

CALL TO ACTION



As the MPO strives to promote land use and demographic patterns that encourage a healthy jobs / housing balance, it is faced with the significant challenge and opportunity of implementing that vision. The land use and demographic patterns must support sustainable developments. The MPO has no land use authority; because of this, fostering partnerships with other local agencies is critical. The Call to Action for the MPO involves new practices that can bridge the gap between local agency partners, land owners, and developers.

Partners in the Region

Every local agency within the MPO area plays a major role in carrying out the desired development pattern. The following table outlines the activities that the MPO and member agencies should undertake.

AGENCY	ACTION	BMPO ACTION
City of Brownsville	Adopt Imagine Brownsville	Endorse Imagine Brownsville's land use policies
Texas Department of Transportation (TxDOT)	Update travel demand model with demographics provided by BMPO	Update MTP based on results from the scenario planning exercise
Cameron County Regional Mobility Authority (CCRMA)	Coordinate with TxDOT for new traffic forecasts	Assist CCRMA with modeling and economic forecasts
Cameron County	Endorse scenario B demographics	Provide planning assistance to County
Brownsville ISD	Perform a Safe Routes to School Study	Assist the ISD with study
Brownsville Navigation District	Port area development study	Assist port study
Town of Rancho Viejo	Work with MPO to locate a sustainable development site	Perform a sustainable development case study
City of Los Fresnos	Work with MPO to locate a sustainable development site	Perform a sustainable development case study
Brownsville Utility Board	Examine the findings and implications of the MPO Study	Share study findings and methodologies
UT Brownsville	Examine the findings and implications of the MPO Study	Share study findings and methodologies

Land Use and Transportation Tools

The previous sections of this report discussed the benefits of development patterns that reduce the amount of land consumed, wetland impacted, and vehicle miles of travel. With limited dollars for transportation funding, many MPOs throughout the country have embraced sustainability practices that minimize the dependence on auto travel. These programs come in various forms. Livable Centers, a Houston Galveston Area Council (H-GAC) program, promotes sustainable transportation and development coordination by facilitating regional and subarea planning. In the Dallas Metroplex, the North Central Texas Council of Governments (NCTCOG) promotes sustainable development projects by funding infrastructure in areas that meet the goals of their sustainable development program.

The Brownsville MPO's challenge is finding a funding source for a local sustainable development program that can fund planning or infrastructure seed projects. It is envisioned that the next federal transportation bill will require coordination between the Department of Transportation with the Housing and Urban Development Department. This change may create many new funding sources that promote transportation/land use coordination. As such, it is recommended that BMPO document sustainable development practices to take advantage of this new federal direction. Furthermore in 2012, the Brownsville MPO will become a



Transportation Management Area (TMA), which will allow for more flexibility in how funds can be used within the region. This change will provide the BMPO with a small amount of funds that could be used for investigating alternatives.

Sustainable Development Practice

Sustainable development can be defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. This multidisciplinary focus integrates environmental, economic, and social development practices.

Among the key components of sustainable development are consideration of the interface between land use and transportation, planning for bicycle and pedestrian modes of transportation, and the evaluation of alternative future demographic scenarios.

Goals of a Sustainable Development Program

- Land use and transportation practices that promote economic development while using limited resources in an efficient manner.
- Transportation decision-making based on impacts to land use, congestion, VMT, and the viability of alternative transportation modes.
- Planning efforts which seek to balance access, finance, mobility, affordability, community cohesion, and environmental quality.
- Encourage a mix of housing choices.

The MPO 2010-2035 Metropolitan Transportation Plan (MTP) Update should establish sustainable development as one of the region's new strategic approaches to transportation planning, programming, and construction. Sustainable development leverages the land use/transportation relationship to improve mobility, enhance air quality, support economic growth, and ensure the financial stability of the transportation system.

By heightening the awareness for a diverse range of mobility options (such as rail, automobiles, bicycling, transit, and walking) these practices help local governments present a range of development opportunities to the private-sector. Moreover, the citizens of Brownsville deserve a mix of housing choices. One should be able to choose to live above the store, next to the store, five minutes from the store, or nowhere near the store. It is easy to imagine the different age groups and personalities that would prefer each alternative. Housing choices can provide an array of lifestyles.

