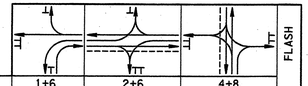
MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



PHASE	1+6			2+6				4+8				FLASH
SIGNAL \ INTERVAL	1	2	3	4	5	6	7	8	9	10	11	
1,2,3	R	R	R	G	G	Y	R	R	R	R	R	Y
4	G/W	Y	R	G	G	Y	R	R	R	R	R	Y
5,6	G	Y	R	G	G	Y	R	R	R	R	R	Y
7,8,9	R	R	R	R	R	R	R	G	G	Y	R	R
10	R/W	R/W	R	R	R	R	R	G	G	Y	R	OFF
11,12,13	R	R	R	R	R	R	R	G	G	Y	R	R
14,15	H	H	H	H	H	H	H	M	FH	H	H	OFF
16,17	H	H	H	M	FH	H	H	H	H	H	H	OFF

FIXED		5	2			5	2		4	2
MINIMUM	3			15				3		
PASSAGE	3							3		
MAX 1	7			44				29		
MAX 2	7			41				32		
PEDESTRIAN*				7	17			7	11	
MEMORY	NL			MX				NL		

OPERATION NOTES

① G/W IF FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6

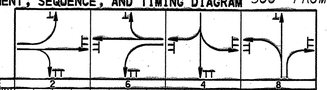
- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8
- MAX 1 TO OPERATE FROM 6:00 AM-10:00 AM MONDAY-FRIDAY
- MAX 2 TO OPERATE AT ALL OTHER TIMES

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

EMERGENCY PRE-EMPTION PHASING

SIGN TO BE LOCATED 500' FROM STOP BAR

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



PHASE	2			6			4			8		
INTERVAL / SIGNALS	12	13	14	15	16	17	18	19	20	21	22	23
1,2,3	G	Y	R	R	R	R	R	R	R	R	R	R
4	R	R	R	G/W	Y	R	R	R	R	R	R	R
5,6	R	R	R	G	Y	R	R	R	R	R	R	R
7,8,9	R	R	R	R	R	R	R	R	R	G	Y	R
10	R	R	R	R	R	R	R	R	R	G/W	Y	R
11,12,13	R	R	R	R	R	R	G	Y	R	R	R	R
14,15	H	H	H	H	H	H	H	H	H	H	H	H
16,17	H	H	H	H	H	H	H	H	H	H	H	H
FIXED	▲	5	2	▲	5	2	▲	4	2	▲	4	2

▲ FOR DURATION OF PRE-EMPTION

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "OOO" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

EMERGENCY PRE-EMPTION OPERATION NOTES

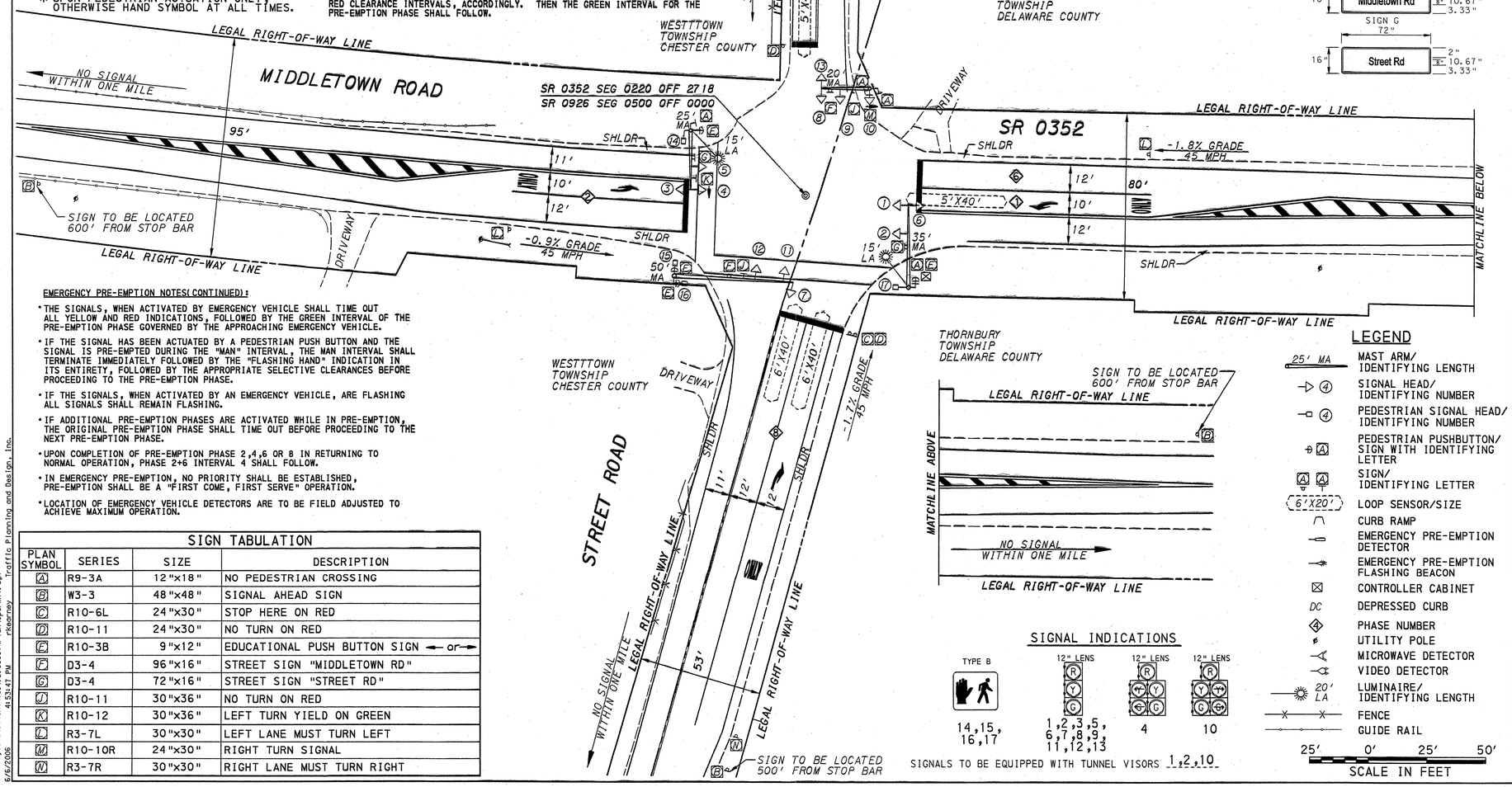
ⓐ SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION
ⓑ SIGNAL TO INDICATE G/W WHEN RETURNING TO NORMAL OPERATION

