VILLAGE OF PARK RIDGE
BOARD MEETING MINUTES
March 18, 2024

****

MEETING CALLED TO ORDER – President Steve Menzel called the Park Ridge Village Board to order at 5:30 pm. The Village Board meeting was held in person at the Village Hall. After the recitation of the Pledge of Allegiance by members present, a roll call was taken. Trustees Barb Friedrich, Gordon Renfert, Kristin Paulson, Dan Holloway and Steve Menzel were present as well as Residents Tori Jennings and Shawn Paulson; Clerk Katie McKelvey attended via Zoom.

AGENDA ITEM #1 - APPROVAL OF THE FEBRUARY AGENDA – Menzel asked the Board members if there were any changes regarding the March agenda. Friedrich made a motion to approve, with no changes. Holloway seconded the motion. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #2 – PUBLIC COMMENT PERIOD - The public comment section was opened to anyone who wished to speak on any agenda item. No comments were made.

AGENDA ITEM #3 – **PUBLIC COMMENT PERIOD -** The public comment section was opened to anyone who wished to speak on any non-agenda item. Resident Tori Jennings spoke, asking the Village to consider trying to lower the speed limit to 25 mph from Country Club Drive all the way through the Village limits. President Menzel advised that we will add this topic to the April agenda.

AGENDA ITEM #4 – REVIEW & APPROVE BOARD MEETING MINUTES FROM FEBRUARY 15, 2024 – After minor changes, Renfert made a motion to approve the minutes. Paulson seconded the motion. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #5 – REVIEW AND ACCEPT FEBRUARY'S TREASURER'S REPORT – Menzel made a motion to approve the treasurer's report. Friedrich seconded motion. Roll call was taken, Friedrich – yes, Renfert – yes, Paulson – yes, Holloway – yes, Menzel – yes.

AGENDA ITEM #6 – REVIEW AND APPROVE FEBRUARY & MARCH BILLS/PAYMENTS – Friedrich made the motion to approve the payment of the bills. Seconded by Menzel. Roll call was taken, Renfert – yes, Paulson – yes, Holloway – yes, Friedrich – yes, Menzel – yes.

DISCUSSION AND/OR POSSIBLE ACTION ON THE FOLLOWING ITEMS:

AGENDA ITEM #7 – SPRING GENERAL ELECTION – TUESDAY, APRIL 2, 2024 – Polls will be open from 7:00am-8:00pm

AGENDA ITEM #8 – UPDATE – FUNDING SOURCES FOR WATER MAINS/HYDRANTS – President Menzel spoke with Nathan Billinghurst with USDA Rural Development, who offers grants and loans. Park Ridge median household income is too high to qualify for a rural development grant, however the village does qualify for a low-interest rate loan (current rate is 3.5%). Loans can be done in a 40-year term. Financing can be used to cover street reconstruction; Rule of thumb is for every $1,000 borrowed translates to $49 per month for 40 years.

AGENDA ITEM #9 – OPEN BOOK – MONDAY, APRIL 15, 2024 – This will be held via telephone if any resident has any issues/questions

AGENDA ITEM #10 – BOARD OF REVIEW – MONDAY, APRIL 22, 2024 – 1:30-3:30pm

AGENDA ITEM #11 – CHIEF ELECTION INSPECTOR RECRUITMENT – The Village is still in need of finding at least one person to be the Chief Election Inspector for the rest of the elections in 2024. This position could be split up between multiple people.

****AGENDA ITEM #12 – SPRING LARGE ITEM PICK-UP** - Thursday, April 11, 2024. It was discussed that perhaps residents would prefer the large item pick-up in the fall.

AGENDA ITEM #13 – VILLAGE-WIDE RUMMAGE SALE – Set for Mother's Day weekend – Saturday, May 12, 2024

AGENDA ITEM #14 – SET DATE FOR NEXT BOARD MEETING – Monday, April 15, 2024 at 5:30pm

AGENDA ITEM #15 – THE BOARD MAY CONSIDER A MOTION TO GO INTO CLOSED SESSION PURSUANT TO WISCONSIN STATUTES SECT. 19.85(1) (C) CONSIDERING EMPLOYMENT, PROMOTION, COMPENSATION OR PERFORMANCE EVALUATION DATA OF ANY PUBLIC EMPLOYEE OVER WHICH THE GOVERNMENTAL BODY HAS JURISDICTION OR EXERCISES RESPONSIBILITY TO WIT: Village Clerk/Treasurer – The board went into closed session to discuss.

AGENDA ITEM #16 – THE BOARD WILL RECONVENE IN OPEN SESSION IMMEDIATELY FOLLOWING THE CLOSED SESSION AND TAKE ACTION, IF ANY, ON MATTERS DISCLOSED IN CLOSED SESSION – The board reconvened and advised that a performance review will be scheduled before the end of April. The review will be conducted by President Steve Menzel, Trustee Barb Friedrich and one other person not on the board.

AGENDA ITEM #17 - ADJOURN

The meeting adjourned at 7:25pm.

_____ _____

KATIE MCKELVEY
VILLAGE CLERK

STEVE MENZEL
VILLAGE PRESIDENT

VILLAGE OF PARK RIDGE
Balance Sheet
As of April 11, 2024

	Apr 11, 24
ASSETS	
Current Assets	
Checking/Savings	
11110 · Checking	1,000.00
11310 · Operating Account	178,457.88
11340 · Reserve Account-Pineries	
11341 · Reserve Account-Pineries (AR...	19,832.13
11340 · Reserve Account-Pineries - Ot...	10,928.51
Total 11340 · Reserve Account-Pineries	30,760.64
11343 · Pineries MM# 8005-467-9	112,099.55
11345 · Reserve Account-Bank of Amhe...	20,098.17
11350 · CD Account	104,104.94
11360 · Petty Cash	200.00
Total Checking/Savings	446,721.18
Accounts Receivable	
1200 · Accounts Receivable	-403.00
Total Accounts Receivable	-403.00
Other Current Assets	
12100 · Taxes Receivable	533,481.89
Total Other Current Assets	533,481.89
Total Current Assets	979,800.07
TOTAL ASSETS	**979,800.07**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
2037 · Village Credit Card-Shanna 1953	-322.46
2046 · Village Credit Card - Katie2258	-411.48
Total Credit Cards	-733.94
Other Current Liabilities	
2100 · State W/H Tax	529.74
21511 · Federal W/H Tax	1,114.74
24700 · Due other taxing authorities	459,648.41
24800 · Due SP Utilities	4,058.00
Total Other Current Liabilities	465,350.89
Total Current Liabilities	464,616.95
Total Liabilities	464,616.95

	Apr 11, 24
Equity	
3000 · Opening Bal Equity	12.46
3010 · Office Equipment Reserve	82.68
3018 · Street Reserve	638.28
3020 · Sewer Reserve	2,500.00
3025 · Reassessment Reserve	9,000.00
3060 · Disaster Reserve	12,345.31
3070 · Santa Visit Reserve	1,650.00
34100 · General Undesignated Fund Bal	103,265.36
3900 · Retained Earnings	166,954.26
Net Income	218,734.77
Total Equity	515,183.12
TOTAL LIABILITIES & EQUITY	**979,800.07**

VILLAGE OF PARK RIDGE
Revenues & Expenses Budget vs. Actual
January 1 through April 11, 2024

	Jan 1 - Apr 11, 24	Budget	$ Over Budget	% of Budget	
Ordinary Income/Expense					
Income					
41110 · Local Tax Levied	361,769.37	363,098.00	-1,328.63	99.6%	
41800 · Int & Penalties on Taxes Levied	1.74	0.00	1.74	100.0%	
43410 · Shared Revenues	0.00	12,676.00	-12,676.00	0.0%	
43420 · Fire Insurance	0.00	2,400.00	-2,400.00	0.0%	
43430 · Exempt Computer Aid	0.00	462.47	-462.47	0.0%	
43440 · Personal Property Aid	0.00	270.00	-270.00	0.0%	
43450 · State Video (Cable) Aid	0.00	1,700.00	-1,700.00	0.0%	
43531 · Transportation Aid	10,005.63	13,338.87	-3,333.24	75.0%	
44110 · Liquor and Malt Beverage	0.00	1,000.00	-1,000.00	0.0%	
44120 · Cigarette/Bartender's Licenses	50.00	1,000.00	-950.00	5.0%	
44200 · Dog Licenses	648.00	350.00	298.00	185.1%	
44300 · Building Permits/Inspections	676.73	2,000.00	-1,323.27	33.8%	
44400 · Zoning/Variance Fees	0.00	200.00	-200.00	0.0%	
44500 · Cable Franchise Fees	1,385.83	4,500.00	-3,114.17	30.8%	
46100 · General Government	0.00	100.00	-100.00	0.0%	
48100 · Interest	618.85	2,000.00	-1,381.15	30.9%	
48200 · CD Interest	0.00	500.00	-500.00	0.0%	
48900 · Miscellaneous Income	936.00	1,500.00	-564.00	62.4%	
48905 · Late Fees	10.00	0.00	10.00	100.0%	
Total Income	376,102.15	407,095.34	-30,993.19	92.4%	
Expense					
51100 · Village Board					
5110001 · President Salary	1,750.00	3,768.00	-2,018.00	46.4%	
5110002 · Trustee Salary	1,600.00	3,445.00	-1,845.00	46.4%	
5110003 · Santa Visit	805.99	500.00	305.99	161.2%	
5110004 · League of Municipalities Dues	0.00	400.00	-400.00	0.0%	
5110006 · Board Expenses	15.82	1,900.00	-1,884.18	0.8%	
Total 51100 · Village Board	4,171.81	10,013.00	-5,841.19	41.7%	
51300 · Legal	0.00	4,000.00	-4,000.00	0.0%	
51410 · Clerk/Treasurer					
5141001 · Clerk Compensation	13,878.34	40,685.00	-26,806.66	34.1%	
5141002 · Mileage and Expense	0.00	1,000.00	-1,000.00	0.0%	
5141006 · General Office Supplies	1,102.69	6,000.00	-4,897.31	18.4%	
5141007 · Training	0.00	1,500.00	-1,500.00	0.0%	
5141010 · Tax Collection Fee	1,450.56	1,500.00	-49.44	96.7%	
5141011 · Villagewide Mailing	0.00	1,000.00	-1,000.00	0.0%	
5141013 · Treasurer Bond	0.00	1,000.00	-1,000.00	0.0%	
5141016 · Accounting Consultation	0.00	1,000.00	-1,000.00	0.0%	
5141019 · Safe Deposit Box	0.00	50.00	-50.00	0.0%	
5141022 · Dues & Subscriptions	439.08	2,000.00	-1,560.92	22.0%	
5141025 · Background Checks	7.00	200.00	-193.00	3.5%	
5141026 · Treasurer Compensation	0.00	6,000.00	-6,000.00	0.0%	
5141027 · IT Services	200.00	1,500.00	-1,300.00	13.3%	
Total 51410 · Clerk/Treasurer	17,077.67	63,435.00	-46,357.33	26.9%	
51420 · Elections					
5142001 · Inspectors	1,120.52	2,500.00	-1,379.48	44.8%	
5142002 · Election Expenses	77.30	500.00	-422.70	15.5%	
5142006 · Election Equipment	154.40	1,000.00	-845.60	15.4%	
Total 51420 · Elections	1,352.22	4,000.00	-2,647.78	33.8%	
51430 · Publication Fees	30.25	200.00	-169.75	15.1%	
51510 · Accounting					
5151001 · Reporting (Form C)	0.00	2,000.00	-2,000.00	0.0%	
51510 · Accounting - Other	111.16	0.00	111.16	100.0%	
Total 51510 · Accounting	111.16	2,000.00	-1,888.84	5.6%	
51530 · Assessment of Property					
5153001 · Assessor Contract	870.00	5,800.00	-4,930.00	15.0%	
5153004 · Bd of Review Notice Publication	0.00	150.00	-150.00	0.0%	
Total 51530 · Assessment of Property	870.00	5,950.00	-5,080.00	14.6%	
51600 · Village Hall					
5160001 · Maintenance Compensation	165.92	3,000.00	-2,834.08	5.5%	
5160004 · Utilities	1,052.12	3,000.00	-1,947.88	35.1%	
5160005 · Supplies and Equipment	431.85	2,500.00	-2,068.15	17.3%	
5160006 · Repairs & Maintenance	1,767.08	2,000.00	-232.92	88.4%	
Total 51600 · Village Hall	3,416.97	10,500.00	-7,083.03	32.5%	

VILLAGE OF PARK RIDGE
Revenues & Expenses Budget vs. Actual
January 1 through April 11, 2024

	Jan 1 - Apr 11, 24	Budget	$ Over Budget	% of Budget
51910 · Uncollectible Taxes	0.00	200.00	-200.00	0.0%
51938 · Insurance				
5193801 · General Liability	2,445.00	5,000.00	-2,555.00	48.9%
5193802 · Local Gov't Property	1,048.00	1,000.00	48.00	104.8%
5193803 · Worker's Compensation	1,645.00	2,000.00	-355.00	82.3%
Total 51938 · Insurance	5,138.00	8,000.00	-2,862.00	64.2%
52100 · Crossing Guard	2,214.00	3,500.00	-1,286.00	63.3%
52205 · Fire & EMS Protection				
5220521 · Fire Protection & EMT Contract	32,317.49	101,000.00	-68,682.51	32.0%
Total 52205 · Fire & EMS Protection	32,317.49	101,000.00	-68,682.51	32.0%
52400 · Building Inspection	1,554.33	4,000.00	-2,445.67	38.9%
52450 · Zoning Administration	250.00	550.00	-300.00	45.5%
53311 · Street Maintenance				
5331101 · Snow Plowing	17,166.00	27,000.00	-9,834.00	63.6%
5331103 · Street Maintenance	0.00	10,000.00	-10,000.00	0.0%
5331105 · Street Repair	0.00	1,000.00	-1,000.00	0.0%
5331113 · Engineering	9,968.00	31,000.00	-21,032.00	32.2%
Total 53311 · Street Maintenance	27,134.00	69,000.00	-41,866.00	39.3%
53420 · Street Lighting				
5342001 · Electric & Maintenance	4,016.05	13,500.00	-9,483.95	29.7%
5342004 · Digger Requests	1,178.78	4,000.00	-2,821.22	29.5%
Total 53420 · Street Lighting	5,194.83	17,500.00	-12,305.17	29.7%
53620 · Garbage Collection				
5362001 · Garbage Collection	10,613.28	32,520.00	-21,906.72	32.6%
5362002 · Fall Large Item Pick-up	0.00	800.00	-800.00	0.0%
Total 53620 · Garbage Collection	10,613.28	33,320.00	-22,706.72	31.9%
53635 · Recycling cost				
5363501 · Recycling Collection	2,653.95	9,000.00	-6,346.05	29.5%
5363503 · Yard Waste Drop Off	0.00	5,200.00	-5,200.00	0.0%
Total 53635 · Recycling cost	2,653.95	14,200.00	-11,546.05	18.7%
54100 · Humane Society Contract	1,356.02	1,500.00	-143.98	90.4%
55200 · Parks Dept. Pledge ($5.50/per)	2,915.00	3,000.00	-85.00	97.2%
6560 · Payroll Expenses	1,746.40	0.00	1,746.40	100.0%
Total Expense	120,117.38	355,868.00	-235,750.62	33.8%
Net Ordinary Income	255,984.77	51,227.34	204,757.43	499.7%
Other Income/Expense				
Other Expense				
58100 · Loan Principal	37,250.00	16,252.05	20,997.95	229.2%
58200 · Loan Interest	0.00	12,747.95	-12,747.95	0.0%
Total Other Expense	37,250.00	29,000.00	8,250.00	128.4%
Net Other Income	-37,250.00	-29,000.00	-8,250.00	128.4%
Net Income	**218,734.77**	**22,227.34**	**196,507.43**	**984.1%**

BUILDING PERMITS
1st QUARTER 2024

1/18/2024	23 Maplewood Dr	Remodel House / Build Addition
3/12/2024	208 Greenbriar Ave	Remodel Basement
3/15/2024	711 Greenbriar Ave	Remodel Bathroom

