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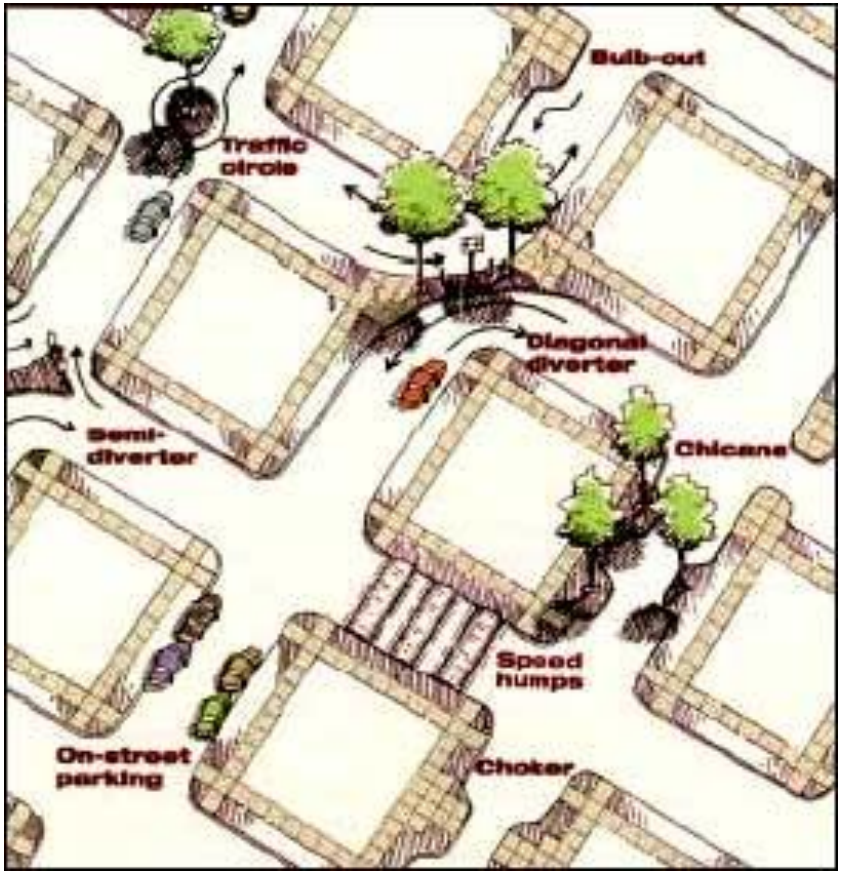
City of Smyrna

Traffic Calming



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Traffic Calming

-- The use of primarily physical measures to reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users. Traffic calming can be divided into two, sometimes overlapping, areas: volume calming and speed calming.

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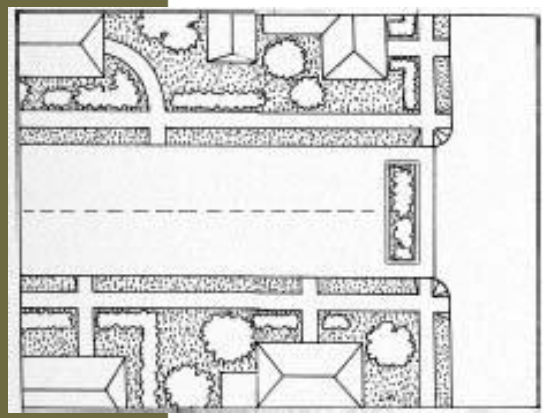
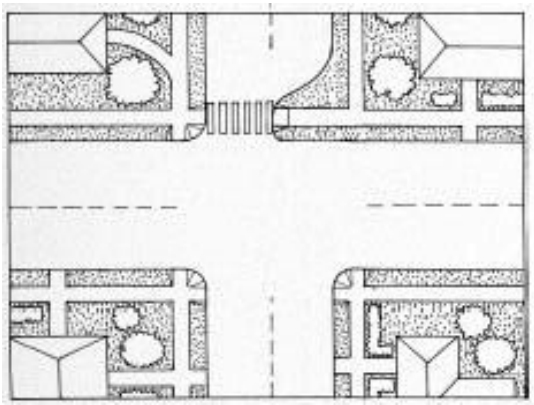
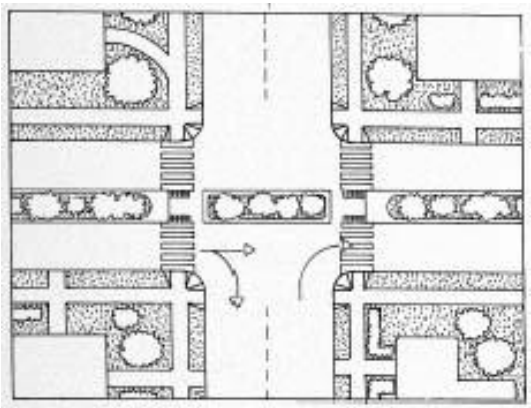
Volume Calming Measures

