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TULSA
Bicycle/Pedestrian Master Plan

Proposal to the
Indian Nation
Council of Governments
May 3, 2013

Toole Design Group

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Toole Design Group

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April 30, 2013

Mr. James Wagner
Project Manager
2 W. 2nd Street, Suite 800
Tulsa, OK 74103

RE: Request for Qualifications Bicycle/Pedestrian Master Plan

Dear Mr. Wagner and Members of the Selection Committee:

Toole Design Group, LLC (TDG), in collaboration with Crafton Tull & Associates, Inc. (CTA) is pleased to submit our qualifications for the INCOG Bicycle/ Pedestrian Master Plan. We have reviewed your RFQ and have assembled a team that is specifically tailored to meet the needs of this project. The individuals who will work on the Plan are national experts in the field of bicycle and pedestrian planning and design.

We understand that INCOG will build off of the considerable success of its initial Trails Master Plan to develop a regional system for biking and walking. We are encouraged that INCOG supports a regional Bicycle/Pedestrian Advisory Committee (BPAC) that represents such a wide cross-section of citizens and agency staff. Our team will support the recommendations articulated by the BPAC in December 2012 by focusing on developing a comprehensive bicycle, pedestrian, and trails network that supports comfortable and safe active transportation for all travelers and trip purposes.

Toole Design Group has developed plans for more than half of the top twenty largest urban areas in the U.S., as well as numerous multi-jurisdictional regions and hundreds of small to mid-size communities. As the primary authors of the AASHTO *Guide for the Development of Bicycle Facilities* and the 2010 report on the Update of the AASHTO *Guide for the Planning, Design and Operation of Pedestrian Facilities*, TDG has an in-depth understanding of the most recent and up-to-date guidance on planning and designing bicycle and pedestrian facilities.

RJ Eldridge will serve as the Project Director and will oversee all aspects of the project. RJ has served in this role for numerous company projects. Jeff Ciabotti will serve as Project Manager and day-to-day point of contact for this project. Jeff has rich experience with creating multi-modal systems with specific focus on linking to trail networks. He will help to ensure that the recommendations and implementation strategies for the various modes are coordinated and that the connections to the region's growing network are seamless. I will serve as Principal-in-Charge, and will provide project oversight and also serve as a strategic advisor.

Crafton Tull & Associates will serve as our subconsultant from their Tulsa office. Their experience working with the INCOG on several transportation planning and design projects and knowledge of the Tulsa Metro area's non-motorized transportation challenges and opportunities bring a great value to our project team.

We are confident that our experience working with MPO's around the country on bicycle and pedestrian issues those experiences will bring added value to this project. We are proud of our reputation for excellence in the field of bicycle, pedestrian and trail planning and design, and encourage the selection committee to contact our current and former clients to inquire about our work. We are excited about the opportunity to work with INCOG. Thank you for your consideration of our team.

Sincerely,

Jennifer Toole, AICP, ASLA
President

1 EXPERIENCE AND TECHNICAL COMPETENCY

TEAM INTRODUCTION

The Toole Design Group (TDG) Team brings direct project experience and staff expertise to address all aspects of bicycle and pedestrian infrastructure planning and design. TDG has managed numerous transportation master planning and concept development projects that varied from corridor, trail, and neighborhood to city, regional, and statewide areas. TDG is comfortable managing studies of similar scope to this RFQ and has a proven track record of success. The team's past work includes pedestrian planning studies, bicycle route planning, trail master planning studies, traffic calming analysis and concept development, transit access studies, bicycle or pedestrian level of service assessments, multimodal street classification, grant application guidance, Safe Routes to School studies, and collection and evaluation of bicycle and pedestrian survey data. The following experience and technical competence will demonstrate our Teams' ability to deliver a quality master plan to INCOG.

Planning and Design of On-street Bicycle Facilities

TDG's approach to bicycle master planning and design has been honed over the years to provide our clients with the most useful information to move forward with new projects. We understand the unique challenges and opportunities inherent in developing active transportation plans for MPOs, where their member jurisdictions may have varying philosophies and levels of awareness related to bicycle and pedestrian issues.

The on-street portion of the master planning process will begin with routes that have been identified in the past as part of the Trails Master Plan and the Long Range Transportation Plan to reassess those locations given recent developments in the field of bicycle planning. For example, there is an increased emphasis on providing buffered bike lanes, bike boxes, and cycle tracks than in the past. In order to encourage more Tulsonian's to bicycle more often, it will be necessary to develop facilities that feel – and are- safer. The final product will be a master plan that identifies specific types of design treatments in specific locations.

Through our planning and design work hundreds of miles of on- and off-street projects have been built and are serving communities across the United States. Following are some bicycle infrastructure projects completed by TDG.

BikeWalk 2012 Street Solutions, *Saint Paul & Minneapolis, MN*
TDG is leading an effort to improve bicycle and pedestrian conditions on 12 priority corridors in the Twin Cities. These projects involve feasibility analyses, public and stakeholder involvement and preliminary engineering design to improve biking and walking conditions.

Baltimore Bike Master Plan Implementation, *Baltimore, MD*
Building off of the Bicycle Master Plan TDG developed for Baltimore, we created construction documents for over 20 miles of bicycle lanes and on-street bicycle facilities in the Park Heights and Southeast sections of the City. On-street facilities included bike lanes, colored bike lanes, shared-lanes, peak-hour bike lanes, contra-flow lanes, signed routes, and Baltimore's first bicycle boulevard.