STEVENS POINT **FIRE DEPARTMENT**
1701 FRANKLIN STREET STEVENS POINT, WI 54481
715-344-1833 FAX: 715-346-1599

JB D. MOODY
FIRE CHIEF

Police & Fire Commission
Fire Chief's Report – January 2024

Significant Events

- Recruit academy 2401 with 4 new hires started on Jan 8th 2024
- Matt Zander completed the Alabama Smoke Diver School
- Chief Rick Lasky Pride and Ownership Presentation March 2nd 2024

Monthly Training:

- Red Power Pump Training
- Weapons of Mass Destruction
- Highrise Pack Overview
- HIPPA & Bloodborne Pathogens
- Ice Rescue Scenario Wisc. River
- First in Reports
- Confined Space PJ Jacobs Middle School
- MABAS Card Updates
- SCBA and N-95 Porta-count In-Service

Public Activities:

• 1905 2nd Street North smoke detector install	01/03/2024
• Witness Fire Drill 41 Park Ridge Drive	01/04/2024
• 4U adult Daycare Station Tour	01/01/2024
• Explorer Post Meeting	01/17/2024
• 4U Adult Daycare Station Tour	01/18/2024
• Police Auxiliary CPR and First Aid	01/18/2024
• UWSP Hands Only CPR/AED	01/19/2024

Police & Fire Commission
Fire Chief's Report – February 2024

Significant Events

• Promotional Ceremony for MPO Ben Shultz to Lieutenant	February 5th
• Recruit academy 2401 Graduation	February 9th
• Promotional Ceremony for Jennifer Petkoff to Field Training Paramedic	February 9th

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JB D. MOODY
FIRE CHIEF

- Promotional Ceremony for FF/P Dusty Fleisner to Motor Pump Operator February 9th
- After Action Review for Dec 31st Ice Storm February 28th
- Chief Lasky Pride and Ownership March 2nd

Monthly Training:

- Cardiology and 12 Lead interpretation
- DNR Wildland Building Preservation
- CIVMIC Anti-Harassment
- Handtevy for Adults
- National Fire Incident Reporting
- Truck Inventory
- Fire Company Operations (hose advancement, Forcible Entry)
- Trauma Case Review
- State Fire Marshal Fire Investigation Electrical

Public Activities:

- Witness Fire Drill 41 Park Ridge Drive Creative Community Living 02/02/2024
- Hands Only CPR WI Childrens Museum 02/02/2024
- Ambulance Standby for Stockton Live Burn 02/17/2024
- Safety Presentation 216 Prentice Street 02/20/2024
- Hands Only CPR PEO Chapter CB 02/22/2024
- Station Tour Project Search 02/26/2024
- DNR Ambulance Standby for Work Function Test 03/01/2024

Police & Fire Commission
Fire Chief's Report – March 2024

Significant Events

- Chief Lasky Pride and Ownership March 2nd

Monthly Training:

- Metro Training
- Pumping & Drafting
- Fire Apparatus Inventory training
- Plow truck removal and installation

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JB D. MOODY
FIRE CHIEF

- Williams Door Lock Key
- Pixelle Paper Mill Tour
- Mass Casualty Training
- EMS Ventilator Training
- Handtevy
- Pediatric Restraints

Public Activities:

• Ambulance Standby for Bock Run	03/02/2024
• Station Tour	03/04/2024
• Daisy Scout Station Tour	03/05/2024
• Hands only CPR Sheriff Office	03/05/2024
• Hand Only CPR Sheriff Office	03/07/2024
• Explorer Promotional Event	03/09/2024
• Rosholt Station Tour	03/12/2024
• Jefferson School Public Safety Event	03/13/2024
• Hand Only CPR Sheriff Office	03/13/2024
• SPASH Career Fair	03/13/2024
• Hands Only CPR Sheriff Office	03/14/2024
• UWSP Dance Team Send-off	03/14/2024
• Station Tour	03/15/2024
• Explorers Meeting	03/20/2024
• Fire Drill Park Ridge	03/26/2024
• Pediatric CPR UWSP	03/26/2024

Fire Runs

Park Ridge Dr @ Linwood Ave	Motor Vehicle Accident	01/16/2024
37 Angelo Court	EMS Assist	02/14/2024
403 Fieldcrest Avenue	EMS Assist	03/10/2024

VILLAGE OF PARK RIDGE
Payroll Summary
January through March 2024

	Behrend, Shanna L			Drevetzki, Catherine F			Friedrich, Barbara J			Holloway,...
	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours
Employee Wages, Taxes and Adjustme...										
Gross Pay										
Building Inspector Salary			0.00			0.00			0.00	
President Salary			0.00			0.00			0.00	
Trustee Salary			0.00			0.00	1		200.00	1
Zoning Administrator Salary			0.00			0.00			0.00	
Clerk Hourly	32	20.00	640.00	570.66666	20.00	11,413.34			0.00	
Daily Rate-Crossing Guard			0.00			0.00			0.00	
Diggers Hotline Locates			0.00			0.00			0.00	
Hourly			0.00			0.00			0.00	
Hourly Rate-Maintenance			0.00			0.00			0.00	
Building Inspector Commission			0.00			0.00			0.00	
Total Gross Pay	32		640.00	570.66666		11,413.34	1		200.00	1
Adjusted Gross Pay	32		640.00	570.66666		11,413.34	1		200.00	1
Taxes Withheld										
Federal Withholding			0.00			-835.00			0.00	
Medicare Employee			-9.28			-165.49			-2.90	
Social Security Employee			-39.68			-707.63			-12.40	
WI - Withholding			-2.20			-451.49			0.00	
Medicare Employee Addl Tax			0.00			0.00			0.00	
Total Taxes Withheld			-51.16			-2,159.61			-15.30	
Net Pay	**32**		**588.84**	**570.66666**		**9,253.73**	**1**		**184.70**	**1**
Employer Taxes and Contributions										
Federal Unemployment			0.00			19.08			1.20	
Medicare Company			9.28			165.49			2.90	
Social Security Company			39.68			707.63			12.40	
WI - Unemployment Company			0.00			0.00			0.00	
Total Employer Taxes and Contributions			**48.96**			**892.20**			**16.50**	

VILLAGE OF PARK RIDGE
Payroll Summary
January through March 2024

	Holloway, Daniel A		Kraft, John E.			Lepak, Rebecca A			Manville, James D.	
	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate
Employee Wages, Taxes and Adjustme...										
Gross Pay										
Building Inspector Salary		0.00			0.00			0.00		
President Salary		0.00			0.00			0.00		
Trustee Salary		200.00			0.00			0.00		
Zoning Administrator Salary		0.00			0.00			0.00	1	
Clerk Hourly		0.00			0.00			0.00		
Daily Rate-Crossing Guard		0.00			0.00			0.00		
Diggers Hotline Locates		0.00	1	715.00	715.00			0.00		
Hourly		0.00			0.00	6.83333	17.00	116.17		
Hourly Rate-Maintenance		0.00			0.00			0.00		
Building Inspector Commission		0.00			0.00			0.00		
Total Gross Pay		200.00	1		715.00	6.83333		116.17	1	
Adjusted Gross Pay		200.00	1		715.00	6.83333		116.17	1	
Taxes Withheld										
Federal Withholding		-50.00			0.00			0.00		
Medicare Employee		-2.90			-10.37			-1.68		
Social Security Employee		-12.40			-44.33			-7.20		
WI - Withholding		0.00			0.00			0.00		
Medicare Employee Addl Tax		0.00			0.00			0.00		
Total Taxes Withheld		-65.30			-54.70			-8.88		
Net Pay		**134.70**	**1**		**660.30**	**6.83333**		**107.29**	**1**	
Employer Taxes and Contributions										
Federal Unemployment		1.20			0.00			0.00		
Medicare Company		2.90			10.37			1.68		
Social Security Company		12.40			44.33			7.20		
WI - Unemployment Company		0.00			0.00			0.00		
Total Employer Taxes and Contributions		**16.50**			**54.70**			**8.88**		

VILLAGE OF PARK RIDGE
Payroll Summary
January through March 2024

	Manville, ...	Menzel, Stephen F			Miller, LoisJean C.			Paulson, Kristin		
	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...
Employee Wages, Taxes and Adjustme...										
Gross Pay										
Building Inspector Salary	0.00			0.00			0.00			0.00
President Salary	0.00	1		875.00			0.00			0.00
Trustee Salary	0.00			0.00			0.00	1		200.00
Zoning Administrator Salary	125.00			0.00			0.00			0.00
Clerk Hourly	0.00			0.00			0.00			0.00
Daily Rate-Crossing Guard	0.00			0.00	56	20.50	1,148.00			0.00
Diggers Hotline Locates	0.00			0.00			0.00			0.00
Hourly	0.00			0.00			0.00			0.00
Hourly Rate-Maintenance	0.00			0.00			0.00			0.00
Building Inspector Commission	0.00			0.00			0.00			0.00
Total Gross Pay	125.00	1		875.00	56		1,148.00	1		200.00
Adjusted Gross Pay	125.00	1		875.00	56		1,148.00	1		200.00
Taxes Withheld										
Federal Withholding	0.00			0.00			0.00			0.00
Medicare Employee	-1.81			-12.69			-16.65			-2.90
Social Security Employee	-7.75			-54.25			-71.18			-12.40
WI - Withholding	0.00			0.00			0.00			0.00
Medicare Employee Addl Tax	0.00			0.00			0.00			0.00
Total Taxes Withheld	-9.56			-66.94			-87.83			-15.30
Net Pay	**115.44**	**1**		**808.06**	**56**		**1,060.17**	**1**		**184.70**
Employer Taxes and Contributions										
Federal Unemployment	0.00			0.00			0.00			0.00
Medicare Company	1.81			12.69			16.65			2.90
Social Security Company	7.75			54.25			71.18			12.40
WI - Unemployment Company	0.00			0.00			0.00			0.00
Total Employer Taxes and Contributions	**9.56**			**66.94**			**87.83**			**15.30**

VILLAGE OF PARK RIDGE
Payroll Summary
January through March 2024

	Renfert, Gordon J.			Zepp, James P.			TOTAL		
	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...	Hours	Rate	Jan - Mar ...
Employee Wages, Taxes and Adjustme...									
Gross Pay									
Building Inspector Salary			0.00	1		125.00	1.00		125.00
President Salary			0.00			0.00	1.00		875.00
Trustee Salary	1		200.00			0.00	4.00		800.00
Zoning Administrator Salary			0.00			0.00	1.00		125.00
Clerk Hourly			0.00			0.00	602.67		12,053.34
Daily Rate-Crossing Guard			0.00			0.00	56.00		1,148.00
Diggers Hotline Locates			0.00			0.00	1.00		715.00
Hourly			0.00			0.00	6.83		116.17
Hourly Rate-Maintenance			0.00			0.00			0.00
Building Inspector Commission			0.00			627.60			627.60
Total Gross Pay	1		200.00	1		752.60	673.50		16,585.11
Adjusted Gross Pay	1		200.00	1		752.60	673.50		16,585.11
Taxes Withheld									
Federal Withholding			0.00			0.00			-885.00
Medicare Employee			-2.90			-10.91			-240.48
Social Security Employee			-12.40			-46.66			-1,028.28
WI - Withholding			0.00			0.00			-453.69
Medicare Employee Addl Tax			0.00			0.00			0.00
Total Taxes Withheld			-15.30			-57.57			-2,607.45
Net Pay	**1**		**184.70**	**1**		**695.03**	**673.50**		**13,977.66**
Employer Taxes and Contributions									
Federal Unemployment			0.00			0.00			21.48
Medicare Company			2.90			10.91			240.48
Social Security Company			12.40			46.66			1,028.28
WI - Unemployment Company			0.00			0.00			0.00
Total Employer Taxes and Contributions			**15.30**			**57.57**			**1,290.24**

Safe Streets and Roads for All

Action Plan Components

This document is not meant to replace the NOFO. Applicants should follow the instructions in the NOFO to correctly apply for a grant. See the SS4A website for more information: https://www.transportation.gov/SS4A



Leadership Commitment and Goal Setting

An official public commitment (e.g., resolution, policy, ordinance, etc.) by a high-ranking official and/or governing body (e.g., Mayor, City Council, Tribal Council, MPO Policy Board, etc.) to an eventual goal of zero roadway fatalities and serious injuries. The commitment must include a goal and timeline for eliminating roadway fatalities and serious injuries achieved through one, or both, of the following:

(1) the target date for achieving zero roadway fatalities and serious injuries, OR

(2) an ambitious percentage reduction of roadway fatalities and serious injuries by a specific date with an eventual goal of eliminating roadway fatalities and serious injuries.



Planning Structure

A committee, task force, implementation group, or similar body charged with oversight of the Action Plan development, implementation, and monitoring.



Safety Analysis

Analysis of existing conditions and historical trends that provides a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region. Includes an analysis of locations where there are crashes and the severity of the crashes, as well as contributing factors and crash types by relevant road users (motorists, people walking, transit users, etc.). Analysis of systemic and specific safety needs is also performed, as needed (e.g., high-risk road features, specific safety needs of relevant road users, public health approaches, analysis of the built environment, demographic, and structural issues, etc.). To the extent practical, the analysis should include all roadways within the jurisdiction, without regard for ownership. Based on the analysis performed, a geospatial identification of higher-risk locations is developed (a High-Injury Network or equivalent).

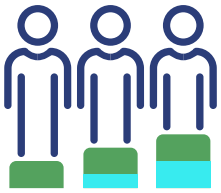


Engagement and Collaboration

Robust engagement with the public and relevant stakeholders, including the private sector and community groups, that allows for both community representation and feedback. Information received from engagement and collaboration is analyzed and incorporated into the Action Plan. Overlapping jurisdictions are included in the process. Plans and processes are coordinated and aligned with other governmental plans and planning processes to the extent practical.

Safe Streets and Roads for All

Action Plan Components



Equity Considerations

Plan development using inclusive and representative processes. Underserved communities* are identified through data and other analyses in collaboration with appropriate partners. Analysis includes both population characteristics and initial equity impact assessments of the proposed projects and strategies.



Policy and Process Changes

Assessment of current policies, plans, guidelines, and/or standards (e.g., manuals) to identify opportunities to improve how processes prioritize transportation safety. The Action Plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards, as appropriate.



Strategy and Project Selections

Identification of a comprehensive set of projects and strategies, shaped by data, the best available evidence and noteworthy practices, as well as stakeholder input and equity considerations, that will address the safety problems described in the Action Plan. These strategies and countermeasures focus on a Safe System Approach, effective interventions, and consider multidisciplinary activities. To the extent practical, data limitations are identified and mitigated.

Once identified, the list of projects and strategies is prioritized in a list that provides time ranges for when the strategies and countermeasures will be deployed (e.g., short-, mid-, and long-term timeframes). The list should include specific projects and strategies, or descriptions of programs of projects and strategies, and explains prioritization criteria used. The list should contain interventions focused on infrastructure, behavioral, and/or operational safety.



Progress and Transparency

Method to measure progress over time after an Action Plan is developed or updated, including outcome data. Means to ensure ongoing transparency is established with residents and other relevant stakeholders. Must include, at a minimum, annual public and accessible reporting on progress toward reducing roadway fatalities and serious injuries, and public posting of the Action Plan online.

* An underserved community as defined for this NOFO is consistent with the Office of Management and Budget's Interim Guidance for the Justice40 Initiative https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf and the Historically Disadvantaged Community designation, which includes U.S. Census tracts identified in this table https://datahub.transportation.gov/stories/s/tsyd-k6ij; any Tribal land; or any territory or possession of the United States.

