VILLAGE OF PARK RIDGE
BOARD MEETING MINUTES
June 19, 2023

****

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 and via Zoom. After the recitation of the Pledge of Allegiance by members present, a roll call was taken. Trustees Gordon Renfert, Kristin Paulson (via Zoom), and Barb Friedrich were present. Clerk Katie McKelvey, and Resident Becky Woodward were also present. Trustee Dan Holloway was not in attendance.

AGENDA ITEM #1 - APPROVAL OF THE JUNE AGENDA – Menzel asked the Board members if there were any changes regarding the June agenda. Friedrich made a motion to approve, with no changes. The motion was seconded by Renfert. 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. No comments were made.

AGENDA ITEM #4 – REVIEW & APPROVE BOARD MEETING MINUTES FROM MAY 15, 2023 – Friedrich asked for an update on the items that were in question on the April Treasurer's report and brought to attention at the May board meeting. Clerk Katie McKelvey provided an update that the payment for the Parks Dept Pledge was made since the previous board meeting; Clerk McKelvey also provided an update that the budget was updated and corrected, no longer showing that we are over budget for Local Tax Levied. Friedrich moved to approve the May minutes with no changes. Paulson seconded the motion. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #5 – REVIEW AND ACCEPT MAY TREASURER'S REPORT – Menzel questioned Gordon made a motion to approve the Treasurer's report. Motion seconded by Paulson. Roll call was taken, Renfert – yes, Paulson – yes, Friedrich – yes, Menzel – yes

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

AGENDA ITEM #7 – DISCUSS, AND POSSIBLY APPROVE PROPOSED ORDINANCE 17.17 STREET RIGHT-OF-WAY, DRIVEWAYS AND PARKING – After discussion, it was decided that the draft presented would be approved and sent to the Village Attorney for review. Menzel made a motion to approve, Friedrich seconded the motion. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #8 – DISCUSS TRAFFIC VIOLATIONS ON HILLCREST AVE – Further discussion is needed

AGENDA ITEM #9 – APPROVE LIQUOR LICENSES – Friedrich made the motion to approve the liquor license renewals for The Store, Airport Bar, The Bottle Stop / Tackle Stop, Silver Coach and Emy J's Coffee Vault. The motion was seconded by Renfert. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #10 – APPROVE OPERATORS LICENSES – Friedrich made the motion to approve the operator licenses. The motion was seconded by Paulson. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #11 – APPROVE CIGARETTE & TOBACCO LICENSES - Friedrich made the motion to approve the Cigarette & Tobacco licenses for Walgreens and The Store. Seconded by Paulson. Motion carried by voice vote, with no negative votes.

AGENDA ITEM #12 – SET DATE AND TIME OF NEXT BOARD MEETING – Monday, July 17th, 2023, at 5:30 pm

DRAFT

The meeting adjourned at 6:25 pm.

_____	_____
KATIE MCKELVEY	STEVE MENZEL
VILLAGE CLERK	VILLAGE PRESIDENT

DRAFT

VILLAGE OF PARK RIDGE
Balance Sheet
As of June 16, 2023

	Jun 16, 23
ASSETS	
Current Assets	
Checking/Savings	
11110 · Checking	159.42
11310 · Operating Account	6,265.75
11340 · Reserve Account-Pineries	
11341 · Reserve Account-Pineries (AR...	19,832.13
11340 · Reserve Account-Pineries - Ot...	10,538.07
Total 11340 · Reserve Account-Pineries	30,370.20
11343 · Pineries MM# 8005-467-9	200,032.88
11345 · Reserve Account-Bank of Amhe...	10,003.03
11350 · CD Account	104,104.94
11360 · Petty Cash	200.00
Total Checking/Savings	351,136.22
Other Current Assets	
12100 · Taxes Receivable	250,672.83
1499 · Undeposited Funds	1,742.17
Total Other Current Assets	252,415.00
Total Current Assets	603,551.22
TOTAL ASSETS	**603,551.22**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
2000 · Accounts Payable	288.00
Total Accounts Payable	288.00
Credit Cards	
2037 · Village Credit Card-Shanna 1953	-3,052.64
Total Credit Cards	-3,052.64

	Jun 16, 23
Other Current Liabilities	
2100 · State W/H Tax	251.74
21511 · Federal W/H Tax	347.46
24700 · Due other taxing authorities	209,474.42
26100 · Advanced Tax Collections	3,554.61
26300 · Other Advanced Funds (park)	500.00
Total Other Current Liabilities	214,128.23
Total Current Liabilities	211,363.59
Total Liabilities	211,363.59
Equity	
3010 · Office Equipment Reserve	82.68
3015 · Fire Department Reserve	5,892.66
3018 · Street Reserve	638.28
3020 · Sewer Reserve	2,500.00
3025 · Reassessment Reserve	9,000.00
3045 · FD Fundraising/Donation Reserve	6,952.65
3060 · Disaster Reserve	1,000.00
3070 · Santa Visit Reserve	50.00
34100 · General Undesignated Fund Bal	103,265.36
3900 · Retained Earnings	216,038.78
Net Income	46,767.22
Total Equity	392,187.63
TOTAL LIABILITIES & EQUITY	**603,551.22**

VILLAGE OF PARK RIDGE
Revenues & Expenses Budget vs. Actual
January 1 through July 13, 2023

	Jan 1 - Jul 13, 23	Budget	$ Over Budget	% of Budget
Ordinary Income/Expense				
Income				
41110 · Local Tax Levied	201,414.91	201,415.00	-0.09	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	461.00	-461.00	0.0%
43440 · Personal Property Aid	269.56	270.00	-0.44	99.8%
43450 · State Video (Cable) Aid	0.00	1,700.00	-1,700.00	0.0%
43531 · Transportation Aid	3,364.12	12,974.00	-9,609.88	25.9%
44110 · Liquor and Malt Beverage	915.00	1,000.00	-85.00	91.5%
44120 · Cigarette/Bartender's Licenses	1,010.00	1,000.00	10.00	101.0%
44200 · Dog Licenses	330.00	500.00	-170.00	66.0%
44300 · Building Permits/Inspections	1,612.38	0.00	1,612.38	100.0%
44400 · Zoning/Variance Fees	200.00	200.00	0.00	100.0%
44500 · Cable Franchise Fees	3,046.76	7,000.00	-3,953.24	43.5%
46100 · General Government	45.00	100.00	-55.00	45.0%
48100 · Interest	359.84	500.00	-140.16	72.0%
48200 · CD Interest	0.00	500.00	-500.00	0.0%
48302 · Sale of Fire Equipment	9,083.85	0.00	9,083.85	100.0%
48900 · Miscellaneous Income	505.03	0.00	505.03	100.0%
48905 · Late Fees	5.00	0.00	5.00	100.0%
Total Income	222,161.45	242,696.00	-20,534.55	91.5%
Expense				
51100 · Village Board				
5110001 · President Salary	1,750.00	3,768.00	-2,018.00	46.4%
5110002 · Trustee Salary	2,000.00	3,445.00	-1,445.00	58.1%
5110003 · Santa Visit	0.00	350.00	-350.00	0.0%
5110004 · League of Municipalities Dues	0.00	400.00	-400.00	0.0%
5110005 · Miscellaneous	152.03	900.00	-747.97	16.9%
5110006 · Email, Website, Community Alert	0.00	1,850.00	-1,850.00	0.0%
Total 51100 · Village Board	3,902.03	10,713.00	-6,810.97	36.4%
51300 · Legal	3,585.00	4,000.00	-415.00	89.6%
51410 · Clerk/Treasurer				
5141001 · Clerk Compensation	19,701.67	39,500.00	-19,798.33	49.9%
5141002 · Mileage and Expense	124.46	0.00	124.46	100.0%
5141006 · General Office Supplies	0.00	6,000.00	-6,000.00	0.0%
5141007 · Training	250.00	1,500.00	-1,250.00	16.7%
5141010 · Tax Collection Fee	1,438.78	1,200.00	238.78	119.9%
5141011 · Villagewide Mailing-Postage	886.31	0.00	886.31	100.0%
5141013 · Treasurer Bond	1,407.00	0.00	1,407.00	100.0%
5141014 · Pineries Bank Fees/Supplies	20.00	0.00	20.00	100.0%
5141016 · Accounting Consultation	0.00	3,000.00	-3,000.00	0.0%
5141018 · Internet and Domain	715.98	0.00	715.98	100.0%
5141024 · WMCA/MTAW Dues	65.00	0.00	65.00	100.0%
5141025 · Background Checks	112.00	0.00	112.00	100.0%
5141026 · Treasurer Compensation	0.00	6,000.00	-6,000.00	0.0%
5141027 · IT Services	400.00	2,000.00	-1,600.00	20.0%
Total 51410 · Clerk/Treasurer	25,121.20	59,200.00	-34,078.80	42.4%

