

Northwest Sector Streets Policy

[draft 11.6.15]

I. Purpose

The Northwest Sector of McKinney offers some of the most beautiful natural features in North Texas, such as rolling hills, creeks and dense groves of trees. These features should be respected, leveraged and integrated into neighborhoods developed in the future. Approved by City Council in February 2015 by Resolution No. 2015-02-022(R), the vision for the Northwest Sector identifies a number of principles and priorities for the area that address how future growth and development should occur over time within the existing natural environment.

Specifically, the Northwest Sector Study Phase I Report outlines three recommendations for improving transportation, access and mobility within the Sector. They state as follows:

1. More refined planning and management of the collector roadway network to ensure that a well-connected series of collector roadways exists within the one-mile arterial grid. Collector streets should offer easy access to and from various neighborhoods and non-residential developments in order to reduce the need to access arterial roadways.
2. Community-scaled roadways should be planned to maximize specific characters or amenities within the Northwest Sector. This could include, but not be limited to rural arterial classifications, a hierarchy of collector street types, single loaded roadways (roadways with development on one side and natural areas on the other), and refinements to road placement to maximize natural features.
3. Utilize sound street design principles (context-sensitive design, complete streets) to establish a roadway network that moves vehicular traffic with a high-quality level of service while offering safe mobility opportunities for pedestrians and bicyclists.

The Northwest Sector Streets Policy (Streets Policy) is intended to implement the vision of the Northwest Sector of McKinney, primarily as it relates to the role of the transportation network. ***The purpose of this policy is to address streets at the collector and local level in order to better influence the structural fabric (i.e., street network) that creates great places and helps newly developed areas sustain value over time.*** As such, this Policy should be used to guide the City in updates to relevant ordinances, design manuals and other regulations. Private developers should use this Policy and the principles set forth within it to better understand the desired goals of the City for the Northwest Sector of McKinney.

The foundation of this policy is a fundamental recognition that local classification streets should be differentiated by their purpose – *link* or *place*. Streets that are intentionally designed as *places* or as *links* enable a better integration of a coherent street network into a transportation system

that is attuned to the desired development patterns of a given area and can move traffic both locally and regionally with options for a person's preferred mode of transportation. In other words, recognizing the difference between streets that are place-focused and those that are link-focused can result in a more intentional creation of a network of streets, rather than a series of seemingly disconnected roadways.

II. Approach

The Northwest Sector Streets Policy should provide decision makers with the necessary tool for making informed decisions about the design and function of proposed collector and local streets in McKinney. As such, this policy outlines the following approach:

1. **Northwest Sector Street Network Criteria.** This policy establishes a clear set of priorities that should guide how local streets are planned, designed and constructed.
2. **Street Types.** Standard cross sections should be established to allow necessary flexibility in the design of streets so that those streets can achieve the goals of this Policy and be tailored to specific land uses and development patterns.
3. **Fundamental Connectivity Framework.** The function of streets (i.e. link or place) and their relationships to each other both within a neighborhood and to other areas should be fundamentally described for proposed development projects.

Northwest Sector Street Network Criteria

The following priorities and outcomes shall guide the development of streets at the local and collector level:

- Local and collector streets should serve principally to provide neighborhood connections within and between subdivisions.
- Neighborhoods shall aim to be connected to one another through a woven street system that offers multiple external access points.
- The street network created by local and collector streets should encourage a mix of premium lot types, including cul-de-sac lots, lots fronting to neighborhood amenities or lots backing to open space. Cul-de-sacs in particular should be used when the presence of physical barriers exist that limit the ability to complete a connection.
- Walking and cycling should be a convenient option of movement within the network in terms of safety and efficiency.

- Local streets should provide access to residential property, small commercial areas and community amenities such as schools, parks and churches.
- Collector streets should provide access from local streets to arterials and to commercial areas.
- Place-focused streets should incorporate frequent intersections and short block lengths to make travel routes more efficient and improve walkability.
- The street network created by local and collector streets should balance efficient travel with appropriate speeds.
- Connections should be assigned within a network in conjunction with an overall connectivity strategy, rather than just to link *ad hoc* elements of subdivisions.
- Bicycle accommodations should be provided in accordance with the On-Street Bicycle Master Plan.
- Streets should follow natural features such as creekbeds and topography, as appropriate.
- Linkages between streets, alleys and trails should be purposeful and integrated into the transportation network.
- Streets should preserve or create viewsheds to natural features, amenities, landmark buildings or other important features.

