

## Memorandum

To: Amanda Nowezki, City Administrator  
City of Long Lake

From: Rachel Scheu, WSB

Date: April 29, 2026

Re: Curb Benefits and Curb Type Comparison

---

This memo provides information on the benefits of curb and compares the pros and cons of barrier curb and gutter (high-back) to surmountable curb and gutter (drive-over).

### Benefits of Curb

- Tends to be more cost effective over the life of the street
- Reduces pavement failure
- Provides Safety
- Controls drainage
- Improves the appearance of the neighborhood
- Provides driveway and traffic control
- Aids street cleaning and snow plowing

### Barrier Curb (Design B)

- Pros:
  - Preference to snowplows.
  - Highly effected at keeping vehicles on the roadway and off sidewalks or landscaping. Offer high pedestrian safety.
- Cons:
  - Can damage tires/rims if they hit the curb.
  - 2" taller than standard surmountable curb, so from a design and construction standpoint, the existing road will need to be lowered more than surmountable to install curb and tie-in to existing yards.
  - Slightly more expensive than surmountable curb (estimate \$5 more/ LF), because there's more volume of concrete required.

### Surmountable Curb (Design D)

- Pros:
  - Allows vehicles to drive over them easily, which eliminates the need for driveway cuts.
    - Preferred in residential developments where driveway locations are not decided yet.
  - Less damaging to vehicles and offer better access for emergency or maintenance vehicles to pull off the road.
- Cons:
  - Less effective at separating traffic from pedestrians.
  - Some residents prefer the drop down curb at driveways used with barrier curb because it is a gradual bump compared to driving over surmountable curb.

See attachments of MnDOT's Standard Plates for barrier curb (Design B) and surmountable curb (Design D).



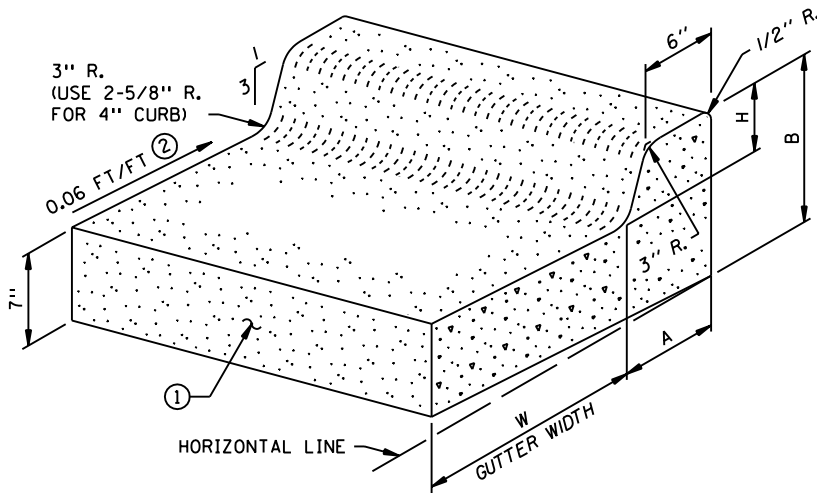
4/29/2026

---

Rachel Scheu

---

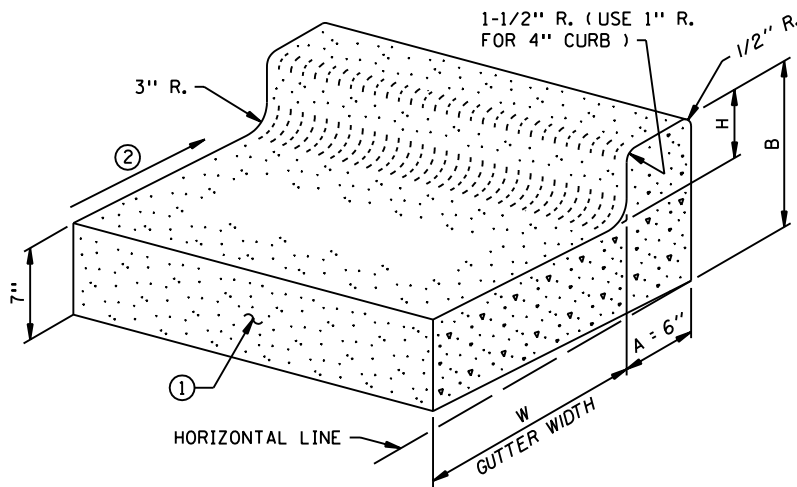
Date



DESIGN B



REVERSE SLOPE GUTTER SECTION  
(FORMS MAY BE TILTED)



DESIGN V

- NOTES:
- ① LONGITUDINAL JOINT WHEN ADJACENT TO RIGID PAVEMENT OR BASE.  
SEE STANDARD PLANS MANUAL FOR JOINT INFORMATION.
  - ② SLOPE 0.06 FT/FT NORMAL, UNLESS OTHERWISE SPECIFIED. IF A DIFFERENT GUTTER SLOPE IS PERMITTED, THE FORM MAY BE TILTED.

