



# SEATTLE SECTION NEWSLETTER

June 2010  
Volume 45 No. 10

## Section Officers

October 1, 2009 – September 30, 2010

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Erin Fletcher, *Director (2011)* 206-770-3504  
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Karen Dix-Colony, *President* 425-266-8899

### WEBMASTER

Lisa Martinez [seattleasce@yahoo.com](mailto:seattleasce@yahoo.com)

## ASCE Seattle Section Meeting

Wednesday, June 9, 2010

**Place:** McCormick & Schmick's Harborside Restaurant  
1200 Westlake Avenue North  
Seattle, Washington 98109

**Cost:** \$30 per person (\$35 for late reservations)  
Students \$10; Unemployed members \$10  
Spouses and guests are welcome.  
Cash or checks payable to ASCE are accepted.

**Meal:** Starter: Seasonal Mixed Field Greens. Entrée: Seafood Alfredo with Penne Pasta -or- Grilled Portobello with Mushroom Risotto and Asparagus. Dessert: Seasonal Cheesecake

5:30 Socialize

6:15 Dinner

7:00 Program: 10th Annual Outstanding Civil Engineering Achievement Awards Presentation

8:45 Adjourn

Please make your reservations by  
**NOON Friday, June 4**, using one of the following methods :

- Call 206-926-0482 (voice mail system — please leave message)
- Send email to: [seattleascereservations@gmail.com](mailto:seattleascereservations@gmail.com)

**Please indicate with RSVP if the vegetarian meal is preferred.**

## 10th Annual Outstanding Civil Engineering Achievement Awards Presentation

The 10th Annual Local Outstanding Civil Engineering Achievement Awards will recognize nine local projects for their overall excellence in design. We will be presenting three Outstanding Awards and six Honor Awards. Each project team receiving an award will make a short presentation describing the challenges they faced and the solutions which lead to successful implementation of their designs.

Don't miss this opportunity to honor your fellow ASCE members and celebrate the great work we are doing within the Seattle Section.

The deadline for the  
September 2010 issue is  
5:00 p.m.  
FRIDAY, August 20, 2010  
No exceptions.

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#### CHANGE OF ADDRESS:

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the newsletter) should be provided  
directly to ASCE at [www.asce.org](http://www.asce.org) or:  
1801 Alexander Bell Drive,  
Reston, VA 20191-4400.  
The Seattle Section will receive the  
updated information from ASCE.

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CIVIL ENGINEERS, SEATTLE SECTION  
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#### ASCE SEATTLE SECTION NEWSLETTER ADVERTISING RATES

##### Employment Ads:

Employees Wanted:  
75 cents per word

Seeking Employment:  
First 75 words free  
75 cents per each additional word

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Contact the editor at  
[seattleASCEnews@gmail.com](mailto:seattleASCEnews@gmail.com)  
for pricing and format requirements.

## President's Column

By Ronald Bard, P.E.

Our summer hiatus is almost upon us. Those hazy, lazy days of summer loom large. All we have to do is get past the usual Seattle June rain-fest. Then we can recharge our creative batteries, bask in the sunshine, enjoy the outdoors, and maybe take a family vacation. A couple of months off are particularly important in a volunteer organization like ours. We can all come back in the fall with renewed energy and a fresh perspective.



First things first, however, let's go out with a bang - the Seattle Section's 10th annual Outstanding Civil Engineering Achievement Awards. We will recognize projects for their overall excellence in design with both "Outstanding Awards" and "Honor Awards." This is a great opportunity to recognize our fellow ASCE members and celebrate the great work being done within the Seattle Section.

I have always thought that the juxtaposition of the student papers and the project awards was fantastic, although I suspect it was accidental. The student papers are an inspirational perspective showing the promise of where we started. The project awards show the results of our labor and illuminate the reason we got into this field. Combined, they showcase our idealism and our desire to make the world a better place. It is Civil Engineering at its best.

Have a great summer.