PORTAGE COUNTY: MULTIJURISDICTIONAL COMMITMENT TO ELIMINATE ROADWAY FATALITIES: SAFE STREETS AND ROAD FOR ALL (SS4A) GRANT AWARD

WHEREAS, on December 13th, 2023, Portage County and its partners (City of Stevens Point and Villages of Plover, Whiting, and Park Ridge) were awarded a $200,000 multijurisdictional (Planning and Demonstration) grant through the U.S. Department of Transportation, Safe Streets and Roads for All (SS4A) grant program under the Infrastructure Investment and Jobs Act, and;

WHEREAS, the $200,000 grant funding provided by the U.S. DOT will cover the majority of the costs associated with the $250,000 project proposed to holistically address roadway safely throughout the County and within its municipalities, and;

WHEREAS, Portage County and its municipal jurisdictions understand the importance of transportation safety, community connectivity, and public participation and collaboration; and

WHEREAS, through the SS4A grant funding, Portage County will solicit for and contract a private consulting firm to meet the three main objectives of the grant application, and;

WHEREAS, such specific objectives include the creation of a (1) Portage County Safe Streets and Roads for All (SS4A) Action Plan, (2) update the 2014 Portage County Countywide Bicycle and Pedestrian Plan as a supplemental safety plan and (3) implement a variety of Demonstration Activities throughout the County; and

WHEREAS, through achieving the goals and objectives outlined in the grant application, Portage County is taking an active role in improving roadway safety for all roadway users, and;

WHEREAS, Portage County and its residents will collaborate and establish a Task Force and sub-committee to give direction to the consulting firm as it relates to the creation of the Safe Streets and Roads for All Action Plan, updated Bicycle and Pedestrian Plan, and the implementation of demonstration activities in holistic and equitable manner, utilizing a multi-prong approach of public engagement in order to maximize community representation/feedback to ensure the three objectives meet the needs of residents, have local support, and are implementable.

NOW, THEREFORE, BY THE SIGNATURE AND ATTESTATION BELOW, that the Portage County Board of Supervisors, the Stevens Point Common Council, the Village Board of the Village of Plover, the Village Board of the Village of Whiting, and the Village Board of the Village of Park Ridge, publicly commit to eliminating roadway fatalities and serious injuries by 2045 and adopt the final Action Plan & PCCBPP after a 24-month period of performance. Goals: incrementally reduce fatalities and serious injuries over the next two decades with the goal of eliminating roadway deaths and serious injuries elimination by 2045.

BY THE SIGNATURE AND ATTESTATION BELOW, the participating political parties approve of and are committed to the goals and objectives of the awarded grant project, pursuant to the terms of the grant application and will execute any and all documents and assurances which may be required for the purposes of the plan (Action Plan and Supplemental Safety Plan) creation processes and the implementation of such demonstration activities.

Portage County

(Date: _____)

Approved: _____
John Pavelski, County Executive

Attest: _____
Maria Davis, County Clerk

City of Stevens Point

(Date: _____)

Approved: _____
Mike Wiza, Mayor

Attest: _____
Kari Yenter, City Clerk

Village of Plover

(Date: _____)

Approved: _____
Gary Wolf, Village President

Attest: _____
Tammy Wojtalewicz, Village Clerk

Village Of Whiting

(Date: _____)

Approved: _____
Dean Curtis, Village President

Attest: _____
Annette Stashek, Village Clerk

Village of Park Ridge

(Date: _____)

Approved: _____
Steve Menzel, Village President

Attest: _____
Katie McKelvey, Village Clerk

13-5-1 Statutory Authority and the Approval Process August 2021

Why do we have speed limits? Speed limits are an important tool for promoting safety on streets and highways. Limits tell drivers the reasonable speed for a road section under ideal conditions. They also help traffic enforcement by setting standards for what is an unsafe speed.

The concept of establishing speed limits is based upon the nationally accepted principle that the majority of drivers are cautious, prudent and drive at speeds that are reasonable and proper, regardless of the posted speed limit. This "reasonable and proper" theme is part of the Wisconsin State Statutes in s. 346.57 (4) and s. 349.11 (7) and as set forth in the Uniform Vehicle Code (Section 11-801 UVC 2000). In part, it reads:

> *"No person shall drive a vehicle at a speed greater than is reasonable and prudent under the conditions, including actual and potential hazards then existing. Consistent with the foregoing, every person shall drive at a safe and appropriate speed when approaching and crossing an intersection or railroad grade crossing, when approaching and going around a curve, when approaching the crest of a hill, when traveling upon any narrow or winding roadway, and when special hazards exist with respect to pedestrians or other traffic or by reason of weather or highway conditions."*

In other words, motorists are required to drive at a speed that allows them to stop safely. This statute governs the speed of all drivers regardless of any posted speed limits.

There are several types of speed limits in the State of Wisconsin as indicated below:

Advisory speed limits warn drivers of the maximum recommended speed through a curve or other special roadway conditions. They are posted only in combination with an appropriate warning sign. *Advisory* speeds are not enforceable in Wisconsin courts except when driving too fast for conditions.

Regulatory speed limits in Wisconsin are absolute limits, above which it is unlawful to drive regardless of roadway conditions, traffic volumes, or other factors. Regulatory speed limits are enforceable and are categorized as either statutory or modified.

Statutory speed limits are set as maximum/minimum speeds. These limits are established legislatively and apply throughout the state. The Wisconsin Manual on Uniform Traffic Control Devices (WisMUTCD) defines statutory speed as a speed limit established by legislative action that typically is applicable for highways with specified design, functional, jurisdictional and/or location characteristic and is not necessarily shown on speed limit signs. The determining factor for speed limits on freeways and expressways is most often statutory.

Modified speed limits are utilized in areas requiring speed limits between the statutory maximum speed limits on state, county or local roadways and the 25-mph prima facie or applied speed limits in business and residential areas when no other speed limit is posted. These *modified* speed limits are established by administrative action based on a traffic engineering study. Modified speed limits *may* only be set by agencies having legal authority and jurisdiction over the respective roadway in accordance with Statute s. 349.11. These modified speed limits are often referred to as absolute speed limits and are not to be exceeded regardless of condition.

SPEED DEFINITIONS

85th Percentile Speed is the speed at or below which 85 percent of the sample of free-flowing vehicles are traveling.

50th Percentile Speed (also known as the median speed) is the speed at which 50 percent of the sample of free-flowing vehicles are traveling.

Adjacent speed limit is the posted regulatory speed limit approaching the modified speed zone.

Basic Speed Law is that no person **shall** operate a motor vehicle at a speed greater than is reasonable and proper for the prevailing conditions.

Design speed is the speed limit which engineering elements of the roadway were designed to accommodate (e.g., roadway and shoulder width, curve radii, and superelevation).

Pace is the 10-mph band of travel speeds containing the largest number of observed vehicles.

Prima facie is the speed limit that applies when no other speed limit is posted.

Seasonal speed limit applies for a specified period(s) during a year, generally at locations with significantly different levels of roadside activity at different times (e.g. high traffic tourist area popular in summer). Wisconsin does not allow seasonal speed limits.

Speed Limit is the maximum (or minimum) speed permitted on a section of street or highway. *May* be statutory or it *may* be established within a speed zone on the basis of an engineering study.

Speed Study (also known as Engineering Study) is the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, standards, guidance and practices as contained in the WisMUTCD and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device, including the installation of speed limit signs. An engineering study **shall** be documented.

Speed variance is the difference, or variation, in travel speeds of vehicles traveling on the same stretch of roadway simultaneously. Large speed variances increase the potential for crashes.

Speed Zone is a section of street or highway where a speed limit different than the statutory speed limit has been established.

Variable speed limit is a speed that changes based on traffic, weather, or other conditions. Wisconsin does not allow variable speed limits.

DISTRICT/AREA DEFINITIONS

Outlying district is an area contiguous to any highway within the corporate limits of a city or village where on each side of the highway within any 1,000 feet, buildings are spaced on average more than 200 feet apart.

Semiurban district is an area contiguous to any highway where on either or both sides of the highway within any 1,000 feet, buildings are spaced on average less than 200 feet apart on either or both sides of the highway.

Urban fringe is a semiurban district or outlying district.

For the purposes of determining the district/area type, a “building” is a structure. Two or more retail businesses or other uses located in a single structure would constitute one building. The statutes refer to “buildings in use for business, industrial, and residential purposes” in defining certain types of districts. Note that schools, churches, farm buildings (other than farm residences), public buildings such as fire stations, are not included.

The statutes also require that the building lie along the referenced highway. In general, any building on property adjoining the highway would count. Under the following circumstances, however, the building would not count if:

- The building is located on property adjoining a frontage road which lies between the buildings and the through roadway in question.
- The building faces a parallel highway and has a continuous fence, hedge or other physical feature separating the building from the highway in question. This circumstance occurs in some subdivisions.
- The building is located on the adjoining property and another building shields it from the highway in question.

If a speed limit change is deemed necessary for public parks, shopping center properties, cemeteries, or other types of land uses, the use of speed zoning under s. 349.11 is necessary.

PHILOSOPHY

It has been found that motorists are generally capable of determining the driving speed that is reasonable for prevailing road and traffic conditions unless there are some roadway conditions that they are unaware of or which are not readily apparent and that the majority will subsequently adjust their speed accordingly. The 85th percentile speed has been found to best represent this perceived "reasonable" speed. The WisMUTCD 2B.13 states “when a speed limit is to be posted, it *should* be within … 5 mph of the 85th percentile speed of free-flowing traffic.” This practice promotes safety as research shows the lowest risk of being involved in a crash occurs at approximately the 85th percentile speed. Additionally, this practice promotes voluntary speed limit compliance as the majority of drivers would likely observe the limit. A third benefit of posting speed limits close to the 85th percentile speed is the ability to target law enforcement efforts toward the limited number of motorists that speed.

Unreasonably low speed limits, also called irrational speed limits, are not effective in changing driver behavior and have several negative effects. Research shows that drivers do not reduce their speed to the posted limit on

the basis of signage alone ("The Effectiveness of Transitional Speed Zones," ITE Journal, 2004). While irrational speed limits do not result in desired driver behavior, resulting negative effects include higher financial cost due to need for increased enforcement, higher potential for crashes due to larger variability in vehicle speeds, and encouragement of motorist disregard of other, rational posted speed limits. Irrationally low speed limits also promote a false sense of security among residents and pedestrians who *may* expect that posting lower limits will change drivers' speed behavior.

Research also indicates that crash rates go down when posted speed limits are within 10 mph of the 85th percentile speed. While the 85th percentile speed is a starting point for the speed limit proposal, the analyst *should* consider a full range of factors when developing the recommendation. The 10-mph pace is another valuable tool when considering a speed limit recommendation. A normal distribution curve would include approximately 70 percent of observed vehicles within the pace with approximately 15 percent of observed vehicles below the pace and 15 percent of observed vehicles above the pace. Typically, the 85th percentile speed is at or near the upper limit of the 10-mph pace.

Driving environment is the main influence on motorists' speeds. Several factors contribute to the driving environment including design, location within urban or rural areas, characteristics of traffic, surrounding land use, and access along the roadway. Pavement condition, on-street parking, bicycle and pedestrian activity levels, and level of snow and ice removal also contribute to the driving environment or roadway context. WisMUTCD 2B.13 recommends conducting a study to reevaluate non-statutory speed limits on segments of roadways that have undergone significant changes since the last review. Changes to the regulatory speed limit **shall not** be used to correct spot safety or operational problems when it would be more appropriate to use an advisory speed plaque with a warning sign. Additionally, regulatory speed limit changes *should not* be used to address concerns with noise or specialty vehicles.

Variable speed limits are not allowed in Wisconsin. There have been seasonal speed limits issued in the past that are grandfathered into current practices.

SPEED ZONES

Speed zones, or modified speed limits, are typically established on roadways where the statutory speed limit or an existing speed zone is no longer appropriate due to changes in land use, access, traffic volumes, levels of congestion, number of crashes or crash potential along the highway. Speed zoning is a means of establishing uniform regulatory speed limits for similar driving conditions throughout the state. It is a means of informing motorists who *may* be unfamiliar with the road of "reasonable" driving speeds under ideal operating conditions. Speed limits within speed zones *should* correlate closely (usually within 5 mph) with 85th percentile speeds determined by field speed studies to promote safety and voluntary compliance.

Authority

The statutory authority for establishment of regulatory speed limits is provided in Statutes s. 346.57 and s. 349.11. These statutes vest WisDOT with the authority to establish regulatory speed limits on the state trunk highway system. Furthermore, the statutes provide WisDOT with approval authority (refer to Statute s. 349.11(3)(c) over some regulatory speed limits that local units of government would establish on facilities under respective maintenance jurisdictions. Figure 1 summarizes the speed limits under Statutes s. 346.57 and authority under s. 349.11.

On November 13, 1962, the Highway Commission delegated its statutory authority to the Chief Traffic Engineer and established the Chief Traffic Engineer as being responsible for maintaining the official records. Later the title of Chief Traffic Engineer was changed to State Traffic Engineer for Highways.

By memorandum of June 5, 1992, from the State Traffic Engineer, the regional offices were authorized to approve speed limit changes on local roads and streets, including county trunk highways, where those changes fall outside the authorized limits that the local authorities *may* exercise as specified in the statutes. In the same memo, the regional offices were authorized to establish reductions in speed limits in construction zones on a temporary basis while the need for the reduction exists. A Traffic Engineer with a Wisconsin Professional Engineer License is required to sign for any speed study on state-maintained highways.

As of October 16, 1995, authority for approval of speed limits which fall within 5 mph of the measured 85th percentile and no more than 2 mph below the measured average speed, or which are increased to the statutory speed limit was delegated to a designated approval authority in each region. Speed limits not meeting those criteria **shall** be sent to the State Traffic Safety Engineer or designee in the Bureau of Traffic Operations (BTO).

Table 1. Speed Limits and Authority to Change

Statutory (Fixed) Limits per Statute 346.57(4)[a]	What Local Governments[b] Can do Per Statute 349.11(3) and (7)[a]
70 mph– Freeway/Expressway	WisDOT ONLY
65 mph – Freeway/Expressway	WisDOT ONLY
55 mph – State Trunk Highway	WisDOT ONLY
55 mph – County Trunk Highway, Town Roads	Lower the statutory speed limit by 10 mph or less.
45 mph – Rustic Roads	Lower the statutory speed limit by 15 mph or less.
35 mph – Town Road (1,000' min) with 150' driveway spacing	Lower the statutory speed limit by 10 mph or less.
25 mph – Inside corporate limits of a city or village (other than outlying districts)	Raise the speed limit to 55 mph or lower. Lower the statutory speed limit by 10 mph or less.
35 mph – Outlying district[c] within city or village limits	Raise the speed limit to 55 mph or lower. Lower the statutory speed limit by 10 mph or less.
35 mph – Semiurban district[d] outside corporate limits of a city or village	Raise the speed limit to 55 mph or lower. Lower the statutory speed limit by 10 mph or less.
15 mph – School Zone, when conditions are met	Raise the speed limit to that of the roadway. Lower the speed limit by 10 mph or less.
15 mph – School Crossing, when conditions are met	Raise the speed limit to that of the adjacent street. Lower the speed limit by 10 mph or less.
15 mph – Pedestrian Safety Zone, with Public Transit Vehicle Stopped	No changes permitted.
15 mph – Alley	Lower by 10 mph or less.
15 mph – Street or town road adjacent to a Public Park	Lower by 10 mph or less.
Construction or maintenance zones – as appropriate	State and Local have authority to establish lower limit.

(a) Source: Wisconsin State Statutes
(b) All speed limit changes **shall** be based on a traffic engineering study, including modifications allowed under Statute. Local governments can implement speed limit changes on the local road system without WisDOT approval when proposals are within the constraints identified above.
(c) Per Statute 346.57(1)(ar) "outlying district" is an area contiguous to any highway within the corporate limits of a city of village where on each side of the highway within any 1,000 feet, buildings are spaced on average more than 200 feet apart.
(d) Per Statute 346.57(1)(b) "semiurban district" is an area contiguous to any highway where on either or both sides of the highway within any 1,000 feet, buildings are spaced on average less than 200 feet apart.

