



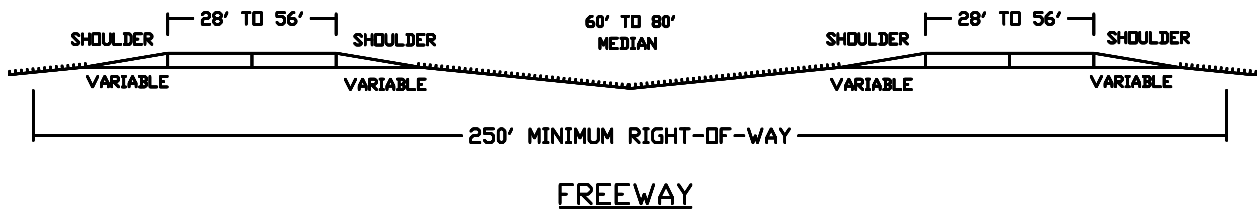
Minimum Design Standards for Streets by Classification

The following classifications are minimum design standards that meet the goals of Metropolitan Planning Organization (MPO). The MPO encompasses nine separate jurisdictions and counts MoDOT as one of its vital planning partners. Each of these entities oversees the construction and maintenance of roadways. For that reason, each organization/jurisdiction has separate design standards, which may be greater than those listed here. Often site conditions such as topography influence the amount of right of way necessary. Therefore, these standards are to be considered the minimum and are subject to be increased by the individual agency or jurisdiction with control over the specific roadway. These standards are intended for new construction or retrofitting of existing roadways. There are existing roadways that do not meet these standards and will not meet these standards until retrofitted to do so. In addition, individual projects may not fulfill these standards but may be an incremental step toward these standards. Individual projects may constitute a stage in reaching the ultimate construction of the roadway to these standards. The right-of-way width stated in these standards should be obtained, and all projects should be designed to fit into the ultimate construction of the roadway to the standards in the following pages. In the event that a roadway project has not been constructed, but it has been designed and right-of-way has been purchased pursuant to previous standards, the project will not be required to meet these standards.

These standards are the desired minimums. There may be cases, which require deviation from these standards due to environmental constraints or identified constraints from the built environment involving historic or cultural resources. In cases where it is not feasible for the ultimate construction of a roadway to meet these standards, a deviation may be approved. A specially appointed subcommittee of the Technical Committee will recommend approval or denial to the Board of Directors for actions. Each project stands on its own merit and should not be looked at as setting a precedent for other projects. Projects which are not funded by federal or state funds will not be required to obtain approval for deviation from these standards.



Freeways: Full access control with continuous traffic flow separated in grade from other facilities. Intended for high-volume, high-speed traffic movement between cities and across the metropolitan area. No direct access is provided to adjacent land.

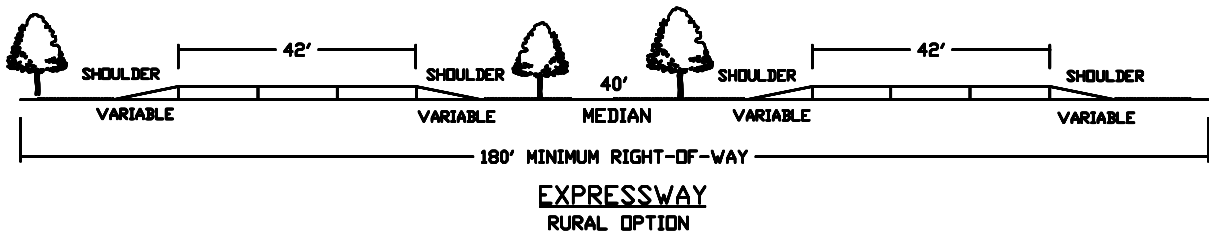
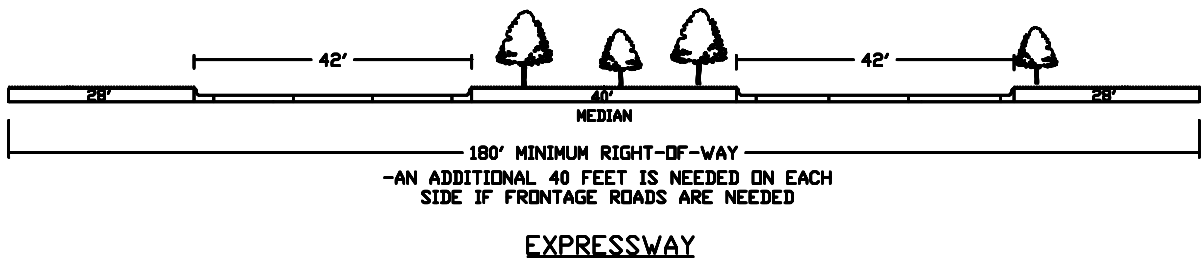


