open space addendum
INTRODUCTION
The Brownsville Parks and Recreation Open Space Master Plan was completed in 2008 and is an important resource for the City. The purpose of this Open Space Plan Addendum is to relate the open spaces described in the Parks and Recreation Open Space Master Plan to the modules proposed in this Future Land Use Plan Element. Coordination between these two Plans is critical for successful implementation and optimal use of open spaces in Brownsville.

If polled for their opinions, it is likely that many citizens of Brownsville or any other city would express a desire for parks and open space in their community. In the day-to-day operations of a municipality, however, longer-term objectives such as increasing open space or building new parks can be bypassed in favor of fixing potholes and other maintenance activities that are often demanded by citizens.

This symptom can be applied at a larger scale as well. Long-range planning and community visioning are often relegated to a wish list status as a municipality strives to respond to more mundane needs. The public involvement process of Imagine! Brownsville gave the citizens of Brownsville an opportunity to express their vision for the future of the City. The opinions expressed regarding parks and open space relate not just to a future wish list, but are tied to the identity of Brownsville and its quality of life. This in turn impacts economic development, civic participation, and environmental quality. Some of the relevant goals and objectives and their synergistic impact on Imagine! Brownsville are presented below.

Goals and Objectives

Economic
- Promote business growth and economic development
- Produce more jobs - create higher paying jobs and career opportunities
- Diversify our economy for long-term growth
These economic goals are related to parks and open space in at least two ways. First, the success rate of economic development recruitment of individuals and companies is often tied to quality of life in the city, of which access to parks and open space figure significantly. Second, development of a more diversified economy could begin for Brownsville in guarding open space habitat for migratory birds, which is a unique feature that can contribute to the creation of new jobs in eco-tourism.

Social
- Provide more parks (green space) and open space/recreation opportunities
- Build a healthier community (obesity, diabetes, disease rates)
- Preservation of historic Brownsville
These three social goals impact the quality of life for citizens of Brownsville. One explicitly supports establishing more parks, and the other two could be considered secondary effects of access to parks and open space. Recreation areas are essential for public health, and many documented historic events in and around Brownsville took place in areas that could be protected for future generations.

Infrastructure
- Improve drainage
- Increase civic participation (voting, volunteerism, etc.)
These infrastructure and civic/institutional goals address secondary benefits of parks and open space. Open space is generally pervious, meaning that rainwater is able to percolate into the ground, instead of forming stormwater flows. Open space and parks also serve a functional
purpose in terms of providing civic space, which contributes to cultural identity. A city cannot function as a civic body of citizens without adequate public spaces.

**Environmental**
- Improve and protect environmental resources (resacas, birding habitat, wetlands)
- Create a healthy and sustainable environment

These environmental goals are primary benefits of establishing parks and open space. A healthy and sustainable environment supports all life, benefitting all who live in Brownsville.

**ASSESSMENTS**
The Brownsville Parks and Recreation Open Space Master Plan (2008) provides an analysis of existing parks and future park needs in Brownsville. The inventory of parks is quite thorough, with data on the number, size, location, usage, facilities, and natural and/or cultural resources at each park. After examining the park system as a whole, as well as evaluating each park individually, the Plan performs a needs assessment, which is based on level of service standards, demand for parks, and resources within the Brownsville community that could benefit the parks system. This conforms to requirements from the Texas Parks and Wildlife Department and therefore makes Brownsville eligible for grant funding for parks. The Plan concludes with lists of specific actions that should be taken to fulfill each goal, implementation steps, new park acquisition and locational criteria, cost estimates, and potential funding sources. Community input was gathered for the Plan in the form of stakeholder interviews, user surveys, and community meetings. Overall, the Plan provides a useful and detailed review of existing parks and future park needs for Brownsville.

