



Transportation-Housing Linkages

Requested by
Garth Hopkins, California Transportation Commission

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Executive Summary

Background

California's housing shortage has resulted in many Californians living farther and farther from job centers to find affordable housing. To address the housing shortage, Gov. Gavin Newsom has issued a call to build 3.5 million housing units over the next seven years. Transportation agencies do not have direct control over new housing development, but housing, land use and transportation are inextricably linked, and major transportation investments influence patterns of housing development. The California Department of Transportation (Caltrans) is investigating measures that will integrate transportation investments and affordable housing development.

The agency is currently interested in exploring the programs and practices implemented by other state departments of transportation (DOTs), metropolitan planning organizations (MPOs), councils of governments (COGs) and regional planning agencies that link transportation investments and housing. Of particular interest are:

- Programs and practices that promote smart growth, including housing planning and production. These include agency practices to incentivize local jurisdictions to increase the supply of affordable and infill housing.
- The limitations or challenges associated with these programs and practices.
- How these programs and practices are funded.

To assist Caltrans in this information-gathering effort, CTC & Associates conducted an online survey of state DOTs and selected MPOs, COGs and regional planning agencies that examined these agencies' practices linking transportation investments and housing. A literature search was also conducted to identify publicly available resources describing relevant practices.

Summary of Findings

Survey of Practice

An online survey was distributed to state DOT members of the American Association of State Highway and Transportation Officials (AASHTO) Committee on Planning who were expected to have experience with programs and practices linking transportation investments and housing. The survey was also distributed to representatives of 10 MPOs, COGs and regional planning agencies who were expected to have similar experience.

Fourteen agencies responded to the survey, including state transportation agencies in Arizona, Connecticut, Idaho, Kansas, Minnesota, Nebraska, Oregon, Wisconsin and Wyoming. Representatives of regional planning agencies in Dallas-Fort Worth; Denver; the Greater Kansas City region in Kansas and Missouri; Portland, Oregon; and the Twin Cities metropolitan area in Minnesota also responded.

Ten of the 14 agencies responding to the survey reported that the production of affordable housing is an issue in their states:

- Connecticut DOT.
- Denver Regional COG.
- Idaho Transportation Department.
- Mid-America Regional Council (MARC) of Greater Kansas City.
- Metro in Portland.
- Metropolitan Council in the Twin Cities.
- Minnesota DOT.
- North Central Texas COG.
- Oregon DOT.
- Wisconsin DOT.

Supporting Infrastructure or Transit Service to Encourage New Housing

Respondents from seven agencies described policies or transportation programs that support the infrastructure or transit service necessary to encourage new affordable or infill housing development:

- Using federal grants and state bonding funds, Connecticut DOT recently opened two new transit services: CTfastrak, the state's first bus rapid transit system, and CTrail Hartford Line, which connects New Haven and Hartford, Connecticut, and provides services to a limited number of other locations. The agency also works with developers, municipalities and other state agencies to facilitate and promote housing and mixed-use development near its transit services. The respondent noted that many Connecticut COGs actively participate in framing transit- and housing-supportive policies.
- Denver Regional COG's regional transportation plan addresses affordable housing production. Transportation Improvement Program (TIP) funding considers support for designated urban centers, while a TIP set-aside program supports planning for urban centers and needed infrastructure.
- MARC's Planning Sustainable Places (PSP) planning program funds projects that integrate transportation, land use and the environment, however, housing has been a secondary focus of four recent programming cycles (with transportation as the dominant focus). Housing is also a consideration of the agency's long range transportation plan.
- Voters recently approved a \$652 million Metro regional bond measure to fund affordable housing construction in partnership with local governments. Metro, the largest MPO in Oregon, oversees the 2040 Growth Concept and related Regional Framework Plan, which contain policies for housing development. The agency's corridor planning work has evolved into an investment areas model, where major transportation project planning is directly linked with related transportation and community development goals and activities.
- Metropolitan Council's Regional Solicitation for transportation funds incentivizes affordable housing development by awarding points to projects in communities with policies and practices that lead to affordable housing.
- North Central Texas COG's Sustainable Development Program uses federal and local dollars to fund bicycle, pedestrian and transit infrastructure that supports mixed-use development, a large component of which is residential housing.
- Oregon DOT uses statewide transportation plan policies to support coordinated land use, housing, transportation, and transit planning and development. The Statewide Transportation Improvement Fund (STIF) and the Transportation Growth Management (TGM) program, which target new transit systems and services as well as sustainable communities, encourage coordinated planning through the use of funding criteria.

Incentive and Disincentive Funding Practices

None of the responding agencies aim to influence housing decisions by withholding transportation funds to penalize local jurisdictions. Five regional planning agencies and one state DOT described funding programs that incentivize investments supporting smart growth, including a TIP set-aside program for planning in urban centers (Denver Regional COG); multiple grant programs that link equitable development and transportation (Metro); federal funding for projects that plan for multimodal solutions (Metropolitan Council); and a voluntary program for local governments and transportation agencies who receive an offset in the form of Transportation Development Credits when they adopt 50 percent of the program's policies, which encompass air quality, environment, operations, roadways and sustainable development (North Central Texas COG).

Planning and Prioritizing Multimodal Transportation Projects

When planning and prioritizing multimodal transportation projects, most respondents consider access and proximity to market-rate housing, affordable housing and employment centers. The Connecticut DOT respondent noted that the agency balances various fiscal, performance-based and location-based criteria during the planning process, citing the prioritization of rail stations for the CT Rail Hartford Line as an example. MARC includes housing and employment centers in the selection criteria for its PSP program, although housing isn't explicitly considered for flexible funding (the agency uses the density of activity centers as a proxy). In Minnesota, housing is considered when estimating demand and future use for all modes and in urban pavement projects, stand-alone nonmotorized infrastructure, and state bicycle routing and pedestrian planning.

Two agencies—Kansas DOT and Metro—consider housing for transit funding. When reviewing public transit grant applications for Federal Transit Administration (FTA) programs, Kansas DOT considers access to employment centers, housing and medical facilities. Metro collaborates with TriMet, the region's transit agency, when determining geographic priorities for major transit projects.

Transportation agencies in five states—Arizona, Idaho, Nebraska, Wisconsin and Wyoming—do not explicitly consider housing in planning and prioritizing processes.

Using Transit Investments to Promote Housing Development

Only one agency—North Central Texas COG—reported on the use of transit investments to ease or resolve the physical impediments to housing development. With support from an FTA grant, the agency's Sustainable Development Program is conducting a major study that is examining improvements of the last-mile connections between light rail stations and housing.

Promoting Smart Growth With Transportation Improvement Program Criteria

Two DOTs (Minnesota and Oregon) and three regional planning agencies (Denver Regional COG, MARC and Metro) responding to the survey include criteria in their TIPs that promote transportation investment in smart growth areas. While Metro uses multiple unspecified criteria, Denver Regional COG uses specific criteria that link housing, urban center development and other factors. MARC's criteria include activity center density and whether the project is located within a transit or Creating Sustainable Places corridor, or is a complete street. In Minnesota and Oregon, projects are funded that score higher in expanding or improving the state's multimodal transportation system, or that promote greater density and active transportation plans.

Coordinating With Entities Responsible for Housing

Focused coordination with housing development stakeholders during the transportation planning and programming processes is practiced by three agencies responding to the survey: Connecticut DOT, MARC and Metro. Arizona and Wyoming DOTs and the Metropolitan Council described a more general approach to engaging with housing-related stakeholders, while Denver Regional COG practices only “peripheral” coordination. Minnesota DOT generally does not engage in coordination.

In the future, both North Central Texas COG and Oregon DOT plan to more actively coordinate with housing-related interests during the transportation planning and programming processes, specifically by addressing the jobs-housing balance (North Central Texas COG) and engaging with the state housing finance agency (Oregon DOT).

Promoting Coordination Between Housing and Transportation

Respondents provided limited information about the use of federal, state and local funding; best practices; or partnerships that promote coordination between housing and transportation. Eight respondents (Connecticut, Minnesota and Oregon DOTs, and Denver Regional COG, MARC, Metro, Metropolitan Council and North Central Texas COG) addressed this issue, and all reported the use of federal funding to advance transportation and housing coordination.

Other common practices used to promote housing and transportation coordination include federal best practices (Connecticut and Oregon DOTs, MARC and North Central Texas COG); state funding (Connecticut and Oregon DOTs, Metro and North Central Texas COG); state partnerships (Connecticut and Minnesota DOTs, Metro and North Central Texas COG); and local partnerships (Connecticut DOT, MARC, Metro and North Central Texas COG).

Outreach and Education

Several agencies described efforts to inform transportation professionals about connecting transportation investments to housing. Five agencies (Connecticut, Oregon and Wisconsin DOTs, MARC and Metro) described ongoing guidance associated with their agencies’ statewide plans. MARC recently hosted a regional summit on housing and transportation, and North Central Texas COG reported on its regional Transit-Oriented Development (TOD) Task Force, a forum that encourages local governments and transit agencies to discuss, coordinate and promote issues related to TOD, including affordable housing.

Using Transportation Funds to Increase New Housing Development

Respondents provided recommendations for using local, regional or state transportation funds as an incentive to increase new housing development, especially affordable new housing development. Key recommendations included connecting housing and transit (Connecticut DOT and MARC); encouraging collaboration between transportation and community development/housing agencies (Metropolitan Council and Minnesota DOT); funding research and planning (North Central Texas COG); investing in infrastructure (Denver Regional COG); making better use of data (MARC); offering funding flexibility (North Central Texas COG); needing political leadership (Metro); and working within structural limitations (Oregon DOT).

Coordinating Transportation Funding With Housing Planning

Local, regional or state transportation funds could be better used to encourage coordination with housing planning and increase new housing development, according to several respondents. Among the recommendations offered were early and expanded collaboration and coordination

with key stakeholders (Connecticut and Oregon DOTs and MARC), housing-specific funding programs and funding decisions (Metro and North Central Texas COG), and other planning-related efforts (Metro and Metropolitan Council).

Related Research and Resources

An in-depth literature search of domestic and international resources was conducted to gather information about programs and practices linking transportation investments and housing.

National Resources

Several national resources address measures to create affordable housing and build capacity, including three U.S. Department of Housing and Urban Development guides and a 2014 publication by Reconnecting America that includes case studies that address affordable housing, station area planning, community development corporations, public-private partnerships, joint development, land assembly and housing trust funds. Mixed-income TOD and funding and financing opportunities are the topics of two FTA resources: a 2009 publication that includes case studies of successful communities and 11 strategies to encourage mixed-income TOD housing at the state, region and local levels; and a web page with links to grants, tax credits, loans and financing for TOD projects.

State and Local Practices

Highlighting this section is the American Council for an Energy-Efficient Economy's State Energy Efficiency Scorecard, which "ranks states on their energy efficiency policy and program efforts and provides recommendations for ways that states can improve their performance in a variety of policy areas." The report provides successful strategies for integrating transportation and land use planning and increasing transportation system efficiency. It also addresses the use of incentives for developers to help align housing and transportation choices.

Eleven state transportation and housing resources are provided, including the Annual Planning Survey Results from the California Governor's Office of Planning and Research and two 2015 resources from the Institute of Transportation Studies at the University of California, Davis, which explore the links between land use policy and impacts. A 2019 Connecticut State Department of Housing statute describes incentives for creating "Incentive Housing Zones (IHZ) in eligible locations, such as near transit facilities, an area of concentrated development or an area because of existing, planned or proposed infrastructure that is suitable for development as an IHZ." A 2019 Massachusetts toolkit "encourages cities and towns to establish new overlay zoning districts to promote housing production and, more generally, smart growth development." Other housing development incentives are discussed in Texas' Neighborhood Housing and Community Development Program resources. A 2018 resource describes a public-private fund that was created in the state of Washington to "help finance the acquisition of property along transit corridors to preserve the affordability of future housing and community facilities."