District of Columbia Bicycle Facility On-Call and Cycletrack Design, *Washington, DC*
TDG developed construction documents for over 70 miles of bicycle facilities throughout the District of Columbia. TDG led design of the District of Columbia's first cycletracks intended to improve the comfort and safety of bicyclists in downtown DC.

Planning Experience in Connecting Destinations Using GIS Applications

GIS analysis can be an effective tool to identify transportation needs and prioritize improvements. TDG has a significant amount of experience working with large GIS datasets that compile information from multiple sources, including state DOTs, MPOs, municipalities and counties. For example, the statewide trails inventory we developed for the State of Maryland compiled information from 24 counties, over 20 municipalities and several MPOs or regional planning commissions.

Demand modeling. A primary example of our GIS capabilities is in bicycle and pedestrian travel demand modeling. The purpose of this mapping effort is to assess demand (both existing and potential) for bicycle and pedestrian travel throughout the region. The task of measuring demand is one that TDG has performed for many past projects, including most recently the Wichita, KS Bicycle Master Plan.

On-line mapping tool. The WikiMap, a web based interactive mapping tool enables us to collect very detailed user input on a wide range of project elements, from existing conditions for bicycling, to desired routes and destinations, to comments on proposed recommendations. This feedback is then seamlessly integrated into our GIS analysis. We have had great success with this cost-effective tool, reaching thousands of individuals with local knowledge and expertise who can highlight the 'hidden' linkages that connect neighborhoods and expand project opportunities. **Test our WikiMap at: http://tiny.cc/tipaww.**

Cost Estimating Experience for On- and Off-street Trail Projects

All of our bicycle and pedestrian master plans include a strong prioritization and implementation component, and our firm has assisted local governments nationwide in implementing bicycle and pedestrian and master plans. Almost all of our plans include a list of "Early Action" projects that are realistic for the agencies to implement within three years after the plan is adopted.

A critical part of the implementation plan includes the development of planning level cost estimates for the proposed infrastructure improvements. Cost estimates will be based on recent costs for similar work completed in the area (e.g. road resurfacing, striping, new trail segments, etc.). Unit costs will be provided to INCOG staff to aid in future cost estimation efforts.

Project Prioritization Methodology and Data Collection

The TDG Team has extensive experience working with qualitative and qualitative data to prioritize projects. We will rank the recommended bicycle and pedestrian facility improvements using a method that combines public and agency stakeholder input, BPAC input, the expertise of our team members, and a weighted prioritization method. This task is of great importance given Tulsa's pending *Fix our Streets CIP* vote later this year. TDG has deep experience in this arena and is currently leading NCHRP 7-17, a study on bike/ped prioritization best practices in the U.S.

The TDG Team understands that INCOG may not be the agency ultimately implementing the projects. Therefore the prioritization tool developed for this project can be customizable for local jurisdictions to adapt to their specific context.

Traffic Analysis

TDG's traffic analysis capabilities include managing a wide variety of data collection such as: turning movement counts; pedestrian and bicycle counts; speed, volume and vehicle classification data; signal timing data; behavioral observations, user surveys; crash data; GIS information; geometric and traffic controls; parking usage and capacity. TDG uses this data in a variety of analyses. For example, in Boston, MA, TDG conducted intersection analyses to provide recommendations for potential geometric and/or signalization changes to reduce pedestrian conflicts and improve the functionality of a congested downtown intersection. TDG worked with Arlington County, VA to analyze the potential impacts of a school development project. TDG developed future trip generation studies; assessed future traffic and parking impacts; and made recommendations to improve pedestrian, bicycle and motor vehicle traffic operations and safety.

Roadway Design Experience. TDG staff includes roadway design engineers that have experience developing construction documents for a range of project types from interstates and complex interchanges, to urban and suburban streets. Our partners at Crafton Tull are very familiar with ODOT road design standards, as well as local guidance for INCOG's member jurisdictions. As a firm, TDG's experience includes complex urban streetscapes and complete streets designs, rural bike routes, on-road bicycle facilities, intersection safety improvements, and off-road trails. As the author's of the AASHTO Bike Guide, we are very familiar with proven, accepted treatments. We propose to conduct a one-day training on bicycle and pedestrian design for agency and department staff, and other transportation professionals to elevate the design community's awareness and understanding of critical design issues.

The following section highlights several key personnel who will be working on this project:

Jennifer Toole, AICP, ASLA
Principal-in-Charge

TDG: 2003-Present
25 years of experience
Bachelor of Environmental Design, Landscape Architecture, NC State University, Cum Laude, 1990
AICP Certificate #011817

Jennifer Toole has worked for over 20 years in multi-modal planning and design, and serves as an expert consultant on bicycle and pedestrian projects throughout the United States. As a certified planner with a degree in Landscape Architecture, her experience includes hands-on project design, as well as, national and statewide research and planning initiatives. Jennifer served as the Principal

Investigator for the 2012 edition of AASHTO's *Guide for the Development of Bicycle Facilities*, and was the co-author of ITE's Transportation Planning Handbook – Chapter 16 (Bicycle and Pedestrian Transportation). Jennifer worked as an expert consultant for the development of a bicycle and pedestrian access plan for the City of Denver.

