

GREGORY E. CREASY, P.E., Principal Traffic Engineer JAY E. STATES, P.E., Principal Traffic Engineer 4800 Linglestown Road, Suite 307 Harrisburg, PA 17112 Telephone: (717) 545-3636 www.grovemiller.com

Revised May 24, 2018

Amy Mason, Community Manager Esquire Association Management, LLC 480 New Holland Avenue, Suite 8204 Lancaster, PA 17602

> Re: Walden Neighborhood Silver Spring Township, Cumberland County, Pennsylvania

Dear Amy:

As requested, we have completed field views and evaluations of several intersections within the Walden Neighborhood in Silver Spring Township, Cumberland County, Pennsylvania. Our work involved obtaining field data in order to evaluate existing intersection control and sight distances at the intersections. The results of our evaluations are summarized in this letter report, and opinions are provided with recommendations.

Since several of the recommendations will affect parking and intersection control with the Walden Neighborhood, it is recommended that the residents be informed of the changes via community newsletter and/or postings. It is suggested that an email be sent to residents approximately one (1) week prior to the implementation of the changes and another email after the changes are in effect.

Please note that this report was revised to address items discussed during a field view with Board members. The items included the addition of the intersection of Walden Way and Line Road to the evaluations, additional signage for the intersection of Tavern House Hill and Porter Alley, and a general recommendation to install "Yield to Peds in Crosswalk" signs when the crosswalks are installed.

FIELD OBSERVATIONS

Field views were completed at eight (8) intersections within the Walden Neighborhood to determine existing signage, roadway geometry, and available sight distances. A summary of the field observations is provided in this section.

Tavern House Hill and Porter Alley

•STOP sign control is provided on the Porter Alley approach to Tavern House Hill. •The posted speed limit on both roadways is 25 miles per hour (mph).

•The grades for the intersection approaches are all relatively flat $(\pm 1\%)$.

•Sight distance is approximately 100 feet looking north and/or south from Porter Alley along Tavern House Hill, restricted by on-street parking.

Tavern House Hill and Ellington Road

•STOP sign control is provided on the Ellington Road approach to Tavern House Hill. •The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat $(\pm 2\%)$.

•Sight distance looking north and south from Ellington Road along Tavern House Hill is restricted by shrubs (north) and on-street parking (south).

•School bus stops occur at this intersection.

Tavern House Hill and Alley Way

•STOP sign control is provided on the Alley Way approach to Tavern House Hill.

•The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat (±1%).

•Sight distance is approximately 100 feet looking north and/or south from Alley Way along Tavern House Hill, restricted by on-street parking.

Summer Lane and Bryant Street

•STOP sign control is provided on the Bryant Street approach to Summer Lane. •The posted speed limit on Summer Lane is 25 mph, while the posted speed limit on Bryant Street is 15 mph.

•The grades for the intersection approaches are all relatively flat $(\pm 1\%)$.

•Sight distance is approximately 100 feet looking north and/or south from Bryant Street along Summer Lane, restricted by on-street parking.

Emerson Way and Cain Alley

•STOP sign control is provided on the Cain Alley approach to Emerson Way.

•The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat $(\pm 2\%)$.

•Sight distance is approximately 100 feet looking east and/or west from Cain Alley along Emerson Way, restricted by on-street parking.

Tavern House Hill and Sutherland Way

•STOP sign control is provided on the Sutherland Way approach to Tavern House Hill.

•The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat (±1%).

•Sight distance is approximately 100 feet looking north and/or south from Sutherland Way along Tavern House Hill, restricted by on-street parking.

Tavern House Hill and Stone Barn Road

•STOP sign control is provided on the Stone Barn Road approach to Tavern House Hill. •The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat (±2%).

•Sight distance is approximately 100 feet looking north and/or south from Stone Barn Road along Tavern House Hill, restricted by on-street parking and roadway alignment.

Walden Way and Line Road

•STOP sign control is provided on the Line Road approach to Walden Way.

•The posted speed limit on both roadways is 25 mph.

•The grades for the intersection approaches are all relatively flat (±2%).

•Sight distance looking north and south from Line Road along Walden Way is restricted by on-street parking and shrubs.

This location is directly adjacent to the main park area (green space).

INTERSECTION EVALUATIONS AND RECOMMENDATIONS

Since several of the recommendations will affect parking and intersection control with the Walden Neighborhood, it is recommended that the residents be informed of the changes via community newsletter and/or postings. It is suggested that an email be sent to residents approximately one (1) week prior to the implementation of the changes and another email after the changes are in effect.

The following section provides a summary of the evaluations and recommendations for each of the eight (8) study intersections.

Tavern House Hill and Porter Alley

•It is recommended that the section of roadway between Tavern House Hill and Meadow Creek Lane (in the area of Porter Alley) be restricted to one-way northbound movements. Appropriate signing should be provided as depicted on the attached sketch.

•It is recommended that parking be restricted along the east side of the roadway for the area (approximately 25 feet in length) just south of Porter Alley as depicted on the attached sketch. A completed TE-100 (Stopping, Standing, or Parking Restriction Engineering and Traffic Study) form is attached.

Tavern House Hill and Ellington Road

•It is recommended that All-Way Stop sign control be provided at the intersection. A completed TE-102 (Multiway Stop Control at Intersections Engineering and Traffic Study) form is attached.

Tavern House Hill and Alley Way

•It is recommended that parking be restricted along the east side of Tavern House Hill from Alley Way for the area (approximately 25 feet in length) just north and south the

intersection as depicted on the attached sketch. A completed TE-100 (Stopping, Standing, or Parking Restriction Engineering and Traffic Study) form is attached.

Summer Lane and Bryant Street

•It is recommended that parking be restricted along the west side of Summer Lane for a distance of 25 feet north and south of the intersection as depicted on the attached sketch. A completed TE-100 (Stopping, Standing, or Parking Restriction Engineering and Traffic Study) form is attached.

Emerson Way and Cain Alley

•It is recommended that parking be restricted along the north side of Emerson Way for a distance of 25 feet east and west of the intersection as depicted on the attached sketch. A completed TE-100 (Stopping, Standing, or Parking Restriction Engineering and Traffic Study) form is attached.

Tavern House Hill and Sutherland Way

•It is recommended that All-Way Stop sign control be provided at the intersection. A completed TE-102 (Multiway Stop Control at Intersections Engineering and Traffic Study) form is attached.

Tavern House Hill and Stone Barn Road

•It is recommended that All-Way Stop sign control be provided at the intersection. A completed TE-102 (Multiway Stop Control at Intersections Engineering and Traffic Study) form is attached.

Walden Way and Line Road

•It is recommended that All-Way Stop sign control be provided at the intersection. A completed TE-102 (Multiway Stop Control at Intersections Engineering and Traffic Study) form is attached.

Crosswalks

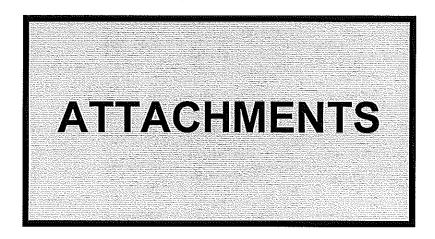
•It is recommended that "Yield to Peds in Crosswalk" signs be provided when crosswalks are installed at various locations within the development.

We shall remain available for future meetings and consultations relative to the intersection evaluations. Please contact me if you have questions relative to the attached materials or the opinions expressed herein.

Sincerely,

Jay E. States, P.E. Senior Traffic Engineer





TAVERN HOUSE HILL AND PORTER ALLEY

-

STOPPING, STANDING, OR PARKING RESTRICTION ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



pennsylvania DEPARTMENT OF TRANSPORTATION www.dot.state.pa.us

A - LOCATION INFORMATION			
COUNTY		MUNICIPALITY	
Cumberland			Silver Spring Township
STREET NAME		TOWNSHIP ROAD #	
Tavern House Hill at Porter Al	ley		
SR#		SEGMENT	
RESTRICTED BETWEEN: Segment: Offse	t:	To Segment:	Offset:
Location:		to Locatio	on:
Tavern	House Hill	from I	Porter Alley to a distance of 25 feet south
Side of Street: EAST	WEST NORTH	🔲 солтн	
B - REFERENCE INFORMATION			
REFERENCE	SECTION(S)		
Chapter 212	212.5((b)(1)(iv) and 212.1	14(a)(c)
REFERENCE	SECTION(S)		
MUTCD	2B.39	2B.40, 2B.41	
REFERENCE	SECTION(S)		
Vehicle Code Title 75 Pa. C.S.	§ 3353	and 6109(a)(1)	
C - STUDY ELEMENTS			
FROM PUB 212 APPENDIX:	Barris (Managaman Barris and Sandar and Sanda		
Crash Analysis (1)	Sight Distance) (16)	
Capacity Analysis (6)	Traffic Volume	s (20)	
Geometric Review (8)	Other:		
D - ATTACHMENTS LISTING			
Check those that apply and attach to this form in t	be order listed belo	N/1	
1. 10-Day Response Letter	7. Crash Extract	w.	13. Traffic/Pedestrian Volumes
2. Letter or Memo Requesting Study	8. Crash Rate		14. STAMPP Identification Data
3. Location Map	9. Collision Diagram	Plot	15. Speed Limit
4. Straight Line Diagram	10. Speed Study		16. Traffic Signal Permit Plan
5. Photographs 6. Field View Drawing or Condition Diagram	11. Warrant Analysis	ruck Restriction Worksheet	17. Other
	TZ. WUID-WAY OLOP OF I	TUCK INCOURT & YOLKSHEEL	

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHEC	KLIST				
Operational Checklist:					ili ya mwana ingi kata kata kata kata kata kata kata kat
1. Do obstructions block a driver's	s view of pedestrians or approachi	ng vehicles?	YES	□ NO	□ N/A
2. Do drivers respond correctly to					— ∏ N/A
3. Is there evidence of crashes (sk					 N/A
4. Are there violations of parking of				NO	 □ N/A
5. Do drivers appear confused ab				NO	 □ N/A
6. Have you observed the location					□ N/A
7. Are there traffic flow deficiencie			_		 N/A
8. Are there significant delays and	·	-	_		 ∏ N/A
9. Are there vehicle/pedestrians c				NO	
10. Are there other traffic flow defi				NO	N/A
Physical Checklist:					
1. Can sight obstructions be remo					
2. Do the street alignments or wid			• —		
3. Are curb radil adequate for turn	-				
4. Are pedestrian crosswalks prop					
5. Are signs adequate as to useful			_		∐ N/A
6. Are traffic signals adequate as to					N/A
7. Are pavement markings adequa			· · · · · · · · · · · · · · · · · · ·	L] NO	N/A
8. Is channelization (Islands or pav		-		—	–
	ining movements?				∐ N/A
9. Does the existing legal parking					∐ N/A
10. Is the pavement condition free	of potholes, washboard, slick surf	ace, etc.?	· · · · · · · · · · · · · · · · · · ·		∐ N/A
F - SITE DATA					
DATE DATA COLLECTED	PERSON CONDUCTING STUDY		TITLE		
01/2018	Jay E. States,	P.E.	SeniorTraffic	Engineer	
1. The posted speed limit is	MPH.	9. With parking in	place, must opposing vehic	les	
			i vehicles yield to permit pas		
2. The 20 ADT is	·		direction?	_	
3. The 20 peak hour volume		using the neak	vel of service as determined I hour volumes indicated to th		ity analysis
North Bound South Bound	East Bound West Bound		ng (one side)		
4. Is vertical curbing present?		-	ng (both sides)		
			arking		
5. Number of lanes	·	•	st the minimum corner sight dis		
6. Roadway width	ft		ns within the proposed restrict		
	(4)	See Section	G		
7. Center of double yellow centerlin	e to Right edge ft.				
8. Center of double yellow centerlin	e to Left edge ft.				
1	•				
	•				

F - SITE DATA (CONTINUED)	
12. The number of crashes within the proposed restriction either directly or indirectly attributed to one of the following as a primary cause during the past three years:	b. Cost of parking: c. Hours of day restricted:
a. Vehicle parking on roadway	d. Days of the week restricted:
b. Vehicle entering or leaving the parked position	e. Class of vehicles restricted:
 c. Drivers or passengers entering or leaving parked vehicles on the street side	19. Signs to be installed: (list each type separately)a. Sign Number from PUB. 236:
parked vehicles	(a) <u>R8-3 (24" x 24")</u>
e. Other	(b) G20-6-1 Right (24" x 12")
f. TOTAL number of parking-related crashes <u>n</u>	(c) <u>G20-6-1 Left (24" x 12")</u>
 13. Does the area contain any of the following: Official Bus Stop Loading Zone Emergency Vehicle Driveway 14. Is the width of the shoulder sufficient to allow a vehicle 	 b. No. of signs to be installed: (a) ²/₂ (b) ¹/₁ (c) ¹/₂ c. Sign message: (a) <u>No Parking Symbol</u> Ped Arrow Sign (Pight)
or its load to park completely off the roadway? 🗌 YES 🔳 NO a. Width of shoulder(s): Left ft. Right ft.	(b) Red Arrow Sign (Right) (c) Red Arrow Sign (Left)
 15. Does the roadway have 3 or more lanes and a speed limit of 40 MPH or more? YES NO a. Is a clear recovery area needed? YES NO 	20. Are parking stalls marked? YES 📕 NO Describe stall size, material, etc.:
16. Has an Ordinance been enacted? 🏳 YES 📕 NO	
17. State approval required? YES 📕 NO	
18. Other restrictions to be imposed; Meters:	21. Based on data indicated, parking is to be restricted from Porter Alley to 25 ft. south
a. Time restriction is in effect:	because condition # _4 from Title 67, Chapter 212.114 is satisfied.
G - BEMARKS	

5 – HEMARKS

Sight distance looking left from Porter Alley with vehicles parked along east side of Tavern House Hill is less than 100 feet. Minimum safe stopping sight distance for a vehicle on Tavern House Hill (25 MPH/-1%) = 148 feet.

