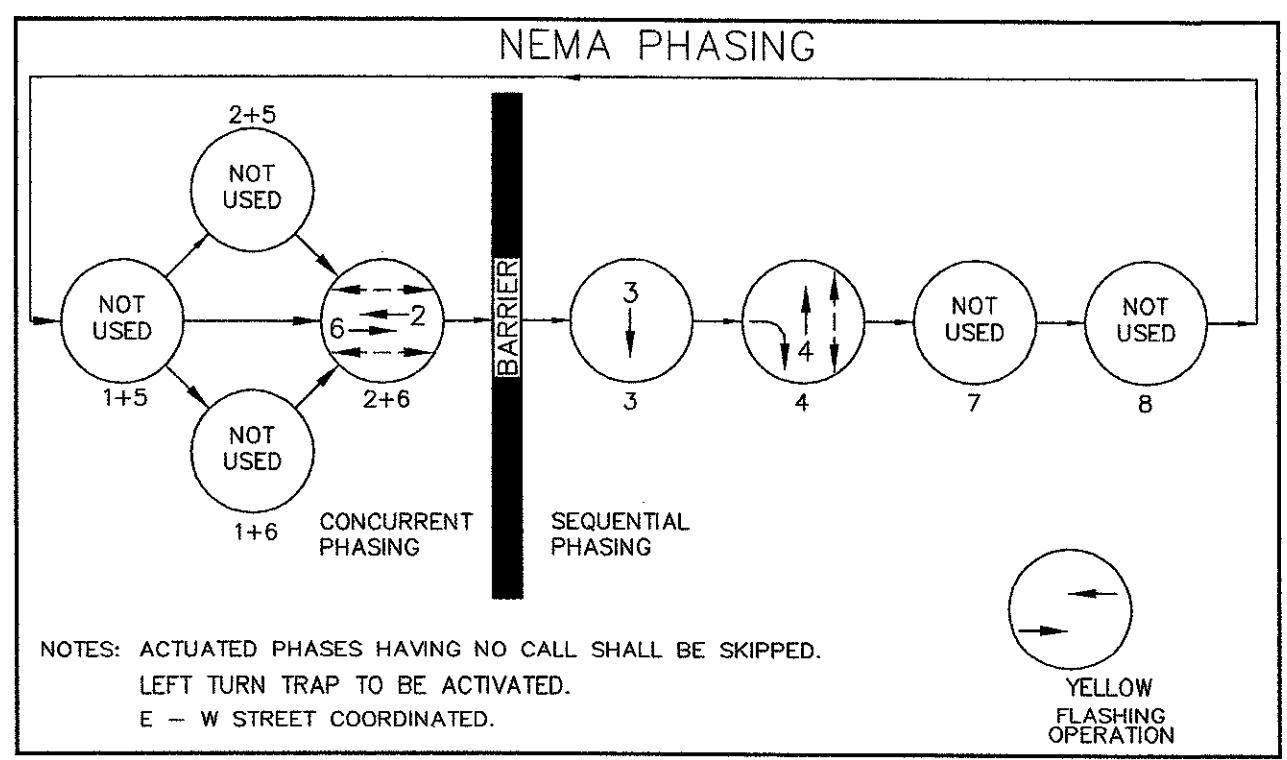
SB EMERGENCY PRE-EMPT
EVA = PHASE 4
CLEARANCE AND DELAY TO BE SET IN FIELD BY DISTRICT TRAFFIC ENGINEERING.
EQUIPMENT: RADIO RECEIVER AND COAX CABLE AND ANTENNA