RJ Eldridge
Project Director

TDG, 2007-Present
19 years of experience
MS, Community and Regional Planning, U. of Texas, 2003
BA, Latin American Studies, Washington College, 1993

RJ Eldridge has over 15 years of experience in a range of transportation and land-use projects. With TDG, RJ has been involved in policy analysis and development, streetscape and urban design guidelines and zoning recommendations, existing conditions assessment and infrastructure recommendations, and travel demand modeling. RJ recently conducted a training workshop for INCOG on implementing bicycle and pedestrian improvements. RJ has experience with public facilitation, regional, corridor, and small area planning, creation of land development ordinances, demand forecasting, and long-range infrastructure and utility planning. He has also led, or worked on master plans for several regional planning agencies.

Jeff Ciabotti
Project Manager

TDG, 2012-Present
18 years of experience
BA, Psychology, Rollins College, 1987

Jeff Ciabotti is a senior planner with TDG and will be the project manager for this project.. With more than 15 years of experience on projects throughout the U.S., Jeff is a recognized national leader in trails and active transportation. Jeff's background as Vice President for Trail Development at Rails-to-Trails Conservancy and National Director of Programs, Partnerships and Health at Save the Children gives him in-depth knowledge of the connection between land use, transportation and health. Jeff understands the unique role of regional planning organizations and is currently leading TDG's work on a bicycle and pedestrian master plan for the Harrisonburg/Rockingham County MPO. Combining this national perspective with his on-the-ground project experience creates a balanced approach with each project and a keen awareness of the power of the public process. Jeff's breadth of expertise extends from large scale regional planning to detailed infrastructure design, allowing him to effectively lead projects like the INCOG effort from the initial visioning to the ultimate project prioritization and development.

Tony Hull
Deputy Project Manager

TDG, 2012-Present
13 years of experience
BA, Urban and Regional Geography, The Ohio State University, Columbus, OH, 1998

Tony Hull is a multi-modal transportation planner with over a decade of experience. Most of Tony's work has concentrated on pedestrian needs and traffic calming. His work has focused on balancing transportation outcomes to foster equitable access to mobility and improve the quality of life in communities. These efforts include facilitating traffic calming in diverse communities, community engagement in the planning process, educating local staff and elected officials, and spearheading regional pedestrian planning efforts.

Tony is the former bicycle and pedestrian coordinator for the Mid Ohio Regional Planning Commission, and will use this unique expertise to help develop implementation and funding aspects of the plan.

Bob Patten
Senior Planner

TDG, 2003-Present
21 years of experience
BA, Speech Communications and English, Whitworth College, 1979

For over fifteen years, Bob Patten has been working in the field of bicycle and pedestrian planning. His experience includes positions at the Rails-to-Trails Conservancy and District of Columbia Office of Planning. For TDG, Bob was the project manager for the Fairfax County Bicycle Master Plan which included hundreds of miles of trail and roadway improvements across dozens of jurisdictions (including VDOT), and is currently managing TDG's work on the Maryland Statewide Bicycle and Pedestrian Plan update.

Dan Biggs, RLA
Landscape Architect

TDG, 2009-Present
9 years of experience
Registered LA: DE, MA, MD, PA, SC, VA, WI
MLA, SUNY College of Environmental Science and Forestry, 2006
BS, Construction Management, Roger Williams Univ., 2003

Dan Biggs is an experienced Landscape Architect with nine years of experience specializing in bicycle and pedestrian

facility planning and design. Dan regularly serves the role of design mediator between conceptual planning and functional design when leading various transportation projects, including on-site bike lanes, cycle tracks, shared lanes, as well as intersection improvements and connections with off-street trails. Dan's role will be to develop graphics and illustrations that help the community understand what various treatments could look like, and how they benefit walking and bicycling.

Tony Gammon, P.E.
Senior Engineer

TDG: 2012-Present
14 years of experience
Professional Engineer: AZ, CO, DC, MD
BS, Civil Engineering, Iowa State University, 1998

Tony Gammon, P.E. has over 15 years of diverse experience including: urban and suburban roadway design, downtown streetscaping and redevelopment, mixed-use development master planning, site and subdivision development, rail-served industrial development, and parking lot design.

Tina Fink, P.E.
Traffic Engineer

TDG: 2011-Present
9 years of experience
Professional Engineer: PA
BS, Civil Engineering, Rensselaer Polytechnic Institute, 2004

Tina Fink is a Professional Engineer with nine years of experience in transportation design and traffic engineering. She combines her knowledge of traffic engineering, signal design and traffic modeling to develop project-specific analysis techniques and balanced solutions for multiple modes of transportation. Tina has served a lead role on numerous project types including planning studies, traffic impact studies and signal design where she applied vehicular modeling tools such as Synchro, SimTraffic and HCS. Additionally, she has quantified performance measures for pedestrians and bicyclists using methodologies in the 2010 Highway Capacity Manual, latest research and knowledge of how these users behave and experience the transportation network.

Lauren Kaufmann
Staff *Engineer*

TDG: 2011-Present
2 years of experience
Engineer-in-Training: VA
BS, Civil Engineering, University of Virginia, 2011

An Engineer in TDG's Silver Spring office, Lauren Kaufmann has two years of experience in pedestrian and bicycle facility design with an emphasis in traffic analysis. Lauren applies valuable skills in traffic engineering including multi-modal quality-of-service analysis and video behavioral analysis for the W&OD Trail Six Intersection Study and the Union Street Corridor Study. Understanding the complexities of wayfinding signage, Lauren developed construction documents and managed construction of over 20 miles of signed bike routes in the District of Columbia. Lauren also applies her verbal and written communication skills to effectively speak to the public, prepare meeting materials, and express complex data.