DESIGN B			W = 12"			W = 18"			W = 24"			W = 30"			W = 36"		
			DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE	
DIMENSIONS			CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	
H	A	B															
4	7-3/8"	11-1/2"	B412	0.0421	23.8	B418	0.0529	18.9	B424	0.0637	15.7	B430	0.0745	13.4	B436	0.0853	11.7
6	8"	13-1/2"	B612	0.0474	21.1	B618	0.0582	17.2	B624	0.0690	14.5	B630	0.0798	12.5	B636	0.0906	11.0
8	8-5/8"	15-1/2"	B812	0.0529	18.9	B818	0.0637	15.7	B824	0.0745	13.4	B830	0.0853	11.7	B836	0.0962	10.4
9	9"	16-5/8"	B912	0.0559	17.9	B918	0.0667	15.0	B924	0.0775	12.9	B930	0.0883	11.3	B936	0.0991	10.1
10	9-3/8"	17-5/8"	B1012	0.0589	17.0	B1018	0.0697	14.4	B1024	0.0805	12.4	B1030	0.0913	11.0	B1036	0.1021	9.8

DESIGN V			W = 12"			W = 18"			W = 24"			W = 30"			W = 36"		
			DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE		DESIGN NO.	CONCRETE	
DIMENSIONS			CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.	
H	A	B															
4	6"	11-3/8"	V412	0.0396	25.3	V418	0.0504	19.9	V424	0.0612	16.4	V430	0.0720	13.9	V436	0.0828	12.1
6	6"	13-3/8"	V612	0.0426	23.5	V618	0.0534	18.7	V624	0.0642	15.6	V630	0.0750	13.4	V636	0.0858	11.7
8	6"	15-3/8"	V812	0.0457	21.9	V818	0.0565	17.7	V824	0.0673	14.9	V830	0.0781	12.8	V836	0.0889	11.3
9	6"	16-3/8"	V912	0.0472	21.2	V918	0.0580	17.2	V924	0.0688	14.5	V930	0.0796	12.6	V936	0.0904	11.1
10	6"	17-3/8"	V1012	0.0487	20.5	V1018	0.0595	16.8	V1024	0.0703	14.2	V1030	0.0811	12.4	V1036	0.0919	10.9

APPROVED MARCH 11, 1994

*R.H. Carped*

ACTING STATE DESIGN ENGINEER

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION

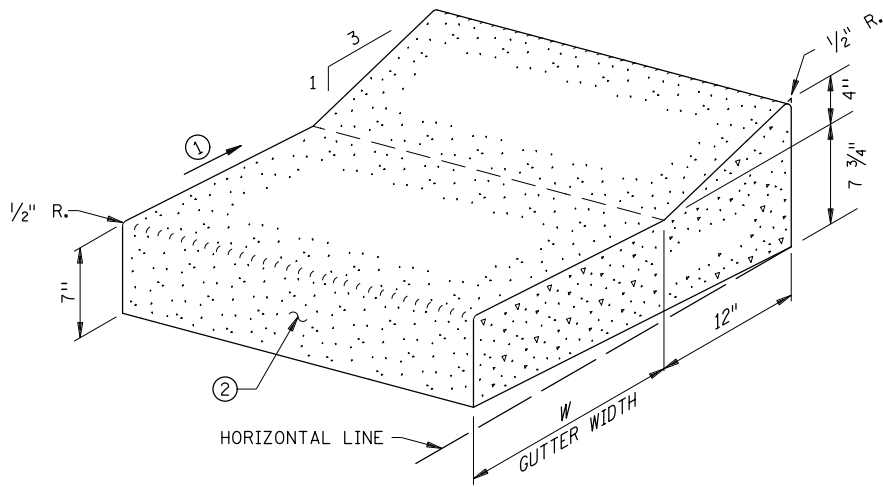
CONCRETE CURB AND GUTTER  
DESIGN B AND DESIGN V

SPECIFICATION  
REFERENCE  
2531

REVISION DATE  
2-28-05

STANDARD  
PLATE  
NO.