8/19/10

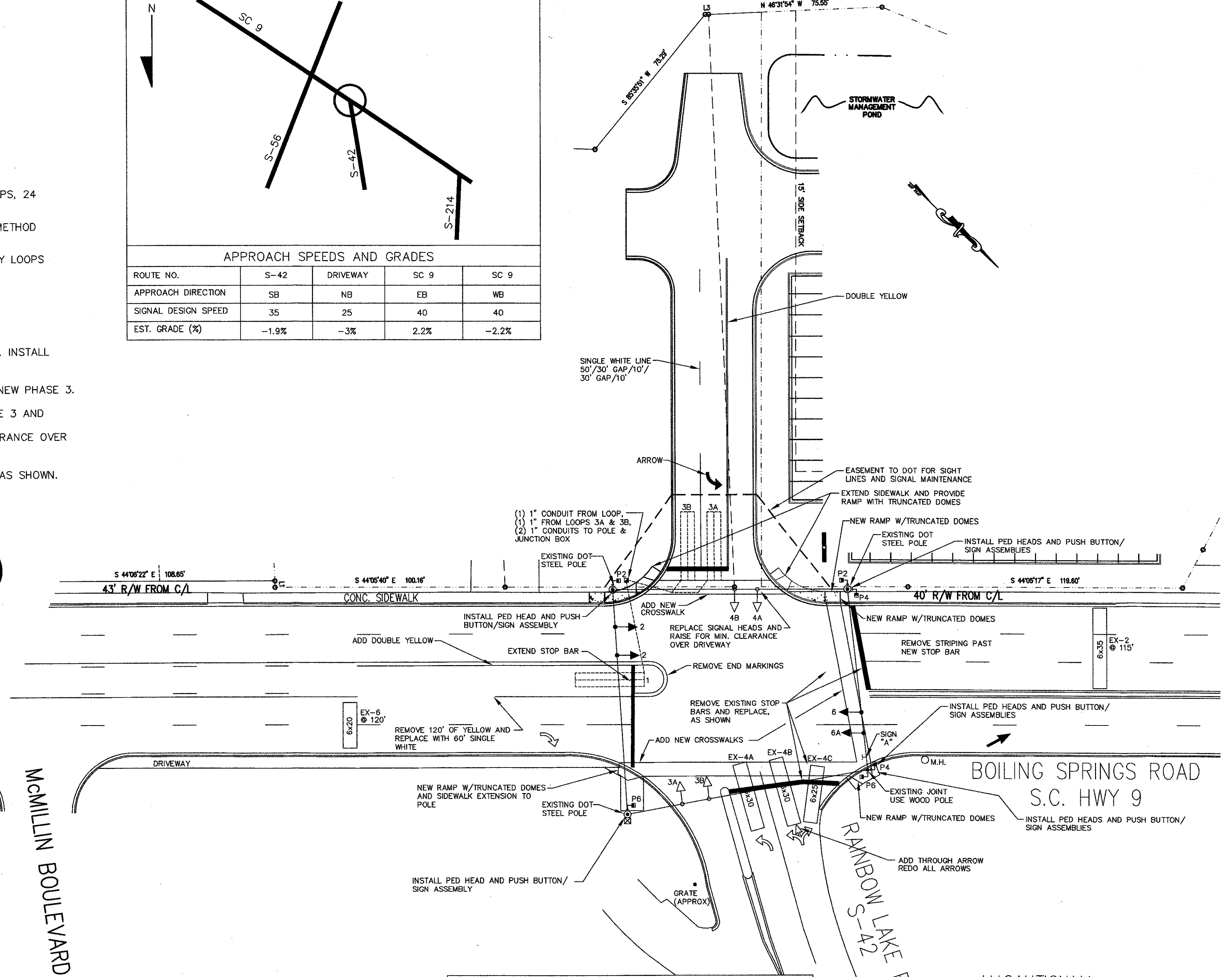
LOOP DETECTOR INSTALLATION CHART										
PHASE LOOP LTR#	DETECTOR	WIRING TO PHASE(S)	LOCK	NON LOCK	PULSE	OPERATION	SPECIAL FEATURES	LOOP DESIGN		
								SIZE	NO. OF TURNS	DISTANCE FROM STOP BAR
1	NEW-1	6	X	X	X			6'x30' QUAD	2-4-2	+5'
*2		2	X		X			6'x35'		115'
*4A		4	X	X	X			6'x30'		(WILL BE +12')
*4B		4	X	X	X	6		6'x30'		(WILL BE +12')
*4C		4	X	X	X	6		6'x25'		(WILL BE +12')
*6		6	X		X			6'x20'		120'
3A	NEW	1	X	X	X	6		6'x30' QUAD	2-4-2	+5'
3B	NEW	2	X	X	X	6		6'x30' QUAD	2-4-2	+5'

* DENOTES EXISTING

APPROACH SPEEDS AND GRADES			
ROUTE NO.	S-42	DRIVEWAY	SC 9
APPROACH DIRECTION	SB	NB	EB
SIGNAL DESIGN SPEED	35	25	40
EST. GRADE (%)	-1.9%	-3%	2.2%



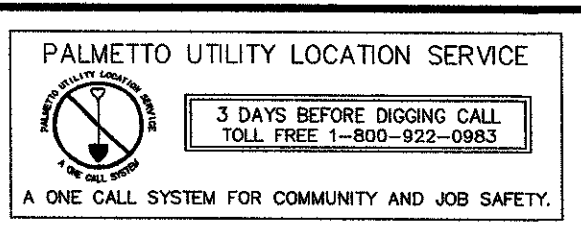
SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)											
FLASH	SIGNAL HEAD NUMBER	PHASES 2 & 3		PHASE 4		PHASE 6		PHASE P2		PHASE P4	
		R/W	Y	R/W	Y	R/W	Y	R/W	Y	R/W	Y
Y	2										
R	3A										
R	3B										
R	4A										
R	4B										
Y	6										
Y	6A										
	P2										
	P4										
	P6										