SPEED STUDIES

Speed zone reviews are typically initiated as a result of concerns expressed by interested citizens who live nearby or drive along the roads in question or *may* be triggered by a severe crash that has occurred. These concerns are referred to the traffic section in the region for review. Occasionally citizens or public officials under citizen pressure, request that a particular speed limit be imposed or that some other type of corrective action be taken. Requests for speed zone reviews originating outside the Wisconsin Department of Transportation for STHs *should* come through a mayor or other elected executive, appointed official, government body, or Traffic Safety Commission and be submitted in writing. WisDOT regions contacted directly by state or national legislators *should* notify and coordinate with the Bureau of Traffic Operations, Traffic Engineering and Safety Section (BTO, TESS). Any decisions regarding speed limits must be based on facts and an objective analysis of the characteristics of the roadway.

Engineering studies **shall** include the following:

1. Measurement of prevailing speed characteristics, including the calculation of the 85th percentile speed;
2. Evaluation of reported crash experience for the past five years;
    a. In cases where a significant change (traffic control changes, speed limit adjustments, lane adjustments, etc.) occurs, a minimum of three years of crash data should be reviewed and documented within the study
3. Assessment of the roadway's geometrics including lane widths, curves, roadside hazards and sight distances;
4. Determination of the 10-mph pace;
5. Determination of the average speed;
6. Evaluation of density and roadside development in terms of the number of driveways and access points where vehicles can enter the traffic flow.

Engineering studies *should* include the following:

7. Consideration of conflicts with parking practices, and pedestrian and bicycle activity;
8. Evaluation of shoulder widths as well as roadway and shoulder conditions;
9. Determination of the current level of enforcement.

OBJECTIVES OF A MODIFIED SPEED LIMIT

For a speed limit to be effective, it *should* accomplish the following:

- Reduce the speed differential of vehicles using the highway
- Be a reasonable speed so the majority of drivers will comply voluntarily
- Reflect consistent application of traffic engineering principals and guidelines in common circumstances

Numerous studies have shown that setting a speed limit within 5 mph of the 85th percentile speed is advisable, to achieve safer operation.

Speed limit recommendations between adjacent sections of highway outside incorporated cities/villages *should* generally be made in increments of 10 mph but increments of 5 mph is permissible when justified. Inside the incorporated cities/villages these speed limits *should* be in increments of 5 mph. The number of such changes *should* be held to a minimum when speed limits are being applied to several adjacent sections of highway.

Transitional Speed Zones

Transitional speed zones are a means to gradually step-down or transition speeds from a higher speed limit in a rural area to a much lower speed in an urban setting. Research found that signage alone was not enough to get drivers to reduce their speeds. There needs to be changes in highway characteristics to impact driver behavior ("The effectiveness of Transitional Speed Zones," ITE Journal, 2004). Thus, unless the driver perceives a reason to slow down, transitional, or step-down speed zones are almost completely ineffective and not recommended. In most cases, use of advanced warning signs (W3-5) advising the driver of a drop in the speed limit is the preferred method.

A transitional speed zone *should* be considered, however, if the physical characteristics of the roadway change, such as a rural section that transitions to a curb and gutter section with minimal driveways, and then transitions to a curb and gutter section with a significant number of driveways. Consider no more than 2 step-downs and only if within the 85th percentile speeds. Where there is development in an outlying area, a step down/transitional zone *may* be appropriate. However, where the highway is rural and transitions directly into a community without an outlying business area, the step down/transition zone is probably not appropriate.

When applied, the length of the transitional speed zone *should* be determined based on the posted speed limit of the highway approaching the transition zone (see Table 2). This will allow drivers adequate time to perceive, react and decelerate to the lower speed limit associated with constraints, such as an urban environment or construction.

Table 2. Minimum Length of Road for a Speed Limit

Speed Limit (mph)	Roadway Type & Adjacent Speed Limits	Minimum Length (miles)
30	Urban street, adjacent speed limits 45 mph or less Urban fringe, adjacent speed limits greater than 45 mph	0.3 0.6
35	Urban arterial route, adjacent speed limits 50 mph or less Other situations	0.6 0.3
45	Partly built-up, adjacent speed limits 50 mph or less Other situations	0.6 0.3
50	Arterial route, adjacent speed limits 45 mph or less Other situations	0.6 0.5
>/= 55	All situations	1.2

Source: *Methods and Practices for Setting Speed Limits.* FHWA-SA-12-004, 2012

Speed Zone Termination Points

Where possible, keep the beginning and end points of speed zones within 50 feet of the speed limit sign and declaration description area. If the location of a sign is greater than 50 feet, the declaration location description *should* be updated. If the declaration beginning and/or end point is at an intersection, the speed limit sign needs to be beyond the intersection.

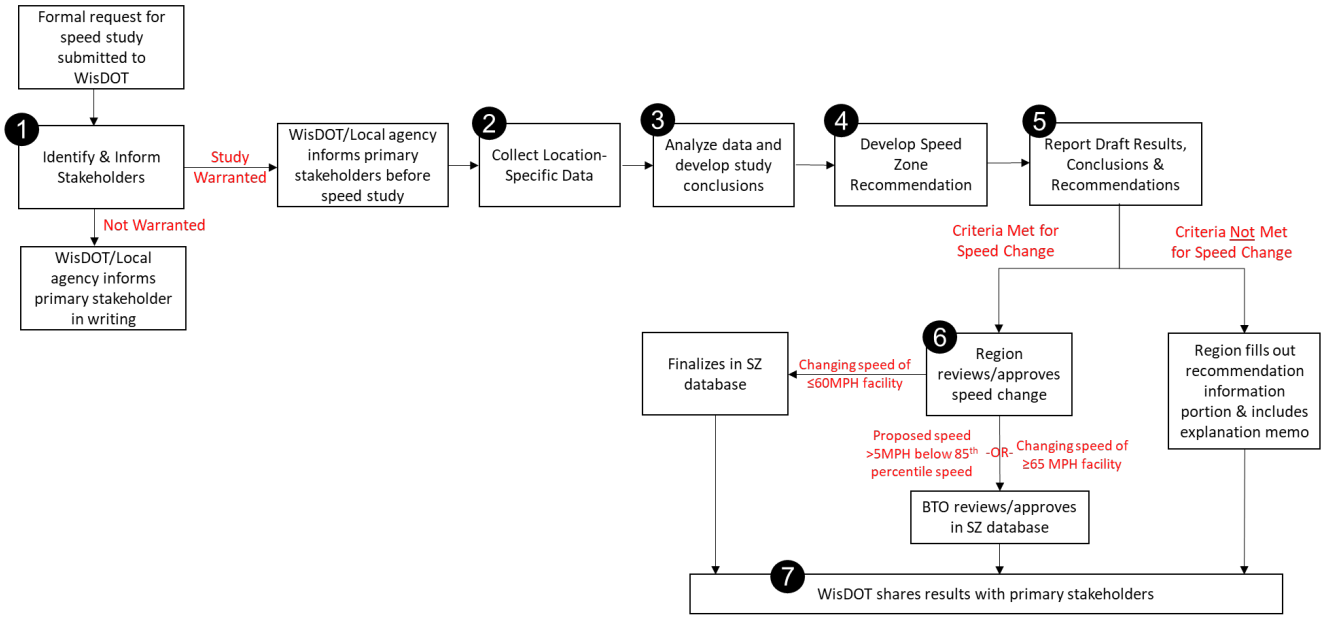
ASSESSING NEED FOR A SPEED ZONE OR MODIFICATION

The process for developing a speed limit recommendation involves many factors and is often complicated. The Federal Highway Administration (FHWA) has developed an expert, web-based system to aid in the process called USLIMITS2. This opensource application provides a speed limit recommendation after the user inputs location-specific data pertaining to the physical environment, speed, and crash history. NCHRP Project 17-76 provides a procedure and tool (macro enabled spreadsheet) for development of a posted speed limit setting. Analysts *should* consider using one of these tools as a starting point in the development of any revised speed limit recommendation.

The speed study process consists of applying the seven steps listed below and is outlined in Figure 1:

1. Identify and inform stakeholders
2. Collect location-specific data
3. Analyze data and develop study conclusions
4. Develop speed zone recommendations
5. Report draft results, conclusions, and recommendations
6. Review and approve or deny proposed speed modification
7. Seek stakeholder support

Figure 1. Speed Study Process



1. IDENTIFY AND INFORM STAKEHOLDERS

Requests for speed studies originating outside of WisDOT for STHs or outside the local authority for local roads *should* be in writing and *should* come through a mayor or other elected executive, appointed official, government body, or a Traffic Safety Commission. WisDOT or the local authority **shall** evaluate the request and use it in identifying primary stakeholders. If the request does not warrant study, WisDOT or the local authority **shall** inform primary stakeholders in writing of this finding and provide supporting rationale.

If study is warranted, WisDOT or the local authority **shall** inform primary stakeholders prior to initiating the speed study but **shall** minimize bias in the data collection effort by avoiding disclosure of specific study dates or times. WisDOT or the local authority *should* take the opportunity to brief decision-makers early in the speed study process, especially when the study area includes local roads or driveway access and passes through local jurisdictions. Briefings *should* include the methodology for developing and communicating recommendations at the conclusion of the study. WisDOT or the local authority

should coordinate with municipal and county officials, such as engineers, public works directors, and law enforcement, to access their local knowledge and identify vital information, especially in crash analysis, as the information *may* affect recommendations resulting from the speed study.

2. COLLECT LOCATION-SPECIFIC DATA

The objective of a speed study is to assess whether the speeds at which motorists travel along a stretch of roadway appropriately relate to the existing physical and geographic environment. State and local speed zone studies **shall** collect the following location-specific data:

- Vehicle speeds
- Crash data for the preceding five years which includes crash location, crash type, time of day, pavement conditions, and contributing factors such as speeding. In cases where a significant change (traffic control changes, speed limit adjustments, lane adjustments, etc.) occurs, a minimum of three years of crash data should be reviewed and documented within the study.
- Roadway geometrics including lane width and pavement condition, shoulder width and condition, and sight distances
- Traffic control and posted speed limits in and near the study area
- Land uses including type of development and intensity and access points from adjoining parcels, lots, or fields onto the roadway
- Official functional classification of the roadway, which indicates the intended function of the roadway in the overall state and local highway system. Classifications include principal arterial, minor arterial, collector and local road. Principal arterials include Interstates and most routes in the Wisconsin STH system. Minor arterials include major local roadways and some routes in the STH system. Collectors include other important local roads and a few STH routes. All other local roadways have the local road classification.
- Practical function of the roadway, which indicates the analyst's perception of the actual function of the roadway within the state and local highway system

Crash Data

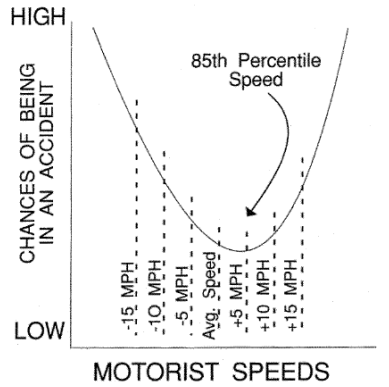
Crashes typically indicate there is a problem beyond speed. Investigations of crashes reveal that in most cases there was a clear violation of a traffic law or rule of good driving. Other numerous factors also impact the number of traffic crashes along a highway. Proper analysis and evaluation of these factors require the experience and expertise of a traffic engineer.

When reviewing, evaluating, and analyzing the crashes, do not compare crashes on a short segment of road to the statewide crash average. Since a speed study evaluates only one section of the highway, this would be inappropriate and could result in incorrect or misleading conclusions.

Contrary to popular belief, lower speed limits do not necessarily improve safety. The more uniform the speeds of vehicles in a traffic stream, the less chance there is for conflict and crashes. Posting speed limits lower or higher than what most drivers are traveling produces two distinct groups of drivers: those attempting to observe the speed limit and those driving at a speed they feel is reasonable and prudent. These differences in speeds can result in increased crashes due to tailgating, improper passing, reckless driving, and weaving from lane to lane.

The graph in Figure 2 illustrates that crashes are lowest at the 85th percentile speed. Research has found that the lowest risk of being involved in a crash occurs at approximately the 85th percentile speed.

Figure 2. Speed vs. Crash Curve



Source: "Speed Zoning on Texas Highways" State Department of Highways and Public Transportation, Austin, Texas, October 1990.

Driving Environment

The design, physical condition, and classifications of a roadway influence vehicle speeds as motorists will vary their speeds depending on the driving environment. The traffic engineer considers significant items in the driving environment. These items *may* include:

- Traffic volumes
- Roadside development (type, density, and lateral offset)
- Roadway and shoulder widths
- Condition of the roadway
- Number of lanes
- Intersections
- Driveways
- Hills, curves
- Urban roadway cross-section (presence of curb and gutter rather than ditches)
- Parking
- Pedestrians and bicyclists
- Any other factors recorded by the study team

The number of changes in the speed limit along a given route *should* be minimized. With this in mind, the length of the speed zone *should* depend on the speed of the roadway (see Table 2). Speed limits are not a spot issue. Realistic speed limits provide for a uniform and orderly movement of traffic. There is a need for uniformity on all roadways especially where they carry large volumes of traffic through various roadside conditions or numerous adjoining communities.

Data Collection Guidelines and Considerations

When a speed study is performed, a standard operating procedure *should* be followed to ensure that the sample set of data collected represents vehicles traveling at uninterrupted, free-flow speeds. In doing so, an accurate representation of vehicle speeds within the speed zone study area will be depicted. The following outlines the recommended procedure that *should* be followed when performing a speed study:

- The speed study *should* be performed during non-peak traffic conditions on a typical weekday (usually a Tuesday, Wednesday, or Thursday), when motorists are likely to be traveling at uninterrupted speeds. Speed studies conducted during peak commute times, unique events, weekends, or holidays *may* unintentionally capture more variable travel characteristics. These variable traffic conditions *may* impede vehicles from operating at their typical free-flow speeds due to congestion or platooning. In addition, the speed data *should* be collected during daylight hours and favorable weather conditions to reflect typical driving behavior.

  In certain cases, though, speed concerns on a particular roadway do involve adverse weather or peak traffic volume conditions (e.g., school startup and release times, shift changes at major employment centers, or corridors with numerous points of commercial access). In these cases, it would be appropriate to conduct a speed study under these conditions to observe vehicle speeds during these unique situations.

- Speed data *should* be collected away from factors that might influence vehicle speeds, such as railroad crossings, intersections, horizontal and vertical curves, and work zones. The location of the

speed study *should* avoid speed limit transition areas and active pedestrian and on-street parking areas as motorist awareness is heightened, which *may* influence their free-flow speeds.

- Regardless of the data collection device being used, safety **shall** be the first priority when the observer or technician is performing this task. Although the amount of human interaction in collecting speed data varies by device, the observer or technician **shall not** be placed in a situation where their safety or that of passing motorists is in question.
- Speed data for the speed study is typically collected by recording the speeds of free-flowing vehicles using a speed-measuring device. A representative sample of speeds is recorded, which includes local residents, commuters, and regional traffic. To assist in obtaining accurate speed measurements, the observer or speed-measuring device *should* be inconspicuous to the observed traffic so unusual driver behavior does not skew data.
- Whenever possible, a minimum sample size (number of observations) for a speed study *should not* be less than 100 vehicles per lane per direction to provide an accurate representation of vehicle speeds within the study area (e.g., a total of 200 vehicles for a roadway with one lane in each direction, or 400 vehicles total for a roadway with two lanes in each direction). For roadways classified as very-low volume local roads, the minimum sample size *should not* be less than 30 vehicles (e.g., 15 vehicles per direction on a two-lane roadway). If the analyst anticipates that a sample of 30 vehicles cannot be collected within a reasonable amount of time, the submitting party **shall** request approval to use a smaller sample size from the agency with jurisdiction over the roadway. Data can be collected over multiple weekdays (typically a Tuesday, Wednesday, or Thursday).
- When an observer is gathering speed data, vehicle headway (the time between successive vehicles) of four to six seconds *should* be present for reliable speed observations. Measurements collected with smaller headways *may not* reflect free-flow conditions, as the lead vehicle *may* influence the speed of the vehicle(s) behind it.
- Two hours **shall** be the minimum amount of time for speed data collection if the 100 vehicles per lane per direction threshold cannot be met.

A speed zone study worksheet, which provides a template for summarizing and reporting the speed data, is available via the BTO Traffic Operations Manuals webpage.