Municipal plans should recognize four categories of sustainable development:

- Strategic Urban Development
- Integrated Land Use Planning
- Livable Streets/Complete Streets
- Transit-Oriented Development

These sustainable development practices should encourage public-private partnerships that positively address existing transportation system capacity, rail access, air quality concerns, and/or mixed land uses. By encouraging member agencies to investigate land use projects promoting alternative transportation modes or reduced automobile use, the MPO and its regional partners will work to address air quality, congestion, and quality of life issues.



Catalyst Sustainable Development Projects

The materials presented for the sustainable development practice above sets a path for a future Brownsville that embraces mixed use developments, transit, walking, biking, environmental stewardship, and pro-actively incentivise sustainable development. To implement sustainable development practices, it is recommended that the member agencies work with the MPO to identify catalyst sites that are consistent with the sustainable development goals.

Project Selection

Selection of the right project should be based on several factors like public-private partnerships. There needs to be a real development opportunity that involves a private developer and or land owner that would entertain the opportunity to develop a site that includes several of the following elements:

- Vertical mixed uses
- Walking or bicycle paths
- Transit connections
- Parking structures
- Open spaces or conservation of land

Project Scope of Services

The study should consist of a preliminary inventory analysis, needs assessment, market analysis, community visioning workshop, urban design framework plan, community framework workshop, urban design guidelines, form code, and implementation strategies. The study should include and take into account the results of a street inventory analysis.

These projects can be sponsored by a local agency or developer. The local agencies must be prepared to offer incentives to developers to develop in a sustainable fashion. The following are a few examples of incentives:

- Waiver of parking requirements
- Expedited development review and approval
- Tax abatement
- Tax Increment Reinvestment zones

Sustainable Network Initiative

Currently, the vast majority of federally funded transportation projects are corridor- or facility-based. They focus exclusively on planning, prioritizing, and building singular facilities. While such efforts may occur within the context of a system-wide approach, each individual facility must stand on its own merit, without regard to how such facilities might perform in combination with each other.

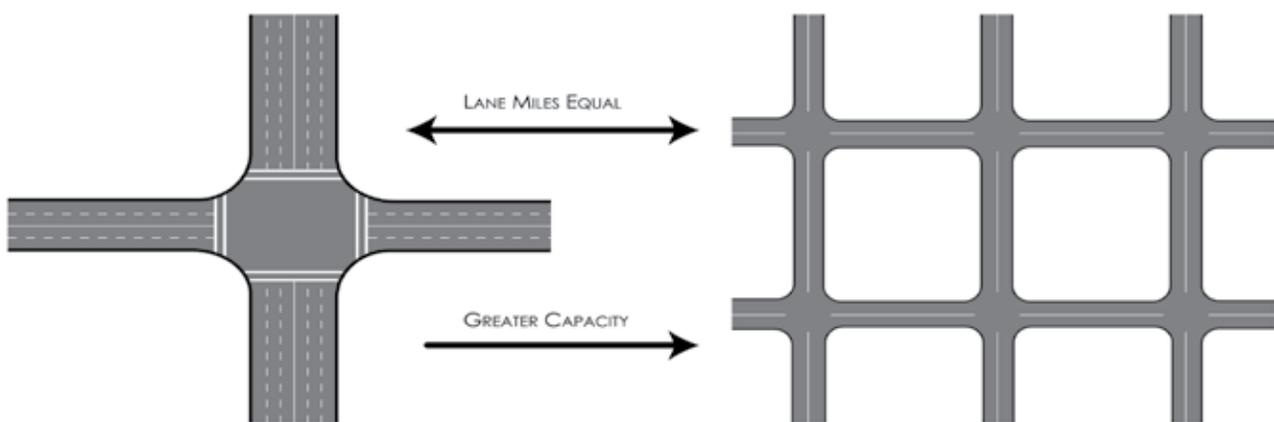
Facility-based metrics (typically volume-to-capacity ratios) are used to identify and prioritize deficiencies in the system. The implication is that adding capacity in the form of additional lanes will improve the system. This approach leads to proposals that mitigate the impacts of a new development (or growth in general) by adding vehicle lanes to an existing road or widening an intersection—which in turn promotes auto-only travel and leads to more congestion. Adding vehicle lanes or widening intersections can be damaging in urbanized areas. The facility-based approach means that many streets are left out of the analysis even though they could be providing tremendous transportation function. As a whole, the street network will end