Street Types

Using existing McKinney Street Classifications (from the 2010 Street Design Manual), a more nuanced set of street types should be introduced within the local street classifications. These new street types should still generally function as collector or local streets, but should be better defined by their functional purpose. Nomenclature for these streets should instead be described as “Neighborhood Street Types” (as opposed to Collector) and “Local Street Types” (as opposed to Residential).

Current Street Classifications

| Classification | Street Type | Designation |
|-------------------|---------------------------------|-------------|
| Arterial Roadways | Principal Arterial | P6D |
| | Major Arterial | M6D |
| | Greenway Arterial | G4D |
| | Minor Arterial (divided) | M4D |
| | Minor Arterial (undivided) | M5U |
| | Minor Arterial (undivided) | M4U |
| | Minor Arterial / Frontage Roads | M3U |
| Local Streets | Collector | C2U |
| | Residential | R2U |
| Alleys | Residential Alley | RA |

Recommended Street Classifications

| Classification | Street Type | Designation |
|----------------------|---------------------------------|-------------|
| Arterial Roadways | Principal Arterial | P6D |
| | Major Arterial | M6D |
| | Greenway Arterial | G4D |
| | Minor Arterial (divided) | M4D |
| | Minor Arterial (undivided) | M5U |
| | Minor Arterial (undivided) | M4U |
| | Minor Arterial / Frontage Roads | M3U |
| Neighborhood Streets | Neighborhood Link (Major) | NL4 |
| | Neighborhood Link (Minor) | NL2 |
| | Neighborhood Place | NP |
| Local Streets | Local Link | LL |
| | Local Place | LP |
| | Rural/Estate | RE |
| Alleys | Residential Alleys | RA |

Similar to current collector streets, the principal purpose of Neighborhood Streets should still be to collect and distribute traffic in order to provide access to and through a neighborhood as well as neighborhood amenities and to arterial roadways. Similar to current residential streets, the principal purpose of Local Streets should still be to provide a higher level of residential and small commercial property access, with narrower traffic lanes and slower speeds. However, standard cross sections for Neighborhood and Local Streets should be established to allow necessary flexibility in the design of each street so that they can achieve the goals of this Policy and be contextually appropriate for the land uses and development patterns that they serve.

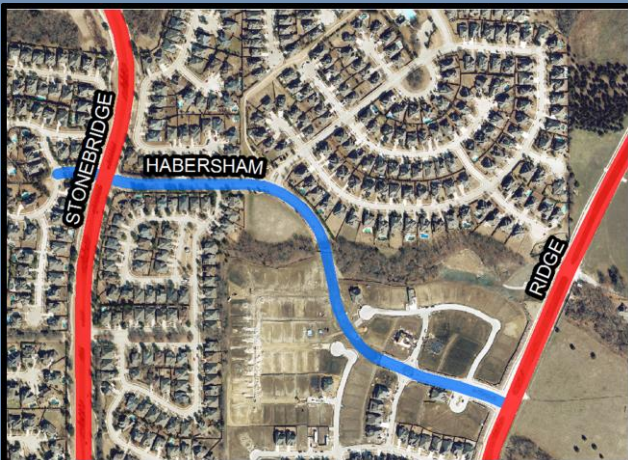
More detail about the new street types is as follows:

Neighborhood Link – Major



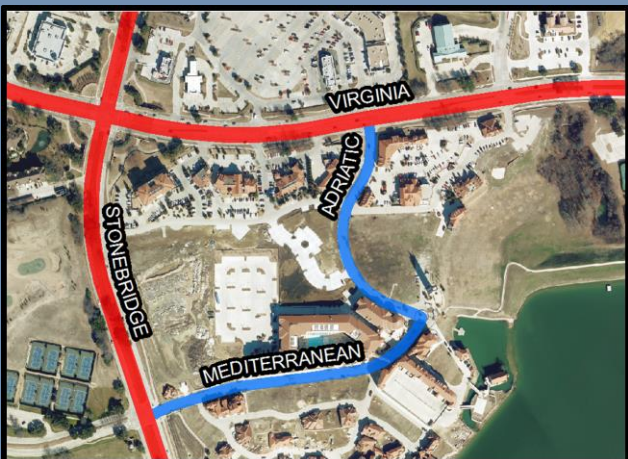
Primarily provides access to and through a neighborhood or between neighborhoods from arterials. This street typically has four lanes and could act as a 'grand boulevard,' connecting arterials within a development or as an entry feature. This street is similar to the City's existing M4U or M4D arterial roadway, such as Glen Oaks Drive.