H - ENGINEERING JUDGEMENT

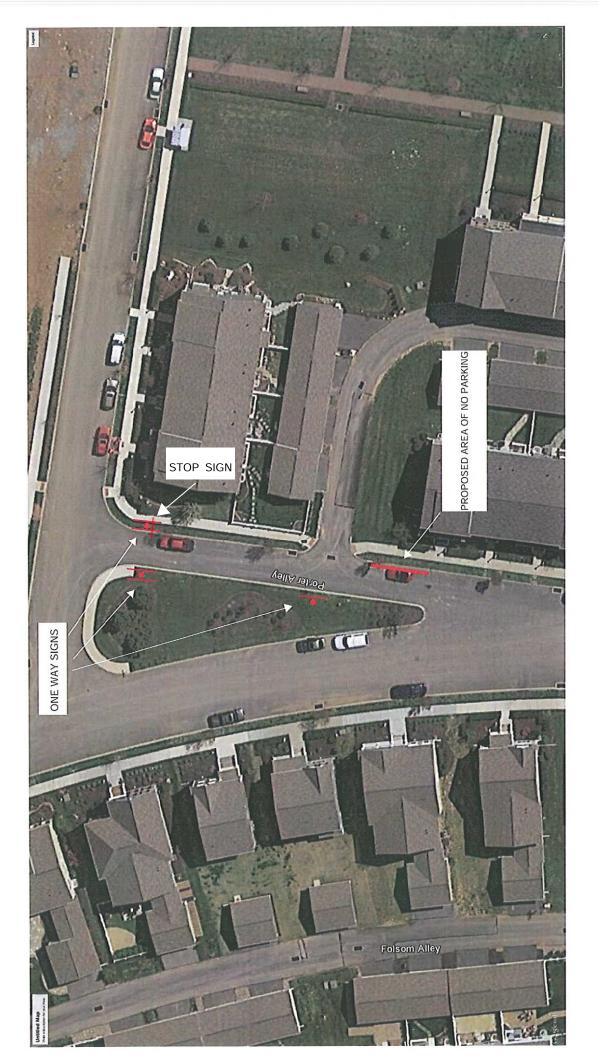
Tavern House Hill from the Porter Alley for a distance of 25 feet south of the intersection satisfies criteria to prohibit parking on the east side. The roadway satisfies Condition 4 of Section 212.114 of PA Title 67 (Sight Distance).

Condition 4 states that parking may be restricted along a roadway if at an intersection, the available corner sight distance for a driver on the minor road (Porter Alley) is less than the necessary minimum stopping sight distance value for the driver on the through roadway (Tavern House Hill).

It is recommended that a No Parking restriction be posted on the east side of Tavern House Hill between Porter Alley for a distance of 25 feet south of the intersection. A figure showing the recommended restriction area is included as an attachment to this study.

I - APPROVALS Comments:

"		
Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date



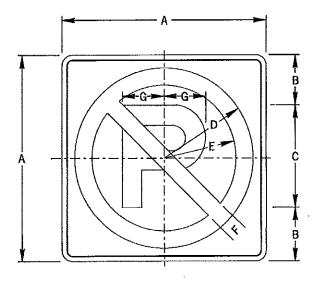
M-950S (03-04) PENNDOT		SIGHT DISTANC LOCAL ROADS, USE PI	E MEASUREMENTS ENNDOT PUB 70)
APPLICAN	T <u>TAVERN HOUSE</u> HIL	L AND PORTER ALLEY	APPLICATION NO
S.R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/25
MEASURE	D BY Grove Miller	Engineering, Inc.	DATE10/2017
FOR DEPA	RTMENT USE ONLY: Sa	fe-Running Speed	85th Percentile Speed
A	******		
		« ·····	GRADE1 % 7 3.50'
******		<pre></pre>	••••>, • 50 ^{n Line}
		Sight Line	DRIVER'S EYE 10' EDGE C TRAVEL L DISTANCE REQUIRED FSD=
	THE MAXIMUM LENGT		A DRIVER AT A DRIVEWAY LOCATION PPROACHING ON THE ROADWAY.
			GRADE %
2222222		الیے بر 	3.50']
	CONTINUOUSLY SEE THE	TH OF ROADWAY ALONG WHI	CH A DRIVER ON THE ROADWAY CAN LOCATED IN THE DRIVER'S TRAVEL LANE
C			
3.	GRADE	sight Line	
) ¥	DISTANCE REQUIRED FSD=
			OF A VEHICLE INTENDING TO MAKE A LEFT TU BOACHING FROM THE OPPOSITE DIRECTION

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3) shall be authorized for use to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Plaque (R10-20AP), No Parking Restricted Hours Plaque (R8-3HP-1), No Parking Loading Zone Plaque (R8-3GP-1), No Parking Arrow Plaque (R7-301), Tow-Away Zone Sign (R7-201AP) and No Parking On Pavement Sign (R8-3CP). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3 sign shall be 12" x 12" in business, residential, or park areas and 24" x 24" in rural areas. The standard size for expressways shall be 36" x 36", and on freeways shall be 48" x 48".

(c) Placement. Signs should be set at an angle of not less than 30° or more than 45° with a line parallel to the flow of traffic so as to be visible to approaching traffic. Care should be taken to ensure that supplemental arrows point in the proper direction to indicate the regulated area. Signs shall be placed at the beginning of and at reasonable intervals throughout the restriction.



DIMENSIONS - IN											
SIGN SIZE A x A	B	С	D	E	F	G	MAR- GIN	BOR- DER	BLANK STD.		
12" x 12"	3	6E(M)	4.9	3.9	1	2.4	0.4	0.4			
24" x 24"	6	12E(M)	10.5	8.5	2	4.8	0.4	0.6	B3–24		
36" x 36"	9	18E(M)	15.8	12.8	3	7.2	0.6	0.8	B336		
48" x 48"	12	24E(M)	21	17	4	9.6	0.8	1.2	B3–48		

By :

COLOR:

SYMBOL AND BORDER: **BLACK (NON-REFLECTORIZED)**

CIRCLE AND DIAGONAL: **RED (REFLECTORIZED)**

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Rowe Date : 02-29-12 Chief, Traffic Engineering and Permits Section

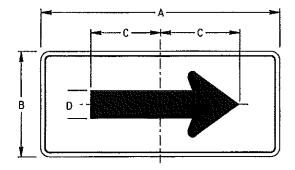
Bureau of Maintenance and Operations

G20-6-1

RED ARROW SIGN

(a) Justification. The Red Arrow Sign (G20-6-1) may be used to mark a detour where the Detour Follow Red Arrow Sign (G20-6) is used. Another color is authorized where two or more detours overlap.

(b) Placement. This sign shall be mounted next to the word "FOLLOW" and indicate the direction of the detour.



NOTE: SEE STANDARD ARROW FOR DIMENSIONS OF ARROWHEAD

DIMENSIONS - IN									
SIGN SIZE A x B	С	D	MAR GIN	BOR DER	BLANK STD.				
24" x 12"	8	2,8	0.4	0.4	B5-2412				

COLOR:

ARROW AND BORDER: **RED (NON-REFLECTORIZED)**

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

. Clow بلكمر

cta ----

80

By : Date : 02-29-12 Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

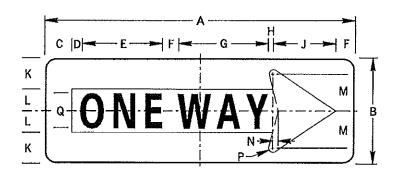
R6–1R

HORIZONTAL RIGHT ONE-WAY SIGN

(a) Justification. The Horizontal Right One-Way Sign (R6-1R) shall be authorized for use to indicate a street, roadway, or alley upon which vehicular traffic is permitted to travel in only one direction. Where the central island of a roundabout allows for installation of signs, the R6-1R sign may be used instead of or in addition to Roundabout Directional Arrow (R6-4 series) signs to direct traffic counter-clockwise around the central island.

(b) Placement. At unsignalized intersections, the R6–1R sign shall be placed on the near right-hand and the far side of the intersection so as to face traffic entering or crossing the one-way street. At signalized intersections, the R6–1R sign shall be placed either near the appropriate signal faces, on poles holding the traffic signals, on mast arm or span wire holding the signals, or at the locations specified for unsignalized intersections. Where used on the central island of a roundabout, the mounting height of a R6–1R sign should be at least 4 feet, measured veritcally from the bottom of the sign to the elevation of the near edge of the traveled way.

(c) Size. The standard size of the R6-1R sign for single lane conventional highways shall be 36" x 12". The standard size for multi-lane conventional highways and expressways shall be 54" x 18". See General Notes for additional guidance.



	DIMENSIONS - IN														
SIGN SIZE A x B	С	D	E	F	G	н	J	К	L	М	N	Ρ	Q	BOR- DER	BLANK STD.
36" x 12"	3	1.2	9.1*	2.2	10.6*	0.5	7.2	3.4	2.6	4.2	0.6	0.7	4D	0.4	B5–3612
54" x 18"	5	3	12.3	4	13.5	2.2	10	5.2	3.8	5.8	0.8	1	5D	0.8	

By :

* REDUCE SPACING 35%

COLOR:

ARROW AND BORDER: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

She C Rowi

Date : 02-29-12

BACKGROUND AND LEGEND: **BLACK (NON-REFLECTORIZED)**

Chlef, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

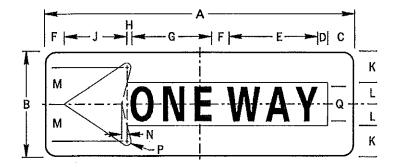
R6–1L

HORIZONTAL LEFT ONE-WAY SIGN

(a) Justification. The Horizontal Left One-Way Sign (R6-1L) shall be authorized for use to indicate a street, roadway, or alley upon which vehicular traffic is permitted to travel in only one direction.

(b) Placement. At unsignalized intersections, the R6-1L sign shall be placed on the near right-hand and the far side of the intersection so as to face traffic entering or crossing the one-way street. At signalized intersections, the R6-1L sign shall be placed either near the appropriate signal faces, on poles holding the traffic signals, on mast arm or span wire holding the signals, or at the locations specified for unsignalized intersections.

(c) Size. The standard size of the R6–1L sign for single lane conventional highways shall be 36" x 12". The standard size for multi-lane conventional highways and expressways shall be 54" x 18". See General Notes for additional guidance.



	DIMENSIONS - IN														
SIGN SIZE A x B	С	D	E	F	G	н	J	К	L	м	N	Р	Q	BOR DER	BLANK STD.
36" x 12"	3	1.2	10.6*	2.2	9.1*	0.5	7.2	3.4	2.6	4.2	0.6	0.7	4D	0.4	B5-3612
54" x 18"	5	3	13,5	4	12.3	2.2	10	5.2	3.8	5.8	0.8	1	5D	0.8	

* REDUCE SPACING 35%

COLOR:

ARROW AND BORDER: WHITE (REFLECTORIZED)

BLACK (NON-REFLECTORIZED)

BACKGROUND AND LEGEND:

APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Rowi

Date : 02-29-12

By : Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

R6_IL.DGN

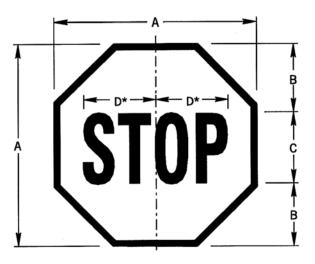
R1_1

STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to Statedesignated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways. At intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-3P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for alleys with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should stay within the edges of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the R1-1 sign.



	DIMENSIONS - IN									
SIGN SIZE A x A	В	С	D	BOR- DER	BLANK STD.					
18" x 18"	6	6C	8	0.4						
24" x 24"	8	8C	10	0.6	B1–24					
30" x 30"	10	10C	12.6	0.8	B1–30					
36" x 36"	12	12C	15	0.8	B1–36					
48" x 48"	16	16C	20	1.2	B1–48					

By :

*** REDUCE SPACING 40%**

COLOR:

LEGEND AND BORDER: WHITE (REFLECTORIZED)

BACKGROUND: RED (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

CROW Date : 02-29-12 Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

TAVERN HOUSE HILL AND ELLINGTON ROAD

TE-102 (8-09)

MULTIWAY STOP CONTROL AT INTERSECTIONS ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



A - LOCATION INFORMATION		HUNDONALTY					
Cumberlan	d	MUNICIPALITY					
MAJOR STREET INFORMATION	u	Silver Spring Township					
SR#	TR#	STREET NAME					
		Tavern House Hill					
STATION		LOCATION					
MINOR STREET INFORMATION	TR#	STREET NAME					
STATION		Ellington Road					
B - REFERENCE INFORMATION REFERENCE	SECTION(S)						
Chapter 212	212.106	(c)					
REFERENCE	SECTION(S)						
MUTCD	2B.07, 3	B.16					
REFERENCE	SECTION(S)						
Vehicle Code Title 75 Pa. C	C.S. §3323, 6	109(a)(6) and 6124					
C - STUDY ELEMENTS							
FROM PUB 212 APPENDIX:							
Crash Analysis (1)	Pedestrian Volumes	(12)					
Acceleration Lane (2)	Sight Distance (16)	Other					
Geometric Review (8)	Speed Data (17)						
• •							
D - ATTACHMENTS LISTING							
Check those that apply and attach to thi							
1. 10 Day Response Letter	7. Crash Extract	13. Traffic/Pedestrian Volumes					
2. Letter or Memo Requesting Study	8. Crash Rate	14. STAMPP Identification Data					
3. Location Map	9. Crash Plot	☐ 15. Speed Permit					
4. Straight Line Diagram	10. Speed Study	16. Other Sight Distance Evaluation					
5. Photographs	🔲 11. Warrant	Documentation					
6. Field View Drawing	12. Multi-Way Stop or Truck	Restriction Worksheet					
	Confidential - Traffic Engl	peering and Safety Study					

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHE	CKLIST			
Operational Checklist:				
1. Do obstructions block the drive	ers' view of approaching vehicles?	YES	ПNО	🗆 N/A
2. Do drivers respond correctly to	o signals, signs, or other traffic control devices?	YES	□ NO	□ N/A
3. Is there evidence of crashes (s	skid marks, property damage, tree/bush damage, broken gla	ss/vehicle parts, etc.)?	NO	□ N/A
4. Are there violations of parking	regulations or other traffic movements?	Yes	NO NO	🗌 N/A
5. Do drivers appear confused ab	pout routes, street names, or other guidance information	lion?	NO	🗌 N/A
6. Have you observed the location	n during peak hours for volume and crashes?	Yes	□ NO	🗌 N/A
7. Are there traffic flow deficiencience	ies or traffic conflict patterns associated with turning	movements?	NO	🗌 N/A
8. Is there significant delays and/	/or congestion?	Yes	NO NO	🗌 N/A
9. Do pedestrian movements thro	ough the location cause conflicts?	Yes	📉 NO	□ N/A
10. Are there other traffic flow defi	iciencies or traffic conflict patterns?	Yes	NO	□ N/A
Physical Checklist:				
1. Can sight obstructions be remo	oved or lessened?	Yes	NO	🗌 N/A
2. Do the street alignments or wid	dths adequately accommodate the type of traffic usin	g the roadway?	□ NO	🗌 N/A
	ning vehicles?	_	□ NO	🗌 N/A
	perly located?		□ NO	□ N/A
	ulness, message, size, conformity, and placement? .		□ио	□n/a
	to placement, visibility, glare, conformity, number of		ПNO	N/A
	late as to their conformance to standards and locatio		ΠNO	N/A
	aint markings) adequate for reducing conflict areas,			
	efining movements?		ПNO	N/A
	g layout affect sight distance for through or turning ve		ПNO	□ N/A
	e of potholes, washboard, slick surface, etc.?		 П N O	N/A
F - SITE DATA	PERSON CONDUCTING STUDY	TITLE		
01/2018	Jay E. States, P.E.	Senior Traffic Engineer		
		; 		
1. Is the multiway stop being installe	ed as an interim measure until the signal approval an	d installation is completed?	. LIYES	NO NO
2. List the number of crashed for the	e previous 12 month period by type and/or causation	factor. **This may include non-rep	ortable cra	shes.**
3. 85th percentile speed of major ap	pproach is MPH.			
4a.Does the vehicular volume enter	ring the intersection from the major street approache	es average at least 300 vehicles/h	our for any	8 hours?
				NO NO
	edestrian and bicycle volume from the minor street a lor-street vehicular traffic of at least 30 seconds per v			same 8
Ac if #3 > 40 MPH than the minimum				
	im vehicular volume warrants are 70% of As and Ah			
	um vehicular volume warrants are 70% of 4a and 4b.		-	
	um vehicular volume warrants are 70% of 4a and 4b.			