Metropolitan Planning Organization Practices

A 2019 online journal article discusses the state-of-the-practice in connecting and coordinating transportation and land use planning among 30 MPOs. Two Metropolitan Council resources address grant funds: a 2019 report that describes the distribution of grant funding under Minnesota's Livable Communities Act and an undated resource that promotes TOD grants. A 2013 journal article assesses policies that promote development in higher-density, mixed-use centers in four metropolitan areas: Puget Sound, Washington; Portland; Denver; and San Diego.

International and Related Resources

International resources include a 2017 journal article about TOD in China, a 2017 case study of integrated housing and railway development in Japan, and an undated resource from the Campaign for Better Transport that examines how sustainable transport can support new development. A 2015 resource looks at funding for large-scale urban transit infrastructure.

Related resources include a 2018 document that promotes funding for equitable TOD, primarily using FTA policies and programs. A 2013 Reconnecting America publication describes 42 state, regional/transit agency and local programs for funding TOD plans and projects. A 2012 handbook describes innovative approaches to smarter transportation investments used by state transportation leaders, and a Center for Neighborhood Technology tool provides a comprehensive approach to evaluating affordability of place.

Gaps in Findings

While feedback from agencies that responded to the survey was thorough and detailed, overall response to the survey—by state transportation agencies and regional planning agencies—was limited. Further attempts to engage state transportation and regional planning agencies could produce further guidance and perspectives about affordable housing development and transportation investments.

Next Steps

Moving forward, Caltrans could consider:

- Examining in greater detail the funding programs and practices described in this report that support transportation investments and affordable housing development, including:
 - The housing-related objectives of Denver Regional COG's Metro Vision plan, which includes Outcome 3: Connected urban centers and multimodal corridors throughout the region accommodate a growing share of the region's housing and employment.
 - MARC's PSP program.
 - Metro's Partnerships and Innovative Learning Opportunities in Transportation program, and the use of its investment areas model for corridor planning efforts, which directly links major transportation project planning with related community development goals.
 - North Central Texas COG's Policy Bundle, which provides offsets to local governments and transportation agencies that adopt policies addressing issues that affect transportation in the region.
 - Metropolitan Council's Regional Solicitation program, which incentivizes affordable housing development by awarding points to projects in communities with policies and practices that lead to affordable housing.
 - Oregon DOT's public transportation plan, which includes policies that foster housing development near public transportation routes and services, and its STIF and TGM program.

- Reviewing documentation and other resources provided by survey respondents and discovered through the literature search that describe innovative funding programs and practices.
- Engaging with state transportation and regional planning agencies not responding to the survey to potentially identify other affordable housing development and transportation investment programs and practices.

Detailed Findings

Background

In response to California's chronic housing shortage Gov. Gavin Newsom has issued a call to significantly increase the number of housing units that are constructed each year, with a goal of building 3.5 million units over the next seven years. Transportation agencies do not have direct control over new housing development, but housing, land use and transportation are inextricably linked. Many Californians are living farther and farther from job centers to find affordable housing, and major transportation investments influence patterns of housing development.

The California Department of Transportation (Caltrans) is exploring measures that integrate housing and transportation investments to help address the state's housing shortage. The agency is currently interested in the programs and practices implemented by other state departments of transportation (DOTs), metropolitan planning organizations (MPOs), councils of governments (COGs) and regional planning agencies that link transportation investments and housing. Of particular interest are the following:

- Programs and practices that promote smart growth, including housing planning and production. These include agency practices to incentivize local jurisdictions to increase the supply of affordable and infill housing.
- The limitations or challenges associated with these programs and practices.
- How these programs and practices are funded.

To assist Caltrans in this information-gathering effort, CTC & Associates summarized the results of an online survey of state DOTs and selected MPOs, COGs and regional planning agencies that examined these agencies' practices linking transportation investments and housing. A literature search was also conducted to identify publicly available resources describing relevant practices. Findings from these efforts are presented in this Preliminary Investigation in two areas:

- Survey of practice.
- Related research and resources.

Survey of Practice

An online survey was distributed to state DOT members of the American Association of State Highway and Transportation Officials (AASHTO) Committee on Planning. The survey was also distributed to the following MPOs, COGs and regional planning agencies expected to have experience with programs and practices linking transportation investments and housing:

- Atlanta Regional Commission.
- Boston Region Metropolitan Planning Organization.
- Chicago Metropolitan Agency for Planning.
- Denver Regional COG.
- Maricopa Association of Governments (Phoenix, Arizona).
- Metro (Portland, Oregon).

- Metropolitan Council (Twin Cities, Minnesota).
- Mid-America Regional Council (MARC) (MARC is the MPO and COG for the Greater Kansas City region in Kansas and Missouri).
- North Central Texas COG (Dallas-Fort Worth).
- Puget Sound Regional Council (Seattle, Washington).

The survey questions are provided in [Appendix A](#). The full text of survey responses is presented in a supplement to this report.

Summary of Survey Results

Fourteen agencies responded to the survey, including nine state transportation agencies:

- Arizona.
- Connecticut.
- Idaho.
- Kansas.
- Minnesota.
- Nebraska.
- Oregon.
- Wisconsin.
- Wyoming.

Five MPOs, COGs or regional planning agencies also responded:

- Denver Regional COG.
- MARC.
- Metro.
- Metropolitan Council.
- North Central Texas COG.

Survey results are summarized below in the following topic areas:

- Significance of affordable housing.
- Supporting infrastructure or transit service to encourage new housing.
- Incentive and disincentive funding practices.
- Planning and prioritizing multimodal transportation projects.
- Using transit investments to promote housing development.
- Promoting smart growth with Transportation Improvement Program (TIP) criteria.
- Coordinating with entities responsible for housing.
- Promoting coordination between housing and transportation.
- Outreach and education.
- Using transportation funds to increase new housing development.
- Coordinating transportation funding with housing planning.

Publications related to the programs and practices described by survey respondents follow these discussions in a **Related Resources** section beginning on page 22.

Significance of Affordable Housing

Respondents from 10 of the 14 agencies responding to the survey reported that the production of affordable housing is an issue in their states:

- Connecticut DOT.
- Denver Regional COG.
- Idaho Transportation Department.
- MARC.
- Metro.
- Metropolitan Council.
- Minnesota DOT.
- North Central Texas COG.
- Oregon DOT.
- Wisconsin DOT.

Supporting Infrastructure or Transit Service to Encourage New Housing

Seven respondents reported on policies or transportation programs that support the infrastructure or transit service necessary to encourage new affordable or infill housing development. Survey responses are summarized below.

Connecticut DOT (transit). Connecticut DOT recently opened two new transit services:

- CTfastrak. This is Connecticut's first bus rapid transit system, launched in 2015.
- CTrail Hartford Line. Opened in 2018, this portion of a commuter rail service connects New Haven and Hartford, Connecticut; some trains continue to Springfield, Massachusetts, using Amtrak's New Haven–Springfield Line.

Investments in these transit services and others have involved a combination of federal grants and state bonding. In addition, the agency works with developers, municipalities and other state agencies to facilitate and promote housing and mixed-use development near its transit services.

MPO and Local Agency Use of the Policy or Program: Many of the COGs in Connecticut have been active in framing transit- and housing-supportive policies. For example, the Capitol Region COG provides various policy guides and tools for municipalities to enable them to draft context-sensitive zoning regulations and economic development policies.

Denver Regional COG (Metro Vision policies). Housing-related objectives contained in Metro Vision, the agency's regional transportation plan, address the production of affordable housing (for example, Outcome 3 recommends that connected urban centers and multimodal corridors throughout the region accommodate a growing share of the region's housing and employment). TIP funding considers support for designated urban centers; a TIP set-aside program supports planning for urban centers and the infrastructure to support them.

MARC (Planning Sustainable Places). The agency's Planning Sustainable Places (PSP) planning program funds projects that integrate transportation, land use and the environment. Housing is listed as an aspect of the agency's long range transportation plan's (LRTP's) goal for Access to Opportunity, but the plan does not specifically focus on housing. Many

would consider housing to be implicit in the activity centers' and corridors' focus on transportation planning, but housing is not explicitly addressed.

MPO and Local Agency Use of the Policy or Program: PSP has now funded four programming cycles. Many of the entities that have received funding address housing in their final plans. However, because Surface Transportation Program funds provide the funding for these plans, the dominant focus of each plan is transportation; other areas, such as housing, are a secondary focus.

Metro (regional bond measure and other practices). In November 2018 voters approved a \$652 million Metro regional bond measure to fund affordable housing construction in partnership with local governments. Metro oversees the 2040 Growth Concept and related Regional Framework Plan, which contain policies for housing development consistent with the goals that form the 2040 concept. Metro's corridor planning work has evolved into an investment areas model, where major transportation project planning is directly linked with related transportation and community development goals and activities. An example of this is the Southwest Corridor, where the agency is working to prevent housing displacement. Metro also provides \$3 million in annual funding for its transit-oriented development (TOD) program that emphasizes equitable development near transit.

MPO and Local Agency Use of the Policy or Program: Metro is the largest MPO in Oregon. Other Oregon MPOs may have similar programs that operate on a smaller scale.

Metropolitan Council (Regional Solicitation). The agency's Regional Solicitation for transportation funds incentivizes affordable housing development by awarding points to projects in communities with policies and practices that lead to affordable housing. The respondent noted that this program does not direct transit or other modes directly to new housing.

North Central Texas COG (Sustainable Development Program). Using federal and local funding, the agency's Sustainable Development Program funds bicycle, pedestrian and transit infrastructure that supports mixed-use development, a large component of which is residential housing.

Oregon DOT (special funding programs). The agency's statewide transportation plan policies support coordinated land use, housing, transportation, and transit planning and development. Some funding programs encourage coordinated planning through use of their funding criteria. Examples include the new Statewide Transportation Improvement Fund (STIF) and Transportation Growth Management (TGM) program:

- A STIF fact sheet describes the expected uses of STIF funds—creating new transit systems and services, maintaining or continuing systems and services, creating plans to improve service, and meeting match requirements for state or federal funds used to provide public transportation services. In its first funding cycle, STIF is intended to primarily fund expanded or improved services.
- TGM planning grants “help local jurisdictions plan for streets and land to lead to more livable, sustainable and economically vital communities. This planning increases opportunities for transit, walking and bicycling.” Two types of grants are awarded:

- Transportation system planning grants “give Oregonians a range of transportation choices and meet requirements of the Oregon Transportation Planning Rules.”
- Integrated land use and transportation planning grants “promote communities that meet the needs of all Oregonians to live, work and move about.”

MPO and Local Agency Use of the Policy or Program: Oregon has supported planning and coordination activities for many years. The city of Portland and Portland’s Metro MPO offer examples of highly developed policies and some independent funding programs to encourage the production of affordable housing. Many of the state’s smaller MPOs, cities and counties also have related policies.

Other respondents provided their perspectives on affordable housing in their states:

- The Idaho Transportation Department respondent noted that “Idaho has completely different economic and housing needs than California,” and that it may not be helpful to use Idaho’s experience to inform an examination of the linkages between transportation and housing policy in California.
- In Kansas, the Wichita MPO funded a recently completed Walkable Development Plan. This plan created a multimodal strategy for improving safety, mobility and livability in central Wichita and promoting opportunities for infill development.
- While Wyoming does struggle with areas that lack affordable housing, state laws and political sentiment do not facilitate influencing what is considered a local issue.

Incentive and Disincentive Funding Practices

Five regional planning agencies and one state DOT described funding programs that incentivize investments that support smart growth principles. None of the responding agencies withhold transportation funds to penalize local jurisdictions in an effort to influence housing decisions. Table 1 below summarizes survey responses.

Table 1. Funding Practices to Incentivize Smart Growth Investments

Agency	Program or Practice
Denver Regional COG	A TIP set-aside program supports planning in urban centers.
MARC	The PSP program specifically focuses on multimodal solutions that integrate transportation, land use and the environment.
Metro	The agency operates multiple grant programs with the intention of linking equitable development and transportation, including: <ul style="list-style-type: none"> ● TOD. ● Regional travel options. ● Safe Routes to Schools. ● System management and operations. ● Partnerships and Innovative Learning Opportunities in Transportation (PILOT) program for emerging technologies. ● 2040 planning and development grants. ● Regional flexible funds allocation.