up with components that are underutilized, while other sections are concentrated with traffic. In addition, adding vehicle lanes can reduce opportunities for other modes of travel, such as walking and biking. These steps can be counter-productive to lasting local economic development as well as reaching greenhouse gas reduction targets by reducing vehicle miles traveled. Federal transportation funding is currently used to improve and maintain state highways. In Texas, some federal funding is available for roads under local jurisdiction that are within the functionally classified roadway system. The functional classification is limited to three types of roadways: expressways, arterials and collectors. However, most roads do not fall under the functional classification system; this is particularly true of the networked streets in Brownsville. While state highways are often considered the backbone of the transportation system, local streets handle approximately 50% of vehicle miles traveled and the majority of all biking and walking trips. In most cities (Brownsville included), the capacity of local streets surpasses the capacity on roads that are eligible to receive federal funding.

Benefits of Well-Connected Networks

A network is a structure of streets that serves and connects multiple places and people via multiple modes of travel. A network approach to transportation projects focuses on connecting people to places — ultimately allowing places to become more intense centers of economic development. A highly-networked system of streets, with at least 150 intersections per square mile, has redundant routes, compact block sizes, sidewalks, narrower streets, and a greater capacity than unconnected street systems.

Well-connected networked streets provide greater mobility and access. By their very nature, networked streets provide shorter, more direct routes between destinations. This increases the efficiency and reliability of the road network. During times of congestion or construction, drivers have more opportunities to switch to different routes and avoid delay. This is especially important for emergency responders as they need the fastest, most direct route to a fire or medical emergency.





Networked streets also encourage intra-area trips to occur on local streets instead of arterials or highways. Poorly-networked streets typically concentrate local traffic on a few arterials because there is no other route available, but highly-networked streets can keep local traffic on local streets. This preserves capacity on arterials and highways for more regional trips.

Networked streets improve health and safety. In addition to improving emergency access and response times, networked streets can reduce vehicular crash severity by providing multiple, more direct routes. Less traffic is concentrated on any one street, which allows each street in the system to be narrower in width. Narrower local streets lead to slower vehicle speeds. Slower speeds dramatically reduce the severity of pedestrian injuries. Narrower streets also allow for shorter pedestrian crossing distances, which, in-turn, reduces the amount of time pedestrians are exposed to traffic directly and improves the intersection signaling times. Creating pedestrian-friendly streets increases the potential for walking and bicycling. Physical activity greatly improves public health and reduces the risk of many diseases.

A system of compact blocks and streets increases the opportunities for and performance of other modes of travel, such as walking, bicycling, and taking transit. As more trips are done without an automobile, the number of VMT can decrease — reducing the amount of energy consumed and greenhouse gas emissions.

Property values are heavily influenced by the quality and form of the streets surrounding them. Walkable streets and connected places can create environments where property values flourish and continue to grow through time. Walkable streets, by virtue of their street appearance and character, increase the desirability of locating on that street for commerce or residential purposes. As networked streets reduce the need for automobile trips, more households will be able to reduce the amount they spend on gas and related transportation costs. This money can then shift into the local economy, housing, and education.

Finally, sustainable networks represent a cost effective alternative to expensive grade separations, interchanges, and corridors that require extensive right-of-way purchases. Networks take a greater level of planning and creative design to create, but their result is sustainable in terms of capital and maintenance costs.

