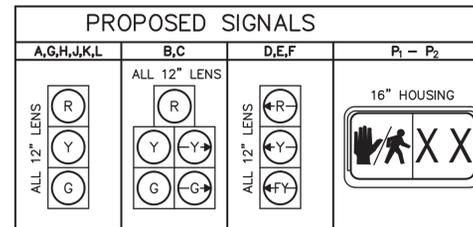
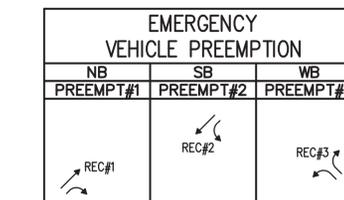


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	77
PROJECT FILE NO.		602615	

TRAFFIC SIGNAL PLAN



- NOTES:
- ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
  - ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES. BACKPLATES SHALL INCLUDE A 3" YELLOW MICRO-PRISMATIC RETRO REFLECTIVE SHEETING ALONG THE OUTER EDGE.
  - ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.



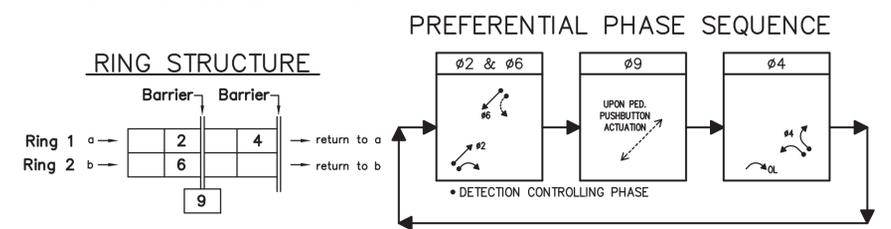
EMERGENCY VEHICLE PREEMPTION OPERATION

- EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
- PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
- IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2 OR REC#3), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2 OR #3 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME (BEGIN WITH  $\phi 2$  &  $\phi 6$ ) PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
- NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
- PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.
- SEPARATE CABLE SHALL BE PROVIDED FOR THE PREEMPTION STROBE. THE SPARE SIGNAL CONDUCTORS SHALL NOT BE USED.

MAJOR ITEMS REQUIRED	
QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
1	25' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
1	10' SIGNAL POST, BASE & FDN.
9	SIGNAL HEAD, 3 SECTION
2	SIGNAL HEAD, 5 SECTION
2	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
2	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
12	ROADWAY VEHICLE LOOP DETECTOR (6'X20' QUADRUPOLE TYPE)
3	ROADWAY BICYCLE LOOP DETECTOR D-2
7	DUAL CHANNEL LOOP DETECTOR AMPLIFIER INCL. 2 SPARES
7	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
3	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
2	PREEMPTION 2-CHANNEL PHASE SELECTOR
1	PREEMPTION CONFIRMATION STROBE (CLEAR)
PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.	
MAST ARM AT STA. 17+77, 30' LT SHALL BE DESIGNED/WIRED FOR AN ADDITIONAL SIGNAL HEAD AS REQUIRED TO CONVERT TO FUTURE FLASHING YELLOW ARROW OPERATION FOR PERMISSIVE LEFT TURN.	