Data Collection Methods

An analyst can use a variety of data collection devices. These devices can be grouped into three categories, which for these purposes, are based on the location that the speed data collection device is installed:

- Manually operated handheld devices that are portable and can be used in most places (e.g., stopwatch, radar gun, and laser gun).
- In-road devices that are installed into or on top of the roadway surface (e.g., pneumatic road tube).
- Out-of-road devices that are installed overhead or to the side of the roadway surface (e.g. radar recorders).

Each device has distinct advantages and disadvantages for collecting and analyzing data that *may* factor in determining the appropriate device to use for a particular location. Table 3 summarizes common speed data collection techniques.

Table 3. Comparison of Data Collection Methods

Method	Data Collected	Labor Involvement	Equipment Costs[1]	Advantages	Disadvantages
Radar Recorders	Instantaneous speed, traffic volumes, vehicle class, traffic flow gaps[3]	Low	High	• Little labor required to collect and tabulate data • Can collect data for long periods of time • Other traffic-related data *may* be collected at the same time • Can be used when snowplows *may* be present without risk of damage • Less visible to traveling public than road tubes	• User cannot randomly select vehicles for data set • Some devices *may not* accurately collect data for multi-lane roadways or determine directionality of observed vehicles • Equipment-intensive method • Maintenance/ calibration required
Pneumatic Road Tube	Instantaneous speed, traffic volumes, vehicle class, traffic flow gaps[3]	Low	Medium	• Little labor required to collect and tabulate data • Can collect data for long periods of time • Other traffic-related data *may* be collected at the same time	• Visible to traveling public which *may* change driver behavior • User cannot randomly select vehicles for data set • Use discouraged when snowplows *may* be present • Most equipment-intensive method • Maintenance/calibration required
Laser Gun	Instantaneous speed	Medium	High	• Equipment is easily portable • User controls vehicles sampled • A more focused laser beam limits the number of readings for non-target vehicles as compared to radar	• Cosine error limits horizontal/vertical deployment • Scopes and sights *may not* be user-friendly • Laser beams are more sensitive to environmental variances than radar • Maintenance/calibration required
Radar Gun	Instantaneous speed	Medium	Medium	• Equipment is easily portable • User controls vehicles sampled • Accurate data collection method • Widespread equipment availability has lowered its cost	• Cosine error limits horizontal/vertical deployment • Closely spaced and larger vehicles *may* create readings for non-targeted vehicles • Maintenance/calibration required
Stopwatch[2]	Travel time over a distance	High	Low	• Little equipment to purchase and maintain • Easy to perform data collection process	• Labor-intensive • Collects time data that needs to be converted to speed data • Typically, low accuracy

1 Equipment costs reflect the initial purchasing costs of the equipment and not future maintenance and calibration costs
2 The stopwatch method **shall not** be utilized in State-sponsored studies or studies that involve roadways under the jurisdiction of WisDOT.
3 The amount of additional data collected varies for each device, please consult the device's user manual for a better understanding of its capabilities.

Further information on these methods can be found in the Data Collection Methods document on the Traffic Operations Manual webpage.

Figure 3 provides a typical speed data summary example illustrating the 85th percentile speed, 10-mph pace and synopsis of speed distribution.

Figure 3. Speed Data Example

WISCONSIN DEPARTMENT OF TRANSPORTATION
SPEED STUDY WORKSHEET

ADDRESS
CITY, STATE, ZIP

LOCATION INFORMATION	
HIGHWAY:	STH 101
COUNTY:	PORTAGE
MUNICIPALITY:	T-ALPHA
STUDY LOCATION:	0.20 MILES SOUTH OF CTH ABC 44.XXXX°, -89.XXXX°
DIRECTION OF TRAVEL:	EASTBOUND/WESTBOUND
POSTED SPEED:	55 MPH

GENERAL INFORMATION	
DATE:	6/10/2021
DAY:	TUESDAY
TIME OF STUDY:	3PM - 7 PM (4 HRS)
OBSERVER(S):	WISDOT
WEATHER:	CLOUDY
PAVEMENT CONDITION:	DRY

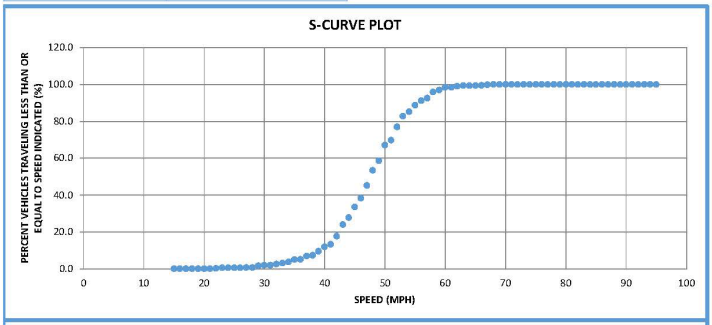
FIELD COMMENTS
DATA RECORDED WITH RADAR DEVICE.

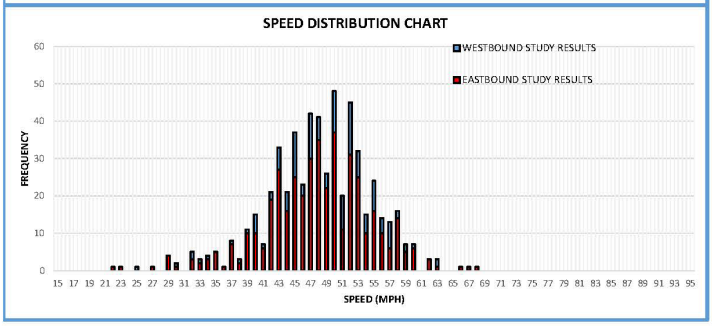
EASTBOUND STUDY RESULTS	
85TH PERCENTILE*	54.0
50TH PERCENTILE†	47.6
AVERAGE SPEED	47.8
PACE RANGE‡	43 TO 52
PERCENT IN PACE	59.2%
PERCENT OVER PACE	23.1%
PERCENT UNDER PACE	17.7%

WESTBOUND STUDY RESULTS	
85TH PERCENTILE*	54.7
50TH PERCENTILE†	49.3
AVERAGE SPEED	48.8
PACE RANGE‡	44 TO 53
PERCENT IN PACE	60.6%
PERCENT OVER PACE	22.6%
PERCENT UNDER PACE	16.8%

COMBINED STUDY RESULTS	
85TH PERCENTILE*	54.2
50TH PERCENTILE†	47.8
AVERAGE SPEED	48.1
PACE RANGE‡	43 TO 52
PERCENT IN PACE	59.4%
PERCENT OVER PACE	24.2%
PERCENT UNDER PACE	16.4%

VEHICLE SUMMARY PERCENTAGES	
PASSENGER VEHICLES	97.9%
TRUCKS	2.1%





*85TH PERCENTILE SPEED IS THE SPEED AT OR BELOW WHICH 85 PERCENT OF THE OBSERVED TRAFFIC TRAVELS UNDER FREE FLOW CONDITIONS

†50TH PERCENTILE SPEED IS THE SPEED AT OR BELOW WHICH 50 PERCENT OF THE OBSERVED TRAFFIC TRAVELS UNDER FREE FLOW CONDITIONS

‡PACE IS THE 10 MPH RANGE OF SPEEDS THAT COVERS THE HIGHEST NUMBER OF OBSERVATIONS FROM THE DATA SET

SPEED (MPH)	EB VEH	EB TRUCKS	WB VEH	WB TRUCKS	TOTAL VEHICLES	TOTAL TRUCKS	TOTAL
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	1	0	0	0	1	0	1
23	1	0	0	0	1	0	1
24	0	0	0	0	0	0	0
25	0	0	1	0	1	0	1
26	0	0	0	0	0	0	0
27	1	0	0	0	1	0	1
28	0	0	0	0	0	0	0
29	4	0	0	0	4	0	4
30	1	0	1	0	2	0	2
31	0	0	0	0	0	0	0
32	2	1	2	0	4	1	5
33	2	0	1	0	3	0	3
34	3	0	1	0	4	0	4
35	5	0	0	0	5	0	5
36	1	0	0	0	1	0	1
37	6	1	1	0	7	1	8
38	2	0	1	0	3	0	3
39	10	0	1	0	11	0	11
40	10	0	5	0	15	0	15
41	5	1	1	0	6	1	7
42	18	1	2	0	20	1	21
43	27	0	6	0	33	0	33
44	16	0	5	0	21	0	21
45	24	1	12	0	36	1	37
46	20	0	3	0	23	0	23
47	30	0	11	1	41	1	42
48	34	1	6	0	40	1	41
49	22	0	4	0	26	0	26
50	37	0	11	0	48	0	48
51	11	0	9	0	20	0	20
52	28	3	14	0	42	3	45
53	23	2	7	0	30	2	32
54	10	0	5	0	15	0	15
55	16	0	8	0	24	0	24
56	10	0	4	0	14	0	14
57	6	0	7	0	13	0	13
58	14	0	2	0	16	0	16
59	5	0	2	0	7	0	7
60	6	0	1	0	7	0	7
61	0	0	0	0	0	0	0
62	3	0	0	0	3	0	3
63	1	0	2	0	3	0	3
64	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
66	1	0	0	0	1	0	1
67	1	0	0	0	1	0	1
68	1	0	0	0	1	0	1
69	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0
82	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0
88	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0
TOTAL VEHICLES	418	11	136	1	554	12	566

3. ANALYZE DATA AND DEVELOP STUDY CONCLUSIONS

After location-specific data has been collected, it *should* be analyzed and serve as the basis for study conclusions and recommendations. State and local speed studies **shall** analyze the data and report the following study conclusions:

- *85th percentile speed.* The 85th percentile speed has been found to best represent the "reasonable" and "proper" speed perceived by motorists and is a key characteristic of traffic conforming to a "safe" and "reasonable" speed limit. While 15 percent of the observed motorists travel above the perceived "reasonable" and "proper" speed, studies have shown that this group of motorists causes many of the vehicle crashes along roadways. Studies have also indicated that the lowest risk of being involved in a crash occurs when motorists travel at approximately the 85th percentile speed.
- *Pace speed.* 10 mph band of travel speeds containing the largest number of observed vehicles.
- *50th percentile speed.* Also known as the median speed, is the speed at which 50 percent of the sample of free-flowing vehicles are traveling.
- *Design speed of the roadway.* Often times the design speed of state trunk highways is 5 mph higher than the posted speed limit. When the design speed is not known, it can be estimated based on elements of the horizontal and vertical alignment. For example, design speed of the curves (an element of horizontal alignment) and stopping sight distance (an element of vertical alignment) are often suitable estimates for overall design speed. See TEOpS 13-5-12.
- *Speed distribution.* Two distribution methods are used to analyze speed data: frequency distribution and cumulative frequency distribution. Frequency distribution compares speed versus the number of observed vehicles traveling at a particular speed. A frequency curve presenting this data will illustrate the modal speed (speed most frequently observed) as well as the pace. Cumulative frequency distribution compares speed to the number of vehicles or percentage of the sample traveling at or less than a particular speed. A cumulative frequency curve presenting this data will illustrate percentile speeds.
- *Proportion of vehicles exceeding existing speed limit.* This statistic reports compliance with the existing posted speed limit and current driver expectation in the proposed speed zone. This data *may* be useful in building an argument for or against a change to the existing posted speed limit.
- *Significance of secondary roadway attributes*. Attributes such as presence of long turning queues, large volumes of trucks, large volumes of regional traffic, driveways and intersections, sight distance, on-street parking, pedestrian and bicycle activity, as well as pavement condition, level of law enforcement, and divergence between functional classification and practical function play a significant role in driver expectancy and vehicle speeds along a roadway. The analyst *should* note when secondary roadway attributes are present and identify which of the attributes are significant.
- *Crash data analysis.* The speed study conclusions **shall** also include an analysis of crash data for the past five years, indicate if a safety concern exists, and provide the number and percentage of crashes for which speed was a contributing factor. In cases where a significant change (traffic control changes, speed limit adjustments, lane adjustments, etc.) occurs, a minimum of three years of crash data should be reviewed and documented within the study. The conclusion **shall** report a crash rate for the roadway segment being studied, the comparable statewide average available on the BTO Traffic Operations Manual webpage, and key contributing factors such as speed, the driver's physical condition (e.g. chemical impairment, sleeping, age, and seat belt use), weather, and time-of-day the crash occurred.

4. DEVELOP SPEED ZONE RECOMMENDATIONS

After analyzing the vehicle speed and location-specific data, the analyst **shall** use it to develop and support the speed zone recommendations. The speed study **shall** provide a recommendation indicating whether conditions warrant a need to modify the speed limit of the studied section of roadway. It is important to note that the study conclusions *may not* support the need for a speed zone.

Decisions regarding the potential change in a speed limit *should* be based on the objective findings of the speed study and on conditions that exist at the time of the evaluation. Modified speed limits *should not* be installed to address the following conditions:

- Response to noise complaints
- Accommodation of specialty vehicles that use the roadway
- Future growth anticipated in the area
- Anticipated law enforcement of the roadway

- Future concerns that have not previously occurred
- Correction of spot safety or operational problems

The speed study **shall** make a recommendation that identifies whether the speed limit *should* change or remain the same. Any recommendation made in the speed study *should* relate to improving motorist and bystander safety along the route, reference findings from the crash data analysis, and suggest additional study if a safety problem is discovered where speed is not a primary contributing factor.

When a modified speed limit is proposed as a result of a speed study, several factors **shall** be considered including but not limited to the following:

- The number of speed limit changes along a route *should* be minimized. For speed zones outside of incorporated cities and villages, speed limit changes *should* be made in increments of 10 mph, though increments of 5 mph are permissible when justified. Within incorporated cities and villages, an increment of 5 mph *should* be implemented.
- The WisMUTCD 2B.13 states "when a speed limit is to be posted, it *should* be within … 5 mph of the 85th percentile speed of free-flowing traffic." The 85th percentile speed is typically the best representation of the perceived "reasonable" speed. It is widely accepted that speed limits set at unrealistic levels above or below the 85th percentile speed have little impact on a driver's choice of speed. In addition, the lowest risk of being involved in a crash occurs at approximately the 85th percentile speed.
- Highways that serve predominantly regional or statewide traffic, including bypass highways and roadways on the urban fringe, *should* have higher speed limits in rural or urbanizing areas than in urban commercial or residential-core areas. These highways *should* also have speed limits at or closer to the 85th percentile speed as compared to roadways that serve predominantly local traffic.
- All recommended modifications to posted speed limits **shall** be within the range allowable by Statutes (see Table 1) or **shall** gain approval from WisDOT.

5. REPORT DRAFT RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

In accordance with state statutes, an engineering and traffic investigation **shall** precede the establishment of a modified speed zone on the state trunk highway system. Exceptions to this requirement are for situations involving minor adjustments of existing speed zone termini that requires the relocation of the speed limit sign due to changes in highway features, development, or signage.

The following elements are expected to be prepared by the region as part of every speed zone engineering and traffic investigation. An engineering and traffic investigation is not required for 55, 65 and 70 mph limits that are established by statute.

1. Speed checks taken at appropriate intervals to determine the 85th percentile and mean speeds of the speed distribution at each of the monitored locations.
2. A picture or photo of each location where speed readings were taken.
3. Crash history when it bears on the recommendation
4. A map depicting the limits of both the existing and proposed speed zoning
5. Documentation of any protests by local units of government, particularly for locations where the speed study recommends altering the existing speed limits.
6. Discussion supporting the recommendation to modify or keep the existing speed limit.

Recommending No Speed Limit Change

When study conclusions indicate the posted speed limit *should not* be changed, the analyst/agency *should* provide alternatives that the responsible jurisdiction can use to respond to the identified issues and concerns, including, but not limited to, noise, specialty vehicles, spot safety problems, or spot operational problems. Alternatives such as signing adjustments, traffic calming, roadway design modifications including modifications to roadway cross-section, access control, or other changes to the physical environment *may* alter vehicle speeds. A comprehensive discussion of traffic calming measures is available from the Institute of Transportation Engineers (ITE). It is generally not recommended to use traffic control devices such as stop signs or traffic signals as tools for controlling

speeds. The analyst *may* want to recommend the completion of additional study as well as consideration of public outreach efforts aimed at reducing speeds using educational and enforcement initiatives.