Project Development Process – Network Alternative Analysis

The Brownsville MPO should endorse a Complete Streets policy as an addition to the local roadway project development process. This process would require defining study areas opposed to just corridors. The emphasis on studying only corridors does not consider the system as whole, rather just a single road or street. Projects that are incomplete or do not include sidewalks or transit access would be discouraged. The San Antonio MPO has embraced this concept and will reject projects that are deemed as incomplete. The emphasis of any project should be on moving people, not cars. This process should examine improvements based upon a network perspective and not just corridor metrics. Examples include the following:

Conventional

- Vehicle hours of delay
- Speed
- Volume/Capacity
- VMT
- Volumes of auto trips
- Transit trips

Enhanced Metrics

- Mode share (walk, bike, transit, auto)
- Accessibility measures
- Lane miles by functional class
- Connectivity indices (intersections/square mile)
- Travel time
- Route directness
- Enhanced model
- More network detail (i.e., get credit for the whole grid)
- Realistic mode share (primary walk and bike trips)

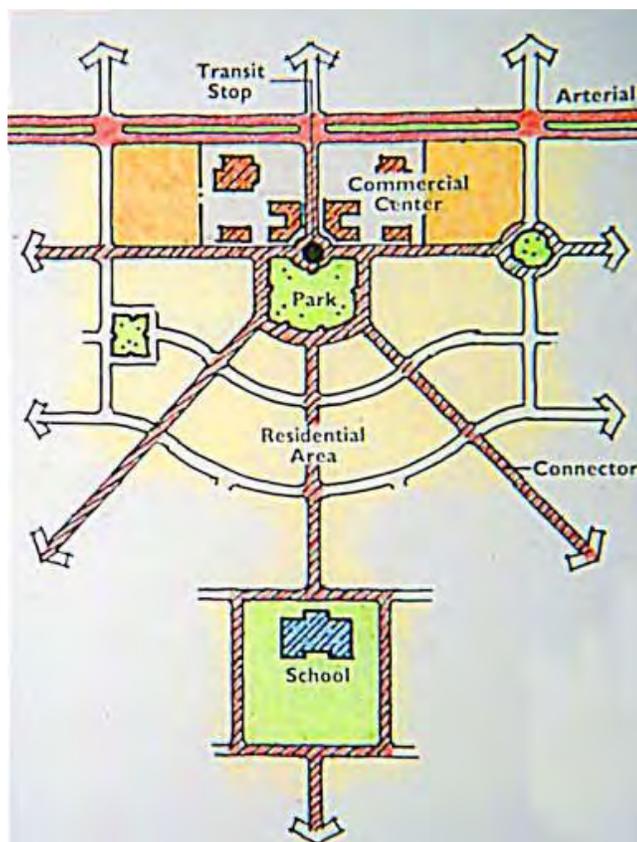
This process will require portions of the Travel Demand Model to be updated with a finer grain of network detail and possible use of a micro-scale model to examine network and modal conflicts.



Project Development Process — Multimodal Alternative Analysis

A balanced transportation system, sustainable development, and sustainable networks are linked. A balanced transportation system supports the needs of pedestrians, bicyclists, transit riders, and drivers equally. Providing transportation choice will boost both the function and aesthetics of the region's transportation system. Benefits of multimodal transportation systems are vast and have been documented in many studies, including restored mobility, reduced congestion, diversified economic development, smart growth, sustained property values, and healthy lifestyles through walkability linking schools, parks, other public facilities, and practical destinations. These benefits form the backbone of a sustainable community.

A multimodal transportation system is described as a network of facilities designed for shared use with seamless linkages between at-least two or more modes of transportation. Multimodal systems can be designed using shared right-of-way as found in a multimodal boulevard where all modes share the same cross-section or as part of a network of roads, fixed transit guide ways and bicycle and pedestrian paths that when combined form a web of multiuse facilities. National trends in multimodal planning indicate that a healthy system will incorporate both forms.

