

Scope of Work

TASK 1: Project Management

The Nelson\Nygaard Consulting Associates Team (CONSULTANT) will manage the overall Sustainable Madison Transportation Plan process including coordination of all subconsultants and communication with City of Madison staff and the community in order to achieve the City's desired outcomes for the project.

Project Management Meetings - Either by phone or in person (if coincident with a scheduled event in Madison), CONSULTANT will organize and lead a monthly project management meeting with City staff. The progress of ongoing tasks and preparation for upcoming tasks will be discussed at these meetings along with the overall direction of the project.

Kickoff Meeting - CONSULTANT will arrange a project kickoff meeting. The meeting will include the project management team (and potentially the Madison Area Transportation Planning Board, Metro Transit and WisDOT). The purpose of the meeting will be to establish a working process and assure that all team members understand the City's desired outcomes for the project. Topics of discussion will include the schedule, timing and plan for public outreach, and the role of Transportation Master Plan Oversight Committee. CONSULTANT will record any primary issues or concerns that meeting attendees wish to bring to the forefront.

Deliverable:

- **Project Management Plan** - Following the kick-off meeting, CONSULTANT will develop a Project Management Plan (PMP) indicating timeframes for milestones and key decision points. The PMP will be submitted to the City for review and a summary will be made available to the public via the project website.

TASK 2: Public Participation Plan

CONSULTANT will develop a public participation plan for the Sustainable Madison Transportation Master Plan that will utilize a variety of methods of outreach and engagement including:

Awareness and Media Efforts – These will include Editorial board interface, cable access content, op-eds or other media placements that may raise awareness of the project. CONSULTANT will also develop, and provide to City staff, content for a project website. Consultant will create and monitor a Facebook page and Twitter account linked to the project or City website.

In-Person Meetings - Stakeholder and public meetings including a design workshop, a series of site visits, walking/biking tours, or mobile work sessions, will be conducted with the Project Management Committee, members of the Oversight Committee and citizens. The specific community meetings and workshops to be conducted will be as follows:

- **Project Public Kick-off** — CONSULTANT will conduct a series of public meetings at up to 4 locations around the City over a 2-day period during which project goals and tie-in to overall community goals will be discussed.
- **Stakeholder Interviews** — CONSULTANT will work with City staff to identify key community leaders, property owners, agency partners and other strategic individuals who can provide special insight. The identified parties will be interviewed either individually or in focus groups. Up to 20 interviews will be conducted. CONSULTANT will also meet with two bicycle stakeholder groups.
- **Visioning and Land Use Events** — CONSULTANT will design and lead two public participation events around these topics. The first event will present a current snapshot of the community including its assets and key adopted plans, land use and transportation factors, and the key short- and long-term trends for the city, region and nation. The second event will present the synthesis of the Asset Analysis, Land Use Vision, Big Opportunities and New Project Ideas into Land Use, Form and Transportation Scenarios. Following the presentation, attendees will be asked to elaborate, supplement and critique the presented Scenarios.
- **Mobile Workshops** - CONSULTANT will conduct two mobile workshops. The first will focus on bicycling, will be less than 10 miles in length and will include stops at various existing bikeway facilities. The bicycling workshop will include a discussion of potential bikeways. The second workshop will focus on pedestrian issues and will include a walk up to 3 miles to highlight intersection crossings and accessibility issues related to ADA.
- **Candidate Project Workshop** — CONSULTANT will conduct a public working session with the community to develop project and policy ideas for testing. Data and principles be presented to assist the public in the development of project ideas and CONSULTANT will work with the members of the

community to create candidate projects that are consistent with broad community goals.

- **Prioritization Workshop** — Following the Candidate Project Workshop, CONSULTANT will undertake technical analyses and look at prioritization. This technical work will be presented in a series of public work sessions at up to 4 locations around the City over a 2-day period. During these sessions there will be discussion of funding constraints and opportunities to gain a sense of whether there are enough highly desirable projects to attempt to expand the pool of funding.
- **Draft Plan Presentation and Adoption** – After development of the draft plan, CONSULTANT will conduct an open house for the public to review the Sustainable Madison Transportation Master Plan's findings, analysis and recommendations.

