



PROPOSAL

NACTO  
Urban Street Design Guide

*Submitted to*  
National Association  
of City Transportation Officials

*Submitted by*  
Otak, Inc.

*in association with*  
Lesley Bain, Weinstein A|U  
Principal Author of  
*Living Streets—Strategies for Crafting Public Space*

Fehr & Peers

studio/216

Urban Advantage



Hanmi Global Partner

June 1, 2012



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May 31, 2012

Mr. David Vega-Barachowitz  
National Association of City Transportation Officials  
55 Water Street, 9th Floor  
New York, New York 10041

**Re: Proposal for the *Designing Cities* NACTO Urban Street Design Guide—Otak File No. 32154**

Dear Mr. Vega-Barachowitz and Selection Committee,

The *Designing Cities* NACTO Urban Street Design Guide will inspire and guide the planning, design, operations, and maintenance of urban thoroughfares throughout the United States. Following the precedent of NACTO's landmark Urban Bikeway Design Guide, the Urban Street Design Guide will address the full range of contexts in our cities, providing a toolbox of guidance that can be adapted to local street conditions. The Guide will highlight the role of streets in fostering civic pride and distinction and serving as cornerstones of economic development. It will provide specific design guidance to make streets safe, comfortable, and enjoyable for all modes of travel.

Otak has assembled a fantastic team for this exceptional and important project. With more than 30 years of experience designing urban streets and developing design guides and toolboxes, Otak will serve as the prime consultant working in close partnership with:

- Lesley Bain of Weinstein A|U, urban designer and author of the recently published book, *Living Streets—Strategies for Crafting Public Space*
- Fehr & Peers Transportation Consultants, known nationally for multi-modal street design and for developing standards and training curriculum for complete streets
- studio/216, an innovative multi-media design firm that will develop web-based content for the Guide and provide graphic support to the project
- Urban Advantage, a firm committed to illustrating transformation of urban settings through creative graphic simulations that show sequential changes at the street level

The Urban Street Design Guide must appeal to and be understood by a broad spectrum of people—elected officials and city leaders with minimal expertise in city street design, as well as engineers, planners, designers, and other practitioners with technical backgrounds. Our in-depth experience in street design and developing and editing street design guides will ensure that the Guide meets the needs of all intended audiences.

Urban street rights-of-way often comprise 30 to 40 percent of the public space in our cities. They not only provide mobility and access, but also serve as important places in our communities and are a valuable part of the public realm. They are the places where we stroll, gather, and connect with each other every day. Our team's background and focus on placemaking and complete streets will ensure that the Urban Street Design Guide serves as a new and lasting blueprint for American city streets, where streets are places for people and commerce as well as thoroughfares that safely serve all modes of travel.

The enclosed proposal highlights our experience and qualifications in detail. We look forward to the opportunity to present our qualifications in a personal interview. In the meantime, feel free to contact me with any questions or if you need additional information.

With my warmest regards,  
Otak, Incorporated

A handwritten signature in black ink, appearing to read "Mandi Roberts". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Mandi Roberts, PLA, ASLA, AICP  
Principal and Senior Project Manager

**TABLE OF CONTENTS**



- Introduction . . . . . 1**
- Project Team Organization and Qualifications . . . . . 5**
  - Team Member Biographies
  - Team Organizational Chart
- Proposed Approach to Project. . . . . 15**
  - Project Understanding
  - Resources and References
  - Innovative Ideas for the Street Design Guide and Web-based Format
  - Comments on the Scope of Work
  - Work Plan Elements
  - Project Schedule (Timeline and Work Plan)
  - Budget Sheet
  - Summary
- Related Past Projects and Client References . . . . . 25**
  - We Have Developed Design Guides
  - We Are Designers
  - We Understand the Requirements
  - Project Examples
  - Client References

*Appendix Included as a Separate Document*

## INTRODUCTION

Since 1981, **Otak** has built a reputation based on integrity, skill, and creativity. With close to 250 staff company-wide, the interdisciplinary composition of our firm enables all of our urban designers, civil engineers, planners, landscape architects, architects, and other professionals to bring innovative solutions that can be implemented cost effectively in urban settings. Otak's award-winning achievements are based on our commitment to projects that are sensitive and responsive to their context, history, environmental resources, and embraced by and connected to the cities and communities where they are located. Throughout our 30-year history, we have worked closely with and for a variety of cities across the US and abroad. This work has included successful completion of urban street design guides and toolboxes. For more information about Otak visit: [www.otak.com](http://www.otak.com).

We strongly believe that effective planning and design enhances the connection between people and places. Approximately 30 to 40 percent of the public space in our communities consists of boulevards, streets, and roadways. These are important public resources that not only need to safely and efficiently accommodate multiple modes of transportation, but also need to facilitate a strong connection between people and place. Design guidelines help to ensure that this connection occurs by encouraging best practices and conveying a specific design aesthetic through improvements as corridors are updated, enhanced, and retrofitted. We bring extensive experience developing design guidelines for public rights-of-way, including urban boulevards, streets, roadways, and other transportation and transit

corridors. Our strong capabilities in written, verbal, graphic, and interpersonal communications have enabled us to develop guidance that appeals to and educates a full spectrum of practitioners, as well as city leaders and elected officials.

For design guidelines to be successfully adopted and implemented, they must be developed through a collaborative process. We have invited some of the best talents in street design and placemaking in the country to collaborate with us on this important assignment. Together with Lesley Bain of Weinstein

A|U, Fehr & Peers, studio/216, and Urban Advantage, our team brings a strong depth of interdisciplinary technical expertise, knowledge, and experience related to urban streets. Introductions to each of our partner firms are provided below. Our team looks forward to working closely with NACTO representatives to produce the Urban Street Design Guide and the accompanying web-based version.

**Weinstein A|U** is recognized as a leading urban design firm, and principal Lesley Bain is the primary author of the recent book, *Living Streets—Strategies for Crafting*



Beacon Hill Station Area Planning Graphic

*Public Space*, which is gaining accolades in the industry for highlighting streets as places and recognizing the important role they serve as part of the public realm. Weinstein staff members are passionate about cities and the opportunity to shape evolving urban neighborhoods. The firm has demonstrated design excellence on a broad array of projects for state, city, federal, private, and not-for-profit clients. Their practice integrates urban design (the art of community building) and architecture (the art and technology of building) with a focus on complex urban projects that contribute positively to their neighborhoods. Through their work on the urban design and architecture of complex public spaces, they have collaborated with multiple stakeholders and community groups to create flexible, attractive multi-use spaces. They are committed to design solutions that are appropriate to the circumstances of each setting and client. In Seattle, Broad Street Green, Theater Commons, and Skatepark are examples of distinctive public spaces they have designed that contribute to the Seattle Center campus and the life of the City. The public right-of-way is a complex, publicly-owned space, and they are at the forefront of creative use of the street as space for people. Pike Place and Post Alley, just outside the firm's front door, also are models of right-of-way as public space in Seattle. Founded by Ed Weinstein in 1977, the firm has won over 50 awards, nationally, regionally, and locally. For more information on their experience and team, visit: [www.weinsteinau.com](http://www.weinsteinau.com).

**Fehr & Peers  
Transportation**

**Consultants** specializes in providing urban street traffic engineering and multi-modal transportation services from the early planning stages of a project to the development of design plans and through final implementation in the field. They integrate complete streets design expertise with transportation engineering capabilities to produce the ideal combination of creative, yet practical solutions that address the needs of all travel modes. This comprehensive approach is an obvious benefit to clients looking to transform streets and neighborhoods in the near term while preserving a full range of access and mobility options. Their services range from transportation planning and conceptual traffic engineering to plans, specifications, and estimates to construction support.

Fehr & Peers also has a full-service communications department in-house that develops interactive



Farmer Avenue

web-based programs and website content. Their communications department will support the programming and development of web-based content for the Urban Street Design Guide, working jointly with studio/216 and the rest of the team. For more information, please visit their website at: [www.fehrandpeers.com](http://www.fehrandpeers.com).

**studio/216** is a multidisciplinary media/visual communication company specializing in interactive media, video, animation, website design, and

“Otak clearly understands pedestrians’ needs and characteristics—that was a major focus of their work on our citywide transportation plan. Their process fully engaged our staff, citizens, neighborhood representatives and other stakeholders in the plan development. Mandi Roberts provided strong project management and was instrumental in ensuring pedestrian transportation was fully addressed an integral element of our plan.”

- Robert Yabes, AICP, Principal Transportation Planner, City of Tempe, Arizona

internet-based products. From their office in Seattle, studio/216 serves clients of all sizes throughout the US and abroad. The firm was founded in 2005 and is comprised of creative individuals who care

deeply about the stories, films, and graphics they produce. For the NACTO Urban Street Design Guide, studio/216 will develop web-based interactive content, including an innovative and dynamic toolbox

to illustrate how urban streets and settings can be transformed by applying recommended design practices. As an optional service, they also can produce short film clips of case study examples and



Lake Union Amazon Project (studio/216)

lessons learned from cities implementing urban street design solutions. In addition, their excellence in graphic design will support the team's work on both the Guide and the website. A few examples of their websites, internet-based products, and graphics are provided in this proposal. For additional examples and information, including film clips they have created, please visit: [www.studio216.com](http://www.studio216.com).

**Urban Advantage** (UA) creates green visions of enriching walkable urbanism by transforming photographs with photo editing software. The results are photo-realistic visualizations that make development visions palpably real and understandable. In community development, seeing is key to understanding. People need realistic pictures to understand development options. Using photo-editing and 3D modeling software, UA develops seamless photo simulations to realistically show how revitalized urban streets and places can be transformed. The deliverables are before and after sequences—existing conditions photographs, two to three intervening step images, and final complete visions. UA has developed nearly 500 simulation sequences, many at the street level view in urban settings. This extensive portfolio of imagery and graphics can be cost-effectively adapted for use in the Guide and web-based interactive tool. UA's innovative images allow viewers to clearly envision the tangible results of change—the impact of streets trees, the viability of transit, the significance of street geometry, and how the changed environment could better respond to human needs. A selection of their work examples are provided in this proposal. For more examples and information, please visit: [www.urban-advantage.com/index.html](http://www.urban-advantage.com/index.html).

Hydraulic Road in Charlottesville, Virginia (Urban Advantage)



Existing conditions



Street geometry improvements, street trees, lamps, sidewalk-oriented buildings, new connecting street (visualization)



Roundabouts, more urban, and greater pedestrian orientation (visualization)

## PROJECT TEAM ORGANIZATION AND QUALIFICATIONS

Our team brings the full level of interdisciplinary expertise and depth of resources needed to complete the *Designing Cities* NACTO Urban Street Design Guide project. We have assembled a strong team of urban designers, civil engineers, landscape architects, multi-modal transportation specialists, traffic engineers, and bicycle and pedestrian experts, as well as multi-media, web-design specialists, and graphic designers.

The organizational chart on the following page illustrates the structure of our team and highlights the areas of expertise of our team members. We have also included brief bios for our team members, identifying their role, summarizing their relevant expertise, and listing a selection of their relevant projects. Full resumes are available upon request.

### MANDI ROBERTS, PLA, ASLA, AICP

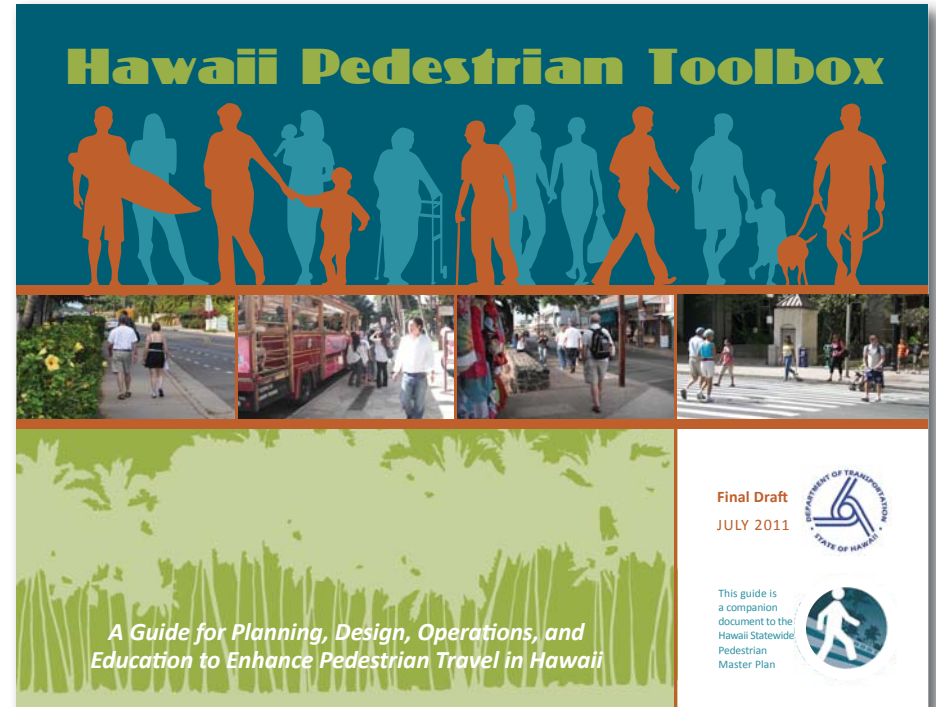
**Project manager, content development, and Urban Street Design Guide principal editor**

Mandi brings more than 25 years of experience managing and providing planning and design for a variety of public sector street and transportation projects. She often manages interdisciplinary projects that bring together urban design, civil engineering, landscape architecture, and multi-modal transportation. She is a licensed landscape architect in Washington and a certified urban planner. She brings extensive experience in planning and design of urban streets, boulevards, roadways, and other transportation and transit facilities, and is known for her ability to successfully develop comprehensive design guides and toolboxes for multi-modal

transportation and street design. Mandi brings particularly strong expertise in pedestrian, transit, and bicycle facility design and a thorough working knowledge of ADA requirements applicable to public rights-of-way. As one of Otak's principals and senior-level project managers, she has been responsible for several complex and multi-faceted public agency projects that have required coordination with a broad diversity of stakeholders at multiple levels, leading experts in the practice, elected officials, community leaders, special interest groups, and others. Mandi is an excellent communicator and facilitator, and she has developed and successfully implemented a range of stakeholder involvement tools, including interactive workshop series, web-based activities, and various outreach media. Select experience includes:

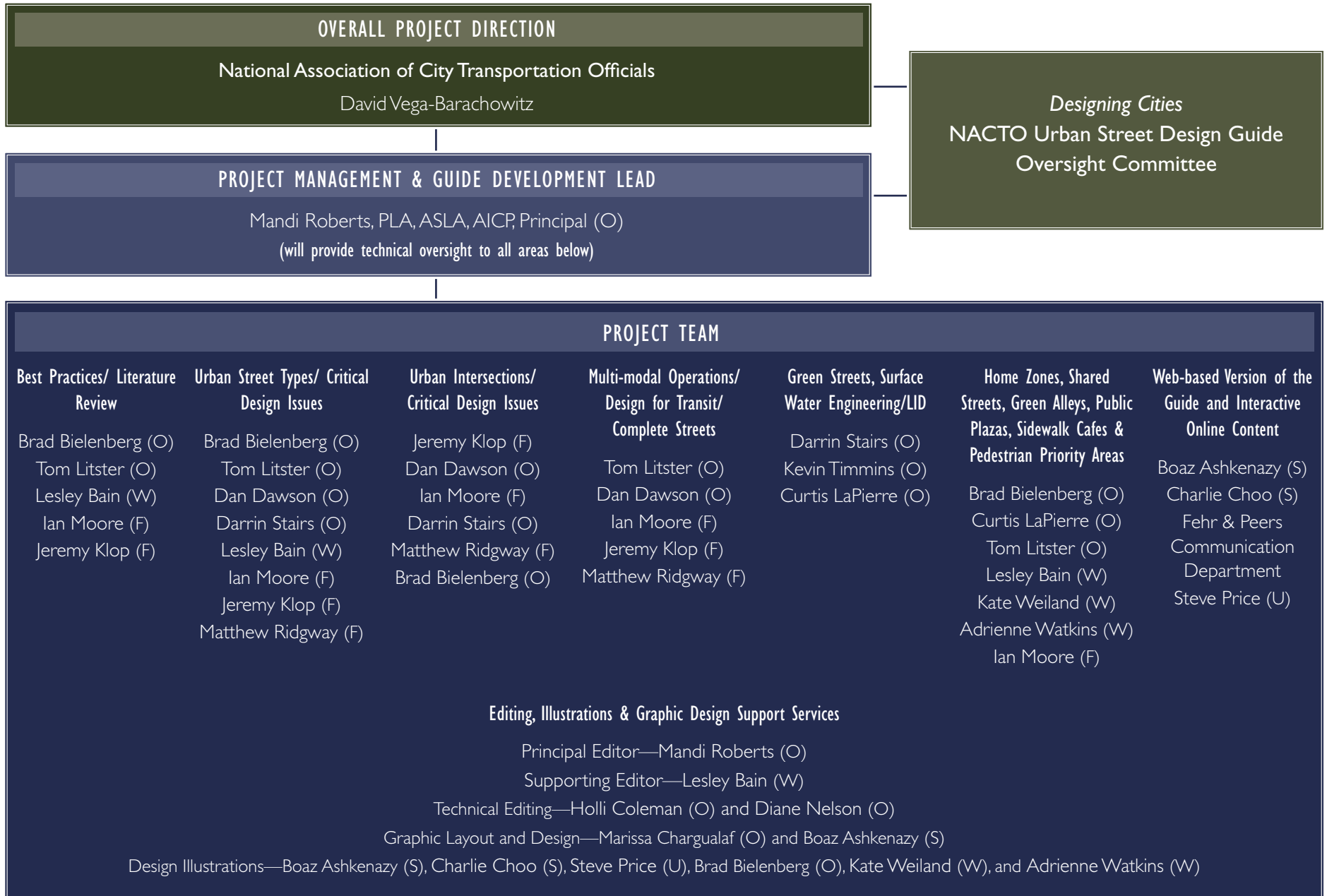
- Abu Dhabi Urban Street Design Manual, Versions I and II; Abu Dhabi, UAE
- Transportation Toolbox and Multi-modal Transportation Plan; Tempe, Arizona
- Pedestrian Toolbox and Statewide Pedestrian Master Plan; Hawaii
- Pedestrian Facilities and Streetscapes Guide; Georgia

- Al Rayyan Corridor Plan and Design Guidelines; Doha, Qatar
- Scottsdale Road Master Plan, Design Guidelines and Streetscape Improvements; Scottsdale, Arizona
- Accessible Public Rights-of-Way Planning and Design for Alterations; US Access Board
- Pedestrian Facilities Guidebook; Washington
- Smart Growth America Technical Assistance, Nationwide—US (Presenting Street Design and Local Strategies for Slowing Climate Change from Otak's Cool Planning Handbook, APA National Award Winner)
- Numerous Urban Boulevard, Street Design, and Corridor Projects





Team Organizational Chart



O = Otak, Inc.

