



Case Study:

Using INVEST to Bridge Sustainability and Transportation Needs in the Denton Greenbelt

Denton County, Texas

Lead Agency: North Central Texas Council of Governments (NCTCOG)

INVEST Module: System Planning for Regions (SPR) and Project Development (PD)

Link: <https://www.nctcog.org/trans/quality/environmental-coordination/planning-and-environmental-linkages>

The Dallas-Fort Worth region is facing extraordinary population growth. Communities neighboring a conserved greenbelt and state park in Denton, Texas recognize the need for an expanded transportation system – and the need to maintain the ecological and recreational amenities that define their communities. To address this confluence of needs, the North Central Texas Council of Governments (NCTCOG) sought to incorporate sustainability best practices into a feasibility study for a planned roadway expansion in the Denton Greenbelt. NCTCOG is the metropolitan planning organization for the Dallas-Fort Worth region.

Staff reviewed System Planning for Regions and Project Development criteria from Federal Highway Administration’s Infrastructure Voluntary Evaluation Sustainability Tool (INVEST). These criteria were modified to develop a menu of best practices appropriate to the corridor scale. The best practices were used to score an existing feasibility study to test the applicability of the new menu. Refinements were then made to the menu. Finally, NCTCOG applied the menu to the Denton Greenbelt Corridor Feasibility Study. Inclusion of the menu’s criteria yielded content not included in past feasibility studies. Some of the criteria provided quantifiable results that could be used to compare alignments in the study. NCTCOG also utilized an existing method to apply the agency’s Regional Ecosystem Framework to analyze and compare alignments in the Denton Greenbelt Corridor Feasibility Study. The feasibility study and the Regional Ecosystem Framework method yielded similar results.

NCTCOG engaged stakeholders as it developed the feasibility study. Stakeholder interest led the agency to increase the number of meetings beyond those originally planned.

NCTCOG’s corridor-scale menu could serve as a starting point for developing a new INVEST module applicable to corridor-scale planning. Future federal efforts could encourage coordination between transportation partners to demonstrate the value of INVEST by using the tool across all phases of one project’s planning, development, construction, and maintenance.

Key Outcomes

NCTCOG identified five key outcomes from applying INVEST to a feasibility study on the Denton Greenbelt Corridor.

Reduced silos: The project brought together NCTCOG staff with a range of expertise. This core group met 11 times to identify criteria that could be used at the corridor scale, score an existing feasibility study, and develop recommendations for how the INVEST tool could be improved. These interactions generated robust discussion that helped familiarize the group with each other's responsibilities and perspectives.



This historic bridge allows bicyclists and pedestrians to cross the Elm Fork of the Trinity River. It also is located within the right of way of FM 428, which is slated for expansion. FM 428 is seen in the left of the photo.

Corridor-scale sustainability module: The NCTCOG-developed Draft Feasibility Study Sustainability Menu provides criteria that could serve as a starting point for the Federal Highway Administration to develop a corridor-scale INVEST module. The menu resulted from combining and modifying criteria from the System Planning for Regions and Project Development INVEST modules. The new menu's 61 criteria fall under 18 categories. The menu also identifies corridor characteristics, such as "Natural or Scenic," for which the criteria are most appropriate.

Robust stakeholder outreach: Criteria in the Draft Feasibility Study Sustainability Menu led NCTCOG to implement stakeholder outreach with community members, conservationists, cities, users of park recreational facilities, active transportation advocates, transportation partners, federally recognized tribal nations, and resource and regulatory agencies. These stakeholders identified concerns, including right-of-way restrictions resulting from conservation easements and a historic bridge. They raised the topic of safe access for horse trailers and proposed a list of potential mitigation activities. The stakeholders' comments were included and addressed in the final feasibility study. NCTCOG's outreach effort yielded information that should inform and streamline future environmental studies.

New feasibility study content: The draft criteria led NCTCOG to include in the Denton Greenbelt Corridor Feasibility Study content that had not been included in past feasibility studies. This content included:

- The use of the Environmental Protection Agency's National Ecological Framework to identify priority ecological areas
- Identification of sites that could be negatively affected by light pollution
- The use of NCTCOG's Environmental Justice Index
- Efforts to inform stakeholders how their comments would be used
- Early identification of opportunities for active transportation
- Data on factors affecting infrastructure resiliency
- The inclusion of information about the quality of data used in the feasibility study

Need to coordinate with transportation partners: NCTCOG identified a need to coordinate more closely with transportation partners, including the Texas Department of Transportation, to ensure the sustainability-related content of the Denton Greenbelt Corridor Feasibility Study informs future project planning and development. NCTCOG staff plan to meet with transportation partners to present the study and to discuss this need.

"One of the things INVEST is doing is making us look at more than mobility needs."

NCTCOG member of INVEST team