CONSULTANT will document all of the outreach events and media including maintenance of a project participation database with contact information of interested citizens.

Deliverables:

- CONSULTANT will develop a Public Involvement Plan that documents the events, timeframes, tools and techniques to be used to raise awareness and create opportunities for community participation in plan development.
- CONSULTANT will develop a memorandum/report chapter documenting the public outreach process and outcomes.

TASK 3: Land Use Vision; Review of Land Use Plans and Policies

CONSULTANT will design Task 3 to position the project as a momentum-building effort, with a specific focus on building implementation enthusiasm for the Community Land Use Vision and the Transportation Master Plan.

Plan Strategy Development - CONSULTANT will hold internal meetings to focus on brainstorming elements of the future vision for the city, which will result in a design for Work Task 3.

Task Management/Side Meetings – CONSULTANT will be responsible for task coordination efforts and will attend a limited number of individual meetings that cannot be accomplished through one of the other methods otherwise included in this scope.

Data and Trends Analysis/Review Plans/Plan Evaluation - CONSULTANT will analyze key emerging demographic, economic and cultural trends that will shape the future of the city and region, and significantly affect transportation options. CONSULTANT will also work with city staff to develop an approach to evaluate existing

City plans – identifying the near-term, mid-term and long-term development potential identified in these plans and policies.

Assets/Opportunities/Vision/Scenarios - CONSULTANT will use a proven approach for arriving at a vision for the city that integrates land use, transportation, economic, environmental and cultural factors; and adopted City plans. Four steps will be employed:

1. **Madison Asset Analysis Summary** - CONSULTANT will identify the City of Madison's and the region's most powerful natural, physical, economic, and cultural assets to provide the foundation for developing the land use vision. The asset analysis will be largely derived from existing sources and past work and will be communicated in map form to provide a common and factual context for vision development.
2. **Land Use Vision Compilation** - CONSULTANT will compile existing plans and policies (with potential adjustments for the asset analysis) to describe the land use vision and role in the region. The vision will ensure that land use assumptions driving transportation scenarios will be based on community intent.
3. **Big Opportunities and New Project Ideas** - Working with the Mayor's Office and the Planning Department, CONSULTANT will identify the planned and additional potential city building opportunities, projects and ideas that will define the future of the City, through the timeframe of the Transportation Master Plan. This effort will build upon, incorporate and tie together numerous existing plans, ideas and initiatives.
4. **Land Use, Form and Transportation Vision Scenarios** - Working with the Planning Department, CONSULTANT will develop 2-4 scenarios that incorporate changes in the central city, major transportation corridors, as well as future edge growth areas.

Visioning and Land Use Public Events – CONSULTANT will bring the work done on visioning land use and scenario development to the public for communication and input. See summary under Task 2

City Staff Meetings/Work Sessions - CONSULTANT will meet for four work sessions with key city staff during the

Vision Phase. These sessions will also capture the depth and breadth of staff expertise and creativity to help ensure the Project is staying on task, addressing concerns and moving forward.

Oversight Committee Meetings – CONSULTANT will prepare, attend and present at two Oversight Committee meetings during the development of the Vision

Deliverables:

- Draft and Final Sustainable Madison Community/Land Use Vision Memorandum/Chapter - CONSULTANT will summarize the recommended Community/Land Use Vision, and document the process used to develop it. The chapter will also describe and illustrate infill/redevelopment typologies which reflect the range of land use and development intensities described in the Vision. Once comments are reconciled, the content of the memo will be adapted as a chapter in the final Sustainable Madison Transportation Master Plan report.

TASK 4: Review and Evaluation of Adopted Transportation Goals, Objectives and Policies

The City of Madison and its agency partners will provide CONSULTANT with relevant and current data and information including GIS databases, transportation movement and safety data, land use and demographic data and previous studies and reports. CONSULTANT will gather, analyze and contextualize that data as a basis for discussion and analysis. The results of these efforts will be documented and submitted to City staff and the community.