6. REVIEW AND APPROVE/DENY PROPOSED SPEED CHANGE

The approval process for speed limit modifications proposed by WisDOT on the STH system consists of one to three reviews and are conducted electronically within the Speed Zone Database. The following summarizes the different levels of review and approval.

1. If the recommended speed limit falls within 5 mph of the measured 85th percentile speed and no more than 2 mph below the measured 50th percentile speed, or is increased to the statutory speed limit of the roadway, the region's approval authority *may* complete and electronically sign/approve the "Request For Approval of Declaration" portion of the speed zone declaration.
2. If the recommended speed limit does not meet these criteria (either the proposed speed is greater than 5 mph below 85th percentile speed or changing the speed of a facility that is more than 60 mph), the region **shall** attach the speed zone engineering and traffic investigation memo, accompanying worksheets, and any supplemental information to the declaration within the Speed Zone Database and submit for BTO review. The State Traffic Safety Engineer or designee reviews the submittal, consults with the regions regarding questions or clarifications, and *may* electronically sign and approve/deny the "Request for Approval of Declaration" portion of the speed zone declaration.
3. For submittals containing sensitive (legislative or tribal interest) recommendations, the State Traffic Safety Engineer or designee reviews the findings with the State Traffic Engineer before approval/denial.

BTO **shall** respond to the region in writing with their decision. If a speed zone request is denied, BTO **shall** provide an explanation of the reasons for denial.

7. SHARE INFORMATION WITH STAKEHOLDERS

After the study's draft results, conclusions, and recommendations have been developed, WisDOT or the local authority **shall** share them with primary stakeholders (e.g., WisDOT, State Patrol, FHWA, local governments, traffic safety commissions, and local law enforcement). WisDOT or the local authority *should* take the opportunity to gather feedback and generate support for study findings by presenting results and answering questions from decision-makers about the speed study process. The outreach *should* include study methodology, results, conclusions, and recommendations.

13-5-2 Local Speed Limits — August 2021

The process to modify regulatory speed zone on town, village, city or county roadways is explained below.

- TEOpS 13-5 is provided to help guide locals in making an informed decision based on data and engineering judgement; the statutes relating to speeds need to be followed first and foremost. Statutes 346.57 and 349.11 are most applicable to modification of regulatory speed limits. These statutes, fixed regulatory speed limits, and local government authority are summarized in TEOpS 13-5-1 Table 1.
- For concerns regarding county highways, contact the County Highway Department office. For concerns regarding city or village roadways, contact the Department of Public Works office. For concerns regarding township roadways, contact the Township Chairperson.
- If the roadway does not currently have a posted speed and is rural in nature (sparse development, no curb and gutter, gravel shoulders and grass ditches), by statute the speed limit is 55 mph.
- The town, village, city or county can reduce rural roadways that are statutorily a 55-mph regulatory speed zone to 45 mph upon doing a traffic engineering study that indicates 45 mph is appropriate. No WisDOT approval required.
- If the town, village, city or county roadway is more urban in nature (higher density of residential, farm, industrial or commercial driveways) the statutory criteria varies depending on driveway spacing. Driveway

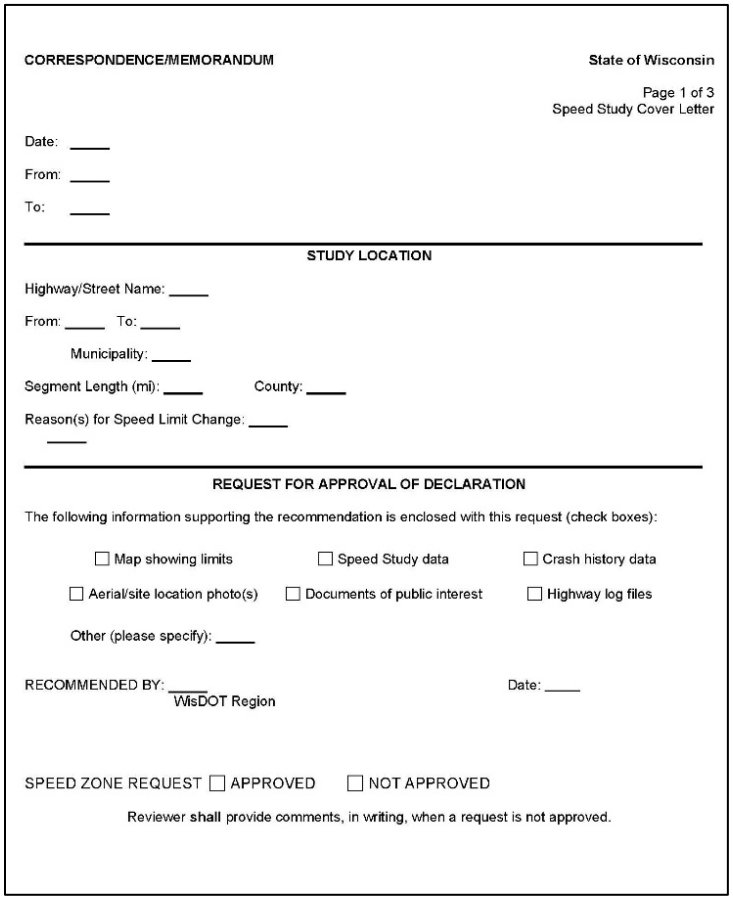
spacing is a major factor in posting 35 mph regulatory speed zones. Refer to Figures 4 and 5 for the driveway spacing requirements.

- If a traffic engineering study conducted by a town, village, city or county indicates a modified regulatory speed zone is appropriate and the modification is allowed by state statute (see Table 1 in TEOpS 13-5-1) approval by WisDOT is not required.
- If a traffic engineering study conducted by a town, village, city or county indicates a modified regulatory speed zone is appropriate but the modification is not allowed by state statute (see Table 1 in TEOpS 13-5-1) approval by WisDOT is required.
- If WisDOT needs to be contacted regarding approval of a local road speed study, approval will likely only be given if the traffic engineering study concludes the modified (typically lower) regulatory speed zone is appropriate.
- Details for conducting a traffic engineering study can be found in TEOpS 13-5-1.
- Analysts *should* consider using USLIMITS2 or NCHRP Project 17-76 with the macro enabled spreadsheet tool, as a starting point in the development of any revised speed limit recommendation.

Changes proposed within the constraints outlined in TEOpS 13-5-1 Table 1 are subject to the local approval process only and do not require review or approval from the WisDOT region . It is recommended that the local approval process include legal adoption of the speed zone recommendation through passage of an ordinance. Proposed changes that lie outside the constraints presented in TEOpS 13-5-1 Table 1 **shall** be reviewed and approved by WisDOT , before legal adoption by local authorities. It is recommended that the local process conclude with the local authority responding to the submitting party in writing, providing notification of approval or an explanation of the reasons for denial. The traffic study must be per Statute s. 349.11 and WisMUTCD 2B.13. Changes proposed outside the constraints require Department approval.

Typical study documentation can include the speed study cover letter, speed study, map and/or photos of area, study findings, methodologies, and any other documentation to help support the recommendation (see example below). Contact the local WisDOT Region for an example of a speed study for more clarification.

Figure 1. Sample Speed Study Template



CORRESPONDENCE/MEMORANDUM

State of Wisconsin

Page 1 of 3
Speed Study Cover Letter

Date: ____

From: ____

To: ____

STUDY LOCATION

Highway/Street Name: ____

From: ____ To: ____

Municipality: ____

Segment Length (mi): ____ County: ____

Reason(s) for Speed Limit Change: ____

____

REQUEST FOR APPROVAL OF DECLARATION

The following information supporting the recommendation is enclosed with this request (check boxes):

☐ Map showing limits ☐ Speed Study data ☐ Crash history data

☐ Aerial/site location photo(s) ☐ Documents of public interest ☐ Highway log files

Other (please specify): ____

RECOMMENDED BY: ____ Date: ____
WisDOT Region

SPEED ZONE REQUEST ☐ APPROVED ☐ NOT APPROVED

Reviewer **shall** provide comments, in writing, when a request is not approved.

Page 2 of 3
Speed Study Worksheet

ROADWAY CHARACTERISTICS

Posted Speed Limit: _____ mph

Design Speed Limit: _____ mph

Number of Lanes: _____

Lane Width (feet): _____

AADT (vehicle/day): _____

Year AADT Performed: _____

Is Segment a Transition Zone (check one): ☐ Yes ☐ No
(If 'Yes', please explain on Page 3)

Significant On-Street Parking (check one): ☐ Yes ☐ No
(If 'Yes', please explain on Page 3)

Significant Ped/bike activity (check one): ☐ Yes ☐ No
(If 'Yes', please explain on Page 3)

Horizontal curves present (check one): ☐ Yes ☐ No
(If 'Yes', please explain on Page 3)

Vertical curves present (check one): ☐ Yes ☐ No
(If 'Yes', please explain on Page 3)

Number of access points in segment: _____

Land Use (check one): ☐ Urban ☐ Suburban ☐ Rural

Roadway Type (check one): ☐ Freeway ☐ Non-freeway

Functional Class: _____

Shoulder Type (check one): ☐ Paved ☐ Gravel ☐ C&G

Shoulder Width (feet): _____

Median Type (check one): ☐ Divided ☐ Undivided ☐ TWLTL

CRASH HISTORY

Years: _____ to _____

Number of Years: _____

Speed-related crashes: _____

Crash Rate: _____

Severity Rate: _____

SPEED STUDY RESULTS

Posted Speed Limit (mph): _____

50th Percentile Speed (mph): _____

85th Percentile Speed (mph): _____

Range of Speeds (mph): _____

Percent observed vehicles non-compliant to speed limit: _____

Number of observed vehicles: _____

10 mph Pace Range: _____

Percent vehicles in pace: _____

Percent vehicles over pace: _____

Percent vehicles under pace: _____

Page 3 of 3
Speed Study Worksheet

Provide additional comments that may be significant or noteworthy about the request

_____

Provide reasoning for omission of any information requested

_____

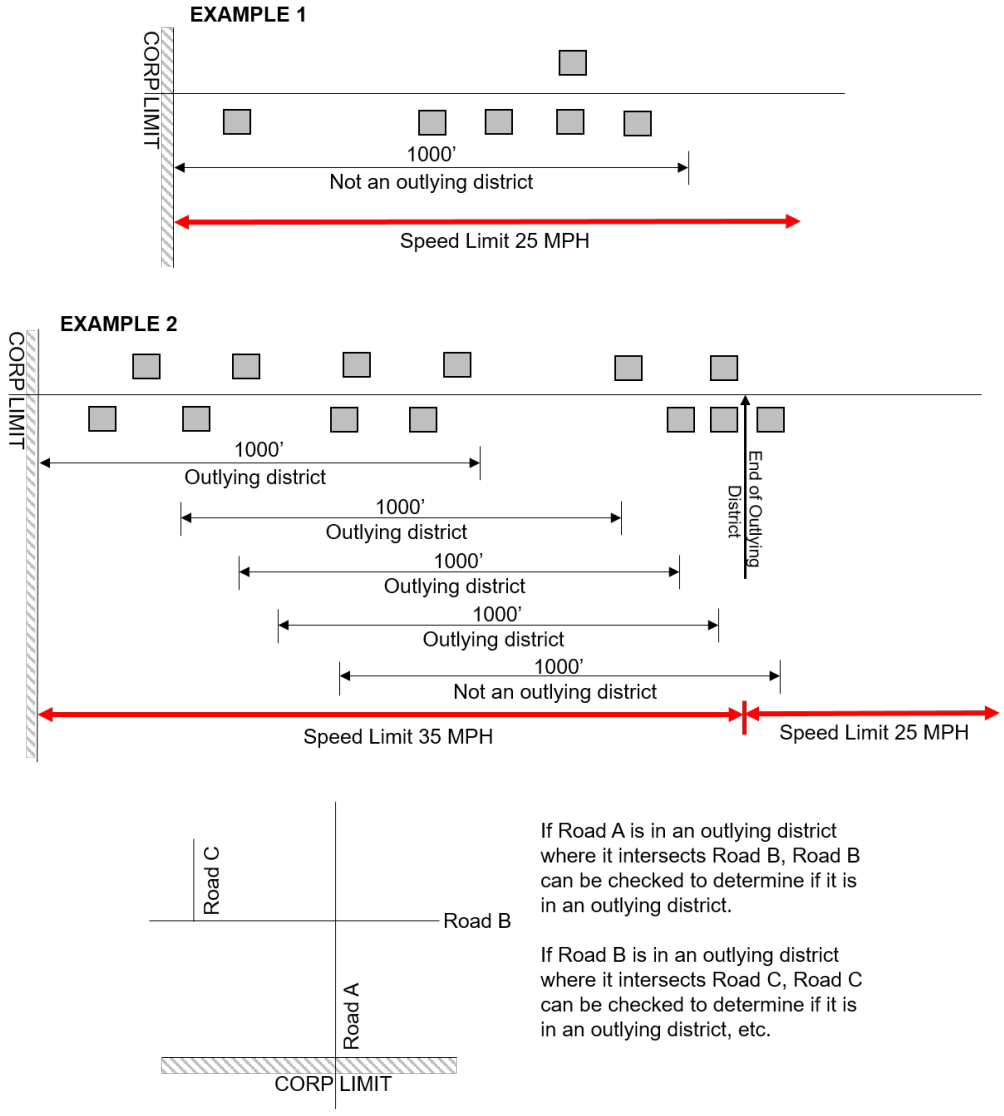
Speed Limits Within Incorporated Areas

Assume that the speed limit within corporate limits is 25 mph unless it can be shown that the area is an outlying district. Use the following steps in conjunction with Figure 4 to help determine if the area qualifies as an outlying district:

1. Measure 1000 feet beginning at the corporate limit and measuring inward. If there are 5 or more "buildings" on either side of the highway, the area is not an outlying district. If neither side of the highway has 5 or more "buildings", the area is an outlying district.
    a. If Step 1 does not find an outlying district, the process stops at this point. There is no outlying district on that highway on that edge of the city or village.
    b. If Step 1 identifies an outlying district, continue with Step 2.
2. Maintaining the 1000-foot measurement, move progressively inward on each side of the highway separately until one additional "building" is added on either side. Then repeat Step 1. Continue this process until a 1000-foot segment is located which does not qualify as an outlying district; the end of the outlying district (the beginning of the 25 mph speed limit) is immediately preceding the most inward "building" in the 1000-foot segment that did not qualify as an outlying district.

An outlying district *may* also lie on a highway which does not intersect the corporate limit but does intersect another highway in an outlying district. To check such a highway, begin at the highway already found to be in an outlying district and treat that intersection the same as the corporate limit for the purposes of Steps 1 and 2 above.

Figure 4. Outlying Districts



Speed Limits Outside Incorporated Areas

Assume that the speed limit outside corporate limits is 55 mph unless it can be shown that an area is a semiurban district. Use the following steps in conjunction with Figure 5 to help determine a semiurban district:

1. Locate the approximate "midpoint" of the suspected semiurban district and measure a 1000-foot length of highway roughly centered on this "midpoint".
    a. If the number of "buildings" within this 1000-foot length is 4 or fewer, counting all "buildings" on both sides of the highway, a semiurban district has not been identified. Select a new "midpoint", if appropriate, and repeat.
    b. If the number of "buildings" within the 1000-foot length is 5 or more, counting all "buildings" on both sides of the road, a semiurban district exists. Continue with Step 2.
2. Measure a new 1000-foot length of highway so it includes all but one of the "buildings" in the previous 1000-foot length.
    a. If this new 1000-foot length includes 5 or more "buildings", it is also part of the semiurban district. Repeat Step 2.
    b. If this new 1000-foot length includes only 4 or fewer "buildings", the distance added because of the new measurement is not part of the semiurban district.

    Note: If a semiurban district is identified in Step 1, Step 2 must be applied in both directions from this original length.