Regards,

*Ronald Bard, P.E.*

Seattle Section President

## UW Concrete Canoe Team Needs Your Support

By Elyse Hanson, UW Concrete Canoe Co-Captain

The University of Washington Concrete Canoe Team has had great success so far this year. We recently returned from the regional competition at Washington State University in Pullman, where we placed first overall. We placed first in the presentation and paper sections of the competition as well as third in the final overall product and fourth in the races. With a first place overall finish, we qualified for the national competition in June at Cal Poly in San Luis Obispo.

In order for the UW Concrete Canoe Team make it to nationals we need your help! The team has increased our fundraising efforts, as our current estimated budget for the national competition is \$7,000, largely due to the cost of travel and competition registration. Every little bit helps so please donate today! Check donations are TAX DEDUCTIBLE! Please contact me at [hansoe@uw.edu](mailto:hansoe@uw.edu) for more information about where to send donations.

The team has already held two Mariners Game fundraisers in May. We are also selling "UW Concrete Canoe Supporter" t-shirts as an additional fundraiser. Feel free to e-mail me at [hansoe@uw.edu](mailto:hansoe@uw.edu) to order t-shirts.

Thanks again for all your continued support of our team!

# I-90 Floating Bridge and Mount Baker Ridge Tunnel to be Dedicated as an ASCE National Historic Civil Engineering Landmark on June 4

By Cindy M. Hirsch, P.E.

The Lacey V. Murrow (I-90) Floating Bridge and the Mount Baker Ridge Tunnel have been designated as an ASCE National Historic Civil Engineering Landmark (NHCEL). The dedication of the landmark is set to take



*This new plaque at East Portal View Point Park recognizes the new landmark.*

place on Friday, June 4, at 10 a.m. It will be held at East Portal View Point Park located at 1400 Lake Washington Boulevard South at the intersection of South Day Street. This is the permanent location of the plaque which recognizes the landmark.

ASCE Past-President Wayne Klotz will participate in the ceremony as the representative of the national ASCE organization. He will be joined by many Washington State Department of Transportation representatives, state and local officials, and Seattle Section Board members. Lorena Eng, Regional Administrator for WSDOT Northwest Region, will accept the plaque for WSDOT. ASCE Seattle Section members are encouraged to attend.

The Lacey V. Murrow Bridge and Mount Baker Ridge Tunnel project was completed in 1940 to carry traffic for US Highway 10 (later I-90) across Lake Washington. The bridge was the largest floating structure at the time it was built. It was the first floating bridge in the world constructed of concrete. The project's tunnels through the Mount Baker Ridge were the largest diameter soft bore-earth tunnels at the time.

## UW Offers New Certificate Programs

### Certificate in Life Cycle Assessment - NEW!

Learn how to track a product, service or policy throughout its entire life cycle and measure its ultimate impact on environmental and economic and structures. Determine the goal and scope of a life cycle assessment (LCA) to obtain an accurate and comprehensive analysis of environmental effects. Use your findings to develop business models and production practices that promote sustainability. Discover effective tools and software commonly used by LCA practitioners.

### Certificate in Stream Restoration - NEW!

Gain ecological and technical expertise to design, implement and maintain effective stream restoration projects. Explore terminology, best practices and integrated theories. Refine your skills as you collaborate with multidisciplinary design teams and apply your knowledge in field exercises.

### Certificate in Sustainable Transportation: Environmental Issues and Impacts - NEW!

Examine the relationship between transportation and the environment, including energy, climate change, air pollution and water quality. Develop tools, such as life cycle assessment, that will help you understand the full range of environmental impacts associated with transportation decisions. Learn to conduct environmental evaluations with a variety of analytical tools, such as travel demand forecasting and air and water quality modeling.

*Check out the University of Washington's full range of engineering and environmental certificate programs, including Decision Making for Climate Change, Infrastructure Construction, Low Impact Development, Sustainable Transportation: Planning and Livable Communities, and Wetland Science and Management. For more information visit [www.pce.uw.edu](http://www.pce.uw.edu) or call 800-506-1325.*

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in this Newsletter  
and on the Seattle Section Web Site

See advertising details  
on page 2

## ASCE Seattle Section Executive Board Meeting Minutes

### Minutes for May 12, 2010

The May 12 minutes will be published in the September 2010 newsletter.