Agency	Program or Practice
Metropolitan Council	<i>Regional Solicitation.</i> This program awards approximately \$180 million in federal funds every two years. Those seeking funding are advised to “address the project’s role in the regional transportation system and regional economy, age and condition of the infrastructure, equity and affordable housing, safety and connections.” The respondent noted that the program is “very data/score-intensive” and awards points to projects that plan well for multimodal solutions.
North Central Texas COG	<i>Policy Bundle.</i> This program is a group of policies that local governments and transportation agencies may voluntarily adopt. Cities and agencies that adopt at least 50 percent of these policies receive an offset of local funds in federal transportation projects in the form of Transportation Development Credits. Policies span a wide range of topics in the broad areas of air quality, aviation, environment, freight, operations, roadways, safety, security and sustainable development.
Oregon DOT	The TGM and STIF programs are good examples of incentivizing smart growth. When the agency funds a transportation modernization program, the criteria for project acceptance generally involve consistency across the plans that address land use (local plans, multimodal transportation plans and comprehensive plans).

Planning and Prioritizing Multimodal Transportation Projects

Respondents were asked how their agencies consider existing and future land use, as well as access and proximity to market-rate housing, affordable housing and employment centers, when planning and prioritizing multimodal transportation projects. Most respondents consider housing or related criteria when prioritizing these projects. Highlights from survey responses are presented below.

Agencies Considering Housing and Related Criteria

- Connecticut DOT balances a variety of fiscal, performance-based and location-based criteria when prioritizing multimodal transportation projects. The respondent offered the prioritization of rail stations for the CTrail Hartford Line as a good example of how the agency considers housing and employment centers in its planning processes. When prioritizing the four remaining stations, the agency will take into consideration those municipalities that have development plans underway or that have made the necessary preparations for transit-supportive development.
- Denver Regional COG considers housing and related criteria when preparing its regional transportation plan and TIP.
- Metropolitan Council awards Regional Solicitation points to projects that are proximate to population, employment and education. (Every two years, the agency’s Regional Solicitation process allocates federal transportation funds to locally initiated projects to meet regional transportation needs.)

The respondent noted that “[p]olitically, this is a transportation funding program, first and foremost. To this point, safety, mobility and emissions have been the key driving factors. It is a fairly quantitative process and we have not arrived at any scoring criteria, save for the aforementioned housing incentive.”

- MARC includes housing and employment centers in the selection criteria to evaluate project applications for its PSP program. However, housing isn’t explicitly considered for

flexible funding; instead, the agency uses the density of activity centers as a proxy given the highest classification has the highest mix of land uses and is the most walkable.

- Minnesota DOT considers housing and related factors when estimating demand and future use for all modes. Housing is also included in project scoring for urban pavement projects and stand-alone nonmotorized infrastructure, and is a factor in the agency's state bicycle routing and pedestrian planning.
- North Central Texas COG reported an emphasis in its TOD planning and research work on access and proximity to market-rate housing. The agency is currently considering future work in the area of the jobs-housing balance.

Existing and future land uses are incorporated into the agency's transportation modeling as part of its Mobility 2045 LRTP. The agency's Sustainable Development Program considers land use when developing project recommendations, reviewing applications for funding, developing corridor and downtown plans, and planning for TOD.

- In Oregon, local jurisdictions and MPOs coordinate transportation system plans with comprehensive plans that typically involve areas identified where housing, employment and transportation options will work together. Typically, agencies are required to maintain consistency across transportation and comprehensive plans for project selection. An investment identified by partners as important for bringing housing and multimodal transportation together would likely do well under the criteria used for project selection.

Agencies Considering Housing for Transit Funding

- Kansas DOT considers access to employment centers, housing and medical facilities in connection with its reviews of public transit grant applications for Federal Transit Administration (FTA) Section 5310 and Section 5311 funds. (Section 5310 refers to FTA's Enhanced Mobility of Seniors and People With Disabilities program; Section 5311 is FTA's Rural Area Formula Program Grants program.)
- Metro's 2040 Growth Concept provides spatial typologies for centers, corridors, employment areas and neighborhoods. Geographic priorities for major transit projects are determined in collaboration with TriMet, the region's transit agency.

Agencies Not Explicitly Considering Housing

- For Arizona DOT, current and future demographic growth projections are an input to the evaluation process; however, land and housing values are not considered at the planning stage. The respondent noted that the absence of data is a barrier to including housing-related values at the planning stage.
- Idaho Transportation Department considers land use in travel demand forecasting but does not consider housing and related criteria. The respondent noted that "[t]his isn't under the jurisdiction of our agency."
- Nebraska's four MPOs are involved in developing detailed land use data that is used in the MPOs' travel demand models and to develop the agencies' LRTPs. Nebraska DOT is involved in developing this data but does not influence the development of land use forecasting. As the respondent noted, "[a]ffordable housing has traditionally not been a significant problem in our state."
- Wisconsin DOT considers land use and multimodal access within the scoping and development of state projects and within its LRTP.

- In Wyoming, considering land use is a local prerogative, and the state DOT does not try to influence these decisions. The funding available for multimodal projects in the state, especially FTA funds, is so minimal that there isn't any leverage to influence land use.

Using Transit Investments to Promote Housing Development

Only one agency—North Central Texas COG—reported on the use of transit investments to ease or resolve the physical impediments to housing development. The agency is addressing this issue indirectly through a major study in process through its Sustainable Development Program. This study, conducted with the support of a grant from FTA, is examining improvements of the last-mile connections between light rail stations and housing.

A November 2016 online magazine article describes the grant as “focus[ing] on ‘last mile’ accessibility to transit and parking needs around the stations. For example, filling in missing sidewalks and making pedestrian crossings safer can make it easier for pedestrians to access rail stations.” More information about the grant is available in **Related Resources**, on page 27.

Promoting Smart Growth With Transportation Improvement Program Criteria

Five respondents reported on criteria in their agencies’ respective TIPs that promote transportation investment in smart growth areas. Table 2 below summarizes survey responses.

Table 2. Transportation Improvement Program Criteria Used to Promote Smart Growth

Agency	Practice
Denver Regional COG	The agency uses specific criteria that link housing, urban center development and other factors.
MARC	<p>The agency evaluates applications for the TIP using the following criteria:</p> <ul style="list-style-type: none"> • Is the project within a transit corridor? • Is the project within a Creating Sustainable Places corridor? • Is it a PSP project? • Is the project a complete street? • Activity center density. • Number of Sustainable Code Framework principles exhibited. • Breakdown of mode traffic for the project.
Metro	The respondent noted the use of multiple unspecified criteria related to the agency’s 2040 Growth Concept.
Minnesota DOT	More points are given to urban projects with greater density and active transportation plans.
Oregon DOT	<p>The respondent cited criteria under the agency’s Enhance modernization program. The Enhance program is described in the Portland Bureau of Transportation document <i>Major Grant Fund Sources for Capital Projects</i> (see https://www.portlandoregon.gov/transportation/article/550192):</p> <p>Funding is for projects, investment and programs that enhance, expand or improve the state’s multimodal transportation system. Typically, projects make key connections between modes or facilities, improve access to economic opportunities, and/or address identified bottlenecks.</p>

Coordinating With Entities Responsible for Housing

Focused coordination with the entities responsible for planning and entitlement of housing and affordable housing during the transportation planning and programming processes appears to be a fairly limited practice among the responding agencies. The Denver Regional COG respondent described only “peripheral” coordination; Minnesota DOT generally does not engage in coordination.

The following summarizes survey responses describing some degree of current or planned coordination that engages housing-related interests during the transportation planning and programming processes.

Focused coordination. Some respondents described a focused approach to engaging with housing-related stakeholders:

- *Connecticut DOT:* The agency coordinates with Connecticut’s Department of Housing (DOH) on specific projects that present a nexus between transportation and housing. In general, when DOH reviews applications for housing funding, DOH includes proximity to transit service in its scoring criteria.
- *MARC:* The Sustainable Places Policy Committee serves as the land use committee for MARC and includes representatives from the Kansas City Housing Authority and a local affordable housing developer as well as planning directors from several cities. The committee participates in the project prioritization process for MARC’s transportation planning and programming.

MARC has also worked with five cities to develop the cities’ Affirmatively Furthering Fair Housing (AFFH) plans for submission to the U.S. Department of Housing and Urban Development (HUD), and has worked to integrate strategies from those plans into transportation planning, particularly transit planning at MARC.

(A HUD web site offers this description of the AFFH legal requirement: *Specifically, affirmatively furthering fair housing means taking meaningful actions that, taken together, address significant disparities in housing needs and in access to opportunity, replacing segregated living patterns with truly integrated and balanced living patterns, transforming racially and ethnically concentrated areas of poverty into areas of opportunity, and fostering and maintaining compliance with civil rights and fair housing laws; see <https://www.hudexchange.info/programs/affh/>).*

- *Metro:* The agency engages in a “very complex coordination process” with the city of Portland, the largest city in the region. Portland’s government structure includes multiple agencies led by multiple council members, requiring complex interagency coordination.

General engagement. Three agencies described a more general approach to engaging with housing-related stakeholders:

- *Arizona DOT:* Stakeholders are invited to participate in the planning and environmental processes.
- *Metropolitan Council:* All counties in the service area and many cities are part of the MPO transportation planning process.
- *Wyoming DOT:* The agency works through its MPO and urban areas to track and assist in efforts to promote affordable housing.

Future plans. Two respondents reported on plans to promote more active coordination with housing-related interests during the transportation planning and programming processes:

- *North Central Texas COG:* The little coordination the agency has engaged in to date has involved housing tie-ins that are not necessarily focused on affordable housing production. Future work that will address the jobs-housing balance will likely necessitate specific coordination with housing entities.
- *Oregon DOT:* The respondent noted that “[t]his work is really just getting started at the statewide level. There was a focus on housing policy in our recent legislative session and a variety of bills were discussed or passed that relate housing, land use and transportation policy.” The DOT has a long history of working closely with the state’s land use agency, the Department of Land Conservation and Development. Going forward, the DOT expects to engage more frequently with Oregon Housing and Community Services, Oregon’s housing finance agency.

Promoting Coordination Between Housing and Transportation

Respondents were asked if their agencies employed funding, best practices or partnerships at the federal, state and local levels to promote coordination between housing and transportation. Six agencies did not respond to this question (Arizona, Kansas, Nebraska, Wisconsin and Wyoming DOTs and Idaho Transportation Department).

Of the eight respondents addressing this question, all reported the use of federal funding to advance transportation/housing coordination. North Central Texas COG is the only respondent to use all three practices at the federal, state and local levels. Survey responses are summarized in Table 3 below.

Table 3. Practices Used to Promote Coordination Between Housing and Transportation

Agency	Federal Funding	Federal Best Practices	Federal Partner ships	State Funding	State Best Practices	State Partner ships	Local Funding	Local Best Practices	Local Partner ships
Connecticut DOT	X	X		X	X	X			X
Denver Regional COG	X						X		
MARC	X	X							X
Metro	X			X		X	X		X
Metropolitan Council	X								
Minnesota DOT	X					X			
North Central Texas COG	X	X	X	X	X	X	X	X	X
Oregon DOT	X	X		X	X				
TOTAL	8	4	1	4	3	4	3	1	4

Outreach and Education

Six respondents described outreach or education conducted by their agencies or a partner agency to provide transportation professionals with information about connecting transportation investments to housing. Some respondents reported on recent efforts (MARC's recent regional summit on housing, Metro's affordable housing bond measure) while others noted the ongoing guidance associated with statewide plans. The practices reported by respondents are summarized in Table 4 below.

