

North Carolina Department of Transportation

Transportation Demand Management Plans: Content Standards & Plan Development Process



November 19, 2024

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Content Standards for Transportation Demand Management (TDM) Plan Development

A TDM Plan is a document that agencies use to guide their efforts in developing and managing a TDM program. TDM Plans outline specific strategies to help people shift their travel behavior away from single-occupancy vehicles (SOVs) and toward healthier, more environmentally sustainable travel choices, like walking, biking, carpooling, riding transit, making shorter trips, remote/flex-work, and travel during off-peak hours. TDM also helps communities meet goals related to creating walkable and bikeable places, supporting business and job growth, addressing public health challenges, reinforcing environmental sustainability measures, and providing access for all.

This document outlines the expected content for the development of North Carolina Department of Transportation (NCDOT)-funded TDM Plans. The document includes the following sections:

1. TDM Plan Content Standards
2. TDM Planning Process
3. Project Manager Checklist

For more information on the NCDOT TDM grant program, see the [Connect NCDOT – TDM Website](#).



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1. TDM PLAN CONTENT STANDARDS

Considerations for Determining TDM Plan Content

Each NCDOT-funded TDM Plan may vary in size and scope, depending on a variety of factors. The content included in each TDM Plan should be based on the context of the places and organizations they are intended to support. Some contextual considerations for determining appropriate TDM plan content are listed below.

- **Geography:** The geographic scope of the TDM plan will have a significant influence on the type/scope of analysis required. TDM plans intended to cover large urban metros may require more analysis, stakeholder coordination, identification of potential TDM partners, etc., than TDM plans intended to cover a single municipality.
- **Organizational needs/capacity/authority:** TDM programs can be hosted/managed by a wide range of organizations, including municipalities, Metropolitan Planning Organizations (MPOs)/Regional Planning Organizations (RPOs), transit service providers, regional councils of governments, non-profits, etc. The needs, capacity (staff time and expertise), and authority (funding, regulatory) of these organizations may vary widely. TDM plan content should be tailored to the specific organization(s) expected to lead the TDM program, if known.
- **Familiarity with TDM program strategies & management:** Some applicants may have familiarity with TDM program management and examples of TDM strategies from other TDM programs in North Carolina and beyond. For applicants that do not have experience and knowledge with TDM programs, it may be helpful to include additional supporting elements in the TDM Plan. For example, these applicants may consider including case studies, peer learning sessions, literature reviews, etc. of established TDM programs as a part of the TDM plan development.
- **Previously completed TDM work:** Some applicants may already have a TDM plan and are simply looking to update that document. Other applicants may have a regional study or transportation plan that outlines some basic TDM recommendations. Other applicants may be starting without any previous TDM planning work. The depth of TDM planning work previously completed should inform the depth of analysis, stakeholder coordination, identification of potential TDM partners, etc., conducted for the proposed TDM plan.

TDM Plan Content Standards

In general, the following components are recommended as the basic content of the TDM Plan:

- Cover
- Acknowledgments
- Table of Contents
- Executive Summary
- Introduction and Purpose
- TDM Assessment
- TDM Strategies
- Performance Metrics
- Program Management
- Branding & Communications Strategy
- Implementation Action Plan
- Appendices (if necessary)

More information is included on these components on the following pages.



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Acknowledgments

This section should include the agency's project management team, the TDM stakeholder/steering committee, the consultant team, etc.

Executive Summary

Briefly describe the most important content of the TDM Plan, including:

- purpose and context,
- a vision statement and/or TDM Plan goals,
- recap of the TDM planning/engagement process,
- priority TDM strategies,
- key implementation actions, and
- other plan summary information if necessary/desired (e.g. recap of TDM assessment, performance metrics, program management recommendations, etc.).

The executive summary may be formatted as a stand-alone document.

Introduction and Purpose

Describe the plan context, plan development process, and plan goals.

- Provide study background and specific context relevant to the plan – purpose and need, leading organization(s), previous planning work, study location, and geographic scope (including maps and/or visual aids).
- Provide study process overview – recap of stakeholder engagement and project schedule.
- Provide the study goals which help guide the TDM program development and future implementation. This may also include a vision statement to guide the operation of the subsequent TDM program.