VILLAGE OF PARK RIDGE
Revenues & Expenses Budget vs. Actual
January 1 through July 13, 2023

	Jan 1 - Jul 13, 23	Budget	$ Over Budget	% of Budget
51420 · Elections				
5142001 · Inspectors	976.00	2,000.00	-1,024.00	48.8%
5142002 · Print Spring Ballot	35.33	0.00	35.33	100.0%
5142006 · Election Equipment	0.00	1,000.00	-1,000.00	0.0%
51420 · Elections - Other	45.75	0.00	45.75	100.0%
Total 51420 · Elections	1,057.08	3,000.00	-1,942.92	35.2%
51430 · Publication Fees	181.88	0.00	181.88	100.0%
51510 · Accounting				
5151001 · Reporting (Form C)	2,055.60	750.00	1,305.60	274.1%
Total 51510 · Accounting	2,055.60	750.00	1,305.60	274.1%
51530 · Assessment of Property				
5153001 · Normal Maintenance Fee	2,900.00	5,800.00	-2,900.00	50.0%
5153004 · Bd of Review Notice Publication	128.35	0.00	128.35	100.0%
Total 51530 · Assessment of Property	3,028.35	5,800.00	-2,771.65	52.2%
51600 · Village Hall				
5160001 · Maintenance Compensation	682.75	3,000.00	-2,317.25	22.8%
5160002 · Sewer	107.48	0.00	107.48	100.0%
5160004 · Natural Gas & Electricity	1,366.30	3,000.00	-1,633.70	45.5%
5160005 · Supplies and Equipment	424.38	2,500.00	-2,075.62	17.0%
5160006 · Lawn Mower/Snowblower Maint.	75.00	0.00	75.00	100.0%
5160007 · Misc.	288.00	0.00	288.00	100.0%
5160010 · AC/Heating Maintenance	267.00	0.00	267.00	100.0%
Total 51600 · Village Hall	3,210.91	8,500.00	-5,289.09	37.8%
51910 · Uncollectible Taxes	230.73	0.00	230.73	100.0%
51938 · Insurance				
5193801 · General Liability	6,831.00	1,300.00	5,531.00	525.5%
5193802 · Local Gov't Property	0.00	1,000.00	-1,000.00	0.0%
5193804 · Public Officials Liability	0.00	1,000.00	-1,000.00	0.0%
Total 51938 · Insurance	6,831.00	3,300.00	3,531.00	207.0%
52100 · Crossing Guard	1,947.50	3,500.00	-1,552.50	55.6%
52205 · Fire Department				
5220520 · Workers Comp & Auto	-160.00	0.00	-160.00	100.0%
5220521 · Emergency Medical Services	7,200.00	1,500.00	5,700.00	480.0%
5220523 · Firefighter Compensation	0.00	97,200.00	-97,200.00	0.0%
52205 · Fire Department - Other	48,879.66	0.00	48,879.66	100.0%
Total 52205 · Fire Department	55,919.66	98,700.00	-42,780.34	56.7%
52400 · Building Inspection	2,886.88	800.00	2,086.88	360.9%
52450 · Zoning Administration	250.00	550.00	-300.00	45.5%

VILLAGE OF PARK RIDGE
Revenues & Expenses Budget vs. Actual
January 1 through July 13, 2023

	Jan 1 - Jul 13, 23	Budget	$ Over Budget	% of Budget
53311 · Street Maintenance				
5331101 · Snow Plowing	16,419.56	27,000.00	-10,580.44	60.8%
5331102 · Grading	0.00	500.00	-500.00	0.0%
5331103 · Street Sweeping	2,010.00	2,000.00	10.00	100.5%
5331105 · Street Repair	689.70	10,000.00	-9,310.30	6.9%
5331107 · Tree & Branch Removal	2,000.00	2,500.00	-500.00	80.0%
5331110 · Flags & Banners	660.69	1,500.00	-839.31	44.0%
5331113 · Road Projects	8,220.00	0.00	8,220.00	100.0%
Total 53311 · Street Maintenance	29,999.95	43,500.00	-13,500.05	69.0%
53420 · Street Lighting				
5342001 · Electricity	6,223.47	11,000.00	-4,776.53	56.6%
5342003 · Repair Lights	200.00	0.00	200.00	100.0%
5342004 · Digger Requests	1,366.34	4,000.00	-2,633.66	34.2%
53420 · Street Lighting - Other	31.79	0.00	31.79	100.0%
Total 53420 · Street Lighting	7,821.60	15,000.00	-7,178.40	52.1%
53620 · Garbage Collection				
5362001 · Garbage Collection	15,150.17	29,000.00	-13,849.83	52.2%
5362002 · Fall Large Item Pick-up	800.00	800.00	0.00	100.0%
Total 53620 · Garbage Collection	15,950.17	29,800.00	-13,849.83	53.5%
53635 · Recycling cost				
5363501 · Recycling Collection	3,836.85	9,000.00	-5,163.15	42.6%
5363503 · Yard Waste Drop Off	0.00	5,200.00	-5,200.00	0.0%
Total 53635 · Recycling cost	3,836.85	14,200.00	-10,363.15	27.0%
54100 · Humane Society Contract	1,230.04	800.00	430.04	153.8%
55200 · Parks Dept. Pledge ($5.50/per)	2,778.00	3,000.00	-222.00	92.6%
6560 · Payroll Expenses	2,359.80	0.00	2,359.80	100.0%
Total Expense	174,184.23	305,113.00	-130,928.77	57.1%
Net Ordinary Income	47,977.22	-62,417.00	110,394.22	-76.9%
Other Income/Expense				
Other Expense				
58100 · Loan Principal	5,208.34	4,942.00	266.34	105.4%
58200 · Loan Interest	3,041.66	3,308.00	-266.34	91.9%
Total Other Expense	8,250.00	8,250.00	0.00	100.0%
Net Other Income	-8,250.00	-8,250.00	0.00	100.0%
Net Income	**39,727.22**	**-70,667.00**	**110,394.22**	**-56.2%**

Second Quarter 2023 Building Permits

Permit #	Resident	Address	Description	Permit Cost
23-9	Walther	322 Pinecrest	Fence & Shed	$60
23-10	Ayers	12 Hillcrest	Install fence	$50
23-11	Bell	503 Fieldcrest	Install Awning	$71.25
				$181.25

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 – April 2023

Significant Events

• Live Burn Training Second Street North	04/08/2023
• Acadia DNR Wildland Fire	04/13/2023
• Field Training Paramedic Course	4/17-21/2023
• Chief Peter Ugorek Funeral Ceremony	04/24/2023
• Promotion Ceremony of FF/P Joey Gemza, and Ethan Przybylski to Field Training Paramedic	4/25/2023
• Nicaragua Donation of SCBA's	048/2023
• Captain Paul Mattlin Celebration of Life Service	04/28/2023
• SPFD Family Pancake Breakfast	04/30/2023

Training:

- Applebee's Training -Search and Rescue/Ladders
- Live Burn 2nd Street North
- Truck 22 Pump Training
- Truck 22 Aerial Ladder Training
- Field Training Paramedic Course
- Oshkosh Sawdust Expo

Public Activities:

• Fox Valley Technical College Public Safety Fair	04/11/2023
• Station Tour	04/19/2023
• Epi Pen Training Water Department	04/26/2023
• SPASH Career Fair	04/27/2023
• CPR AED Nasal Narcan Class	04/27/2023
• Station Tour	04/28/2023

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

JB D. MOODY
FIRE CHIEF

May 2023

Significant Events

• Recruit Academy	05/15/2023
• Truck 22 Push in Ceremony	05/15/2023
• Burn Facility was Delivered	05/17/2023

Monthly Training:

- Recruit Academy
- Crew tours of City Municipal Pool
- Ladders, VEIS, Roof Operations
- Review RTF procedures, go bags, patient movement
- Review Mass Casualty Protocols
- Hose Testing
- Forcible Entry
- Trauma Protocol
- Officer Training
- USGA Senior Open Tabletop exercise
- CVMIC Coaching and Mentoring class

Public Activities:

• Hands only CPR and AED at the Courthouse	05/02/2023
• Boys and Girls Club Career Fair	05/03/2023
• Jefferson School	05/04/2023
• CPR/AED/Nasal Narcan County Annex	05/04/2023
• UWSP Work Capacity Standby	05/04/2023
• Junior Women's Club	05/07/2023
• Waukesha Tech Recruitment	05/09/2023
• Stepping on Workshop	05/16/2023
• Ortho Molecular Extinguisher Demo	05/23/2023
• Senior Caregiver Expo	05/24/2023
• Jordan Lodge Extinguisher Demo	05/24/2023
• Fire Drill ADRC	05/24/2023
• Ambulance Standby SPASH Graduation	05/28/2023
• Memorial Cermony	05/29/2023

STEVENS POINT **FIRE DEPARTMENT**
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JB D. MOODY
FIRE CHIEF

June 2023

Significant Events

- Recruit Academy Graduation and Promotion of Conner Pelot 06/16/2023
- New Water Rescue Boat in-service 06/23/2023
- USGA 43rd Golf Event 06/26/2023

Monthly Training:

- Recruit Academy
- RTF Training Pacelli, SPASH and Rosholt Schools
- Hose Testing
- Pump/Nozzle Training
- EV Car Training
- CPR/Spinal Immobilization and Drownings
- G2 Paging Training
- Water Training
- EM Tracker Training
- EMS Heat Related emergencies, trauma, burns
- EMS Protocols
- USGA Crew briefing
- WI Fire Chiefs Convention
- WI IAAI Fire Investigation Conference

Public Activities:

- Ride on a Fire Truck 06/01/2023
- Pacelli Softball Team Escort 06/10/2023
- Excel Preschool truck and tour 06/13/2023
- World Elder Awareness Day 06/15/2023
- Fleet Farm Touch a Truck 06/23/2023

Fire Runs

STEVENS POINT **FIRE DEPARTMENT**
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715-344-1833 FAX: 715-346-1599

JB D. MOODY
FIRE CHIEF

- 216 Sunrise Ave (structure Fire) 04/15/2023
- 10 Park Ridge Drive (EMS Assist) 04/28/2023
- 36 Angelo Ct. (CO Detector) 05/02/2023
- 35 Odessa Ct (EMS Assist) 05/20/2023
- 106 Sunrise Ave (EMS Assist) 06/05/2023
- 517 Greenbriar Ave (Electrical) 06/14/2023
- 4 Park Ridge Drive (EMS Assist) 06/18/2023

Inspections

- 36 of 36 fire inspections completed with no violations June 2023

VILLAGE OF PARK RIDGE
Payroll Summary
April through June 2023

	Behrend, Shanna L			Drevetzki, Catherine F			Friedrich, Barbara J			Holloway,...
	Hours	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours
Employee Wages, Taxes and Adjustme...										
Gross Pay										
President Salary			0.00			0.00			0.00	
Trustee Salary			0.00			0.00	2		400.00	2
Zoning Administrator Salary			0.00			0.00			0.00	
Clerk Hourly	266.25	20.00	5,325.00	249.5	20.00	4,990.00			0.00	
Daily Rate-Crossing Guard			0.00			0.00			0.00	
Hourly			0.00			0.00			0.00	
Total Gross Pay	266.25		5,325.00	249.5		4,990.00	2		400.00	2
Adjusted Gross Pay	266.25		5,325.00	249.5		4,990.00	2		400.00	2
Taxes Withheld										
Federal Withholding			-245.00			-204.00			0.00	
Medicare Employee			-77.21			-72.36			-5.80	
Social Security Employee			-330.15			-309.38			-24.80	
WI - Withholding			-157.50			-127.03			0.00	
Medicare Employee Addl Tax			0.00			0.00			0.00	
Total Taxes Withheld			-809.86			-712.77			-30.60	
Net Pay	**266.25**		**4,515.14**	**249.5**		**4,277.23**	**2**		**369.40**	**2**
Employer Taxes and Contributions										
Federal Unemployment			0.00			29.94			2.40	
Medicare Company			77.21			72.36			5.80	
Social Security Company			330.15			309.38			24.80	
WI - Unemployment Company			0.00			0.00			0.00	
Total Employer Taxes and Contributions			**407.36**			**411.68**			**33.00**	

VILLAGE OF PARK RIDGE
Payroll Summary
April through June 2023

	Holloway, Daniel A		Lepak, Rebecca A			Manville, James D.			Menzel, Stephen F	
	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours	Rate
Employee Wages, Taxes and Adjustme...										
Gross Pay										
President Salary		0.00			0.00			0.00	1	
Trustee Salary		400.00			0.00			0.00		
Zoning Administrator Salary		0.00			0.00	1		125.00		
Clerk Hourly		0.00			0.00			0.00		
Daily Rate-Crossing Guard		0.00			0.00			0.00		
Hourly		0.00	20.75	17.00	352.75			0.00		
Total Gross Pay		400.00	20.75		352.75	1		125.00	1	
Adjusted Gross Pay		400.00	20.75		352.75	1		125.00	1	
Taxes Withheld										
Federal Withholding		-100.00			0.00			0.00		
Medicare Employee		-5.80			-5.12			-1.81		
Social Security Employee		-24.80			-21.87			-7.75		
WI - Withholding		0.00			0.00			0.00		
Medicare Employee Addl Tax		0.00			0.00			0.00		
Total Taxes Withheld		-130.60			-26.99			-9.56		
Net Pay		**269.40**	**20.75**		**325.76**	**1**		**115.44**	**1**	
Employer Taxes and Contributions										
Federal Unemployment		2.40			0.00			0.00		
Medicare Company		5.80			5.12			1.81		
Social Security Company		24.80			21.87			7.75		
WI - Unemployment Company		0.00			0.00			0.00		
Total Employer Taxes and Contributions		**33.00**			**26.99**			**9.56**		

VILLAGE OF PARK RIDGE
Payroll Summary
April through June 2023

	Menzel, S...	Miller, LoisJean C.			Paulson, Kristin			Renfert, Gordon J.		
	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...	Hours	Rate	Apr - Jun ...
Employee Wages, Taxes and Adjustme...										
Gross Pay										
President Salary	875.00			0.00			0.00			0.00
Trustee Salary	0.00			0.00	1		200.00	1		200.00
Zoning Administrator Salary	0.00			0.00			0.00			0.00
Clerk Hourly	0.00			0.00			0.00			0.00
Daily Rate-Crossing Guard	0.00	44	20.50	902.00			0.00			0.00
Hourly	0.00			0.00			0.00			0.00
Total Gross Pay	875.00	44		902.00	1		200.00	1		200.00
Adjusted Gross Pay	875.00	44		902.00	1		200.00	1		200.00
Taxes Withheld										
Federal Withholding	0.00			0.00			0.00			0.00
Medicare Employee	-12.69			-13.08			-2.90			-2.90
Social Security Employee	-54.25			-55.93			-12.40			-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	-66.94			-69.01			-15.30			-15.30
Net Pay	**808.06**	**44**		**832.99**	**1**		**184.70**	**1**		**184.70**
Employer Taxes and Contributions										
Federal Unemployment	0.00			0.00			0.00			0.00
Medicare Company	12.69			13.08			2.90			2.90
Social Security Company	54.25			55.93			12.40			12.40
WI - Unemployment Company	0.00			0.00			0.00			0.00
Total Employer Taxes and Contributions	**66.94**			**69.01**			**15.30**			**15.30**

VILLAGE OF PARK RIDGE
Payroll Summary
April through June 2023

	TOTAL		
	Hours	Rate	Apr - Jun ...
Employee Wages, Taxes and Adjustme...			
Gross Pay			
President Salary	1.00		875.00
Trustee Salary	6.00		1,200.00
Zoning Administrator Salary	1.00		125.00
Clerk Hourly	515.75		10,315.00
Daily Rate-Crossing Guard	44.00		902.00
Hourly	20.75		352.75
Total Gross Pay	588.50		13,769.75
Adjusted Gross Pay	588.50		13,769.75
Taxes Withheld			
Federal Withholding			-549.00
Medicare Employee			-199.67
Social Security Employee			-853.73
WI - Withholding			-284.53
Medicare Employee Addl Tax			0.00
Total Taxes Withheld			-1,886.93
Net Pay	**588.50**		**11,882.82**
Employer Taxes and Contributions			
Federal Unemployment			34.74
Medicare Company			199.67
Social Security Company			853.73
WI - Unemployment Company			0.00
Total Employer Taxes and Contributions			**1,088.14**

Operator's License Summary (7/17/23)

(For ease of review and to reduce photocopying, applicant supporting documents have been summarized below, and only applications and 'positive' check reports are included in board packets.)