Table 4. Outreach and Education to Connect Transportation and Housing

Practice	Agency	Description
Policies, Plans and Programs	Connecticut DOT, MARC, Metro, Oregon DOT, Wisconsin DOT	<p><i>Connecticut DOT.</i> Through the Community Connectivity Program, the agency conducted 80 road safety audits with municipalities statewide to build safer multimodal linkages in community centers, many of which are served by transit.</p> <p><i>MARC.</i> Smart growth is encouraged through the PSP program and workshops/speakers.</p> <p><i>Metro.</i> The agency's regional affordable housing bond measure provides a platform for multiple public and practitioner conversations about affordable housing development.</p> <p><i>Oregon DOT.</i> Outreach and education have been part of the agency's statewide plans for a long time, but the focus specifically on housing needs is rather new. Outreach is provided broadly and relates to guidance developed for completing plans and the content of related statewide plan policy, especially when a policy plan is updated.</p> <p><i>Wisconsin DOT.</i> Some MPOs have included housing factors as part of their long-range plans.</p>
Regional Summit	MARC	The connection between housing and transportation was raised at the agency's first regional summit on housing, held recently.
Task Force	North Central Texas COG	Formed in 2013, the agency's regional TOD Task Force provides "a forum for local governments and transit agencies to discuss, coordinate and promote transit-oriented development in the region." Among the topics addressed by the task force are the challenges of providing affordable housing at TODs.

Using Transportation Funds to Increase New Housing Development

Respondents reported on practices and provided recommendations for more effectively using local, regional or state transportation funds as an incentive to increase new housing development, especially affordable new housing development. Survey responses that described relevant practices are summarized below by topic. Following this summary is a brief discussion of the agencies not taking an active role in encouraging new housing development.

Connect Housing and Transit

- *Connecticut DOT:* The respondent recommended predicated funding for new or improved transit service on the demonstration of recently added affordable housing

and/or the encouragement of future affordable housing through zoning regulations to incentivize new housing development.

- *MARC*: Prioritizing TOD and transit-ready development design for transportation funding could increase new housing development.

Encourage Collaboration

- *Metropolitan Council*: While the impact may be uncertain, the respondent suggested that incentivizing housing development “likely starts with collaboration between transportation and community development/housing agencies.”
- *Minnesota DOT*: The agency is considering taking on the role of convener, with the respondent noting that major transportation projects can catalyze public interest and present an opportunity to bring various groups together for discussions about adjacent development.

Fund Research and Planning

- *North Central Texas COG*: Funding research and planning efforts that result in specific implementable next steps could help identify challenges and solutions before allocating funds for projects that may or may not be successful for the region. The respondent recommends especially funding research and implementation in the area of regional jobs-housing balance, which could help identify how transportation systems can be modified regionally to improve the ratio and location of affordable housing relative to job centers, particularly given the change in the distribution of job centers and demographic shifts during the past 20 to 30 years.

Invest in Infrastructure

- *Denver Regional COG*: The respondent noted that direct investment in supporting infrastructure will reduce development costs.

Make Better Use of Data

- *MARC*: Data should be used to better select projects located in places that best connect jobs and services to housing. The respondent also encouraged using the data to assist applicants in selecting better locations for projects.

Offer Funding Flexibility

- *North Central Texas COG*: Transportation funds should be flexible enough to allow the best solutions for the region, as different regions have very different housing challenges and solutions.

Need Political Leadership

- *Metro*: Incentivizing new housing development is not a matter of money or alignment with programmatic goals. Instead, the respondent said, “political leadership” is needed “to push for more aggressive investments to prioritize housing outcomes over all other outcomes.”

Work Within Structural Limitations

- *Oregon DOT*: There are strict conditions for use of most general transportation funds in Oregon. Rather than using direct incentives, the agency ensures plans align and the rules and environment are set up to encourage development where it can be readily served.

Other respondents reported that encouraging housing development is not a primary focus of their agencies. In Idaho, multimodal access to current housing is a greater concern than affordable housing. Nebraska DOT has not invested agency resources in attempting to incentivize new housing development, and in Wisconsin, affordable housing programs are mainly addressed by local governments and/or other state agencies. The Wyoming DOT respondent noted that “[c]urrent state laws do not facilitate housing decisions at the state level.”

Coordinating Transportation Funding With Housing Planning

Among the recommendations offered by respondents to make better use of local, regional or state transportation funds to encourage coordination with housing planning and increase new housing development are early and expanded collaboration with key stakeholders, housing-specific funding programs and funding decisions, and other planning-related efforts. Survey responses are summarized below by topic.

Collaboration and Coordination

- *Connecticut DOT*: Transportation agencies should work with housing agencies, municipalities, regional governments and developers early in a project’s planning phase to coordinate and strengthen linkages between transportation and housing.
- *MARC*: The respondent noted that, in theory, a greater focus on coordinating with housing planning when programming regional funds would result in increased housing development.
- *Oregon DOT*: The agency’s transportation planning processes have long involved collaboration with the state’s Department of Land Conservation and Development. Recently the agency has worked more closely with the state’s Department of Human Services and other health and human services agencies. The respondent recommends expanding this collaborative process to include housing agencies in the planning process, noting that the planning process presents the best opportunity for coordination with external partners.

The DOT also collaborates with a variety of stakeholders who advise on development of statewide plans, including representatives associated with environmental justice, aging, and disability service or advocacy groups that address housing and access. The respondent expects more of this type of collaboration to take place in the future.

Funding Programs and Funding Decisions

- *Metro*: The respondent recommended developing more regional-scale, housing-specific funds, similar to Metro’s affordable housing bond.
- *North Central Texas COG*: Housing planning should be required to obtain transportation funding.

Planning-Related Efforts

- *Metro*: The respondent recommended using land owned by transportation agencies to subsidize new development at key locations where transportation projects are being planned.
- *Metropolitan Council*: Historically, transportation funds have been allocated in response to development. Ideally, funding would help drive development. Transportation routes should be planned well in advance and development should work within that plan, with development responding to transportation realities.

Related Resources

The resources cited below are related to programs or practices described by survey respondents. Additional resources about responding agency practices may appear in the **Related Research and Resources** section of this report, which begins on page 29.

Connecticut Department of Transportation

New Haven-Hartford-Springfield (NHHS) Rail Program, Connecticut Department of Transportation, 2019.

<http://www.nhhsrail.com/>

The DOT's regional vision is highlighted on this web site that offers information about the new Hartford Line train service.

Denver Regional Council of Governments

Metro Vision, Denver Regional Council of Governments, January 2017.

https://drcog.org/sites/drcog/files/resources/Metro_Vision_Jan_18_2017_FINAL.pdf

This is the agency's regional plan. Housing-related objectives include:

- Outcome 3: Connected urban centers and multimodal corridors throughout the region accommodate a growing share of the region's housing and employment (see page 20 of the document; page 24 of the PDF).
- Outcome 12: Diverse housing options meet the needs of residents of all ages, incomes and abilities (see page 61 of the document; page 65 of the PDF).
- Outcome 13: All residents have access to a range of transportation, employment, commerce, housing, educational, cultural and recreational opportunities (see page 68 of the document; page 72 of the PDF).

Policy on Transportation Improvement Program (TIP) Preparation: Procedures for Preparing the 2020-2023 TIP, Denver Regional Council of Governments, July 2018.

<https://drcog.org/sites/default/files/resources/Adopted%202020-2023%20TIP%20Policy.pdf>

See page 40 of the document (page 44 of the PDF) for a discussion of Metro Vision, the agency's regional plan (cited above). This page also includes guidance related to one of the four sections used by applicants to provide qualitative and quantitative responses for the project review panel to use for scoring projects. This section, Consistency and Contributions to Transportation-Focused Metro Vision Objectives, includes the following prompt for applicants to address housing:

Describe how the project will help increase housing and employment in urban centers.

- a. Will it help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations? Y/N
- b. Describe, including supporting quantitative analysis: _____

This prompt directs the reader to Metro Vision Regional Objective 3, Increase Housing and Employment in Urban Centers (see

https://drcog.org/sites/drcog/files/resources/Metro_Vision_Jan_18_2017_FINAL.pdf#page=27).

This portion of the Metro Vision plan provides ideas for implementation of this objective that can be used by regional and local organizations to collaborate, adopt policies and regulations, make investments, and provide education and assistance.

Metro

2018 Regional Transportation Plan, Public Review Draft, Metro, June 2018.

https://www.oregonmetro.gov/sites/default/files/2018/07/02/draft2018RTP_publicreviewweb.pdf

This draft regional transportation plan contains multiple references to affordable housing, including a description of the Regional Transit-Oriented Development Program. *From page 427 of the PDF:*

8.2.2.9 Regional Transit-Oriented Development Program

Since 2001, Metro's Transit-Oriented Development (TOD) program has had a unique and critical role in implementing the 2040 Growth Concept vision for vibrant, walkable centers and station areas linked by transit. The program invests in compact mixed-use projects near light rail stations, along frequent service bus corridors and in regional and town centers throughout the region increasing opportunities for people [who] live, work and shop in neighborhoods with easy access to high-quality transit. The program provides financial incentives for TOD projects to increase transit ridership, stimulate private development of mixed-use buildings that would otherwise not proceed, and increase affordable housing opportunities near transit in high cost and gentrifying neighborhoods through land acquisition and project investments. With an increased focus on affordable housing, the program supports construction of housing near transit and services that is more affordable for older adults and lower- and lower income households compared to what would otherwise be built on a property. Related program activities include opportunity site acquisition, investment in urban living infrastructure, and technical assistance to communities and developers.

Affordable Homes for Greater Portland, Metro, undated.

<https://www.oregonmetro.gov/public-projects/affordable-homes-greater-portland>

From the web site: On Nov. 6, 2018, voters approved a \$652.8 million general obligation bond to create affordable housing for approximately 12,000 people in the greater Portland region. Metro worked with partners and community members to create a set of goals for the bond.

- Create 3,900 permanently affordable homes.
- Reserve 1,600 homes for people who earn very low incomes (\$26,000 per year for a family of four).
- Build half of the homes with two-, three- and four-bedroom apartments—big enough to accommodate families.

Related Resource:

Homes for Greater Portland: Implementing Metro's Affordable Housing Bond, Fact Sheet, Metro, undated.

<https://www.oregonmetro.gov/sites/default/files/2019/02/12/housing-bond-fact-sheet-02122019.pdf>

From the fact sheet: The regional affordable housing bond framework included these core values:

- Lead with racial equity to ensure access to affordable housing opportunities for historically marginalized communities.
- Prioritize people least well-served by the market.
- Create opportunity throughout the region by increasing access to transportation, jobs, schools, and parks, and prevent displacement in changing neighborhoods.

- Ensure long-term benefits and good use of public dollars with fiscally sound investments and transparent community oversight

....

How we'll create affordable homes

Through regional programs and local action, the bond aims to create 3,900 affordable homes in five to seven years by:

- Buying land and funding construction for new affordable rental and owned homes
- Buying and renovating market rate housing to convert to permanently affordable homes
- Distributing resources across the region to create 34% of the homes in Washington County, 21% in Clackamas County, and 45% in Multnomah County.

“Work is Underway to Prevent Housing Displacement in the Southwest Corridor,” Arashi Young, *Metro News*, Metro, June 2018.

<https://www.oregonmetro.gov/news/work-underway-prevent-housing-displacement-southwest-corridor>

From the article: Metro has awarded \$275,000 in grants to organizations working with communities in the Southwest Corridor area. These grants support six pilot projects that reach out to vulnerable people, help raise incomes and develop new businesses, and lay the groundwork to secure affordable housing.

Partnerships and Innovative Learning Opportunities in Transportation Program, Metro, undated.

<https://www.oregonmetro.gov/tools-partners/grants-and-resources/partnerships-and-innovative-learning-opportunities>

Metro’s Partnerships and Innovative Learning Opportunities in Transportation (PILOT) grant program accepts applications for grants ranging from \$25,000 to \$150,000. *From the web site:*

The Partnerships and Innovative Learning Opportunities in Transportation program will fund projects that test how recent innovations in transportation technology can benefit communities in the region and share lessons learned. Awards of up to \$150,000 are available to support teams of public agencies, nonprofit organizations and/or private companies to design and implement projects that test innovative approaches to providing equitable, shared or active transportation options.