Neighborhood Link – Minor



Primarily provides connectivity to and through a neighborhood or between neighborhoods from arterials. This roadway is typically 2 lanes and can also be a good connector to arterials within a development. An example of this street type in McKinney is Habersham Way.

Neighborhood Place



This street is typically 2 lanes and provides access while also creating a context for adjacent destination development such as mixed use centers or more dense residential areas. This would be ideal for a mixed use center with retail, commercial and urban residential development adjacent.

Local Link



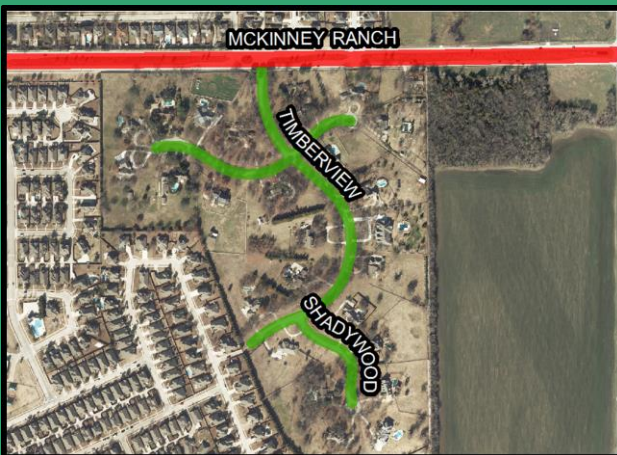
Primarily provides local access within a neighborhood, providing connections between neighborhoods or facilitating access from a neighborhood to a significant public space destination. This roadway would be ideal as a neighborhood road that connects to local destinations such as schools, parks, churches or amenity centers. Some existing streets in McKinney that serve as Local Links are Wolford Street and Dowell Street.

Local Place



Primarily provides fine-grained access for all modes of transportation. This street type would be ideal for residential neighborhood development and small commercial streets. Most residential streets in McKinney are representative of the Local Place street type.

Local Rural / Estate



Provides access to estate lots within a rural context. Drainage would be handled through swale systems and sidewalks will be optional on this street.

Northwest Sector Street Types

| Parkway | | | Travel Way | | | | |
|----------------------|---------------------------|---|---------------------------------|-------------------|--------------------------------|---|---------------|
| Street Type | Furnishing Zone | Pedestrian Zone | Number of Lanes | On-Street Parking | Bicycle Accomodations* | Median | |
| Neighborhood Streets | Neighborhood Link (Major) | Landscaping required, with streetscape features** optional | Sidewalk or trail on one side | 4 | Not Permitted | Required in accordance with the On-Street Bicycle Master Plan | Permitted |
| | Neighborhood Link (Minor) | Landscaping required, with streetscape features** optional | Sidewalk or trail on one side | 2 | Not Permitted | Required in accordance with the On-Street Bicycle Master Plan | Permitted |
| | Neighborhood Place | Landscaping or hardscaping with streetscape features** required | Sidewalk or trail on both sides | 2 | Permitted in designated spaces | Required in accordance with the On-Street Bicycle Master Plan | Permitted |
| Local Streets | Local Link | Landscaping required, with streetscape features** optional | Sidewalk or trail on one side | 2 | Permitted in designated spaces | N/A | Permitted |
| | Local Place | Landscaping or hardscaping with streetscape features** required | Sidewalk on both sides | 2-way yield | Permitted | N/A | Not Permitted |
| | Rural / Estate | Drainage swale | None required | 2-way yield | Permitted | N/A | Not Permitted |

*Typical accommodation includes signage and/or sharrow on at least on Neighborhood Street in a given development.

