

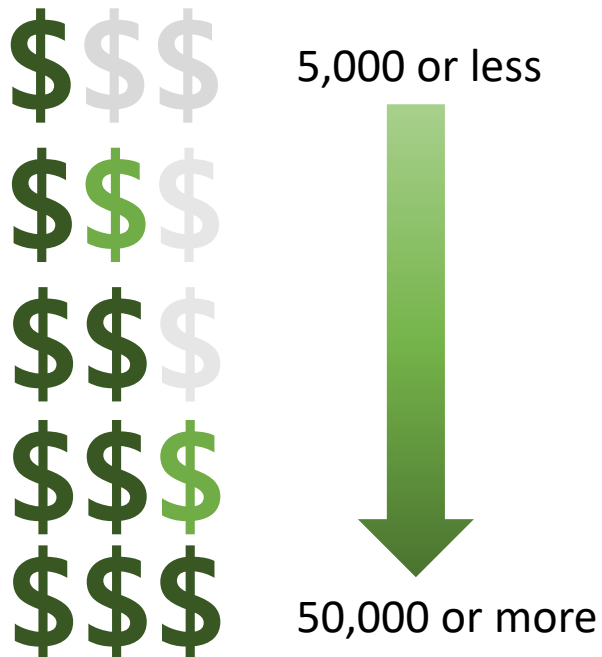
Traffic Calming Options

Legend

The following scales for cost, maintenance, and effectiveness may be good references when going through the following 10 traffic calming options.

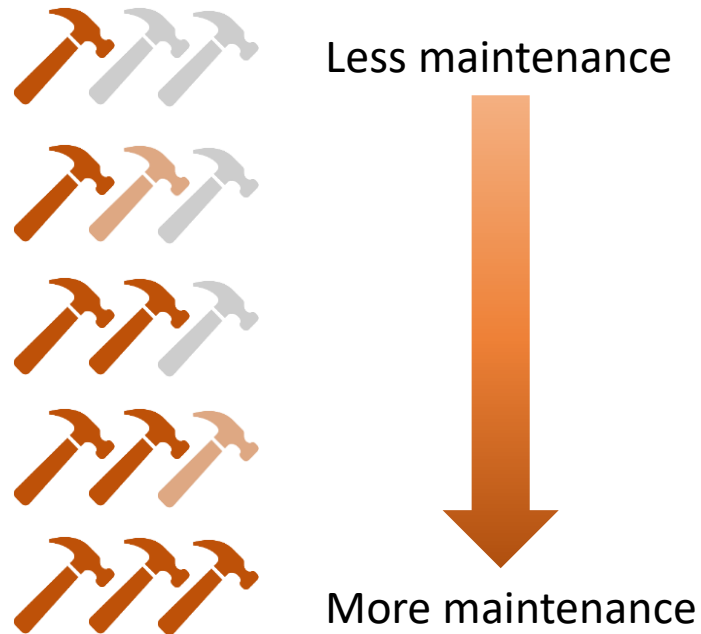
Cost

The scale below is given to represent the estimated cost of construction.



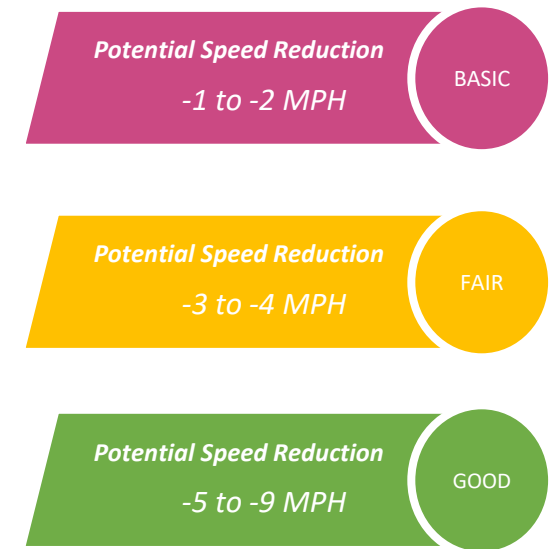
Maintenance

The scale below is given to represent the long-term routine maintenance implications.



Effectiveness

The following ribbons indicate speed reduction potential.