F - SITE DATA (CONTINUED)
5. Where #2, #4a and #4b are satisfied to 80% of their minimum values. **Note: #4c is excluded from this condition.**
 6a. Determine and list the minimum intersection sight distance for all approaches. See attached Sight Distance Forms 6b. List the posted, approach speeds on all intersection legs.
Tavern House Hill is 25mph, Ellington Road is 25mph 6c. Is there any practical method for improving the sight distance at these intersections?
7. List any other factors justifying a multiway stop.
Sight distance looking left from Ellington Rd Northbound is 145 ft.; required intersection sight distance is 280 ft. Sight distance looking right from Ellington Rd Southbound is 100 ft.; required intersection sight distance is 280 ft.
8. Has the municipality agreed to purchase, erect and maintain the signs necessary to legalize the above stop intersection at no cost to the Department
9. Has the Through Highway permit been modified
G - REMARKS
See attached Sight Distance Forms for the Ellington Road approach to the intersection. The Ellington Road approach is currently controlled by a STOP sign. The Tavern House Hill approaches are free-flow.
Sight distances looking left and right from Ellington Road Eastbound do not meet criteria defined in PennDOT Publication 13M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The sight distances are restricted by the geometry of the intersection, parked vehicles, landscaping, and the horizontal curve along Tavern House Hill.
H - ENGINEERING JUDGEMENT
All-way STOP control should be implemented at the subject intersection of Tavern House Hill and Ellington Road. STOP signs (R1-1, 30" x 30") should be placed on both Tavern House Hill approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
In addition, a STOP AHEAD sign (W3-1, 36" x 36") should be placed on the southbound Tavern House Hill approach to the intersection at a distance of 155 feet in advance of the intersection.
Details on the recommended signs, from PennDOT Publication 236 - Handbook of Approved Signs, are attached.
I - APPROVALS
Comments

Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date

1-950S 03-04) ENNDOT		SIGHT DISTANCE	NDOT PUB 70)
	TAVERN HOUSE HII	L AND ELLINGTON ROAD	APPLICATION NO
S.R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/25mph
IEASURE	BY Grove Miller	Engineering, Inc.	DATE _10/2017
OR DEPAR	RTMENT USE ONLY: Sa	fe-Running Speed	85th Percentile Speed
A	01000011110001000000000000000000000000		
		« ••••	100'
======	3.50'	145'%	····
	NCE REQUIRED	Sight Line	DRIVER'S EYE 10' EDGE OF TRAVEL LANE FSD=
3	THE MAXIMUM LENG	I I I I I I I I I I I I I I I I I I I	A DRIVER AT A DRIVEWAY LOCATION
		[]	GRADE%
(CONTINUOUSLY SEE THE	TH OF ROADWAY ALONG WHICH	A DRIVER ON THE ROADWAY CAN OCATED IN THE DRIVER'S TRAVEL LANE
2 	0 GRADE	Sight Ling	3.50
της Μα			DISTANCE REQUIRED FSD= F A VEHICLE INTENDING TO MAKE A LEFT TURN

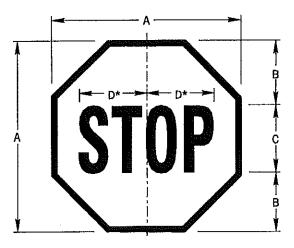
R1–1

STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to Statedesignated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways. At intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-3P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for alleys with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should stay within the edges of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the R1-1 sign.



SIGN SIZE A x A	B	C	D	BOR- DER	BLANK STD.
18" x 18"	6	6C	8	0.4	
24" x 24"	8	80	10	0.6	B124
30" x 30"	10	10C	12.6	0.8	B1–30
36" x 36"	12	12C	15	0.8	B1–36
48" x 48"	16	16C	20	1.2	B1-48

Bv :

COLOR:

LEGEND AND BORDER: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Bureau of Maintenance and Operations

She C Row Date : 02-29-12 Chief, Traffic Engineering and Permits Section

BACKGROUND: **RED (REFLECTORIZED)**

RE_1.0GN

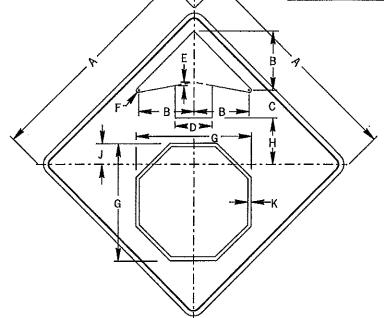
W3-1

STOP AHEAD SIGN

The Stop Ahead Sign (W3–1) will be authorized for use in advance of a stop sign when physical conditions prevent the driver from having a continuous view of the stop sign for the following distances. Advance placement distance for the W3–1 sign will be based on Department regulation. When used in a work zone, the background color shall be orange.

85th Percentile Speed MPH	Distance feet
20	115
25	155
30	200
35	250

85th Percentile Speed MPH	Distance feet
40	305
45	360
50	425
55	495
60	570



	DIMENSIONS - IN											
SIGN SIZE A x A	В	С	D	E	F	G	н	J	К	MAR- GIN	BOR- DER	BLANK STD,
18" x 18"	4.5	2.3	3	0.4	0.2	9.5	3	1.8	0.3	0.4	0.6	B3-18
36" x 36"	9	4.4	6	0.8	0,4	19	7.6	3.5	0.6	0,6	0.8	B3–36
48" x 48"	12	6	8	1	0.5	25.6	10	4.5	0.8	0.8	1.2	B3-48

By :

COLOR:

ARROW AND BORDER: BLACK (NON-REFLECTORIZED)

BACKGROUND:

YELLOW (REFLECTORIZED)

SYMBOL BORDER: WHITE (REFLECTORIZED)

SYMBOL BACKGROUND: RED (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

All C Rowe

Date : 02-29-12

Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

TAVERN HOUSE HILL AND ALLEY WAY

STOPPING, STANDING, OR PARKING RESTRICTION ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



pennsylvania DEPARTMENT OF TRANSPORTATION www.dot.state.pa.us

A - LOCATION INFORMATION			
COUNTY		MUNICIPALITY	
Cumberland			Silver Spring Township
STREET NAME		TOWNSHIP ROAD #	
Tavern House Hill at Alley W	ау		
SR#		SEGMENT	
RESTRICTED BETWEEN: Segment: Offse	t:	To Segment:	Offset:
Location:		to Locatio	in:
Tavern	House Hill	from All	ey Way to a distance of 25 feet north and south
Side of Street: EAST	WEST NORTH	🔲 солтн	
B - REFERENCE INFORMATION			
REFERENCE	SECTION(S)		
Chapter 212	212.5((b)(1)(iv) and 212.1	14(a)(c)
REFERENCE	SECTION(S)	<u> </u>	
MUTCD	2B.39.	, 2B.40, 2B.41	
REFERENCE	SECTION(S)		
Vehicle Code Title 75 Pa. C.S.	§ 3353	3 and 6109(a)(1)	
C - STUDY ELEMENTS			
FROM PUB 212 APPENDIX:			
Crash Analysis (1)	Sight Distance	ə (16)	
Capacity Analysis (6)	Traffic Volume	s (20)	
Geometric Review (8)] Other:		
D - ATTACHMENTS LISTING			
Check those that apply and attach to this form in t	7. Crash Extract	W:	13. Traffic/Pedestrian Volumes
2. Letter or Memo Requesting Study	8. Crash Rate		14. STAMPP Identification Data
3. Location Map	9. Collision Diagram	Piot	15. Speed Limit
4. Straight Line Diagram	10. Speed Study		16. Traffic Signal Permit Plan
5. Photographs	11. Warrant Analysis		17. Other
6. Field View Drawing or Condition Diagram	12. Multi-Way Stop or T	Truck Restriction Worksheet	Sight Distance Documentation

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHECK								
	<u>a</u> st							
Operational Checklist:	yley of pedestrians or approachin	a vohiolon?						
	1. Do obstructions block a driver's view of pedestrians or approaching vehicles? YES VES NO NO N/A 2. Do drivers respond correctly to signals, signs, or other traffic control devices?							
3. Is there evidence of crashes (skia								
4. Are there violations of parking or								
5. Do drivers appear confused abo								
	during peak hours for volume, cras							
7. Are there traffic flow deficiencies								
8. Are there significant delays and/				NO LIN/A				
9. Are there vehicle/pedestrians co				NO N/A				
10. Are there other traffic flow defic	lencles or traffic conflict patterns?		YES	NO 🗌 N/A				
Physical Checklist:								
1. Can sight obstructions be remov	/ed or lessened?	• • • • • • • • • • • • • • • • • •	Yes	NO N/A				
2. Do the street alignments or widtl	hs adequately accommodate the ty	ype of traffic using th	e roadway? 🖬 YES	🗌 NO 🔄 N/A				
3. Are curb radil adequate for turnit	ng vehicles?		Yes	NO N/A				
4. Are pedestrian crosswalks prope	erly located?		🖬 YES	NO N/A				
5. Are signs adequate as to usefuln	iess, message, size, conformity, ar	nd placement?	YES	NO N/A				
	placement, visibility, glare, conformity			🗌 NO 📕 N/A				
7. Are pavement markings adequat	e as to their conformance to stand	lards and location? .	Yes	🗌 NO 🔛 N/A				
8. Is channelization (islands or pave								
separating traffic flows, and defi	ning movements?		Yes	🗌 NO 🔲 N/A				
9. Does the existing legal parking legal				NO N/A				
10. Is the pavement condition free of				🗌 NO 🔲 N/A				
E OITE DATA								
F - SITE DATA	PERSON CONDUCTING STUDY		ΤΙΤΙΕ					
DATE DATA COLLECTED	PERSON CONDUCTING STUDY	ÞF	TITLE SeniorTraffic	Engineer				
	PERSON CONDUCTING STUDY Jay E. States, F	P.E.	TITLE SeniorTraffic	Engineer				
DATE DATA COLLECTED 01/2018 25	Jay E. States, F		SeniorTraffic	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				
DATE DATA COLLECTED 01/2018		9. With parking in	SeniorTraffic	les				
DATE DATA COLLECTED 01/2018 25	Jay E. States, F	 With parking in passing parket 	SeniorTraffic	sing				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is	Jay E. States, F	 With parking in passing parket In the opposite 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas	sles ssing 				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume is	Jay E. States, F	 With parking in passing parket In the opposite The existing le 	SeniorTraffic place, must opposing vehic d vehicles yield to permit pas e direction?	oles ssing Market YES DNO by a capacity analysis				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is	Jay E. States, F	 With parking in passing parked In the opposite The existing le using the peak 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas e direction?	bles ssing YES INO by a capacity analysis he left is:				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume is	Jay E. States, H	 With parking in passing parked In the opposite The existing le using the peak With parking 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas e direction?	sles ssing YES INO by a capacity analysis he left is:				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume i North Bound [] South Bound 4. Is vertical curbing present?	Jay E. States, F MPH. 	 With parking in passing parked In the opposite The existing le using the peak With parking 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas e direction?	bles asing YES NO by a capacity analysis he left is:				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume i North Bound South Bound	Jay E. States, F MPH. 	 With parking in passing parked In the opposite The existing le using the peak With parki With parki With no parki 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas e direction?	bles ssing YES INO by a capacity analysis he left is:				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume i North Bound [] South Bound 4. Is vertical curbing present?	Jay E. States, F MPH. 	 With parking in passing parked In the opposite The existing le using the peak With parki With parki With no parking 	SeniorTraffic n place, must opposing vehic d vehicles yield to permit pas e direction?	bles ssing YES INO by a capacity analysis he left is: 				
DATE DATA COLLECTED 01/2018 1. The posted speed limit is 2. The 20 ADT is 3. The 20 peak hour volume i	MPH. MPH. 	 With parking in passing parked In the opposite The existing le using the peak With parki With parki With no parking 	SeniorTraffic	bles ssing YES INO by a capacity analysis he left is: 				

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

8. Center of double yellow centerline to Left edge _____ ft.

F - SITE DATA (CONTINUED)	
12. The number of crashes within the proposed restriction either directly or indirectly attributed to one of the following as a primary cause during the past three years:	b. Cost of parking:
a. Vehicle parking on roadway	d. Days of the week restricted:
b. Vehicle entering or leaving the parked position	e. Class of vehicles restricted:
 c. Drivers or passengers entering or leaving parked vehicles on the street side	 19. Signs to be installed: (ilst each type separately) a. Sign Number from PUB. 236: (a) <u>R8-3 (24" x 24")</u> (b) <u>G20-6-1 Right (24" x 12")</u> (c) <u>G20-6-1 Left (24" x 12")</u> b. No. of signs to be installed: (a) <u>4</u> (b) <u>2</u> (c) <u>2</u>
 Loading Zone Ernergency Vehicle Driveway 14. Is the width of the shoulder sufficient to allow a vehicle 	c. Slgn message: (a) <u>No Parking Symbol</u> (b) Red Arrow Sign (Right)
 or its load to park completely off the roadway? YES NO a. Width of shoulder(s): Left ft. Right ft. 15. Does the roadway have 3 or more lanes and a speed limit of 40 MPH or more? YES NO a. Is a clear recovery area needed? YES NO 	(c) <u>Red Arrow Sign (Left)</u> 20. Are parking stalls marked? YES I NO Describe stall size, material, etc.:
16. Has an Ordinance been enacted? YES NO	
 17. State approval required? YES NO 18. Other restrictions to be imposed: Meters: 	21. Based on data indicated, parking is to be restricted from Alley Way to 25 ft. north and south
a. Time restriction is in effect:	because condition # <u>4</u> from Title 67, Chapter 212.114 Is satisfied.