Name	Type	New or Renewal	Fee Pd	Proof of Training	Online Checks	
					CIB[1]	CCAP[2]
Dobbe, Jordan Lee 1100 Sunset Blvd #8 Stevens Point	Operator's One Year *(Taps & Tackle)*	New	$30	Valid License	No criminal history found	No relevant results found

[1] **Wisconsin Department of Justice Crime Information Bureau** (wi-recordcheck.org); [This website contains arrest and conviction information on over 1,000,000 individuals dating back to 1971. Every record in the database is supported by positive fingerprint identification. New arrest fingerprint cards are being received at a rate of 10,000 each month.]; $7 per check.

[2] **Wisconsin Circuit Court Access** (wcca.wicourts.gov); [This website provides access to certain public records of the circuit courts of Wisconsin. Information provided is an exact copy of the case information entered into the Consolidated Court Automation Programs (CCAP) case management system by court staff in the counties where the case files are located.]; no charge for checks; currently.

DRAFT

Ordinance No. 2023-[Number of Ordinance]~~Ordinance 17.17~~
Village of Park Ridge
Street Right-Of-Way, Driveways and Parking Ordinance

STATE OF WISCONSIN

VILLAGE OF PARK RIDGE

PORTAGE COUNTY

The Village Board of Trustees does hereby ordain as follows:

Purpose:

In order to provide for the health, safety and welfare of the Village with respect to street safety, and pursuant to Wis. Stat., § 61.36, § 66.1031 through § 66.1037, § 66.0839 and § 83.06, the Village Board of Trustees does hereby pass the following ordinance for publishing and inclusion in the Village of Park Ridge Code of Ordinances as follows: ~~ordain as follows:~~

Ordinance 17.17

Section I. Grading and Swales

1. The right-of-way area between the edge of street pavement and the right-of-way line shall include a ditch/swale that meets the dimensions and details exhibited of the Typical Street Section as set forth in FIGURE 1, which diagram is incorporated by reference into this Ordinance. ~~defined by the Village~~ (see ~~illustration~~FIGURE 1 below). Rights-of-way in the Village ~~Properties~~ that do not have a swale currently may be ~~subject to~~ regrad~~ed~~ing by the Village as street improvement projects occur. Any new grading initiated by a private property owner shall include a Village approved swale as detailed in the Typical Street Section, upon prior approval by the Village Board.~~.~~
2. Parking pads, either paved or graveled, are prohibited on Village right-of-way. Existing parking pads may remain but shall be removed if any new grading or shaping of the street occurs, or if a street construction project includes work that extends outside the street pavement/shoulder.

Section II. Driveways

3. Each Village lot shall be allowed no more than 1 (one) driveway for ingress and egress onto Village streets. If multiple driveways currently exist, they may remain, providing they do not pose a safety concern, in the discretion of the Village Board.. When a street construction project occurs, ~~additional~~ driveways more than one (1) will be considered for removal by the Village Board. ~~Village~~. When construction occurs on private property that ~~e~~affects

ingress and egress onto Village streets, then any ~~driveways, all~~ additional driveways more than one (1) per lot will be considered for elimination and closure by the Village Board. ~~removal.~~

Section III. Parking – For vehicles and trailers

4. Short term parking - less than 12 hours
   a) Short term parking is allowed along all Village streets unless otherwise restricted according to Village signage. Parking is prohibited along all Village streets and rights-of-way when a snowfall of 1 inch or more is forecast, or if 1 inch or more of snow cover exists. Vehicles shall be parked partially off the paved portion of the roadway as much as possible, ~~roadway,~~ with at least two (2)2 vehicle wheels on the shoulder or yard. Vehicles may be parked entirely on private property outside of driveway areas for twelve (12) hours or less. Vehicles may not be parked entirely off of a driveway on private property for more than 12 hours in a 24-hour period. Vehicles shall not be parked outside of driveway areas on a recurring basis, subject to limitations described in Ordinance 10.06, Sect. 1, Sect. E.
   b) Recreational vehicles, campers and other trailers – The above restriction in Section III.4.a) shall pertain ~~similarl~~similarly for all recreational vehicles, including but not limited to campers and any other trailers. ~~y.~~
5. Long term parking – more than twelve (12) hours
   a) Long term parking is not allowed along Village s~~S~~treets. Long term and regular recurring parking shall be entirely on the portion of a driveway ~~driveway areas~~ that lies entirely on a private lot, or in a garage or car port. No more than four (4) cars will be allowed to park in driveways, outside of a garage or car port. Recreational vehicles, campers and other trailers must be parked in accordance with limitations described in Ordinance 10.06, Sect. 1, Sect. E.

Section IV. Plantings

6. Vision triangles
   a) On lots that abut on cross-streets, vegetation on private lots shall be maintained by lot owners to allow v~~V~~ision triangle~~s shall be maintained to~~ that will provide ~~provide~~ clear vision in both directions when a vehicle is stopped near the edge of the crossing street. Trees and bushes and other vegetation shall not be permitted at a height to exceed ____ feet [include specific height, I'd suggest. Otherwise, the ordinance could be vague in this respect]~~should not be allowed~~ or allowed in such vision triangles ~~these~~ areas, ~~and any plantings within the vision triangle shall be low, such as to not impair driver's vision.~~ A 50 foot by 50-foot vision triangle will be typical (see ~~illustration below~~FIGURE 2 of typical vision triangle, attached and incorporated by reference). [Do you mean 25' by 25' would be typical? For that matter, I'm not sure why we need to mention what is typical, when we want to ordain what is required. Discuss more?] Existing landscaping that encroaches into the vision triangle may remain but will be considered for removal if it poses a safety concern, or with any new street improvement or maintenance project. [Hmmm. I'd suggest that we (the Village) confer with our insurance liability carrier on this provision. I'm not sure that allowing as part of a "grandfathering" technique is a best practices under "vision tringle" practices or not. Said another way, I'd suggest that we confer with the risk management department of our insurance carrier to see if it has

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some thoughts on allowing vegetation that violates the vision triangle guidelines to remain on the property. Here's my concern: Once we have a standard set forth (like a 25' by 25' vision triangle, for example, I'm not sure that it is wise to then undercut that standard by grandfathering present "violations" of that standard.]

~~a)~~b)

7. Trees
   a) Large species trees (those that are expected to have a height greater than twelve (12) feet at mature height) ~~greater than 12 feet mature height)~~ shall not be planted closer than ten (10) feet from the edge of pavement, or within vision triangles. Existing trees that are within these areas may remain if they do not pose a threat to public safety but may be considered for removal by the Village if issues develop, or if a Village street improvement project occurs. Any overhanging branches shall be kept trimmed to provide a vision window of at least sixteen (16) feet high and five (5) feet from the edge of the street pavement. ~~edgels.~~ [Could this mean that someone is planting within the right-of-way?]
   b) Small species trees/bushes (those that are expected to have a height less than twelve (12) feet at mature height) may be planted on Vi~~vi~~llage right-of-way. These plantings shall not be planted with the trunk closer than ten (10) feet from the street pavement edge, and the mature crown area shall not extend closer than five (5) feet from of the edge of street pavement. Existing small species trees that have crowns that extend into this zone shall be kept trimmed to provide this window.
   c) Trees, bushes, or other plantings that exceed twenty-four (24) inches in height shall ~~will~~ not be allowed within any vision triangle. [Again, let's check with insurance risk department about what to do about present "violations."]
8. Garden plantings
   a) Rain Gardens are strongly encouraged on Village right-of-way. [We may want to define exactly what we mean by Rain Gardens, since it is not necessarily clear to everyone—even to me. Do we need another diagram? What if they are constructed too close to the paved portion of the street?] They provide needed water retention during storm events and in spring thaw periods. They also facilitate infiltration of stormwater to recharge Village groundwater resources.
   b) Flower gardens or other decorative garden plantings are also strongly encouraged on Village right-of-way. [Any parameters/limitations on them? Definition of what we mean by a flower garden? Sorry to get nit-picky here, but perhaps better now than later?!]
   c) Garden plantings [Does this include flower gardens?] are prohibited within one (1) foot of the edge of street pavements.
   d) Garden plantings that exceed thirty-six (36) inches in height are prohibited within any vision triangle.