# ASCE 2009 Local Outstanding Civil Engineering Achievement Awards

By Ann Bryant, P.E., Immediate Past President

The 10th Annual Local Outstanding Civil Engineering Achievement Awards night will be held at the regularly scheduled Section Meeting on Wednesday, June 9, 2010. Thirteen qualified entries were received. Judging was carried out by 15 representatives from the respective Section's technical committees. The Awards Night will recognize nine projects for their overall excellence in design. Three Outstanding Awards and six Honor Awards will be presented.

Each team receiving an award will make a short presentation at the ceremony describing the challenges they faced and the solutions that led to successful implementation of their designs. Don't miss this opportunity to recognize your fellow ASCE members and celebrate the great work we are doing within the Seattle Section area in maintaining and enhancing the environment and infrastructure upon which our quality of life and safety depends.

Congratulations to all of the 2009 LOCEA award winners, and thank you to all of our members who submitted their excellent projects. And, thank to our judges: Perry Cole, Karen Dawson, Eric Herzstein, Doug Lindquist, Scott Mesic, Sarah Morgan, Peter Opsahl, Robert Parish, Ralph Petereit, Bill Swigart, Jim Thompson, Jon Turcott, Cliff Williams, Melissa Wu, and Robyn Yang.

And the winners are. . .

## Small Project and Non-Construction Study Category - Honor Award Recipient

### *Carpenter Creek Bridge Emergency Repair - Snohomish County*

January 2009 storms and Carpenter Creek flooding created an emergency with the private Carpenter Creek Homeowner Association's (HOA) bridge in jeopardy of imminent and catastrophic collapse. Inspection and a site meeting March 10, 2009 with the HOA and WDFW noted the bridge's critical nature, which is the sole access for 22 family homes including emergency service and fire trucks, mail deliveries, garbage collection, and winter propane gas delivery. The HOA acted decisively to close the bridge to all but light personal vehicles, worked with the engineer to create a rapid repair design using readily available materials, obtained permits, pre-ordered materials, and completed the new bridge

See [2009 LOCEA Awards](#) on page 5

## 2009 Award Winners

### Outstanding Awards

#### ***Benson Road Bridge Replacement - Renton***

Category: Structures  
ASCE Entry Engineer: Hong Guan and Paul Guenther  
Designer: CH2M Hill  
Owner: WSDOT

#### ***Pike Place Market Renovation - Phase 1A (Excavation & Foundation Support) - Seattle***

Category: Geotechnical  
ASCE Entry Engineer: John Bickford  
Designer: DBM Contractors  
Owner: Pike Place Market Preservation and Development Authority (PDA)

#### ***Fraser Street Bike and Pedestrian Improvements - Bellingham***

Category: Transportation and Development  
ASCE Entry Engineer: Freeman Anthony  
Designer: City of Bellingham  
Owner: City of Bellingham

### Honor Awards

#### ***Carpenter Creek Bridge Emergency Repair - Snohomish County***

Category: Small Project and Non-Construction Study  
ASCE Entry Engineer: Ken Wilson  
Designer: Integrity Structural Engineering  
Owner: Carpenter Creek Homeowners Association

#### ***NE 10th Street Bridge Crossing - Bellevue***

Category: Structures  
ASCE Entry Engineer: Tie Zong  
Designer: HNTB  
Owner: WSDOT & City of Bellevue

#### ***Pike Place Market Renovation - Phase 1A (Excavation & Foundation Support) - Seattle***

Category: Structures  
ASCE Entry Engineer: John Bickford  
Designer: DBM Contractors  
Owner: Pike Place Market Preservation and Development Authority (PDA)

#### ***14th Street Bridge Over Fishtrap Creek - Lynden***

Category: Transportation and Development Category - Honor Award Recipient  
ASCE Entry Engineer: Duane Huskey  
Designer: KPFF  
Owner: City of Lynden

#### ***Elwha River Bridge West Approach Build Back - Clallam County***

Category: Geotechnical  
ASCE Entry Engineer: Thomas Gurtowski & Matthew Gibson  
Designer: Shannon & Wilson and Parsons/RCI  
Owner: Clallam County

#### ***Dakota Creek Shipyard Redevelopment - Anacortes***

Category: Ports and Waterways  
ASCE Entry Engineer: William Gerken  
Designer: PND Engineers  
Owner: Port of Anacortes & Dakota Creek Industries

repair construction with only two days closure, opening to the community late Sunday, May 10. The total construction cost was \$59,500.