Metro is looking for projects that:

- address a well-understood, clearly-defined challenge and test an innovative solution
- conduct outreach and education to help community members make the most of this solution
- create new partnerships between public agencies, nonprofits and/or private companies
- develop and share information on successes and challenges
- include a comprehensive approach to advancing transportation equity.

Metropolitan Council

Regional Solicitation Facts, Metropolitan Council, undated.

<https://metro council.org/About-Us/Facts/TransportationF/Regional-Solicitation-Facts.aspx>

This web site provides information about the agency's Regional Solicitation program, "a competitive process where federal funds are allocated to local governments, state agencies, and transit providers to fund regional transportation needs."

"The solicitation typically occurs once every two years and awards approximately \$180 million in federal funds. Rules and requirements are established by the U.S. Department of Transportation and the regional Transportation Advisory Board (TAB)."

Evaluation criteria are specific to the mode categories and type of project request. Among the criteria, "proposals must address the project's role in the regional transportation system and regional economy, age and condition of the infrastructure, equity and affordable housing, safety and connections."

Mid-America Regional Council (MARC)

Overview: Planning Sustainable Places, Mid-America Regional Council, 2018.

<https://www.marc.org/Regional-Planning/Creating-Sustainable-Places/Planning-sustainable-Places/Background>

From the web site: The Planning Sustainable Places (PSP) program continues the work of the Creating Sustainable Places initiative and the region's long-range plan, Transportation Outlook 2040, promoting concepts consistent with sustainable communities and the advancement of site-specific and project-specific activities within the centers-and-corridors planning framework.

The PSP efforts work to advance detailed local planning and project development activities that further the creation of vibrant places that offer a mix of options for housing, jobs, services and recreation; connected places with a variety of transportation options; and green places that support healthy living and a healthy natural environment.

Projects are reviewed by the Sustainable Places Policy Committee and the Total Transportation Policy Committee. These committees make funding recommendations that are submitted to the MARC Board of Directors for review and approval.

Sustainable Places Policy Committee, Mid-America Regional Council, 2018.

<https://www.marc.org/Regional-Planning/Creating-Sustainable-Places/Creating-Sustainable-Places/Sustainable-Places-Policy-Committee>

From the web site: The Sustainable Places Policy Committee (SPPC) was formed in Spring 2015 to follow up on the Creating Sustainable Places initiative which ran from 2011–2013. The SPPC provides leadership and policy advice to MARC's Board of Directors in regional sustainable development. Under the guidance of the SPPC, MARC works with local communities to update and implement land-use strategies that support transportation, equity, environment and conservation principles.

Sustainable Code Framework, Mid-America Regional Council, 2018.

<https://www.marc.org/Regional-Planning/Creating-Sustainable-Places/Tools/Sustainable-Code-Framework>

From the web site: The Sustainable Code Framework is a resource to help local governments identify code strategies that match the vision they have for their community. The Sustainable Code Framework allows communities to explore different code options based on their

development objectives. The framework also contains a database of existing projects that demonstrate many of the sustainable principles communities desire. These projects are for the most part local so communities can actually see the projects and how they integrate into local communities.

Creating Sustainable Places, Mid-America Regional Council, 2018.

<https://www.marc.org/Regional-Planning/Creating-Sustainable-Places>

From the web site: The Creating Sustainable Places initiative has organized networks of people and agencies with a wide range of interests; developed a suite of planning tools and resources; and demonstrated new models through planning projects in six key corridors.

North Central Texas Council of Governments

Mobility 2045, North Central Texas Council of Governments, 2019.

<https://www.nctcog.org/trans/plan/mtp/2045>

This web site provides access to chapters of the agency's most recent metropolitan transportation plan and interactive online tools.

Policy Bundle, Metropolitan Transportation Plan, North Central Texas Council of Governments, 2019.

<https://www.nctcog.org/trans/plan/mtp/policy-bundle>

From the web site: Mobility 2045, the region's current Metropolitan Transportation Plan (MTP), recommendations consist of policies, programs and projects that reflect regional priorities and support Mobility 2045 goals. However, the construction of infrastructure projects alone cannot achieve the goals of Mobility 2045.

To encourage the development of alternative, strategic solutions, Mobility 2045 includes a voluntary list of policies that local governments and transportation agencies can choose to adopt. These policies aim to address issues that affect transportation in the region, and cover a wide range of topics. By voluntarily adopting 50 percent of these policies, participating agencies will receive an offset of local funds in federal transportation projects in the form of Transportation Development Credits (TDCs).

Related Resource:

Policy Bundle Table, Metropolitan Transportation Plan, North Central Texas Council of Governments, undated.

<https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Plan/MTP/PolicyBundleTableHandout.pdf>

This handout includes a description of the land use strategies that can be adopted by cities and counties to earn TDCs:

Develop sustainable land-use strategies to support urban, rural and suburban communities. A) Encourage form-based design, increased density, diversity of land uses and multi-modal transportation options for areas of infill, redevelopment, historic main streets, and/or those that are transit oriented, B) Develop strategies to protect rural land use and reduce suburban sprawl, or C) Encourage strategies that support areas of conservation, partnered with strategic economic growth and density.

Funded Infrastructure Projects: Sustainable Development Infrastructure, North Central Texas Council of Governments, 2019.

<https://www.nctcog.org/trans/quality/land-use/sustainable-development-infrastructure-landbanki>

From the web site: In 2001, the Regional Transportation Council (RTC) initiated the Sustainable Development Program. The program is designed to encourage planning and foster growth and development in and around historic downtowns and Main Streets, infill areas, and along passenger rail lines and at stations. By allocating transportation funds to land use projects promoting alternative transportation or reduced automobile use, NCTCOG [North Central Texas Council of Governments] and its regional partners are working to address escalating air quality, congestion, and quality of life issues, and promote economic development through public/private partnerships.

“\$1.4M Federal Grant to Boost North Texas Transit-Oriented Development Planning,”

ACP Staff, *Texas Contractor*, Associated Construction Publications, November 2016.

<https://www.acppubs.com/articles/4792--1-4m-federal-grant-to-boost-north-texas-transit-oriented-development-planning>

From the online article: North Texas’ efforts to improve transit-oriented development have received a \$1.4 million boost. The Federal Transit Administration awarded the North Central Texas Council of Governments a planning grant to help the region enhance accessibility to 28 Dallas Area Rapid Transit [DART] stations along the system’s Blue and Red lines.

NCTCOG is leading the effort, partnering with Dallas, Texas, Garland, Texas, Plano, Texas, and Richardson, Texas, in addition to DART. Various Red and Blue Line stations were eligible for this grant, as they are required to be part of an FTA Capital Investment Grant.

The grant will focus on “last mile” accessibility to transit and parking needs around the stations. For example, filling in missing sidewalks and making pedestrian crossings safer can make it easier for pedestrians to access rail stations. The outcome should be a better understanding of the bicycle and pedestrian infrastructure needs at each station and a plan to address them.

Oregon Department of Transportation

Oregon Public Transportation Plan, Volume 1, Oregon Department of Transportation, September 2018.

https://www.oregon.gov/ODOT/Planning/Documents/OPTP_V1_FINAL_Feb2019.pdf

From page 58 of the plan (page 68 of the PDF):

Policy 8.3: Foster the development of housing near public transportation routes and services.

Strategy 8.3A: Collaborate with public housing agencies and developers to locate affordable housing units in new developments near public transportation services stations, lines and stops.

Strategy 8.3B: Promote TOD, mixed use and multi-unit housing on transit corridors and near public transportation services. Consider the use of incentives, fees, and public-private partnerships to accomplish such development.

Statewide Transportation Improvement Fund, Rail and Public Transit Division, Oregon Department of Transportation, undated.

<https://www.oregon.gov/ODOT/RPTD/Pages/STIF.aspx>

From the web site: Section 122 of Keep Oregon Moving (Oregon House Bill 2017) established a new dedicated source of funding for improving or expanding public transportation service in

Oregon. This new funding source is called the Statewide Transportation Improvement Fund, or STIF. The Rail and Public Transit Division, or RPTD, is developing programs, and policies to implement the STIF under the oversight of the Oregon Transportation Commission. ODOT staff developed the STIF programs with significant input from the Oregon State Public Transportation Advisory Committee, public transportation providers and other interested stakeholders.

Related Resource:

Statewide Transportation Improvement Fund: Overview of Approved Oregon Administrative Rules, Rail and Public Transit Division, Oregon Department of Transportation, July 2018.

<https://www.oregon.gov/ODOT/RPTD/RPTD%20Committee%20Meeting%20Documents/STIF-Rules-Overview-Factsheet-Print-Version.pdf>

From the fact sheet: STIF resources may be used for public transportation purposes that support the effective planning, deployment, operation, and administration of STIF-funded public transportation programs. These uses include, but are not limited to, creating new transit systems and services, maintaining or continuing systems and services, creating plans to improve service, and to meet match requirements for state or federal funds used to provide public transportation services. It is intended to primarily fund expanded or improved services in the first funding cycle. In future funding cycles, it may fund the maintenance of services that were expanded or improved during the first funding cycle. In 2018, the Oregon Legislature clarified that these funds also may be used for light rail expenses, except for capital improvements.

TGM Planning Grants, Transportation and Growth Management Program, Oregon Department of Transportation and Oregon Department of Land Conservation and Development, undated.

<https://www.oregon.gov/LCD/TGM/Pages/Planning-Grants.aspx>

From the web site: TGM Planning Grants help local jurisdictions plan for streets and land to lead to more livable, sustainable, and economically vital communities. This planning increases opportunities for transit, walking and bicycling.

TGM awards two types of grants:

- Category 1: Transportation System Planning, to give Oregonians a range of transportation choices and meet requirements of the Oregon Transportation Planning Rules.
- Category 2: Integrated Land Use and Transportation Planning, to promote communities that meet the needs of all Oregonians to live, work, and move about.

Related Research and Resources

A literature search of recent publicly available resources identified publications and other resources that are organized into five topic areas:

- National resources.
- State and local practices.
- Metropolitan planning organization practices.
- International resources.
- Related resources.

National Resources

Creating Connected Communities: A Guidebook for Improving Transportation Connections for Low- and Moderate-Income Households in Small- and Mid-Sized Cities, Office of Policy Development and Research, U.S. Department of Housing and Urban Development, April 2014.

https://www.huduser.gov/publications/pdf/Creating_Cnnted_Comm.pdf

From the foreword:

This guidebook presents strategies that communities can use to help meet [their] goals by planning and investing in transportation improvements to provide low-income and moderate-income households with affordable, convenient, and reliable options for accessing jobs and other essential destinations, such as schools, community colleges, health care, and other services and amenities. By preserving existing affordable housing and planning new affordable housing in places where residents have opportunities to walk, bicycle and take transit to get to work, school, health care, shopping and parks, residents can thrive whether they own one car, two cars or no car.

An examination of the link between transportation and housing affordability begins on page 5 of the report (page 19 of the PDF). Following this discussion are case studies of small- and medium-sized communities (page 17 of the report, page 31 of the PDF) and implementation strategies (page 45 of the report; page 59 of the PDF).

Encouraging Transit Oriented Development: Case Studies That Work, Reconnecting America, Local Initiatives Support Corporation and U.S. Environmental Protection Agency, 2014.

<https://www.epa.gov/sites/production/files/2014-05/documents/phoenix-sgia-case-studies.pdf>

From the abstract: This document presents an overview of the benefits associated with transit-oriented development and provides illustrative case studies. Case study topics include affordable housing, station area planning, community development corporations, parking, aesthetic zoning, public-private partnerships, joint development, land assembly and housing trust funds.

Building Capacity: Helping Communities Create Vibrant, Healthy and Economically Prosperous Neighborhoods, Reconnecting America, U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency, December 2013.