Katie Mencarini, AICP
Planner

TDG: 2008-Present
City of Rockville: 2005-2008
American Institute of Certified Planners
Master of Community & Regional Planning: U. of Maryland
BA, Historic Preservation, U. of Mary Washington, 2005

Katie Mencarini is a Transportation Planner with a background in active transportation planning, urban land-use planning, and historic preservation. Katie's skills in planning help her to apply comprehensive planning tools and theories to smaller area and niche plans. Her training in preservation complements her planning perspective with additional insight into the value of creating a "sense of place" within communities, which is critical to developing effective plans. Her work at TDG includes bicycle and pedestrian master plans, transit access plans, pedestrian safety audits, and wayfinding schematics.

Jessica Zdeb
Planner

TDG: 2012-Present
2 years of experience
Independent Consultant: 2008-2009
Harvard University Food Services: 2005-2008
Master of City Planning, U. of California Berkeley, 2012
BA, American History, Harvard University, 2004

Jessica Zdeb is a transportation planner with a master of city planning degree and a background in project development, communications and research in sustainability and health. Prior to joining TDG, Jessica worked in institutional, government and nonprofit contexts providing a wide exposure to organizational structures and approaches. She is a skilled communicator to diverse audiences, using policy research and data analysis to support presentations. Jessica has lived in and visited some of the most bicycle- and pedestrian-friendly cities in the U.S. and brings the perspective of a user of infrastructure to her work.

Benjamin Sigrist
GIS Coordinator

TDG: 2010-Present
6 years of experience
MS, Geography (GIS), University of South Carolina: 2010
BS, Geography (GIS), Salisbury University, 2007

Ben Sigrist is TDG's GIS Department Coordinator. He has an extensive background in Geographic Information Systems. Ben is an expert in developing GIS methodologies that measure non-motorized transportation demand, and in prioritizing infrastructure investments. He has been the GIS/Technical lead for numerous company projects including pedestrian and bicycle plans for Denver, CO; Aurora, CO; Wichita, KS; Philadelphia, PA; and Boston, MA.

Alison Cohen
Bike Sharing Services

TDG: 2013-Present
6 years of experience
Free the Children: 2001-2002
Goldman Sachs, Inc.: 1999-2001
WTA Women's Professional Tennis Tour: 1996-1998
MS, Earth, Atmospheric and Planetary Science, Massachusetts Institute of Technology, 2005
BA, Physics, University of Virginia, 1996

Alison Cohen is the Director of Bike Sharing Services for TDG. With 15 years of varied business and non-profit experience, including over five in the emerging industry of bike share, she has arguably the most broad and deep experience in bike sharing in the United States and globally. Until recently, she was President of Alta Bicycle Share, where she led the procurement, negotiations, sponsorship and launch phases of Melbourne Bike Share in Australia, Capital Bikeshare in Washington DC, Hubway in Boston and New York's Citi Bike. Alison's role will be to assess the existing Tulsa Townies bike share program, and if desired by INCOG, provide recommendations for optimization or expansion.

Dave Roberts, RLA
Senior Planner

Crafton Tull & Associates
22 years of experience
RLA Arkansas
BLA, University of Arkansas

Dave Roberts will assist in conducting public meetings and coordination with the Tulsa area communities. Dave will provide planning expertise in routing options for bike and pedestrian planning as well as coordinate with the CTA Tulsa engineers regarding local knowledge and cost considerations. Dave served as project planner on numerous projects in and around the Tulsa area. Most recently he helped facilitate the 36th Street Corridor Plan study in north Tulsa. The initial phases included a public workshop, coordination with City of Tulsa planners, multiple conceptual corridor options and complete street cross section graphics. Dave served as the lead planner on the Broken Arrow Old Town study which provided recommendations for street, drainage and pedestrian circulation improvements for a one mile square area of the city. Dave lead a team of planners to provide an infill redevelopment concept for East Tulsa with a focus on pedestrian linkages between the community trail network and the new Driller's ONEOK Field.

Julie Luther, AICP, RLA
Senior Planner

Crafton Tull & Associates
13 years of experience
RLA Arkansas
Certified Planner
BLA, University of Arkansas

Julie Luther will assist with conducting public meetings and coordination with GIS data among INCOG and communities. Julie will prepare planning documents and bicycle pedestrian recommendations.

Julie is no stranger to large scale planning projects. She managed a four-county nature based trails and a recreation planning study for the San Antonio River Authority, which won both State of Arkansas and State of Texas ASLA awards as well as the Texas Recreation and Parks society Excellence Award. Julie is currently serving as project manager on the City of Maumelle Strategic Plan, which includes analysis, recommendations and strategies for transportation and open space/ park improvements. In 2004 Julie was project manager for the Pulaski County Pedestrian and Trail Master Plan that won an Arkansas ASLA award. Numerous proposed phases of the study have been implemented and are in use in Central Arkansas.