ASCE Entry Engineer: Ken Wilson  
Designer: Integrity Structural Engineering  
Owner: Carpenter Creek Homeowners Association

### **Structures Category – Outstanding Award Recipient**

#### ***Benson Road Bridge Replacement - Renton***

As part of the I-405 corridor program improvements, WSDOT is building the Renton Stage 2 Project, a new half-diamond interchange on I-405 east of the I-405/SR 167 interchange at SR 515 (Talbot Road). The Benson Road Bridge Replacement is part of the Renton Stage 2 Project. The replacement bridge is a 520-foot-long, three-span bridge constructed with WF100PTG spliced, post-tensioned prestressed girders, the first application of these girders in the state. The total construction cost was \$6 million.

ASCE Entry Engineer: Hong Guan and Paul Guenther  
Designer: CH2M Hill  
Owner: WSDOT

### **Structures Category – Honor Award Recipient**

#### ***NE 10th Street Bridge Crossing - Bellevue***

WSDOT, the City of Bellevue, and the HNTB-led I-405 GEC Team (I-405 Team) along with Scarcella Brothers and Max J. Kuney Company, recently completed the NE 10th Street Bridge project on schedule and under budget. Funded by a combination of local funding and state gas tax, this project involved the design and construction of a new NE 10th Street alignment connecting 112th Avenue NE to 116th Avenue NE, a steel bridge crossing I-405. The project constructed a stormwater detention pond along with vaults and new conveyance systems, roadway widening and intersection modifications, new traffic signals, EPS geofoam, subsurface pedestrian bridge, context-sensitive landscaping, and amenities such as street lighting, bridge railings, bridge columns and retaining walls. The project was designed and constructed in two stages to fit between the footprints of two hospital construction projects being built at the same time. Construction required extensive coordination between the hospital projects, the City of Bellevue, and WSDOT to ensure a design that would fit the needs of

the community and stakeholders. NE 10th Street provides a valuable new local access to the medical district from downtown Bellevue. The total construction cost was \$21 million.

ASCE Entry Engineer: Tie Zong  
Designer: HNTB  
Owner: WSDOT & City of Bellevue

### **Geotechnical Category – Outstanding Award Recipient**

#### **Structures Category – Honor Award Recipient**

#### ***Pike Place Market Renovation – Phase 1A (Excavation & Foundation Support) - Seattle***

The Pike Place Market is one of the most popular tourist destinations in the Pacific Northwest and one of the oldest in Seattle. A recently approved public initiative has allowed the renovation of the Pike Place Market to begin. This renovation involves a number of phased projects designed to repair and replace the mechanical, plumbing, and electrical infrastructure, perform code-required structural upgrades, and provide new accessible public restrooms and elevators. Phase 1A of the renovation involved demolition, excavation, site utilities, earth retention, and structural upgrades during the peak tourist season (summer) while keeping the Market open for business, all on a site that is only 80 feet by 90 feet in plan dimension. The total construction cost was \$2.4 million.

ASCE Entry Engineer: John Bickford  
Designer: DBM Contractors  
Owner: Pike Place Market Preservation and Development Authority (PDA)

### **Transportation and Development Category – Outstanding Award Recipient**

#### ***Fraser Street Bike and Pedestrian Improvements - Bel- lingham***

This project connects key area bicycle and pedestrian facilities through a sensitive wetland corridor while utilizing innovative stormwater management and low-impact construction techniques. The bike lane installation consisted of rebuilding existing roadway shoulders using a structural cellular containment system with a passive linear sand filter and crushed-rock pretreatment shoulders. An elevated pedestrian boardwalk with pin-pile foundations minimizes the impact on high quality

See 2009 LOCEA Awards on page 6

wetlands. The project also expanded lighting, increasing area safety while connecting two adjacent, interurban trail segments. The total construction cost was \$630,000.

