

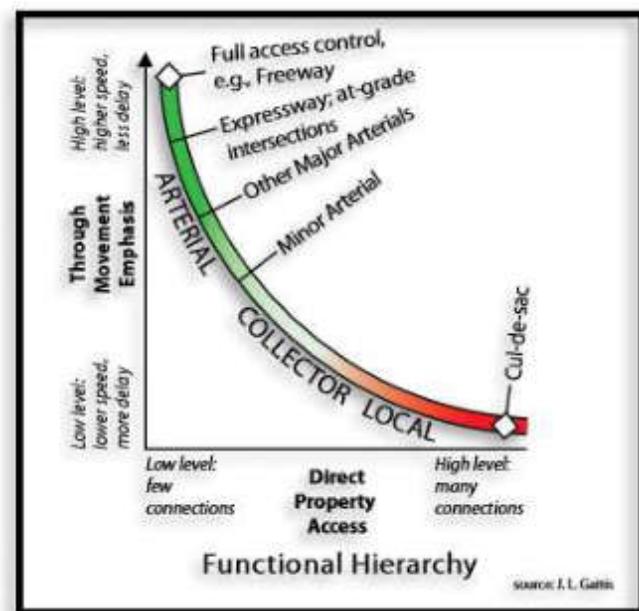


7 Access Management Techniques To Help Prevent Crashes And Congestion

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Access management is the practice of limiting driveway or street intersections on a road to avoid crashes and congestion.

Freeways sit on one end of the access management spectrum. Interchanges are spaced out to greatly limit access, which promotes faster, better flowing traffic. Local residential streets are at the other end of the spectrum, where closely packed driveways are expected. Between these two extremes are the various other road types, each with its own balance of access and mobility. Good access management policy for these roads can help improve the flow of traffic while still providing reasonable access to private property.



Every agency should develop their own access management policy so that developers, architects, and engineers know in advance what guidelines to use when creating new driveways and street connections.

Whereas effective access management can help create a great functioning road, poor access management can lead to traffic congestion. Multiple vehicle conflicts from uncoordinated turning movements create congestion and safety issues. This can reduce the number of clients a business gets, frustrate resident, impact the livability of the neighborhood, and slow deliveries.

The effect of access management on nonmotorized traffic is mixed. Any reduction in the number of driveways, or full access intersections, reduces the number of vehicle conflicts. However, that same access reduction can also lead to higher vehicle speeds, impacting the comfort, and increasing safety concerns for pedestrians and bicyclists.

Different features that support and create a safe environment for pedestrian, bicycle, and transit use, can be incorporated into any access management plan. Such design elements could include small driveway radii, having driveways ramp up to the sidewalk rather than the opposite, and orientating driveways at 90 degrees to sidewalks or crossings.

Taking a long-term view of accessibility to any property will help ensure future prosperity. Driveways close to a signalized intersection, for example, may seem fine initially, but future traffic growth may increase vehicle stacking at the signal and block the driveway. A traffic impact study is often the best method of determining the need for access management as well as what shape that management should take.

Access management techniques, such as installing raised medians or pedestrian crossings, should be included in any major reconstruction or roadway expansion study. A traffic study should also be done on sites with existing safety concerns or congestion to determine the cause and extent of the issue. That data can be examined to determine what access management techniques, if any, can be applied to improve operations and safety.

Access Management Benefits

Reduced congestion and better overall traffic flow.

- A lower potential for crashes as there are fewer places where cars cross paths with other cars, as well as with pedestrians.
- Added capacity, which can reduce the number of through lanes needed and, in turn, reduce the chance of crashes.
- Decreased travel times for commuters, truck drivers, and others.
- Easier movement between properties, improving the livability of adjacent neighborhoods.

Components of Access Management

- **Facility Hierarchy.** Determine where on the hierarchy of thoroughfares (principal arterial, arterial, collector, or local road) a road is, to help define its balance between mobility and access. Every agency should define these categories in their policies or comprehensive plan.
- **Intersection Spacing.** Establish the location of public intersections as well as which intersections will be controlled with traffic signals, all-way stops, or roundabouts.
- **Driveway Spacing.** Decide the location of driveways and how close to the public intersections they should be, as well as their proximity to other driveways.
- **Public and Private Intersection Type.** Determine which vehicle movements will be allowed at each intersection. Preventing some movements through $\frac{3}{4}$ -access (allowing left and right turns from the main road but only right turns from the driveway or side street) or right in/right out only access (allowing only right turns from the main road and from the driveway or side street) may be desirable at some locations.
- **Overall Development of Connectivity.** For access management to work, smaller properties must have some type of access to the remaining median openings and signals.

7 Access Management Techniques

1. Create connectivity

Between adjacent commercial properties to better serve businesses with reduced road access, such as a frontage or backage road connecting several properties.

2. Consolidate private driveways

Either through shared access or reduced access.

3. Provide a center median

To limit access, including retrofitting a two-way left turn lane.

4. Use exclusive turn lanes

To remove turning vehicles from the through lanes.

5. Create service roads

To better access various properties.

6. Limit street and driveway connections

To right in/right out, or 3/4 accesses.

7. Use roundabouts

To allow for easier U-turns compared to traditional intersections.

Access Management Resources

- [Institute of Transportation Engineers Access Management](https://www.ite.org/pub/?id=e26c5400-2354-d714-51b2-432d8f3da94d)
<https://www.ite.org/pub/?id=e26c5400-2354-d714-51b2-432d8f3da94d>
- [Federal Highway Administration Access Management](https://ops.fhwa.dot.gov/access_mgmt/)
https://ops.fhwa.dot.gov/access_mgmt/
- [Federal Highway Administration Proven Safety Countermeasures](https://safety.fhwa.dot.gov/provencountermeasures/corridor_access_mgmt/)
https://safety.fhwa.dot.gov/provencountermeasures/corridor_access_mgmt/
- [Transportation Research Board Committee on Access Management](http://www.accessmanagement.info)
<http://www.accessmanagement.info>
- [Minnesota Department of Transportation \(MnDOT\) Access Management](http://www.dot.state.mn.us/accessmanagement/index.html)
<http://www.dot.state.mn.us/accessmanagement/index.html>