W = Weinstein A|U

F = Fehr & Peers Transportation Consultants

S = studio/216

U = Urban Advantage

## BRAD BIELENBERG, PLA, ASLA

### Urban Street Design Guide content development—all topics

Brad is a senior associate and professional landscape architect and urban designer with more than 19 years of experience. He is skilled in urban street design throughout the US and abroad. He has designed and managed a variety of projects including streets and streetscapes, transit facilities, and public plazas. His recent experience revolves around urban design and planning, transportation planning and design, and the pedestrian environment with an emphasis on how transportation influences pedestrian circulation and creates livable cities. Brad also has extensive national and international experience, primarily in the northeast US, in particular New York City, where he worked on a wide variety of projects throughout the region as well as in the Midwest, India, Japan, Brazil, Israel, and Qatar. Throughout his career, Brad has collaboratively worked with architects, engineers, and artists to successfully design, manage, and oversee construction of numerous award-winning projects. Select project experience (with Otak and previous employers) includes:

- Fort Valley Road Cultural Corridor Study; Flagstaff, Arizona
- Fourth Street Corridor Study, North Section; Flagstaff, Arizona
- Muroor Road Streetscape Improvements; Abu Dhabi, UAE
- Scottsdale Road Master Plan, Design Guidelines, and Improvements; Scottsdale, Arizona
- Lower Broadway Streetscape Program; New York, New York
- New York Stock Exchange Streetscape & Security Project; New York, New York
- Avenue-by-the-Sea; Rockaway, New York

- Trinity College Landscape Master Plan and Vernon Street Improvements; Hartford, Connecticut
- Somerville Streetscape; Somerville, New Jersey
- Al Rayyan Corridor Plan and Design Guidelines; Doha, Qatar
- Abu Dhabi Urban Street Design Manual, Abu Dhabi, UAE

## DAN DAWSON, PE

### Urban Street Design Guide content development—pedestrian accessibility considerations (including accessible intersection and signal design)

Dan is a professional civil engineer and a recognized national expert on pedestrian travel needs and accessibility in public rights-of-way. He was a member of the Public Rights-of-Way Accessibility Advisory



New York Stock Exchange Streetscape Project  
(Brad Bielenberg's experience while with another firm)

Committee (PROWAAC) of the US Access Board. He has also served on the Transportation Research Board's Committee on Geometric Design. He has taught accessibility planning and design to transportation design professionals and has played an instrumental role in Otak's development of pedestrian design guideline documents. Dan is also an expert in design of urban streets, transit facilities, and municipal public works projects. He was awarded the 2010 Washington Section ITE Award for Outstanding Service to the community and the transportation profession. Select project experience includes:

- Accessible Public Rights-of-Way Planning and Design for Alterations; US Access Board

- Scottsdale Road Master Plan, Design Guidelines and Streetscape Improvements; Scottsdale, Arizona
- Pedestrian Facilities and Streetscapes Guide; Georgia
- Pedestrian Facilities Guidebook; Washington

**CURTIS LAPIERRE, PLA, ASLA, AICP, LEED AP**  
**Urban Street Design Guide content development—shared streets, festival streets, and public spaces**

Curtis brings more than 20 years of experience as a talented landscape architect and urban designer with a solid construction background. He is LEED accredited and has a particular ability to develop

highly creative yet constructible, sustainable, low maintenance site designs and streetscapes. His projects include design of an urban festival street in Seattle, shared streets, and public plazas, as well as design of gateways, integration of public art, transit stations, and trail and trailhead design. Curtis is especially accustomed to working on complex interdisciplinary projects that require high levels of coordination. His background is strong in several areas including natural drainage design, low impact development (LID) methods and the design of pedestrian, bicycle and transit facilities, especially related to streets and transportation projects. Select project experience includes:

- Aurora Corridor Urban Boulevard Streetscape and Gateway Improvements; Shoreline, Washington
- Roberto Maestas Festival Street; Seattle, Washington
- SR 522 HOV Enhancement, Phase 2/Burke Gilman Trail Improvements; Kenmore, Washington
- Pioneer Square Parks Master Plan and Occidental Square Improvements; Seattle, Washington
- Everett Gateways Streetscape Plan; Everett, Washington
- East Riverside Drive Improvements; Bothell, Washington
- Sidewalk Improvement Programs; Redmond, Washington
- Urban Street Design Manual; Abu Dhabi, UAE
- Many Other Urban Boulevard, Street, and Corridor Design Projects



SW Burnham Street (APWA National Public Works Project of the Year, 2012)

**TOM LITSTER**  
**Urban Street Design Guide content development—multi-modal considerations and access to transit**

Tom brings extensive experience in the design of urban multi-modal streets and transit and

transportation corridors. His work focuses on integrated land use and transportation to create more livable communities. Tom has authored many design guideline documents for boulevards and street networks and has designed signature streetscapes, green streets, and developed context sensitive solutions for a diversity of transportation and transit projects. Select project experience includes:

- Tigard Comprehensive Streetscapes; Tigard, Oregon
- SW Burnham Street Improvements (National APWA Award Winner); Tigard, Oregon
- Fourth Plain Boulevard Streetscape Plan; Vancouver, Washington
- Mississippi Avenue Main Street Study (building design guidelines); Portland, Oregon
- Miami Streetcar Feasibility Study (urban design guidelines); Miami, Florida
- Downtown Community Plan (historic design guidelines); Oregon City, Oregon
- Opportunity Gateway Street Design Guidelines; Portland, Oregon
- NW Broadway Urban Design Master Plan; Portland, Oregon
- Pedestrian Facilities for Transit Access; Portland, Oregon
- Pine Street Improvements and Streetscape Plan; Central Point, Oregon

### **DARRIN STAIRS, PE**

**Urban Street Design Guide content development—civil engineering and integrating LID, green technologies, and surface water management**

Darrin is a civil engineer with more than 17 years of experience managing, engineering, and designing urban street projects in the Pacific Northwest and the northeast US. His experience includes local

collector and arterial roadways; bridges and culverts; pedestrian and bicycle facilities; storm drainage, sanitary, and water systems; site development for single- and multifamily residential housing; site grading; and erosion control. Select experience includes:

- SW Burnham Street Improvements (National APWA Award Winner); Tigard, Oregon
- US 97: Fairgrounds Road L Street Sidewalk/ Streetscape Project; Madras, Oregon
- Trail Bike/Pedestrian Path; West Linn, Oregon
- Downtown Intermodal Mall; Corvallis, Oregon
- Lot 5 at The Yards Transit-oriented Development (TOD); Portland, Oregon
- Mt. Scott/Scouter Mt. Trail Loop; Portland, Oregon

- Woodburn Downtown Development Plan; Woodburn, Oregon

### **KEVIN TIMMINS, PE**

**Urban Street Design Guide content development—integrating LID, green technologies, and surface water management**

Kevin has 13 years of engineering experience working with multidisciplinary design teams on public projects. He has served the past seven years as Chair of the Water Resources committee for the Oregon Chapter of APWA. Kevin has spent his entire career working in water resource engineering, hydrology,



Roberto Maestas Festival Street

and hydraulics. His expertise includes hydrologic and hydraulic modeling, fish passage culverts, scour analysis, watershed analysis, flood reduction, stream restoration, large woody debris design, water quality, and stormwater management. Select experience includes:

- SW Burnham Street Improvements (National APWA Award Winner); Tigard, Oregon
- Gateway Towers Green Street Concepts; Portland, Oregon
- Foster Corridor Investment Strategy; Portland, Oregon
- Pedestrian Places Project (Ashland TSP Update); Ashland, Oregon
- West Linn Trail Bike/Pedestrian Path; West Linn, Oregon
- Salmon Creek River Restoration; Clark County, Washington

- South Waterfront River Bank Restoration and Stormwater Management; Portland, Oregon

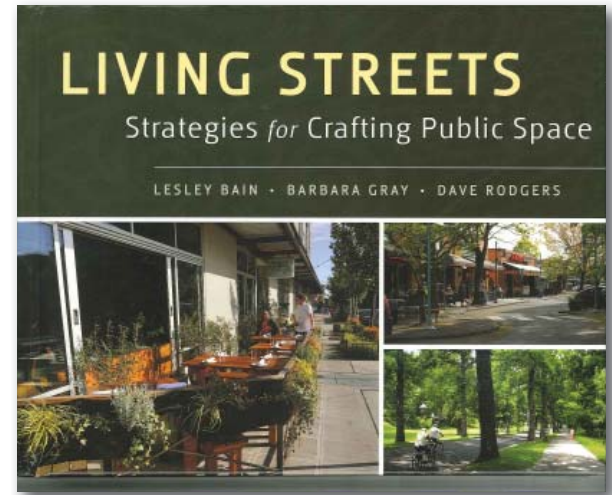
**MARISSA CHARGUALAF**

**Urban Street Design Guide graphic design for deliverables and presentations**

Marissa is a designer with more than six years of experience in graphic design and print production. She provides graphic design to support many of Otak’s design guideline and toolkit documents, streetscape plans, and studies, including recent completion of the Abu Dhabi Urban Street Design Manual and the Pedestrian Design Toolbox for the State of Hawaii. Marissa has also created designs for wayfinding signs and elements as part of streetscape projects and supports a wide variety of public involvement and community outreach tools and media.

**LESLEY BAIN, AIA, LEED AP**  
**Urban Street Design Guide content development and contributing editor—all topics**

Lesley is a passionate and successful advocate for quality urban life. She has expanded the role of the architect—setting the stage for more humane, walkable cities. Lesley has developed a particular expertise

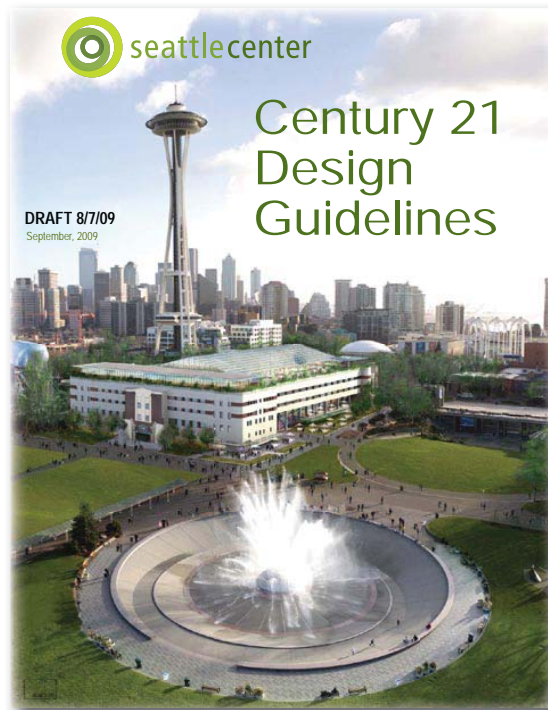


in public space and placemaking, recognizing the potential of the right-of-way in communities. Her book, *Living Streets—Strategies for Crafting Public Space*, was released by publisher John Wiley & Sons in March 2012. She works regularly with city staff on project in the public realm. She worked with the City of Seattle to rewrite the Citywide Design Guidelines, with an increased focus on the sustainability and conceptual thinking. She worked on a team with the City of Redmond on the Master Plan for the Central Connector to re-envision nearly four miles of a former rail corridor. Lesley authored the City’s first street master plan, for Terry Avenue, with the mandate to make as close to a European-style pedestrian street as possible. She is currently working with the Washington State Department of Transportation (WSDOT) on the urban design for the south and north portals associated with the Alaskan Way Viaduct Replacement project, along with urban design for the surface streets in the portal areas.

Since winning the How Green is My Alley competition in February 2010, Lesley has played a



South Waterfront Redevelopment



leadership role on a volunteer basis for the reinvention of Pioneer Square's alleys in downtown Seattle. She studied intimate streetscape in Italian hilltowns as a 2010 Fellow of the Northwest Institute for Architecture and Urban Design in Italy, and has been a speaker at national conferences on the quality of the public realm.

### KATE WEILAND, LEED AP

#### Urban Street Design Guide content development—support on alleyways

Kate joined Weinstein A|U in 2012 after receiving her Master of Architecture degree from the University of Washington. She recently has been involved in visualization of both urban design and architecture projects including the re-imagining of alley spaces in the International District of Seattle, the entrance

portals to the Alaska Way Viaduct replacement tunnel, and a high-rise office building in Seattle's South Lake Union neighborhood. Her experience as a construction administrator for a general contractor gives Kate a holistic understanding of the design/bid/build process from multiple points of view.

### ADRIENNE WATKINS

#### Urban Street Design Guide content development—support on various topics

Adrienne recently joined Weinstein A|U after completing her Master of Architecture at the University of Washington. She is originally from California and studied at the University of California, Berkeley, where she received her Bachelor of Arts in Architecture and a Minor in City and Regional Planning in 2007. After moving to Seattle, Adrienne worked for two years at ZGF Architects before pursuing her graduate degree. She is currently a design team member for Artspace PA'I, an artist housing and Hawaiian cultural center in Honolulu. She is also working on visualization studies for the restoration of historic alleys in Seattle's International District and the Alaska Way Viaduct and Seawall Replacement Program.

### IAN MOORE

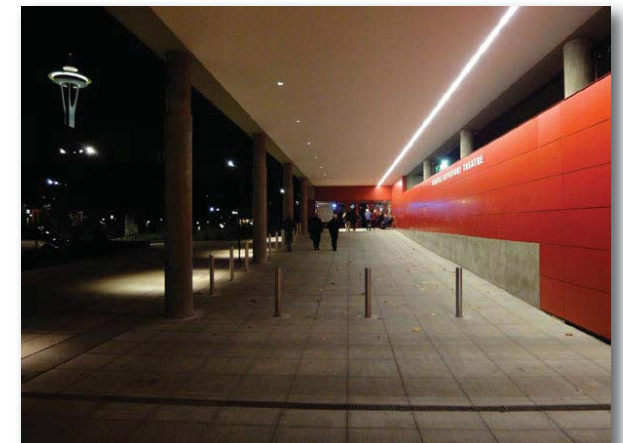
#### Urban Street Design Guide content development—pedestrian and bicycle considerations

Ian has 13 years of experience managing pedestrian and bicycle plans, multi-modal transportation corridor studies, multi-use trail studies, and roadway corridor master plans. His pedestrian and bicycle project experience is diverse including many phases of planning and design: policy development, expenditure

plan development and administration, community-wide master planning, funding plans, design guideline preparation, conceptual design development, construction document preparation, design review, and environmental review. Ian has developed bicycle, pedestrian and trail plans for communities throughout California with a focus in the San Francisco Bay Area. He is a recognized expert in bicycle and pedestrian long-range planning, project funding strategies, design



Seattle Center Commons, Pedestrian Route



Seattle Center Commons, New Canopy at Seattle Repertory Theater



best practices, as well as in programs that effectively support growth of walking and bicycling as safe transportation modes in diverse communities and land use settings. Select project experience includes:

- Orinda Bicycle, Trails, and Walkways Master Plan; California
- San Mateo Bicycle Master Plan; California
- San Mateo Pedestrian Master Plan; California
- Los Altos Bicycle Master Plan; California
- Alpine County Bicycle and Pedestrian Transportation Plan; California
- Union City Bicycle and Pedestrian Master Plan; California
- San Francisco Bicycle Master Plan Update; California
- C/CAG San Mateo Countywide Bicycle and Pedestrian Plan; California



and trip generation, complete streets, and bicycle and pedestrian facility planning, including a co-author role for the Bicycle and Pedestrian chapter in the ITE Transportation Planning Handbook (2009). He is a member of the American Planning Association (APA), the ITE, and currently serves as the Vice President of Communications for the Colorado APA. Select experience includes:

- APA Complete Streets Training
- Urban Street Standards for TOD and Mixed-use Centers; Aurora, Colorado
- Downtown Multi-modal Access Plan; Denver, Colorado
- Multi-modal Street Design Guidelines; Denver, Colorado
- Multi-modal Access and Circulation for TOD; Denver, Colorado