*Medians and Shoulders provide options for landscaping where appropriate

Minimum Right-of-Way:	250 feet minimum
Number of Lanes:	4 to 8
Turning Lanes:	N/A
Lane Width:	12 feet per lane
Median:	50-80 feet
Design Service Volume:	20,000 – 100,000
Design Speed:	55-70 mph
Intersection:	N/A
Drainage:	Variable. 10-12 foot shoulders minimum
On-street Parking:	Not Permitted
Greenspace Width:	N/A
Pedestrian Provisions:	Pedestrians Prohibited (No Sidewalks Required)
Bicycle Provisions	Bicycles not recommended
Interchange Spacing:	1-3 miles
Driveway Spacing	None permitted
Traffic Flow/ Access Priority	99/1
Facility Spacing:	4-8 miles
Trip Length:	Between Cities and across Metropolitan Area (2 + miles)
Transit Provisions:	No Stops, Express Routes Only



Expressways: Partial access control and high priority for traffic flow with at-grade signalized intersections for major streets. Intended for high-volume, moderate-to-high speed traffic movement across the metropolitan area with minimal access to adjacent land. May be designed as a highway with separation from adjacent land uses or as a street with controlled access to adjacent land uses. Service access should be provided from lower order streets.



*Medians and Shoulders provide options for landscaping where appropriate

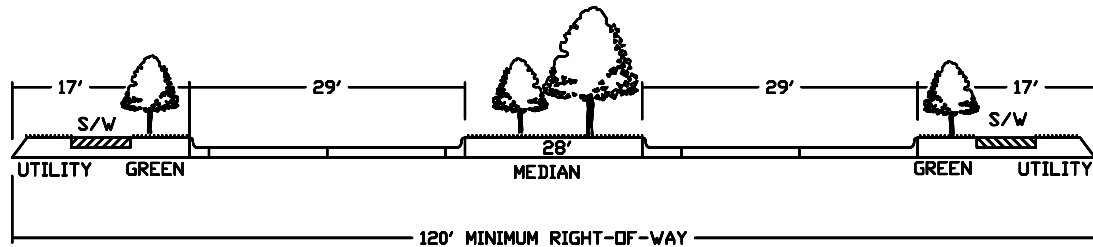
Minimum Right-of-Way:	180 feet, plus 40 feet each side if frontage roads are needed.
Number of Lanes:	4-6
Lane Width:	12 feet (plus shoulders in rural areas only)
Median:	40 foot landscaped
Design Service Volume:	20,000 – 50,000
Design Speed:	40- 55 mph
Turning Lanes:	At Intersections Only
Intersection:	Left and Right Turn Lanes Desired.
Drainage:	Curb and Gutter or Shoulders (rural areas)
On-street Parking:	Not Permitted
Pedestrian Provisions:	Sidewalks required on Frontage Roads.
Transit Provisions:	Turnouts at Major Generators



Median Breaks:	Allowed at signalized intersections only.
Bicycle Provisions:	Bicycle lane provided on Frontage Road
Traffic Flow/ Access Priority	90/10
Facility Spacing:	3-5 miles
Trip Length:	Across metropolitan area and between major activity centers. (2 plus miles)
<i>Access:</i>	
Full Access Intersection Spacing:	½ mile
Non-Signalized Intersection/ Driveway Spacing:	660 feet (Right-In/ Right-Out only)
Residential Driveway Spacing:	No residential drives permitted



Boulevard: Partial access control and high priority for traffic flow with at-grade signalized intersections for major streets. Intended for high-volume moderate-to-high speed traffic movement across the metropolitan area with minimal access to adjacent land. Designed with a landscaped median which includes trees as well as greenspace and sidewalks on both sides to accommodate pedestrians.