<http://www.reconnectingamerica.org/assets/Uploads/HUD-Capacity-Building-Implementation-Team-Compilation-of-Issue-Briefs-2013.pdf>

From the introduction: The information in this document represents a compilation of specific issue area briefs provided by Team Implementation. Each issue brief accompanied a webinar and allowed grantees to gain additional resources on topics such as creating regional TOD plans and strategies, infill infrastructure financing, advancing sustainability in a slow economy, and redeveloping brownfield properties. This document was created for the purpose of providing grantees with a one-stop resource for all issue briefs from [the] Phase I Capacity Building work of Team Implementation.

A Model Housing Transportation Plan: Coordinating Housing and Transportation, Office of Policy Development and Research, U.S. Department of Housing and Urban Development, June 2012.

https://www.huduser.gov/Publications/pdf/model_housing_transportationplan.pdf

This report describes a housing and transportation plan developed by the U.S. Department of Housing and Urban Development for a transit station in Miami, Florida. Among the considerations in the plan are land availability, affordable housing options, existing and proposed development incentives, financing options, and ridership and travel trends. The plan includes tools that local jurisdictions can use to encourage affordable housing development near transit.

Mixed-Income Housing Near Transit: Increasing Affordability With Location Efficiency, Center for Transit-Oriented Development, Federal Transit Administration, September 2009.

<http://www.reconnectingamerica.org/assets/Uploads/091030ra201mixedhousefinal.pdf>

From the abstract:

[This booklet] discusses how providing for a mix of incomes in all communities is good, but that providing for a mix of incomes in walkable, mixed-use neighborhoods near transit is even better because of reduced transportation costs. Mixed-income TOD deepens the affordability of housing because families can get by with one less car or no cars—resulting in the savings of thousands of dollars per household annually.

Case studies of successful communities are described along with 11 strategies that encourage mixed-income TOD housing in the state, region, corridor, city, neighborhood and site:

- Incentives for proactive station area planning and zoning (a strategy for the state or region).
- Public-private partnerships (a strategy for the site).
- Target existing funding to preserve and create affordable housing along transportation corridors (a strategy for the corridor).
- Inclusionary housing (a strategy for the region).
- Modify low-income housing tax credits to offer incentives for locating near transit (a strategy for the state or region).
- Infill development or redevelopment in transit zones (a strategy for the corridor, neighborhood and site).

- Facilitate use of value capture to fund affordable housing (a strategy for the corridor, neighborhood and site).
- Land acquisition/land banking funds (a strategy for the corridor, city and neighborhood).
- Incentive-based zoning (a strategy for the region).
- Tax increment financing (a strategy for the corridor and neighborhood).
- Reduced parking requirements (a strategy for the neighborhood and site).

Related Resource:

Mixed-Income Transit-Oriented Development Action Guide, Reconnecting America and the Center for Transit-Oriented Development, Federal Transit Administration, September 2009.

<http://mitod.org/whatisTOD.php>

From the introduction: This Action Guide is a tool for local jurisdictions working to foster mixed-income transit-oriented development (TOD) around planned transit stations. The term “mixed-income TOD” (MITOD) is shorthand to describe a set of goals that includes the provision of a mix of housing choices, affordable to a range of incomes, for people at different stages of life within a specific transit station area. The goal of this guide is to help practitioners identify the most appropriate and effective planning tools for achieving MITOD in their transit station area, and ultimately to facilitate the development of mixed-income communities across the United States.

Funding and Financing Opportunities, National Public Transportation/Transit-Oriented Development Technical Assistance Initiative, Federal Transit Administration, undated.

<https://todresources.org/funding/>

This web page provides links to grants, tax credits, loans and financing for TOD projects along with a link to a U.S. Environmental Protection Agency’s report on TOD infrastructure financing options.

Related Resource:

Infrastructure Financing Options for Transit-Oriented Development, Office of Sustainable Communities, Smart Growth Program, U.S. Environmental Protection Agency, January 2013.

https://www.epa.gov/sites/production/files/2014-02/documents/infrastructure_financing_options_for_transit-oriented_development.pdf

From the abstract: This report provides information about funding mechanisms and strategies that communities can use to provide innovative financing options for TOD. It explains dozens of tools that provide traditional financing as well as new tools.

State and Local Practices

The citations below provide information about practices for linking transportation and housing in 11 states: California, Colorado, Connecticut, Georgia, Louisiana, Maryland, Massachusetts, New Jersey, North Carolina, Texas and Washington.

Multiple States

The State Energy Efficiency Scorecard, American Council for an Energy-Efficient Economy, 2018.

<https://aceee.org/state-policy/scorecard>

From the introduction:

Every year, ACEEE ranks states on their energy efficiency policy and program efforts and provides recommendations for ways that states can improve their performance in a variety of policy areas. The *State Scorecard* serves as a benchmark for state efforts, encouraging states to continue strengthening their efficiency commitments as a pragmatic and effective strategy for promoting economic growth, securing environmental benefits, and increasing their communities' resilience in the face of the uncertain costs and supplies of the energy resources on which they depend.

See page 65 of the report (page 80 of the PDF) for *Integration of Land Use and Transportation Planning*, a discussion of successful strategies to integrate transportation and land use planning and increase transportation system efficiency. The report also addresses the use of incentives to developers to help align housing and transportation choices. *From page 67 of the report (page 82 of the PDF):*

Providing incentives to developers who set aside a fixed percentage of low-income housing in transit-served areas helps align housing and transportation choices. Similarly, many states use nearness to transit services as a key criterion for disbursing federal low-income tax credits to qualifying property owners, ensuring that low-income communities are served by a variety of transportation alternatives.

California

2018 Annual Planning Survey Results, Governor's Office of Planning and Research, State of California, December 2018.

http://opr.ca.gov/docs/20181231-APS_Results_Summary_FINAL.pdf

From the introduction:

Each year the Governor's Office of Planning and Research (OPR) distributes a survey to every city and county planning department in the state. The survey asks for basic information on the status of each jurisdiction's planning efforts and explores, in greater depth, the policies and programs that jurisdictions are implementing.

Housing is addressed in questions that examine the language related to climate change and greenhouse gas emissions in a county's general plan. An Excel spreadsheet of answers to the survey is available at http://opr.ca.gov/docs/20181015-Annual_Planning_Survey_2018_Answers.xlsx.

Programming and Grants, Santa Clara Valley Transportation Authority (VTA), 2018.

<https://www.vta.org/programs/congestion-management-program/grants>

The VTA maintains two programs that link transportation and housing:

- *Priority Development Area (PDA) Planning Grants Program*. The goal of this grant program is to enable transit-oriented housing and employment growth in Santa Clara County's PDAs by funding comprehensive planning in PDAs that will result in intensified land uses around public transit hubs and bus and rail corridors in the county. Local jurisdictions receive assistance in planning and creating "vibrant places with adequate housing for all income levels, a mix of uses, access to jobs and multimodal transportation infrastructure."
- *OneBayArea Grant Program*. Funding distribution to counties considers progress toward achieving local land use and housing policies by:
 - Rewarding jurisdictions that accept housing allocations through the Regional Housing Need Allocation process and support housing through transportation projects.
 - Supporting the Sustainable Communities Strategy for the Bay Area by promoting transportation investments in PDAs.
 - Allowing flexibility to invest in transportation categories such as Transportation for Livable Communities, bicycle and pedestrian improvements, local streets and roads preservation, safe routes to school and mobility management.

Measuring Land Use Performance: Policy, Plan and Outcome, Gian-Claudia Sciara, Institute of Transportation Studies, National Center for Sustainable Transportation, University of California, Davis, October 2015.

<https://ncst.ucdavis.edu/wp-content/uploads/2014/08/10-20-2015-Sciara-MEASURING-LAND-USE-PERFORMANCE-POLICY-PLAN-AND-OUTCOME-SD.pdf>

From the introduction:

This white paper explores the current knowledge and knowledge gaps about linkages between upstream land use policy and downstream land use impacts. ...The paper speaks to an informed general audience, including planners and decision makers in land use and transportation policy and planning, at state, regional and local levels. Its organization reflects three main concerns fundamental to land use planning and policy performance:

- The effectiveness of state, regional, and local policies intended to influence land use;
- The evaluative frameworks for assessing the state local land use planning and policy; and
- The data and measures used for observing on-the-ground impacts of land use.

An extensive list of references that begins on page 22 of the report (page 27 of the PDF) provides other publications that may be relevant to this project.

Related Resource:

Can State and Regional Efforts Change Local Land Use Planning and Reduce Sprawl?, Gian-Claudia Sciara, Institute of Transportation Studies, National Center for Sustainable Transportation, University of California, Davis, October 2015.

https://ncst.ucdavis.edu/wp-content/uploads/2015/10/10-23-2015-NCST_Brief_LandUsePolicyPlanOutcomev2.pdf

This policy brief summarizes the study cited above.

Colorado

Denver Transit-Oriented Development Fund, Urban Land Conservancy, 2019.

<https://www.urbanlandc.org/denver-transit-oriented-development-fund/>

From the introduction: The Urban Land Conservancy (ULC), Enterprise Community Partners, the City and County of Denver, and several other investors partnered to establish the first affordable housing Transit Oriented Development (TOD) acquisition fund in the country. The purpose of the Denver TOD Fund is to support the creation and preservation of over 1,000 affordable housing units through strategic property acquisition in current and future transit corridors. The Fund answers a basic real estate conundrum: when the economy is bad, property values are low and ripe for purchase, but access to capital is poor and affordable housing developers are scarce. Now is the opportune time to invest in real estate around proposed transit stations in order to capitalize on current values and preserve affordable housing before RTD's [Regional Transportation District's] FasTracks light rail is fully operational.

Connecticut

Incentive Housing Zone Program/Housing for Economic Growth (HEG) Program, Connecticut State Department of Housing, 2019.

<https://portal.ct.gov/DOH/DOH/Programs/Housing-for-Economic-Growth-Program>

From the web site's program overview: The Statute provides incentives to municipalities for creating Incentive Housing Zones (IHZ) in eligible locations, such as near transit facilities, an area of concentrated development or an area because of existing, planned or proposed infrastructure that is suitable for development as an IHZ. Developable land excludes publicly and privately owned property slated for public uses, parks, recreation areas, dedicated open space land, other land where restrictions prohibit development, wetlands or watercourses and areas exceeding one-half or more acres of contiguous land where steep slopes or other topographic features make it unsuitable for development.

The Statute authorizes the Commissioner of the Department of Housing (DOH) to “make grants to municipalities for the purpose of providing technical assistance and pre-development funds in the planning of incentive housing zones, the adoption of incentive housing zone regulations and design standards, the review and revision as needed of applicable subdivision regulations and applications to the Secretary for preliminary or final approval.”

Georgia

“Invest Atlanta Announces Atlanta’s First Transit-Oriented Development Fund,” *Impact and Insights*, Invest Atlanta, City of Atlanta, Georgia, October 2018.

<https://www.investatlanta.com/impact-insights/invest-atlanta-announces-atlantas-first-transit-oriented-development-fund>

From the newsletter article: Invest Atlanta recently announced the creation of a \$15 million transit-oriented development (TOD) fund. This \$15 million pilot fund will provide below-market, patient capital to support the acquisition and pre-development of workforce housing near MARTA stations, the Atlanta Streetcar, the Atlanta BeltLine and other modes of transit. The fund will include \$4.5 million of City of Atlanta Housing Opportunity Bond financing with an additional \$10.5 million from Enterprise Community Loan Fund and Low Income Investment Fund.

....

The \$15 million in revolving funds will be used to provide low-interest loans to non-profit and for-profit affordable housing real estate developers. This financing structure will enable developers to access capital for TOD projects at a lower cost than traditional financing options. The projects

supported through the pilot program will serve as case studies to attract additional sources of capital to the fund in the future. Enterprise Community Loan Fund and Low Income Investment Fund have implemented similar funding mechanisms in other areas, including the San Francisco Bay Area, Seattle/Puget Sound and Denver.