**JEREMY KLOP, AICP**  
**Urban Street Design Guide content development—complete streets, traffic engineering, and multi-modal transportation considerations**

Jeremy brings a rare blend of experience in multi-modal transportation planning, modeling, and operations analysis. With this integrated understanding of both the multi-modal planning and operation implications, he provides a wide range of services including complete streets policy and design, multi-modal transportation planning in campus, medical, and downtown settings, transit operations and signal priority, corridor studies and livable street design, and smart growth modeling and forecasting. In addition to project experience, he publishes and presents on the relationship between urban form

**MATTHEW RIDGWAY, AICP, PTP**  
**Urban Street Design Guide content development—multi-modal transportation considerations**

Matthew's key strength is his broad background and multi-modal approach, which he has applied to many large-area plans with transit- and pedestrian-oriented projects. In addition to his work as a consultant, Matthew is an instructor for the University of California at Berkeley Institute of Transportation



Terry Avenue North Build-out per Design Guidelines

Studies Technology Transfer Program, teaching courses on bicycle and pedestrian planning and design since 1999. He is the National Expert within Fehr & Peers' Pedestrian and Bicycle Discipline Group, meaning he is involved in most complex bicycle and pedestrian-related studies conducted by the company and has developed hundreds of multi-modal plans and designs. He is the Past Chair of the Institute of Transportation Engineers' Pedestrian and Bicycle Council and has contributed to numerous publications. Select project experience includes:

- UT Austin TDM and Transit Plan; Austin, Texas
- Union Square/Patsouras Plaza Redesign; Los Angeles, California
- BART Bike Plan; San Francisco Bay Area, California
- Sugarhouse Streetcar and Trail Alternatives Analysis; Salt Lake City, Utah
- Eastern Neighborhoods Transportation Plan; San Francisco, California
- East LA (Gold Line in Boyle Heights) Transit Access Plan; Los Angeles, California
- Caltrain Bike Plan; San Mateo, California
- MTC Safe Routes to Transit Program Evaluation; San Francisco Bay Area, California
- SR 89 Transitway Feasibility Study; Tahoe Region, California/Nevada

## BOAZ ASHKENAZY

### Web-based content development, multi-media, and graphic design support

Boaz is a principal with studio/216 and is responsible for creating visual communications and dynamic graphics and visuals for design professionals, architects, artists, building developers, and community leaders engaged in the design, marketing, and development of capital projects. Since 2004, he has also taught

courses in Advanced 3D Computer Modeling and Rendering, Vertical Design, and Computers in Architecture at the University of Washington. Boaz has developed graphic simulations and renderings for a wide variety of built projects in urban environments and has been responsible for the design of websites and interactive web-based content. Select project experience includes

- [studypublicart.org](http://studypublicart.org)
- [jerserdevelldesignbuild.com](http://jerserdevelldesignbuild.com)
- uwarchitecture website
- [Davidcolemanarchitecture.com](http://Davidcolemanarchitecture.com)
- [petercohanarchitecture.com](http://petercohanarchitecture.com)
- Mountain Villas; Guangzhou, China

- Heartbroke Ranch House
- Architecture for Humanity: Mobile AIDS Clinic Competition
- Coleman Park Community Center



Climate Friendly Seattle, Plaza Before (studio/216)



Climate Friendly Seattle, Plaza After



## CHARLIE CHOO

### Web-based content development, multi-media, and graphic design support

Charlie is a principal with studio/216 responsible for high quality visualization designs and graphics. Since 2004, he has also taught courses at the University of Washington in Advanced 3D Computer Modeling and Rendering and has led the Vertical Design Studio. Select project experience includes:

- Climate Friendly Seattle
- South Lake Union Upzone
- Dublin Transit Center
- Highpoint Community Center
- Architecture for Humanity: Mobile AIDS Clinic Competition
- Colman Park Community Center

## STEVE PRICE

### Urban street design graphic simulations

Steve communicates urban design implications to the public through photo-realistic illustration. Using photo-editing software, he modifies photographs of existing landscapes to create before-and-after visualizations of change. Clients for Steve's visualization services have included cities, urban designer firms, community development corporations, transportation agencies, environmental groups, foundations, universities, and neighborhood groups. He has participated in numerous urban design charrettes across the country and has worked with most of America's leading New Urban designers and transportation planners. Select experience:

- Better Streets Plan; San Francisco, California
- East Port of Spain Charrette; Trinidad, Spain
- A New Plan for El Paso, A Comprehensive Plan Rewrite; El Paso, Texas

- Ramona Town Center Form-based Code; Ramona, California
- Downtown D2 District Form-based Code; Portsmouth, Virginia



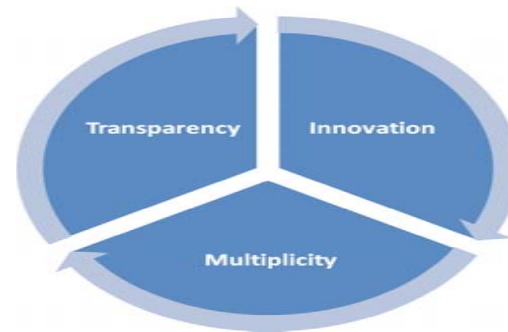
## PROPOSED APPROACH TO PROJECT

### PROJECT UNDERSTANDING

The *Designing Cities* NACTO Urban Street Design Guide will create a new blueprint for American city streets. Through a collaborative, innovative approach, the Otak team will work closely with NACTO representatives and the project oversight committee to create a precedent-setting Guide that emphasizes the important role streets serve as spaces for people and commerce, as well as arteries for multi-modal traffic. NACTO has initially identified three key principles for development of the Guide: transparency, innovation, and multiplicity.

- **Transparency**—The Guide will provide guidance that is clear, succinct, and easy to apply. Illustrations and graphics will convey intent more than words. People will be able to quickly and conveniently access the information they need. Transparency also represents sharing of information and ideas, key to NACTO's mission. The Guide will not only promote best practices in urban street design in cities across the country, but it will also inspire peer-to-peer exchange and support as urban areas move forward to transform the public realm.
- **Innovation**—The Guide will represent not only the current state of the practice, but also emerging trends and simple approaches that can help designers overcome legal, technical, and political barriers as they strive to make streets more livable and infrastructure more cost effective. A new standard and threshold for urban street design in America will be introduced.
- **Multiplicity**—The Guide will illustrate how public rights-of-way can effectively serve multiple uses—multi-modal travel, public space, climate mitigation,

utility corridors, surface water management, and other functions—maximizing infrastructure costs and capital investments. Specific guidance will address how to balance these uses within urban streets, minimizing and managing conflicts, and integrating principle functions.



Design guidance will be presented in a toolbox approach that allows flexibility and adaptability to a broad diversity of urban settings. Representatives and design practitioners from cities across America will be able to easily understand the design guidance and draw the information they need to apply to their own unique conditions. The Guide, including both the online and printed versions, will appeal to all potential audiences including elected officials and city leaders who may be most interested in high level policy implications and tangible results, as well as design professionals, who will be interested in the technical details and justification for application.

The new Urban Street Design Guide will carry American cities forward to a more sophisticated level of public infrastructure design and implementation. Design principles and guidelines developed specifically

for urban street typologies and to address critical urban street design issues will set a new standard and threshold for world-class street design that:

- Illustrates essential concepts and principles
- Counteracts common misconceptions and provides accurate information based on research and data to support best practices
- Demonstrates why deviations from conventional design standards can be beneficial and implemented without compromising safety

These are issues that our team works to resolve and address on a daily basis as part of our work on urban streets. We understand the traditional barriers that have limited design creativity and we understand how to move beyond these barriers to new ways of thinking. We will bring our full breadth of knowledge, experience, and tools to the development of content for the Guide to emphasize how designing streets for multiple uses and as attractive urban spaces can also enhance safety, mobility, and transportation capacity.

### RESOURCES AND REFERENCES

As you review our proposal, you will become aware of the strong depth of experience our team brings in designing urban streets and more specifically, developing design guidelines and toolboxes. Our experience is recent and fresh, including the Abu Dhabi Urban Street Design Manual (first edition in 2010 and second edition currently in review) and the book *Living Streets—Strategies for Crafting Public Space* published earlier this year. We are also currently working on innovative standards for multi-modal level of service and complete streets

implementation that will have nationwide applicability.

Through this experience, our team has already broadly researched best practices and resources across the globe that pertain to urban street design. We have developed compendiums and comparative analyses of street design standards and guidelines from which to draw pertinence guidance for use in America. There are extensive resources available, including some under our own authorship that we can reference and adapt for use in the new Guide. Below is a listing of resources and references we have

already reviewed. Some of these resources are more applicable and useful than others. New resources and design reference materials are emerging all the time, we keep tabs on new guidance and trends in the practice through our professional organizations and contacts, information-sharing websites, blogs, and other sources.

Our understanding of available references and resources will enable our team to quickly develop an annotated outline for the Guide. Additionally, through our past and current work on urban street

design guides, we have assembled and developed a substantial clearinghouse of relevant data, design content, imagery, illustrations, and graphics that can be made readily available and repurposed for the new Guide. This will save time and costs in content development, which will provide the opportunity for more time and attention given to developing a unique layout, look, and feel for the Guide (print and web versions) that is distinctive, attractive, and cutting edge.

## INNOVATIVE IDEAS FOR THE STREET DESIGN GUIDE AND WEB-BASED FORMAT

In our review of all available street design guidance, we have found that there are a number of great resources and guidance available in print form, but a really functional and easy-to-use online resource for designers has yet to be developed. The NACTO Urban Street Design Guide will become the first in-depth, online resource that provides interactive content aligned with street and intersection typologies and critical design issues.

Our team will work collaboratively to bring a fresh approach that emphasizes illustration and uses the latest technologies available for developing interactive online media. Supported by the expertise of Fehr & Peers' communications staff, studio/216, and Urban Advantage, we will coordinate with NACTO to develop a unique online version of the Guide with active links and interactivity built into a dynamic display. We will also develop a separate toolbox with interactive graphics that allows designers to layer in treatments and best practices to visually represent how the improvements will look for the street type they are working on. We have hundreds of existing graphics and graphic components that we can use to efficiently build this toolbox. We anticipate that

### Resources and References Reviewed

- NYC Street Design Manual
- Boston Complete Streets Design Guidelines
- City of Seattle Right-of-Way Improvements Manual and Online Street Design Guidance
- Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, an ITE Recommended Practice
- City of Chicago Streetscapes and Sustainable Design Program
- San Francisco Better Streets Plan
- Los Angeles Downtown Urban Design Guidelines and Downtown Street Standards
- New York's Best Practices for High Performing Infrastructure
- Community Design Toolkit for Building Physical Activity Into Daily Life
- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO, A Guide for Achieving Flexibility in Highway Design (some limited applicability to urban streets)
- Manual on Uniform Traffic Control Devices
- AASHTO Guide for Planning, Design, and Operation of Pedestrian Facilities
- AASHTO Guide for the Development of Bicycle Facilities (new edition coming in June 2012)
- Complete Streets Policies and Case Studies
- NACTO Urban Bikeway Design Guide
- Abu Dhabi Urban Street Design Manual, First and Second Editions
- Accessible Public Rights-of-Way, Planning and Design for Alterations, US Access Board
- Living Streets—Strategies for Crafting Public Space, Bain
- Great Streets, Jacobs
- The Boulevard Book, Jacobs, MacDonald, and Rofe'
- The Social Life of Small Urban Spaces, Whyte
- Context Directed Design: The Design of Excellent Thoroughfares, Chellman
- Transport for London Resources
- Paved with Gold, The Real Value of Street Design, Cabe
- Livable Neighbourhoods Code, Western Australia
- Street Layout Design and Traffic Management Guidelines
- Environmentally Friendly Major Streets, Netherlands
- An Improved Traffic Environment: A Catalogue of Ideas, Danish Road Directorate
- Manual for Bicycle Facilities, Netherlands
- Life Between Buildings, Using Public Space, Gehl
- Manual for Streets, United Kingdom
- The Pedestrian and City Traffic, Hass-Klau
- Designing Sidewalks and Trails for Access, FHWA
- Effective Utilization of Street Width on Urban Arterials

the initial scope of the toolbox will focus on the street typologies and critical design issues listed in the Request for Proposal (RFP). However, the great benefit of this approach is that it can be easily updated and supplemented with new toolbox modules in the future to address emerging needs. We also envision that this approach can easily integrate existing NACTO guidance from the Urban Bikeway Design Guide and other applicable resources into the toolbox.

Our team brings exceptionally rich graphic design capabilities, as well as strong technical expertise in web product development. For example, Fehr & Peers' communications team brings innovative approaches to translating technical transportation engineering information into a wide variety of publicly-accessible technologies, including not only web-based project data and interactive tools, but also smart phone applications, multi-media presentations, social media channels, short video presentations, voting and commenting mechanisms, and dynamic maps and graphics. studio/216 is one of the premiere multi-media firms in the Pacific Northwest, known for creating high quality graphic presentations and easy-to-use interactive design tools. Otak and Weinstein A|U also have in-house graphic design and illustration capabilities that will support development of content for the Guide and layout of the print version.

We will apply our team's full creativity to develop optional formats for the print and web versions of the Guide for NACTO's review. As the selected format moves forward through design and programming, we will ensure that web products are accessible to Mac and PC users, and supportive of current versions of Internet Explorer, Safari, and Firefox, as well as older versions of each. Our work during the project will determine how integrated the online Guide and toolbox are with the existing

NACTO website's framework, or how independently they will function. Regardless of the technical programming approach, access to the new Guide and toolbox from NACTO's website will be seamless and retaining the brand and look of NACTO's communication style will be an important objective.

## COMMENTS ON THE SCOPE OF WORK

NACTO has prepared an initial scope of work for the Urban Street Design Guide and our team concurs with the general approach proposed and the identified tasks to be completed. All the expected products and deliverables listed in the NACTO RFP can easily be assembled and created. We have much of the design content and many illustrations and graphics already available that we can adapt and repurpose for the Guide. We suggest a few refinements and have reorganized NACTO's identified tasks into an efficient work plan that will help to ensure that the project is completed within the expected 12-month timeframe. The project schedule on page 23 illustrates our proposed work plan. General suggestions are listed below, followed by a description of our proposed work plan.

### Placemaking and Context

We would like to see guidance related to placemaking and context integrated into the urban street and intersection typologies. For example, the way a shared street is designed in an urban center may be different than how it is treated in an urban residential neighborhood. We integrated context considerations in the Abu Dhabi Urban Street Design Manual in a simple, easy-to-understand way, and feel it can be dealt with similarly in the NACTO Urban Street Design Guide.

By its nature, placemaking is about each local place and its unique characteristics. Every city is different and has inherent characteristics that are recognizable. If the place that you make looks like every other place, you may have improved the street, but you have not fully succeeded. Placemaking is also about fitting the needs of local people and being stewarded by them. For street design, we can describe the elements that can be used to enhance that unique sense of place and we can use photos and case studies to illustrate the fundamentals of placemaking. Contributions from NACTO representatives and the oversight committee will be helpful here. We will also describe the mechanisms available for making sure streets are well cared for as important public places in our communities.

### Street, Intersection, and Pedestrian Realm Components

In the Abu Dhabi Street Design Manual, we found it helpful to categorize design components as follows: building-to-curb, curb-to-curb, and intersections and mid-block crossings. Within each of these areas there were elements for which design guidance can be consistent no matter the typology or context (such as curbs, some crossing treatments, accessibility features, etc.) It may be helpful to have a section on components, with design guidance for each. The New York City Street Design Manual is organized in this manner:

Design guidance through illustrations and concise narratives related to each street and intersection typology can address which street components are applicable and how they might change depending on the context. For example, consider curbs—the functions include separating modes of transportation, channeling stormwater, and allowing sight-impaired

pedestrians to know when they are entering a traffic zone. If you want to create a tabled street or intersections (raised without curbs), what design treatments are needed to successfully meet these functions? The Guide will clearly illustrate these types of solutions.

### Streetscape and Urban Design Treatments

Similarly to components of a street, streetscape and urban design treatments represent a layer of design that can be implemented in various settings and typologies, yet the choices that are made in materials, design styles, furnishings, and landscape are what work to create a sense of place and identity for each locality. We can include guidance to help designers address the performance and function of streetscape and urban design, while leaving flexibility and design choice open to fit their context. For example, the way a deciduous street tree is planted and cared for will be generally consistent across all contexts, but the specific choice of the type of street tree to be installed should relate to the local character and climate.

### Legal and Liability Considerations Module

There are a variety of perceptions and myths in our practice related to concerns about following specific standards to minimize liability and meet legal requirements. These can often become barriers to design and inhibit creativity. In truth, standards and guidelines in the US related to street design actually allow extensive flexibility to be applied on a case-by-case basis. For example, the American with Disabilities Act (ADA) allows flexibility in how standards and requirements can be met in the right-of-way and at intersections. It takes creativity in design, good guidance at the local level, and strong city leadership to encourage creative and innovative street design. Development of the NACTO Urban Street Design

Guide will provide a tremendous tool to help cities and local leaders advance a more context-sensitive and flexible approach to street design. We propose a special module in the Guide that will be specifically designed to dispel inaccurate perceptions related to legal requirements and liability.

### Expert Panel Involvement

NACTO representatives and oversight committee members will bring keen insights and experience to the process of developing the Guide. It may also be advantageous to involve technical experts on street design, complete streets, and multi-modal transportation in development of the Guide. Outside experts can bring critical perspectives and insights to the process and as they become partners in the Guide's development, they can help promote its use upon completion. Our proposed work plan below suggests potential points for this involvement. The selection of the experts would be completed jointly with NACTO. Our team members have worked with many noted national and international experts in the field, and we can arrange for involvement of individuals at NACTO's request. In some cases, stipends for involvement and reimbursement of travel costs may be required.