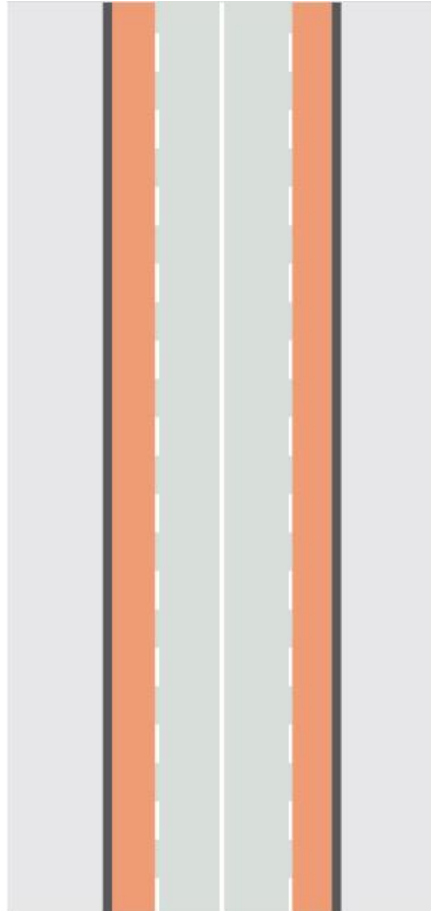


1 | Lane Narrowing

(Road Diet, On-Street Parking, Pavement Striping)

Potential Speed Reduction
-1 to -2 MPH

BASIC



Description

Narrow lanes reduce speeds and keep drivers alert.

This can be achieved through pavement striping or reduced pavement.

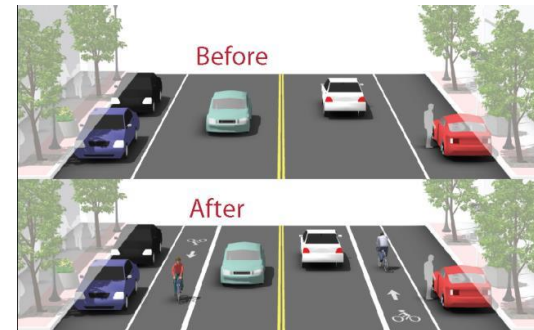
Reduced vehicular travel lane widths can also allow for extended curbs, bike lanes or on-street parking.

Cost and Maintenance

Depends on roadway length. More expensive if moving curb.



Examples



Braintree, MA neighborhood traffic calming mockup



Shoulder markings used to narrow travel lanes in Roland, IA

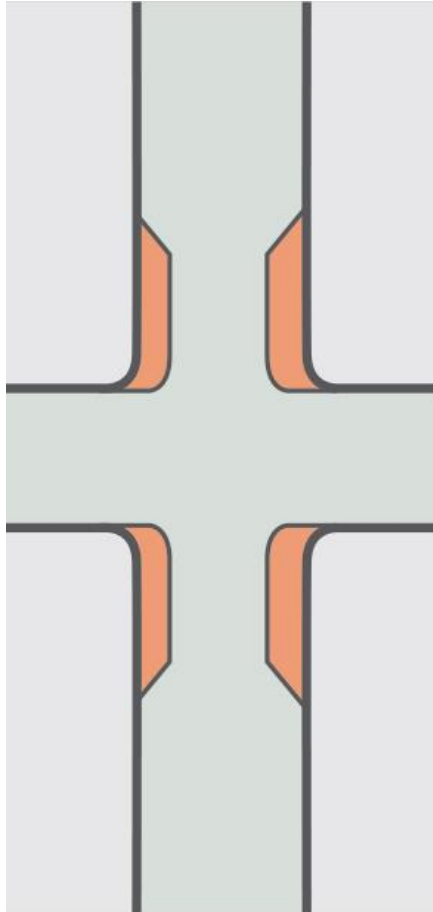
Pros	Cons
✓ May allow for bike lanes or additional parking	× May not be effective unless lanes are significantly narrowed
✓ Low-cost solution	

2 | Curb Extension

(Corner Extension, Corner Radii, Bulb-Out)

Potential Speed Reduction
-3 to -4 MPH

FAIR



Description

Extensions of the sidewalk can narrow the street at desired intersections.

These can improve pedestrian safety by slowing vehicle turning speeds, reducing pedestrian crossing distances and increasing pedestrian visibility.

Cost and Maintenance

Depends on length and width of barriers.