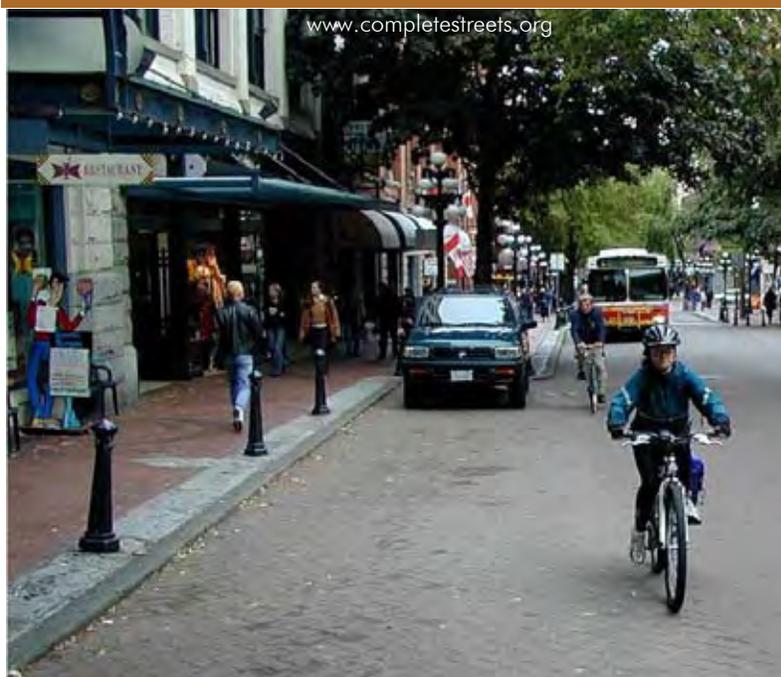


National Trends in Multimodal Planning/Complete Streets

Common planning and design standards for transportation are established at a national level for construction and maintenance of a safe and efficient transportation system that is predictable and uniform across an interconnected and interdependent conglomeration of states, regions, and municipalities. These guidelines are based on “best practices” that are continually progressing from theoretical and empirical research. Federal transportation policy for the development and application of design standards is a reflection of need from a host of governmental units, advisory groups, and constituencies through a federal legislative process.

Planning and design guidance is generated from a wide range of issues and considerations related to commerce, safety, environment, health, community development, social justice, universal accessibility, and quality of life, as well as national defense and security (the Interstate system was based on a national defense premise).

Historically, planning and design standards were formed from theories of economics, demographics, community development, and engineering theory and application. More recently, these standards have been questioned as to their influence on urban sprawl, dysfunctional disconnected communities, air quality and the overall relationship to runaway energy consumption. These sustainability-based initiatives have formed a powerful block of public interest. Smart growth, Complete Streets, TOD, new urbanism, walkable communities, safe routes to school, and context sensitive solutions are interrelated concepts. They have positively influenced the form, policy, and expenditures of the last several Federal Transportation Acts and the related missions of both the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The American Association of State Transportation Officials (AASHTO) recently released guidance to context sensitive design as a set of alternative roadway design standards. The current governing AASHTO standards, often cited as limiting creative community based transportation system development, are now being supplemented by a draft Proposed Recommended Practice for Context Sensitive Thoroughfares, prepared by the Institute of Transportation Engineers (ITE) under the sponsorship of the Congress for New Urbanism (CNU), FHWA and EPA.





The landmark ITE publication recommendations have been guided by a team of national experts in transportation planning, design and engineering with the tutelage from the founders of CNU to form the connection of transportation and land use. The knowledge base of this team was augmented with research and observation of the European experience of placemaking in communities such as the Netherlands, Great Britain, and Denmark. Additionally, case studies of several American cities (including San Francisco, Seattle, Portland, and Boulder, and even Chicago and New York City — places associated with congestion but also with urban vitality) defined best practices for the publication. These cities demonstrate that concepts such as traffic calming, shared and/or living streets, and pedestrian/bicycle networks integrated with modern transit systems have proven to be extremely effective for safety, quality of life, and economic development “smart growth.”

How Cities Can Create Walkable Areas Through Policy

Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities must be able to safely move along and across a complete street. Creating Complete Streets means changing the policies and practices of transportation agencies. A Complete Streets policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. Transportation agencies must ensure that all road projects result in a complete street appropriate to local context, needs and funding ability.

A good Complete Streets Policy specifies the following:

- 1) All users, such as, pedestrians, bicyclists, transit vehicles and passengers, and motorists, of all ages and abilities.
- 2) Aims to create a comprehensive, integrated, connected network.
- 3) Recognizes the need for flexibility; that all streets are different and user needs must be balanced. Is adoptable by all agencies to cover all roads.
- 4) Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
- 5) Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
- 6) Directs the use of the latest and best design standards.
- 7) Directs that Complete Streets Solutions fit in with context of the community.
- 8) Establishes performance standards with measurable outcomes.