## WORK PLAN ELEMENTS

We have reorganized the tasks identified by NACTO into an efficient work plan. Please note that all the proposed tasks are still included in the work plan and will be completed, we have just combined some aspects and clarified the process for how we will develop the Guide. Specifically:

- We have added work elements to address project management, reporting, meetings, and coordination.
- For efficiency, the layout design of the print format

should be completed as early as possible so that drafts of the Guide can be created in the selected format for review. Rather than laying out the printed version of the Guide toward the end of the process, we propose selecting the preferred format as part of Phase I and providing all drafts in that format. (As such, Task 8 is no longer shown as a separate work element.)

- We feel strongly that the content development and layout of both the print and web versions of the guide should be done in tandem. Sequential reviews of both the print and web versions (and testing of the web version) interactivity and functions can then occur, making more efficient use of NACTO representatives and oversight committee members' time and involvement in the project. Our proposed work plan reflects this concurrent approach. Each work element is further summarized below.

### Phase I Project Development

#### *1.1—Project Start-up, Ongoing Management and Coordination, and Monthly Progress Reports During Phase I*

This work element will cover ongoing team coordination and providing monthly progress updates and invoicing. Monthly reports will relate to the original scope and timeline proposed and show progress and percentage of completeness. Invoices will provide a summary of hours worked and progress on tasks and deliverables, as well as a description of any issues or difficulties encountered in current work in process and targets for the upcoming month.

#### *1.2—Finalize Scope, Schedule, and List of Products and Deliverables and Coordinate Project Start-up*

We believe strongly that successful projects have a clear and transparent work plan that all team members can closely follow to completion. We will

work with each team member to review scope, schedule, and their responsibilities for products and deliverables. Internal kick-off meetings and coordination sessions will be held to move the project forward immediately upon selection and initiate a strong momentum in meeting upcoming deadlines.

### ***1.3—Hold Two-Day Kick-off Workshop with Project Oversight Committee in New York, NY***

Starting the development of the Guide out with clear direction and purpose is critical. Key members of our team will meet with NACTO representatives and the oversight committee, either in New York or another city and hold coordination sessions over a two-day period. The team and NACTO representatives/oversight committee members will share information, discuss project goals and objectives, confirm resource materials to be referenced, and begin to formulate an initial organizational structure and outline for the Guide. We would also like to discuss the potential involvement of the expert panel at the kick-off workshop to determine if it is desirable and affordable and make potential selections of individuals to participate. Mandi Roberts, Otak's project manager,



Al Rayyan Road Corridor

will work jointly with the NACTO lead to develop an itinerary and specific session agendas for the two-day workshop.

### ***1.4—Bi-weekly Project Coordination via Phone Conferences/Web Meetings***

Since our team is based on the West Coast and the NACTO headquarters is on the East Coast, we will use these bi-weekly coordination sessions as a mechanism to keep in close contact and jointly monitor progress to keep the project moving forward. We will make use of technology, such as web meetings as well as Skype and/or video conferencing to visually share and discuss work products in process. During the times that we are meeting in-person at key milestones in the process, these progress coordination sessions will become part of the itinerary.

### ***1.5—Coordination Sessions in New York, NY, During Phase I***

These will be in-person coordination meetings involving key team members, which may alternate depending upon work in process, to be held at NACTO headquarters in New York or another city more centrally located, if feasible. (Meeting locations could rotate across the country.) The agenda for these sessions will vary depending upon the tasks underway. See below for anticipated information to be shared at the in-person coordination sessions. We anticipate the need for up to three in-person coordination sessions during Phase I, including the two-day kick-off workshop.

### ***1.6—Literature Review and Annotated Outline of the Urban Street Design Guide***

This work will begin immediately upon authorization to proceed. (And with our team, literature review has already been underway as part of our work on other street design guides and publications.) We can quickly

develop a synopsis of reference materials and review this with NACTO at the two-day kick-off workshop. We will also devote time during the workshop to working on an annotated outline and addressing the organizational structure of the Guide. After the kick-off workshop, our team will refine and expand the outline and distribute to NACTO for formal review.

### ***1.7—Web Development Specifications & Mock-Up***

We will discuss potential framework for development of the web content at the two-day kick-off workshop. Following that, we will develop detailed specifications and a mock-up, which will be ready for draft review at the second in-person coordination session with NACTO. From there, we will refine the draft specifications and mock-up to create a final version to circulate for formal review and comment.

### ***1.8—Develop Draft Content for Three Street and Intersection Types***

We will confirm the specific types at the two-day kick-off workshop with NACTO (confirming that the types identified in the RFP are still the preference). We suggest that design of Home Zones be expanded to encompass the full range of shared street types (commercial/downtown shared streets, as well as neighborhood shared streets) and suggest adding alleyways into the module because they have similar design implications as shared streets and retrofit public plazas. All of the content listed in the RFP will be developed, as well as the before and after images, for which we can use and repurpose imagery created by Urban Advantage and studio/216. Case study photo examples will also be provided. We propose having work-in-progress versions of this content ready for review at the second in-person coordination session and then preparing the full draft content for distribution and discussion at the third in-person coordination session. The third in-person

coordination session may be an advantageous time to bring together the panel of experts, or to circulate draft content for their review and comment.

### ***1.9—Develop Draft Content for Two Critical Design Issues***

We will confirm the specific issues to be addressed at the two-day kick-off meeting with NACTO (confirming that the issues identified in the RFP are still the preference). All of the content listed in the RFP will be developed, as well as the before and after images, for which we can use and repurpose imagery created by Urban Advantage and studio/216. Case study photo examples will also be provided. This content will be prepared concurrently with the content for the three street and intersection types, with work-in-progress versions ready for review at the second in-person coordination session. Then we will prepare the full draft content for distribution and discussion at the third in-person coordination session.

### ***1.10—Develop Print Layout Template for Printed Version of the Guide***

We will begin work on template options immediately, and may even be able to bring options for discussion



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to the two-day kick-off workshop. Our preference is to resolve selection of a preferred layout and design template as early as possible in the process so that draft content can be developed in this layout as the Guide moves forward through development.

### ***1.11—Prepare and Deliver 20-Page Preview Document***

Using the content developed for the three street and intersection types and two critical design issues, as well as some introductory content, we will develop a 20-page preview document, which will be ready in draft by the time of the third in-person coordination session (mid-October). We will then make revisions immediately following the work session so that the preview document can be ready for broader distribution later in October. We recommend circulating the preview document to the experts panel and other stakeholders for review and comment.

## **Phase 2 Full Content Development & Layout**

### ***2.1—Ongoing Project Management and Coordination and Monthly Progress Reports During Phase 2***

This work element will cover ongoing team coordination and providing monthly progress updates and invoicing (with the same information distributed as described under 1.1).

### ***2.2—Bi-weekly Project Coordination via Phone Conferences/Web Meetings***

This will be ongoing regular coordination during Phase 2 as described under 1.4.

### ***2.3—Coordination Sessions in New York, NY, During Phase 2***

Continued in-person coordination meetings involving key team members (which may alternate depending upon work in process) to be held at NACTO

headquarters in New York or another city more centrally located, if feasible. (Meeting locations could rotate across the country.) The agenda for these sessions will vary depending upon the tasks underway. See below for anticipated information to be shared at the in-person coordination sessions. We anticipate the need for up to four in-person coordination sessions during Phase 2.

### ***2.4—Final Layout and Full Content Development of the Guide and Website***

This will involve concurrent layout and content development of the Guide and website in sequential drafts for review and comment as described in the work elements below.

### ***2.5—First Draft Design Guide Developed and Website Content Prepared for Test 1***

We will begin working on full content development by November 2012 and be ready with a first draft of full content for the Guide and website by mid-January 2013 (for the first in-person coordination session scheduled for Phase 2). While there may be some areas of content that are not fully developed, we anticipate that we can have a fully complete first draft prepared within this timeframe. We will set up a test for the online version of the Guide with first draft content, as well as a test of the interactive online design toolbox.

### ***2.6—First NACTO Review of Guide and Website Testing***

This will involve a 30-day review period of the first draft content and website testing. Our team will coordinate and facilitate the review process, as well as support and participate in testing online content.

### ***2.7—Revised/Second Draft of Design Guide Developed and Website Content Prepared for Test 2***

Based on comments received on the first draft, our

team will proceed to develop the second draft of the print and web versions of the Guide. This will be completed by mid-March 2013 (for the second Phase 2 in-person coordination session). This will be another good opportunity to assemble the panel of experts for review of and comment on the second draft content of the full Guide (or it could be circulated for review and comment and a protected link to the website could be sent for their access). The website will not go live for public access until final completion of the project later in the summer.

### **2.8—Second NACTO Review of Guide and Website Testing**

This work element provides another 30-day period for review and testing of second draft content (both print and online versions).

### **2.9—Third and Final Draft Design Guide and Final Website Content Developed**

Based on review of the second draft, our team will move forward to finalize the Guide (both print and web versions) as well as the online design toolbox. We will provide the final draft for proofing and final testing by mid-May 2013.

### **2.10—Final NACTO Review/Final Testing of Web Content**

This will be a two-week review period of the final Guide and web content before making any final minor edits or adjustments and going to final production and full launch.

### **2.11—Final Revisions/Prepare for Printing, Distribution, and Launch**

We will address any final comments, making minor edits and revisions, as well as final adjustments to the web version and toolbox, with the intent to go to final production and online launch by early July 2013.

### **2.12—Guide and Website Roll-out, Media Work and Support**

Our team will assist in the roll-out of the design guide, including online press, communications, select presentations to practitioners, and development of press stories around the Urban Street Design Guide. This will be a good time to involve the panel of experts again, to support the roll-out process and help promote use of the Guide. Optionally, our team can also provide services in developing film clips and videos (of city officials speaking, case study examples, etc.) to support the roll-out campaign.

## **BUDGET SHEET**

The budget sheet on pages 23 and 24 is formatted as requested by NACTO, but also includes costs to accomplish the work plan elements described above and shown in our proposed schedule. We kept the format consistent to NACTO's requested budget sheet so that you could easily compare our proposal to others received. Time for project management, coordination, and meetings is integrated into the tasks shown and pro-rated in the content development elements. The variations in content development costs typically relate to information and graphics our team has already developed and can adapt/repurpose for use in the Guide.

Please note that the number of meetings and involved team members is flexible. As such, our price proposal is preliminary, flexible, and negotiable. We look forward to the opportunity to coordinate with NACTO to finalize the specific scope of work for the project, as well as the list of products and deliverables, schedule, and budget.

## **SUMMARY**

Our team members have been designing and building innovative streets throughout America and abroad for many years. We have developed design guidelines, including very recent urban street design guides. We bring an up-to-date knowledge of the full array of resources and references available related to urban street design. We have been researching the most interesting and cutting-edge projects and processes for designing, permitting, and constructing the best urban streets. We will build on that research and knowledge and integrate insights and content from the NACTO member cities.

The *Designing Cities* NACTO Urban Street Design Guide will be pace-setting, establishing a new framework for urban street design across the US. The Guide's development will be shaped by the important principles of transparency, innovation, and multiplicity throughout the process. This is a tremendous opportunity, and we would be honored to work with NACTO in setting a new course and precedent for design of America's urban streets.



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### Preliminary Budget Sheet

Tasks/Content Elements	Estimated Cost	Work Plan Elements and Comments
Task 1: Annotated Outline of Urban Street Design Guide	\$3,600	1.1, 1.2, 1.3, 1.4, 1.6
Task 2: Web Development Specifications and Mock-up	\$7,600	1.1, 1.2, 1.3, 1.4, 1.7
Task 3: Develop Draft Content for Three Treatments	\$18,600	1.1, 1.2, 1.3, 1.4, 1.8
Task 4: Develop Draft Content for Two Critical Design Issues	\$9,600	1.1, 1.2, 1.3, 1.4, 1.9
Task 5: Print Format for Urban Street Design Guide	\$3,200	1.1, 1.2, 1.3, 1.4, 1.10
Task 6: Full Content Development (please estimate cost per type and total)		Allocated to elements below
<b>Streets</b>		
Boulevards	\$8,400	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Downtown/CBD Streets	\$8,400	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Neighborhood Commercial Streets	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Neighborhood Connectors	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Residential Streets	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Pedestrian Priority Commercial Streets	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Home Zones	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Green Alleys	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Sidewalk Cafes and Alternative Curbside Uses	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Travel Lane Width	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Design and Operating Speed (including speed limits)	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Design Vehicle/Wheel Base (including emergency vehicle access)	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Traffic Capacity/Number of Travel Lanes (including level of service and peak hour parking restrictions)	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Roadside Clear Zones	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Building/Frontage Zones	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Legal Standing and Liability	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Bus Stop Placement and Design	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Transit Lane Design and Placement	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
<b>Intersections</b>		
General Intersection Design Principles	\$8,400	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Retrofit Public Plazas at Intersections	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Intersections Near Transit Hubs and Stations	\$6,200	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Intersections Near Schools, Parks, Waterfronts, and Key Destinations	\$8,400	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Design Vehicle/Wheel Base: Corner Radii	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Pedestrian Crossing Warrants	\$3,600	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Curb Extensions/Crossing Distance and Visibility	\$4,800	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Right-of-Way/Yield Control versus Stop/Signal Control	\$3,600	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Turn Restrictions	\$3,600	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Leading Pedestrian Interval Signal Timing	\$3,600	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Alternative Intersection Performance Measures (other than peak hour vehicle delay)	\$3,600	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11

Preliminary Budget Sheet—*continued*

Tasks/Content Elements		Estimated Cost	Work Plan Elements and Comments
Task 7:	Development, Testing, and Revision of Website	\$46,000	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Task 8:	Layout of Print Guide	\$32,000	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11
Task 9:	Website Roll-out Media Work and Support	\$12,000	2.12
<b>Subtotal—Professional Services/Consultant Labor Fees</b>		<b>\$288,600</b>	
Reimbursable Expenses:			
	Travel	\$24,600	Airfare, lodging, meals, and public ground transportation
	Reprographics, Supplies, Deliveries (printing of guide not included)	\$4,200	Draft prints for review/circulation, express deliveries, outside copies
<b>Estimated Total Project Budget</b>		<b>\$317,400</b>	

Content development elements include costs for project management, coordination, meetings, and written and graphic content (including visual simulations for nine street types)

Optional Items: videos/film clips to support promotion, additional visual simulations beyond nine street types, additional content other than elements listed, additional meetings, and coordination other than listed in the proposed work plan

## RELATED PAST PROJECTS AND REFERENCES

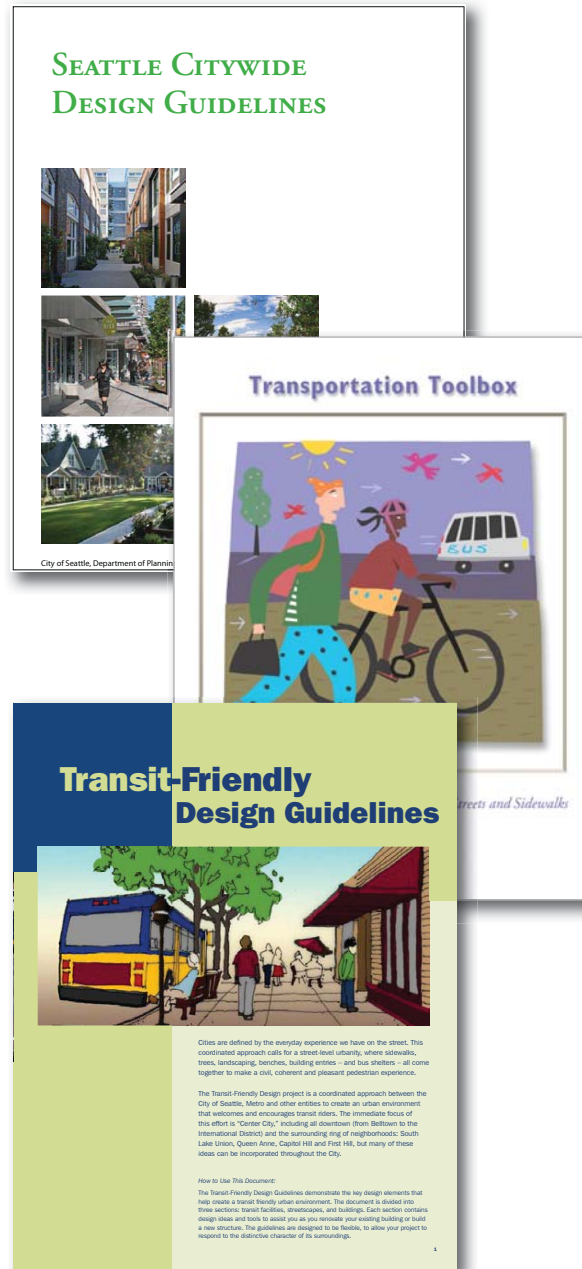
Select relevant projects are described on the following page, followed by summaries of other relevant work and references. Project examples also are illustrated on pages throughout our proposal. As shown, our team brings a strong depth of experience developing design guides for urban settings.