Examples



Yellow-painted curb extension narrows the roadway along 30th Ave E in West Fargo, ND



Curb extension narrows crossing of 1st St E near South Elementary School in West Fargo, ND

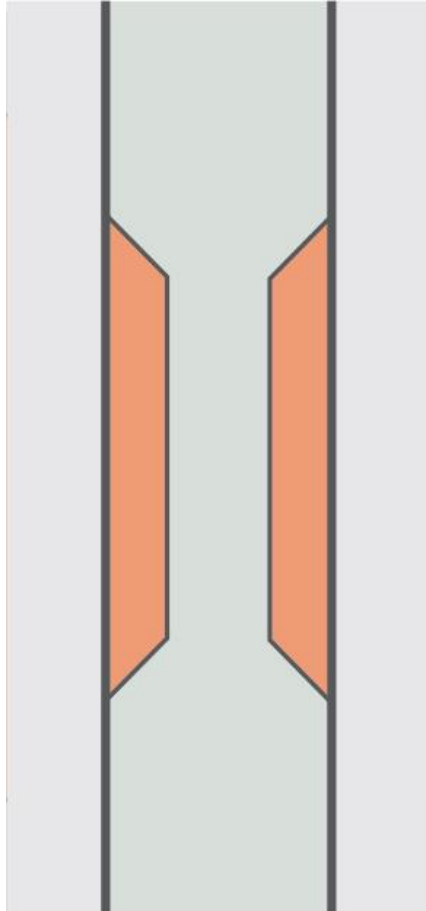
Pros	Cons
✓ Slows turning and through vehicles	× Buses and heavy trucks may find turning difficult
✓ Improves pedestrian safety	× Realigned drainage may increase cost/maintenance
	× Impact to snow removal

3 | Pinchpoint

(Choker)

Potential Speed Reduction
-3 to -4 MPH

FAIR



Description

Pinchpoints narrow the roadway at a mid-block point, lowering vehicle travel speeds.

One-lane chokers can also force two-way traffic to take turns entering through the pinchpoint, further reducing speeds and keeping drivers alert.

Cost and Maintenance

Depends on length and width of barriers.



Examples



Choker narrows roadway in St. Louis Park, MN



Traffic island narrows roadway in Toronto, ON

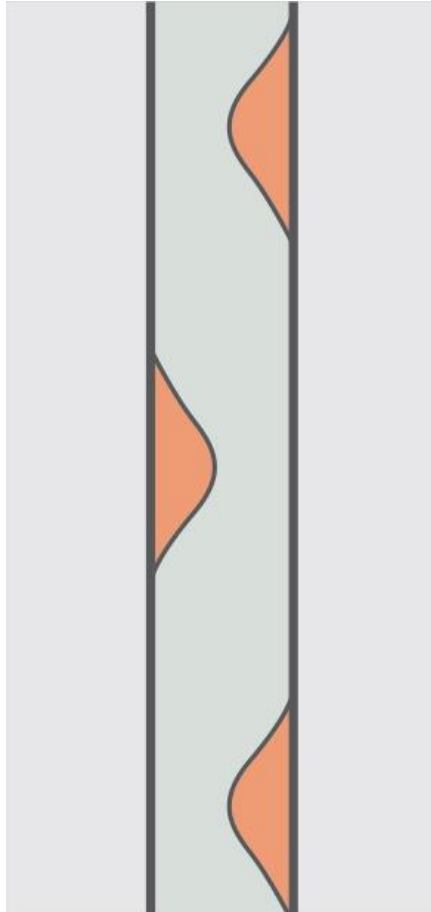
Pros	Cons
✓ Slows traffic at mid-block locations	× May require on-street parking removal
✓ Keeps drivers alert	× Uncomfortable for bicyclists sharing the travel lane
	× Impact on snow removal

4 | Chicane

(Lane Shift, Lateral Shift, Realigned Intersection)

Potential Speed Reduction
-6 to -9 MPH

GOOD



Description

Chicanes slow drivers by alternating curves or lane shifts to form an S-shaped path of travel.

This can be achieved by strategically placing parking, curb extensions or edge islands along the corridor to force motorists to steer back and forth.

Cost and Maintenance

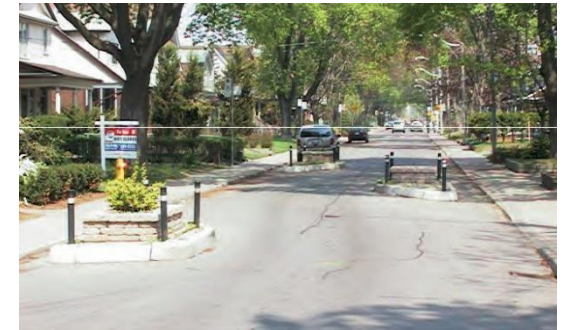
Depends on length of street.