TDM Assessment

This section assesses the existing conditions of the study area to help determine what TDM strategies may be most appropriate. The TDM assessment should include:

A. A description of current TDM efforts in the study area, including the organizations that oversee them and an evaluation of how effective those efforts/TDM strategies have been.¹

B. Mapping analysis of available spatial data. This analysis should provide details of high-level regional trends which may include:

- Demographic & socioeconomic patterns
- Equity considerations²
- Trip attractors & activity centers
- Existing and future active transportation infrastructure
- Existing and future transit infrastructure
- Existing and future land use
- Environmental and health characteristics

¹Share the Ride NC may be a useful resource with data to help illustrate current participation in carpool/vanpool programs, employer-based TDM programs, and other TDM strategies.

²See NCDOT's Environmental Justice / Transportation Disadvantage Index Tool as a starting point for analyzing issues of equity - <https://connect.ncdot.gov/projects/planning/Pages/EJ-TDI-maps.aspx>



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- Distribution of travel mode (SOV vs. non-SOV)
- Traffic, congestion, and other road network characteristics

(NOTE: Where data is available, the TDM assessment should also discuss the implications of post-Covid travel shifts within the study area, as things like flex-work schedules and peak-spreading may have significant impact on travel behavior.)

C. Identification of potential TDM partners. This should include a description of the organizations most likely to be involved in supporting/implementing the TDM program. This should also include a summary of existing TDM programs and activities within the study area.

D. Identification of potential TDM “hot spots” (OPTIONAL). Use a data-driven screening process to determine “hot spot” locations to focus early TDM implementation efforts. “Hot spots” are places that may demonstrate a propensity toward future mode shift away from SOVs. Spatial data that are useful for identifying “hot spots” include:

- Existing and planned mobility hubs
- Large employment/activity centers
- City/town centers
- Education and healthcare campuses
- Existing planned rail and bus rapid transit stations
- Location of people who do not drive and/or do not have access to a car
- Primary SOV commuting corridors

Identifying “hot spots” is especially important for TDM Plans covering large regions where it may be necessary to narrow the geographic focus of TDM program efforts in the early years of the program. However, these “hot spots” are not intended to limit the ability/flexibility of TDM programs to engage with interested partners and employers who may be located in other places. **The identification of TDM “hot spots” is an optional exercise that may not be appropriate/necessary for all TDM plans.**

E. Peer program case studies (OPTIONAL). For applicants and regions that do not have experience and knowledge with TDM programs, it may be helpful to complete case studies of established TDM programs as a part of the TDM plan development. The purpose of the case studies is for applicants to learn more about the details of implementing TDM strategies and managing an ongoing TDM program. This may also take the form of a peer learning session(s) with staff from an established TDM program and/or a literature review of other TDM plans. **The preparation of TDM case studies is an optional exercise that may not be necessary for all TDM plans.**

F. Key takeaways. The TDM assessment should conclude with key takeaways that clearly describe the implications of the assessment for the development of the TDM plan. This is the “so what?” section that shows how the assessment informs the identification of TDM strategies, partnerships, and performance metrics that are most appropriate for the study area.



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TDM Strategies

TDM strategies represent actions that the TDM program will pursue to influence regional travel behaviors and support the goals of the TDM Plan. This section should include a menu of TDM strategies for the study area informed by the TDM assessment and stakeholder input. Strategies should consider applicability across the range of land use contexts or community types within the study area. For each TDM strategy, the menu should provide details on:

- Strategy name and description;
- Primary target audience;
- Examples of successful applications;
- Regional organizations most likely to implement;
- Potential funding source(s); and
- Applicability to different land use contexts or community types.

This section should also identify the highest priority TDM strategies for early implementation. In general, high priority strategies should be those that are:

- Best aligned with the TDM plan goals,
- Best aligned with existing partnerships and organizational capacity, and
- Most engaging and effective for the study area.

Performance Metrics

This section should include recommended performance metrics that will allow TDM program staff to track progress toward TDM program goals. Performance metrics also allow program staff to demonstrate the value of TDM programs to potential partners and funders. The TDM plan should identify TDM performance metrics that:

- Succinctly communicate what the TDM program is about;
- Align with the TDM plan goals;
- Are easily understood by potential funders and the general public;
- Are supported by available data; and
- Can be measured/ updated on an annual basis.

In the development of recommended performance metrics, it may be important to consider future grant reporting requirements. For example, the NCDOT grant program for TDM program operations includes a scorecard of performance metrics that grant recipients are required to track and report each year.

Program Management

This section includes recommendations for managing a sustainable and effective TDM program. The agency proposed to manage the TDM program should be the primary audience for this section. Program management recommendations should include:

A. Evaluation of the managing agency's current staff/funding capacity: Can the agency take on TDM program management within its existing structure, staff capacity, and financial resources? Will additional staff or funding be required? If additional staff are required, how many FTEs are proposed and what will be their roles/responsibilities? What additional funding sources should program staff pursue?