G - REMARKS

Sight distance looking left and right from Alley Way with vehicles parked along east side of Tavern House Hill is less than 100 feet.

Minimum safe stopping sight distance for a vehicle on Tavern House Hill (25 MPH/-1%) = 148 feet.

H - ENGINEERING JUDGEMENT

Tavern House Hill from Alley Way for a distance of 25 feet north and south of the intersection satisfies criteria to prohibit parking on the east side. The roadway satisfies Condition 4 of Section 212.114 of PA Title 67 (Sight Distance).

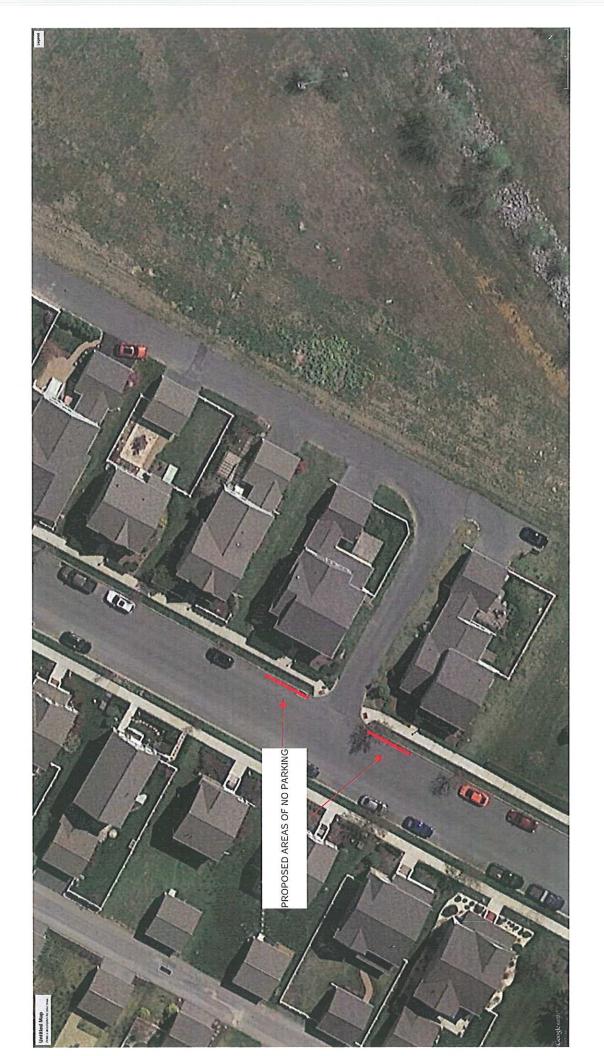
Condition 4 states that parking may be restricted along a roadway if at an intersection, the available corner sight distance for a driver on the minor road (Alley Way) is less than the necessary minimum stopping sight distance value for the driver on the through roadway (Tavern House Hill).

It is recommended that a No Parking restriction be posted on the east side of Tavern House Hill from Alley Way for a distance of 25 feet north of and 25 feet south of the intersection. A figure showing the recommended restriction area is included as an attachment to this study.

I - APPROVALS

Comments:

Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date



Dot DF		SIGHT DISTANC	CE MEASUREMENT PENNDOT PUB 70)	'S
ICANT <u>TAV</u>	VERN HOUSE HI	LL AND ALLEY WAY	APPLICATION NO	
	SEG	OFFSET	LEGAL SPEED LIMIT_	25mph/25mph
SURED BY_	Grove Miller	Engineering, Inc.	DATE _10/2017	
DEPARTME	NT USE ONLY: S	afe-Running Speed	85th Percentile Speed	
		a (and a hollow that for the second	<100'	
		<	GRADE1%, 7 (3.50')	
[3.50'	<100'		
		Sight Line"	DRIVER'S EYE 10'	EDGE OF
DISTANCE F FSD=		3.50'	DISTANCE REQUIRED	TRAVEL LANE
тн			L CH A DRIVER AT A DRIVEWAY LOCATI APPROACHING ON THE ROADWAY.	ION
		· · · · · · · · · ·	GRADE%	3.50'
		=======================================		
		± 1	DISTANCE REQUIRED	
-	NUOUSLY SEE THE	GTH OF ROADWAY ALONG WHE REAR OF A VEHICLE WHICH	IICH A DRIVER ON THE ROADWAY CA IS LOCATED IN THE DRIVER'S TRAVE LEFT TURN INTO A DRIVEWAY.	
		ourtht line _ of	3.50'	
3.50'	GRADE			
		Ì	DISTANCE REQUI	RED
	GRADE	DWAY ALONG WHICH A DRIVE		EAI

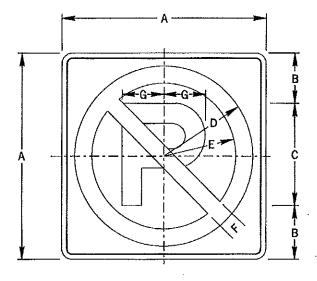
INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3) shall be authorized for use to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Plaque (R10-20AP), No Parking Restricted Hours Plaque (R8-3HP-1), No Parking Loading Zone Plaque (R8-3GP-1), No Parking Arrow Plaque (R7-301), Tow-Away Zone Sign (R7-201AP) and No Parking On Pavement Sign (R8-3CP). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3 sign shall be 12" x 12" in business, residential, or park areas and 24" x 24" in rural areas. The standard size for expressways shall be 36" x 36", and on freeways shall be 48" x 48".

(c) Placement. Signs should be set at an angle of not less than 30° or more than 45° with a line parallel to the flow of traffic so as to be visible to approaching traffic. Care should be taken to ensure that supplemental arrows point in the proper direction to indicate the regulated area. Signs shall be placed at the beginning of and at reasonable intervals throughout the restriction.



DIMENSIONS - IN									
SIGN SIZE A x A	В	С	D	E	F	G	MAR- GIN	BOR DER	BLANK STD.
12" x 12"	3	6E(M)	4.9	3.9	1	2.4	0.4	0.4	<u> </u>
24* x 24"	6	12E(M)	10.5	8.5	2	4.8	0.4	0.6	B3–24
36" x 36"	9	18E(M)	15.8	12.8	3	7.2	0.6	0.8	B3-36
48" x 48"	12	24E(M)	21	17	4	9.6	0.8	1.2	B3-48

By :

COLOR:

SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)

CIRCLE AND DIAGONAL: RED (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Row Date : 02--29--12

BACKGROUND: WHITE (REFLECTORIZED)

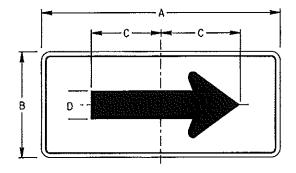
Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

G20-6-1

RED ARROW SIGN

(a) Justification. The Red Arrow Sign (G20-6-1) may be used to mark a detour where the Detour Follow Red Arrow Sign (G20-6) is used. Another color is authorized where two or more detours overlap.

(b) Placement. This sign shall be mounted next to the word "FOLLOW" and indicate the direction of the detour.



NOTE: SEE STANDARD ARROW FOR DIMENSIONS OF ARROWHEAD

DIMENSIONS - IN						
SIGN SIZE A x B	С	D	MAR- GIN	BOR- DER	BLANK STD.	
24" x 12"	8	2.8	0.4	0,4	B5–2412	

COLOR:

ARROW AND BORDER: **RED (NON-REFLECTORIZED)**

BACKGROUND: WHITE (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Rowe

Date : 02-29-12 Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

SUMMER LANE AND BRYANT STREET

STOPPING, STANDING, OR PARKING RESTRICTION ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



Pennsylvania DEPARTMENT OF TRANSPORTATION WWW.dot.state.pa.us

A - LOCATION INFORMATION				
COUNTY	MUNICIPALITY			
Cumberland	Silver Spring Township			
STREET NAME	TOWNSHIP ROAD #			
Summer Lane and Bryant Street				
SR#	SEGMENT			
RESTRICTED BETWEEN: Segment: Offset:	To Segment: Offset:			
Location:	to Location:			
Summer Lane	from Bryant St to a distance of 25 feet north and south			
Side of Street: 🔲 EAST 🔛 WEST 🗌 NO	ятн 🔲 south			
B - REFERENCE INFORMATION				
REFERENCE SECTION(S)				
Chapter 212 212	2.5(b)(1)(iv) and 212.114(a)(c)			
REFERENCE SECTION(S)				
MUTCD 2B.	39 , 2B .40, 2B .41			
REFERENCE SECTION(S)				
Vehicle Code Title 75 Pa. C.S. § 33	353 and 6109(a)(1)			
C - STUDY ELEMENTS				
FROM PUB 212 APPENDIX:				
Crash Analysis (1)	ance (16)			
Capacity Analysis (6)				
Geometric Review (8)				
D - ATTACHMENTS LISTING				
Check those that apply and attach to this form in the order listed b 1. 10-Day Response Letter 7. Crash Extract				
2. Letter or Memo Requesting Study	14. STAMPP Identification Data			
🔲 3. Location Map				
4. Straight Line Diagram 10. Speed Study	16. Traffic Signal Permit Plan			
5. Photographs 📃 11. Warrant Analy				
6. Field View Drawing or Condition Diagram 12. Multi-Way Stop	or Truck Restriction Worksheet Sight Distance Documentation			

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHECKLIST										
Operational Checklist;	· · ·				□ N/A					
	 Do obstructions block a driver's view of pedestrians or approaching vehicles? Do drivers respond correctly to signals, signs, or other traffic control devices? 									
, <u> </u>	_		∐ N/A ∏ N/A							
	3. Is there evidence of crashes (skid marks, property damage, tree/bush damage, broken glass/vehicle parts, etc.)?									
	4. Are there violations of parking or other traffic regulations?									
	 Do drivers appear confused about routes, street names, or other guidance information?									
,	es or traffic conflict patterns associ		_		∐ N/A □ N/A					
	d/or congestion?	*								
	conflicts?									
	clencles or traffic conflict patterns?									
	olonoloo or traino oonnor parterne.	* * * * * 4 * * * * * * * * * * * * * *								
Physical Checklist:	· · ·			ΠNO	∏ N/A					
	1. Can sight obstructions be removed or lessened? YES									
	Iths adequately accommodate the t		· _							
. •	hing vehicles?				∐ N/A					
	perly located?				□ N/A					
- ·	iness, message, size, conformity, a		_		□ N/A					
÷ ,	placement, visibility, glare, conformity	•	· • —		N/A					
	ate as to their conformance to stand		YEŞ		N/A					
	vement markings) adequate for redu fining movements?	-		Пио						
	layout affect sight distance for thro									
	of potholes, washboard, slick surfa		Ξ		∐ N/A □ N/A					
	of puttoles, washbuaru, shuk suna	100, etc. /	160							
F - SITE DATA										
DATE DATA COLLECTED	PERSON CONDUCTING STUDY		TITLE SeniorTraffic Engineer							
01/2018	Jay E. States, I	Ρ.Ε.	Serior tranic	Engineer	-					
25										
1. The posted speed limit is	МРН.	 9. With parking in place, must opposing vehicles passing parked vehicles yield to permit passing in the opposite direction?								
2. The 20 ADT is										
			vel of service as determined		_					
3. The 20 peak hour volume	e is: d East Bound West Bound	using the peak hour volumes indicated to the left is:								
		With parking (one side)								
4. Is vertical curbing present?		With parking (both sides)								
5. Number of lanes		With no pa	rking		·					
5. Number of lattes	, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , ,, , , ,, , , ,, , , , , , , , , , , , , , , , , , , ,		st the minimum corner sight dis		• •					
6. Roadway width	ft.	to all intersection	ns within the proposed restrict	ion and ind	icate below:					
7. Center of double yellow centerlin	to Blass adapt	See Section G								
7. Center of double yealow centeria	18 to Right eage h.									
8. Center of double yellow centerline to Left edge ft.										

F - SITE DATA (CONTINUED)	
12. The number of crashes within the proposed restriction either directly or indirectly attributed to one of the following as a primary cause during the past three years:	er b. Cost of parking:
a. Vehicle parking on roadway	d. Days of the week restricted:
b. Vehicle entering or leaving the parked position .	e. Class of vehicles restricted:
 c. Drivers or passengers entering or leaving parked vehicles on the street side	a. Sign Number from PUB, 236: (a)
 13. Does the area contain any of the following: Official Bus Stop Loading Zone Emergency Vehicle Driveway 14. Is the width of the shoulder sufficient to allow a vehicle 	 b. No. of signs to be installed: (a) 4 (b) 2 (c) 2 c. Sign message: (a) No Parking Symbol (b) Red Arrow Sign (Right)
or its load to park completely off the roadway? YES	NO (c) Red Arrow Sign (Left) ft. 20. Are parking stalls marked? YES NO
and a speed limit of 40 MPH or more? YES a. Is a clear recovery area needed? YES [
16. Has an Ordinance been enacted? 🏼 YES	
17. State approval required? YES	NO
18. Other restrictions to be imposed: Meters:	21. Based on data indicated, parking is to be restricted from Bryant Street to 25 ft. north and south
a. Time restriction is in effect:	because condition # _4 from Title 67, Chapter 212.114 is satisfied.

G - REMARKS

Sight distance looking left and right from Bryant Street with vehicles parked along west side of Summer Lane is approximately 100 feet.

Minimum safe stopping sight distance for a vehicle on Summer Lane (25 MPH/-1%) = 148 feet.

