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16. Abstract Smart growth is planned growth that integrates land use and transportation to create urban development that conserves resources and improves quality of life while providing adequate mobility. This project initiated implementation of previous research findings through a series of workshops and through the development of this guideline report for Texas Department of Transportation (TxDOT) consideration. The guidelines in this report could facilitate TxDOT support of local smart growth programs where initiated by local agencies, and could help TxDOT support local smart growth initiatives through typical TxDOT projects or the enhanced TxDOT policies. The report explains how smart growth can be an asset to TxDOT, and relates how basic smart growth principles are consistent with TxDOT's goals under its Strategic Plan.					
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**PROMOTING SMART GROWTH TEXAS STYLE:
PROPOSED POLICIES FOR TxDOT
TO BENEFIT FROM AND SUPPORT
LOCAL SMART GROWTH INITIATIVES**

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INTRODUCTION

Smart growth provides an alternative to personal vehicle-dependent urban sprawl that is so prevalent today in urban areas of Texas and other states. The term “smart growth” has been defined in numerous ways, but most definitions include some common elements:

- development that is conducive and friendly to multiple modes of transportation, including walking, bicycling, and transit;
- conservation of open space;
- compact development that makes efficient use of infrastructure and resources;
- attractive, livable neighborhoods (e.g., residential, commercial) that offer a desirable quality of life; and
- growth and development designed with long-term community goals in mind (*1*).

Smart growth is a basis for deciding where, when, and what type of growth should occur to maximize the long-term vitality of the community (*2,3*). Moreover, smart growth can be viewed by transportation agencies as the land-use component of a smart comprehensive transportation/mobility plan . . . a plan that arranges land uses to make more efficient use of transportation and improves compatibility between transportation and land use.

THIS REPORT

This report is an introduction to smart growth in transportation. The guidelines contained in this report are tools for use in creating smart growth policies that can assist TxDOT in meeting its strategic goals.

TRANSPORTATION IMPACTS OF SMART GROWTH

Smart growth policies and planning impact land use and community development and, likewise, affect travel and the transportation system. Smart growth reduces per capita automobile travel through the effects of compact, mixed-use, transit-oriented development.

Vehicle travel reductions occur in several ways:

- Fewer vehicle trips are made when shorter trips can be made conveniently by foot, bicycle, or transit.

- Trip lengths are reduced when residential, retail, business, and entertainment activities are located in a compact area.
- Shorter distances between activity centers encourage walking and bicycling for some trips rather than driving.
- Clustered development promotes efficient transit service, which can shift even more trips from automobiles into alternate modes.
- Vehicle ownership lessens in dense pedestrian and transit friendly developments, due to the higher availability of other modes and the lower availability of parking (4).

SMART GROWTH CAN BE AN ASSET TO TXDOT

Smart growth can be an asset to TxDOT by promoting efficiency of transportation through land use/development relationships. Smart growth includes transportation and presents opportunities to transportation agencies. Smart growth can benefit TxDOT by being a tool to improve the efficiency of transportation service by making land use/development more transportation friendly.

Project delivery can be expedited and local acceptance of TxDOT projects improved through the use of smart growth practices. The benefits of expedited projects and local acceptance of projects can be accomplished through TxDOT's accommodating local preferences and improving the compatibility of projects to support local smart growth programs and projects. In addition, some local smart growth programs may be able to attract local resources to enhance TxDOT projects. *Introducing Smart Growth to Texas: Research Report*, produced under TxDOT's research program, shows examples of smart growth types of actions and projects already included in parts of TxDOT's normal program (5). This report also identified positive transportation-related benefits and experiences associated with smart growth as implemented elsewhere at the local, regional and state levels.

TXDOT'S STRATEGIC PLAN AND SMART GROWTH

Smart growth addresses each of the five stated objectives of the 2002 TxDOT Strategic Plan for 2003 to 2007, which are (6):

1. reliable mobility,

2. improved safety,
3. responsible systems preservation,
4. streamlined project delivery, and
5. economic vitality.

Reliable Mobility

Reliable mobility can be achieved using smart growth principles that include increasing availability of transportation alternatives by providing efficient, accessible multi-modal transportation options, which serve to reduce dependence on the use of private motor vehicles, lessening congestion and decreasing travel time and costs.

Improve Safety

Improved safety is a smart growth objective achieved through context-sensitive design measures, such as altering roadway design to reduce vehicle speed where there is the potential for pedestrian-vehicle conflict.

Responsible Systems Preservation

Smart growth principles encourage responsible systems preservation by maximizing the use of existing infrastructure and by coordinating land use and transportation planning to use existing infrastructure before building new facilities and to lessen sprawl to reduce the premature need for additional infrastructure.