BOULEVARD

- *Greenspace and Median provide options for landscaping where appropriate
- *Utility and Greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks

Minimum Right-of-Way:	120 plus intersection triangles
Lane Width:	12 feet lanes
Number of Lanes:	4
Median:	28 foot (landscaping desired) Design
Minimum Area Behind Curb:	17 feet
	Used for sidewalks, utilities, and Landscaping (where appropriate)
Service Volume:	10,000 – 40,000
Design Speed:	35- 45 mph
Turning Lanes:	At Intersections Only
Intersection:	Left and Right Turn Lanes Desired.
Drainage:	Curb and Gutter
On-street Parking:	Not Permitted
Pedestrian Provisions:	4-6 foot sidewalks (minimum) on both sides
Bicycle Provisions:	Bicycle facilities provided according to adopted bicycle plan
Traffic Flow/ Access Priority	80/20
Facility Spacing:	3-5 miles
Trip Length:	Across metropolitan area and between major activity centers. (2 plus miles)
Transit Provisions:	Turnouts at Major Generators
Shoulders:	If shoulders are used they should be between 6 and 10 feet wide.



Access:

Full Access Intersection Spacing:

1/4 mile

Directional Median Breaks:

660 feet

Driveway Spacing:

330 feet (Right-In/ Right-Out only)

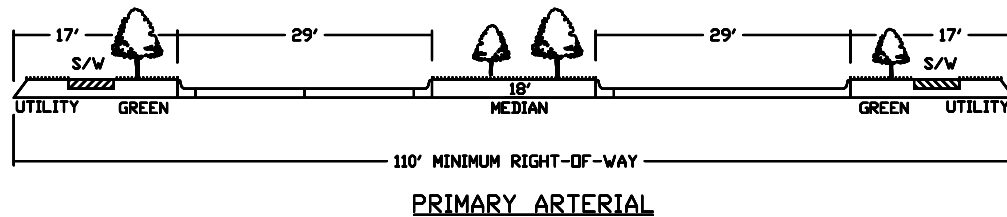
Allowed only if internal circulation, cross access and minimum driveway radii and grade are provided.

Residential Driveway Spacing:

No residential drives permitted



Primary Arterial: Provides for high- moderate- volume, moderate-speed traffic movement between and through major activity centers. Access to abutting property is subordinate to traffic flow and is subject necessary control of entrances and exits.



- *Greenspace and Median provide options for landscaping where appropriate
- *Utility and Greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks

Minimum Right-of-Way:	110 feet plus intersection triangles
Number of Lanes:	4-6
Lane Width:	12 feet
Median:	18 feet
Minimum Area behind curb:	17 feet
	Used for sidewalks, utilities, and Landscaping (where appropriate)
Design Service Volume:	10,000-30,000
Design Speed:	35-45 mph
Turning Lanes:	At Intersections Only
Intersection:	Left and right turn lanes desired
Drainage:	Curb and Gutter (shoulders permitted in rural areas)
On-street Parking:	Not Permitted
Pedestrian Provisions:	4-5 foot (minimum) sidewalks both sides
Bicycle Provisions:	Bicycle facilities provided according to adopted bicycle plan
Traffic Flow/ Access Priority	70/30
Facility Spacing:	1 – 2 miles
Trip Length:	Between and through major activity centers (2-8 miles)
Transit Provisions:	Scheduled stops every ¼ mile (where transit service is provided)
Shoulders:	If shoulders are used they should be between 6 and 10 feet wide.