**Streetscape features include amenities such as trees, street lights and benches

Fundamental Connectivity Framework

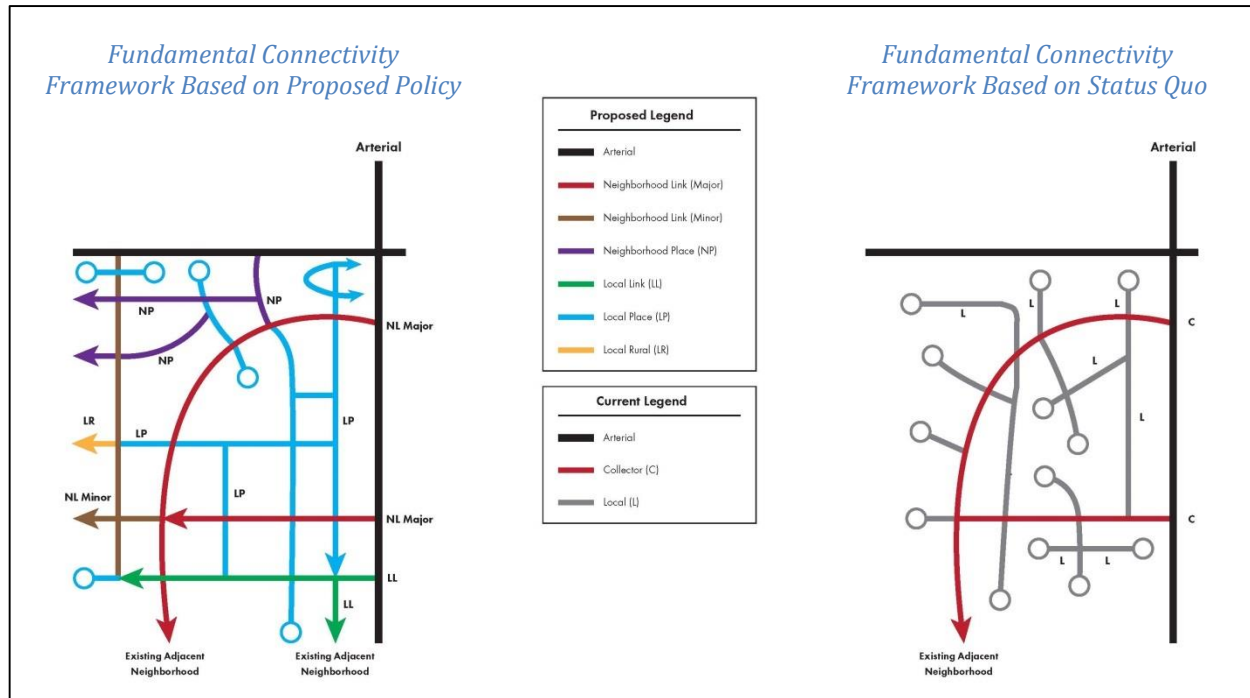
While the design of a street itself can contribute to achieving the goals of the overall Network Criteria, the location of these streets within a development are equally important. As such, a fundamental connectivity framework should be understood/reviewed for each individual development project. Its purpose should be to establish the basic elements of a neighborhood in terms of access points as well as those locations within the neighborhood that would be aligned with link-focused streets or place-focused streets.

However, this Policy recognizes that the ability to establish a detailed fundamental connectivity framework may be largely dependent on the size and proposed use of a specific project.

The general elements that should be reviewed for a projects fundamental connectivity framework should include:

1. A clear illustration of the proposed street network, including the designation of functional purpose of each street as Neighborhood Link (Major), Neighborhood Link (Minor), Neighborhood Place, Local Link, Local Place or Local Rural / Estate.
2. Connections to:
 - a. Arterial roadways and key perimeter roadways.
 - b. Adjacent neighborhoods or areas of dense development (existing or planned).
 - c. Significant destination opens spaces/parks, as applicable.
 - d. Natural assets such as parks and natural preserves.
 - e. Neighborhood-scale local amenities and destinations.
3. Proposed street cross sections, including travel way and parkway elements. Design for proposed cross sections should contribute to the desired environment of the proposed development in terms of the necessary pedestrian amenities, on-street parking, frequency of intersections, likely future opportunities for transit, etc.

The diagram below demonstrates how a more nuanced set of street types paired with network criteria can more purposefully result in an improved fundamental connectivity framework (a more well-connected neighborhood), compared to the *ad hoc* application of two simple street types (local and collector streets) in a project to simply move traffic.



Next Steps

In order to fully implement this policy, the following should be undertaken:

1. **Modify the City's Street Design Manual and Subdivision Ordinance.**
The City should update and revise the Street Design Manual as well as the Subdivision Ordinance to incorporate the elements of this Policy.
2. **Calibrate the Zoning Ordinance to reflect standards that achieve the goals of this policy.** This will enable predictable outcomes of both neighborhood character and traffic throughout the development process, from planning and zoning through subdivision and permitting. Modifications to the Zoning Ordinance should focus on the relationship between the streets and their development pattern context.
3. **Establish a development review process that accounts for the street network as it relates to the context of particular development types.** This will ensure that new development meets the network and street design goals of the City.