Streamlined Project Delivery

Streamlined project delivery may be possible by utilizing smart growth strategies that encourage partnering of agencies and neighborhood and general citizenry toward common goals that help generate project compatibility and gain acceptance for projects in their early stages.

Economic Vitality

Economic vitality is a basic smart growth goal to attract and support business and other economic assets of the community and is linked to reliable transportation. Smart growth and development makes communities attractive places for businesses seeking a high quality of life for employees.

PROPOSED SMART GROWTH GOALS FOR TXDOT

The following goals are proposed as TxDOT goals for employing smart growth to help accomplish TxDOT transportation program objectives while better supporting community objectives and smart growth initiatives in Texas communities. The guidelines bulleted as (✓) are routinely being implemented by TxDOT at this time, and guidelines bulleted (☑) are occasionally being used by TxDOT. Those guidelines bulleted (•) are not currently in use by TxDOT, and are recommendations for TxDOT's consideration.

- Preserve right-of-way to meet ultimate state and regional goals.
- Support local smart growth initiatives by participating in local and regional planning processes.
- ☑ Participate in local development review.
- Encourage local entities to assume control of state highways that have been downgraded or replaced by new or parallel routes.
- Incorporate smart growth concepts and principles into TxDOT projects and programs consistent with TxDOT goals, and use the transportation-land use relationships to support community objectives while addressing transportation needs.
- ☑ Incorporate flexibility into TxDOT procedures, guidelines, criteria and standards.
- Adopt new commission rules as needed to achieve these goals.

PROPOSED SMART GROWTH GUIDELINES FOR TXDOT

The following guidelines suggest a means to meet these goals to promote and support implementation of local smart growth initiatives and to achieve the potential benefits to TxDOT programs and projects. The currently used policies can be more effective when used in conjunction with additional policies outlined here.

Preserve Right-of-Way to Meet Ultimate State and Regional Needs

TxDOT should support statewide and regional growth goals through the development of a long-range plan to acquire and/or preserve right-of-way for statewide and regional transportation

facilities. A cooperative effort could make right-of-way preservation effective in meeting these goals.

- ☑ Create a long-range right-of-way plan and protection program. Pursue the acquisition of access rights along on-system roadways as part of the long-range right-of-way protection plan as a measure to assist local communities with smart growth and growth management objectives.
- Develop a long-range right-of-way plan that produces projects that meet state and local objectives.
- ✓ Work with local jurisdictions and Metropolitan Planning Organizations (MPO) to incorporate planned on-system facilities into local plans such that ultimate right-of-way for state facilities can be acquired or preserved through the local platting process.
- Involve district and area offices (if not already involved) in the local review of proposed plats for developments that impact state roadways to coordinate and assist in dedication and preservation of right-of-way along state facilities as well as to assess and address any impacts or benefits that would result from each proposed plat or development on the state highway.
- ☑ Support and encourage thoroughfare planning at the county or regional level to help identify and preserve right-of-way to meet ultimate needs in unincorporated areas of counties in advance of development. This planning is needed due to increasing growth and development in unincorporated areas of the state, especially those near growing urban areas. It is also needed so the local road system can effectively provide access and connectivity between the state highway system and local development.
- ☑ Develop a proactive initiative in districts and area offices to receive and review county plats that affect state roads.

Support Local Smart Growth Initiatives by Participating in Local and Regional Planning Processes

TxDOT already participates in local government planning processes through MPO and other activities. TxDOT could support local and regional smart growth initiatives by coordinating planning and development of state transportation facilities with local smart growth

goals, objectives, and planning efforts. State transportation improvements should be sustainable and integrated with area land-use and economic development plans and should balance mobility needs with community objectives and character of development.

To coordinate with and facilitate local and regional smart growth efforts, TxDOT should:

- Increase participation in the local and regional planning process to facilitate coordination of TxDOT transportation system development with local integrated transportation and land use planning.
- ✓ Continue to work with local stakeholders to ensure that on-system roadways are incorporated into local and regional transportation plans in the proper local context and function.
- Create outreach and cooperative programs in partnership with local communities to promote sustainable transportation and development.
- Support and coordinate with communities on their smart growth plans and programs consistent with TxDOT's stated mission and programs (per TxDOT's Strategic Plan).
- ✓ Develop transportation systems consistent with regional goals and objectives for land development.
- Continue to encourage local and regional agencies to consider ultimate needs in addition to the 20 plus year planning horizon.
- Support and encourage legislation that would expand the applicability of Senate Bill 873 (SB 873) to counties located within or adjacent to TMAs of the state or to counties having one or more municipalities with a population over 10,000. SB 873 passed by the 77th Legislature in 2001, provided certain urbanized counties in Texas with the authority to develop and enforce transportation plans, along with the ability to acquire or preserve right-of-way in accordance with a transportation plan. The expansion of SB 873 to include additional urbanized counties would benefit TxDOT through increased dedication of state right-of-way as part of implementing county thoroughfare plans in unincorporated areas of the state.
- Support local and regional growth goals (including economic) through active participation in the planning, development and stewardship of municipal, county,

and regional transportation plans. This participation is important, since local and regional plans include on-system roadways.