- Full Roadway Closures
- Half Roadway Closures
- Median Barriers
- Diagonal Diversions







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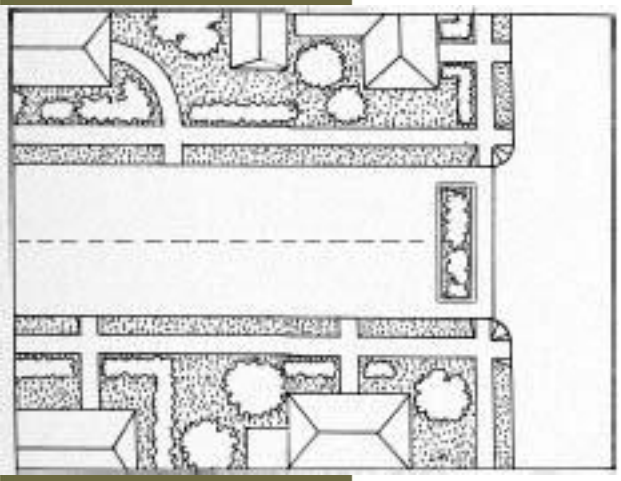
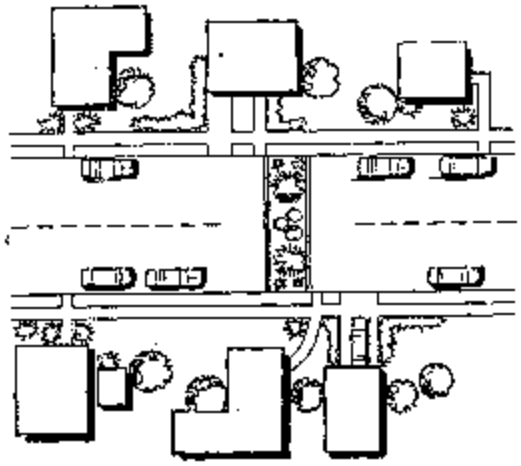
Full Closures

- Through traffic is completely prohibited beyond closure, however there is often pedestrian and bicycle access provided.





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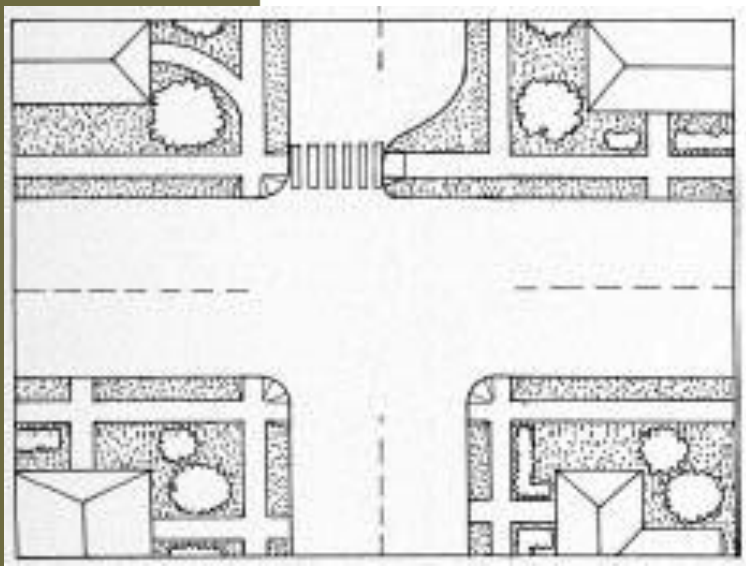
Half Closures