GENERAL APPROACH

TDG has prepared many bicycle and pedestrian master plans in communities throughout the United States, including several regional planning organizations. A bicycle and pedestrian master plan is tremendous opportunity that does not come along often. It is a chance to plan new infrastructure that supports bicycling and walking, and also to foster a new attitude about active transportation among citizens, elected leaders, and municipal staff at all levels. Our approach to this plan will be influenced by the insightful recommendations of the Bicycle and Pedestrian Advisory Committee to the Tulsa

City Council in 2012. We will align the critical components of the master plan with the vision set forth in those recommendations and use the goals as a vehicle to shape and promote the plan as an agent of change for the region.

Drawing on these goals, we propose several key themes that will be fundamental to the success of this Plan:

The Plan should be bold but also realistic. Plans must be imaginative and provide a clear and coherent vision. We have found that the most successful plans are those that identify and prioritize specific project and programs for immediate implementation, and that build consensus among stakeholders to begin the implementation process upon completion.

The Plan must be integrated and balanced. From the perspective of someone walking or biking, jurisdictional boundaries are often irrelevant and seamless. Continuous routes are essential. Similarly, the bicycle and pedestrian network is not independent, and must be designed in the context of a multi-modal transportation system and an evolving built environment. The system should accommodate users of all skill levels, from children to daily bike commuters, and recreational runners to seniors and wheelchair users.

The Plan should address both the mutual and exclusive needs of pedestrians and bicyclists. While facilities such as paths and trails benefit both pedestrians and bicyclists, these modes have different concerns, particularly when it comes to roadway crossings and accessibility. Plan recommendations should consider the different needs and factors affecting pedestrian and bicycle demand, safety, and convenience.

The Plan should maximize contribution from stakeholders and residents. The INCOG region is fortunate to have growing institutional and citizen support for pedestrian and bicycle improvements. The TDG Team has extensive experience coordinating among diverse stakeholders, providing multiple avenues for input (e.g. from traditional public meetings to interactive websites), and reaching out to individuals and groups not traditionally included in bicycle and pedestrian planning efforts.

The Plan must be detailed. Many bicycle and pedestrian plans identify lines on a map but don't identify solutions that can be implemented in specific locations. This plan will consider and provide a level of detail that will allow quick and effective implementation. To ensure network connectivity and program coordination, the Plan development process and recommendations will speak to all of the agencies and stakeholders responsible for building, promoting and maintaining the system.

2 FAMILIARITY

PROJECT UNDERSTANDING

Tulsa has a popular network of approximately 100 miles of trails and greenways which provides excellent recreational opportunities, but may not support the full range of trips (commuting, errands, etc.) as it does not connect to every destination. The purpose of this plan is to capitalize on this existing off-road network and develop a multimodal transportation system that serves all users and trip purposes, from the regular commuter walking or biking to work or transit, to the multi-generational family out for a weekend picnic.

The TDG Team understands that INCOG and its member jurisdictions are not starting from scratch with this regional bicycle and pedestrian master plan. The Connections 2035 Long Range Transportation Plan contains a bicycle and pedestrian element which identifies regional priorities, and some of the member jurisdictions have done some active transportation planning work. For instance, Tulsa's 2010 Comprehensive Plan lays out a system of bikeways, but more work is needed to recommend specific treatments and prioritize improvements. In addition, the region adopted the Fast Forward Regional Transit Plan in 2010 which establishes

a robust vision for transit throughout the region. The priority corridors identified in the plan should accordingly become priority focus areas for bicycle and pedestrian access to support travel to and from the transit system.

In November of 2013, Tulsa residents will be asked to vote on the Fix Our Streets Capital Improvement Program. This $885 million package of projects includes numerous roadway and transit improvements. The INCOG bicycle and pedestrian plan provides an excellent opportunity to capitalize on this opportunity and ensure that as roadways are improved, bicycle and pedestrian accommodations are incorporated into the ultimate designs.

The jurisdictions that comprise INCOG have different levels of technical capacity and familiarity with best practices in bicycle and pedestrian planning and design. This plan presents an excellent opportunity to educate transportation professionals and elected officials about the importance of walking and bicycling, and develop planning and design resources that can be used to improve the quality and level of accommodation provided by transportation projects. In addition to developing planning tools and design guidance, the TDG Team proposes to conduct a day-long training workshop based on the AASHTO Bike Guide, AASHTO Pedestrian Guide, NACTO Urban Bikeways Guide, and other best practice resources.

Lastly, effective public and stakeholder engagement will be key to identifying regional bicycle and pedestrian priorities and building support for improvements. INCOG has a history of high quality civic engagement, and this project will build off of that expertise. We propose working with the BPAC to reach beyond the traditional audience for bicycle and pedestrian plans by participating in festivals, farmers markets and other public events. Small-group focus meetings will allow us to speak to key stakeholders who will be key to plan implementation. In addition to in-person stakeholder engagement, we will develop visually compelling and informative project websites, leverage the power of social media, and utilize our WikiMapping tool to broaden our public outreach.

PROJECT WORK PLAN

The TDG Team is pleased to present the following generalized work plan and deliverable framework for the development of the INCOG Bicycle/Pedestrian Master Plan. The TDG Team anticipates working closely with INCOG staff and the BPAC to ensure the final scope of work reflects the needs and priorities of the community and positions it for immediate implementation.

Our proposed schedule would typically require approximately twelve months from project kick-off to delivery of the final plan.