- ☑ Coordinate with local jurisdictions through district and area offices to ensure that on-system facilities included in local plans are functionally integrated with area land use plans to ensure long-term sustainability of facilities and adjacent development.

Participate in Local Development Review

The objective of participation in local planning processes should be to:

- ensure that TxDOT interests are considered in developments along state facilities;
- ☑ partner with local entities to ensure that developments along on-system roadways are carried out in a manner consistent with preserving and enhancing the utility and efficiency of TxDOT facilities; and
- ensure that TxDOT facilities are consistent with local and regional transportation and land-use plans and policies.

Coordinating TxDOT and local objectives can streamline project development by promoting local approval and acceptance, and can support responsible on-system preservation through coordination of state and local development. Policies recommended to help achieve this goal are listed below.

- ☑ Increase participation in the local development process through review of site development plans and subdivision plats that affect state roadways.
- ☑ Coordinate and cooperate with other transportation and growth and development related agencies to make planning decisions supportive of combined development and transportation objectives to be mutually beneficial and cost-effective.
- ☑ Support local growth and development initiatives through responsive and context sensitive design of TxDOT's new and upgraded highways. To the extent possible, design key elements of facilities such as location, alignment, cross-section, access, facility type, and enhancements to support local and regional growth and development initiatives.

- ☑ Plan and design transportation projects to proactively preserve and enhance community and natural character and conserve natural and historic resources to the extent feasible.
- ☑ Create enhancement programs to make transportation projects assets to communities, and support and encourage enhancement programs (local or otherwise). Provide local jurisdictions with the opportunity to incorporate enhancements into state transportation projects that reflect community goals and development objectives.
- ✓ Use enhancement funds to help increase compatibility of TxDOT transportation improvements with adjacent areas. Enhancement costs should be reasonably in scale with total project cost and may include such items as sidewalks, landscaping, special grading, lighting, and enhanced structural details.
- ✓ Provide local jurisdictions the opportunity to fund the difference between a budgeted TxDOT standard treatment and a locally desired upgrade to an enhanced treatment.

Encourage Local Entities to Assume Control of On-System Highways That Have Been Downgraded or Replaced by New or Parallel Routes

TxDOT should allow and encourage local jurisdictions to assume control and maintenance responsibility of on-system roadways through downtown areas and urban cores where those roads no longer serve an important regional mobility function or as the primary route for through traffic within a community. This transfer of control can be done by designating qualifying highway segments as local function areas (LFAs). The purpose of an LFA is to (1) provide local entities, in coordination with TxDOT, the opportunity to undertake measures along designated urban segments of at-grade state highways to support local smart growth, economic, and development objectives and (2) allow the roadway to serve in a more localized function. Designating a highway as an LFA could accompany the construction of a local bypass or the relocation of a main highway out of a core area to an alternative location. Guidelines related to the development and designation of LFAs are as follows:

- Create a bypass policy to allow alternate streets to be used to carry traffic that would otherwise travel on existing at-grade state highways. Bypasses may be

streets parallel and adjacent to the state highway or highway segments that skirt the urbanized area.

- Provide through-traffic bypasses where consistent with local plans.
- Reroute through-traffic out of urban centers if locally desired.
- Supplement corridor capacity.
- Work with local jurisdictions to allow for the designation of LFAs.
- Designation of LFAs could include:
 - downtown or other major business districts and ‘main street’ type projects;
 - local business areas or districts of historical, cultural, or environmental significance; and
 - highway segments where local function and access needs outweigh the mobility needs of the identified segment of the highway.
- Designate LFAs only where an analysis shows that (1) the highway’s transportation function can still be satisfactorily accommodated after any proposed changes, either on the existing route or on an alternative route, and (2) TxDOT and the local agency requesting the LFA mutually agree on how the proposed changes will be funded.
- LFA designation may include relocation of the state highway to an alternative existing or new route and/or turning the state highway over to the local jurisdiction for control and maintenance.

Incorporate Local Smart Growth Concepts and Principles into TxDOT Projects and Programs Consistent with TxDOT Goals.

Use the transportation and land use relationship to support community objectives and address transportation issues that affect quality of life. Decisions made in the planning and project development stages have a significant impact on right-of-way and design elements of TxDOT projects. In light of this, TxDOT should involve area stakeholders in an open, flexible, and multi-disciplined approach to planning and project development to understand and consider local insights and objectives early in the process. Specific policies to accomplish this include:

- For local areas practicing smart growth, to the extent possible, incorporate smart growth concepts and principles consistent with TxDOT goals into TxDOT projects.