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

H - ENGINEERING JUDGEMENT

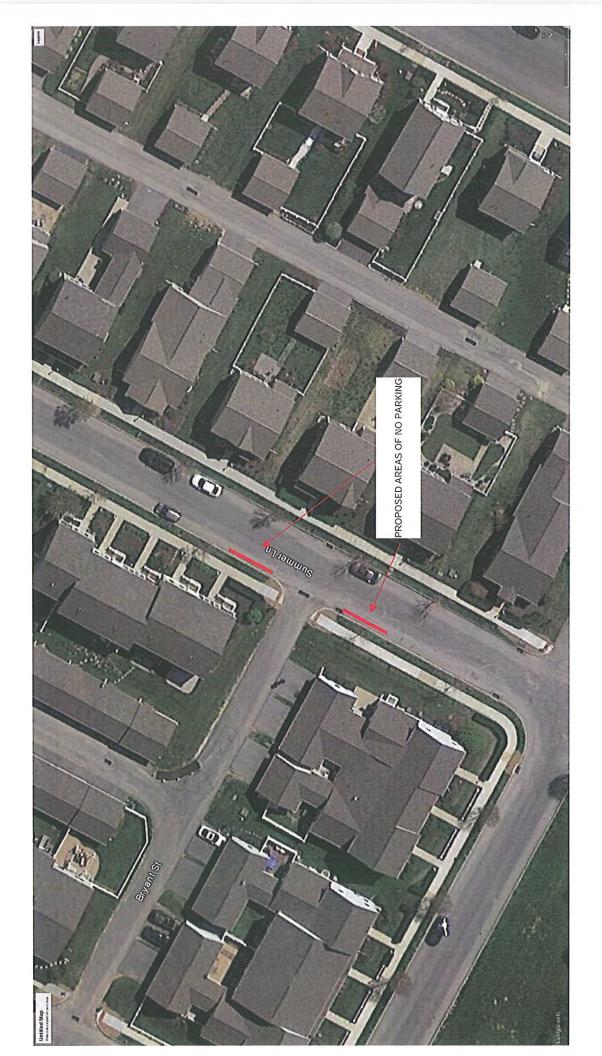
Summer Lane from Bryant Street for a distance of 25 feet north and south of the intersection satisfies criteria to prohibit parking on the west side. The roadway satisfies Condition 4 of Section 212.114 of PA Title 67 (Sight Distance).

Condition 4 states that parking may be restricted along a roadway if at an intersection, the available corner sight distance for a driver on the minor road (Bryant Street) is less than the necessary minimum stopping sight distance value for the driver on the through roadway (Summer Lane).

It is recommended that a No Parking restriction be posted on the west side of Summer Lane from Bryant Street for a distance of 25 feet north of and 25 feet south of the intersection. A figure showing the recommended restriction area is included as an attachment to this study.

I - APPROVALS

Comments:		
Reviewed and Approved by Signature	Name/Title	D-1-
neviewed and Approved by Signature	TVALIGY 1 SUB	Date
Reviewed and Approved by Signature	Name/Title	Date
notioned and opproved by orginature	1142/1307 11110	
This traffic engineering and safety study	r is confidential pursuant to 75 Pa. C.S. 3754 a	nd 23 U.S.C. 409 and may not be
disclosed of use	d in litigation without written permission from	Pennuul.



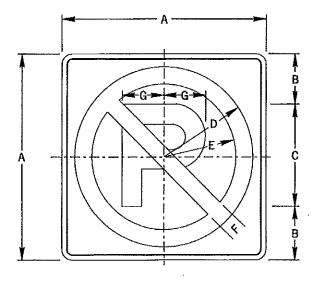
PLICATION NO EGAL SPEED LIMIT_25mph/15m DATE _10/2017 Percentile Speed %, 7 3.50' %, 7 3.50' %, 7 3.50' %, 7 3.50' %, 7 3.50' %, 7 3.50' % ER'S EYE 10' EDGE OF TRAVEL LAI NCE REQUIRED
DATE _ 10/2017 Percentile Speed %, 7 3.50' ER'S EYE 10' EDGE OF TRAVEL LAN NCE REQUIRED T A DRIVEWAY LOCATION
Percentile Speed
SEYE 10' ER'S EYE 10' EDGE OF TRAVEL LAN NCE REQUIRED
T A DRIVEWAY LOCATION
T A DRIVEWAY LOCATION
EDGE OF TRAVEL LAI NCE REQUIRED
EDGE OF TRAVEL LAI NCE REQUIRED
TRAVEL LAI NCE REQUIRED
RADE%
UIRED
ON THE ROADWAY CAN
THE DRIVER'S TRAVEL LANE D A DRIVEWAY.
0'1
DISTANCE REQUIRED
1

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3) shall be authorized for use to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Plaque (R10-20AP), No Parking Restricted Hours Plaque (R8-3HP-1), No Parking Loading Zone Plaque (R8-3GP-1), No Parking Arrow Plaque (R7-301), Tow-Away Zone Sign (R7-201AP) and No Parking On Pavement Sign (R8-3CP). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3 sign shall be 12" x 12" in business, residential, or park areas and 24" x 24" in rural areas. The standard size for expressways shall be 36" x 36", and on freeways shall be 48" x 48".

(c) Placement. Signs should be set at an angle of not less than 30° or more than 45° with a line parallel to the flow of traffic so as to be visible to approaching traffic. Care should be taken to ensure that supplemental arrows point in the proper direction to indicate the regulated area. Signs shall be placed at the beginning of and at reasonable intervals throughout the restriction.



DIMENSIONS - IN									
SIGN SIZE A x A	В	С	D	E	F	G	MAR- GIN	BOR- DER	BLANK STD.
12" x 12"	3	6E(M)	4.9	3.9	1	2.4	0.4	0.4	
24" x 24"	6	12E(M)	10.5	8.5	2	4.8	0.4	0.6	B3-24
36" x 36"	9	18E(M)	15.8	12.8	3	7.2	0.6	0.8	B3–36
48" x 48"	12	24E(M)	21	17	4	9.6	0.8	1.2	B3-48

By :

COLOR:

SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)

CIRCLE AND DIAGONAL: RED (REFLECTORIZED)

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Date : 02-29-12

Sh C Row

Chief, Traffic Engineering and Permits Section

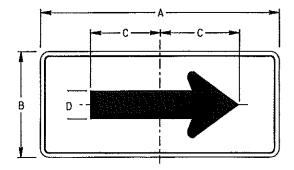
Bureau of Maintenance and Operations

G20-6-1

RED ARROW SIGN

(a) Justification. The Red Arrow Sign (G20-6-1) may be used to mark a detour where the Detour Follow Red Arrow Sign (G20-6) is used. Another color is authorized where two or more detours overlap.

(b) Placement. This sign shall be mounted next to the word "FOLLOW" and indicate the direction of the detour.



NOTE: SEE STANDARD ARROW FOR DIMENSIONS OF ARROWHEAD

DIMENSIONS - IN							
SIGN SIZE C D MAR- BOR- BLANK A x B C D GIN DER STD.							
24" x 12"	8	2.8	0.4	0.4	B5-2412		

COLOR:

ARROW AND BORDER: **RED (NON-REFLECTORIZED)**

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Rowe

By : ______ Date : 02-29-12 Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

EMERSON WAY AND CAIN ALLEY

STOPPING, STANDING, OR PARKING RESTRICTION ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



DEPARTMENT OF TRANSPORTATION www.dot.state.pa.us

A - LOCATION INFORMATION					
COUNTY		MUNICIPALITY			
Cumberland		Silver Spring Township			
STREET NAME		TOWNSHIP ROAD #			
Emerson Way and Cain A	lev				
SR#		SEGMENT			
RESTRICTED BETWEEN: Segment: Of	fset:	To Segment:	Offset:		
Location:		to Location	n:		
Eme	erson Way	from Ca	in Alley to a distance of 25 feet east and west		
Side of Street: EAST] west 📕 North	_			
B - REFERENCE INFORMATION					
REFERENCE	SECTION(S)				
Chapter 212		(b)(1)(iv) and 212.1	14(a)(c)		
REFERENCE	SECTION(S)				
MUTCD		, 2B.40, 2B.41			
REFERENCE	SECTION(S)	,,			
Vehicle Code Title 75 Pa. C.S		3 and 6109(a)(1)			
C - STUDY ELEMENTS					
FROM PUB 212 APPENDIX:					
Crash Analysis (1)	Sight Distance				
Capacity Analysis (6)	Traffic Volume	es (20)			
Geometric Review (8)	Other:	· · · · · · · · · · · · · · · · · · ·			
D - ATTACHMENTS LISTING					
Check those that apply and attach to this form i	n the order listed belo	w:			
1. 10-Day Response Letter	7. Crash Extract		13. Traffic/Pedestrian Volumes		
2. Letter or Memo Requesting Study	3. Crash Rate		14. STAMPP Identification Data		
3. Location Map	9. Collision Diagram	n Plot	15. Speed Limit		
🛄 4. Straight Line Diagram	10. Speed Study		16. Traffic Signal Permit Plan		
5. Photographs	11. Warrant Analysis		17. Other		
6. Field View Drawing or Condition Diagram	12. Multi-Way Stop or	Truck Restriction Worksheet	Sight Distance Documentation		

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHEC	KLIST						
Operational Checklist:	NLIOI						
	s view of pedestrians or approaching	na vehicles?	VES	Пио	□ N/A		
	signals, signs, or other traffic cont				□ N/A		
	id marks, property damage, tree/bush da				□ N/A		
	or other traffic regulations?				□ N/A		
	out routes, street names, or other g			NO			
	during peak hours for volume, or						
	es or traffic conflict patterns associ						
8. Are there significant delays and				NO			
	onflicts?				□ 0/6 □ N/A		
	ciencies or traffic conflict patterns?				□ N/A		
	solicios of frame connect patients						
Physical Checklist:							
	ved or lessened?				□ N/A		
	ths adequately accommodate the t				□ N/A		
	ing vehicles?				□ N/A		
	erly located?				□ N/A		
	ness, message, size, conformity, a				□ N/A		
	placement, visibility, glare, conformit				N/A		
7. Are pavement markings adequa	ite as to their conformance to stan	dards and location? .	Yes	DNO 🗌	N/A		
	vement markings) adequate for red		_		_		
	fining movements?				□ N/A		
9. Does the existing legal parking				NO NO	□ N/A		
10. Is the pavement condition free	of potholes, washboard, slick surfa	ace, etc.?	YES	ОИ	🗌 N/A		
F - SITE DATA							
DATE DATA COLLECTED	PERSON CONDUCTING STUDY		TITLE				
01/2018	Jay E. States,	P.E.	SeniorTraffic	Enginee			
1. The posted speed limit is	MPH.	9 With perking in	place, must opposing vehic	loc			
			d vehicles yield to permit pas				
2. The 20 ADT is		in the opposite	direction?	. 📕 YES	🗌 NO		
3. The 20 peak hour volume	is:	10. The existing level of service as determined by a capacity analysis					
North Bound South Bound		the peak hour volumes indicated to the left is:					
		With parking (one side)					
4. Is vertical curbing present?		With parking (both sides)					
5. Number of lanes			arking				
E			ist the minimum corner sight di ons within the proposed restrict				
6. Roadway width	ft.				JOGIO DOIOW.		
7. Center of double yellow centerlin	e to Right edge ft.	See Section	G				
8. Center of double yellow centerlin	e to Left edge ft.						

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

F - SITE DATA (CONTINUED)	
12. The number of crashes within the proposed restriction either	b. Cost of parking:
directly or indirectly attributed to one of the following as a primary cause during the past three years:	c. Hours of day restricted:
a. Vehicle parking on roadway	d. Days of the week restricted:
b. Vehicle entering or leaving the parked position	e. Class of vehicles restricted:
c. Drivers or passengers entering or leaving parked vehicles on the street side	19. Signs to be installed: (list each type separately)
d. Reduced sight distance due to the parked vehicles	a. Sign Number from PUB. 236: (a) R8-3 (24" x 24")
e. Other	(a)(b) G20-6-1 Right (24" x 12")
f. TOTAL number of parking-related crashes	(o) <u>G20-6-1 Left (24" x 12")</u>
13. Does the area contain any of the following: Official Bus Stop	b. No. of signs to be installed: (a) <u>4</u> (b) <u>2</u> (c) <u>2</u>
	c. Sign message:
Emergency Vehicle Driveway	(a) No Parking Symbol
14. Is the width of the shoulder sufficient to allow a vehicle	_(b) Red Arrow Sign (Right)
or its load to park completely off the roadway? 🗌 YES 📕 NO	Red Arrow Sign (Left)
a. Width of shoulder(s): Left ft. Right ft.	(c) Red Arrow Sign (Left)
 15. Does the roadway have 3 or more lanes and a speed limit of 40 MPH or more? YES INO a. Is a clear recovery area needed? YES INO 	20. Are parking stalls marked?
16. Has an Ordinance been enacted?	
17. State approval required? YES 🔛 NO	
18. Other restrictions to be imposed: Meters:	21. Based on data Indicated, parking is to be restricted from <u>Emerson Way</u> to <u>25 ft. east and west</u>
a. Time restriction is in effect:	because condition # _4 from Title 67, Chapter 212.114 is satisfied.

G - REMARKS

Sight distance looking left and right from Cain Alley with vehicles parked along north side of Emerson Way is less than 100 feet.

Minimum safe stopping sight distance for a vehicle on Emerson Way (25 MPH/0%) = 149 feet.