Task 1. Project Kick-Off and Ongoing Coordination

Task 1 Deliverables:

- Kick-off meeting
- Revised work plan and schedule
- Ongoing project coordination

Task 2. Existing Conditions Inventory; Policies, Zoning, and Development Regulations Review

Task 2 Deliverables:

- GIS-based map of existing bicycle and pedestrian facilities with existing conditions
- GIS-based demand analysis map (pedestrian and bicycle generators and socioeconomic demographics)
- Combined existing conditions and demand analysis map
- Memorandum summarizing findings and recommendations of ordinance and policy review

Task 3. System Appraisal and Evaluation

Task 3 Deliverables:

- Map of GIS-based transportation system needs
- Map of field assessment transportation system needs
- Combined map of transportation system needs
- Pedestrian hot spot locations
- Bicycle Level of Service
- Pedestrian and Bicycle Friendly Community assessment

Task 4. Bicycle and Pedestrian Network Development

Task 4 Deliverables:

- Map/s of draft network and associated databases
- Summary/rationale for the draft network

Task 5. Recommendations and Implementation Plan

Task 5 is the heart of the Plan, in which recommendations for physical changes to the INCOG transportation network will be identified and policy/program recommendations to support multi-modal transportation, will be documented.

Task 5 Deliverables:

- GIS base map and associated database
- Recommendations Maps
- Memorandum outlining funding sources
- Recommendations on policy, zoning and development regulation modifications

Task 6. Conceptual Design

Task 6 Deliverables:

- Conceptual designs of selected projects
- Preliminary cost estimates
- Renderings

Task 7. Public Involvement and Outreach

Task 7 Deliverables:

- Meet with BPAC / Project Advisory Committee
- Public Involvement and Outreach Plan
- Establish online presence
- Develop and manage online interactive map and brief memo with map summarizing responses
- Develop online survey and brief memo summarizing responses
- Public workshops
- Focus group meetings, targeted interviews, or policy briefings
- Presentation to INCOG Council
- Full-day Training AASHTO Bike Guide

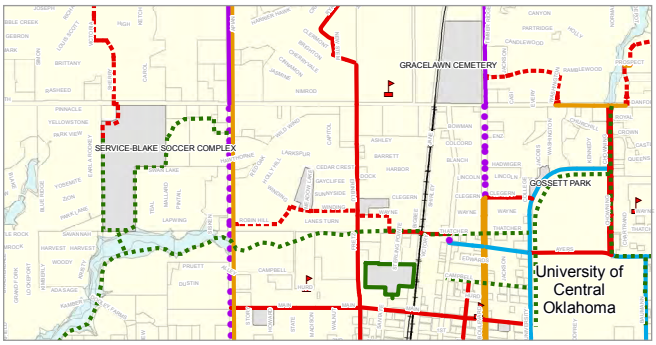
3 RECORD OF SUCCESS

Toole Design Group (TDG) has produced more large-city and regional bicycle and pedestrian master plans throughout the U.S. than any other firm. A sampling of these projects are listed below, with a select few described in more detail following the chart.. Our work has been a key component in significantly increasing rates of walking and bicycling in many communities, as well as supporting Bike Friendly and Walk Friendly Community status. For instance, the City of Seattle has experienced a 40% increase in bicycle use since adoption of the plan TDG developed in 2006; Seattle is now a certified Gold level Bicycle Friendly Community by the League of American Bicyclists. Seattle also achieved Platinum Level Walk Friendly Community status through TDG's work on the Pedestrian Master Plan.

Location	Bike	Pedestrian	Trail	Regional
Edmond, OK	✓		✓	
Wichita, KS	✓	✓	✓	✓
Dallas, TX	✓		✓	
San Antonio, TX	✓	✓		✓
St. Louis, MO	✓			✓
Casper, WY	✓	✓	✓	✓
Minneapolis & Saint Paul, MN	✓	✓	✓	✓
Central Midlands, SC	✓	✓	✓	✓
Harrisonburg-Rockingham, VA	✓	✓	✓	✓
Seattle, WA	✓	✓	✓	
Denver, CO	✓	✓		
Aurora, CO	✓	✓	✓	
Boston, MA	✓			
Washington, DC	✓	✓	✓	
Omaha, NB	✓	✓		✓
Central Shenandoah, VA	✓		✓	✓
Richmond, VA	✓	✓		✓
Alexandria, VA	✓	✓		
Berkeley, Charleston, Dorchester, SC	✓	✓		✓
Charlotte, NC	✓	✓		
Culpeper, VA	✓	✓	✓	
Durham, NC	✓	✓		
Howard County, MD	✓	✓		
Loudon County, VA	✓	✓		
Philadelphia, PA	✓	✓		
Portage County, WI	✓	✓	✓	✓
Winchester & Frederick, VA	✓	✓	✓	✓

Edmond Bicycle Master Plan, *Edmond, OK*

The Edmond Bicycle Master Plan recommends over 140 miles of on-street bicycle facilities and policies and programs that are focused on building a bicycling culture and achieving Bicycle Friendly Community status, a primary goal of the City. TDG was the primary author of the Master Plan and played a major role in assessing the Edmond street network for bicycle improvements, engaging stakeholders, and reviewing pilot project designs. The Master Plan has wide support from the Edmond community and was unanimously approved by the Edmond City Council. The City is currently implementing a bike lane facility recommended in the Plan that entails reducing the number of vehicle travels lanes, installing bike lanes and improving pedestrian safety along a corridor that provides access to the University of Central Oklahoma.