- Half closures block travel in one direction for a short distance on otherwise two-way streets. Pedestrian and bicycle access is usually provided.



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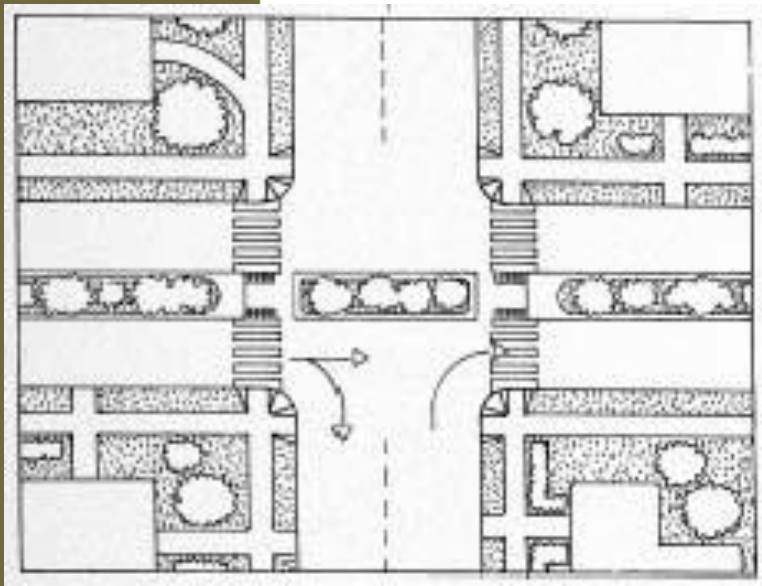
Median Barriers

- Raised islands in the centerline of a street through an intersection that block left hand turn movements on all approaches and through movements on the cross street approach.



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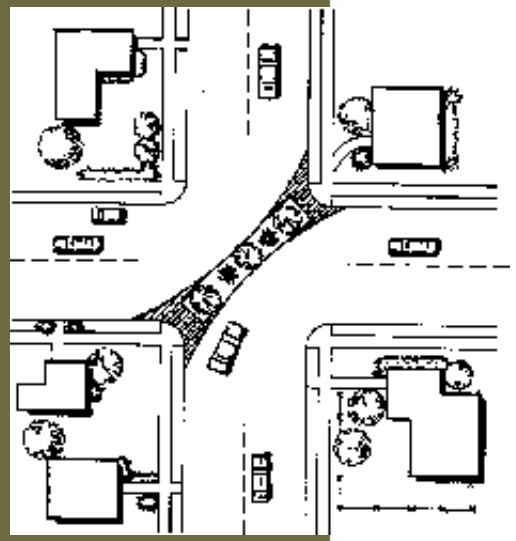
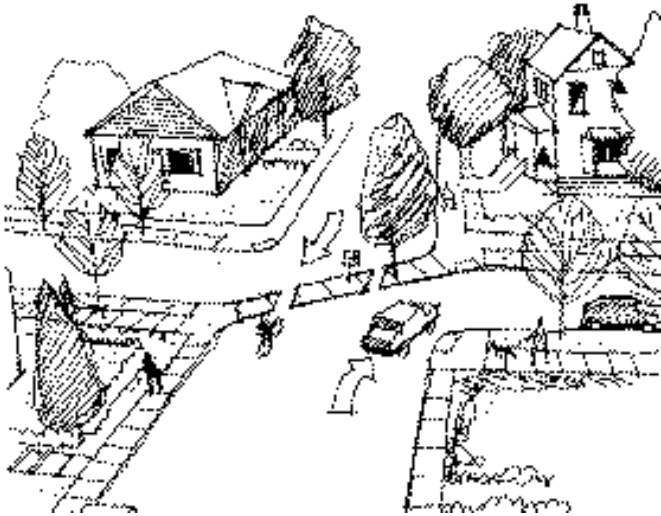
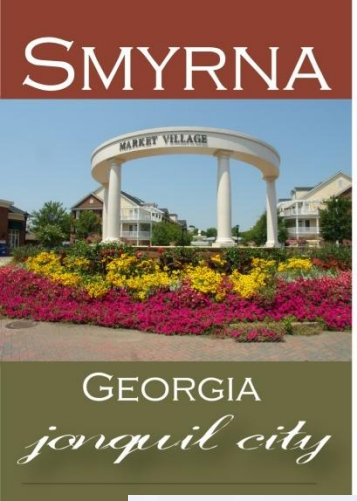
Diagonal Diversions