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B. Recommendations for key partners and advisory committee support: What organizations can best support the TDM program? What types of support can they offer (technical assistance, outreach, funding, etc.)? How can a TDM program advisory committee help guide and support future TDM program staff? What organizations/interests should be represented on a TDM program advisory committee?

C. Recommendations for necessary legal/regulatory changes: Will the agency need to change its bylaws or governing regulations to accommodate a TDM program? Is there a governing board/authority that must adopt the plan or vote to start the TDM program? Are any changes necessary to accept funding from potential TDM program funders?

(NOTE: If the TDM program plans to provide any type of direct transportation services there may be additional liability and insurance issues to consider.)

Branding & Communications Strategy

The branding & communications strategy should establish a TDM program name and supplemental communications tools as necessary, like a logo, tagline, and style guide. The branding & communications strategy should also identify key partners to support the launch and communications of the TDM program following the completion of the TDM plan. Finally, the branding & communications strategy should identify specific audiences that will be a focus of engagement for the TDM program and the different methods of communication recommended for reaching those different audiences.

Implementation Action Plan

The implementation action plan should support the recommendations of the previous sections by identifying the key steps for launching and implementing the TDM program. This section should outline key action items for the first several years after the completion of the TDM Plan. Special attention should be given to the most important action items in the near term (1-2 years).

Appendices (Optional)

Depending on the scope and depth of analysis for the TDM Plan, it may be necessary or desirable to include some content in a supplemental appendix. Appendices may include the following (if applicable):

- TDM strategies menu (if full menu isn't included in body of plan)
- TDM assessment report – supplemental maps and information
- Case studies and/or literature review of other TDM programs/plans
- Branding & communications materials for the TDM program
- Performance metric monitoring methodology
- Recommended TDM program staff roles and job descriptions
- Other information as necessary



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2. TDM PLANNING PROCESS

This section provides guidance on the recommended process for preparing a TDM plan and supporting a collaborative stakeholder driven process. A typical TDM planning process is driven by three primary groups/audiences:

1. Project Management Team (PMT)
2. TDM Steering Committee
3. Stakeholders & Community Members

The table on the following page summarizes the roles and responsibilities of these groups.



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TDM Planning Process – Typical Roles & Responsibilities

	Role / Responsibility	Recommended Members	Expected time commitment
Project Management Team (PMT)	<ul style="list-style-type: none"> Provides specific guidance on project coordination and direction. Reviews and approves all deliverables. Assists in coordination among critical stakeholder groups and help navigate any interagency sensitivities. 	<p>Required: Managing agency staff and NCDOT IMD staff</p> <p>Others: Staff from municipal transportation/planning departments, transit service providers, regional councils, MPOs/RPOs, etc.</p> <p>(Recommended size = 4-8 people)</p>	<ul style="list-style-type: none"> Kickoff meeting + monthly meetings Review and comment on project deliverables
TDM Steering Committee	<ul style="list-style-type: none"> Provides input on the development of the TDM Plan and review of key program elements. Ensures that diverse interests and viewpoints from across the study area are represented and incorporated into the TDM Plan. Offers guidance for reaching key audiences and calibrating the TDM plan/program to the unique places and partners in the study area. Serves as a forum for communication across jurisdictional and industry lines. Informs immediate next steps to support the program's launch. (This group may transition into an ongoing Advisory Committee after the plan's completion to support and guide the operation of a TDM Program.) 	<p>Membership should include representation from a diverse range of public, private, and non-profit organizations. This may include municipal governments, major employers, MPOs/RPOs, academic institutions, health and human service providers, local transit agencies, non-profits, municipal service districts / economic development groups, etc.</p> <p>(Recommended size = 10-20 people)</p>	<ul style="list-style-type: none"> 4 – 8 meetings, depending on the scale / scope of the TDM plan
Stakeholders & Community Members	<ul style="list-style-type: none"> Provide targeted feedback and guidance during the development of the TDM Plan. Depending on the audience, input activities may yield guidance on a variety of topics (e.g., prioritizing TDM strategies, establishing performance metrics, building a useful brand and communications strategy, etc.) 	<p>Audiences / members will vary depending on the desired input and method of engagement. For example:</p> <ul style="list-style-type: none"> Topic area stakeholder/focus groups may target major employers, economic development groups, workforce development groups, local land use planners, transit service providers, social equity/climate/sustainable transportation advocates, etc. Surveys of relevant audiences may target transit riders, employees at pilot/"hot spot" locations, government officials, MPO/RPO policy board members and/or staff advisory committees, etc. Other types of engagement may target other audiences. 	<ul style="list-style-type: none"> Varies depending on the scale / scope of the TDM plan and the amount of prior stakeholder & community involvement conducted. Recommend a minimum of 3 opportunities for stakeholder / community participation

Note – This table describes typical roles and responsibilities for conducting a TDM planning process. Each TDM planning process should be calibrated to the specific needs and context of the lead agency and study area. For example, updates to existing TDM Plans may require fewer meetings.