Goals Setting – Based upon the review of adopted goals, and in conjunction with the work and public interface in Task 3, CONSULTANT will develop and document goals for the Sustainable Madison Transportation Plan. CONSULTANT will develop a set of measurable evaluation criteria based on the goals.

Deliverable:

- Madison Fact Book — CONSULTANT will develop a review and analysis of previous and current plans and data. This deliverable will include information on current streets, transit, bicycle and pedestrian facilities, key gaps in systems and barriers to non-motorized mobility. It will include summary of information that has been provided on crashes and system safety. The Fact Book will include a review of key transportation and development plans to determine how they may affect demand for improved transit, bicycling and walking conditions. The book will document drivers of future transportation (such as growth trends). This deliverable will include (1) a summary of current system-level travel demand forecasts; (2) summary

of adopted transportation system plans and recommendations; (3) demographic and growth data and trends; (4) existing conditions of key streets, transit, bicycle and pedestrian facilities (based on available information). In addition to clear explanation of existing conditions and issues, the Madison Fact Book will provide a review of best practices from relevant peer cities.

TASK 5: Travel Demand Forecasts, Performance-Based Standards and Evaluation of Existing Transportation Plans and Recommendations

Testing Using Travel Demand Model - CONSULTANT will utilize the region's travel demand model to test the candidate projects (described further in Task 6) versus some of the previously developed measurable mobility criteria. While these will not constitute all of the evaluation criteria, they remain important. CONSULTANT will work with City staff to aggregate the projects into up to three testing scenarios that correspond to coherent and consistent programs for testing. Each scenario will be coded into the model, focusing on street and transit projects as well as other proposed actions that tend to improve basic accessibility factors such as access to transit stops and stations. CONSULTANT will run these scenarios using the region's established future socio-economic data. In order to test the impacts of land use assumptions, CONSULTANT will also model the land use scenario developed during Task 3.

Bicycle and Pedestrian Demand – CONSULTANT will assess demand, both existing and potential, for bicycle and pedestrian travel throughout the city. The analysis will be a GIS approach that uses a multi-variant mapping exercise which identifies “heat areas” or places where demand is greatest for bicycle and pedestrian facilities. This demand analysis will provide metrics to help in prioritizing route network segments for implementation.

Evaluation Process – Using the goals and evaluation metrics previously developed, CONSULTANT will develop a project evaluation process for review by City staff.

Deliverables:

- Goals, Objectives and Evaluation Framework Memorandum – Following selection of transportation goals and objectives by the community, CONSULTANT will develop a draft set

of evaluation metrics and a process for evaluating projects and policies for consistency with the goals. This process will be summarized in a memorandum for review by staff and stakeholders, and then incorporated into the final Sustainable Madison Transportation Master Plan report.

TASK 6: Development and Evaluation of Alternatives

CONSULTANT will utilize the data, maps, and information developed for the Fact Book and during stakeholder interviews to prepare candidate project ideas to discuss at the Candidate Project Workshop. The workshop will make distinctions such as to identify which streets have overall utility for the community at large, and which serve only a particular neighborhood. By identifying “neighborhood” and “community” streets, issues of where through traffic is appropriate and which streets should be prioritized for public investment will be organized more effectively. On neighborhood streets, traffic calming and pedestrian facilities are likely to be primary concerns. Among community streets, it is likely that the recommendations in centers such as downtown will be different than recommendations in predominantly residential corridors. The candidates will include projects not only for public investment, but will identify locations where contributions from the private sector would be beneficial. This will be especially relevant in developing connectivity.