- A barrier constructed diagonally across an intersection, blocking through movements on all approaches.

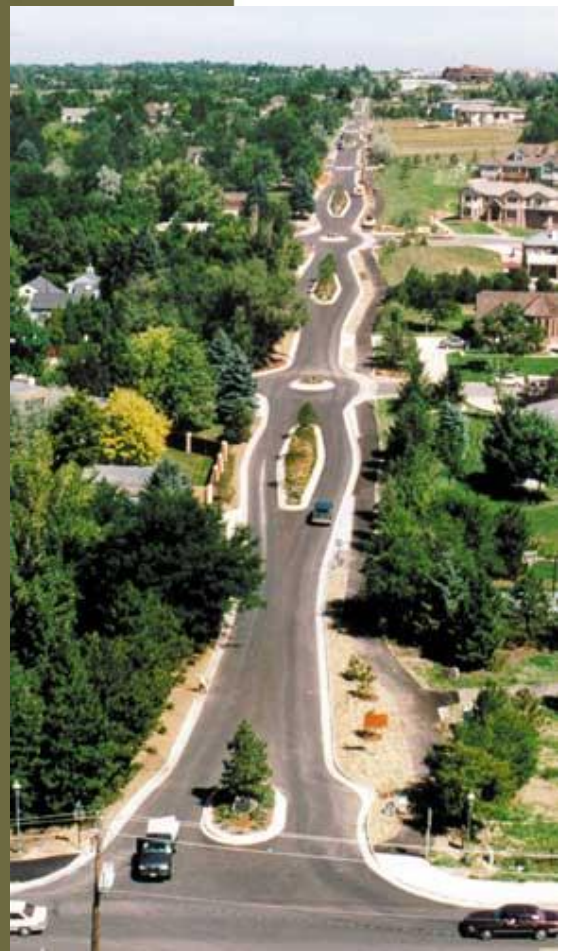






Speed Calming Measures

-Two Types: Horizontal Measures and Vertical Measures



Horizontal Measures

- Roundabouts
- Mini roundabouts/neighborhood traffic circles
- Chicanes
- Chokers and curb extensions
- Center island narrowings

Vertical Measures

- Textured pavement
- Raised Intersections
- Speed humps, raised crosswalks and speed tables

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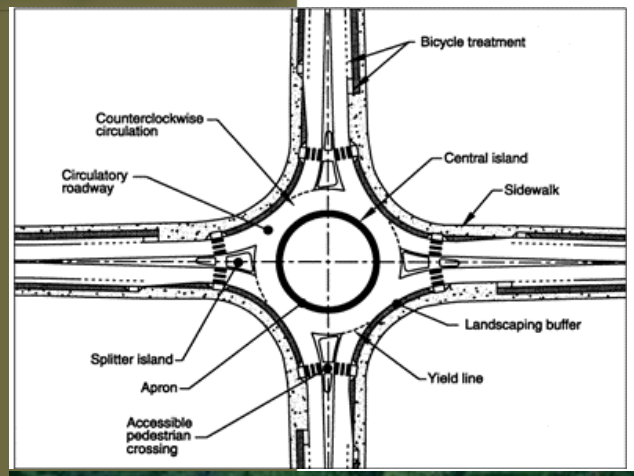
Roundabouts

- Engineered roundabouts manage intersecting traffic on higher volume streets around a circular center island. Vehicle approaches operate on a yield control to balance right-of-way, intersection delay and congestion.