There are several ways in which the current Plan could be enhanced, including an expanded parks and trails typology, a programmatic element, and coordination with Brownsville’s Future Land Use Plan. There are only five different types of parks discussed in the Plan and only brief mention of trails. The open space typology could be expanded to include a greater variety of types and sizes of both parks and trails, offering a greater level of detail and personalization to Brownsville, as well as connectivity to all open space resources. Open spaces should also be programmed with activities such as sports, festivals, farmers markets, educational classes, etc., helping the spaces to be full of people and events. Finally, Brownsville’s open space plan should be well integrated with the City’s Future Land Use Plan to ease understanding, implementation, and fulfillment of mutual goals. When plans have increased common structure, terminology, organization, and goals, their effectiveness is also increased.
PLAN ELEMENTS

Overview
A successful city-wide parks and open space plan should consist of a wide array of active and passive recreational experiences for citizens of all ages. The distribution, placement, and programming of open spaces create vibrant park experiences that become community defining elements. This Open Space Plan Addendum seeks to expand the types of open spaces available in Brownsville, provide detailed information about creating a network of trails in the City, and describe the manner in which open space resources are integrated into the fabric of the community by directly tying them to the Future Land Use Plan. The open space system should be a legible experience that contains the diversity of park facilities possible in Brownsville.

Open Space Typology Transect
The Plan Addendum is rooted in a transect that arrays open spaces along a continuum from Active/Recreation to Preservation spaces (Figure 1). Each type allows for a different balance of nature preservation and active recreation while providing various amenities and recreational opportunities. In this way, a variety of experiences are created that respond to Brownsville’s economic, social, and environmental goals. Critical to this approach is the incorporation of several trail types to allow access to and connectivity between open space...
resources and the entire Brownsville community, which will be discussed in the following section. The open space types in the transect address inventory, needs assessment, and goals identified in the 2008 Open Space Master Plan, as well as the functional requirements of the projected future population of Brownsville.

The open space typologies that occur along this transect are all tied to Brownsville’s landscape, heritage, and culture, which are the characteristics that the Comprehensive Plan endeavors to preserve and enhance. The transect includes spaces as diverse as nature preserves, wildlife refuges, and Resaca parks for the protection of environmental and habitat resources, as well as multi-use spaces such as medium parks with playgrounds and athletic fields and urban parks for civic events and public gatherings. The range of park spaces included in this Plan Addendum expands upon those in the 2008 Open Space Master Plan and provides additional layers of detail to enrich the City’s open space resources. Additionally, the parks are stitched together with a varied trails typology that includes nature trails for experiencing preserved resources, connector trails linking neighborhoods to parks, and regional trails that connect all areas of the City. Greater detail, including location and size criteria, is provided for each open space types in Figure 2.

It is also important to remember the viewshed category of open space type and the valuable views created by all open spaces. Open spaces should be highly visible within the fabric of the City in order to preserve its character. This Plan Addendum will provide both visual and physical access to open space as appropriate in each land use module. Equitable provision of access to all recreation types is also necessary. The transect of open space types and their designation in multiple land use modules promotes a balanced approach that distributes access to different types of experiences throughout the City. This will prevent all of the sports fields from ending up on one end of City and all of the nature on the other. Aggregation of uses and shared spaces will also lessen maintenance burdens for the City. Finally, the open space typology will also allow utilization of existing resources, such as road right-of-ways, while granting Brownsville the flexibility to build upon land acquisition opportunities as they become available. This Plan Addendum is a flexible and strategic tool that the City can use to evaluate options by showing different zones that are appropriate for different uses and park and trail types that can respond to market conditions.

**Trails and Connectivity**

As the 2008 Open Space Master Plan discusses acquisition, location, size, and amenity criteria for parks, this Plan Addendum will focus on the trails component. The trail connectivity concept for Brownsville is designed to capitalize upon the diversity of experiences available within the City. Trail connectivity is achieved by a system of on-road bikeways, equestrian trail loops, and pedestrian trails through a variety of settings. Trail and bike route users may traverse through the different areas of Brownsville, while regional trail routes connect all of the other trails within the hierarchy. In this way, the network of trails and routes offers a variety of scale and loop options for a diversity of user groups.