Wichita Bicycle Master Plan, *Wichita, KS*

TDG developed the City of Wichita's Bicycle Master Plan over a 15 month period. Major aspects of TDG's work included facilitating two public meetings, working with a project steering committee, developing a comprehensive bicycle network and conducting a detailed field analysis of

several hundred miles of on and off street facilities. TDG produced a detailed Plan that included:

- Recommendations for on- and off-street bicycle facilities including bicycle lanes, shared lane markings, cycle tracks, bicycle boulevards and shared use paths
- Design guidance for bicycle facilities such as bike lanes, shared lane markings, trail crossings, and intersections;
- Recommendations for education, enforcement and encouragement programs; and
- Phased implementation plan that identifies short-, medium- and long-term projects, and programs along with performance measures for monitoring implementation.

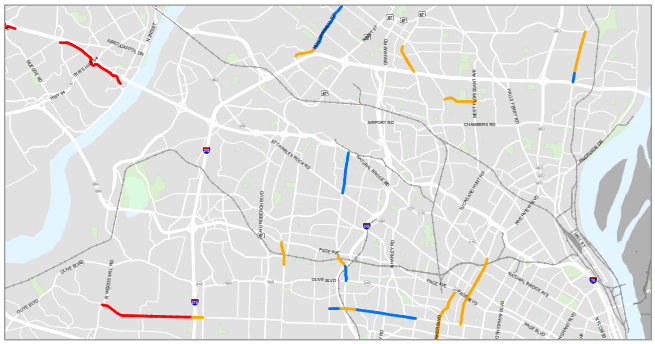
Another major aspect of the project was to coordinate with the internal technical advisory committee comprised of engineers, planners, and others to discuss and review recommendations and facility types that have not been used in the past. The final Plan was endorsed by community stakeholders and unanimously adopted by the City Council.

St. Louis Gateway Bike Plan, *St. Louis, MO*

TDG served as an expert bicycle planning subconsultant for the development of the award winning St. Louis Regional Bicycle Master Plan, a master plan that incorporates approximately 100 local jurisdictions into a regional vision for accommodating and encouraging bicycling. Major aspects of TDG's work included facilitating a regional committee with many different viewpoints on bicycle issues, and conducting detailed field analysis of over 500 miles of roadways throughout the metropolitan area. TDG produced a detailed implementation plan that includes:

- Locations of future bikeways in a cohesive regional network;
- Proposed design treatments specific to each location;
- Range of design treatments including cycle tracks, bike lanes, bike boulevards and shared-use facilities; and
- Phased implementation plan that identifies a list of feasible, short-term implementation projects, as well as longer term projects for future years.

Another major aspect of TDG's work was meeting with key engineering staff of local jurisdictions to discuss the recommendations and ease concerns regarding new facility types that have not been built in this region in the past.



Aurora Bicycle & Pedestrian Master Plan, *Aurora, CO*

The City of Aurora Bicycle and Pedestrian Master Plan recommends over 160 miles of on-street bicycle facilities, as well as spot bicycle and pedestrian improvements to improve safety, connectivity, and wayfinding. The recommended bicycle network compliments the City's extensive trail network and was prioritized to serve areas with highest potential demand. Central to the Master Plan is an "Action Plan" that includes over two dozen specific actions the City will take to successfully implement the Plan, including engineering policies and practices, funding, staffing, education and encouragement. Actions were tailored to the City's unique circumstances and grounded in the best practices of communities across the nation who are successfully promoting bicycling and walking as viable transportation options.

The Master Plan effort also included a detailed multi-modal analysis of a corridor that is a key focus area of the City's economic development efforts. Recommended corridor improvements are expected to reap the City substantial economic benefits while creating a premier gateway into the City.

Harrisonburg-Rockingham MPO Bicycle and Pedestrian Plan, *Harrisonburg, VA*

Virginia's Central Shenandoah Valley provides superb natural, cultural and historic resources including emerging bicycling and walking networks for residents and visitors. Harrisonburg-Rockingham MPO (HRMPO) is leading an effort to create a framework for the development of an efficient, safe, and interconnected system of pedestrian, bicycle, and multi-use facilities that will enhance the transportation system the region. TDG is part of a team working with the community and local stakeholders to develop a vision and recommendations for how this area can improve conditions for bicycling and walking.

TDG is assisting in identifying existing facilities for expansion projects, future facilities and construction priorities, non-infrastructure programs such as education, encouragement, and evaluation strategies, incorporate state-of-art design

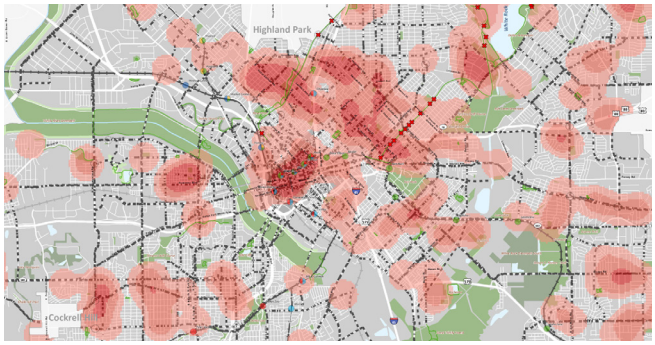
standards, and outline local government policy initiatives to promote bicycle and pedestrian modes. Overlaying this robust public input with in-depth analysis and cutting edge planning and design strategies will produce a plan with practical near-term recommendations and a long term vision.