### WE HAVE DEVELOPED DESIGN GUIDES

Working closely with various municipal, regional and state agencies, we have created many effective sets of design guidelines for urban streets, boulevards, and transportation corridors. We are known for creating guideline documents and toolboxes that are highly illustrative, easy-to-read, electronically accessible, and immediately ready for use by design professionals, technical staff, community leaders and elected officials, and other practitioners. We've developed guides specifically focused on the needs of pedestrians, bicyclists, and enhancing access to transit, as well as guidance focused on current best practices in sustainability (such as integration of natural drainage systems and low impact development).

### WE ARE DESIGNERS

In addition to our experience creating urban street design guides, we have designed hundreds of streets, boulevards, and intersections in a diversity of urban settings throughout the US and that accommodate all modes. Otak's integrated team of civil engineers, urban designers, landscape architects, architects, and planners have been designing urban streets and intersections for over 30 years. Otak also brings extensive design



experience of in-street transit facilities such as light rail, streetcars, and bus rapid transit systems, as well as bus lanes and stops. We are known nationally and internationally for our expertise in the design of as well as bicycle and pedestrian facilities, as well as public plazas, shared streets, alleyways, and other urban spaces. An important distinction of our team is that we are not just transportation planners and traffic analysts—we are also designers, working on the technical design of these facilities every day. And we have seen these projects through construction and onto successful public use. Our subconsultants, Weinstein A|U, Fehr & Peers, studio/216, and Urban Advantage, are all also very experienced with urban streets, and Fehr & Peers is a national leader in policy development, training, and implementation of complete streets programs.

### WE UNDERSTAND THE REQUIREMENTS

We are thoroughly familiar with national, state, and local requirements applicable to street and roadway design in the US, including the AASHTO Green Book, Roadside Design Guide, and pedestrian and bicycle design guides, as well as the NACTO Urban Bikeway Design Guide, the Manual on Uniform Traffic Control Devices, applicability of the ADA to public rights-of-way, Crime Prevention through Environmental Design, LID and sustainability practices, and all other requirements, standards, and guidance applicable to the design of streets, intersections, sidewalks, and public use areas.

All of this experience has built our team's practical knowledge of urban streets. This, along with our

creativity in design, has led to our strong capability to develop meaningful design guidelines that can immediately guide project implementation. When it comes to providing guidance for urban streets, the Otak team can address the full spectrum of best practices, from planning and design to operations and maintenance for the NACTO Urban Street Design Guide.

## PROJECT EXAMPLES

### Urban Street Design Manual, First and Second Editions | Abu Dhabi, UAE

The Abu Dhabi Urban Planning Council selected Otak to develop a comprehensive Urban Street Design Manual that serves as a nationwide guide for retrofitting of existing and design and development of new urban streets across the entire emirate. The manual addresses the changing priorities of street users and places pedestrians at the top of the list. In order to achieve the vision for sustainability and livability inspired by Abu Dhabi Plan 2030, the manual introduces a new street typology system based on context and urban form, as well as multi-modal needs (boulevards, downtown and town center streets, neighborhood connectors, residential streets, and other street types). Guidance in the manual can be applied across a wide diversity of urban contexts. The team researched best practices in street design and engaged technical experts from around the world in development of the manual.

Similar to the proposed NACTO Urban Street Design Guide, this manual provides design guidance for shared streets, alleyways, pedestrian spaces, and curb to building (pedestrian realm) areas. It also addresses lane widths, street capacity per street type

and traffic volume, design and operating speeds, design vehicle dimensions, corner radii, clear zones, transit/bus facilities, intersections, traffic control and signals, pedestrian accessibility, pedestrian crossings, pedestrian leading interval signal timing, bicycling facilities, retrofit conditions, roundabouts, and a variety of other topics. Organizationally, the manual is easy to follow, providing guidance for pedestrian realm and street components in a logical format. In addition to street design guidance related to function, chapters of the manual also address urban design considerations related to streetscape design, furnishings, lighting, surfacing materials, wayfinding, public art, and many other topics. The manual can be viewed online and

downloaded at <http://www.upc.gov.ae/guidelines/urban-street-design-manual.aspx?lang=en-US>. This website also provides an interactive presentation on street design infrastructure. Otak was the prime consultant responsible for preparing the first edition of the manual in 2009 and was retained in 2011 to update and expand the manual as the second edition. Mandi Roberts was a principal author and editor.

### Living Streets Strategies for Crafting Public Space

Lesley Bain is the lead author for this book, published in 2012, advocating for new ways of thinking about how to use the public right-of-way. The book provides



Abu Dhabi Urban Street Design Manual

practical guidance on the complete street approach to sustainable and community-minded street use and design. With contributions from an interdisciplinary team of experts, the book brings insights and experience from urban planning, transportation planning, and civil engineering perspectives. It includes examples from many completed street design projects from around the world, an overview of the design and policy tools that have been successful, and guidance to help get past the predictable obstacles to implementation—Who makes decisions in the right-of-way? Who takes responsibility? How can regulations be changed to allow better use of the right-of-way? Typologies addressed in Living Streets are extremely relevant to the categories proposed for the NACTO Urban Street Design Guide, including:

- Residential Streets
- Green Streets
- Alleys
- Main Streets
- Thoroughfares
- Shared-use Streets

**Living Streets is a long overdue comprehensive look at living strategies, planning ideas and technologies that are being applied to streets around the world in communities of all scales.**

*- Customer review, Amazon*

**Accessible Public Rights-of-Way Planning and Design for Alterations by the Public Rights-of-Way Access Advisory Committee to the US Access Board | Nationwide**

Otak staff represented the Institute of Transportation

Engineers on the Public Rights-of-Way Access Advisory Committee (PROWAAC) and managed the development of Accessible Public Rights-of-Way Planning and Design for Alterations, a technical assistance guidebook for accessibility in public street rights-of-way in the US. The guidance and recommendations in this document were shaped by the technical design input from Otak staff, as well as other PROWAAC members. The guidebook provides a toolbox approach to retrofitting accessibility features at intersections, with guidance that can be applied in a wide diversity of settings nationwide. Otak staff specifically authored the chapter on design solutions, which focuses on various levels of alterations in street rights-of-way and at intersections to accommodate pedestrians with physical challenges. Flexible solutions for curb ramp retrofitting are provided, along with other types of improvements that can be implemented with various types of projects in public rights-of-way. Otak also contributed to other chapters of the guidebook and coordinated the development of and contributed technical guidance for PROWAAC’s work on Building a True Community, the initial report of recommendations to the US Access Board. PROWAAC has been in existence since 1999 and Otak has been involved since the committee was established.

**Complete Streets Implementation | Carlsbad, California**

Fehr & Peers was retained by the City to take their existing complete streets policy efforts to the next level of implementation success. Building on a strong foundation of policy support, Fehr & Peers met with the leadership in more than nine City departments to expand the discussion of complete streets into every corner of the City’s implementation efforts.



As a new Council priority, the effort is highlighting existing successes and leading to near-term policy changes, new interdepartmental collaboration efforts, and a new performance measurement framework for complete street outcomes. A key early outcome was a shift in thinking to include economic vitality and health outcomes as important indicators, along with a shift to the term livable streets to better capture the broad range of benefits to residents, employees, and visitors. The City’s communications department,

along with input from Fehr & Peers, developed one of the best introductory video shorts seen on the topic (follow link below). The project includes a policy and procedures assessment and recommendations for a new performance measurement framework that links directly to the City's broader goals and objectives in the General Plan. Fehr & Peers is known nationally for their expertise in complete streets policy and implementation and staff members, including Jeremy Klop provide complete streets training sessions to various organizations including the APA.

<http://www.youtube.com/watch?v=AS9VFpVWTB8&feature=youtu.be>

**Hawaii Pedestrian Toolbox—A Guide for Planning, Design, Operations and Education to Enhance Pedestrian Travel in Hawaii and Statewide Pedestrian Master Plan |** Hawaii Otak is developing a toolbox of pedestrian and transportation guidelines for application in various settings (urban, suburban, rural, resort, and natural) across the Hawaiian Islands. The toolbox contains chapters on pedestrian- and bicycle-friendly street design, intersections and crossings, and urban area treatments, as well as many others. It is being created to support implementation of the Statewide Pedestrian Master Plan for Hawaii (a project being led

by the Honolulu office of CH2MHill). Hawaii has one of the highest accident rates involving pedestrians in the US. As such, there is a strong focus on pedestrian mobility, accessibility, and safety in the toolbox. While enhancing conditions for pedestrians is a strong focus of the toolbox, design for other modes, including bicycle-friendly street design and access to transit are also emphasized. Best practice approaches for intersections and mid-block crossings are included and the toolbox also addresses the importance of integrating sustainable and maintenance-efficient treatments in corridor design. Development of the toolbox and master plan is being shaped by public and stakeholder involvement and technical and citizen advisory groups from around the state have been fully engaged in the process.

**King County Metro and City of Seattle Transit-friendly Guidelines |** Washington A joint project of King County Metro and the City's Department of Planning and Development, this effort developed new tools to reduce single-occupant-vehicle travel into the downtown area of the City. Lesley Bain, of Weinstein A|U, led the urban design portion of the work, which included design strategies for increasing the comfort and attractiveness of transit. The team developed the City's new Transit-friendly Design Guidelines and strategized means to integrate them into the City's processes.

**SW Burnham Street Improvements |** Tigard, Oregon After developing a comprehensive set of urban street design guidelines for Tigard's downtown urban renewal district, Otak was retained to design improvements to SW Burnham Street as the first signature and catalyst project. The street

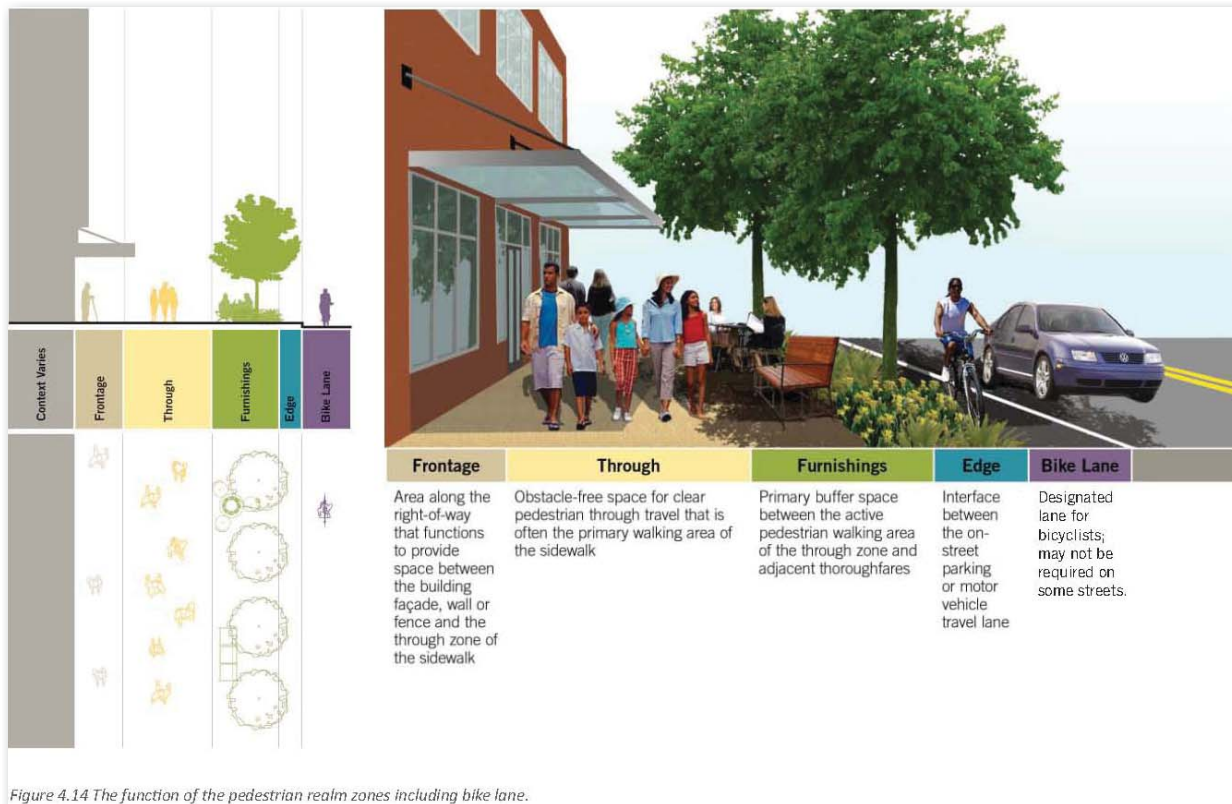


Figure 4.14 The function of the pedestrian realm zones including bike lane.

serves as a major utility and freight corridor and is lined with more than a dozen small businesses that have been rooted in the Tigard community for many years. The downtown plan placed an importance on green and sustainable redevelopment, which was incorporated into the Downtown Streetscape Guidance documents. SW Burnham Street provides a critical connection between the downtown core along Main Street and Hall Boulevard, a major arterial (with State Highway designation). The project had potential to be much more than just another roadway improvement project and acknowledgment of the opportunities that could be realized on SW Burnham Street are ultimately what pushed the project through to completion this time around. The SW Burnham Street roadway project is the largest and most complex project ever undertaken by the City of Tigard.

The improved street is now serving as a catalyst for private investment, providing public space, improved multi-modal transportation and connections, and leading edge sustainable and green infrastructure practices in an urban streetscape. The revitalized downtown core will serve as a destination for pedestrians and visitors to businesses, an urban plaza, and farmer's market venue. The Otak team worked with the City and with the Oregon Department of Transportation for signal design and unique striping elements. Otak provided the roadway and stormwater design, water main and landscaping design, utility coordination, and preparation of legal descriptions for easement and right-of-way acquisition. Green elements consist of 17 stormwater planters edged with natural boulders, a vegetated swale, Stormfilter units, and LED lighting. The project was recently awarded APWA's National Public Works Project of the Year.

### Multi-modal Level of Service Toolkit | Nationwide

Fehr & Peers has assembled an innovative Multi-modal Level of Service (MMLoS) Toolkit (<http://www.fehrandpeers.com/mmls-toolkit/>). Conventional methods for calculating Level of Service (LOS) for a road or intersection only address the experience of one set of users—vehicle drivers. This simple fact has broad implications, because LOS is often used as the primary (or sometimes the only) metric of transportation system performance. Over the past several years, the transportation planning field has seen a profusion of new methods for calculating LOS that claim to account for the experiences of a much wider range of road users. But local agencies may be confused by all of the options and unsure about which method would best meet their needs and reflect their community's values. Fehr & Peers developed the MMLoS Toolkit to help agency staff cut through the confusion. Through extensive research and testing, they identified 16 different LOS methods that have some level of multi-modal capabilities. The MMLoS Toolkit is a web-based interface that organizes the LOS methods by mode (auto, transit, bike, etc.) and by setting (urban, suburban, rural), so users can identify methods that most closely address their unique situation. Users can drill down on the selected methods for fact sheet on each, with information on its applicability, advantages, shortcomings, and data/software requirements.

### Transportation Toolbox and Multi-modal Transportation Plan | Tempe, Arizona

Otak developed a comprehensive transportation and streetscape design toolbox with design guidelines addressing a variety of topics, including pedestrian- and bicycle-friendly streets, accessibility, transit- and

pedestrian-oriented design, intersections and crossings, improvements in school zones, special events and festival streets, dimensional guidance for sidewalks and shared-use paths, water-conserving trees and landscape, and streetscape furnishings. Otak's commitment to being at the forefront of planning and design of livable communities that provide fully integrated land use and transportation networks led the City to select our team to put together the toolbox as well as a comprehensive multi-modal transportation plan. The plan



SW Burnham Street





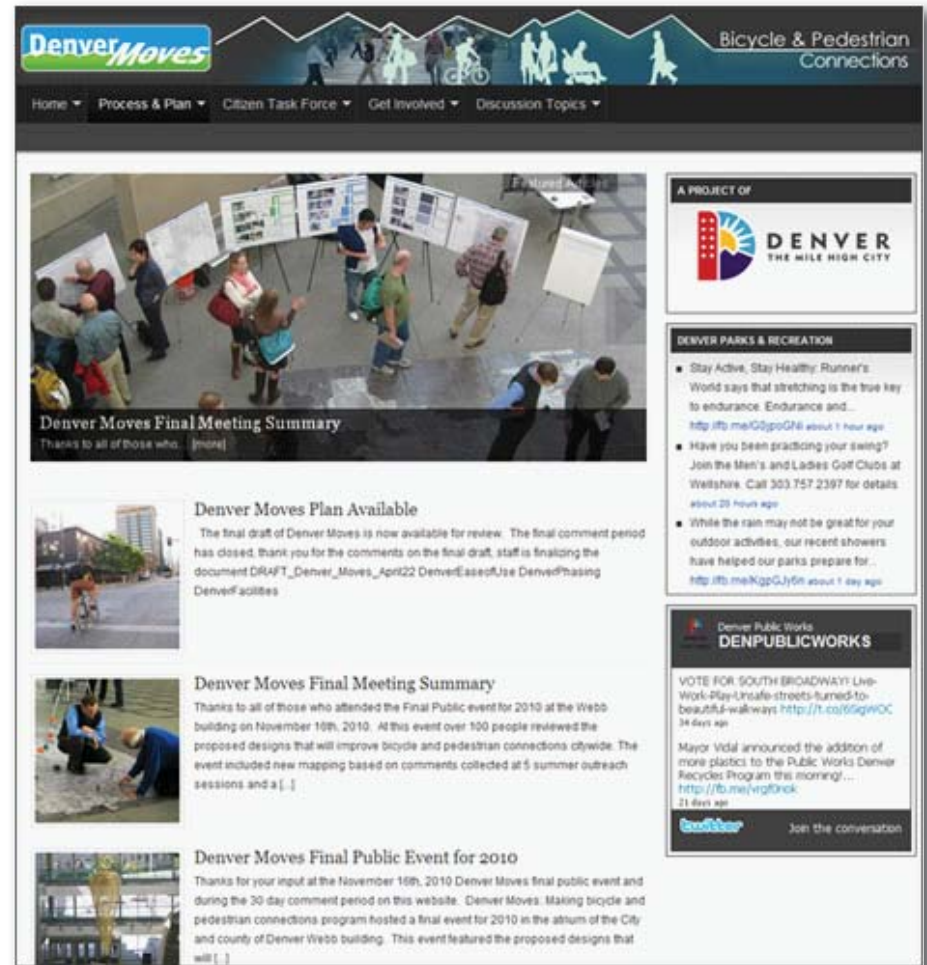
introduces a progressive and balanced approach to planning and implementing transportation improvements in the City through the next 20 years. The plan is community-based, reflecting local goals and visions for development, redevelopment, and identifying opportunities to fully integrate and accommodate all modes of travel, including the light rail transit system. Extensive consideration and analysis focused around the design of urban corridors for multi-modal use, sustainable streets, integration of transit, and transportation supportive land uses including station area and TOD opportunities. Otak also prepared urban corridor plans for the main arterials in Tempe, combining technical analysis and community involvement to explore urban design concepts for progressive redevelopment with

transportation. In addition, Otak prepared a model pedestrian overlay zoning template. The toolbox and plan were officially adopted by the City in 2007 and have led to successful implementation of many urban corridor and transportation projects. Our involvement in Tempe led to additional work for the City, including the award-winning, LEED Platinum Tempe Transportation Center.