- Incorporate local smart growth goals as one of the factors considered in the prioritization and selection of projects to the Statewide Transportation Improvement Plan (STIP) and the Transportation Improvement Programs (TIPs) of districts and MPOs throughout the state.
- ☑ Develop a proactive initiative in districts and area offices to receive and review county plats that affect state roads.
- ☑ Use access management to harmonize the interaction and functions between transportation facilities and adjacent land use by influencing the nature and intensity of development on property.
- ☑ Educate TxDOT staff to understand the benefits and workings of smart growth and interagency cooperation and true stakeholder participation, land use-transportation relationships, and how they affect community well-being.

Incorporate Flexibility into TxDOT Procedures, Guidelines, Criteria and Standards

TxDOT should permit flexibility in the use of its guidelines, procedures, and standards for key design elements of roadways to develop design solutions that balance the need for safety and mobility with preservation of desired aesthetic, environmental, or historic features of a new roadway project. Examples of incorporating flexibility into TxDOT plans and projects are provided below.

- ☑ In urban areas, utilize a flexible and creative design approach that balances objectives of safety and mobility with context-sensitive designs that preserve unique or important characteristics or elements of the local area.
 - Freeway/expressway: Provide flexibility in the design of freeways and expressways to enhance compatibility with and support for adjacent areas.
 - Arterial roads: Develop flexible design criteria for arterial roadways that provide for a range of design treatments that are context sensitive while satisfying fundamentals of roadway design, yet remain within the acceptable limits of American Association of State Highway and Transportation Officials (AASHTO) guidelines.
- Design arterials to safely accommodate all modes of travel.

- ✓ Maintain current design standards for rural roadways and continue to develop and maintain roadways in rural areas that minimize disruption to the surrounding environment, preserve rural settings, and retain the physical and scenic character of these areas.

Adopt New Commission Rules as Needed

- As needed, TxDOT should adopt new rules to support implementation of the policies described in this report.

CONCLUSIONS

Smart growth can help TxDOT meet the objectives of its strategic plan for 2003 to 2007. Employing smart growth principles in routine transportation planning can also help TxDOT in working cooperatively with local and regional transportation agencies within the state and to expedite or facilitate project delivery.

Achieving local smart growth objectives will require coordinating development of TxDOT projects with the goals of local communities and agencies pursuing smart growth. TxDOT staff should be knowledgeable of smart growth principles and goals and should be trained to facilitate community involvement in (smart growth) transportation planning in order to increase the acceptance and approval of TxDOT projects.

In addition to adding selected smart growth principles to planning procedures, TxDOT should create policies and strategies for smart growth implementation. TxDOT may also need to adopt new commission rules to integrate smart growth transportation planning principles into routine TxDOT planning practices.

RECOMMENDATIONS

If TxDOT wishes to coordinate with and support local smart growth initiatives and programs, the following steps are recommended:

- Review the policies in this report with TxDOT management and administration.
- Select policies for possible addition to TxDOT guidance documents and refine if needed.

- Develop a presentation describing new smart growth policies and how these policies will help TxDOT work more effectively with local governments.
- Assemble sample examples of how the application of smart growth policies has worked in Texas and elsewhere.
- Review proposed policies with local government (MPOs, Councils of Government, counties, cities, and others) prior to submitting to the Texas Transportation Commission; refine as appropriate based on input received.
- Develop additional policies or guidelines as necessary.
- Draft appropriate rules for consideration by the Texas Transportation Commission.

REFERENCES

- 1 “Smart Growth — More Efficient Land Use Management,” from *Online TDM Encyclopedia* <http://www.vtpi.org/tdm/tdm38.htm>.
- 2 *Why Smart Growth: A Primer*, International City/County Management Association – Smart Growth Network, Washington, D.C., 1998.
- 3 O’Neill, D., *The Smart Growth Tool Kit*, Urban Land Institute, Washington, D.C., 2000.
- 4 U.S. EPA, *Our Built and Natural Environments*, Environmental Protection Agency, Report No. EPA-R-00-005, Washington, D.C., 2000.
- 5 Bochner, B., Lewis, C., Rabinowitz, R., Higgins, L., and Zietsman, J., *Introducing Smart Growth To Texas: Research Report*, Research Report 4238-1, Texas Transportation Institute, College Station, Texas, September, 2002.
- 6 *Creating Tomorrow’s Transportation System, Strategic Plan 2003-2007*, Texas Department of Transportation, ftp://ftp.dot.state.tx.us/pub/txdot-info/lao/strategic_plan.pdf , May 30, 2002.