Examples



Chicane with added landscaping in Seattle, WA



Chicane shifts traffic on a one-way road in Toronto, ON

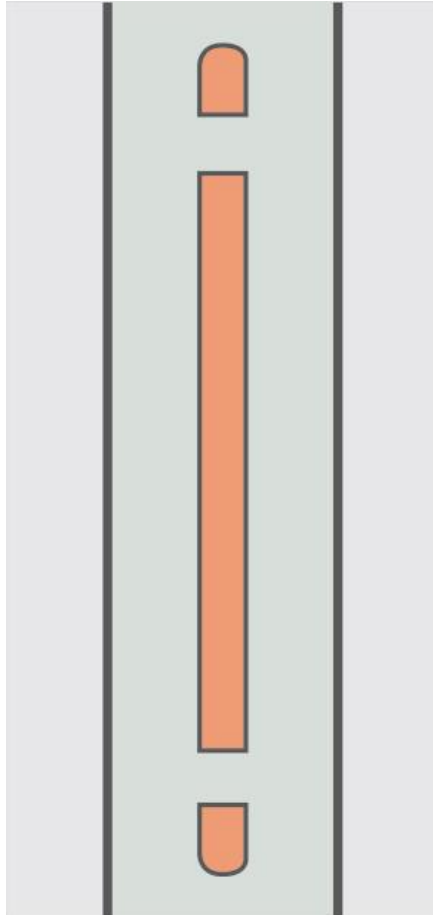
Pros	Cons
✓ Slows traffic along a corridor	× Buses and heavy trucks may find movement difficult
✓ Unlikely to require utility relocation	× Street sweeping may need to be done manually

5 | Median Island

(Median, Refuge Island, Median Island Intersection, Median Island Midblock)

Potential Speed Reduction
-3 to -6 MPH

FAIR



Description

Raised median islands create a pinchpoint for slowing traffic in the center of the roadway by reducing lane widths.

The median can also double as a pedestrian refuge island if a cut in the island is provided along with a marked crosswalk.

Cost and Maintenance

Depends on length and width of island.



Examples



Median island on 13th Ave W in West Fargo, ND



Median refuge island on 18th Ave W in Fargo, ND

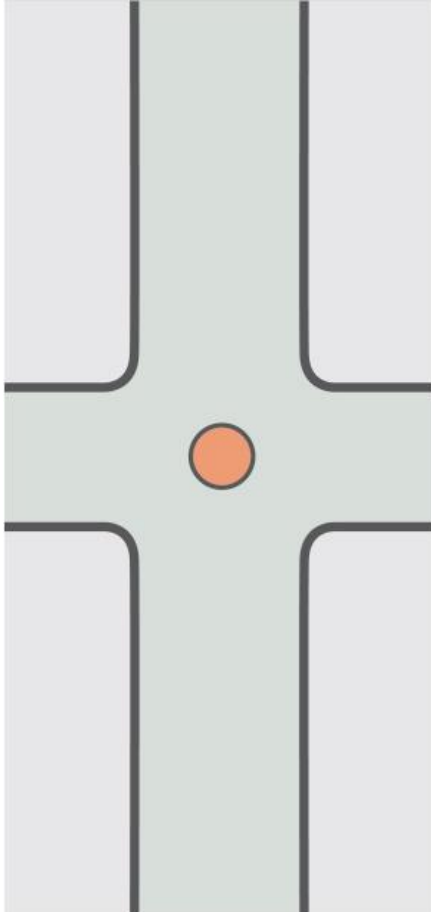
Pros	Cons
✓ Reduces lane width to slow traffic	× May restrict turning access into or out of driveways
✓ Can shorten pedestrian crossing distances	× May require on-street parking removal

6 | Mini Roundabout

(Traffic Circle)

Potential Speed Reduction
-4 MPH

FAIR



Description

Round islands at intersections serve to both reduce speeds and organize traffic.

These can keep drivers alert by requiring them to move with caution and yield for other vehicles.

Cost and Maintenance

Depends on the design and dimensions of roundabout.