An effective Complete Streets Policy should prompt transportation agencies to:

- Restructure their procedures to accommodate all users on every project.
- Rewrite their design manuals to encompass the safety of all users.
- Retrain planners and engineers in balancing the needs of diverse users.
- Create and maintain new data collection procedures to track how well the streets are serving all users.
- Revise local codes and ordinances, including sidewalk requirements.

Example Policy

Section 1. MPO cities will plan for, design and construct all new city transportation improvement projects to provide appropriate accommodation for pedestrians, bicyclists, transit riders, and persons of all abilities, while promoting safe operation for all users, as provided for below.



Section 2. MPO Cities will incorporate Complete Streets principles into the Department’s Comprehensive Plan; Transit Plan; Bicycle and Pedestrian Plan; and other plans, manuals, rules, regulations, and programs, as appropriate.

Section 3. Because freight is important to the basic economy of the Brownsville urbanized area and has unique right-of-way needs to support that role, freight will be the major priority on streets classified as freight or truck routes. Complete Street improvements that are consistent with freight mobility but also support other modes may be considered on these streets.

Section 4. Except in unusual or extraordinary circumstances, Complete Streets principles will not apply to the following:

- Ordinary maintenance activities designed to keep assets in serviceable condition (e.g., mowing, cleaning, sweeping, spot repair and surface treatments such as chip seal, or interim measures on detour or haul routes)
- Where the Director of Public Works issues a documented exception concluding that application of Complete Street principles is unnecessary or inappropriate because it would be contrary to public safety
- Where other available means or factors indicate an absence of needs including future need.

Section 5. Complete Streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance activities over time. It is the Mayor’s and Council’s intent that all sources of transportation funding be considered to implement Complete Streets. The City believes that maximum financial flexibility is important to implement Complete Streets principles.

Street Connectivity Policy

Street connectivity requirements are potentially very important at the local neighborhood level, since connectivity is a key factor in ensuring that people can walk or bike between neighborhoods, cul-de-sacs, and communities. An interconnected street system is necessary in order to promote orderly and safe development by ensuring that streets function in an interdependent manner, provide adequate access for emergency and service vehicles, enhance access by ensuring connected transportation routes, and provide continuous and comprehensible traffic routes.

Connectivity shall be defined by the ratio of links to nodes in any subdivision.

- A. The connectivity ratio shall be the number of street links divided by the number of nodes or end links, including cul-de-sac heads.
- B. A link shall be any portion of a street, other than an alley, defined by a node at either end. Stub outs to adjacent property shall be considered links. For the purpose of determining the number of links in a development, boulevards, median-divided roadways, and divided entrances shall be treated the same as conventional two-way roadways. A pathway between neighborhoods for walking, bicycling and emergency access shall be counted as a link.
- C. A node shall be the terminus of a street or the intersection of two or more streets.
 1. Any curve or bend of a street that exceeds 75 degrees shall receive credit as a node. Any curve or bend of a street that does not exceed 75 degrees shall not be considered a node.
 2. A divided entrance shall only count once.