Benefits

This Streets Policy involves more than just technical elements, which often themselves do not add up to an intended outcome. Rather, the Northwest Sector Streets Policy includes a holistic approach and guidance for growth outcomes and, correspondingly, direction for all departments responsible for those outcomes including life-safety, engineering, planning, parks, public works, finance, etc. The resulting benefits from this approach can include:

1. **Make clear the role of a street as either primarily place-focused or primarily a commuter connection (i.e., a link).** When streets within a community are designed *ad hoc* based on each particular project and within a limited design family, they tend to serve an ambiguous function and sometimes fail to meet the desired goal of safety, context and playing a meaningful role as part of a balanced modal system. The graphic below shows the difference between streets that are intentionally designed as *places* or to serve as *links*. This distinction enables the integration of a coherent street network into a transportation system that is calibrated to the desired development patterns of a given area and, at the same time, is designed to move traffic both locally and regionally with options for a person's preferred mode of transportation. It is important to note that while the “place” image in the graphic is representative of an urban space, the concept of a sense of place is applicable to all development types, including suburban and even rural.



2. **Encourage high-quality places through a diversity of place types.** A better pattern of streets can lead to higher-quality places. By

developing the appropriate transportation framework and merging that framework with the policy for these high-quality places, a diversity of land uses, development patterns and transportation modes (i.e., walking, transit, biking and driving) can be intentionally related so that the vision for the Northwest Sector and other areas of McKinney can be predictably realized.

3. **Create alignment between fire, safety, traffic management and development pattern goals.** A strong alignment between the departments responsible for these goals will ensure a streamlined process for design and development review as projects move forward citywide. Clear requirements that are based on the intent to create a comprehensive network, while ensuring sustainable traffic patterns can facilitate a streamlined review process and align the City's different department priorities.
4. **Provide realistic guidance that is mutually beneficial for the development community and the City.** The qualitative and quantitative basis of this Streets Policy is grounded in best practices from the Institute of Transportation Engineers (ITE) *Designing Walkable Urban Thoroughfares* Manual, the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*, the AASHTO *Guide for the Development of Bicycle Facilities*, and the NACTO *Urban Bikeway Design Guide*. This Policy will help the development community to better understand the goals of the City: a network of streets at the Local and Collector ("Neighborhood") level that provides safe, efficient transportation options while adding to the quality of the adjacent land.

III. Policy Limitations and Special Considerations

While this Policy is intended to improve several aspects of development in the Northwest Sector and throughout McKinney, it is important to note its limitations. The Northwest Sector Streets Policy will not:

1. **Provide exact dimensions for a given street application.** This Streets Policy provides a matrix of design guidance for each respective street type and its particular purpose, rather than attempting to create every specific detailed application for any possible scenario. The design guidance approach, rather than a set of non-flexible prescribed cross-sections, will enable the development of streets and a street network — for a series of neighborhoods or a given neighborhood — that are better calibrated to the needs of the desired development pattern.

2. **Alter the Master Thoroughfare Plan (MTP) at the Arterial Level.** The Streets Policy will work within the larger framework of the existing MTP; yet it will modify how the MTP functions below the arterial level in order to accomplish the incorporation of place-focused streets and connector-focused streets into a coherent network for a given area.
3. **Address every unique circumstance that may occur in the development process.** While the priorities of this Streets Policy are intended to be applicable in all developments, certain situations may arise in which alternative solutions are necessary. For example, access management techniques may be utilized in order to accommodate expected traffic volumes or to provide consistency in traffic operations.

Some conditions of the application of any new street types may result in anomalies such as single-family residential uses that front Collector (now “Neighborhood”) or Arterial streets. In that case, additional design strategies may need to be applied. For example, a “slip” lane can be utilized to create a limited access condition along a roadway while also creating a convenient and urbane frontage along the development. This idea has already been employed successfully in McKinney along Eldorado Parkway, near Country Club Drive.



4. **Change the basic function of streets at the Local and Collector Level.** Already stated within the City’s Street Design Manual, the primary functional purpose of local and collector streets is to provide access as opposed to high mobility, which is the primary role of arterials. This Streets Policy desires to balance Quality of Service (QOS) within a neighborhood or specific development location with the Level of Service (LOS) that is measured at the arterial level of the City’s transportation

framework. The Quality of Service perspective provides a basis for building a street network within the context of the place in order to achieve a higher-quality development pattern in a given area while also creating better access. Application of a Quality of Service approach supports traditional and urban walkable developments even though the traditional LOS rating could be lower for a given location.