Examples



Mini roundabout on 19th Ave W in West Fargo, ND



Mini roundabout in Athens, OH

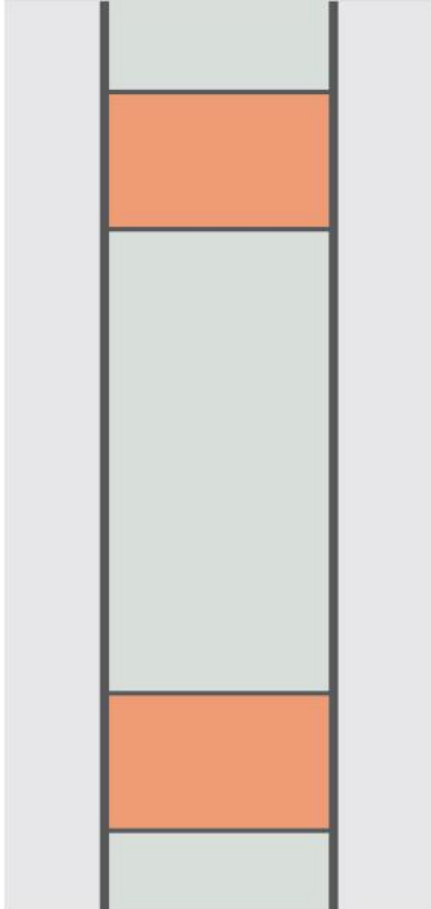
Pros	Cons
✓ Slows traffic at intersection	× Buses, heavy trucks and larger emergency vehicles may find movement difficult
✓ Can reduce crash severity	× Forces bicyclists to share the travel lane

7 | Speed Hump

(Speed Cushion, Speed Table, Raised Intersection, Raised Crosswalk)

Potential Speed Reduction
-6 to -8 MPH

GOOD



Description

Speed humps, cushions or tables vertically deflect vehicles at a midblock location to reduce speeds.

Raised intersections are similar to speed tables but cover an entire intersection.

Cost and Maintenance

Depends on the design and pavement material choice.



Examples



Raised crosswalk on 19th Ave W in West Fargo, ND



Speed bump on Golf Course Road in Fargo, ND

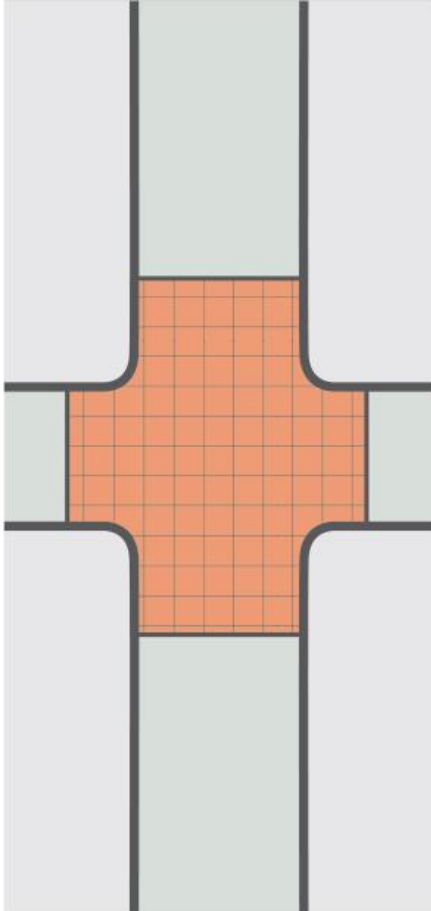
Pros	Cons
✓ Forces speed reduction	× Speeds typically increase after speed hump unless multiple are installed
✓ Can be a low-cost solution	× Emergency vehicles may be delayed

8 | Pavement Material

(Pavement Markings)

Potential Speed Reduction
-1 to -2 MPH

BASIC



Description

Pavement appearance can be altered through unique treatments that add visual interest, such as colored or patterned-stamped asphalt, concrete or brickwork.

This can be used to alert drivers, particularly at crossings and intersections.

Cost and Maintenance

More expensive if paired with a raised intersection.



Examples



Raised intersection & pavement material near Freedom Elementary School in West Fargo, ND



Intersection pavement material in downtown Fargo, ND

Pros	Cons
✓ Can be low-cost depending on material	× Effectiveness may be minimal
✓ No impact on access	× Brickwork may require more maintenance over time