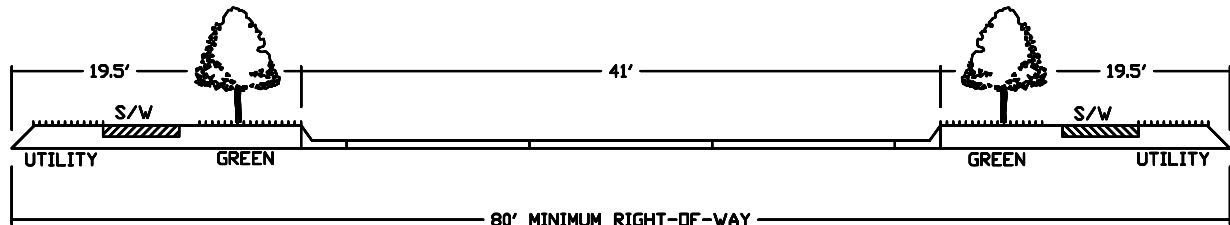


Access:

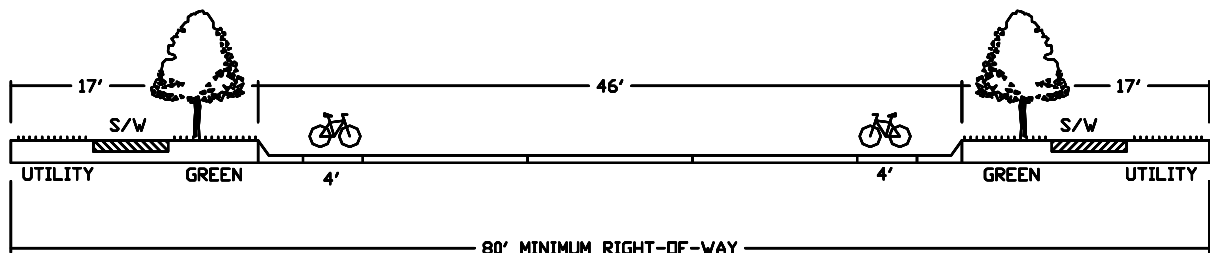
Full Access Intersection Spacing:	1/4 mile
Directional Median Break Spacing:	660 feet
Driveway Spacing:	330 feet center to center (Right-In/ Right-Out only) Allowed only if internal circulation, cross access and minimum driveway radii and grade are provided.
Residential Driveway Spacing:	No residential drives permitted



Secondary Arterial: Augments and feeds the primary arterial system and is intended for moderate- volume moderate-speed traffic movement. Access to abutting property is partially controlled.



SECONDARY ARTERIAL



SECONDARY ARTERIAL
BICYCLE ROUTE

- *Greenspace and Median provide options for landscaping where appropriate
- *Utility and Greenspace areas may switch locations if needed.
- *Utilities may be placed under sidewalks

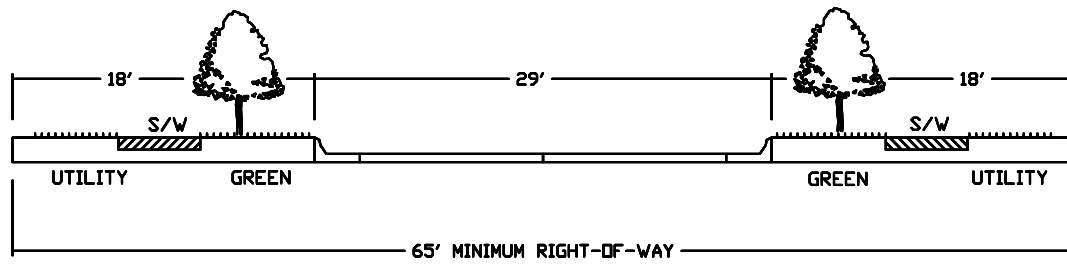
Minimum Right-of-Way:	80 feet plus intersection triangles
Number of Lanes:	2 to 3
Lane Width:	12 feet (Bicycle Routes: 11 foot vehicle and 4 foot bicycle lanes)
Median:	None required
Minimum Area behind curb:	19.5 feet (17 feet when bicycle lanes are provided)
	Used for sidewalks, utilities, and Landscaping (where appropriate)
Design Service Volume:	6,000 to 20,000 vehicles per day
Design Speed:	30-35 mph
Intersection:	4 lanes
Turning Lanes:	Left turn lane
Drainage:	Curb and gutter (shoulders permitted in rural areas)
On-street Parking:	None permitted