Louisiana

Linking Housing Development and Transportation Investment, Sheren G. Sanders and Nick Sorrells, Louisiana Housing Alliance, Fall 2015.

https://www.naceda.org/assets/Linking-Housing-and-Transportation-Investments_Fall-2015.pdf

Below are recommendations for maximizing accessibility and overall affordability (beginning on page 12 of the report):

- Prioritize increasing affordable housing investments near key transit corridors.
- Address the needs of the booming senior population.
- Prioritize mixed-use facilities.
- Permit alternative housing types.
- Invest in bikeways and walkability.
- End counterproductive subsidies.
- Institute impact fees.
- Adopt sensible local inclusionary zoning policies.

Maryland

“Hotspots for Growth: Does Maryland’s Priority Funding Area Program Reduce Sprawl?”

Bernadette Hanlon, Marie Howland and Michael P. McGuire, *Journal of the American Planning Association*, Vol. 78, No. 3, pages 256-268, 2012.

Citation at <https://www.tandfonline.com/doi/abs/10.1080/01944363.2012.715501>

From the abstract:

Problem, research strategy, and findings: Our study contributes to the ongoing debate about the ability of Maryland’s Priority Funding Area (PFA) program to control urban sprawl. We develop an economic-based land use conversion model to estimate if the PFA program steers urban growth to locations inside targeted growth areas within a fast-growing, exurban county. The results indicate that the size of an agricultural parcel, its distance from urban parcels, its proximity to highways, the productivity of agricultural land, and location in or outside PFAs influence the probability an agricultural parcel will be converted to urban use. We find that some of the parcels experiencing the greatest market pressure for development are located outside PFAs, and Maryland’s incentive-based strategy is not completely effective at preventing sprawl.

Takeaway for practice: Careful design of the location of entrances and exits on and off highways, limitation of agricultural parcel fragmentation, and vigilant control of land use change in unproductive agricultural areas can limit sprawl. Our analysis highlights, yet again, the importance of communication between transportation and land use planners.

Massachusetts

Smart Growth/Smart Energy Toolkit Modules-Chapter 40R (and Chapter 40S), Commonwealth of Massachusetts, 2019.

<https://www.mass.gov/service-details/smart-growth-smart-energy-toolkit-modules-chapter-40r-and-chapter-40s>

From the web page: Chapter 40R of the Massachusetts General Laws encourages cities and towns to establish new overlay zoning districts to promote housing production and, more generally, smart growth development. Chapters 40R and 40S both provide financial incentives to communities to adopt these new zoning districts.

In order [sic] was created to encourage smart growth consistent housing production in the Commonwealth. Under Chapter 40R, communities that adopt special zoning districts allowing as-of-right higher density residential development are provided financial rewards.

Smart growth zoning districts can be in one of three locations:

- Areas near transit stations, including rapid transit, commuter rail, and bus and ferry terminals.
- Areas of concentrated development, including town and city centers, other existing commercial districts in cities and towns, and existing rural village districts.
- Areas that by virtue of their infrastructure, transportation access, existing underutilized facilities, and/or location make highly suitable places for residential or mixed use smart growth zoning districts.

New Jersey

Transit Village Initiative Overview, New Jersey Department of Transportation, undated.

<https://www.state.nj.us/transportation/community/village/>

From the overview: The New Jersey Department of Transportation (NJDOT) and NJ TRANSIT spearhead a multi-agency Smart Growth partnership known as the Transit Village Initiative. The Transit Village Initiative creates incentives for municipalities to redevelop or revitalize the areas around transit stations using design standards of transit-oriented development (TOD). TOD helps municipalities create attractive, vibrant, pedestrian-friendly neighborhoods where people can live, shop, work and play without relying on automobiles.

North Carolina

Transit and Affordable Housing in North Carolina, North Carolina Department of Transportation, June 2018.

<https://connect.ncdot.gov/business/Transit/Documents/Affordable%20Housing%20and%20Transit%20White%20Paper.pdf>

From the introduction: This white paper begins with a scan of the national-level state of the practice for supporting the provision of affordable housing and promoting TOD—as these two factors are critical in better connecting transit services and affordable housing. It identifies key challenges and opportunities affecting communities and states across the country as they seek to integrate public transit, land use and affordable housing. It also examines housing affordability and TOD practice and planning in North Carolina. This research combined with key stakeholder interviews provides clarity on the issues, opportunities, and challenges faced by the state’s major urbanized areas as they work to provide and protect affordable housing within transit supported areas.

“Top-to-Bottom Sustainability Analysis,” Dave Wortman and Graham Billingsley, *Planning*, Vol. 78, No. 6, pages 23-26, July 2012.

Citation at <https://trid.trb.org/view/1148140>

From the abstract: In 2009, Greensboro, North Carolina, received a \$2.5 million Energy Efficiency Community Block Grant. This article describes how Greensboro used this funding in a comprehensive strategic evaluation using sustainability as a guide. The city assessed its plans, policies and codes in the areas of economic development, transportation, housing, land use, parks and recreation, and water resources. The nine-month study examined where sustainability is and is not addressed and how all of the city’s planning efforts could be aligned. The study group found that many plans already address sustainability. However, the study group also identified many opportunities for increased incentives to encourage sustainability, strengthened links between plans, and better ties between planning and implementation.

Texas

Development Incentives and Agreements, Neighborhood Housing and Community Development Program, Austin, Texas, undated.

<http://www.austintexas.gov/page/development-incentives-and-agreements>

From the web site:

The City of Austin may provide developers with incentives—such as fee waivers, density bonuses, tax incentives and development agreements—to build and to set aside affordable rental and ownership housing for low- and moderate-income households in developments.

Three incentive programs are discussed:

- *S.M.A.R.T. housing* “stimulate[s] the production of affordable housing for residents of Austin that is Safe, Mixed-Income, Accessible, Reasonably Priced, and Transit-Oriented (i.e., S.M.A.R.T.) and compliant with the City of Austin’s, Austin Energy Green Building standards.”
- *Density bonuses* “allow developers to build more units than are allowed by a site’s base zoning if the developer agrees to set aside a portion of units for income-restricted affordable housing or in some cases pay a fee-in-lieu of providing affordable housing. The affordable housing units must be income restricted and leased or sold to a low or moderate income household for the required affordability period.”
- *Development incentive programs* includes links to current programs (see *Related Resource* below) and agreements.

Related Resource:

City of Austin Affordable Housing Development Incentive Policy Overview, Neighborhood Housing and Community Development Program, Austin, Texas, 2019.

https://austintexas.gov/sites/default/files/files/Housing/Developer_Incentive_Matrix_02072019.pdf

This matrix provides an overview of the program’s incentive policies.

Washington

Regional Equitable Development Initiative (REDI) Fund, Enterprise Community Partners, Inc., March 2018.

<https://www.enterprisecommunity.org/financing-and-development/community-loan-fund/redi-fund>

From the web site: In response to the significant investments being made in Puget Sound transit, the public-private Regional Equitable Development Initiative (REDI) Fund was created to help finance the acquisition of property along transit corridors to preserve the affordability of future housing and community facilities.

Project Types

- Multifamily affordable rental housing meeting affordability requirements.
- Multifamily affordable for-sale housing, on an exception basis.
- Mixed-use projects up to 20 percent non-residential space, or 30 percent for projects that provide community facility and/or nonprofit space (ex. childcare centers, health clinics, charter schools, fresh food markets).
- Vacant and underutilized land that will be acquired for the purpose of producing any of the above.
- Emphasis will be placed on acquiring properties with interim income potential, particularly existing affordable rental housing.

Metropolitan Planning Organization Practices

“State-of-the-Practice in Connecting and Coordinating Transportation and Land Use Planning in the U.S.A.” Sadegh Sabouri, Amanda Dillon, David Proffitt, Megan Townsend and Reid Ewing, *Transportation Research Record*, May 2019 (online).

Citation at <https://journals.sagepub.com/doi/pdf/10.1177/0361198119844762>

From the abstract: This study surveyed a stratified sample of 30 U.S. MPOs weighted toward larger metropolitan areas. Of the 30 MPOs, about half were funding smart growth-oriented local land use planning through transportation and land use connection (TLC) programs. From them, 10 MPOs with TLC programs were selected and written up as case studies. Across the case studies it was found that the funding and support provided differs greatly by region. The ultimate goal of these programs was similar, however—to reduce suburban sprawl and the associated need for highway building, and instead to create more livable, sustainable, walkable, bikeable, and transit-accessible communities within the region. These goals were achieved by promoting infill and development in and around urban centers, and encouraging concentration of activity around transit stations. With the exception of one program, funding portfolios have grown year by year. While project funding selection criteria differ across MPOs, how well they align with the region’s transportation plan seems to be of paramount importance.

2019 Annual Livable Communities Fund Distribution Plan, Metropolitan Council (Minnesota), January 2019.

[https://metro council.org/Communities/Services/Livable-Communities-Grants/LCA/2019-Fund-Distribution-Plan-\(PDF\).aspx](https://metro council.org/Communities/Services/Livable-Communities-Grants/LCA/2019-Fund-Distribution-Plan-(PDF).aspx)

The annual plan details the distribution of grant funds under Minnesota’s Livable Communities Act. Among the grant accounts and categories within the annual plan is the Transit Oriented Development (TOD) program, which “is focused on high density, generally mixed-use projects that are located within TOD-eligible areas along light rail, commuter rail, bus rapid transit, and high frequency bus corridors.”

Financing the Development in Transit-Oriented Development: CDFI Case Study on the Denver Regional TOD Fund, Leiha Edmonds, Metropolitan Housing and Communities Policy Center, Urban Institute, April 2018.

https://www.urban.org/sites/default/files/publication/98056/financing_the_development_in_transit_oriented_development_0.pdf

From the case study: The Denver Regional TOD Fund focuses on lending for preserving and developing multifamily affordable rental housing, mixed-use projects that provide community facility or nonprofit space (e.g., child care centers, health clinics, charter schools, fresh food markets), and the development of vacant property. The fund lends to developers in the Denver metropolitan area within a half mile of a light rail station or a quarter of a mile of a frequently running bus (defined as buses that stop every 15 minutes or more). It provides fixed-interest below-market rate loans of up to \$5 million for a maximum of five years.

....

The fund is designed to allow affordable housing and community developers—nonprofits, for profits, and housing authorities alike—to acquire and hold strategic transit-accessible properties for preservation or future development purposes. By providing flexible financing terms and a streamlined underwriting and closing process, the fund allows qualified borrowers to react to opportunities and compete with other potential buyers who may not have affordable housing in their plans.

“Metropolitan Smart Growth Centers: An Assessment of Incentive Policies in Four Regions,” Richard D. Margerum, Susan Brody, Robert Parker and Gail McEwen, *Journal of Transport and Land Use*, Vol. 6, No. 2, pages 21-32, 2013.

Full text available at <https://www.jtlu.org/index.php/jtlu/article/view/257/337> (click on “Download this PDF file” in the upper right corner)

This article presents the results of a study that assessed policies in four metropolitan areas—Puget Sound, Washington; Portland; Denver; and San Diego—to promote development around higher-density, mixed-use (smart-growth) centers, specifically “how MPOs have used regional plans and financial incentives to encourage local governments to develop centers.” Researchers found that “incentive policies by themselves were having a limited impact because they are new and offer small amounts of funding relative to local government needs and market forces. However, when incentives are combined with plans, policies, and transit investment, they provide a significant foundation for promoting growth around centers. There are a number of ways these policies can be improved, and many policies are transferable to other metropolitan regions.”

Transit-Oriented Development (TOD) Grants, Metropolitan Council (Minnesota), undated. <https://metro council.org/Communities/Services/Livable-Communities-Grants/Transit-Oriented-Development.aspx>

From the introduction: The Council’s TOD grants promote moderate- to higher-density development located within easy walking distance of a major transit stop, that typically include[s] a mix of uses such as housing, jobs and retail choices. TOD projects are expected to diversify uses and provide a higher concentration of amenities in a compact built environment within transit station areas contributing to high-quality, pedestrian-oriented streets and public spaces encouraging the use of transit service. Through a focus on TOD, the Council aims to integrate transportation, jobs and housing, leverage private investment, advance equity and increase transit ridership.