Mobility Infrastructure Testing – Once candidate transportation solutions have been developed, CONSULTANT will utilize GIS databases, the region’s travel demand forecasting model and other best practices-based model and data to evaluate the set of desirable transportation concepts that have emerged from the community and technical process. CONSULTANT will evaluate how well the proposed system operates with regard to the broad spectrum of multimodal measures developed in Task 5. CONSULTANT will also utilize cordon line analysis techniques to determine whether major cross-town person movements can be dispersed among parallel routes. CONSULTANT will develop an overview of existing sidewalk availability, bicycle facility connectivity and vehicular capacity. These measures may include:

- **Automobile Movement** — Candidate projects will be tested versus community and regional criteria. CONSULTANT will also analyze system improvements such as ITS.
- **Bicycle & Pedestrian System Evaluation** — CONSULTANT will utilize multi-modal measures to evaluate projects in this task and include factors that consider levels of service for pedestrians and bicyclists.
- **Transit Evaluation** — CONSULTANT will build on the results of initiatives such as the 2008 Long-Range Metro

Transit Plan, leveraged by best practices from across the country to evaluate the proposed solutions versus transit needs.

- **Street Design** — CONSULTANT will identify locations where the pedestrian environment should be enhanced through urban design. This will include assessments of whether sidewalks are present and areas of high needs such as schools, transit stations/stops and activity centers.
- **Context Sensitive Solutions** — CONSULTANT will include design measures intended to relate to the context of a given area. These may range from neighborhood traffic calming recommendations, to the creation of an access management plan along an arterial corridor.
- **Health and Safety** — CONSULTANT will measure specific linkages between physical infrastructure and health.
- **Ecological Impact** — CONSULTANT will measure the impacts (positive or negative) of transportation projects and policies on the quality of air and water.
- **Economic Considerations** — CONSULTANT will consider project costs, both in terms of initial capital and long term costs. CONSULTANT will evaluate the potential economic benefits of project and relate those to long-term municipal revenue growth, individual wealth creation and more equitable allocation of costs and benefits.

Transportation Systems Evaluation – In addition to analysis of individual projects, CONSULTANT will assure that each modal system is logical and the transfer between modes is convenient, incorporating mapped summaries of existing and future conditions for the street system and vehicular traffic, the bicycle and pedestrian network and the transit system.

Bicycle System Classification - CONSULTANT will provide a functional classification of bikeways that will help in prioritizing improvements, making recommendations, and determining appropriate bikeway facility types including more creative solutions such as buffered bicycle lanes, bicycle boulevards, and cycle tracks.

Sidewalk Linkages – CONSULTANT will identify key sidewalk segments (building on work conducted in earlier tasks) and enhanced crossing treatments will

be identified as projects while planning-level cost estimates will be provided for each of these projects.

Focus-Area Details – CONSULTANT will identify approximately five challenging intersections or specific street segments and pair these with appropriate innovative design solutions. These will be developed as either plan concepts or before and after illustrations/photos. The bikeway design concepts will cover all innovative solutions: cycle-tracks, buffered bike lanes, counter-flow bike lanes, etc. CONSULTANT will also identify other places where these innovative solutions can be considered, but no design concepts will be drawn up for those. Similarly, state-of-the-art designs for pedestrian facilities will also be featured and include pedestrian hybrid beacons, RRFBs, and crossing islands. Since these pedestrian facilities have already been studied for their safety effectiveness, their crash reduction factors will be included and assessed.

Deliverables:

- **Candidate Project Chapter** – CONSULTANT will develop a chapter/memorandum documenting the full set of candidate projects (from the current long range plan, past studies and those developed at the workshop) and the evaluation of their ability to meet the community goals outlined earlier. These candidates will be multimodal in nature, and will be tested against those goals to create a draft implementation plan. CONSULTANT will document the set of transportation solutions to be brought forward for evaluation. This product will be highly graphical and will describe the logic behind the development of candidates.
- **Draft Project Ranking** – A raw, prioritized list of candidate projects based on the evaluation methodology will be provided to City staff. After review, this list will be shared with the community in the Prioritization Public Meetings (described in Task 2).