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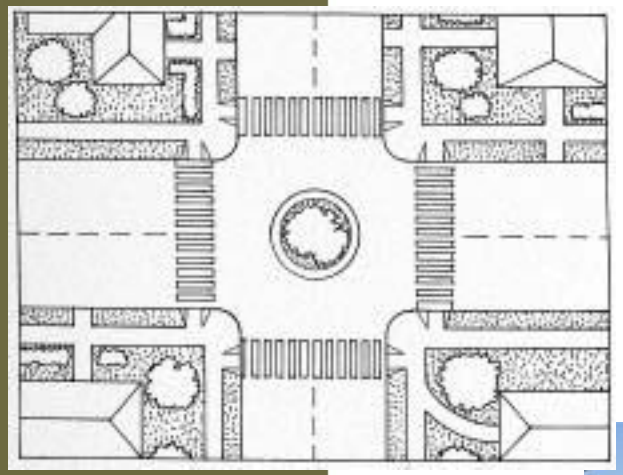
Mini roundabouts/Neighborhood traffic circles

- Similar to regular roundabouts, but smaller in scale and appropriate for lower volume roadways. Vehicle approaches are yield controlled and vehicles pass around the center island in a counter-clockwise direction.



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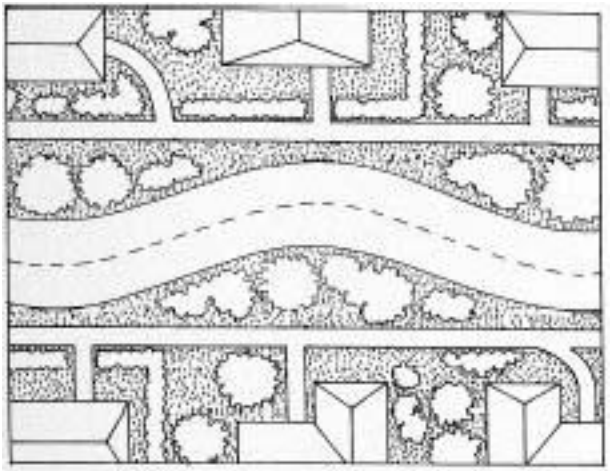
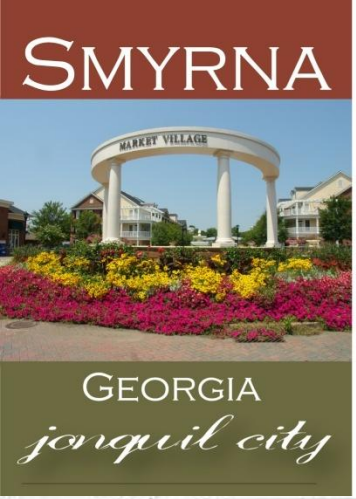
Chicanes

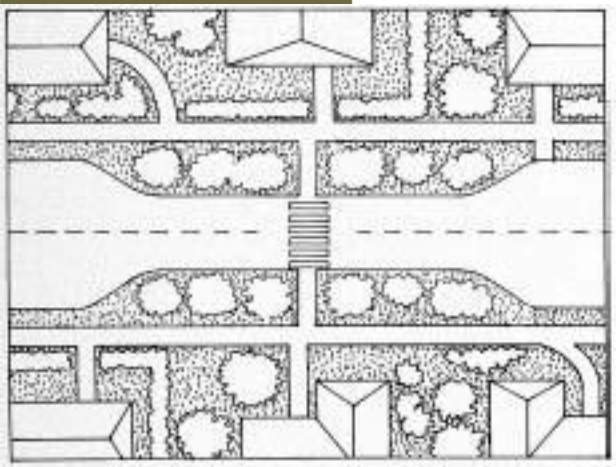
- Also called serpentines, chicanes are curb extension constructed away from intersections that shift traffic from side to side to create an S-shaped path of travel.