There are five main categories of trail types recommended for Brownsville, which form a hierarchical system conferring legibility, connectivity, and transitions throughout the City. The placement of the trails along the transect of open spaces can be seen in Figure 1. A description of each trail type and its purpose follows:

1. **Nature Trail:** These unpaved trails form loops within natural areas to provide access for pedestrians to wildlife habitats and preserved environments. Trails should feature views of significant environmental, historic, and/or cultural features and be narrow in width. Trails constructed of wooden walkways would be appropriate in areas prone to floods.
2. **Connector Trail:** These trails will typically be wider and paved, providing an appropriate setting for a variety of users, including pedestrians, bicyclists, and in-line skaters. Trails may be located along roadways, within parks, and along resacas and/or surface waterways. Connector trails serve the valuable purpose of linking parks,
<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Location Criteria</th>
<th>Size Criteria</th>
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<tbody>
<tr>
<td>Wildlife Refuge</td>
<td>Lands set aside for the preservation of critical habitats and wildlife movement corridors. Focus on passive recreation, including hiking, wildlife viewing, and birding.</td>
<td>Areas of significant wildlife habitat and movement.</td>
<td>Variable; can be both linear and non-linear.</td>
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<tr>
<td>Rural/Ranches - Viewshed Only</td>
<td>Rural areas where large setbacks are established to preserve the rural aesthetic and views from roadways and other vantage points.</td>
<td>Determined by rural, undeveloped character and the presence of intact views.</td>
<td>Variable.</td>
</tr>
<tr>
<td>Nature Trail</td>
<td>Unpaved, compacted dirt trails that serve pedestrian use. Focus on maintaining harmony with the natural environment.</td>
<td>Typically found in nature preserves and wildlife refuges.</td>
<td>Not applicable.</td>
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<tr>
<td>Nature Park</td>
<td>Areas with significant vegetative cover. Focus is on passive recreational uses and preservation of vegetative resources.</td>
<td>Resource availability and opportunity.</td>
<td>Variable.</td>
</tr>
<tr>
<td>Resaca Park</td>
<td>Areas surrounding and along resacas and surface waterways. Focus is on passive recreational uses and preservation of water bodies.</td>
<td>Resource availability and opportunity.</td>
<td>Variable.</td>
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<tr>
<td>Historic Open Space</td>
<td>Areas around significant historic resources. Focus is on interpretive activities and preservation of historic buildings, landforms, and context.</td>
<td>Resource availability and opportunity.</td>
<td>Variable.</td>
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<tr>
<td>Connector Trail</td>
<td>Multipurpose trails that emphasize safe travel for pedestrians to and from parks and around the community. Focus is as much on transportation as it is on recreation.</td>
<td>Separate/single-purpose hard-surfaced trails for pedestrians and bicyclists/in-line skaters located in independent right of ways and/or road right of ways.</td>
<td>Not applicable.</td>
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<tr>
<td>Small Park</td>
<td>The basic unit of the park system, serves as the recreational and social focus of the neighborhood. Focus is on informal active and passive recreation.</td>
<td>1/4 to 1/2 mile distance and uninterrupted by non-residential roads and other physical barriers.</td>
<td>5 acres is considered minimum size. 5 to 10 acres is optimal.</td>
</tr>
<tr>
<td>School Park</td>
<td>Depending on circumstances, combining parks with school sites can fulfill the space requirements for other classes of parks, such as small, medium, and special use.</td>
<td>Determined by location of school district property.</td>
<td>Variable; depends on function.</td>
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<tr>
<td>Medium Park</td>
<td>Serves broader purpose than small park. Focus is on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces.</td>
<td>Determined by the quality and suitability of the site. Usually serves two or more neighborhoods and 1/2 to 3 mile distances.</td>
<td>As needed to accommodate desired uses. Usually between 30 and 50 acres.</td>
</tr>
<tr>
<td>Large Park</td>
<td>Serves a broader purpose than medium parks and are used when medium and small parks are not adequate to serve the needs of the community. Focus is on meeting community-based recreational needs, as well as preserving unique landscapes and open spaces.</td>
<td>Determined by the quality and suitability of the site. Usually serves the entire community.</td>
<td>As needed to accommodate desired uses. Usually a minimum of 50 acres, with 75 or more acres being optimal.</td>
</tr>
<tr>
<td>Equestrian Trail</td>
<td>Trails developed for horseback riding with hard packed surface to prevent erosion.</td>
<td>Loop trails usually located in larger parks and natural resource areas. Sometimes developed as multipurpose with hiking and biking where conflicts can be controlled.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>On-Street Bikeway</td>
<td>Paved segments of roadways that serve as a means to safely separate bicyclists from vehicular traffic.</td>
<td>Designated portions of the roadway for the preferential or exclusive use of bicyclists.</td>
<td>Not applicable.</td>
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<td>Special Use Area - Farmers Market</td>
<td>Open space areas that are designed with the amenities and features necessary to host a farmers market.</td>
<td>Determined by the quality and suitability of the site. Should serve the entire community and be accessible to both dense neighborhoods and rural/farming areas.</td>
<td>Variable; depends on size of market.</td>
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<tr>
<td>Urban Park</td>
<td>Areas in highly dense settings that can be used by many people for a variety of purposes. Focus is on providing space for public gatherings and civic events, as well as casual interactions.</td>
<td>Less than a 1/4 mile distance.</td>
<td>Between 2500 square feet and 1 acre in size.</td>
</tr>
<tr>
<td>Regional Trail</td>
<td>Multipurpose trails that emphasize movement on a regional scale. Focus is on providing the spine of an area’s trail system, linking all neighborhoods to both trails and parks.</td>
<td>Could be located in parks, natural areas, neighborhoods, and along roadways.</td>
<td>Not applicable.</td>
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Figure 2. Brownsville Open Space Description Matrix.
residential neighborhoods, and commercial areas together throughout Brownsville.