9 | Diverter

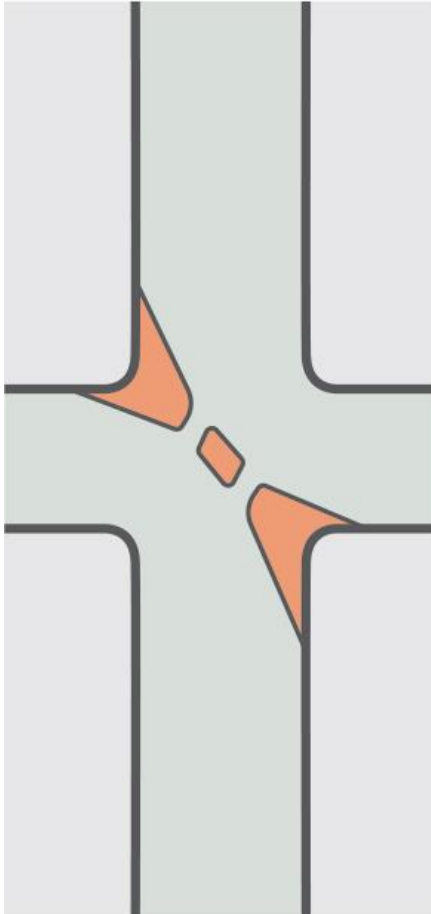
(Closure, Partial Closure, Diagonal Diverter, Median Barrier, Forced Turn Island, Bicycle Boulevard, Semi-Diverter)

Potential Speed Reduction

NA

Traffic is Diverted

FAIR



Description

Diverter and other volume management strategies can restrict movement along a corridor while maintaining access for pedestrians and bicyclists.

This works to divert traffic volumes to other parallel streets.

Cost and Maintenance

More expensive for complex full closures.



Examples



Diverter in residential area of Minneapolis, MN



Bicycle boulevard diverts vehicular traffic in Rochester, NY

Pros	Cons
✓ Reduces traffic volumes and speeds along the corridor	× May increase traffic on nearby streets
✓ Improves pedestrian and bicycle safety	× Impacts ease of access to properties

10 | Landscaping

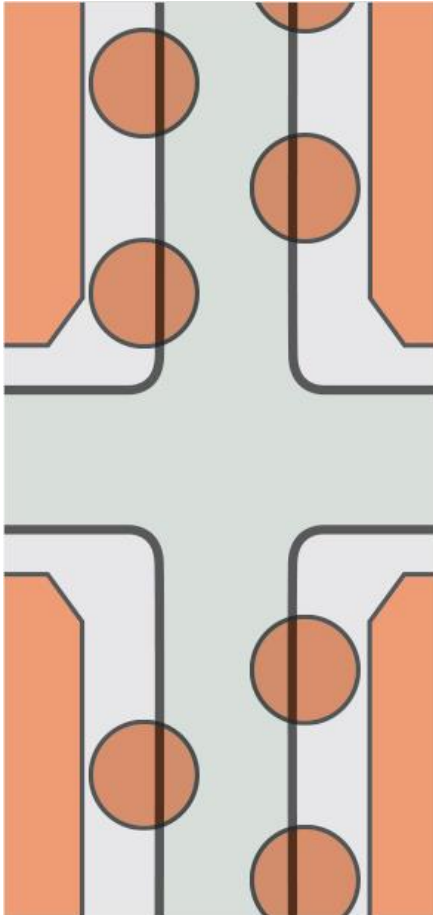
(Building Lines, Street Trees)

Potential Speed Reduction

NA

Depends on Context

BASIC



Description

A denser built environment with street trees or no significant building setbacks can narrow a driver's visual field. This keeps drivers more alert and aware of their surroundings.

Cost and Maintenance

Depends on tree size and quantity.



Examples



Very mature street trees providing canopy cover over entire 4th St N in Fargo, ND











Large street trees starting to mature in the Charleswood neighborhood of West Fargo, ND

Pros	Cons
✓ Does not alter roadway use of space or access	× May not be as effective unless tree coverage is significant
✓ Increases street attractiveness	× May takes decades for trees to fully mature

Traffic Calming Measures

Summary Table

Traffic Calming Measure	Speed Reduction Potential	Cost	Maintenance
1. Lane Narrowing	Basic: -1 to -2 mph	\$\$\$	
2. Curb Extension	Fair: -3 to -4 mph	\$\$\$	
3. Pinchpoint	Fair: -3 to -4 mph	\$\$\$	
4. Chicane	Good: -6 to -9 mph	\$\$\$	
5. Median Island	Fair: -3 to -6 mph	\$\$\$	
6. Mini Roundabout	Fair: -4 mph	\$\$\$	
7. Speed Hump	Good: -6 to -8 mph	\$\$\$	
8. Pavement Material	Basic: -1 to -2 mph	\$\$\$	
9. Diverter	Fair: NA – Traffic is Diverted	\$\$\$	
10. Landscaping	Basic: NA – Depends on Context	\$\$\$	