Section V. Structures

9. Retaining walls
   a) Retaining walls [of any height?] are prohibited within the Village right-of-way or vision triangles. Existing retaining walls that encroach on right-of-way may remain but shall be considered for removal if any new grading or shaping of the right-of-way occurs, or if a

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street construction project includes work that extends outside the street pavement/shoulder.

Section VI. Mailboxes

10. Location
    a) Mailboxes shall be installed such that the front face of the box is no closer than two (2) feet and no greater than three (3) feet from the edge of street pavement (see FIGURE 3, incorporated into this Ordinance by reference.). Other details of installation shall be in accordance with the mailbox detail in the Village Street improvement Guide, which Guide is made a part of this Ordinance.
11. Type
    a) Mailboxes shall be standard size and shape and may be small or large version of the USPS standard. Non-standard or custom-built mailboxes will be allowed if they are within the typical size range, are not a hazard, and are acceptable to the Village. Mailbox posts may be wooden or steel. Stone or concrete mailbox posts are prohibited.
12. Existing allowances
    a) Existing mailboxes that do not meet location of type requirements may remain but shall be considered for modification or relocation if any new grading or shaping occurs, or if a street construction project includes work that extends outside the street pavement/shoulder. Mailboxes that are deemed a safety hazard by the Village Board ~~will~~ shall be replaced within ten (10) days after notification from the Village or will be removed by the Village at the owner's expense, including remedies that may be allowed by including the costs on the property tax roll.

Section VII. Underground sprinkler systems

13. Location
    a) Sprinkler lines and heads are allowed on Village right-of-way. Heads shall be installed no closer than two (2) feet from the edge of any street pavement.
14. Damage, repair and replacement
    a) Repair or replacement of sprinkler lines and heads located within the Village ~~street~~ right-of-way that are damaged or destroyed as a result of street construction, repair, maintenance or utility work is the sole responsibility of the property owner and not the Village under any circumstances. (see Section IX. below)
15. Type
    a) Sprinkler heads located within right-of-way shall be flush or below grade. Head type or brand is not regulated by this Ordinance, ~~restricted~~ providing it meets this grade restriction.
16. Control Boxes (Manifold and valve units)
    a) Placement of s~~S~~prinkler control boxes within ~~are prohibited on~~ the Village right-of-way is prohibited.

Section VIII. Snow plowing markers ("snow sticks")

17. Materials
    a) [Seems like we need an introductory sentence here . . . something about what we mean by snow markers. And that they are allowed, provided that such markers meet the

following restrictions….] Markers shall be made of a "breakaway" material and shall be no greater than one-half (½) inch in diameter and no taller than four (4) feet.

18. Location
    a) Markers shall be installed no closer than two (2) feet from the edge of the street pavement.

Section IX. Liability

19. All liability of private property installed, erected or maintained on any Village right-of-way, including plantings, landscaping, mailboxes, sprinkler systems, structures, walls, snowplow markers, or other personal property; is the sole responsibility of the property owner if damage occurs as a result of village projects or maintenance operations.

[Format issue here. Sorry about that.]

Section X. Enforcement.

~~19.~~ 20. Enforcement of this Ordinance shall be pursuant to any remedy allowed at law or in equity, including but not limited to Ordinance No. 17.41.

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EFFECTIVE DATE

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This ordinance is effective upon publication. The Village Clerk shall properly post or publish this ordinance as required under § 61.50, Wis. Stat.

Adopted this day of July, 2023.

Steve Menzel – Village President

Gordon Renfert – Village Trustee

Kristin Paulson – Village Trustee

Barbara Friedrich – Village Trustee

Dan Holloway – Village Trustee

DRAFT

ATTESTED BY:

Katie McKelvey – Village Clerk/Treasurer

DRAFT

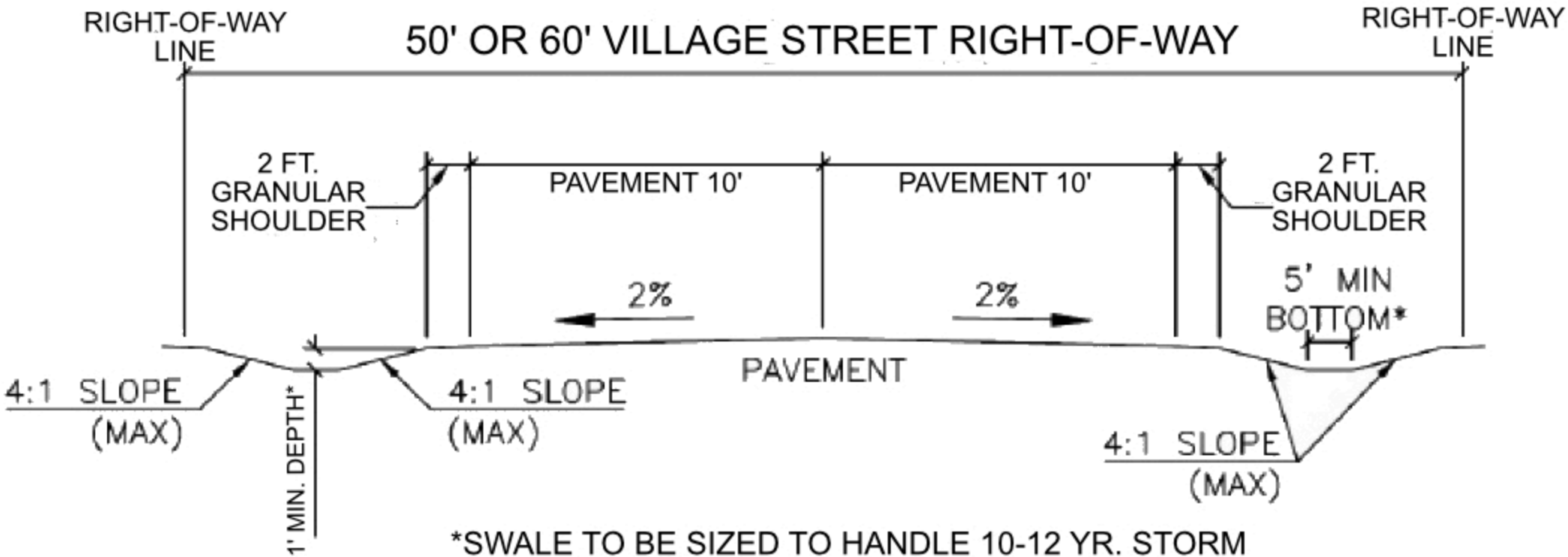
ADDENDUM

FIGURE 1 (TBD)