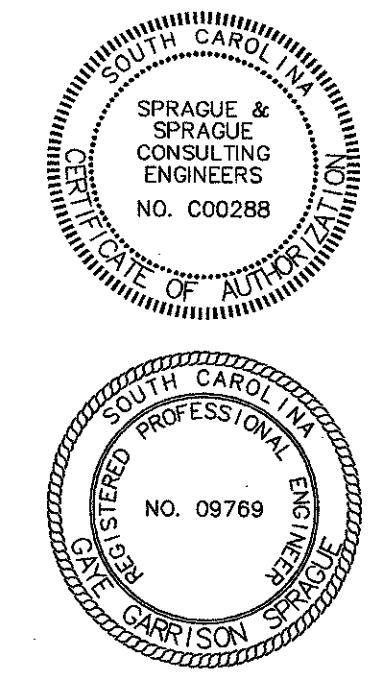
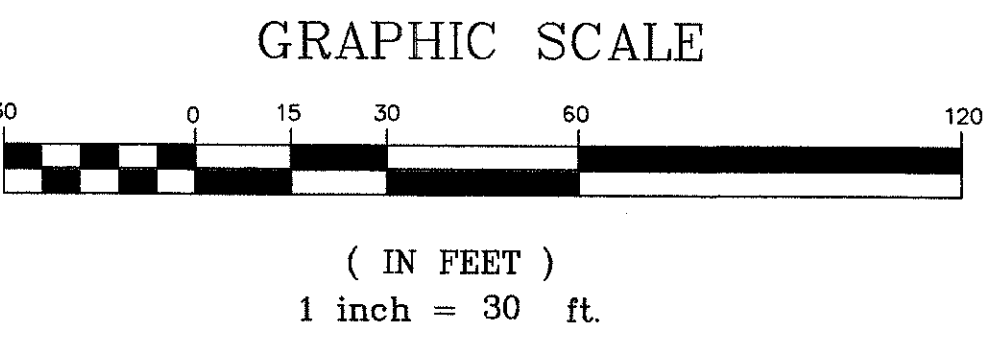
NO TURN ON RED
SIGN "A" R10-11a
LIGHTED SIGN LIGHTS DURING PHASE 3 AND WHEN P6 IS CALLED

- LEGEND**
- → TRAFFIC SIGNAL HEAD-NEW
 - → TRAFFIC SIGNAL HEAD-EXISTING
 - → PEDESTRIAN HEAD w/PUSH BUTTON AND SIGN ASSEMBLY
 - → STEEL POLE
 - → WOOD POLE
 - → JUNCTION BOX
 - → CABINET AND CONTROLLER
 - → UNDERGROUND CONDUIT
 - ▲ → ELECTRICAL SERVICE PEDESTAL
 - → NEW LOOP
 - → LOOP (6' x VARIOUS)
 - → QUADRAPOLE LOOP (6' x 30')

FUNCTIONS	PHASE							
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
WALK	-	7	-	6	-	7	-	-
DON'T WALK	-	17	-	19	-	28	-	-
MIN. INITIAL	-	15	8	8	-	15	-	-
MAX. INITIAL	-	-	-	-	-	-	-	-
ADD/VEH	-	-	-	-	-	-	-	-
VEHICLE EXTENSION	-	2.5	3.0	3.0	-	2.5	-	-
TIME BEFORE REDUCE	-	-	-	-	-	-	-	-
TIME TO REDUCE	-	-	-	-	-	-	-	-
MIN. GAP	-	-	-	-	-	-	-	-
MAX. LIMIT	-	35	15	25	-	35	-	-
MAXIMUM II	-	-	-	-	-	-	-	-
YELLOW CHANGE	-	4.3	3.0	3.6	-	4.3	-	-
RED CLEARANCE	-	1.9	2.7	2.5	-	1.9	-	-



THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



DATE PLOTTED: 8/19/10
REVISIONS: 8/16/10 ADD EMERGENCY PRE-EMPT

FILE NO.: 10-09-002SP-GGS	
Spraue & Sprague CONSULTING ENGINEERS BOX 9192 GREENVILLE, SC 29604-9192	
SUBJECT TITLE: TRAFFIC SIGNAL PLAN	
SPECIFIC LOCATION: BOILING SPRINGS ROAD (SC 9) AT RAINBOW LAKE ROAD (S-42)	
CITY: BOILING SPRINGS	COUNTY: SPARTANBURG
DESIGNED: GGS	APPROVED BY:
DRAWN: GLY	DIR. OF TRAFFIC ENGINEERING:
CHECKED: GGS	SCALE: 1" = 30'
REVIEWED: GGS	DATE: 7/16/09
RECOMMENDED:	SHEET NO. 1
	INDEX NO.