### Denver Moves | Denver, Colorado

Fehr & Peers is currently working with Denver on this innovative planning project. Denver's recent award for the Best Trail System in the US from the National Recreation and Parks Association is not a surprise to most Denver residents. On any day in Denver you will find walkers, in-line skaters, runners, and bicyclists using the trail network for exercise, commuting, and connecting with the natural environment. Based on activity counts, there is no question that trails uniquely define Denver's quality of life. Hundreds of thousands of people use the trail system each year. Popular outdoor publications have applauded Denver

trails, local real estate listings often mention nearby trails as a selling point, and trails were a major emphasis in Denver's effort to attract the 2008 Democratic National Convention. Their robust trail system is the result of significant planning undertaken over the past two decades, beginning with the 1989 Bicycle Master Plan, which established the framework for citywide connectivity and identified key missing links and challenging connections. Denver Parks and Recreation's Game Plan and the Downtown



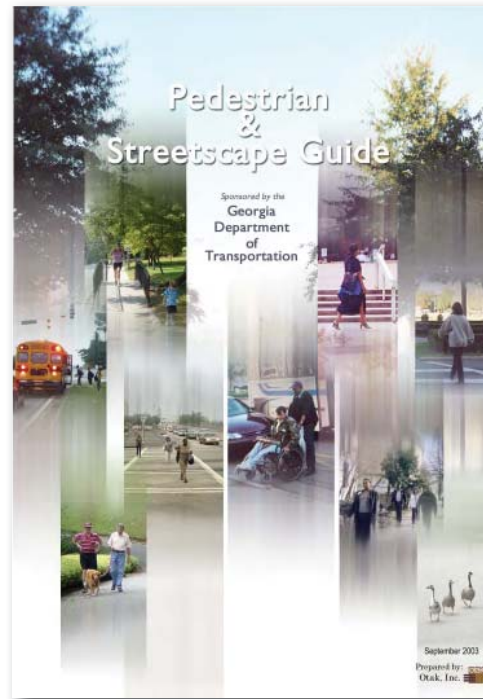
Multi-modal Access Plan (DMAP), undertaken at approximately the same time, layered green streets and neighborhood-scale connections into this system, with an overriding goal of making Denver one of the most walkable and bikeable cities in the US. Fehr & Peers' work preparing Denver Moves builds on these planning efforts, establishing a unified and comprehensive vision for the system, as well as identifying a multi-year build-out program that can inform the City's capital improvement planning. Denver's trail system will form the backbone of the City's nonmotorized transportation system. Although many accomplishments have been made to connect trails throughout the City, more work is needed to ensure that the network joins with on-road bikeways and sidewalks to ensure a seamless transportation system that connects to neighborhoods and destinations in all parts of the City. Visit [www.denvermoves.org](http://www.denvermoves.org) for more information.

### Denver Multi-modal Design Guidelines | Denver, Colorado

Fehr & Peers was asked to continue their work on Blueprint Denver by assisting the City and County in developing comprehensive, multi-modal street design guidelines that could be incorporated into the City's newly created design standards manual. This includes the development of standard cross-sections that blend street typology priority elements with fixed elements from the City's original utility standards; development of multi-modal guidelines matrix categorized by street type and functional class; and guidelines text for key design elements. They were also asked to look at access management techniques and to review the City's design standards to ensure the appropriate inclusion of Blueprint Denver elements and priorities.

### Pedestrian and Streetscapes Design Guide | State of Georgia

Georgia's Department of Transportation (GDOT) recognized the immediate need to guide the evaluation, design, and development of pedestrian facilities in the State of Georgia. Otak evaluated the existing Georgia design policies and guidelines, as well as those of AASHTO, comparing the contents of the Washington State Guidebook to the current Georgia laws, regulations, and requirements, as well as existing and new draft guidance from AASHTO. The purpose of the comparison was to identify the differences, conflicts, and gaps that existed, considering those differences and Georgia's unique settings. A tailored Pedestrian and Streetscapes Guide was the result. This project demanded efficient organization and communication between GDOT staff, the GDOT Bicycle and Pedestrian Task Force, the



Statewide Bicycle and Pedestrian Advisory Committee, local agency staff, regional planning organizations, accessibility organizations, and other special interest groups.

### Scottsdale Road Master Plan, Design Guidelines, and Streetscape Improvements | Scottsdale, Arizona

Otak worked closely with the City, a diversity of stakeholders, and the community for this streetscape master planning and design guidelines for the entire 25-mile length of Scottsdale Road. The master plan and guidelines were adopted in 2008 and advanced immediately into implementation. Otak then provided detailed streetscape design for Phase I, focusing on two segments at the south end of the City—McKellips Road north to Osborn Road and Osborn Road to Chaparral (for a total length of four-miles). The City required an accelerated schedule for the project. The master plan and design guidelines addressed the overall vision, guiding principles, and Great Street best practices desired for Scottsdale Road as the living room of the City, as well as detailed guidance related to multi-modal functions, intersections and crossings, accessibility, transit stop areas, paving and surfacing, furnishings and materials, street trees and landscaping, lighting, and other elements. The work also included the preparation of Design Concept Reports, construction cost estimates. The project was completed through a collaborative process with City staff and stakeholders. Intensive public involvement and community outreach helped guide development of the overall master plan and design guidelines, as well as the more detailed design development for the two southern segments.



### Terry Avenue North Street Design Guidelines | Seattle, Washington

Weinstein A|U worked with Seattle's Department of Transportation to develop a set of guidelines that would clarify Terry Avenue North, located in the heart of Seattle's evolving South Lake Union neighborhood. The growing biotech industry is replacing many of the traditional industrial uses in the area, and new public amenities for the area are in the design phase, including a revitalized South Lake Union Park and a streetcar connecting the neighborhood to downtown. The design team came to the conclusion that the best way to integrate pedestrians more fully into the

street is to have continuity in the paving materials in the street and in the adjacent pedestrian areas. Seattle's most noted urban pedestrian spaces, the Pike Place Market and Westlake Center, have continuity in street and pedestrian spaces. The second imperative of design is to ensure that traffic volumes and speeds stay low over time so that Terry Avenue North can function as a pedestrian-oriented street. In a manner that is counter-intuitive to typical street design, traffic devices are meant to reduce and slow traffic. Sustainability was an important factor in the guidelines and a high priority for South Lake Union in particular. The guidelines coordinated related work regarding sustainability in lighting, drainage and landscape. Other design decisions were intended to reinforce and enhance the specific assets of Terry Avenue, including historic character, topography, setting, and connections to downtown and Lake Union.



Scottsdale Road

### Seattle Center Century 21 Design Guidelines | Seattle, Washington

Lesley Bain, of Weinstein A|U, has led several projects at the Seattle Center, and was part of the urban design team for the Century 21 Master Plan. The architectural design guidelines, written in 2009, covered relationships of building to site within the context of the master plan, the elements that make the campus cohesive, building design, circulation, streetscape, sustainability, accessibility, and materials. In the guidelines, the campus was divided into several zones with distinct characteristics. Guidelines for each area are intended to take advantage of the opportunities specific to each zone of the campus.

### Tigard Comprehensive Streetscapes Guidelines | Tigard, Oregon

Working with citizens and City staff, the Otak team developed a comprehensive set of design guidelines for revitalization of the downtown urban street network and enhanced urban village character. Sustainability and development of green streets was an important focus of the plan and guidelines. Burnham Street was the first green street opportunity identified in the plan. Main Street was the second green street opportunity identified. Other key elements included analysis for downtown street lighting, detailed recommendations for street and public space furnishings, improvements to the commuter rail station environment, cost estimates, and construction phasing plans.

### Seattle Bike Master Plan Implementation | Seattle, Washington

Otak provided design of bicycle facilities throughout the City to implement the adopted Bicycle Master Plan. An objective of the plan is to shift substantially more commute trips from auto to bicycle. Otak provided civil engineering and urban design applying a series of design templates to existing conditions in the City and retrofitting bike lanes, sharrows, crossing improvements, markings at transit stops, shared streets, and signing and wayfinding improvements. Our team frequently rode the streets and routes we were involved in designing to test potential approaches and solutions prior to implementation.

### Opportunity Gateway Street Plan and Guidelines | Portland, Oregon

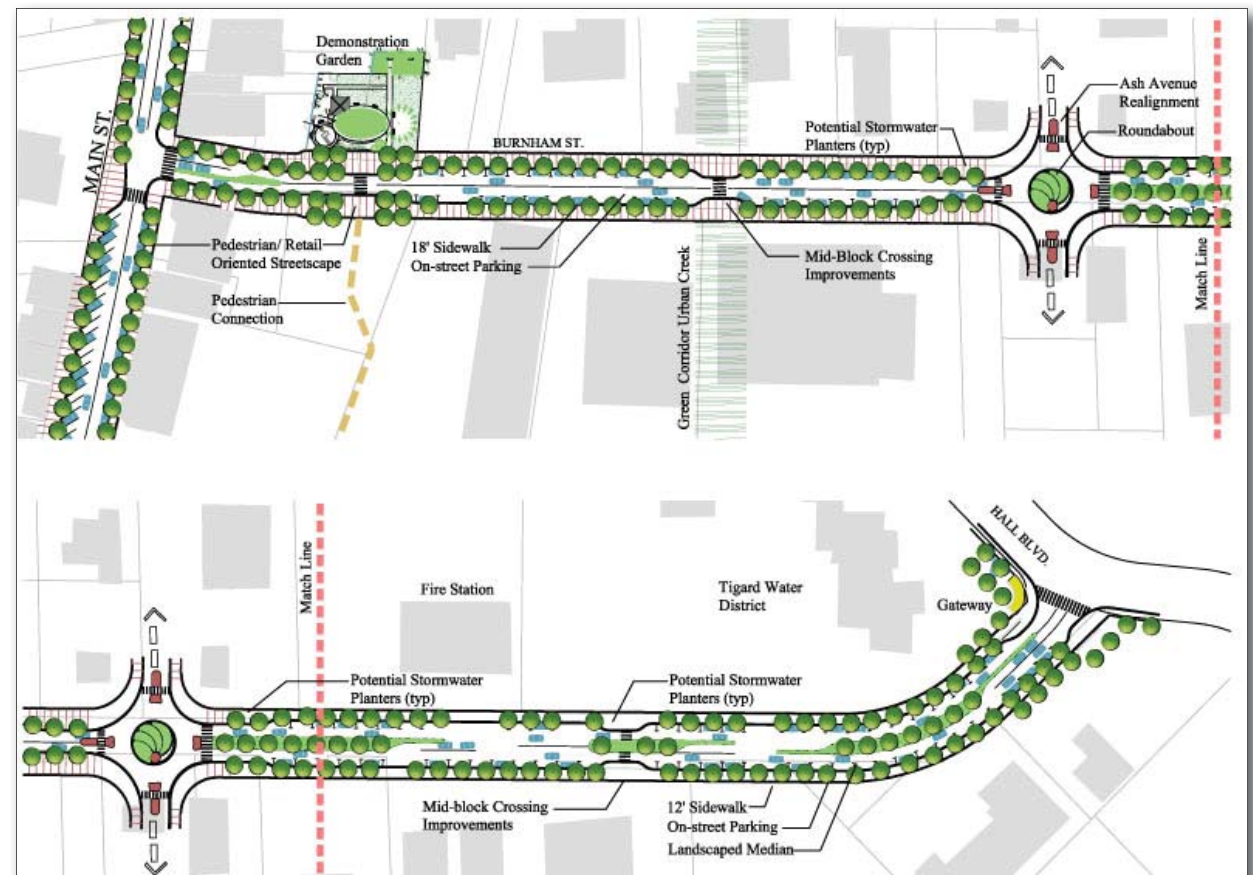
The Otak team worked collaboratively with the City and partners to develop a street framework plan for

intensive redevelopment of the Gateway Regional Center, an aging commercial district in urban Portland. A boulevard concept was developed for 102nd Avenue as a signature street and Pacific Street as a main street. A street typology with specific guidelines and templates for design was developed for the street network. Design criteria included right-of-way width, pedestrian crossings, transit stops, sidewalk design, street lighting, and landscaping. Otak was later retained to provide final design engineering for the project.

### Experience Designing Urban Streets and Boulevards

In addition to the projects highlighted above, our team has extensive experience designing urban streets and boulevards throughout the US, including:

- Aurora Corridor Urban Boulevard Streetscape and Gateway Improvements; Shoreline, Washington— Otak was part of the design team for Phases II and III of the Aurora Boulevard project, a major urban boulevard north of Seattle extending from North 165th Street to North 205th Street at the



Tigard Comprehensive Streetscapes

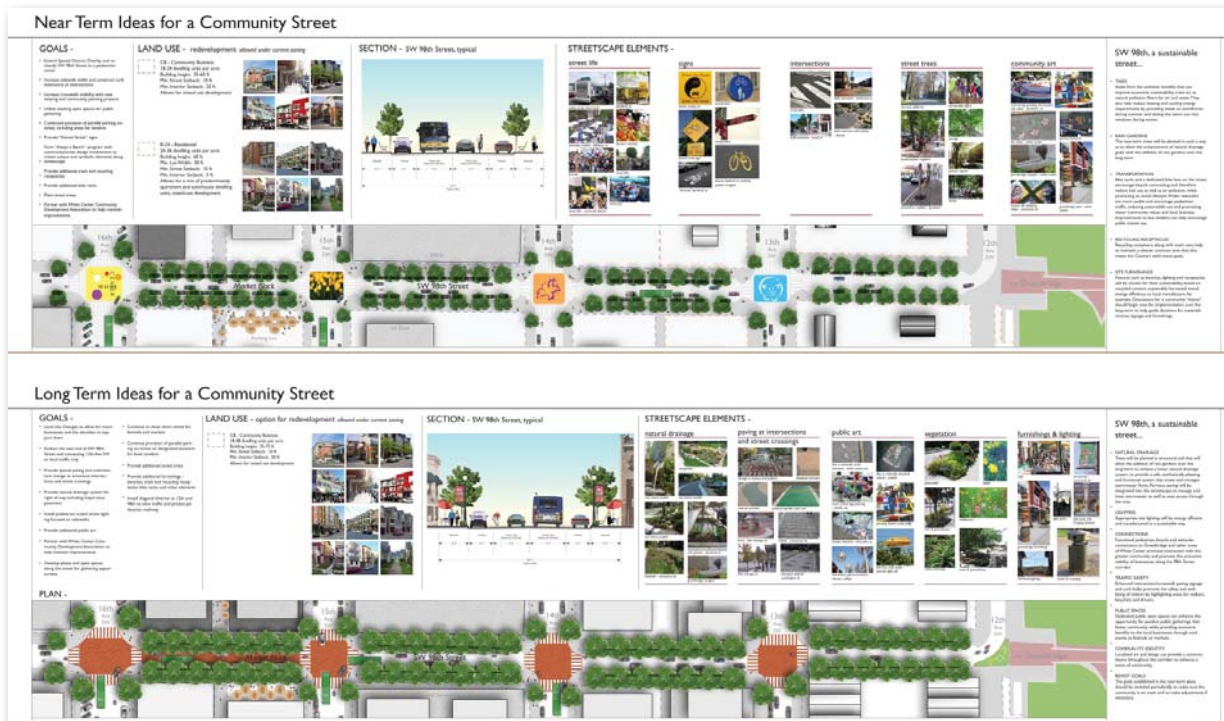
City limits. The corridor-wide streetscape design integrates sustainable and LID features.

- Lower Broadway Streetscape Program; New York, New York—Brad Bielenberg, served as the lead landscape architect on this urban streetscape project while employed with an East Coast firm prior to joining Otak. His responsibilities included design and construction supervision. The \$20 million project, designed for the Alliance for Downtown New York, stretched from Battery Park to City Hall. Signature paving elements and black granite Canyon of Heroes pavers with stainless steel lettering were installed every 20 feet to commemorate all the ticker-tape parades held on Lower Broadway from the dedication of the Statue of Liberty in 1886 to more recent parades.