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Example Project Schedule

Preparation of a TDM Plan is typically a ~12-month process. For large regions with multiple jurisdictions, more complex urban areas, and a greater number of stakeholders, the TDM plan process may take 16-18 months. For smaller regions and updates of existing TDM plans, the TDM plan process may take 6-9 months. An example project schedule is provided below. Applicants should tailor this to their specific needs and context.

Month 1 (Kickoff project and set planning framework)

- Meetings:
 - » PMT kickoff workshop
 - » Steering Committee kickoff workshop
- Project Milestones:
 - » Prepare Stakeholder Engagement Strategy
 - » Begin TDM Assessment – Compile available data and identify data needs
 - » Identify Case Study plans/programs (optional)

Months 2-4 (TDM program strategies)

- Meetings:
 - » PMT Meetings (monthly)
 - » Steering Committee Meeting(s) on project goals, key takeaways from TDM Assessment, and lessons from case studies (if applicable)
 - » Stakeholder Meeting(s) on potential TDM partnerships and program goals
- Project milestones:
 - » Develop TDM Plan goals
 - » Finish TDM Assessment
 - » Finish “Hot Spot” identification (optional)
 - » Finish Case Studies (optional)

Months 5-8 (TDM program strategies)

- Meetings:
 - » PMT Meetings (monthly)
 - » Steering Committee Meeting(s) on program management/staffing, funding, and TDM strategies
 - » Stakeholder Meeting(s) to calibrate TDM program and potential TDM strategies to different places and organizations within the study area
- Project milestones:
 - » Develop draft menu of TDM strategies
 - » Develop program management recommendations – beginning with organizational evaluation to assess current capacity/resources to manage TDM program
 - » Begin to identify funding needs and possible TDM program performance metrics
 - » Begin to discuss TDM program name and branding/communications strategy (if necessary)



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Months 9-11 (TDM program details)

- Meetings:
 - » PMT Meetings (monthly)
 - » Steering Committee Meeting(s) on recommended high priority TDM strategies, performance metrics, and implementation action plan
 - » Stakeholder Meeting(s) to discuss high priority TDM strategies and implementation with key partners
- Project milestones:
 - » Finalize TDM Strategy Menu and identify high priority TDM strategies
 - » Finalize performance metrics
 - » Finalize program management recommendations and develop implementation action plan
 - » Finalize branding & communications strategy (*if necessary*)
 - » Develop draft TDM Plan and vet with PMT and Steering Committee

Month 12 (TDM Plan closeout)

- Meetings:
 - » PMT Meeting (monthly)
 - » Steering Committee Meeting – thank you and celebration
- Project milestones:
 - » Publish final TDM Plan
 - » Deliver presentation(s) on final TDM Plan to partner agencies, especially those requested to adopt/endorse the plan



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3. PROJECT MANAGER CHECKLIST

Each NCDOT-funded TDM Plan may vary in size and scope, depending on a variety of factors. The following checklist provides an at-a-glance reference for project managers on the typical components of each TDM Plan.

Planning Process

- Develop project schedule (*recommend checking progress against schedule on a monthly basis and updating as necessary throughout the life of the project*)
- Develop Stakeholder Engagement Strategy
- Collaborate with PMT to identify and recruit Steering Committee
- Set a calendar of PMT, Steering Committee and Stakeholder meetings

TDM Plan Content

- Table of Contents & Acknowledgments
- Executive Summary (*may be a standalone document*)
- Introduction and Purpose
 - » Background and context
 - » Study process
 - » TDM plan goals
- TDM Assessment
 - » Mapping analysis
 - » Identification of potential partners
 - » “Hot Spots” identification (*optional*)
 - » Peer Program case studies (*optional*)
 - » Key takeaways
- TDM Strategies
 - » Menu of potential TDM strategies
 - » Identify high priority TDM strategies
- Performance Metrics
- Program Management
 - » Staff/funding recommendations
 - » Recommendations for key partners
 - » Recommendations for legal/regulatory changes (*if necessary*)
- Branding & Communications Strategy
- Implementation Action Plan
- Appendices (*if necessary*)