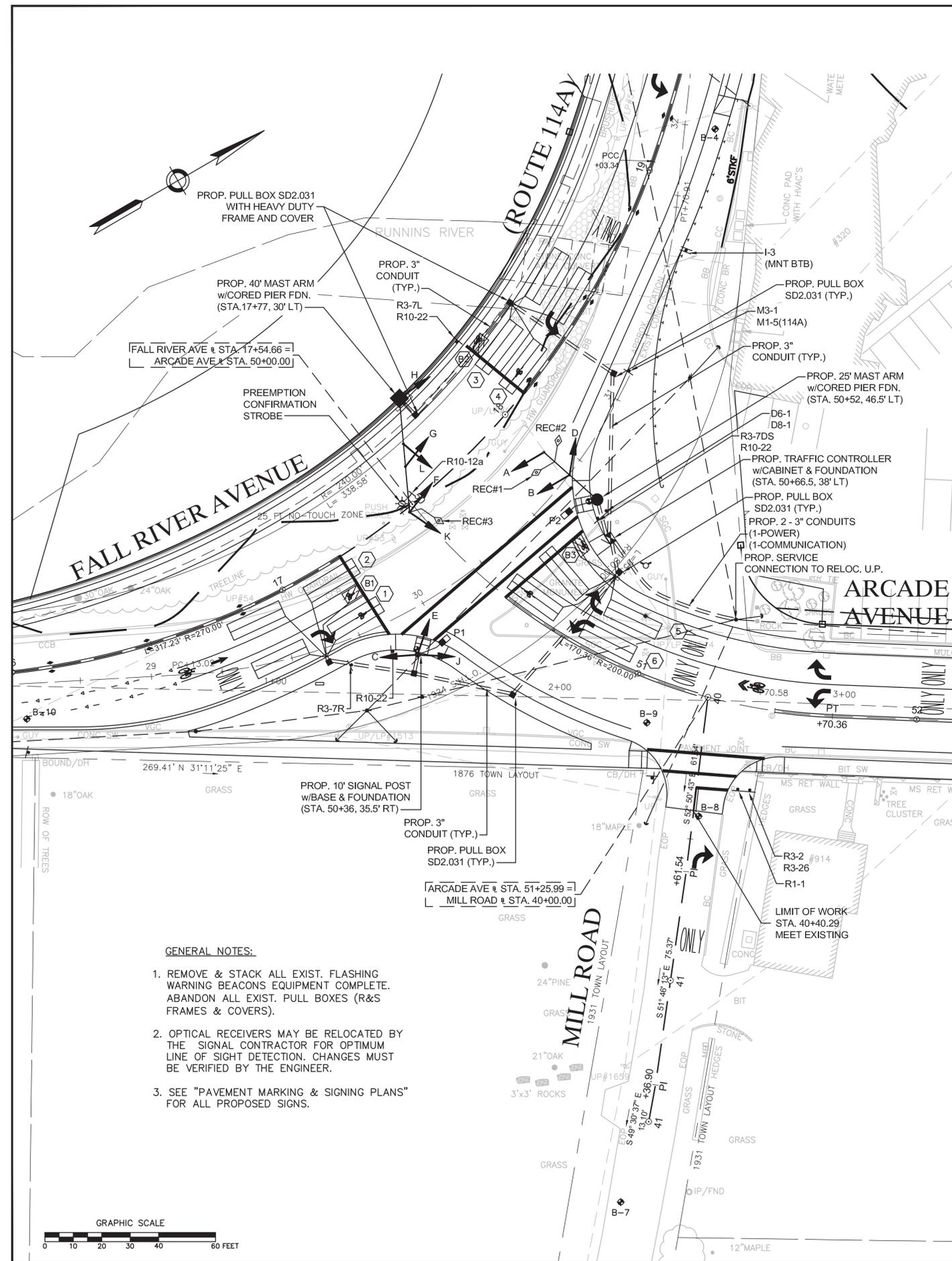
LOOP DETECTOR DATA						
DETECTOR NO.	LOOP SIZE NO. OF SEGMENTS	$\phi$ CALLED	$\phi$ EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	2-6'x20' QUAD. TYPE	2	2	B	-	-
2	2-6'x20' QUAD. TYPE	2	2	B	-	-
3	2-6'x20' QUAD. TYPE	6	6	B	-	-
4	2-6'x20' QUAD. TYPE	6	6	B	-	-
5	2-6'x20' QUAD. TYPE	4	4	B	-	-
6	2-6'x20' QUAD. TYPE	4	4	B	-	-
B1	1-6'x4' BICYCLE TYPE D-2	2	2	B	-	-
B2	1-6'x4' BICYCLE TYPE D-2	6	6	B	-	-
B3	1-6'x4' BICYCLE TYPE D-2	4	4	B	-	-

TRAFFIC CONTROLLER DATA	
PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON ( $\phi 2$ & $\phi 6$ )
SIMULTANEOUS GAP OUT DISABLED	YES ( $\phi 2$ & $\phi 6$ )
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED



FULLY-ACTUATED	<input checked="" type="checkbox"/>	ISOLATED	<input checked="" type="checkbox"/>
SEMI-ACTUATED	<input type="checkbox"/>	COORDINATED	<input type="checkbox"/>
PRE-TIMED	<input type="checkbox"/>	WIRE	<input type="checkbox"/>
		TBCU	<input type="checkbox"/>

SEQUENCE AND TIMING												
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	FLASH OPER.
FALL RIVER AVENUE (ROUTE 114A)	NB	A	G	Y	R	R	R	R	R	R	R	FY
FALL RIVER AVENUE (ROUTE 114A)	NB	B,C	G	Y	R	R/R/R/YR	R	R	R	R	R	FY
FALL RIVER AVENUE (ROUTE 114A)	SB	D,E,F	RL	RL	RL	RL	RL	FYL	YL	RL	RL	FYL
FALL RIVER AVENUE (ROUTE 114A)	SB	G,H	R	R	R	R	R	G	Y	R	R	FY
ARCADE AVENUE	WB	J,K,L	R	R	R	G	Y	R	R	R	R	FR
PEDESTRIAN		P1-P2	DW	DW	DW	DW	DW	DW	DW	W	FDW	OUT
TIMING IN SECONDS												
MINIMUM INITIAL			10			6			10			
PASSAGE						2			2			
MAXIMUM 1			30			20			30			
MAXIMUM 2			30			20			30			
CHANGE				4.5	1.0		4.0	1.0		4.5	1.0	
PEDESTRIAN										7	20	3
RECALL			SOFT			OFF			SOFT			OFF
MEMORY			NON-LOCKING			NON-LOCKING			NON-LOCKING			NON-LOCKING



GENERAL NOTES:

- REMOVE & STACK ALL EXIST. FLASHING WARNING BEACONS EQUIPMENT COMPLETE. ABANDON ALL EXIST. PULL BOXES (R&S FRAMES & COVERS).
- OPTICAL RECEIVERS MAY BE RELOCATED BY THE SIGNAL CONTRACTOR FOR OPTIMUM LINE OF SIGHT DETECTION. CHANGES MUST BE VERIFIED BY THE ENGINEER.
- SEE "PAVEMENT MARKING & SIGNING PLANS" FOR ALL PROPOSED SIGNS.