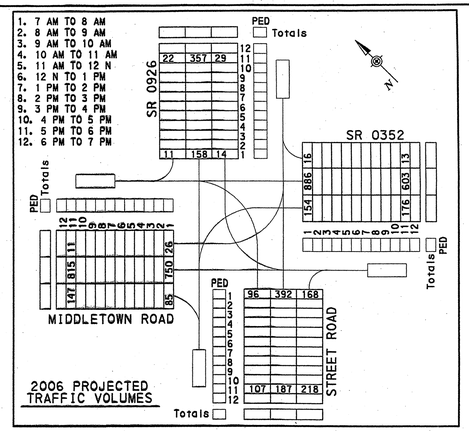
EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND AND SOUTHBOUND APPROACHES OF MIDDLETOWN ROAD (SR 352) AND THE EASTBOUND AND WESTBOUND APPROACHES OF STREET ROAD (SR 0926) WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTION PHASE SHALL FOLLOW.

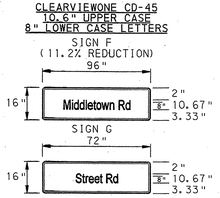
EMERGENCY PRE-EMPTION NOTES(CONTINUED):

- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED DURING THE "MAN" INTERVAL, THE MAN INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION PHASE 2,4,6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 4 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.
- LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.





CLEARVIEWONE CD-45
10.6" UPPER CASE
8" LOWER CASE LETTERS



SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	DESCRIPTION
A	R9-3A	12"x18"	NO PEDESTRIAN CROSSING
B	W3-3	48"x48"	SIGNAL AHEAD SIGN
C	R10-6L	24"x30"	STOP HERE ON RED
D	R10-11	24"x30"	NO TURN ON RED
E	R10-3B	9"x12"	EDUCATIONAL PUSH BUTTON SIGN ← or →
F	D3-4	96"x16"	STREET SIGN "MIDDLETOWN RD"
G	D3-4	72"x16"	STREET SIGN "STREET RD"
J	R10-11	30"x36"	NO TURN ON RED
K	R10-12	30"x36"	LEFT TURN YIELD ON GREEN
L	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
M	R10-10R	24"x30"	RIGHT TURN SIGNAL
N	R3-7R	30"x30"	RIGHT LANE MUST TURN RIGHT

SIGNAL INDICATIONS

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 1,2,10

LEGEND

- 25' MA — MAST ARM/ IDENTIFYING LENGTH
- ④ — SIGNAL HEAD/ IDENTIFYING NUMBER
- ④ — PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- Ⓐ — PEDESTRIAN PUSHBUTTON/ SIGN WITH IDENTIFYING LETTER
- Ⓐ — SIGN/ IDENTIFYING LETTER
- 6'X20' — LOOP SENSOR/SIZE
- CURB RAMP
- EMERGENCY PRE-EMPTION DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- CONTROLLER CABINET
- DC — DEPRESSED CURB
- ④ — PHASE NUMBER
- UTILITY POLE
- MICROWAVE DETECTOR
- VIDEO DETECTOR
- 20' LA — LUMINAIRE/ IDENTIFYING LENGTH
- FENCE
- GUIDE RAIL

25' 0' 25' 50'
SCALE IN FEET

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 68.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 199, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE DATE NOVEMBER 30, 2004.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-7800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE & CHESTER
MUNICIPALITY: THORNBURY & WESTTOWN TOWNSHIPS
INTERSECTION: MIDDLETOWN ROAD (SR 0352) & STREET ROAD (SR 0926)

REVIEWED:
DATE
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
STEPHEN B LESTER 9/7/76
DISTRICT TRAFFIC ENGINEER DATE

NO	REVISION	DES/ REVW	DATE	REVW	DATE	RECOM	DATE
1	CHANGED TIMING	MAP/ MK	12/19/95	MK	12/22/95	DWM	12/22/95
2	CHANGED TIMING	SHG/	11/28/01	WJE	11/28/01	LRB	11/28/01
3	CHANGED TIMING	SHG/	12/10/03	MK	1/06/04	LRB	1/8/04
4	ADDED EB RT TURN LN AND FULL MODERNIZATION	TPD/ RMC	6/15/06	MLE	6/19/6	[illegible]	6/23/06
5							
6							
7							
8							

SHEET 1 OF 1 | PERMIT # 62-1979 | FILE # 1979

Rec'd From DOT 7/12/06

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