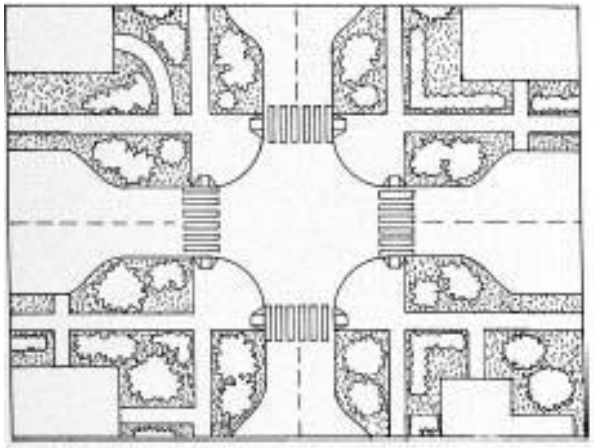




Chokers and Curb Extensions

- Constructed mid-block or at intersections, chokers and curb extensions narrow a street from both sides creating an "hourglass" curb alignment.





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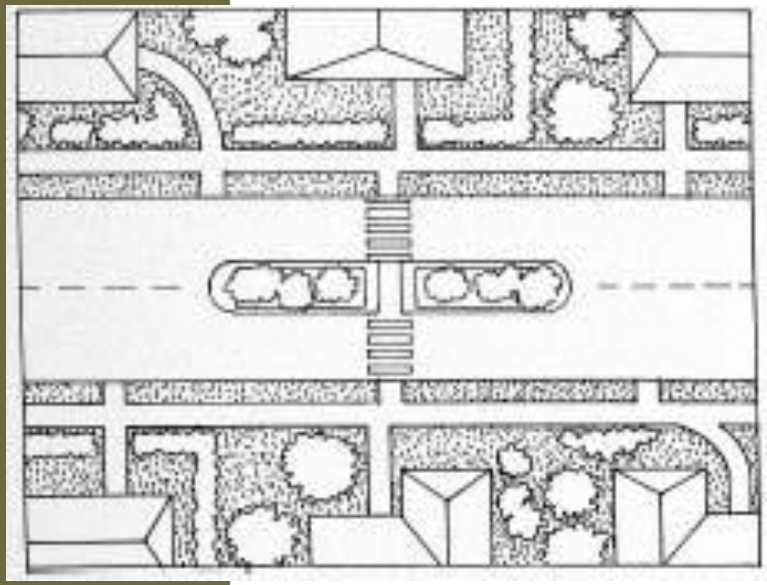
Center Island Narrowings

- Raised islands in the centerline of a street. They separate each travel lane but provide a narrowing effect in each direction.



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Textured Pavement

- Application of various textures or materials to roadway surface, often paired with a change in road surface color.

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Raised Intersections

- Raised flat areas covering an entire intersection, often with a textured surface on the center flat area. Approaches transition to the raised section with a ramp similar to a speed hump.

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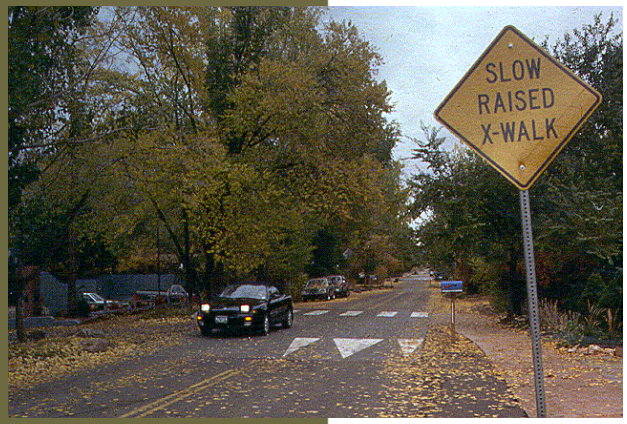
Speed humps, raised crosswalks and speed tables

- Raised vertical deflections that vary in total length. Typically placed mid-block, away from intersections.
- Speed humps may have a rounded or smaller flat top. Raised crosswalks have a flat top sized to accommodate a pedestrian crossing. Speed tables have a large distinct flat top portion, like a plateau.