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

H - ENGINEERING JUDGEMENT

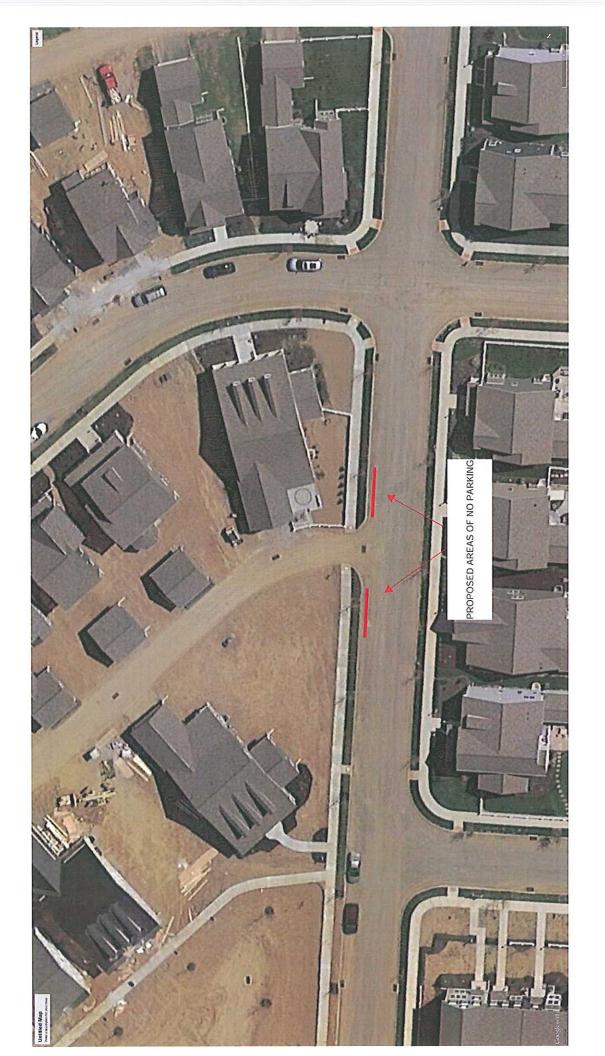
Emerson Way from Cain Alley for a distance of 25 feet east and west of the intersection satisfies criteria to prohibit parking on the north side. The roadway satisfies Condition 4 of Section 212.114 of PA Title 67 (Sight Distance).

Condition 4 states that parking may be restricted along a roadway if at an intersection, the available corner sight distance for a driver on the minor road (Cain Alley) is less than the necessary minimum stopping sight distance value for the driver on the through roadway (Emerson Way).

It is recommended that a No Parking restriction be posted on the north side of Emerson Way from Cain Alley for a distance of 25 feet east of and 25 feet west of the intersection. A figure showing the recommended restriction area is included as an attachment to this study.

I - APPROVALS

Comments:			
Reviewed and Approved by Signature	Name/Title		Date
Reviewed and Approved by Signature	Name/Title		Date
This traffic engineering and safety study disclosed or used	is confidential pursuant to 75 Pa. C.S. 3754 I in litigation without written permission from	and 23 U.S.C. 409 and may PennDOT.	not be



M-950S (03-04) PENNDOT		SIGHT DISTANC LOCAL ROADS, USE P	E MEASUREMENTS ENNDOT PUB 70)
APPLICAN	EMERSON WAY AND	CAIN ALLEY	APPLICATION NO
S.R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/15mph
MEASUREI) BY Grove Miller	Engineering, Inc.	DATE _10/2017
FOR DEPA	RTMENT USE ONLY: Sa	ife-Running Speed	85th Percentile Speed
			GRADE -2 % 7 3.50'
		GRADE +2 %	GRADE
	NCE REQUIRED	3.50	DISTANCE REQUIRED
[]			H A DRIVER AT A DRIVEWAY LOCATION APPROACHING ON THE ROADWAY.
		(GRADE%
	CONTINUOUSLY SEE THE	TH OF ROADWAY ALONG WHI	STANCE REQUIRED SD= CH A DRIVER ON THE ROADWAY CAN S LOCATED IN THE DRIVER'S TRAVEL LANE EFT TURN INTO A DRIVEWAY.
[3.5	GRADE	Sight Line	DISTANCE REQUIRED FSD=

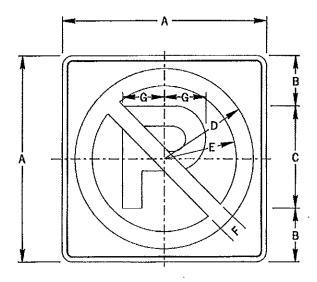
R8–3

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3) shall be authorized for use to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Plaque (R10-20AP), No Parking Restricted Hours Plaque (R8-3HP-1), No Parking Loading Zone Plaque (R8-3GP-1), No Parking Arrow Plaque (R7-301), Tow-Away Zone Sign (R7-201AP) and No Parking On Pavement Sign (R8-3CP). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3 sign shall be 12" x 12" in business, residential, or park areas and 24" x 24" in rural areas. The standard size for expressways shall be 36" x 36", and on freeways shall be 48" x 48".

(c) Placement. Signs should be set at an angle of not less than 30° or more than 45° with a line parallel to the flow of traffic so as to be visible to approaching traffic. Care should be taken to ensure that supplemental arrows point in the proper direction to indicate the regulated area. Signs shall be placed at the beginning of and at reasonable intervals throughout the restriction.



DIMENSIONS - IN									
SIGN SIZE A x A	В	С	D	E	F	G	MAR- GIN	BOR- DER	BLANK STD.
12" x 12"	3	6E(M)	4.9	3.9	1	2.4	0,4	0.4	
24" x 24"	6	12E(M)	10.5	8.5	2	4.8	0.4	0.6	B3-24
36" x 36"	9	18E(M)	15.8	12.8	3	7.2	0.6	0.8	B3-36
48" x 48"	12	24E(M)	21	17	4	9.6	0.8	1.2	B3-48

By :

COLOR:

- SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)
- CIRCLE AND DIAGONAL: RED (REFLECTORIZED)

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Row Date : 02-29-12

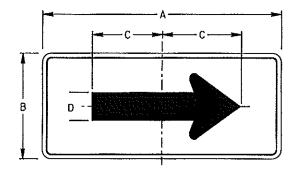
Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

G20-6-1

RED ARROW SIGN

(a) Justification. The Red Arrow Sign (G20-6-1) may be used to mark a detour where the Detour Follow Red Arrow Sign (G20-6) is used. Another color is authorized where two or more detours overlap.

(b) Placement. This sign shall be mounted next to the word "FOLLOW" and indicate the direction of the detour.



NOTE: SEE STANDARD ARROW FOR DIMENSIONS OF ARROWHEAD

DIMENSIONS - IN							
SIGN SIZE C D MAR- BOR- BLANK A x B C D GIN DER STD.							
24" x 12"	8	2.8	0.4	0.4	B5–2412		

By :

COLOR:

ARROW AND BORDER: **RED (NON-REFLECTORIZED)**

BACKGROUND: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

All C. Rowe

Date : 02-29-12

Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

TAVERN HOUSE HILL AND SUTHERLAND WAY

TE-102 (8-09)

MULTIWAY STOP CONTROL AT INTERSECTIONS ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



A - LOCATION INFORMATION					
COUNTY		MUNICIPALITY			
Cumberland		Silver Spring Township			
SR#	TR#	STREET NAME			
		Tavern House Hill			
STATION	I	LOCATION			
MINOR STREET INFORMATION					
SR#	TR#	STREET NAME			
STATION		Sutherland Way			
B - REFERENCE INFORMATION					
REFERENCE	SECTION(S)				
Chapter 212	212.106	(c)			
REFERENCE	SECTION(S)				
MUTCD	2B.07, 3	B.16			
REFERENCE	SECTION(S)				
Vehicle Code Title 75 Pa. C	2.S. §3323, 6	5109(a)(6) and 6124			
C - STUDY ELEMENTS					
FROM PUB 212 APPENDIX:					
🔲 Crash Analysis (1)	Pedestrian Volumes	(12) Traffic Volumes (20)			
Acceleration Lane (2)	Sight Distance (16)	Other			
Geometric Review (8)	Speed Data (17)				
D - ATTACHMENTS LISTING Check those that apply and attach to this	form in the order listed hele				
1. 10 Day Response Letter	7. Crash Extract	13. Traffic/Pedestrian Volumes			
2. Letter or Memo Requesting Study		☐ 14. STAMPP Identification Data			
3. Location Map	9. Crash Plot	☐ 15. Speed Permit			
4. Straight Line Diagram	 10. Speed Study	16. Other Sight Distance Evaluation			
5. Photographs	11. Warrant	Documentation			
6. Field View Drawing	12. Multi-Way Stop or Truck F	······································			

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHE	CKLIST			
Operational Checklist:				
1. Do obstructions block the drive	ers' view of approaching vehicles?	YES	ΠNO	□n/a
2. Do drivers respond correctly to	o signals, signs, or other traffic control devices?	YES	ПNО	□n/a
3. Is there evidence of crashes (s	skid marks, property damage, tree/bush damage, broken glass/ve	ohicle parts, etc.)? 🛄 YES	NO	□n/a
4. Are there violations of parking	regulations or other traffic movements?	Yes	NO	□n/A
5. Do drivers appear confused al	pout routes, street names, or other guidance information	?PYES	NO	□ N/A
6. Have you observed the location	n during peak hours for volume and crashes?	YES	□ NO	🗌 N/A
7. Are there traffic flow deficience	es or traffic conflict patterns associated with turning mov	ements? YES	NO	□n/A
8. Is there significant delays and	/or congestion?	Yes	NO	🗌 N/A
9. Do pedestrian movements thro	bugh the location cause conflicts?	Yes	NO	□ N/A
10. Are there other traffic flow def	iciencies or traffic conflict patterns?	Yes	NO NO	[_] N/A
Physical Checklist:				
1. Can sight obstructions be rem	oved or lessened? ,	Yes	NO	□ N/A
2. Do the street alignments or with	dths adequately accommodate the type of traffic using th	e roadway? 🛛 🔤 YES	⊡ио	🗌 N/A
3. Are curb radii adequate for tur	ning vehicles?	YES	□ NO	🗌 N/A
4. Are pedestrian crosswalks pro	perly located?	YES	□ NO	🗌 N/A
5. Are signs adequate as to useful	ulness, message, size, conformity, and placement?		□ио	🗌 N/A
6. Are traffic signals adequate as	to placement, visibility, glare, conformity, number of sigr	al heads, or timing? □YES	ПNO	N/A
7. Are pavement markings adequ	ate as to their conformance to standards and location?.	Yes	ΠNΟ	N/A
8. Is channelization (islands or pa	aint markings) adequate for reducing conflict areas,			
separating traffic flows, and de	fining movements?	Yes	ПNO	N/A
9. Does the existing legal parking	a layout affect sight distance for through or turning vehicle	es?YES	□ №	□n/a
10. Is the pavement condition free	e of potholes, washboard, slick surface, etc.?	Yes	ПNO	🗌 N/A
F - SITE DATA				
DATE DATA COLLECTED	PERSON CONDUCTING STUDY	TITLE		
01/2018	Jay E. States, P.E.	Senior Traffic Engineer		
1 le the multivery step house installe	ad as an inform managura until the signal approval and in	dellation is completed?		
1. Is the moniway stop being instance	ed as an interim measure until the signal approval and ins	stallation is completed (. 🗆 (ES	NO NO
2. List the number of crashed for the	previous 12 month period by type and/or causation fact	or. **This may include non-rep	ortable cra	shes.**
3. 85th percentile speed of major ap	proach is MPH.			
	ing the intersection from the major street approaches av		-	Technol .
•••••••••••••••••••••••••••••••••••••••	• • • • • • • • • • • • • • • • • • • •		. LIYES	NO
	edestrian and bicycle volume from the minor street appro- or-street vehicular traffic of at least 30 seconds per vehic			ame 8
4c. If #3 > 40 MPH, then the minimu	m vehicular volume warrants are 70% of 4a and 4b.			
	nd safety study is confidential pursuant to 75 Pa. C.S. 37 lisclosed or used in litigation without written permission fi		y not be	

Page 2	of	3	
--------	----	---	--

- SITE DATA (CONTINUED) . Where #2, #4a and #4b are satisfied to 80% of their minimum values. **Note: #4c is excluded from this condition.**
a. Determine and list the minimum intersection sight distance for all approaches. See attached Sight Distance Forms b. List the posted, approach speeds on all intersection legs.
Tavern House Hill is 25mph, Sutherland Way is 25mph . Is there any practical method for improving the sight distance at these intersections?
List any other factors justifying a multiway stop.
Sight distance looking left from Sutherland Way Northbound is 260 ft.; required intersection sight distance is 280 ft. Sight distance looking right from Sutherland Way Southbound is 110 ft.; required intersection sight distance is 280 ft.
. Has the municipality agreed to purchase, erect and maintain the signs necessary to legalize the above stop intersection at no cost to the Department
Has the Through Highway permit been modified
- REMARKS
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is urrently controlled by a STOP sign. The Tavern House Hill approaches are free-flow.
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is urrently controlled by a STOP sign. The Tavern House Hill approaches are free-flow. ight distances looking left and right from Sutherland Way Eastbound do not meet criteria defined in PennDOT Publication 3M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is urrently controlled by a STOP sign. The Tavern House Hill approaches are free-flow. ight distances looking left and right from Sutherland Way Eastbound do not meet criteria defined in PennDOT Publication 3M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The ight distances are restricted by parked vehicles and the horizontal curve along Tavern House Hill.
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is urrently controlled by a STOP sign. The Tavern House Hill approaches are free-flow. ight distances looking left and right from Sutherland Way Eastbound do not meet criteria defined in PennDOT Publication 3M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The
ee attached Sight Distance Forms for the Sutherland Way approach to the intersection. The Sutherland Way approach is urrently controlled by a STOP sign. The Tavern House Hill approaches are free-flow. ight distances looking left and right from Sutherland Way Eastbound do not meet criteria defined in PennDOT Publication 3M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The ight distances are restricted by parked vehicles and the horizontal curve along Tavern House Hill.

intersection at a distance of 155 feet in advance of the intersection.

Details on the recommended signs, from PennDOT Publication 236 - Handbook of Approved Signs, are attached.

I - APPROVALS

Comments

Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

M-950S (03-04) PENNDOT		IGHT DISTANC	E MEASUREMENTS ENNDOT PUB 70)
APPLICANT	TAVERN HOUSE HILL AN	D SUTHERLAND WAY	APPLICATION NO
S.R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/25mph
MEASURED	BY_Grove Miller E	ngineering, Inc.	DATE _ 10/2017
FOR DEPAF	RTMENT USE ONLY: Saf	e-Running Speed	85th Percentile Speed
A			
		ح مد، _{مر}	← 110' GRADE1%, 7 € [3.50]
	3.50'		····
	NCE REQUIRED	Sight Ling "	DRIVER'S EYE 10' EDGE OF TRAVEL LANE FSD=
B	THE MAXIMUM LENGT		I CH A DRIVER AT A DRIVEWAY LOCATION APPROACHING ON THE ROADWAY.
			GRADE%
	ONTINUOUSLY SEE THE F	I F TH OF ROADWAY ALONG WH REAR OF A VEHICLE WHICH I	ISTANCE REQUIRED SD= ICH A DRIVER ON THE ROADWAY CAN S LOCATED IN THE DRIVER'S TRAVEL LANE .EFT TURN INTO A DRIVEWAY.
	GRADE	Sight Line	
			DISTANCE REQUIRED FSD=

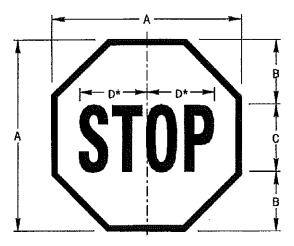
R1-1

STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to Statedesignated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways. At intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-3P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for alleys with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should stay within the edges of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the RI-1 sign.