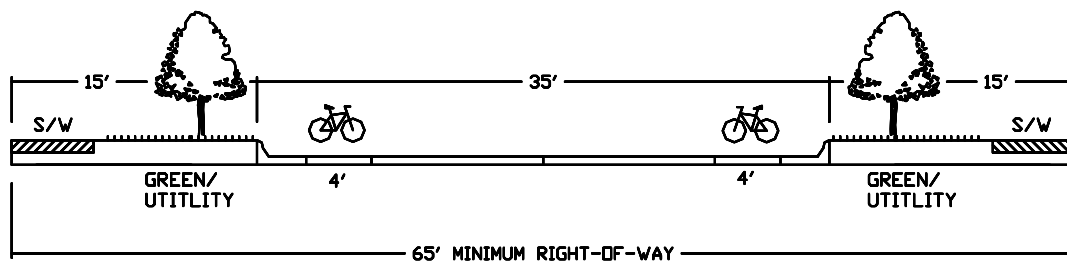
Pedestrian Provisions:	4-5 foot (minimum) sidewalks on both sides
Bicycle Provisions:	Bicycle facilities provided in accordance with adopted bicycle plan
Traffic Flow/ Access Priority	60/40
Facility Spacing:	½ to 1 mile
Trip Length:	Between and within activity centers (1 to 4 miles)
Transit Provisions:	Scheduled stops every ¼ mile (where transit service is provided).
Shoulders:	If shoulders are used they should be between 6 and 10 feet wide.
<i>Access:</i>	
Full Access Intersection Spacing:	600 feet
Commercial Driveway Spacing:	210 feet center to center. Allowed only if internal circulation, cross access and minimum driveway radii and grade are provided.
Residential Driveways:	None permitted



Collector : Collects and distributes traffic between arterial streets and local streets. Intended for short length trips while also providing access to abutting properties. Design of collector streets varies depending on the character and intensity of traffic generated by adjacent land development.



COLLECTOR



**COLLECTOR
BICYCLE ROUTE**

*Greenspace and Median provide options for landscaping where appropriate
 *Utilities may be placed under sidewalks

Minimum Right-of-Way:	65 feet plus intersection triangles
Number of Lanes:	2
Lane Width:	12 feet (Bicycle Routes: 11 foot vehicle and 4 foot bicycle lanes)
Median:	None
Minimum Area behind curb:	18 feet (15 feet when bicycle lanes are provided)
	Used for sidewalks, utilities, and Landscaping (where appropriate)
Design Service Volume:	1,500 to 8,000 vehicles per day
Design Speed:	30 mph
Turning Lanes:	Left turn lane when needed
Intersection:	Up to 4 lanes
Drainage:	Curb and Gutter (shoulders permitted in rural areas)



Long Range Transportation Plan: Roadways

On-street Parking:	None Permitted
Pedestrian Provisions:	4-5 foot (minimum) sidewalks on both sides
Bicycle Provisions:	Bicycle facilities provided according to adopted bicycle plan
Traffic Flow/ Access Priority	30/70
Facility Spacing:	¼ to ½ mile
Trip Length:	Local Street to Arterial Street (½ to 2 miles)
Transit Provisions:	Scheduled regular and Paratransit service
Shoulders:	If shoulders are used they should be between 6 and 10 feet wide.
 <i>Access:</i>	
Full Access Intersection Spacing:	660 feet
Commercial Driveway Spacing:	160 feet center to center
Residential Driveways:	Prohibited



Residential Collector : Collects and distributes traffic between arterial streets and local residential streets. Intended for short length trips while also providing access to abutting properties. Design of residential collector streets varies depending on the character and intensity of traffic generated by adjacent land development. Parking may be allowed on the street and bicycle lanes may be provided. Each local jurisdiction should develop design standards for residential collectors.

Local: Provides direct access to abutting property. Intended for low-speed low-volume traffic movement and for short length trips. Design of local streets varies depending on the character and intensity of traffic generated by adjacent land development and the design standards developed by each local jurisdiction.

Downtown Local: Provides direct access to abutting property. Intended for low-speed low-volume traffic movement and for short length trips. Design of downtown local streets varies depending on the character and intensity of traffic generated by adjacent land development as well as the existing right of way and significant buildings and on the design standards developed by each local jurisdiction.

Residential: Provides direct access to abutting property. Intended for low-speed low-volume traffic movement and for short length trips. Typically utilized for volumes of 300 vehicles per day or less. Design of residential streets varies depending on the standards developed by each local jurisdiction.