San Antonio-Bexar County Pedestrian Safety Action Plan, *San Antonio/Bexar County, TX*

TDG led the development of a regional Pedestrian Safety Action Plan for the San Antonio-Bexar County MPO. In addition to focusing on pedestrian safety, the Plan also promotes walking through the creation of more attractive walking environments and programs encouraging walking for health, recreation and transportation. Key elements of the project included critiquing municipal and county development standards, crossing policies and design guidelines. In addition, TDG evaluated existing pedestrian infrastructure using a combination of fieldwork and data analysis. Prioritized facility recommendations focused on improving safety, closing gaps and creating more walkable environments.

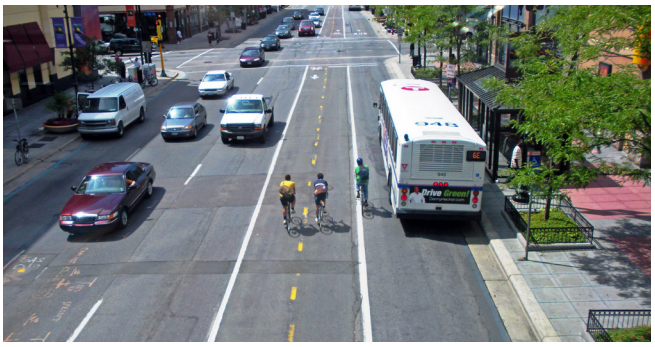
Dallas 2011 Bike Plan, *Dallas, TX*

TDG served as the prime consultant for the City of Dallas 2011 Bike Master Plan. The project involved extensive GIS and field analysis, the development of 450 miles of on-street facility recommendations, bicycle parking templates for light rail stations, trail crossing guidelines, wayfinding protocols, and prioritization and policy strategies.
The Plan focused heavily on implementation and included funding strategies and phased approach for the completion of recommendations from the plan. Installation of early implementation projects started in the fall of 2010.



Twin Cities Regional Bicycle System Master Study *Saint Paul & Minneapolis, MN*

TDG is working with the Metropolitan Council to develop a regional bicycle system study that will identify regionally-significant bicycle travel corridors in the seven-county Twin Cities Region. This effort builds upon existing data including travel survey data, bicycle count data, land use data, and crowd-sourced GIS to develop an assessment of regional bicycle demand in the region. The outcome of this project will be a final report that will propose bicycle corridors of regional significance that will be proactively guide the bicycle component of the region's long range transportation plan with a focus on increasing connectivity and removing barriers to bicycling.



Pulaski County Pedestrian and Bicycle Trails Master Plan, *Pulaski County, AR*

This Master Plan proposes a regional network of connections between the numerous cities within the county for transportation and recreational use. Crafton Tull coordinated with Metroplan, the local MPO, Arkansas Highway and Transportation Department, and Arkansas State Parks to incorporated local municipal plans into the Plan. The plan identifies strategies for on- and off-road trails, focusing pedestrian-oriented trails with walkable distances to destinations in urban areas, while utilizing bicycle trails to connect one urban area to another. In addition, trail classifications with corresponding design criteria were developed, as well as signage and trailhead standards.

Tulsa East VIllage, *Tulsa, OK*

The East Village Master Plan was commissioned by a private developer to present revitalization solutions to the City of Tulsa. The solution presents an important connection to the stadium as an anchor, as well as connections to the Tulsa trail network. This sustainable master plan developed by Crafton Tull creates a pedestrian-oriented environment that encourages the adaptive reuse of existing structures to create a downtown entertainment area promoting mixed uses and a central park as the organizing feature.

Broken Arrow Old Towne Study, *Broken Arrow, OK*

The City of Broken Arrow contracted Crafton Tull to provide an engineering and planning developmental study for the Old

Town area bordered by Elm Place on the west, Kenosha Street on the north, 9th Street to the east, and Houston Street to the south. The project was divided into three basic phases.

Phase I: Information Collection Phase, during this phase, the streets, alleys, sidewalks, bar ditches, drainage-ways, streetscapes, gateways, trails and sidewalks were inventoried and evaluated. In addition, the City provided GIS information and drainage reports that were relevant to the area of the study. During Phase II: Preliminary Engineering and Planning Phase, Crafton Tull determined drainage areas, flows, and capacity of creeks in order to provide drainage improvements. Preliminary design parameters and budgets were developed during this phase. Lastly, during Phase III: Final Engineering and Planning Phase During this final phase, final estimates, design schedules, and construction schedules will be established.

Cleveland Bicycle Share Feasibility Study, *Cleveland, OH*
Utilizing a data driven approach based on stakeholder participation and population trends, TDG is currently working with the City of Cleveland Mayor's Office of Sustainability to study the feasibility of bike sharing in Cleveland. This two-phase project includes delivery of a feasibility study, and pending the outcome will include the development of a business plan for moving the program into implementation.

Phase one of the project includes analyzing the conditions for bike sharing in Cleveland, including assessment of the suitability of bike share using GIS to evaluate potential demand. The TDG team will make recommendations on the appropriate size and geography of a bike sharing system for Cleveland based on technical analysis and public input gathered through stakeholder meetings, workshops and interactive web surveys and mapping tools.

The second phase will build on the initial recommendations to provide a detailed business plan that will position the City to move forward with full implementation.

We invite you to contact any of our clients profiled in this proposal regarding the quality of the Toole Design Group Team's professional qualifications.

TOOLE DESIGN GROUP

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