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Additional benefits from traffic calming

- If desired, traffic calming measures can add landscaping, improve the appearance of a roadway as well as improve the quality of stormwater runoff.

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Where are the stop signs?

- According to the Manual on Uniform Traffic Control Devices, published by the Federal Highway Administration, “STOP signs should not be used for speed control.”
- Traffic studies have consistently shown that installing STOP signs only impacts vehicle speed in the immediate vicinity of the intersection, and requires diligent enforcement to ensure compliance.
- Traffic studies often show that after adding STOP signs, mid-block vehicle speeds often increase to speeds equal to or greater than what existed prior to the installation of the STOP sign.
- Addition of STOP signs to previously uncontrolled approaches increases carbon monoxide emissions by 30-40% and reduces fuel economy by approximately 30%.

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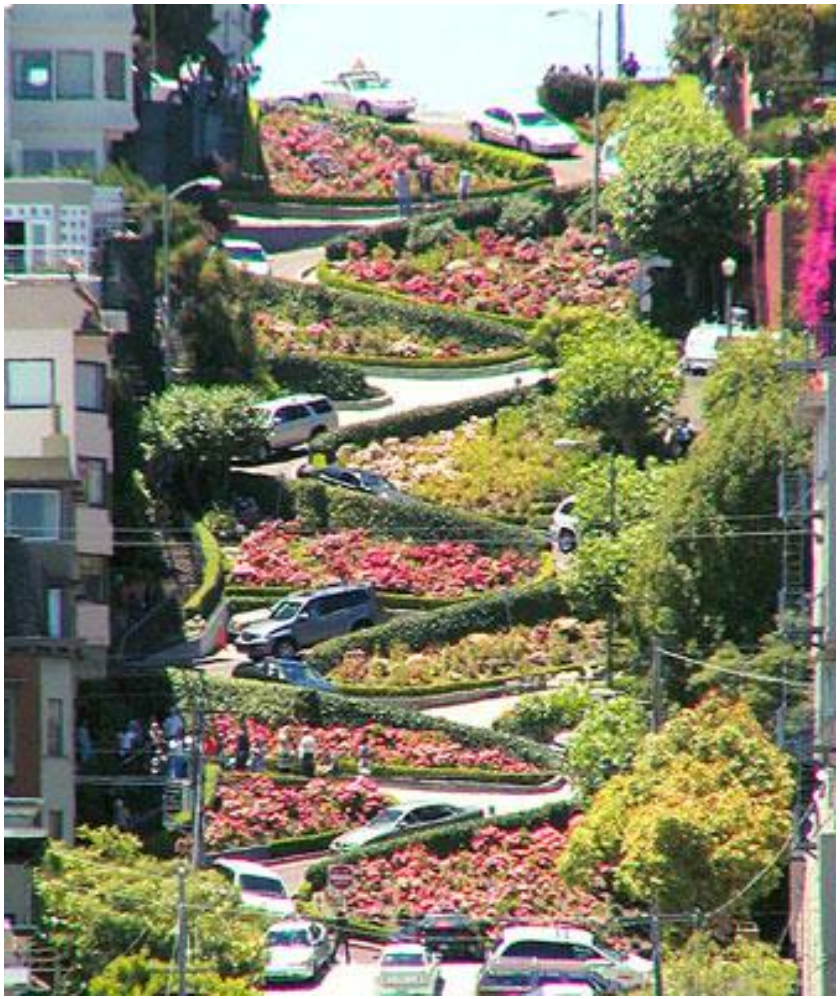
Questions and Discussion