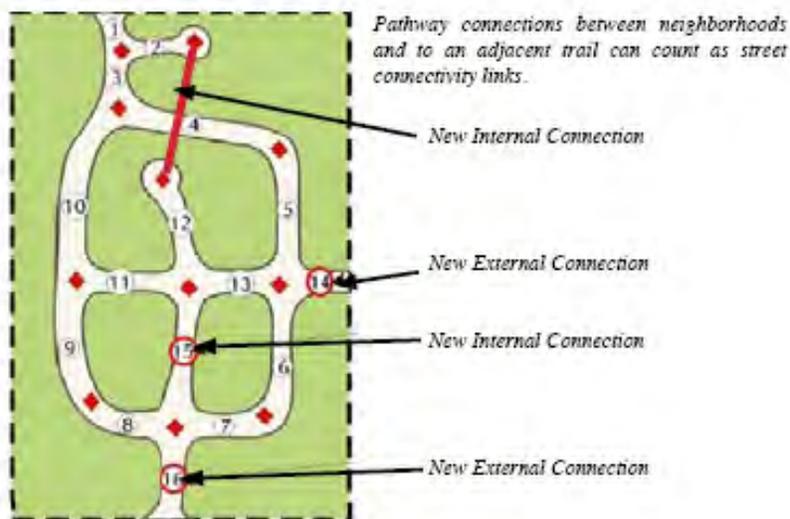
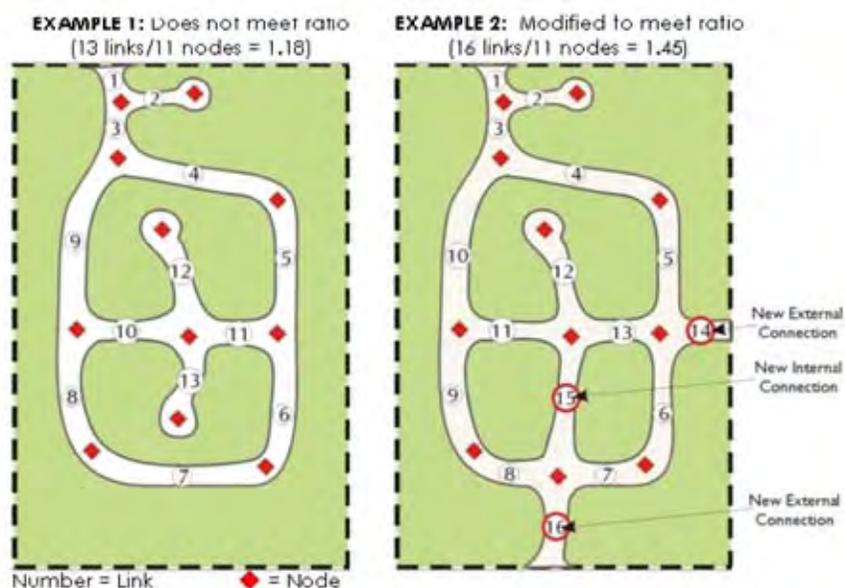
Required Ratio

A. Street Network

1. The street network for any subdivision with internal roads or access to any public road shall achieve a connectivity ratio of not less than 1.40 in all tiers except the Rural Tier, measured within the subdivision.
2. Within the Rural Tier, the street network for any subdivision with internal roads or access to any public road shall achieve a connectivity ratio of not less than 1.15, measured within the subdivision.

B. Street links and nodes along a collector or arterial street providing access to a proposed subdivision shall not be considered in computing the connectivity ratio.

C. Stub outs shall be considered as being present as a link at the ratio of one link per side as provided for purposes of determining if the required ratio has been met.



Safe Routes to School

Another method for providing walkable areas is the safe routes to school program. TxDOT currently has a safe routes to school funding program that provides grants for schools looking to improve the pedestrian environment new schools zones. These grants can be used to improve infrastructure including, sidewalks, traffic calming measures, on-or off street bicycle facilities, and bicycle parking. Other educational projects such as public awareness forums are also eligible through the grant program. Staff at local municipalities and school districts should work cooperatively to identify and implement pedestrian improvements to and from school locations. For additional information on this grant or improving pedestrian areas near schools please use the following resources:

- “Schools for Successful Communities: An Element of Smart Growth” (2004) published by the Council of Educational Facility Planners International and the US Environmental Protection Agency provides strategies for creating walkable, community centered schools. The report is available at www.cefpi.org.
- TxDOT administers the Federal Highway Administration’s local Safe Routes to School Program. Funding guidelines and application forms are available at www.txdot.gov/services/traffic_operations/safe_routes_to_school/default.htm.
- Professional organizations including the American Institute of Architects (AIA), the Urban Land Institute (ULI), and Congress for New Urbanism (CNU) offer low-cost technical assistance on issues such as downtown revitalization and sustainable development. Information and application forms can be found on their respective web pages.



www.pedbikeimages.org/jones