Theoretically these provisions can result in two (2) semiurban districts which are quite close together. For practical purposes, if the limits of two adjacent semiurban districts are less than 1000 feet apart, they *should* be considered a single district.

Figure 5. Semiurban Districts

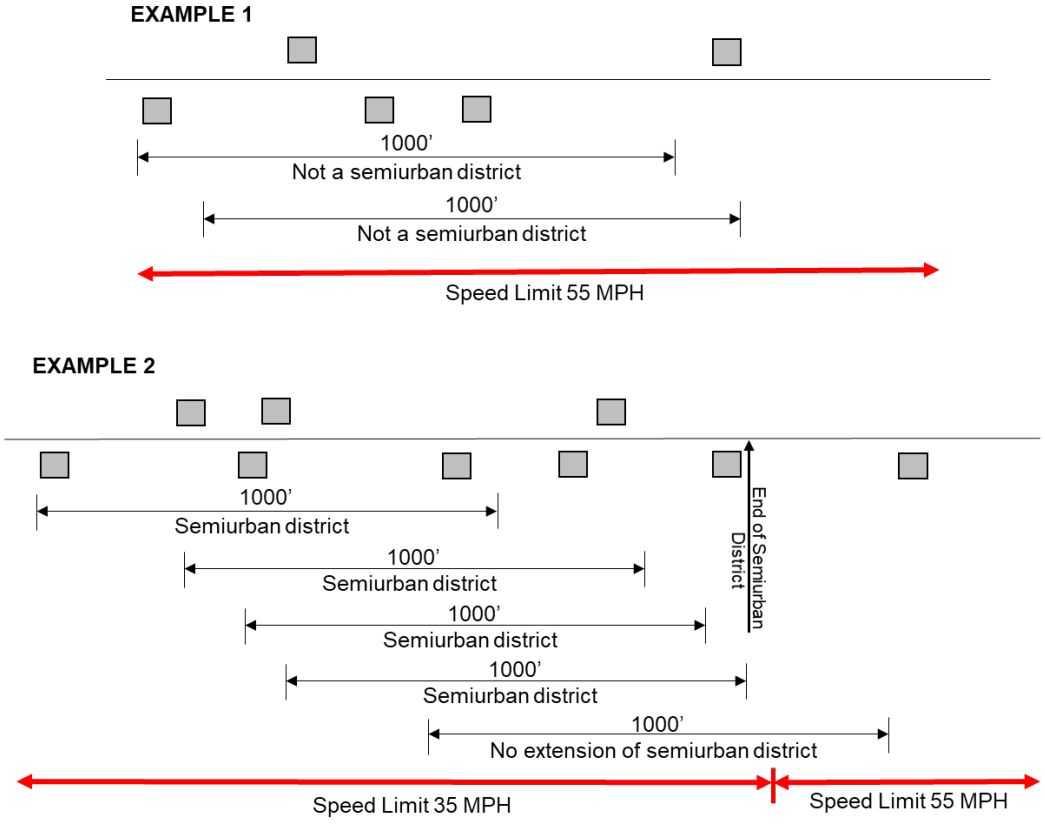
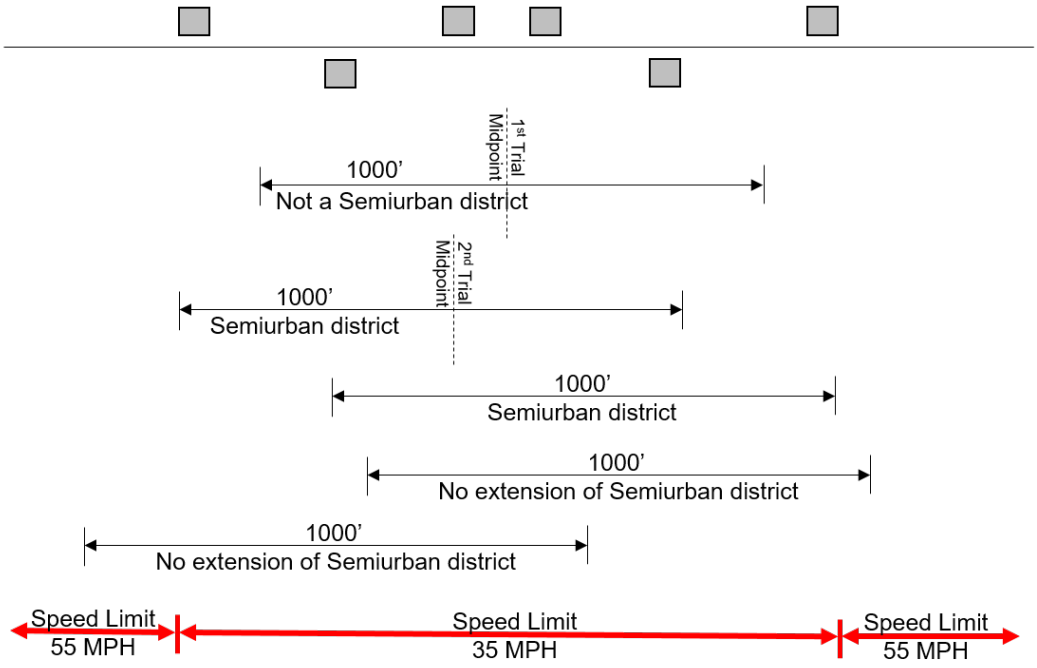


Figure 5. Semiurban Districts (Continued)



13-5-5 School Zones August 2021

Wisconsin State Statutes require that School Advance warning signs (S1-1) be installed and maintained on every highway where a school ground~~s~~ is contiguous to the highway. There is no requirement that a school speed limit be posted except where it differs from the 15-mph provision in Statutes. 346-57 (4)(a) and (b). These two provisions place the requirement on the motorist to reduce speed to 15 mph when children are present, even in the absence of speed limit signs.

MOTORIST OBSERVANCE

It is commonly known that motorists in Wisconsin, as well as in many, if not most other states, do not respond consistently or dependably to school speed limit signs, unless there is active enforcement. Where enforcement is exercised, it is often sporadic or symbolic, such as on the opening day of school. It takes intensive, continuous enforcement to cause a reduction of speed toward 15 mph or thereabouts. As a result, this effort is rarely undertaken. In regard to public safety, it would be better to address the actual hazards that exist and make efforts to correct them.

THE NEED FOR SIGNS

There are many variations to the physical arrangements at school locations on the state trunk highway system. The following two typical situations, however, are offered to illustrate guidelines for handling most of the rest:

1. In a built-up section of a city or village, where the arterial speed limit is low, probably 25 mph or 30 mph and sidewalks are present, many or most of the children walk to school. Some *may* be transported by personal auto, thereby causing some congestion, etc. The posting of the school speed limit is virtually inevitable and would be in agreement with general statewide practice. A motorist's unexpected or sudden reaction to the combination of the speed limit and/or presence of children or crossing guard would likely not cause a crash potential. Sudden stoppages and slowdowns are common in developed areas. It would be desirable to study the location to see if an increase to a 20-mph school speed limit would be appropriate and acceptable as per authority is s. 349.11(7). School speed limits can be posted (S4-51 sign**).** If used, they *should* be posted at 10 mph less than the speed limit of the highway. The reason for this is, if speed limits that exceed a 10-mph drop are used, the compliance will be marginal and differential speeds will occur.

2. On a rural section of highway where the school is the only feature and the speed limit is 55 mph or approaching it, virtually all students are transported. There *may* be a few nearby who walk or cycle. It is WisDOT's policy to refrain from posting school speed limits under these conditions and to resist requests to have them posted. Whereas motorists are skilled at anticipating slowing traffic where there

are recognizable features, such as intersections or driveways, there would be a very serious situation generated if occasional motorists respond to extremely low posted speed limits in an unpredictable manner. Since children are unlikely to be present, speed limit signs would be basically a purposeless use of signing. School speed limits can be posted (S4-51 sign). If used, they *should* be posted at 10 mph less than the speed limit. If there are no children present, do not post a school speed limit sign; rather place an advisory speed plaque under the S1-1 advance crossing sign or the school entrance warning sign.

On the other hand, S1-1 school advance signs, which are required, *should* be useful in warning of motorists frequenting the school driveway.

The two examples given *may* represent the two extremes of situations. Other locations *may* have semiurban characteristics and will have to be studied carefully to see what problems *may* exist.

Do not post signs unless asked by a local unit of government. Evaluate appropriateness prior to posting. Checking for appropriateness includes evaluating the following:

- Are there children present near the roadway?
- Will there be proper and consistent enforcement?
- Are children bused to school or do they have to cross at or near the roadway?

ARTERIAL SPEED LIMIT

There has been occasional local sentiment to have an arterial speed limit lowered because of the existence of a school, often times on the outskirts of the municipality. If the school is isolated and detached, the request *should* be resisted. The school hours, particularly those where children are present at the street side, are such a low percentage of the day that this *should* be unjustifiable. Enhanced warning signs or flashers on a time clock would be better solutions.

CONFLICT OF SIGNS

Where school speed limits are posted, it is considered good practice to omit the full-time regulatory speed limit signs in the school zone, in order to prevent confusion or avoid giving motorists grounds for disobeying the school speed limit.

WISMUTCD

See Figure 7B-3 in the WisMUTCD for proper sign locations. WisMUTCD 7B.11 provides standards, options and support for school speed limit assemblies.

SPEED LIMITS WITH FLASHERS

It *should* be emphasized that the statutes provide for school zone speed limits to be in effect "When Children Are Present". Therefore, it is improper for local municipalities to use the S4-4 "When Flashing" panel with the school speed limit sign that is supplemented with a flashing beacon.

FLASHING BEACON

A permit can be issued to the local jurisdiction to place a beacon above the S4-51 sign in accordance with TEOpS 4-5-1 permit application.

DYNAMIC SPEED DISPLAY SIGNS

See TEOpS 2-1-7 regarding policy for dynamic speed display signs.

13-5-6 Temporary Traffic Control Zones August 2021

BACKGROUND

Speed limit reduction for temporary traffic control zones is discussed in Part 6 of the WisMUTCD. Excerpts from Section 6C.01 of the WisMUTCD state:

“Reduced speed limits *should* be used only in the specific portion of the temporary traffic control zone where conditions or restrictive features are present.”

“A temporary traffic control plan *should* be designed so that vehicles can travel through the temporary traffic control zone with a speed limit reduction of no more than 10 mph.”

"Reduced speed zoning (lowering the regulatory speed limit) *should* be avoided as much as practical because drivers will reduce their speeds only if they clearly perceive a need to do so."

"Research has demonstrated that large reductions in the speed limit increase speed variance and the potential for crashes. Smaller reductions in the speed limit of up to 10 mph cause smaller changes in speed variance and lessen the potential for increased crashes. A reduction in the regulatory speed limit of only up to 10 mph from the normal speed limit has been shown to be more effective."

The WisMUTCD guidance corresponds with conclusions of research titled, "Work Zone Speed Limit Procedure," documented in Transportation Research Record Volume 1657 and National Cooperative Highway Research Program Digest 192. Conclusions of the report include:

1. Motorists reduce their speed in temporary traffic control zones even with no speed limit reduction
2. Where temporary traffic control zone speed limits are posted, motorists reduce their speed but not to the posted limit
3. If a reduced speed limit is posted, compliance and crash prevention benefit are best if the speed limit is reduced no more than 10 mph
4. There is commonly more variance in speed in temporary traffic control zones than in non-zones
5. Where all work activity is on or beyond the shoulder, there are no benefits from reducing speed limits
6. Interviews with motorists show that they resent arbitrary, inappropriate speed limits
7. If a reduced speed limit is posted, the reduced limit must be removed where no activity is present

To be consistent with the WisMUTCD and documented research, reductions in speed limits for temporary traffic control zones *should* be evaluated according to the criteria in this procedure.

There is often less need for reduced speed limits in temporary traffic control zones on rural conventional highways. The main reason is that on rural conventional highways, drivers do not have the same expectation for free-flowing traffic as they do on rural freeways. With driveway access and crossing movements on conventional highways, drivers tend to be alert to such movements and other similar conflicts even without reduced speed limits.

Changes in alignment such as crossovers and transitions, or work activities that occupy a short work area, *should not* be posted with short sections of regulatory speed limit signs. If a lower operating speed is necessary, warning signs with advisory speed plaques are more appropriate.

AUTHORITY

Authority to approve and establish temporary traffic control zone speed limits has been delegated to the Regional Work Zone Engineer. This conditional delegation effectively retained BTO Work Zone Operations Engineer approval authority for all interstates and facilities with a normal posted speed of 65 mph or greater.

POLICY CRITERIA

Engineering judgment must be used when determining appropriate speed zones. This procedure is intended to assist with the development of an appropriate work zone speed limit. Contact the region work zone engineer or the Bureau of Traffic Operations for assistance with applying this policy.

Most drivers operate their vehicles at a speed they deem appropriate for conditions. A posted speed that is close to what most drivers consider appropriate is more likely to yield uniform speeds. Consistent speeds improve safety for the travelling public and highway construction workers.

Speed zones provide drivers an indication of what is considered a reasonable speed for that section of roadway. Proximity to construction activities, drop offs, lane closures, narrow lanes/shoulders and pavement condition all influence the driver's determination of a reasonable speed. The type of construction work, project length, area type (i.e. urban vs. rural), facility type, occurrence of night work and traffic mix (e.g. commuter, recreational, truck percentages) all impact driver expectations and the determination of what is a reasonable speed. The policy criteria described below *should* only be used for facilities during intermediate-term and long-term work activities as defined in Part 6 of the WisMUTCD.

Speed reductions in segments without active work lead to disregard of the posted speed. When there is no work activity, traffic control devices are pulled back and lanes re-opened, the temporary speed limit **shall** be removed. Work with your project manager to incorporate standard special provisions for removing temporary speed zones.

Policy criteria 1 through 6 *should* be evaluated, along with engineering judgment, to develop an appropriate work zone speed limit. The most restrictive work zone impact *should* be used as the determining condition.

All reduced work zone speed limits **shall** be approved prior to approval of the 90% Transportation Management Plan (TMP).

1. Interstates and Expressways with 70 or 65 mph speed limit:
   - If bi-directional traffic separated by tubular markers, then reduce to 55 MPH
   - If workers are present within 12 feet of live traffic without positive protection for any length or work area, then reduce to 55 MPH
   - If work area is less than or equal to 0.5 miles in length with lane shifts or narrowed travel lanes and has positive protection, then post warning signs with an advisory speed plaque
   - If work area is less than or equal to 0.5 miles in length with no lane shifts or narrowed travel lanes and has positive protection, then do not lower the speed limit
   - If work is taking place outside the clear zone, then do not lower the speed limit

   During periods of no work activity when devices are pulled back and lanes re-opened, restore speed limit to normal posted speed. Such speed limit reduction **shall** be subject to documented approval by the BTO Work Zone Engineer. When a reduced work zone speed limit is recommended in the Transportation Management Plan (TMP), a temporary speed zone declaration **shall** be completed and sent to BTO for approval.

2. Expressways and other multi-lane highways with 55 or 50 mph speed limit:
   Reduce to 45 mph only in situations that have a combination of extreme lane shifts, narrowed lanes, bi-directional traffic, or milled surfaces.

   Restore speed limit to normal posted speed when reduction criteria are not present.

3. Multi-lane highways with 45 mph speed limit – Reduce speed limit to 35 mph only in situations that have a combination of extreme lane shifts, narrowed lanes, bi-directional traffic, or milled surfaces.

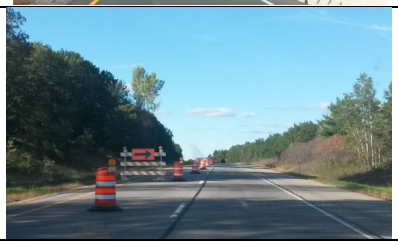
4. Two-lane rural highways with 55 mph speed limit – Reduce to 45 mph only in situations that have a combination of extreme lane shifts, narrowed lanes or milled surfaces. A flagging operation in and of itself would typically not warrant a reduced speed limit since motorists are controlled by the flagging devices.