- Meadow Drive Streetscape; Vail, Colorado—Otak developed design plans for Meadow Drive, which runs through the center of Vail to integrate motor vehicle traffic and buses, delivery trucks, bicycles, and large volumes of pedestrians. Opportunities for placement of public art and streetscape enhancements were also important aspects of the project.
- New York Stock Exchange Streetscape & Security Project; New York, New York—Brad Bielenberg also served as the lead designer on this project (prior to Otak) and worked with Rogers Marvel Architects in creating a secure zone around the Exchange while upgrading the streetscape and creating new public spaces on closed streets within the financial district. The \$24 million

project included coordination with private utility companies to determine how to fit the proposed improvements into lower Manhattan's dense infrastructure. The effort involved immense coordination with numerous city agencies, including NYC Department of Transportation, Department of City Planning, Department of Environmental Protection, NYPD, FDNY, Economic Development Corporation, and Lower Manhattan Development Corporation.

- Mississippi Avenue Main Street Project; Portland, Oregon—Otak provided civil engineering and urban design for redevelopment of Mississippi Avenue in a historic district of Portland. The project included traffic calming, improved pedestrian connections, and historic streetscape preservation and enhancements.
- Avenue-by-the-Sea; Rockaway, New York—Another project of Brad Bielenberg's, prior to Otak, where he served as the lead designer and worked with architects Ehrenkrantz, Eckstut and Kuhn was developing a new planned community on the Rockaway peninsula in New York City. Brad was responsible for design of a new mixed-use main street, along with other project elements.
- Alaskan Way Viaduct Replacement Project; Seattle, Washington—The Washington State Department of Transportation (WSDOT) retained Weinstein A|U for urban design in order to coordinate the designs generated by the consultant team and their in-house design team, and to lead the entitlement process for the various components of the project. The urban design issues include working with neighborhood stakeholders, including Pioneer Square on the south portal and Uptown and South Lake Union on the north portal. Stakeholders also



98th Street Eco-charrette (Otak)

include public and private entities including the stadium authorities, the Port of Seattle, the Bill & Melinda Gates Foundation, and the Seattle Center.

- 98th Street Eco-charrette and Streetscape Guidelines; King County, Washington—Otak worked with King County staff from multiple departments to develop guidelines for improvements to this urban street in a transforming commercial district of south King County. Plans were developed for phased improvements that would inspire new development and neighborhood use of the street. Possible public investment opportunities included paving, street and pedestrian lighting, trees and landscaping, on-street parking, and public art.
- Terry Avenue Green Street; Seattle, Washington—Weinstein A|U worked with Cornish College of the Arts, GGN Ltd landscape architects, and the City of Seattle to turn a block of Terry Avenue into a green street. The block is a significant location in the college's urban campus, and reducing the drive zone to a single 12-foot-wide lane created space for gardens, trees, seating, and a small plaza with space for art display. Traffic calming has increased comfort for walking and sitting. Plantings were added to curb bulbs to favor greening at the intersections and minimize the concrete.
- San Francisco Better Market Street; San Francisco, California—Fehr & Peers was retained by the San Francisco County Transportation Authority as part of a multidisciplinary team, led by Gehl Architects and Perkins + Will, to develop and evaluate concepts for transforming Market Street in San Francisco into a 21st Century multi-modal street. Fehr & Peers aided in the development of detailed design guidelines for pedestrian, bicycle, transit, automobile, and commercial

vehicle accommodations. The project addressed design materials and operational impacts for paving, striping, signage, and signal control devices. As part of a multidisciplinary design team, Fehr & Peers provided the City with detailed recommendations for intersection-level operations that could accommodate the separated bikeway, trolley, multiple bus lines, and heavy cross street automobile volumes.

- Trinity College Landscape Master Plan and Vernon Street Improvements; Hartford, Connecticut—Brad Bielenberg served as the lead designer on this project, prior to Otak. As part of the master plan effort, Trinity College commissioned the redevelopment of Vernon Street. This project that included creating a new signature entrance

and unifying the academic and residential areas of the campus. The design incorporates many traffic calming measures and special paving that denotes pedestrian areas, making the street more pedestrian friendly. Extensive tree planting and a new brownstone wall were incorporated to create a sense of place and to help unify the campus.

- Al Rayyan Road Corridor; Doha, Qatar—Otak provided civil engineering, traffic analysis, and urban design for redevelopment of this major urban corridor. The 15-kilometer corridor stretches through the urban core of Doha to outlying neighborhoods and is the main link between the Emir's Palace at Al Wajba and the Emiri Diwan in the historic heart of Doha.



Trinity College Landscape Master Plan and Vernon Street Improvements in Hartford, Connecticut (Brad Bielenberg's experience while with another firm)

- Somerville Streetscape; Somerville, New Jersey—Brad Bielenberg, prior to Otak, served as the lead designer on this project and was responsible for the development of design and construction documents for this two-mile stretch of Main Street. The design included new paving, planting, seating, and lighting.
- Hydraulic Road; Charlottesville, Virginia—Urban Advantage produced photo simulations showing the impacts of alternative traffic engineering solutions for the road, as well as its intersection with US 29. They showed not only alternatives to the roadway, including roundabouts, flyovers, and sunken roadways, but also how these alternatives

impact the quality of land use and urban form upon leaving historic Charlottesville and entering the auto-oriented sprawl north of the City. The project included coordination with urban designers, transportation planners, the Thomas Jefferson Planning District Commission, and the Virginia Department of Transportation.

- Palm Avenue; Imperial Beach, California—Urban Advantage worked with the San Diego Association of Governments to develop a Smart Growth Tool Box with illustrations demonstrating positive effects in nine areas, including Palm Avenue. The completed images demonstrate a variety of conditions, but with a common theme of vital, walkable streets.

Most images also showed a strong connection between development and transit.

- Rhode Island Avenue; Mt. Rainier, Maryland—Mt. Rainier is a small town along Rhode Island Avenue not far from Washington, DC. It has a good historic urban form, but in recent decades has suffered from the gradual erosion of attention to the safety and needs of the pedestrian. As part of a design team hired to create a mixed-use town center development plan, Urban Advantage was asked to create multi-step photo simulations demonstrating plan ideas. They produced three visualizations—the humanizing of a major arterial, the creation of a civic center park, and the revitalization of a neighborhood commercial center.
- Sheridan Road; Peoria, Illinois—The Peoria Planning Department and Heart of Peoria Commission chose to take the Heart of Peoria Plan done by Duany Plater-Zyberk to the next step—refine the plan and draft a form-based code to implement and enforce it. Urban Advantage was hired as part of an urban design team to help conduct a seven-day public charrette. They were asked to produce visualizations of three locations in Peoria. One of them, Sheridan Road, is a commercial street with businesses fronting on sidewalks that are narrow and obstructed with utility poles. Urban Advantage showed changes to the street that would improve pedestrian safety and comfort, turning Sheridan Road into a vital neighborhood main street.
- Lancaster Boulevard; Lancaster, California—Lancaster Boulevard is the major road through the heart of Lancaster, a town in the Mojave Desert. Urban Advantage was part of a design team given the challenge of making a sun-baked downtown street comfortable for pedestrians and sustaining for local businesses. The design team proposed a central



Al Rayyan Road Corridor

Lancaster Boulevard



Existing conditions



Redesign of travel lanes, introduction of center-of-street diagonal parking, and pedestrian-scale lighting (visualization)



Trees and building facade improvements (visualization)



Farmer's market (visualization)

parking area that could double as a significant community space for arts festivals and farmers markets. They also suggested shaded arcades over the sidewalks to provide comfortable walking during the summer months. Urban Advantage created photo-realistic illustrations demonstrating the visual appearance of such unconventional solutions. The illustrations and designs were enthusiastically received by the City Council.

- Trilogy Parkway Roundabout Design; Redmond, Washington—Otak was responsible for final design plans and detail specifications for this fast-track roundabout project. Final design and plans were prepared to meet the developer and King County's schedule for other concurrent projects. The project involved a special sidewalk ramp configuration that was incorporated to accommodate the existing adjacent sidewalk and hard-surface regional trail. The project included coordination and final approval by King County Department of Transportation.
- Farmer Avenue Arts District; Tempe, Arizona—Otak developed a master plan and vision for the redevelopment of the Farmer Avenue corridor into an urban arts district. Illustrative graphics supported the vision and analysis of how the district could transform from an auto-oriented environment to a pedestrian-, bicycle- and transit-friendly, livable neighborhood focused on visual arts, studios, lofts, and light-manufacturing shops for pottery, textiles, and other crafts

**Experience in Urban Design of Shared Streets, Alleys, Pedestrian Environments, and Other Public Spaces**

Select projects that specifically relate to shared streets, alleys, pedestrian environments, public plazas,

and other public spaces that our team members have designed are highlighted below.

- Center Commons Woonerf; Portland, Oregon—Otak designed a shared street, following in the Dutch tradition of woonerfs for this TOD project in urban northeast Portland. Special paving and streetscape treatments defined the common space for use by pedestrians, bicyclists, and motorists traveling at very low speeds.
- Safeco Field Pedestrian Connections Plan and Improvements; Seattle, Washington—Weinstein A|U developed an urban design plan focusing on pedestrian connections. The last project included design and construction of streetscape improvements near Safeco Field through contract documents. The first project's criteria for evaluation, urban analysis and design study, included access, visibility, image and visual quality, public safety, and adverse impacts. Also studied was the potential for each site to act as a catalyst for economic viability and urban place-making.
- Roberto Maestas Festival Street; Seattle, Washington—Otak designed this shared street for



Trilogy Parkway Roundabout





Center Commons Woonerf

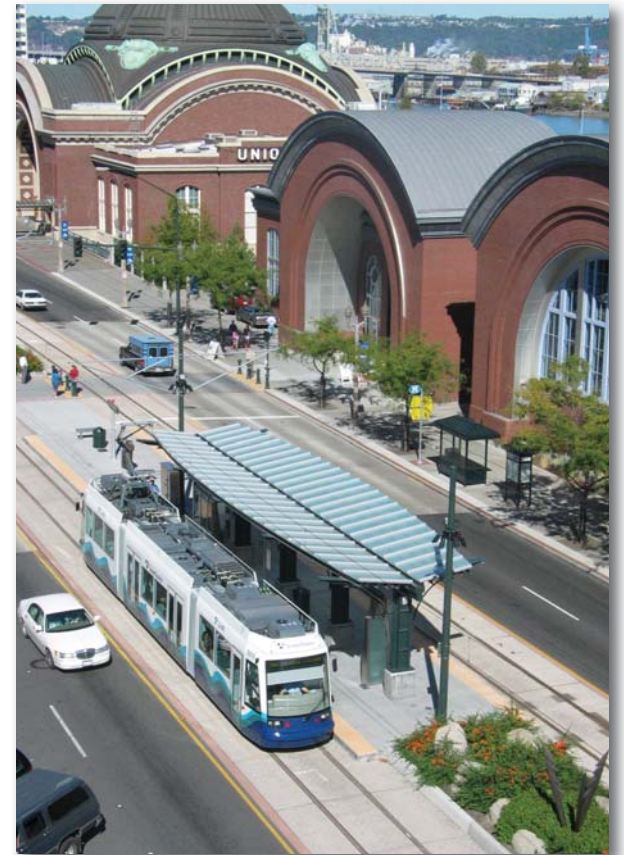
the City of Seattle to function as both an urban street and a festival space in the diverse Beacon Hill neighborhood. Visual cues from the speed table paving, bollards, pedestrian lighting, and large canopy trees defined spaces for shared use by motorists, pedestrians, and bicyclists. At times the street can be closed to vehicle traffic for special neighborhood events.

- North Rainier Station Area Urban Design; Seattle, Washington—Weinstein A|U provided urban design for the light rail station area near the North Rainier/McClellan Station, which includes portions of Olmsted's boulevard system, landmarks

such as Franklin High School, heavily trafficked intersections, and a great deal of development potential. A roundabout generated interest from Seattle Department of Transportation to solve the intersection of Cheasty Boulevard, Rainier Avenue South, and Martin Luther King Boulevard.

- Pioneer Square/Occidental Plaza Improvements; Seattle, Washington—Otak completed urban design improvements in Seattle's signature historic district with the intent of improving pedestrian accessibility, comfort, and security and as such, enhancing the vibrancy of buildings and surrounding uses in the district.

- Nord Alley/Pioneer Square Alleyways; Seattle, Washington—The International Sustainability Institute led a group of sponsors for a competition calling for ideas to activate a historic alley in Seattle's Pioneer Square neighborhood. Weinstein A|U's entry included the idea of showing the 2010 World Cup soccer matches in the alley. With limited funds, Lesley Bain worked with ISI to project the matches during lunchtimes over the month-long World Cup. Hundreds of people came to the showings—residents, people who work in the vicinity, sports fans, people on jury



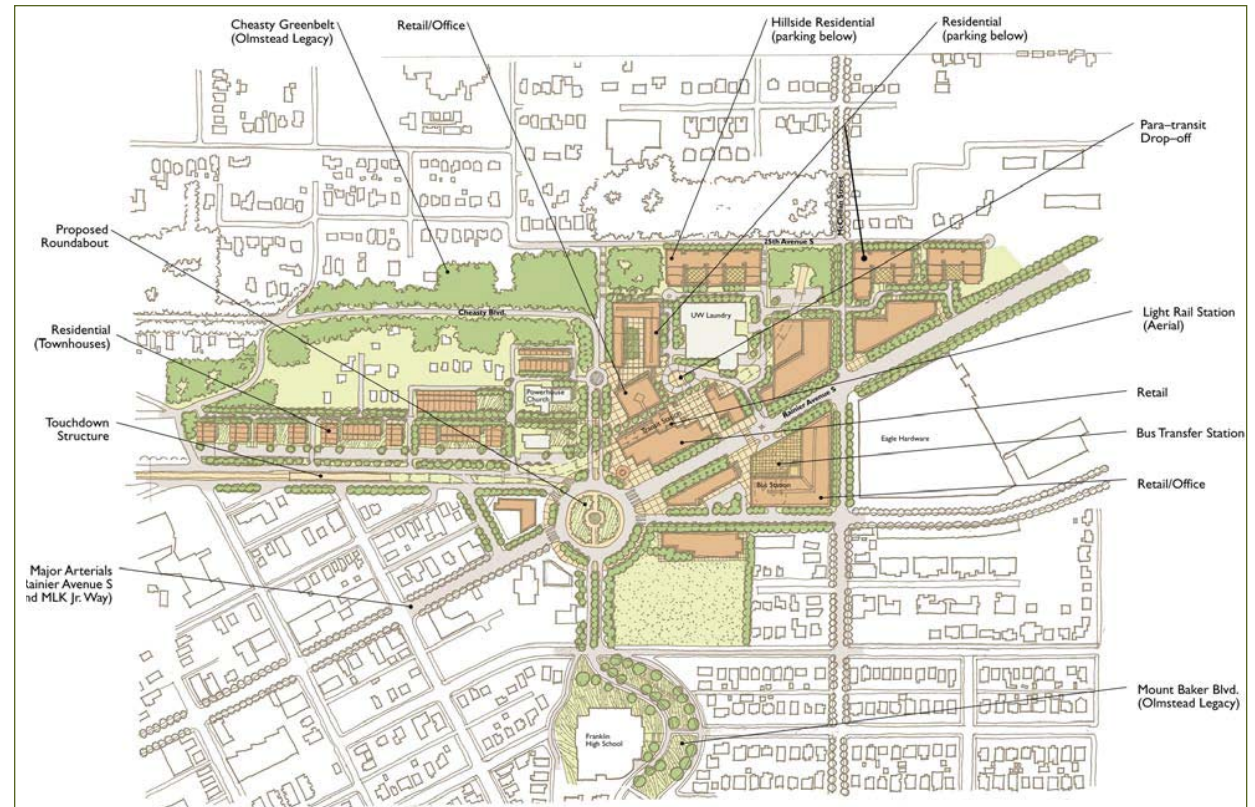
Tacoma Link Light Rail

duty, soccer teams, and people from the countries that were playing. Weinstein A|U has provided pro bono support on other efforts in the alleys and the adjacent park, including art installations and assistance to get banners at alley entries.

- Broad Street Green; Seattle, Washington—Weinstein A|U worked on the signature Broad Street Green project. Broad Street slices diagonally from Denny Way to Thomas Street, defining the southeastern edge of Broad Street Green, the expanse of lawn at the base of Seattle’s most visible and visited attractions: Space Needle, Experience



Portland Streetcar



North Rainier Station Area (Weinstein A|U)

Music Project (EMP)/Science Fiction Museum, and Pacific Science Center. In addition to being the foreground for these highly memorable icons, as well as several large-scale outdoor sculptures, the lawn is itself a venue for major events at the Seattle Center; including Bumbershoot and the Northwest Folklife Festival. As such, it is clearly an area that is central to Seattle Center’s mission to be the nation’s best gathering place. Running from the Pacific Science Center to the EMP, this significant edge includes three entry points to the campus. The design creates a sweeping, generous hardscape edge that is transformed seasonally with massed

plantings of colors tied to the provocative palette of the EMP, and the fiery orange red of Alexander Lieberman’s Olympic Iliad sculpture.