SIGN SIZE A x A	В	С	D	BOR- DER	BLANK STD.
18" x 18"	6	6C	8	0.4	
24" x 24"	8	8C	10	0.6	B1-24
30" x 30"	10	10C	12.6	0.8	B1–30
36" x 36"	12	12C	15	0.8	B1-36
48" x 48"	16	16C	20	1.2	B1-48

COLOR:

LEGEND AND BORDER: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sh C Rowe Date : 02-29-12 Chief, Traffic Engineering and Permits Section

BACKGROUND: **RED (REFLECTORIZED)**

Bureau of Maintenance and Operations

By :

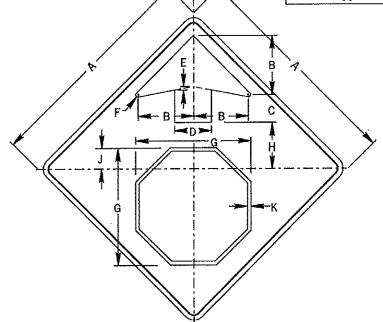
W3-1

STOP AHEAD SIGN

The Stop Ahead Sign (W3-1) will be authorized for use in advance of a stop sign when physical conditions prevent the driver from having a continuous view of the stop sign for the following distances. Advance placement distance for the W3-1 sign will be based on Department regulation. When used in a work zone, the background color shall be orange.

85th Percentile Speed MPH	Distance feet
20	115
25	155
30	200
35	250

85th Percentile Speed MPH	Distance feet
40	305
45	360
50	425
55	495
60	570



					DIN	IENSIO	NS – I	N				
SIGN SIZE A x A	В	С	D	E	F	G	н	J	к	MAR- GIN	BOR- DER	BLANK STD,
18" x 18"	4.5	2.3	3	0.4	0.2	9.5	3	1.8	0.3	0.4	0.6	B3-18
36" x 36"	9	4.4	6	0.8	0.4	19	7.6	3.5	0.6	0.6	0.8	B3-36
48" x 48"	12	6	8	1	0.5	25,6	10	4.5	0.8	0.8	1.2	B3–48

By a

COLOR:

ARROW AND BORDER: **BLACK (NON-REFLECTORIZED)**

BACKGROUND:

YELLOW (REFLECTORIZED)

SYMBOL BORDER: WHITE (REFLECTORIZED)

SYMBOL BACKGROUND: **RED (REFLECTORIZED)** APPROVED FOR THE SECRETARY OF TRANSPORTATION

She C Rowe

Date : 02-29-12

Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

TAVERN HOUSE HILL AND STONE BARN ROAD

MULTIWAY STOP CONTROL AT INTERSECTIONS ENGINEERING AND TRAFFIC STUDY

PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK



A - LOCATION INFORMATION				
Cumberland	4			
MAJOR STREET INFORMATION	4	Silver Spring Township		
SR#	TR#	STREET NAME		
		Tavern House Hill		
STATION		LOCATION		
MINOR STREET INFORMATION				
SR#	TR#	STREET NAME		
		Stone Barn Road		
STATION		LOCATION		
B - REFERENCE INFORMATION				
REFERENCE Chapter 212	SECTION(S) 212.106			
Chapter 212	SECTION(S)			
MUTCD	2B.07, 3	B.16		
REFERENCE	SECTION(S)			
Vehicle Code Title 75 Pa. C	S. §3323, 6	109(a)(6) and 6124		
C - STUDY ELEMENTS				
FROM PUB 212 APPENDIX:				
Crash Analysis (1)	Pedestrian Volumes	(12) Traffic Volumes (20)		
Acceleration Lane (2)	Sight Distance (16)	Other		
Geometric Review (8)	Speed Data (17)			
D - ATTACHMENTS LISTING				
Check those that apply and attach to this	7. Crash Extract	w:		
2. Letter or Memo Requesting Study	8. Crash Rate	14. STAMPP Identification Data		
3. Location Map	9. Crash Plot	15. Speed Permit		
4. Straight Line Diagram	10. Speed Study	16. Other Sight Distance Evaluation		
5. Photographs	🔲 11. Warrant	Documentation		
6. Field View Drawing	12. Multi-Way Stop or Truck	Restriction Worksheet		

Confidential - Traffic Engineering and Safety Study

This document is the property of the Commonwealth of Pennsylvania, Department of Transportation. The data and information contained herein are part of a traffic engineering and safety study. This safety study is only provided to those official agencies or persons who have responsibility in the highway transportation system and may only be used by such agencies or persons for traffic safety related planning or research. The document and information are confidential pursuant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, reproduced, released or discussed without the written permission of the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHE	CKLIST			
Operational Checklist:		_		_
	ers' view of approaching vehicles?			∐ N/A
2. Do drivers respond correctly to	signals, signs, or other traffic control devices?	YES		□ N/A
3. Is there evidence of crashes (s	skid marks, property damage, tree/bush damaga, broken glas	ss/vehicle parts, etc.)? YES	NO NO	□ N/A
4. Are there violations of parking	regulations or other traffic movements?	Yes	NO NO	🗌 N/A
5. Do drivers appear confused at	pout routes, street names, or other guidance informat	lon?	NO	🗌 N/A
6. Have you observed the locatio	n during peak hours for volume and crashes?	YES	ΠNO	🗌 N/A
7. Are there traffic flow deficienci	es or traffic conflict patterns associated with turning r	movements?	NO	🗌 N/A
8. Is there significant delays and	or congestion?		NO	□ N/A
9. Do pedestrian movements thro	bugh the location cause conflicts?		NO	🗌 N/A
10. Are there other traffic flow def	iciencies or traffic conflict patterns?		NO	🔲 N/A
Physical Checklist:				
	oved or lessened?	Yes	NO	🗌 N/A
	dths adequately accommodate the type of traffic usin		□no	🗌 N/A
	ning vehicles?		 □no	□ N/A
	perly located?		 NO	 N/A
1	ulness, message, size, conformity, and placement? .		 □ NO	□n/a
	to placement, visibility, glare, conformity, number of			N/A
-	tate as to their conformance to standards and location		 П NO	N/A
	aint markings) adequate for reducing conflict areas,		—	
	efining movements?		Пио	N/A
	g layout affect sight distance for through or turning ve		ПNO	 N/A
			ПNO	□ N/A
10. Is the pavement condition free	e of potholes, washboard, slick surface, etc.?			
10. Is the pavement condition free F - SITE DATA	e of potholes, washboard, slick surface, etc.?	Yes		
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED	e of potholes, washboard, slick surface, etc.?		ОИП	
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E.	TITLE Senior Traffic Engineer		
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018	e of potholes, washboard, slick surface, etc.?	TITLE Senior Traffic Engineer		
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E.	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an	TITLE Senior Traffic Engineer	□ NO	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an e previous 12 month period by type and/or causation	TITLE Senior Traffic Engineer	□ NO	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume entering 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an- e previous 12 month period by type and/or causation pproach is MPH. ring the intersection from the major street approache	TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep	NO NO NO YES ortable cra	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume entering 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an- e previous 12 month period by type and/or causation pproach is MPH.	TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep	NO NO NO YES ortable cra	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume entering 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an- e previous 12 month period by type and/or causation pproach is MPH. ring the intersection from the major street approache	TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep	NO NO NO YES ortable cra	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume ente 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an- e previous 12 month period by type and/or causation pproach is MPH. ring the intersection from the major street approache	YES TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep es average at least 300 vehicles/h pproaches average at least 200/ho	NO VES NO VES NO VES NO VES NO	N/A NO ashes.** * 8 hours? NO same 8
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume ente 4b. Does the combined vehicular, p hours, with an average delay to min 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an e previous 12 month period by type and/or causation oproach is MPH. ring the intersection from the major street approache edestrian and bicycle volume from the minor street appro-	YES TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep es average at least 300 vehicles/h pproaches average at least 200/ho	NO VES NO VES NO VES NO VES NO	N/A NO ashes.** * 8 hours? NO same 8
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume ente 4b. Does the combined vehicular, p hours, with an average delay to min 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an e previous 12 month period by type and/or causation oproach is MPH. ring the intersection from the major street approache edestrian and bicycle volume from the minor street approache	YES TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep es average at least 300 vehicles/h pproaches average at least 200/ho	NO VES NO VES NO VES NO VES NO	N/A NO ashes.** * 8 hours? NO same 8
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 01/2018 1. Is the multiway stop being installed 2. List the number of crashed for the 3. 85th percentile speed of major at 4a.Does the vehicular volume ente 	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval an e previous 12 month period by type and/or causation oproach is MPH. ring the intersection from the major street approache edestrian and bicycle volume from the minor street appro-	TITLE Senior Traffic Engineer d installation is completed? factor. **This may include non-rep es average at least 300 vehicles/h pproaches average at least 200/hc rehicle during the highest hour?	NO VES NO VES our for any Our for any Our, for the Our, for the Our, for the	N/A NO ashes.** * 8 hours? NO same 8

F - SITE DATA (CONTINUED)		
5. Where #2, #4a and #4b are satisfied to 80% of their minimum val	ues. **Note: #4c is excluded from this condition.**	
6a. Determine and list the minimum intersection sight distance for a See attached Sight Distance Forms 6b. List the posted, approach speeds on all intersection legs.	II approaches.	
Tavern House Hill is 25mph, Stone Barn Road is 25m 6c. Is there any practical method for improving the sight distance at	ph these intersections?	. 🗌 YES 📓 NO
7. List any other factors justifying a multiway stop.		
Sight distance looking left from Stone Barn Road South Sight distance looking right from Stone Barn Road Nort		
8. Has the municipality agreed to purchase, erect and maintain the sign	ns necessary to legalize the above stop intersection at no co	
9. Has the Through Highway permit been modified		. YES NO
G - REMARKS		
See attached Sight Distance Forms for the Stone Barn Ro is currently controlled by a STOP sign. The Tavern House		Road approach
Sight distances looking left and right from Stone Barn Roa 13M "Design Manual Part 2 - Highway Design" or AASHT sight distances are restricted by parked vehicles and the h	O's "A policy on Geometric Design of Highways a	
H - ENGINEERING JUDGEMENT		
All-way STOP control should be implemented at the subje signs (R1-1, 30" x 30") should be placed on both Tavern H should be installed under the STOP sign on all three (3) in	House Hill approaches. An ALL-WAY plaque (R1	
In addition, a STOP AHEAD sign (W3-1, 36" x 36") should	t be placed on the northbound Tayern House Hill	approach to the
intersection at a distance of 155 feet in advance of the inter		
Details on the recommended signs, from PennDOT Public	cation 236 - Handbook of Approved Signs, are att	ached.
I - APPROVALS Comments		
Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date
This hoff a preincering and potential is confidential	uursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may	

and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S disclosed or used in litigation without written permission from PennDOT. Page 3 of 3

(03-04) PENNDOT		SIGHT DISTANC	E MEASUREMENTS PENNDOT PUB 70)
APPLICAN	T_TAVERN HOUSE HILL A	ND STONE BARN ROAD	APPLICATION NO
S.R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/25mph
MEASURE	DBY Grove Miller	Engineering, Inc.	DATE10/2017
FOR DEPA	RTMENT USE ONLY: S	afe-Running Speed	85th Percentile Speed
A			
		ح ۰۰, , ,	GRADE% , 7 (3.50)
	3.50	90'* GRADE+3%	
	NCE REQUIRED	Sight Line	DRIVER'S EYE 10' EDGE OF TRAVEL LANE FSD=
D			T CH A DRIVER AT A DRIVEWAY LOCATION APPROACHING ON THE ROADWAY.
	=======================================	 	GRADE%
	CONTINUOUSLY SEE THE	TH OF ROADWAY ALONG WH	ISTANCE REQUIRED SD= ICH A DRIVER ON THE ROADWAY CAN S LOCATED IN THE DRIVER'S TRAVEL LANE EFT TURN INTO A DRIVEWAY.
C	GRADE		DISTANCE REQUIRED FSD=

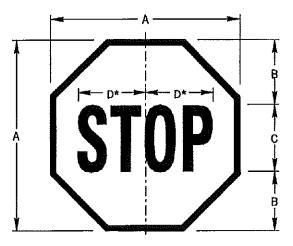
R1--1

STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to Statedesignated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways. At intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-3P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to Install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for alleys with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should stay within the edges of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the R1-1 sign.



		DIMENSI	ons – In		
SIGN SIZE A x A	В	С	D	BOR- DER	BLANK STD.
18" x 18"	6	6C	8	0.4	÷
24" x 24"	8	80	10	0.6	B1-24
30" x 30"	10	100	12.6	0.8	B1-30
36" x 36"	12	12C	15	0.8	B136
48" x 48"	16	16C	20	1.2	B1-48

COLOR:

LEGEND AND BORDER: WHITE (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

de CRow Date : 02-29-12 By : Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

BACKGROUND: RED (REFLECTORIZED)

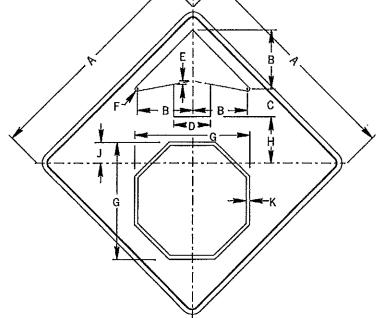
W3–1

STOP AHEAD SIGN

The Stop Ahead Sign (W3-1) will be authorized for use in advance of a stop sign when physical conditions prevent the driver from having a continuous view of the stop sign for the following distances. Advance placement distance for the W3-1 sign will be based on Department regulation. When used in a work zone, the background color shall be orange.