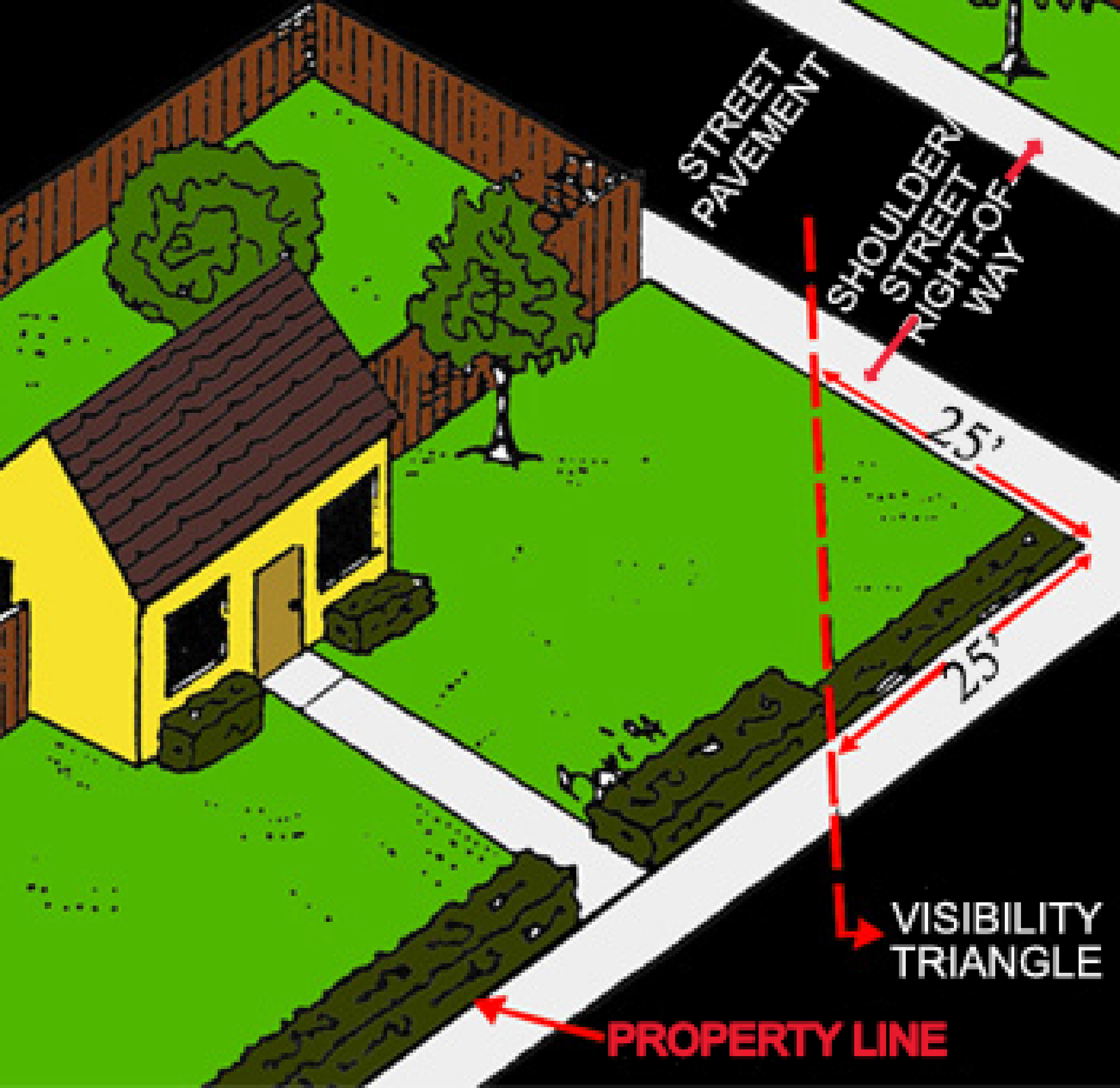
FIGURE 2 (TBD)

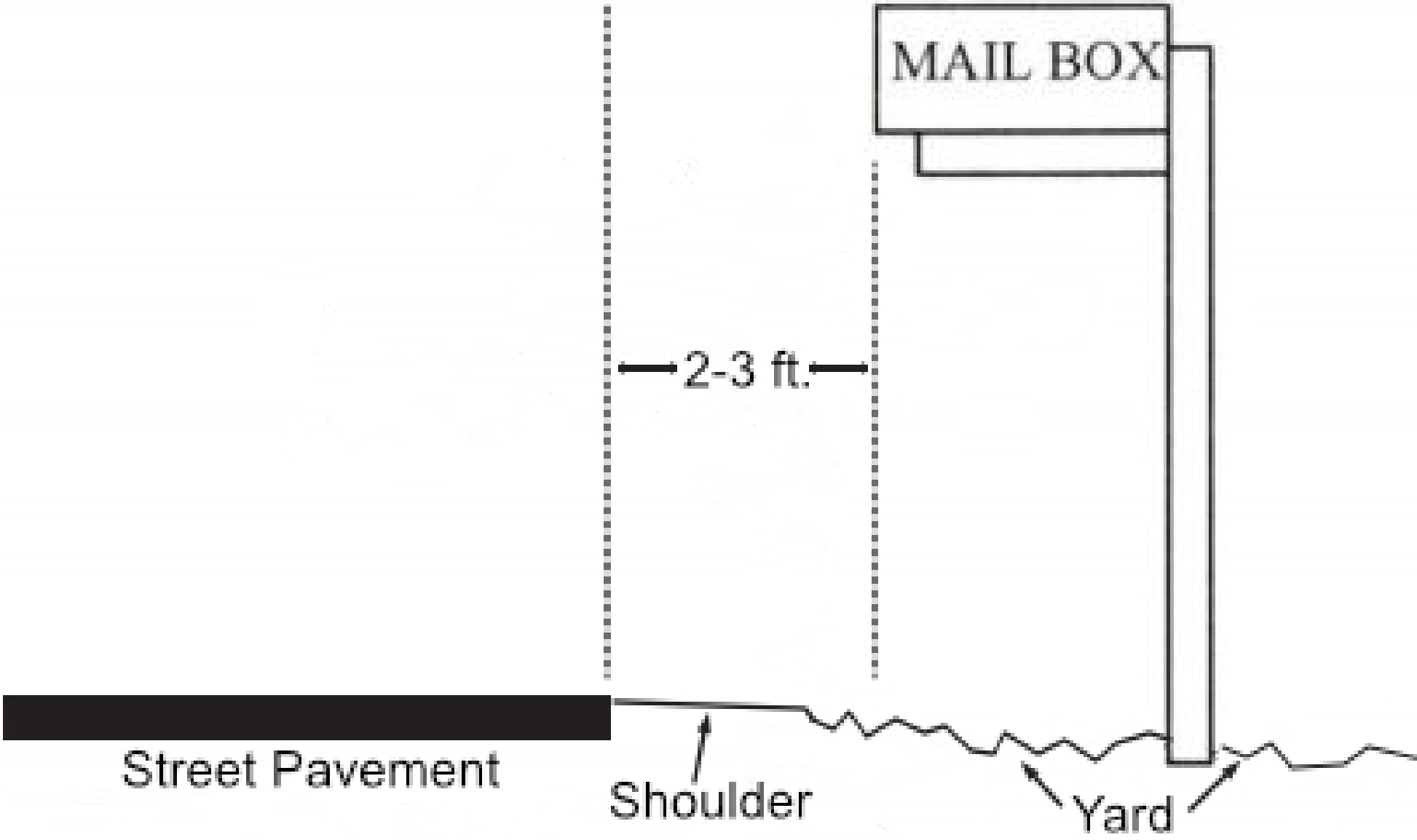
FIGURE 3 (TBD)

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*SWALE TO BE SIZED TO HANDLE 10-12 YR. STORM


STREET PAVEMENT
SHOULDER
STREET RIGHT-OF-WAY
25'
25'
VISIBILITY TRIANGLE
PROPERTY LINE


MAIL BOX
2-3 ft.
Street Pavement
Shoulder
Yard



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.



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.