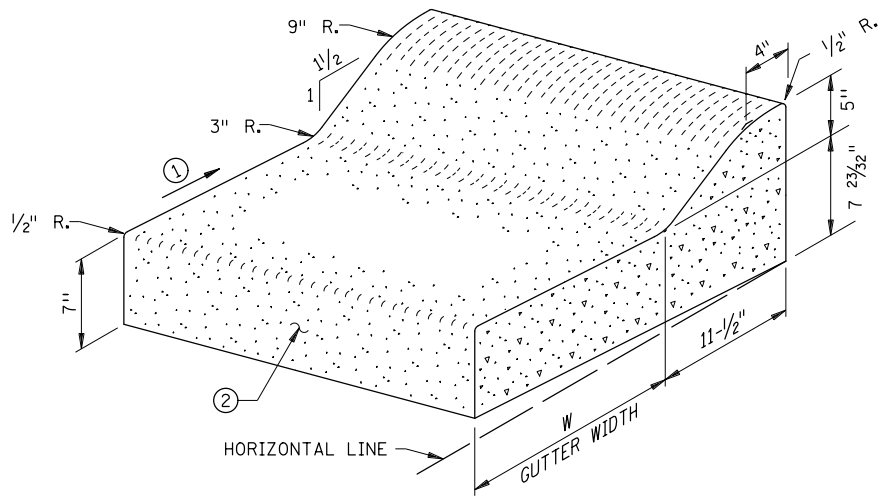
7100H



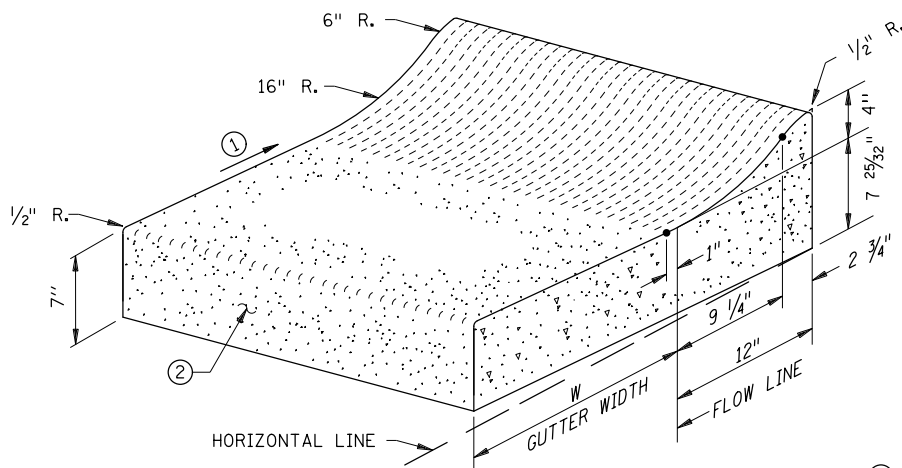
D DESIGN NO.	GUTTER WIDTH W	CONCRETE	
		CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.
D412	12"	0.0505	19.8
D418	18"	0.0613	16.3
D424	24"	0.0721	13.9
D436	36"	0.0937	10.7

DESIGN D

S DESIGN NO.	GUTTER WIDTH W	CONCRETE	
		CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.
S512	12-1/2"	0.0541	18.5
S518	18-1/2"	0.0649	15.4
S524	24-1/2"	0.0757	13.2
S530	30-1/2"	0.0865	11.6
S536	36-1/2"	0.0973	10.3



DESIGN S



DESIGN R

R DESIGN NO.	GUTTER WIDTH W	CONCRETE	
		CU. YDS. PER LIN. FT.	LIN. FT. PER CU. YD.
R412	12"	0.0492	20.3
R418	18"	0.0600	16.7
R424	24"	0.0708	14.1
R436	36"	0.0924	10.8

NOTES:

- ① SLOPE 3/4" PER FOOT NORMAL UNLESS OTHERWISE SPECIFIED. IF A DIFFERENT GUTTER SLOPE IS SPECIFIED, THE FORM MAY BE TILTED.
- ② LONGITUDINAL JOINT WHEN ADJACENT TO RIGID PAVEMENT OR BASE. SEE STANDARD PLANS MANUAL FOR JOINT INFORMATION.

APPROVED AUGUST 28, 2017

*Ron Smith*  
STATE DESIGN ENGINEER

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION

CONCRETE CURB AND GUTTER  
DESIGN D, DESIGN S AND DESIGN R

SPECIFICATION  
REFERENCE

2531

STANDARD  
PLATE  
NO.

7102K