3. Equestrian Trail: These trails should be located within large parks and rural areas of Brownsville and should provide a safe venue for designated horse activities. Trails should be designed to withstand the impact of horses and to minimize erosion and runoff damage.

4. On-Street Bikeway: These paved trails should be located within road right-of-ways, but be clearly separated from vehicular traffic, either through signage or, preferably, physical barriers. Bikeways will provide safe and convenient sites for commuting and recreating on bicycles.

5. Regional Trail: These paved trails should be the widest and most accessible of all the trail types, serving a wide range of users from bikers, walker, joggers, hikers, and in-line skaters. Regional trails should stitch together the four other trail types, serving to unify the trail system in Brownsville for all users.

Distinguishing characteristics among trail types, such as location, setbacks from roadways or buildings, trail width, and trail surfaces, will provide for a variety of user experiences, making the trails unique to Brownsville. A city is experienced through its trails just as it is through its fabric of development. The relationship between land use and open space is critical to creating an integrated and legible city. In many ways, trails, especially those in developed areas, are necessary to forging this relationship. Trails can be a key component of the streetscape, and trail widths, alignments, and design should be coordinated with the overall streetscape character in the area. Connections must be properly

**Coordination with Land Use Modules**

The appropriateness of various open space types is directly tied to the proposed land use modules outlined in the Future Land Use Plan. The Open Space Type/Land Use Distribution matrix (Figure 3) illustrates appropriate open space types for each land use module. For example, true nature preserves occur in the Emerging, Reserve Future City, Water Management, and Parks and Wildlife Districts, and not in the middle of the Downtown Node. Likewise, urban parks are not appropriate in the rural areas, but are reserved for modules such as the Nodes and Core Districts. In general, more developed parks are associated with denser land uses, thereby creating value and providing amenities for more functions, more events, and less pure preservation. More natural parks, likewise, are associated with more of the rural, lower density, and floodplain designations.

The correspondence between land use and park type ensures appropriate locations, balance of activities, and more seamless transitions. As development and redevelopment projects occur in Brownsville, the information provided this Plan Addendum will make it easier to incorporate new parks, park enhancements, and trail connections in appropriate land use modules. In this way, the legibility of the land uses will enhance and reinforce the legibility of the open space system. When land uses and open spaces are designed in concert and to be complementary, greater success, as measured in terms of number of users and increased value to the community, will be realized.
### Figure 3. Coordination Matrix between Open Space Type and Land Use Module.
IMPLEMENTATION
The Open Space Plan Addendum identifies several options associated with how to achieve the open space typology for Brownsville. The goal is flexibility for the City to react to a fluid real estate market as tracts of land become available. Therefore, the Plan Addendum depicts the location of park types within the system, rather than specific tracts. This grants Brownsville the flexibility to explore various options as parcels come available. Specifically, this implementation section will present strategies to guide acquisition of open space resources and to properly integrate them within the City’s system, develop an appropriate trails system, and an overview to funding opportunities.