TASK 7: Draft Plan — Maps and Recommendations

CONSULTANT will lead a series of prioritization public work sessions (described in Task 2) that will help to confirm that the right projects and systems have risen to the top. Utilizing the input received at the prioritization sessions, CONSULTANT will assemble the results into a draft plan. This plan will include capital projects, City policy recommendations and City policy positions regarding partner agency projects. CONSULTANT will include the selection and mapping of the draft bicycle and pedestrian networks (close coordination will occur with the Madison MPO to make system connections to suburbs and county areas). A series of non-engineering recommendations for bike/ped facilities will also be provided. CONSULTANT will

make recommendations on travel demand management, parking policy, traffic and bicycle system enforcement, community education, and process initiatives and potential policy changes that may improve mobility in Madison.

Deliverables:

- **Project Evaluation Memorandum** – Summary of the evaluation of transportation system alternatives (including maps, exhibits and presentations of system alternatives, to be used in public participation activities)
- **Draft Sustainable Madison Transportation Master Plan** – This plan will describe the process, data, analysis and recommendations. This will include a compilation of all previous deliverables. It will also include maps and recommendations for:
 - Street system plan map and facility recommendations
 - Bicycle system plan map, facility recommendations
 - Public transit system plan map, facility recommendations and service recommendations
 - Park-and-ride/park-and-bike system plan map and facility recommendations
 - Bike/Ped Encouragement efforts for a wide range of residents (children, seniors, people who are disabled, students, etc.).
 - Map of potential locations for future transit stations and terminals (e.g., intercity bus terminals, intercity passenger rail stations, regional rail stations, bus rapid transit terminals, etc.) and facility recommendations
 - Draft Sustainable Madison Transportation Master Plan Implementation, Programming and Financial plan
 - Prototype Transportation Demand Management (TDM) programs
 - Prototype Transportation Management Association (TMA)

TASK 8: Draft Plan — Implementation and Financial Plan

CONSULTANT will develop capital and maintenance/operating cost plans and an implementation plan that will define the steps that the city will have to take to implement the recommendations. The implementation

steps and timeline will be grounded in a sequence that is realistic, given time, budgets, and regulatory constraints.

Capital and Maintenance/ Operating Cost Plans - For each recommended initiative, CONSULTANT will develop financial plans that present capital costs, ongoing maintenance and operating costs, and the party that will be responsible for funding the costs. The financial plan will outline the costs associated with each individual project, as well as potential costs and strategies for long-term citywide projects. This may include proposals of annual funding levels that would allow the system to be developed over a set number of years. CONSULTANT will also search for programming advantages that can be gained such as bicycle and pedestrian facilities that can be included in candidate street projects as incidental parts of larger street projects.

Implementation Plan and Timeline - CONSULTANT will develop an implementation plan to address recommendations, including the following elements:

- Specific implementation steps for each recommendation
- Where applicable, thresholds or triggers to undertake actions (for example public streetscape projects that will couple with privately constructed new network)
- Responsibilities for each action
- The level of effort that will be required
- Interrelationships between activities
- Interparty relationships or agreements
- Recommended travel demand management policies (both public and private).
- Schedule/timeline

Deliverables:

- Draft Report — CONSULTANT will deliver a Draft Report to the list of recipients as established at the beginning of the study. Comments will be solicited, and comments received will be reviewed with the City. CONSULTANT will make appropriate modifications to the Draft Report.

TASK 9: Final Plan – Document and Implementation Plan

Following the presentation of the draft plan to the public and advisory committee, CONSULTANT will develop a prioritized work program and Final Plan. This program will include public projects and associated costs, target public- private partnership initiatives and locations and funding sources.

Deliverables:

- Final Report — CONSULTANT will deliver a Final Report that will convey the recommended

transportation policy and related strategy for the City of Madison. This will include all exhibits and visual aids summarizing the Final Plan following response to all City comments from draft review. The report will include a work program broken down by year along with costs and schedules. The report will include recommendations of policy and overall direction of multimodal mobility for the City. Strategies will summarize the objective of each mode, the long-range target for development of each mode, and the City process needed to make steady progress toward the long range goals.

- GIS Databases – The team will build upon the City's GIS database by encoding all of the recommended projects. This will result in a return to the City of a full GIS-database including planned bicycle, street, transit and pedestrian system projects.