85th Percentile Speed MPH	Distance feet
20	115
25	155
30	200
35	250

85th Percentile Speed MPH	Distance feet
40	305
45	360
50	425
55	495
60	570



					DIN	IENSIO	VS - 1	N				
SIGN SIZE A x A	В	С	D	E	F	G	Н	J	к	MAR- GIN	BOR- DER	BLANK STD,
18" x 18"	4.5	2.3	3	0.4	0.2	9.5	3	1.8	0.3	0.4	0.6	B3–18
36" x 36"	9	4.4	6	0.8	0.4	19	7.6	3.5	0.6	0.6	0.8	B3-36
48" x 48"	12	6	8	1	0.5	25.6	10	4.5	0.8	0.8	1,2	B3-48

COLOR:

ARROW AND BORDER: BLACK (NON-REFLECTORIZED)

BACKGROUND:

YELLOW (REFLECTORIZED)

SYMBOL BORDER: WHITE (REFLECTORIZED)

SYMBOL BACKGROUND: **RED (REFLECTORIZED)** APPROVED FOR THE SECRETARY OF TRANSPORTATION

Sen C Rome

Date : 02-29-12 By : Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

WALDEN WAY AND LINE ROAD

MULTIWAY STOP CONTROL AT INTERSECTIONS ENGINEERING AND TRAFFIC STUDY



PLEASE TYPE OR PRINT ALL INFORMATION IN BLUE OR BLACK INK

A - LOCATION INFORMATION		
Cumberland	4	MUNICIPALITY
MAJOR STREET INFORMATION	u	Silver Spring Township
SR#	TR#	STREET NAME
		Walden Way
STATION		LOCATION
MINOR STREET INFORMATION SR#	TR#	STREET NAME
		Line Road
STATION	J	LOCATION
B-REFERENCE INFORMATION		
REFERENCE	SECTION(S)	
Chapter 212	212.106	(c)
REFERENCE	SECTION(S)	
MUTCD	2B.07, 3	68.16
Vehicle Code Title 75 Pa. C	SECTION(S)	5109(a)(6) and 6124
venicie Code Thie 751a. C	,0. 80020,	5107(d)(0) and 0124
C - STUDY ELEMENTS		
FROM PUB 212 APPENDIX:		
Crash Analysis (1)	Pedestrian Volumes	(12) Traffic Volumes (20)
Acceleration Lane (2)	Sight Distance (16)	Other
Geometric Review (8)	Speed Data (17)	••••••••••••••••••••••••••••••••••••••
D - ATTACHMENTS LISTING	- form in the order listed bet	
Check those that apply and attach to this	s form in the order listed bein	w:
2. Letter or Memo Requesting Study		14. STAMPP Identification Data
3. Location Map	9. Crash Plot	15. Speed Permit
4. Straight Line Diagram	10. Speed Study	16. Other <u>Sight Distance Evaluation</u>
5. Photographs	11. Warrant	Documentation
6. Field View Drawing	12. Multi-Way Stop or Truck	Restriction Worksheet
	Confidential - Traffic Eng	ineering and Safety Study
herein are part of a traffic engineering a responsibility in the highway transport or research. The document and inform	and safety study. This safety ation system and may only be nation are confidential pursu	a, Department of Transportation. The data and information contained study is only provided to those official agencies or persons who have e used by such agencies or persons for traffic safety related planning ant to 75 Pa. C.S.3754 and 23 U.S.C. 409 and may not be published, f the Pennsylvania Department of Transportation.

E - SITE OBSERVATION CHE	CKLIST			
Operational Checklist:		_		
	ers' view of approaching vehicles?			□ N/A
2. Do drivers respond correctly to	signals, signs, or other traffic control devices?		🗌 NO	🗌 N/A
3. Is there evidence of crashes (s	skid marks, property damage, tree/bush damage, broken glass.	/vehicle parts, etc.)?	NO	🗆 N/A
4. Are there violations of parking	regulations or other traffic movements?	YES	NO	□ N/A
5. Do drivers appear confused at	oout routes, street names, or other guidance informatio	n?	NO NO	🗌 N/A
6. Have you observed the locatio	n during peak hours for volume and crashes?	YES	□ NO	🗌 N/A
7. Are there traffic flow deficienci	es or traffic conflict patterns associated with turning me	ovements?	NO NO	🗌 N/A
8. Is there significant delays and	for congestion?	Yes	NO	□ N/A
9. Do pedestrian movements thro	ough the location cause conflicts?	YES	NO	🗌 N/A
10. Are there other traffic flow def	iciencies or traffic conflict patterns?	Yes	NO	🗌 N/A
Physical Checklist:				
-	oved or lessened?		NO	□ N/A
-	dths adequately accommodate the type of traffic using			
-		· _		
	ning vehicles?			□ N/A
	perly located?			∐ N/A
	ulness, message, size, conformity, and placement?	_		□ N/A
	to placement, visibility, glare, conformity, number of si			N/A
7. Are pavement markings adequ	ate as to their conformance to standards and location?	•YES	□ NO	N/A
	aint markings) adequate for reducing conflict areas,	_	_	
	fining movements?		∐ NO	N/A
O Dean the eviction legal parking	I layout affect sight distance for through or turning vehi		∐ NO	L N/A
	e of potholes, washboard, slick surface, etc.?			□ N/A
10. Is the pavement condition free		TITLE		
10. Is the pavement condition free F - SITE DATA	e of potholes, washboard, slick surface, etc.?	YES		
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018	e of potholes, washboard, slick surface, etc.?	TITLE Senior Traffic Engineer		<u></u> N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018	e of potholes, washboard, slick surface, etc.?	TITLE Senior Traffic Engineer		<u></u> N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.?	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval and b	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval and b	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval and b	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval and b	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.? PERSON CONDUCTING STUDY Jaγ E. States, P.E. ed as an interim measure until the signal approval and b	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installed	e of potholes, washboard, slick surface, etc.?	TITLE Senior Traffic Engineer	□ NO . □ YES	N/A
10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major appendix	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is previous 12 month period by type and/or causation fa	TITLE Senior Traffic Engineer	□ NO . □ YES ortable cra	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is previous 12 month period by type and/or causation fa	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO . YES ortable cra	N/A NO shes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is previous 12 month period by type and/or causation fa	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO . YES ortable cra	N/A
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is previous 12 month period by type and/or causation fa	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	□ NO . □ YES ortable cra	N/A NO Ishes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 4b. Does the combined vehicular, per 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and a previous 12 month period by type and/or causation fa pproach is MPH. ring the intersection from the major street approaches	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO NO . □ YES our for any . □ YES ur, for the second s	N/A NO NO Ishes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 4b. Does the combined vehicular, per 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is previous 12 month period by type and/or causation fa	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO NO . □ YES our for any . □ YES ur, for the second s	N/A NO Ishes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 4b. Does the combined vehicular, phours, with an average delay to min 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and a previous 12 month period by type and/or causation fa pproach is MPH. ring the intersection from the major street approaches	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO NO . □ YES our for any . □ YES ur, for the second s	N/A NO NO Ishes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 4b. Does the combined vehicular, phours, with an average delay to min 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is a previous 12 month period by type and/or causation fa oproach is MPH, ring the intersection from the major street approaches edestrian and bicycle volume from the minor street app or-street vehicular traffic of at least 30 seconds per vehicular traffic of at least 30 seco	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep	NO NO . □ YES our for any . □ YES ur, for the second s	N/A NO NO Ishes.**
 10. Is the pavement condition free F - SITE DATA DATE DATA COLLECTED 05/2018 1. Is the multiway stop being installe 2. List the number of crashed for the 3. 85th percentile speed of major ap 4a.Does the vehicular volume enter 4b. Does the combined vehicular, perhours, with an average delay to min 4c. If #3 > 40 MPH, then the minimu 	PERSON CONDUCTING STUDY Jay E. States, P.E. ed as an interim measure until the signal approval and is a previous 12 month period by type and/or causation fa oproach is MPH, ring the intersection from the major street approaches edestrian and bicycle volume from the minor street app or-street vehicular traffic of at least 30 seconds per vehicular traffic of at least 30 seco	TITLE Senior Traffic Engineer Installation is completed? ctor. **This may include non-rep average at least 300 vehicles/ho roaches average at least 200/ho nicle during the highest hour?	□ NO . □ YES ortable cra our for any . □ YES ur, for the : □ YES	N/A NO NO Ishes.**

F - SITE DATA (CONTINUED)
5. Where #2, #4a and #4b are satisfied to 80% of their minimum values. **Note: #4c is excluded from this condition.**
6a. Determine and list the minimum intersection sight distance for all approaches. See attached Sight Distance Forms
6b. List the posted, approach speeds on all intersection legs.
Walden Way is 25mph, Line Road is 25mph 6c. Is there any practical method for improving the sight distance at these intersections?
7. List any other factors justifying a multiway stop.
Sight distance looking left from Line Rd Northbound is < 175 ft.; required intersection sight distance is 280 ft. Sight distance looking right from Line Rd Southbound is <175 ft.; required intersection sight distance is 280 ft.
8. Has the municipality agreed to purchase, erect and maintain the signs necessary to legalize the above stop intersection at no cost to the Department
9. Has the Through Highway permit been modified
G - REMARKS
See attached Sight Distance Forms for the Line Road approach to the intersection. The Line Road approach is currently controlled by a STOP sign. The Walden Way approaches are free-flow.
Sight distances looking left and right from Line Road Eastbound do not meet criteria defined in PennDOT Publication 13M "Design Manual Part 2 - Highway Design" or AASHTO's "A policy on Geometric Design of Highways and Streets". The sight
distances are restricted by parked vehicles and landscaping.
H - ENGINEERING JUDGEMENT
n - Engineering Jobgement
H - ENGINEERING JODGEMENT
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1,
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1,
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches. Details on the recommended signs, from PennDOT Publication 236 - Handbook of Approved Signs, are attached.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches. Details on the recommended signs, from PennDOT Publication 236 - Handbook of Approved Signs, are attached.
All-way STOP control should be implemented at the subject intersection of Walden Way and Line Road. STOP signs (R1-1, 30" x 30") should be placed on both Walden Way approaches. An ALL-WAY plaque (R1-3P, 18" x 6") should be installed under the STOP sign on all three (3) intersection approaches. Details on the recommended signs, from PennDOT Publication 236 - Handbook of Approved Signs, are attached.

Reviewed and Approved by Signature	Name/Title	Date
Reviewed and Approved by Signature	Name/Title	Date

This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be disclosed or used in litigation without written permission from PennDOT.

PPLICANT	WALDEN WAY AND I	LINE ROAD	APPLICATION NO
R	SEG	OFFSET	LEGAL SPEED LIMIT_25mph/25m
EASURED	BY Grove Miller	Engineering, Inc.	DATE _05/2018
	TMENT USE ONLY: S	afe-Running Speed	85th Percentile Speed
		≪••••••	<
	3.50	<175'	
	ICE REQUIRED	Sight Line	DRIVER'S EYE 10' EDGE OI TRAVEL LA DISTANCE REQUIRED FSD=
			H A DRIVER AT A DRIVEWAY LOCATION APPROACHING ON THE ROADWAY.
			GRADE%
C	ONTINUOUSLY SEE THE	GTH OF ROADWAY ALONG WHI	STANCE REQUIRED SD= CH A DRIVER ON THE ROADWAY CAN S LOCATED IN THE DRIVER'S TRAVEL LANE EFT TURN INTO A DRIVEWAY.
		===== Sight Line	
3.50	GRADE	%	DISTANCE REQUIRED

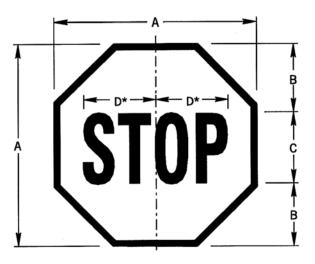
R1_1

STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to Statedesignated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways. At intersections where all approaches are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-3P) shall be mounted below each R1-1 sign.

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for alleys with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign should stay within the edges of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign installed back-to-back with it remains within the edges of the R1-1 sign.



DIMENSIONS - IN								
SIGN SIZE A x A	В	С	D	BOR- DER	BLANK STD.			
18" x 18"	6	6C	8	0.4				
24" x 24"	8	8C	10	0.6	B1–24			
30" x 30"	10	10C	12.6	0.8	B1–30			
36" x 36"	12	12C	15	0.8	B1–36			
48" x 48"	16	16C	20	1.2	B1–48			

By :

*** REDUCE SPACING 40%**

COLOR:

LEGEND AND BORDER: WHITE (REFLECTORIZED)

BACKGROUND: RED (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

CROW Date : 02-29-12 Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations

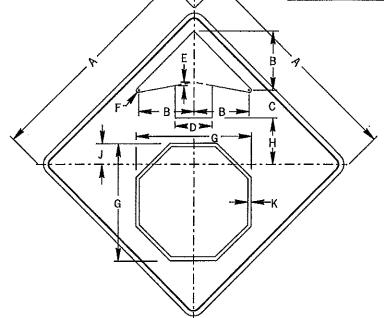
W3-1

STOP AHEAD SIGN

The Stop Ahead Sign (W3–1) will be authorized for use in advance of a stop sign when physical conditions prevent the driver from having a continuous view of the stop sign for the following distances. Advance placement distance for the W3–1 sign will be based on Department regulation. When used in a work zone, the background color shall be orange.

85th Percentile Speed MPH	Distance feet
20	115
25	155
30	200
35	250

85th Percentile Speed MPH	Distance feet
40	305
45	360
50	425
55	495
60	570



	DIMENSIONS – IN											
SIGN SIZE A x A	В	С	D	E	F	G	н	J	К	MAR- GIN	BOR- DER	BLANK STD,
18" x 18"	4.5	2.3	3	0.4	0.2	9.5	3	1.8	0.3	0.4	0.6	B3-18
36" x 36"	9	4.4	6	0.8	0,4	19	7.6	3.5	0.6	0,6	0.8	B3–36
48" x 48"	12	6	8	1	0.5	25.6	10	4.5	0.8	0.8	1.2	B3-48

By :

COLOR:

ARROW AND BORDER: BLACK (NON-REFLECTORIZED)

BACKGROUND:

YELLOW (REFLECTORIZED)

SYMBOL BORDER: WHITE (REFLECTORIZED)

SYMBOL BACKGROUND: RED (REFLECTORIZED) APPROVED FOR THE SECRETARY OF TRANSPORTATION

All C Rowe

Date : 02-29-12

Chief, Traffic Engineering and Permits Section Bureau of Maintenance and Operations