Acquisition
As different parcels are available for consideration, the City should make a concerted effort to acquire properties with different characteristics within the framework of the transect. This will ensure a variety of experiences and enrich the City. Naturally, some sites lend themselves to different types of activities, and Brownsville should carefully keep track of these differences to ensure a balanced system that is rich in diversity. Rather than simply acquiring leftover floodplain in small tracts, the City should look for flexible and diverse opportunities. Likewise, the City should strive to ensure that the resacas and creeks function as a system and not as a patchwork of disconnected small parcels.

Other opportunities exist that create added value to the open space system. For example, landform is a critical determinant in site selection. Rugged terrain is not suitable for ballfield development and an open field isn’t necessarily the most interesting trail experience. Brownsville should identify sites that require the minimum amount of manipulation for the given program. Proximity to schools would be an asset to most types of parks in the typology. Public plazas that exist in support of other civic spaces or destinations create added value for the City, residents, and developers. These approaches reinforce and support the identity of modules and experiences while building value for Brownsville. Each site should be evaluated on a site-by-site basis to influence the final appropriateness of the general objectives for each. Architectural and site design guidelines should be developed to ensure continuity across the City-wide park system.

Success in an atmosphere of population growth and new development hinges on the fact that the City must be flexible to react as tracts become available. This includes having a fund of monies available for land acquisition to be able to respond quickly when opportunities arise. Since this Plan Addendum links open spaces to the Future Land Use Plan and to the land use modules, implementation will be partially driven by market influences as development continues within Brownsville. Land development will trigger park development and will accommodate market fluctuations. Through this approach, open space development will keep pace with population growth and other development in Brownsville, resulting in a balanced and equitable system.

 Trails
Implementation of a trails system in Brownsville relies on planning ahead for trails, maximizing existing right-of-ways for trail use, and establishing criteria for trail design. During development and redevelopment projects in Brownsville, trail crossings should be planned, appropriate drainage structures designed, and benches provided for trail crossings to go under roads. A missed opportunity in construction of such structures will lead to blocked trail connections or result in at-grade solutions, which are not as safe or aesthetically pleasing. Critical dimensions (head clearances, turning radii, etc.) for pedestrians and bikers must be ensured and planned for in advance. Creating a bench for a trail under a bridge doesn’t work if it only provides four feet of vertical clearance, for example.

Right-of-way and easement acquisition for trail routes should be written into the development codes so that developers share the burden and the benefit from trail and open space development. Utility corridors should also be utilized whenever appropriate to facilitate connectivity. Either overhead high lines or underground pipeline right-of-ways are suitable for trail development when
the proper negotiations with utility companies are achieved. The Plan is flexible to allow for different areas and different conditions to accommodate different trail types.

Trail guidelines should be developed that establish design criteria for materials, furnishings, street crossings, bridges, signage, and other trail amenities. A storyline should be established for each trail segment that “personalizes” it to contribute to the interpretive experience and uniqueness of Brownsville. For example, the system of resacas and surface waterways is an important identifier for the Brownsville community and should be acknowledged by providing trails along the waterways and connections to the rest of the City.

**Funding**
The Texas Parks and Wildlife Department (TPWD) assists many communities in park development and nature conservation through a grant program, for which the City of Brownsville would qualify. The strategy outlined in the 2008 Open Space Master Plan should strengthen the opportunities for grant writing success. The clear goals of the 2008 Plan, as well as this Plan Addendum, invest in ecological diversity, habitat preservation, public access, and linkages between definitive destinations, which are all important scoring criteria for the TPWD grant programs. In order for Brownsville to be eligible for grants from TPWD, the City’s Parks and Recreation Open Space Master Plan must be updated every five years and entirely re-done every ten years.