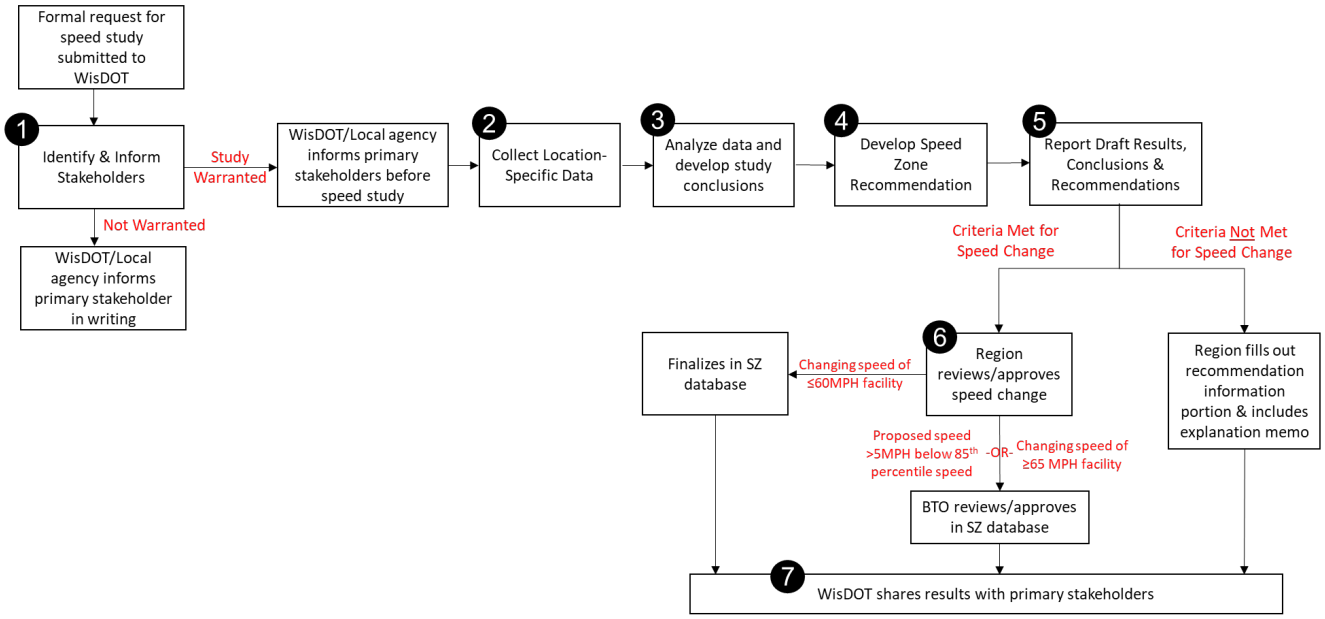
ASSESSING NEED FOR A SPEED ZONE OR MODIFICATION

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

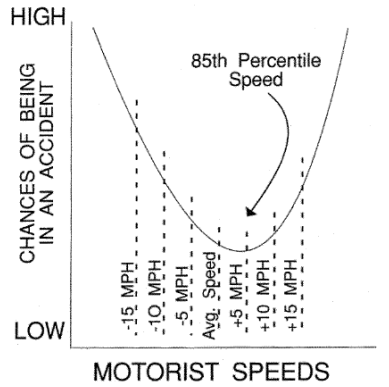
Crashes typically indicate there is a problem beyond speed. Investigations of crashes reveal that in most cases there was a clear violation of a traffic law or rule of good driving. Other numerous factors also impact the number of traffic crashes along a highway. Proper analysis and evaluation of these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

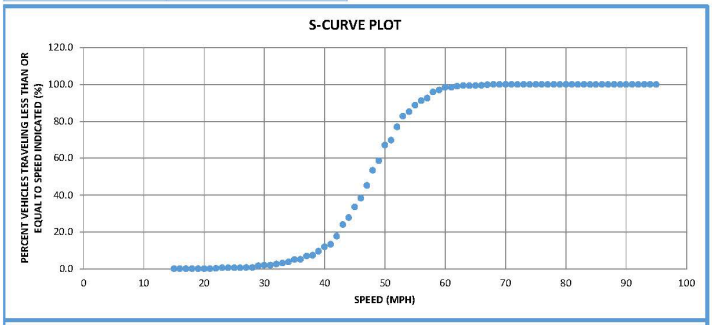
FIELD COMMENTS
DATA RECORDED WITH RADAR DEVICE.

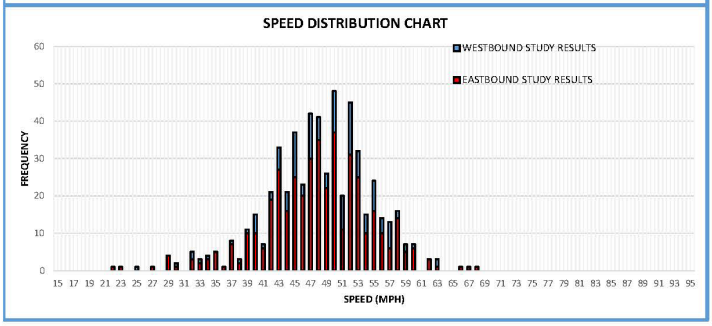
EASTBOUND STUDY RESULTS	
85TH PERCENTILE*	54.0
50TH PERCENTILE†	47.6
AVERAGE SPEED	47.8
PACE RANGE‡	43 TO 52
PERCENT IN PACE	59.2%
PERCENT OVER PACE	23.1%
PERCENT UNDER PACE	17.7%

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

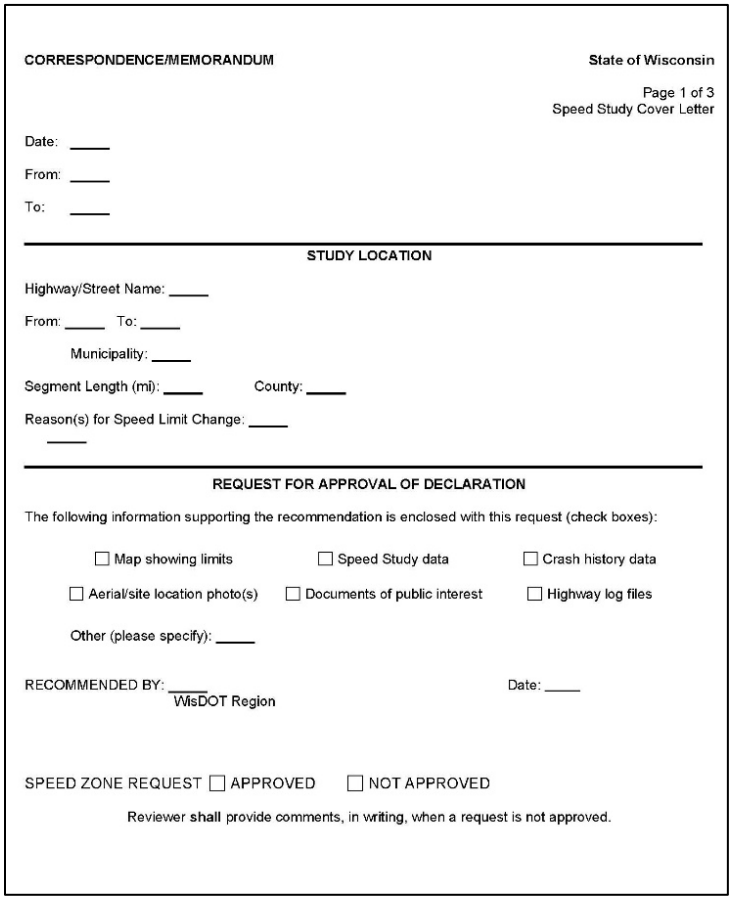
spacing is a major factor in posting 35 mph regulatory speed zones. Refer to Figures 4 and 5 for the driveway spacing requirements.