International Resources

“Transit-Oriented Development in China: Literature Review and Evaluation of TOD Potential Across 50 Chinese Cities,” Wangtu (Ato) Xu, Andrew Guthrie, Yingling Fan and Yongling Li, *The Journal of Transport and Land Use*, Vol. 10, No. 1, pages 743-762, 2017. https://conservancy.umn.edu/bitstream/handle/11299/191063/JTLU_vol10no1_pp743-762.pdf?sequence=1&isAllowed=y

From the abstract: This article reviews the existing TOD literature pertinent to conditions in China, introduces TOD practices in China, and evaluates land development impacts of TOD across 50 Chinese cities that either have metro systems already or expect to have operating metro systems by 2020. The evaluation analysis contributes to the existing literature because most research on TOD in Chinese cities has focused on large, national or provincial capitals such as Beijing, Shanghai and/or Guangzhou. Based on simulation analysis, we evaluate TOD's land development impacts across all Chinese cities that are expected to have metro systems by 2020. Our results show that the second- as well as the third-class cities of China will have more potential for TOD implementation than the first-class cities in the next five years.

Case Study of Integrated Housing and Railway Development (Kohoku New Town and Yokohama City Metro Development), City of Yokohama, *2017 World Bank Conference on Land and Poverty*, March 2017.

https://www.confcool.com/landandpoverty2017/index.php/11-02-Hotta-1231_paper.pdf?page=downloadPaper&filename=11-02-Hotta-1231_paper.pdf&form_id=1231&form_version=final

From the abstract:

During Japan's period of rapid economic growth, rapid urbanization took place in Yokohama City, bringing about [a] new inflow of population from [the] Tokyo Metropolitan Region. In order to accommodate the inflow of population from Tokyo and at the same time develop into a city with a livable environment, the city developed the Kohoku New Town as a new center that was expected to be open to the community and to adopt the Transit Oriented Development (TOD) concept with construction of municipal subways. About 1,317 hectares underwent land readjustment [which] was implemented in the Kohoku New Town for 31 years. The Kohoku New Town achieved the following with the recovery of development profits from TOD.

- Government and landowners came together to create a new urban area.
- Through land adjustment and railroad/subway development, total development and transportation infrastructure was created.
- Daily convenience was increased and a green, warm living environment was provided.
- Through the concentration of commercial and administrative functions, a city was created that draws any visitors from both inside and out of the city.

Page 7 includes a brief discussion of the cost of the land readjustment project and the effect of city tax revenue.

Network Rail to Unlock Land for 12,000 Homes by 2020, Network Rail (United Kingdom), September 2016.

<https://www.networkrailmediacentre.co.uk/news/network-rail-to-unlock-land-for-12000-new-homes-by-2020>

In 2016 Network Rail, which owns and operates Great Britain's railway, announced plans to release land for new housing development, including land near transit stations. *From the web*

site: Nearly 200 sites across the country have been identified as suitable housing development opportunities for around 12,000 new homes. It is anticipated that land for around 5,000 of these homes will be delivered in London, 3,600 in Manchester and the North, 1,700 in the Midlands and East of England, and around 1,400 homes in the South of England. Network Rail continues to assess these sites with the aim of increasing their potential for housing development.

How a Chinese Megacity is Innovating Finance for Transit-Oriented Development, Wanli Fang and Lulu Xue, *TheCityFix*, May 2015.

<https://thecityfix.com/blog/how-chinese-megacity-innovating-finance-transit-oriented-development-tdm-wanli-fang-lulu-xue/>

From the introduction:

China's rapid urbanization has dramatically increased the need for public transit infrastructure. To accommodate these changes, it's estimated that China needs to expand urban rail by at least 3,000 kilometers by 2020—approximately a \$4 trillion investment.

In Chinese cities, funding for large-scale urban transit infrastructure traditionally comes from two sources: sales of land development rights and bank loans. However, these approaches can not only financially burden city governments, but also lead to costly urban sprawl. Recently, the city of Shenzhen has been successfully experimenting with alternative approaches to overcome these significant challenges. Shenzhen's experience demonstrates that financing transport infrastructure by harnessing the value of land can also be an opportunity for sustainable transit-oriented development (TOD) in Chinese cities.

The authors cited four strategies for bringing TOD to the Shenzhen region:

- Innovative financing arrangements.
- Planning integration.
- Flexible zoning.
- Multistakeholder dialogue.

Getting There: How Sustainable Transport Can Support New Development, Campaign for Better Transport (United Kingdom), undated.

https://bettertransport.org.uk/sites/default/files/research-files/Getting_there_final_web_0.pdf

From the introduction:

Local authorities are increasingly taking an imaginative approach to planning and development. Using examples and initiatives from across the country, this report argues that it is possible to base new development around public transport, walking and cycling, and that doing so can support the economy. The report begins by looking at examples of how spatial planning is facilitating imaginative and sometimes extensive sustainable transport projects as part of the planning process at strategic and local plan level. The report then details examples of where sustainable transport is supporting economic development both in revitalizing existing town and city centres, and as an integral part of new business and retail developments. It then looks at housing, presenting examples of good practice in both new developments and in regeneration. Finally, recommendations are offered on how the good practice already going on can be made more widespread.

A discussion of housing development and transport begins on page 22 of the report (page 12 of the PDF).

Related Resources

Promoting Opportunity Through Equitable Transit-Oriented Development (eTOD): Navigating Federal Transportation Policy, Ahmad Abu-Khala, Enterprise Community Partners, March 2018.

<https://www.enterprisecommunity.org/download?fid=9043&nid=6437>

From the introduction: Transportation, housing and land use decisions that form the foundation of our development patterns are made at every level of government. While the local regulatory environment significantly impacts the amount and type of development that occurs, the federal government plays a major role in local development in both overt and hidden ways. Federal funding is the most obvious source of influence. However, this funding comes with a catch, as the incentives and regulations that govern funding programs can have a significant impact—both positive and negative—on the type of housing and transportation infrastructure that is built and how it is maintained over time.

....

This report seeks to assist stakeholders involved in achieving eTOD, such as public entities, developers and practitioners, as they work to navigate the federal policy landscape, with a focus on Federal Transit Administration (FTA) policies and programs. These policies and programs generally offer several funding and technical assistance opportunities that can address eTOD (among a range of other uses), but housing practitioners may be less familiar with these resources and how to access them.

A National Review of State, Regional and Local Programs That Fund Transit-Oriented Development Plans and Projects, Reconnecting America, 2013.

<http://reconnectingamerica.org/inventory/index.php>

From the introduction: With the differing political landscape, unique development market, and mixture of key players from place to place, there is a great deal of variety in TOD funding programs between states, regions, transit agencies and localities. In some cases, smaller grants support the completion of many station-area plans, while in other places larger loans are used to advance catalytic development projects. Some programs target public agencies, while others provide resources directly to private and non-profit developers.

This report provides information on 42 programs, including 18 state-level, 15 regional and transit agenc[ies], and 9 local programs. Twenty-eight of the programs provide funding for implementation, 19 give money for planning and 11 for property acquisition. (Many of the programs allow funding to be used for more than one purpose, i.e., implementation and planning.)

The Innovative DOT: A Handbook of Policy and Practice, Smart Growth America and the State Smart Transportation Initiative, September 2012.

<https://smartgrowthamerica.org/app/uploads/2016/08/the-innovative-dot.pdf>

The introduction to this handbook describes it as a collection of “the innovative approaches that state transportation leaders are already using to make systems more efficient and effective in today’s challenging economy. Smarter transportation investments are both possible and popular: the challenge is determining where to begin.”

Focus Area 7, Integrating Transportation and Land Use Decision-Making, which begins on page 169 of the handbook (page 175 of the PDF), addresses the following topic areas:

- Pursuing policies that integrate transportation and land use decision-making.
- Using decision-making to conduct scenario planning.

- Improving public facility siting.
- Coordinating infrastructure investments across agencies.
- Promoting TOD.

The handbook highlights common DOT challenges, including the following:

- DOTs lack authority over land use and must work with local partners.
- Common practices by both transportation agencies and land use authorities, such as providing highways that induce inefficient development and requiring separation of uses, can lead to increased infrastructure and travel costs.
- Commonly employed mobility-related metrics ignore land use considerations and may result in decisions that run counter to community development goals.

H+T Index: About the Index, Center for Neighborhood Technology, undated.

<https://htaindex.cnt.org/about/>

From the introduction: The Center for Neighborhood Technology's Housing and Transportation (H+T) Affordability Index provides a more comprehensive way of thinking about the true affordability of place. It presents housing and transportation data as maps, charts and statistics covering 100 percent of the U.S. population. Costs can be seen from the regional down to the neighborhood level.

Contacts

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Appendix A: Survey Questions

The following survey was distributed to members of the American Association of State Highway and Transportation Officials (AASHTO) Committee on Planning, and selected metropolitan planning organizations, councils of government and regional planning agencies expected to have experience with programs and practices linking transportation investments and housing.

Would your agency like to be notified when the final report for this project is complete and a summary of survey results is available?

- No
- Yes

Supporting Infrastructure/Transit Service to Encourage New Housing

Note: The response to Question 2 below determines how a respondent is directed through the survey.

1. Is the production of affordable housing an issue in your state?
 - No
 - Yes
2. (Required) Does your agency have any policies or transportation funding programs in place to support the infrastructure or transit service necessary to encourage new affordable or infill housing development?
 - No (directs the respondent to **Transportation-Housing Linkages**)
 - Yes (directs the respondent to the questions below)

Supporting Infrastructure/Transit Service to Encourage New Housing

1. Please describe these policies or funding programs that support infrastructure or transit service to encourage new housing development.
2. Have any metropolitan planning organizations (MPOs) or local governments in your state implemented any of these policies or funding programs?
 - Don't know/not sure
 - No
 - Yes (please identify these MPOs or local governments)

Transportation-Housing Linkages

1. Does your agency use funding to incentivize the planning and implementation of multimodal transportation investments that support smart growth principles?
 - Don't know/not sure
 - No
 - Yes (please describe how this incentive funding program works)
2. Does your agency withhold transportation funds to penalize local jurisdictions to influence housing decisions?
 - Don't know/not sure
 - No
 - Yes (please describe these practices)

3. How does your agency consider existing and future land use, as well as access and proximity to market-rate housing, affordable housing and employment centers, when planning and prioritizing multimodal transportation projects?
 - 3A. If your agency **does not** consider existing and future land use, as well as access and proximity to market-rate housing, affordable housing and employment centers, when planning and prioritizing multimodal transportation projects, what are the **challenges or barriers** preventing these issues from being considered?
4. Does your agency have strategies for using transit investments to ease or resolve the physical impediments to housing development?
 - Don't know/not sure
 - No
 - Yes (please describe these strategies)
5. Does your agency have criteria in the Transportation Improvement Program development process that are related to promoting transportation investment in smart growth areas?
 - Don't know/not sure
 - No
 - Yes (please describe these criteria)
6. How does your agency coordinate with entities responsible for the planning and entitlement of housing and affordable housing during the transportation planning and programming process?
7. What outreach or education does your agency provide to transportation professionals about connecting transportation investments to housing?
8. Does your agency use any of the following to promote coordination between housing and transportation? Select all that apply.

• Federal funding	• State funding	• Local funding
• Federal best practices	• State best practices	• Local best practices
• Federal partnerships	• State partnerships	• Local partnerships
9. In your opinion, how could transportation funds (local, regional or state) be better used as an incentive to increase new housing development, especially affordable new housing development?
10. In your opinion, how could the use of transportation funds (local, regional or state) include better coordination with housing planning to increase new housing development?
11. If available, please provide links to documentation related to your agency's policies or funding programs that support infrastructure or transit service to encourage new housing development. Send any files not available online to carol.rolland@ctcandassociates.com.

Wrap-Up

Please use this space to provide any comments or additional information about your previous responses.