- Chinatown Historic Alleys; Seattle, Washington—Weinstein A|U worked as part of a team with the Seattle Chinatown International District Preservation and Development Authority on a strategy and schematic design to activate historic Maynard and Canton alleys. The study included coordination with a broad range of stakeholders through a project steering committee and two public meetings with the broader community. Prerequisites for better use of the alleys were

identified, including the removal of dumpsters and drainage problems that kept adjacent storefronts vacant. The study considered lighting, landscaping, paving, and new uses along the alleys.

- Pedestrian Facilities Guidebook; Washington State—Otak developed this comprehensive

toolbox to guide design of pedestrian facilities in the more urban Puget Sound Region, as well as in cities, towns, suburban, rural, and natural areas throughout the state of Washington. One of the first guideline documents of this type developed in the US, it placed priority on pedestrian

safety, accessibility, and mobility. Detailed guidance for pedestrian-friendly intersections and crossings, sidewalks, school zones, pedestrian spaces, access to transit, and other topics was later referenced and adapted for use in other guideline documents across the country and for the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities.

### Experience Designing Transit Systems and Facilities in Urban Street Rights-of-Way

Otak has designed light rail transit, streetcar, bus rapid transit, and bus systems and facilities in urban street rights-of-way, including:

- Swift Bus Rapid Transit (BRT); Snohomish County, Washington—Otak designed more than 30 BRT system stops and adjacent street and intersection improvements

for 17 miles along the urban boulevard of SR 99, south of Everett.

- Tacoma Link Light Rail; Tacoma, Washington—Otak was the lead designer for the entire light rail system and five stations, as well as associated urban design, street, and intersection improvements along the entire alignment in downtown Tacoma. A major objective of the project was to enhance connections to surrounding urban neighborhoods and districts. Mandi Roberts was the lead urban designer.
- Portland Streetcar; Portland, Oregon—Otak was the lead civil engineer and urban designer for development of the original streetcar alignment in northwest Portland. The project realized a long-time objective of improving traffic circulation and keeping Portland's central city vital by providing public transportation choices and connections to neighborhoods, shopping areas, employment, and activity centers.
- Eugene to Springfield EmX BRT; Oregon—Otak has been assisting Lane Transit with implementation of the green EmX system between Eugene and Springfield. The system features grass-lined trackway sections, as well as bicycle-friendly state-of-the-art BRT vehicles and platform facilities.
- Uptown Albuquerque Transit, Bicycle, and Pedestrian Plan and Wayfinding Program; Albuquerque, New Mexico—Otak prepared a transit, bicycle, and pedestrian circulation plan for enhancing connections between land uses in the district and transit. The plan also provided design guidance for public plazas and spaces, wayfinding enhancements, and other urban design improvements.
- Central Phoenix/East Valley Light Rail; Phoenix, Arizona—Otak designed several East Valley light



Tacoma Link Light Rail

rail stations and surrounding street and intersection improvements and was part of the initial design team to develop the kit of parts elements for the system's waiting platforms, including cooling screens, a series of large scale louvers, and textile canopies arranged for maximum shading.

- **Westside Mobility Plan; Los Angeles, California**—Fehr & Peers is leading a team to develop a long-term comprehensive mobility plan for the Westside of the City of Los Angeles. The study includes six major components: a state-of-the-art travel demand model; a mobility and rail connectivity study including the potential for north/south transit connections from the LAX area through the Westside, including evaluations of light rail and BRT, the integration of transit, and bicycle and pedestrian modes. As add-on work to the mobility plan, Fehr & Peers is also developing multi-modal performance measures for the City of Los Angeles.
- **Urban Corridor Bus Facilities; Various Locations**—Otak has designed many bus facilities, including lanes, in-line stops, pull-outs, and waiting area platforms on a diversity of urban corridors and in proximity to urban intersections. We have a thorough understanding of transit and bus design vehicle parameters and requirements related to design of transit facilities. Many of the guides and toolboxes we have authored included design guidance for transit facilities and enhancing access to transit. Weinstein A|U has also prepared access to transit design guidelines.

### Experience Illustrating Urban Street Design and Transformations

We apply illustrative techniques through high quality graphics and visual simulations to show how urban street design can enhance aesthetic character and

community identity while also maximizing public use and capital investment. We bring exceptionally strong graphic capabilities with this team and this expertise will give the NACTO Urban Street Design Guide a signature look and feel that will also complement and be recognizable as part of the NACTO communication style. Both the web and print versions of the Urban Street Design Guide will be graphically designed in matching styles and organized in highly accessible and legible formats. Design guidance will be focused, concise, and easy to find. We understand that the highly illustrative/graphically rich Guide will be similar in depth, length, and applicability as the NACTO Urban Bikeway Design Guide, which we have thoroughly reviewed and have been referencing in various design projects.

In addition to the in-house graphic design capabilities at Otak, we have retained studio/216 and Urban Advantage to assist with graphic design and development of interactive web-based products for the Urban Street Design Guide. Fehr & Peers' in-house communications department will also provide technical support related to programming and integration of various transportation design components. studio/216's innovative, high quality visual simulation and multi-media capabilities offer exceptional opportunities for the

project. Urban Advantage's work in urban areas throughout the US, creating computer simulations that clearly illustrate transformation of streets and urban settings, will also be highly advantageous. Urban Advantage has a huge portfolio of existing imagery and simulations that we can draw from and apply to illustrate the effectiveness of the design guidance in the Guide. We also envision adapting the simulations for use in an online interactive tool that will help street designers and city leaders clearly envision the positive outcomes of applying best practices in their cities.

The graphic capabilities of our team are highlighted throughout this proposal, as well as in the Appendix and on the CD accompanying our proposal.

### Interactive Web-based Content and Website Development

Being able to efficiently access design guidance online is essential in today's world. While there are many



Central Phoenix/East Valley Light Rail

resources online currently, most are static PDF files that can be downloaded and printed. There are a few online tools that provide interactive guidance, but none that will be as comprehensive and instructive as the new NACTO Urban Street Design Guide online version.

Our team understands that the web-based version of the Guide will be integrated into the existing NACTO website and will utilize the existing website infrastructure where possible. The online version will be linked to other design guidance, including the NACTO Urban Bikeway Design Guide in an efficient, easy-to-use approach. Links to innovative programs and case studies around the US and abroad can also be integrated into the online Guide, including short film clips and street view images. Beyond the basic framework of providing an online version of the guide with text, graphics, and links, we envision development of an interactive street design tool that will illustrate the value of best practices in street design to practitioners and city officials. Using layered visual simulations, the tool will give designers choices of elements to add to various street typologies. As elements are added, designers will be able to see streets transform onscreen. The tool will be accessible for use by Mac and PC, and support Internet Explorer, Safari, and Firefox, including older versions of each.

To accomplish this important task, we have assembled a creative and experienced team with web-based product expertise. Through the combined technical skills of studio/216 and the Fehr & Peers' in-house communications staff, and with graphic simulation support from Urban Advantage, our team brings the capability to design not only an online version of the Guide but also an interactive web-based tool that will

help designers visualize the results of design. Relevant examples of the team's project experience include:

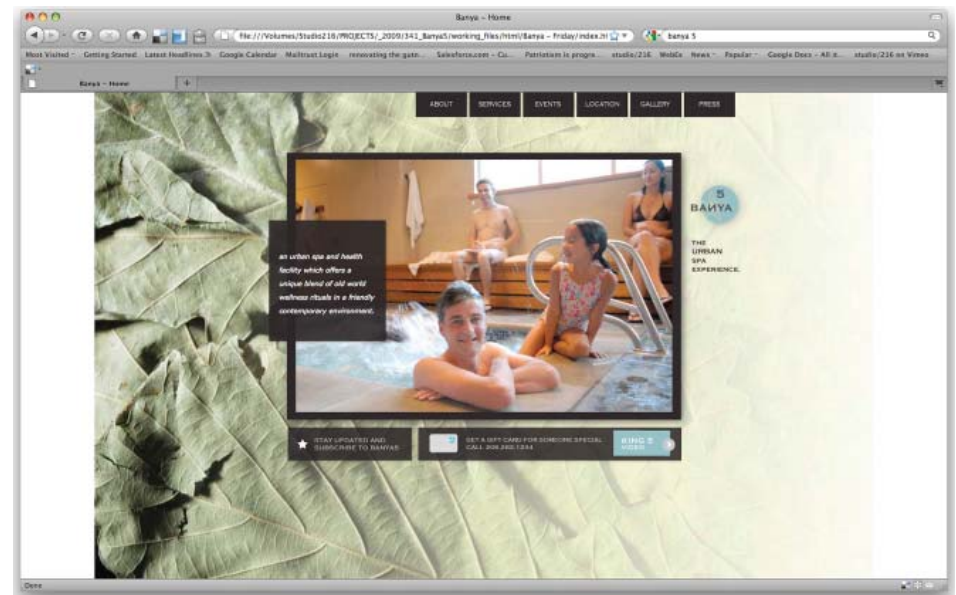
### Fehr & Peers

- Reno-Sparks Bicycle and Pedestrian Plan—custom website as a primary electronic communication tool for the project and innovative smart phone app for bicycle and pedestrian environments (one of the first of its kind that allowed citizens to download the app on iPhone, Android, and Blackberry to submit photos and comments on the positives and negatives of bicycle and pedestrian environments in the Reno-Sparks area)
- Social media citizen engagement programs
- Denvermoves.org Website
- Albany Bicycle and Pedestrian Plan website
- Coolconnections.org Brand
- WTSUTAH.org
- Metro Orange Line Online Survey
- Chautauqua Study Web Application
- Wiki Knowledge Management Strategies (company-wide, web-accessible wiki to improve management and sharing of knowledge)
- Urban Land Institute Boulder Promotional Video
- Pedestrian Safety Assessment Promotional Video

- Visual Communications Award from the Transportation Research Board

### studio/216

- <http://www.storefrontstudio.org> interactive design website for the University of Washington Architecture Department and Headlines 2009 lecture series webpage
- <http://ideanw.com> – ideas at work website
- <http://marinavistacondos.com> website
- <http://runstad.be.washington.edu/> Runstad Center for Real Estate Studies website
- <http://www.studio216.com/studioconsortium/>
- [www.lmnarchitects.com](http://www.lmnarchitects.com)
- [www.davidcolemancarchitecture.com](http://www.davidcolemancarchitecture.com)
- [www.petercohanarchitecture.com](http://www.petercohanarchitecture.com)
- [www.studypublicart.org](http://www.studypublicart.org)
- [www.jerseydeveldesignbuild.com](http://www.jerseydeveldesignbuild.com)
- <http://www.banya5.com/>



studio/216 Web Design

### Team Experience Chart

The chart below aligns our team’s experience with the key areas of expertise needed for the NACTO Urban Street Design Guide. Many of the projects listed in the chart and others are described in more detail on the preceding pages.

	Otak Team Experience	Select Project Examples	
✓	Developing Design Guides and Toolboxes	<ul style="list-style-type: none"> <li>• Abu Dhabi Urban Street Design Guide, First and Second Editions</li> <li>• Tempe Transportation Toolbox</li> <li>• Accessible Public Rights-of-Way, Planning and Design for Alterations</li> <li>• King County Metro and City of Seattle Transit-friendly Guidelines</li> <li>• Denver Multi-modal Design Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Hawaii Pedestrian Toolbox</li> <li>• Living Streets—Strategies for Crafting Public Space</li> <li>• Multi-modal Level of Service Toolkit</li> <li>• Cool Planning Handbook—2012 APA National Best Practices Award</li> <li>• Scottsdale Road Master Plan, Design Guidelines, and Streetscape Improvements</li> <li>• Opportunity Gateway Street Plan and Guidelines</li> </ul>
✓	Designing Urban Streets	<ul style="list-style-type: none"> <li>• SW Burnham Street—2012 APWA National Project of the Year</li> <li>• Terry Avenue Green Street</li> <li>• Tigard Comprehensive Streetscapes Guide</li> <li>• Al Rayyan Corridor; Doha, Qatar</li> <li>• San Francisco Better Market Street</li> </ul>	<ul style="list-style-type: none"> <li>• Aurora Corridor Urban Boulevard Improvements</li> <li>• New York Lower Broadway Streetscape Program</li> <li>• Avenue-by-the-Sea, Rockaway</li> <li>• New York Stock Exchange Streetscape</li> <li>• Sheridan Road</li> <li>• Rhode Island Avenue</li> </ul>
✓	Developing Interactive Web-based Content and Websites	<ul style="list-style-type: none"> <li>• Denver Moves <a href="http://www.denvermoves.org">www.denvermoves.org</a></li> <li>• Reno-Sparks Bicycle and Pedestrian Plan</li> <li>• Albany Bicycle and Pedestrian Plan Website</li> <li>• Metro Orange Line Online Survey</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="http://www.storefrontstudio.org">www.storefrontstudio.org</a></li> <li>• <a href="http://www.studypublicart.org">www.studypublicart.org</a></li> <li>• <a href="http://ideanw.com">http://ideanw.com</a></li> <li>• <a href="http://www.lmnarchitects.com">www.lmnarchitects.com</a></li> </ul>
✓	Designing Transit Facilities (light rail, streetcar, BRT, bus) in Urban Settings	<ul style="list-style-type: none"> <li>• Swift BRT Corridor</li> <li>• Eugene-Springfield EmX BRT</li> <li>• Portland Streetcar</li> <li>• Westside Mobility Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Tacoma Link Light Rail</li> <li>• Central Phoenix/East Valley Light Rail</li> <li>• Various Bus Facilities on Urban Corridors</li> <li>• Tempe Transportation Center</li> </ul>
✓	Designing Shared Streets, Alleys, Pedestrian Plazas, and Other Public Spaces	<ul style="list-style-type: none"> <li>• Center Commons TOD Woonerf</li> <li>• Safeco Field Pedestrian Connections Plan</li> <li>• Roberto Maestas Festival Street</li> <li>• Nord Alley/Pioneer Square Alleyways</li> </ul>	<ul style="list-style-type: none"> <li>• Pioneer Square/Occidental Plaza Improvements</li> <li>• Broad Street Green</li> <li>• Chinatown Historic Alleys</li> <li>• North Rainier Station Area Urban Design</li> </ul>
✓	Additional Pedestrian Design Experience and Design Guides	<ul style="list-style-type: none"> <li>• Georgia Pedestrian and Streetscapes Design Guide</li> <li>• Washington Pedestrian Facilities Guidebook</li> <li>• Hawaii Pedestrian Toolbox</li> </ul>	<ul style="list-style-type: none"> <li>• King Street Station Area Improvements</li> <li>• Tempe Pedestrian Overlay District Provisions</li> </ul>
✓	Designing Bicycle Facilities	<ul style="list-style-type: none"> <li>• Seattle Bike Master Plan Implementation</li> <li>• Uptown Albuquerque Transit, Bicycle, and Pedestrian Plan</li> </ul>	<ul style="list-style-type: none"> <li>• 98th Street Eco-charrette</li> <li>• Mississippi Avenue Main Street Improvements</li> <li>• Meadow Drive Street Improvements</li> </ul>
✓	Working Knowledge of AASHTO, MUTCD, FHWA, ADA, CPTED, and Other Relevant Requirements and Standards	<ul style="list-style-type: none"> <li>• All of the Above</li> </ul>	

## CLIENT REFERENCES

Our team's references can attest to our successful past performance including our quality of service, quality of production, technical competence, responsiveness to clients, and dependability. Most of our clients are repeat clients, and we work hard to maintain a high-level of client satisfaction. We believe that we can only be successful when our work helps make our clients successful.

References for Otak, Weinstein A|U, and Fehr & Peers are provided below. The work of studio 216 and Urban Advantage, highlighted throughout this proposal and in the Appendix (and saved on accompanying CD), stands on its own in terms of

high level graphic quality. We have worked with both firms and can attest to their high level of responsiveness and attention to client service.

### Otak, Inc.

Bill Lashbrook, Transportation Planning Manager,  
Urban Planning Council, Abu Dhabi  
+971 (0) 2 409 6000  
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Worked with Otak and Mandi Roberts on the Abu Dhabi Urban Street Design Manual

<http://www.upc.gov.ae/guidelines/urban-street-design-manual.aspx?lang=en-US>

Robert Yabes, Principal Planner, City of Tempe  
(480) 350-2734  
robert\_yabes@tempe.gov

Worked with Otak and Mandi Roberts on the Tempe Transportation Toolbox and Comprehensive Transportation Plan, also currently working with Otak on the Hardy Drive project, and urban street improvements project

Rachel Roper, Project Manager, Hawaii Department of Transportation  
(808) 587-6395  
Rachel.LA.Roper@hawaii.gov

Working with Otak on the Hawaii Pedestrian Toolbox, part of the Hawaii Pedestrian Master Plan

Lyle Bicknell, Urban Designer, City of Seattle  
(206) 684-0763  
lyle.bicknell@seattle.gov

Worked with Otak on the Roberto Maestas Festival Street, a shared street project in Seattle, as well as Beacon Hill neighborhood planning and other projects

### Weinstein A|U

Barbara Gray, Director, Street Use & Urban Forestry  
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McCall Lake Front Street Improvements

**Fehr & Peers**

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<http://www.bikesd.org/2012/03/02/bryan-jones-carlsbads-deputy-director-of-transportation-and-city-traffic-engineer/>



Uptown Albuquerque Transit, Bicycle, and Pedestrian Plan and Wayfinding Program

“Otak brings a team of passionate and dedicated professionals to the table that is invested in providing a quality product in a timely and professional manner. Their knowledge is augmented by the listening and communication skills so essential in producing a successful project.”

*-Jack Emrick, Bureau of Land Management, National Operations Center*





Hanmi Global Partner

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