- 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

_____

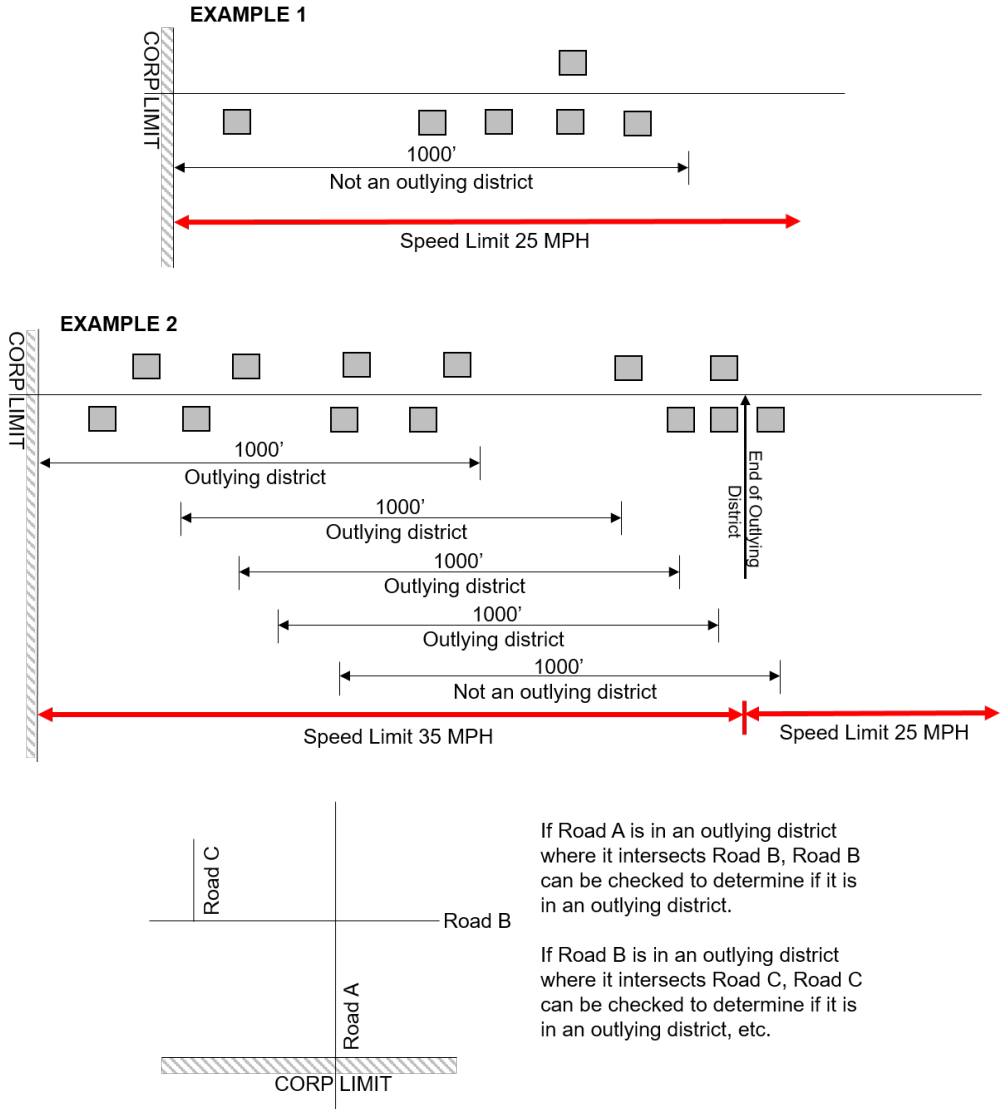
Speed Limits Within Incorporated Areas

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

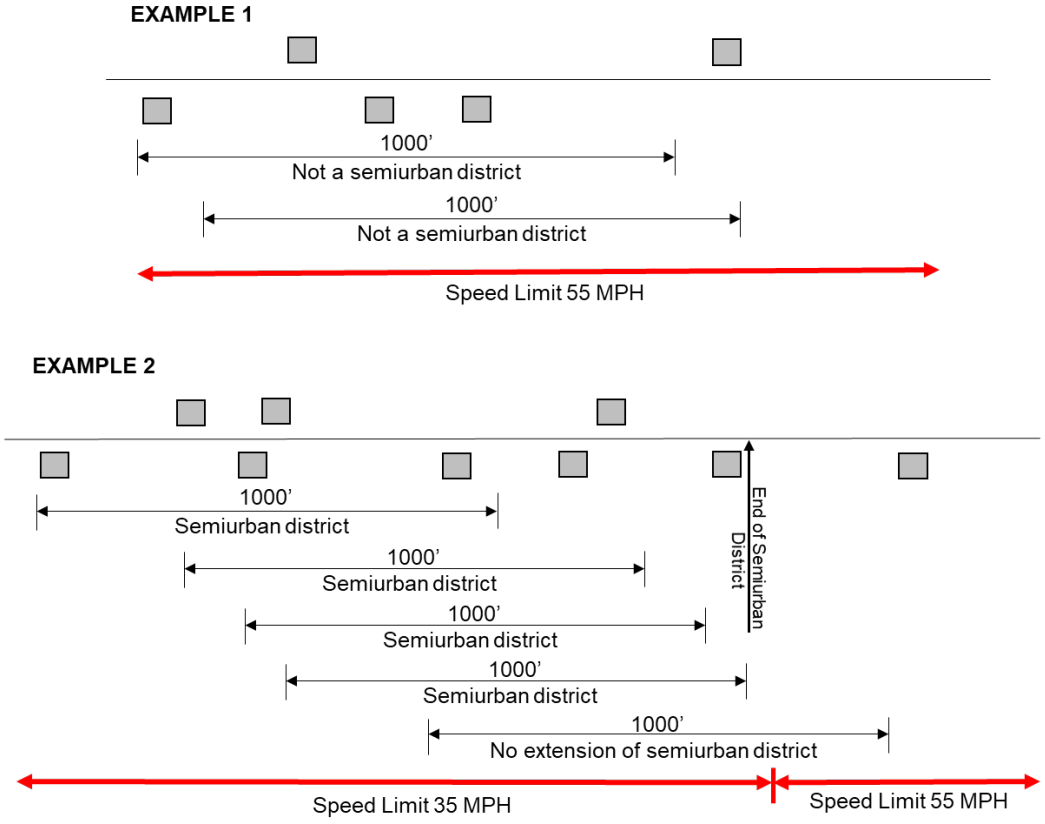
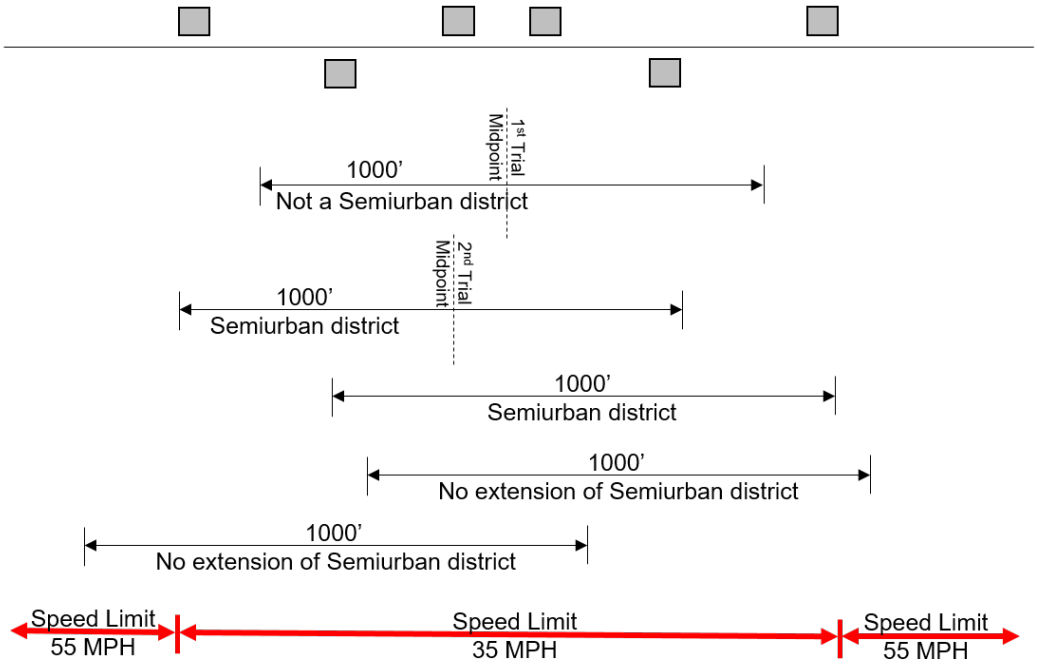


Figure 5. Semiurban Districts (Continued)



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.

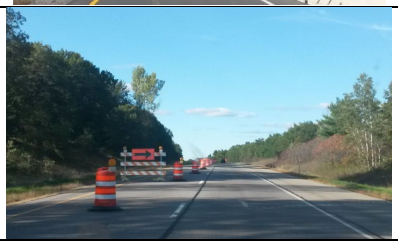
4. Two-lane rural highways with 55 mph speed limit – Reduce to 45 mph only in situations that have a combination of extreme lane shifts, narrowed lanes or milled surfaces. A flagging operation in and of itself would typically not warrant a reduced speed limit since motorists are controlled by the flagging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

Save the Date!

PARK RIDGE
VILLAGE PICNIC

August 13, 2023 | 4pm - 7pm
Park Ridge Village Hall

It is time for a Good Ol' Fashioned neighborhood picnic to celebrate the 85th anniversary of the Village of Park Ridge.

A friendly gathering for the residents of Park Ridge
potluck meal
Blue Barn Scoops ice cream truck
lawn games
music and more

Save the date, more information available soon!



If you wish to volunteer or have questions contact:
Christine Neidlein at cneidlei@uwsp.edu