5. Two-lane rural roadways with speed limit of 45 mph or less – typically no reduction in speed limit. *May* consider a speed reduction up to 10 mph in increments of 5 mph in situations that have a combination of extreme lane shifts, narrowed lanes or milled/gravel surfaces.

6. Two-lane urban roadways with speed limit of 40 mph or less – no change in speed limit except reduction to 35 mph *may* be considered in situations that have a combination of extreme lane shifts, narrowed lanes or milled/gravel surface.

*Positive protection is defined by FHWA as a temporary precast concrete barrier that contains or redirects vehicles and separates workers from the active travel lanes.

Table 1. Example Temporary Traffic Control Zone Scenarios

	Bi-directional traffic separated by flexible tubular markers
	Active work areas within 12-ft. of live traffic without positive protection
	Lane shift to shoulder or temporary pavement
	Lane closure without positive protection

SPEED ZONE DECLARATIONS

Reduced speed limits in temporary traffic control zones are subject to documented approval by the State Traffic Engineer or their delegate's approval identified as "Reviewer" on the Speed Zone Declaration. A Speed Zone Declaration **shall** be submitted through the Department's online Wisconsin Transportation Management Plan at the following link: http://transportal.cee.wisc.edu/tmp/

Complete the following form and attach it to Section 4 of the TMP.

https://transportal.cee.wisc.edu/documents/applications/TMP/Temporary%20Speed%20Zone%20Declaration%20Form_2021.pdf

The speed zone declaration will be approved by BTO and/or the Region by signing the 90% TMP.

13-5-7 Maintenance Work Zones August 2021

Wisconsin Statute 349.11(10) provides that a county *may* establish a speed limit through a maintenance work zone on a state trunk highway less than the authorized speed limit. This includes all freeways and Interstate highways. The State Patrol will enforce the speed limit but would need to be informed of its inauguration and the ordinance, resolution, or action enacting it.

Follow TEOpS 13-5-6 Temporary Traffic Control Zones, policy criteria 1-6 when establishing a temporary speed zone reduction for maintenance activities.

Document the reduced regulatory speed in LCS or in the Permit.

13-5-8 Speed Limits on Approach to Controlled Intersections August 2021

GENERAL

Reference is made to TEOpS 13-5-1. At times, questions surface regarding the need to reduce the regulatory speed limit on a State Trunk Highway (STH) in the vicinity of isolated intersections controlled by stop conditions, traffic control signals, or roundabouts. In these situations, the section of highway within approximately one-half mile of the intersection is generally considered.

POLICY

By this policy, sections of the STH system in the immediate vicinity of a controlled intersection *should not* be considered for a speed zone reduction due strictly to the presence (or planned presence) of an intersection control condition. Intersection control conditions include stop conditions (two-way or all-way), traffic control signals, roundabouts, or access restrictions (controlled either by regulatory signs or channelizing islands).

Rather than promoting artificial restrictions in advance of a condition, proper design of the intersection control will be required to address the safety and operational needs of the subject location. Design features typically include:

- Stop Conditions – Proper placement of advance warning signs (per WisMUTCD),
- Traffic Control Signals – Intersection lighting (per TEOpS 11-12-1) and Dilemma zone detection on high-speed approaches (per TSDM 8-1-6),
- Roundabouts – Proper geometric design of splitter islands, roadway curvature (per FDM 11-26-5) and lighting (per TEOpS 11-11-1),
- Access Restrictions – Proper geometric design principles (per FDM 7-35-1).

SUPPORT

As indicated by TEOpS 13-5-1 to be appropriate, speed limits need to be reasonable and enforceable. Just as speed-zoning criteria used on all other portions of the STH system are considered, any section of highway on approach to a controlled intersection *should* be treated in similar regard.

If requests for a reduced speed in advance of a controlled intersection stem from safety concerns, improvements *should* be considered that pertain to the installation/location itself (e.g. channelized turning movements, extended turn bays, modification to signal phasing or timing, rumble strips, advance warning signs, warning beacons, signing/marking enhancements, etc.).

Speed limit reductions in advance of the intersection will likely not influence safety and *may* even promote poor engineering decisions in the future since certain functions, such as signal timing or sign placement, can be based on posted speeds.

Existing locations that do not comply **shall** be allowed to remain until such time as the intersection is resurfaced or reconstructed.

13-5-10 Declarations Format August 2021

FORMAT OF DECLARATIONS

The speed zone declarations are recorded as individual actions for each individual highway and are numbered consecutively. Each speed zone declaration is prepared in paragraph form and will either establish a new speed zone or rescind an earlier numbered action and usually recreate it. The Speed Zone Database will automatically number the declaration.

The following are typical examples of speed zone declarations, depicting some of the more common situations encountered and portraying the general written format and style. Note: All distances *should* be in decimals of a mile, to the nearest 0.01 mile.

Example of an action to establish a new speed zone:

> #### - State Trunk Highway 57, Town of Liberty Grove, Door County
>
> Forty-five miles per hour from a point 0.16 of a mile south of its north intersection with County Trunk Highway "Q", northerly for a distance of 0.37 of a mile.

Example of an action taken to simply remove a speed zone:

- U.S. Highway 51, Town of Dunn, Dane County

Rescind Speed Zone Declaration No. 3119, approved by the Commission on February 11, 1976.

Example of an action taken to change a speed zone:

####- State Trunk Highway 31, Town of Caledonia and Mt. Pleasant, Racine County

Rescind Speed Zone Declaration No. 3905, approved by the Department on November 11, 1982, and substitute the following:

a) Forty-five miles per hour from its intersection with State Trunk Highway 32, southerly to its intersection with County Trunk Highway "MM".

b) Thirty-five miles per hour from its intersection with County Trunk Highway "MM", southerly to its intersection with State Trunk Highway 11.

c) Forty-five miles per hour from its intersection with State Trunk Highway 11, southerly to its intersection with Lincolnshire Drive.

The preceding examples are typical speed zone declarations. They begin with a title line that included the Speed Zone Declaration number, followed by the identification of the highway, the local governmental unit(s) in whose jurisdiction the zone is located, and the county/counties involved.

The title line is followed by a line describing the action to be taken as it relates to any previous action(s) by either the former Wisconsin Highway Commission (all actions before July 1, 1977), or WisDOT. This line is omitted if a new speed zone is being established.

This is followed by the declaration itself. All distances are referenced to readily recognizable landmarks (in this instance, CTH "MM"), which are itemized in the "STN Roadway Log". Landmarks that are not of sufficient importance to be recognized in the STN Roadway Log *should not* be used in describing a speed zone. Landmarks that change (construction limits, city limits, railroad names, etc.,) *should* also not be used.

If in the preceding example, STH 31 intersected STH 32, in both the Town of Caledonia and the Town of Mt. Pleasant, paragraph (a) would need to be revised to specify which intersection was involved as follows:

(a) Forty-five miles per hour from its intersection with State Trunk Highway 32, in the town of Caledonia, southerly to its intersection with County Trunk Highway "MM".

As long as all local governmental units are specified in the title line, and there could be no misinterpretation of specific intersection(s) involved, there is no need to repeat the "city of _____", "village of _____', "town of _____", appellation in the Declaration itself.

To ensure that there are no misunderstandings concerning the speed limit on those "rural" or unzoned segments of STH within a local unit's corporate limits, a subparagraph is included to define the limits of all 55 mph zones within the incorporated limits:

(b) The speed limit on all other portions of U.S. Highway 12 within the corporate limits of the village of Elk Mound **shall** be 55 miles per hour.

School speed zones, other than 15 mph, **shall** have individual declarations:

(c) Twenty-five miles per hour "When Children are Present", from a point 150 feet east of its intersection with Range Line Road, westerly to a point 350 feet west of said intersection, pursuant to Statute s. 349.11(7).

The Regions are responsible for keeping electronic records in the Speed Zone Database. For more information, contact the Bureau of Traffic Operations Traffic Engineering and Safety Section.

13-5-11 County Ordinance August 2021

The following is a suggested format for a county ordinance for speed limits on county highways. It pertains to those limits requiring approval by the Department. It *may* be modified for use by other local governments.

SAMPLE ORDINANCE

Establishment of Speed Zones on County Trunk Highway,
Doe County, State of Wisconsin

The Board of Supervisors of the County of Doe do ordain as follows:

Section I. A traffic and engineering investigation having been made on the following described highways, the maximum permissible speed at which vehicles *may* be operated on said highways, which speed is herewith established as reasonable and safe pursuant to Section 349.11, Wisconsin Statutes, **shall** be as set forth herein subject to approval by the Wisconsin Department of Transportation, and upon the erection of standard signs giving notice thereof:

No. 1. County Trunk Highway "A", Town of Doe, Doe County.

Forty-five miles per hour from its intersection with County Trunk Highway "B", northerly to its intersection with State Trunk Highway 201.

No. 2. County Trunk Highway "B", Town of Blank, Doe County.

Thirty miles per hour from the north corporate limits of the Town of Blank, northerly for a distance of 0.35 of a mile.

I, John Doe, Clerk of Doe County, hereby certify that the above is a true and correct copy of an ordinance which was adopted on _____, by the Board of Supervisors of Doe County.

Dated this _____ day of _____, _____.

_____

County Clerk

13-5-12 Posted versus Design Speeds August 2021

PURPOSE

To clarify the relationship between the posted speed and design speed and to clarify the roles between traffic section and project team related to the design and posted speeds.

GUIDANCE

When designing curb for a new roadway, the expected posted speed is used. The posted speed limit is not required to correspond to the design speed or to an individual design element within a project. Consult with the Region traffic unit to determine the appropriate posted speed that will be implemented following completion of an improvement project. (See TEOpS 13-5-1 for guidance relating to posted speed limits). In the case of a local roadway or connecting highway, consult with the local municipality having jurisdiction over the roadway when determining the appropriate posted speed limit".

The 85th percentile is used as the primary bases of establishing posted speed limits and, by extension, design speeds. Geometric and cross-section elements are based on design speed. Exceptions to design standards *may* be necessary for some individual geometric or cross-section elements. Although the posted speed is not reduced because of these exceptions, some mitigation is usually desirable.

Cross-sectional features *should not* dictate posted speed limits, rather:

- **Free-flow ramps at system and service interchanges** - the design speed **shall not** dictate the speed limit. Rather, ramps are signed with advisory speed warning sign plaques (W13-1) mounted under a horizontal alignment sign and ramp speed warning sign, because raising and lowering the speed limit for each ramp results in differential speeds.
- **Curves and turns with a speed rating less than design speed on a section of highway** - are not signed with a change in speed limit; rather, they are signed with horizontal alignment signs and an advisory speed plaque with the safe operating speed of the curve or turn. For example: A 55 mph rural section of highway often has turns and curves where it is necessary for the driver to lower their speed in

order to safely negotiate the curve or turn. The speed limit is not changed for each one of these turns or curves.

- **At transition sections from 4 to 2 lanes** - the speed limit is not reduced because of the transition area merely because of the divided highway to undivided highway change.
- **Individual design features** - such as the presence of curb, wider or narrower shoulders, or other design features do not determine speed limit. Rather, the 85th percentile speed is the primary indicator for determining the speed limit.
- **Curb offsets** also are not a determining factor in establishing speed limits.
- **Sloped curb** without offset *should not* dictate speed limit

The 85th percentile speed is used as the primary basis of establishing speed limits. Motorist's behavior will account for road characteristics such as shoulder condition, grade, development, and sight distance.

Where local roads are converted to state highways or built on relocation, such as bypasses, the speed limit *should* be based on the new geometrics of the roadway and the function of the highway as either an expressway or conventional highway. The function of the highway includes adjacent land use, spacing of access points and proximity to the roadway. The speed limit that existed prior to the conversion to a state highway *may not* necessarily be retained.

POLICY

- Posted speeds *may* be higher than the design speed for a section of highway
    - Individual design features such as isolated horizontal and vertical curves and shoulder width narrowing *should not* dictate posted speed; rather, overall design features *should* determine the appropriate posted speed. Driver's perceive the overall design features to determine a safe operating speed
- The project engineers need to obtain approval from the regional traffic unit at the scoping meeting to establish the proper speed limit for the improvement project
    - The traffic section *should* issue the speed zone declaration at the Plan, Specification & Estimate (PS&E) stage.
    - The traffic engineer **shall** establish the speed limit of a roadway in consultation with the project team

The Design Study Report **shall** be routed through the regional traffic unit for establishing the posted speed, where posted speed is suggested to be changed.

Conversion of a two-lane roadway to a four-lane roadway **shall not** automatically constitute changing the speed limit from 55 mph to 45 mph.



SETTING APPROPRIATE SPEED LIMITS ON WISCONSIN'S STATE HIGHWAYS

Wisconsin Department of Transportation

www.dot.wi.gov

Why Speed Limits?

The setting of speed limits is fundamentally influenced by basic principles of human behavior. Research and experience have shown that effective speed limits are those that the majority of motorists will naturally and instinctively drive. Traffic laws that reflect the behavior of the majority of motorists are found to be the most successful. This has shown to be true with creating speed zones.

What rational speed limits do:

- Encourage compliance from the majority of drivers
- Provide a clear reminder of the reasonable speed under ideal conditions. When conditions change, drivers must reduce their speed accordingly
- Serve as an effective tool for law enforcement
- Minimize public antagonism toward law enforcement agencies which results from enforcement of artificially low speed limits
- Provide a smooth and orderly flow of traffic to prevent crashes



What factors are considered when setting a speed limit?

One of the most widely recognized principles is to post the speed limit as near practical to the speed at which 85% of the drivers are traveling. Most people choose a reasonable speed in which they feel comfortable and safe. Engineers consider that speed to help determine the posted speed limit.

The 85th percentile speed may be adjusted with consideration of other important factors such as:

- Crash history
- Roadway geometrics
- Parking
- Pedestrians and pedestrian crossings
- Horizontal and vertical curves
- Adjacent development
- Engineering judgment

What is the relationship between vehicle speed and crashes?

Roadways are safest when all vehicles are traveling at about the same speed. Studies have shown that crash rates are at their lowest when traffic is travelling at or near the 85th percentile speed. Crash injury and fatality rates are highest for motorists traveling at speeds much higher than the average speed or much lower than the average speed or current flow of traffic.

Variation of speed within the traffic stream creates more conflicts and passing maneuvers, which in turn lead to more crashes.

Common Misconceptions

- Lowering the posted speed limit will slow down the traffic
- Lowering the posted speed limit will increase safety and decrease the number of crashes
- Raising the posted speed limit will increase the speed of traffic
- Drivers will always travel at 5 mph over the speed limit which is posted

Why not post a lower speed limit and have the police enforce it?

This theory is only effective when law enforcement is present. The availability of police officers is limited for speed enforcement on a consistent basis. If unreasonably low speed limits are posted and not vigorously enforced, there will be varying speeds of traffic which will increase the potential for crashes. Setting unreasonable speed limits will also lead to a disregard to speed limits in general.



		Current VoPR	City of SP
Alcohol Beverage License	Class 'A' Beer	$50.00	$75.00
	Class 'B' Beer	$100.00	$100.00
	Class 'A' Cider Only		
	Class 'C' Wine	$30.00	$100.00
	Class 'B' Winery		
	Wholesaler's Fermented malt beverage license	$25.00	$25.00
	Class 'A' liquor license	$50.00	$425.00
	Class 'B' liquor license	$100.00	
	Class 'C' liquor license	$100.00	
	Class 'A' Combo (Beer & Liquor)		
	Class 'B' Combo (Beer & Liquor)		$500.00
	Operator's License		
	One Year	$20.00	
	Two Year	$30.00	
	Provisional Operator's License	$10.00	$15.00
	Publication Fee	$15.00	
Cigarette, Tobacco, Vaping	Annual License	$30.00	$100.00
Dog License	Female Dog - not spayed	$27.00	
	Male Dog - not neutered	$27.00	
	Female Dog - spayed	$17.00	
	Male Dog - neutered	$17.00	

Village of Plover	Village of Amherst
$50.00	$50.00
$75.00	$100.00
	$100.00
$25.00	
	$275.00
$125.00	
$150.00	
	$20.00
$15.00	
$33.00	$30.00

	$30.00