ASCE Entry Engineer: Freeman Anthony  
Designer: City of Bellingham  
Owner: City of Bellingham

### **Transportation and Development Category - Honor Award Recipient**

#### ***14th Street Bridge Over Fishtrap Creek - Lynden***

The 14th Street Bridge over Fishtrap Creek is in the City of Lynden. The new bridge structure includes innovative uses of typical bridge materials to create a unique structure, including a bridge deck curved with a 190-foot radius supported on straight precast concrete bridge girders. Safety was significantly improved with the lane widening and addition of sidewalks, shoulders, the curved deck, and lighting. The structure fits well into the surrounding environment because of the use of vegetated faced structural earth walls, a widened creek opening and lighting fixtures that match historic features used throughout the City. The total construction cost was \$1.4 million.

ASCE Entry Engineer: Duane Huskey  
Designer: KPFF  
Owner: City of Lynden

### **Geotechnical Category - Honor Award**

#### ***Elwha River Bridge West Approach Build Back - Clallam County***

This project consists of a curved MSE reinforced slope constructed on a steep rock face to serve as the approach abutment for the west approach of the Elwha River Bridge. The steep rock face was created after an access

road was benched into the rock face to provide access to a pier location near the river. A reinforced slope was designed to be built back on the access road and up the steep rock slope. Challenging aspects of the project were minimizing additional excavation of the rock slope while maintaining sufficient reinforcement lengths to meet static and seismic slope stability requirements. The normal 70 percent of height for the reinforcement lengths did not apply. Slope stability and FLAC numerical analyses were performed to evaluate the performance of the reinforced soil mass. The total construction cost was \$1.1 million.

ASCE Entry Engineer: Thomas Gurtowski and Matthew Gibson  
Designer: Shannon & Wilson and Parsons/RCI  
Owner: Clallam County

### **Ports and Waterways Category - Honor Award**

#### ***Dakota Creek Shipyard Redevelopment - Anacortes***

The Dakota Creek Shipyard project is a major redevelopment/expansion of Dakota Creek Industries (DCI) shipyard in Anacortes. The project includes two new deep water berths; new bulkheads and a heavy load pier; additional usable upland space; utilities, storm water systems and an outfall; dredging/excavation, including contaminated material; rip rap slope protection; and relocation of shipyard structures. The project created over 100 family-wage jobs. This project was successfully executed under a cost-plus contract. The total construction cost was \$20 million.

ASCE Entry Engineer: William Gerken  
Designer: PND Engineers  
Owner: Port of Anacortes & Dakota Creek Industries

## **Welcome New ASCE Members!**

We welcome the following 9 members, who joined the Seattle Section between March 2 and May 12 . If you see somebody you know, give them a call!

Mr. Romeo De La Pena, P.Eng, M.ASCE

Mr. Mark Nordstrom, P.E., M.ASCE  
*MDE, Inc.*

Mr. William Kim, A.M.ASCE

Mr. Justin Clark, A.M.ASCE

Dr. Stephen Kwan, Ph.D., A.M.ASCE

Mr. Joseph Biller, P.E., M.ASCE

Mr. Jake Stick, S.M.ASCE  
*U of Washington*

Mrs. Kari Manos, A.M.ASCE  
*BOEING COMPANY*

Mr. Christopher Dela Pena, P.E., M.ASCE

## Calendar of Upcoming Events

### **Friday, June 4, 10:00 am**

#### **Lacey V. Murrow Plaque Dedication Ceremony**

Location: East Portal Viewpoint Park, 1400 Lake Washington Blvd. S at S. Day Street

Description: ASCE is proud to recognize the Lacey V. Murrow Memorial Bridge and Mount Baker Ridge Tunnels as a National Historic Civil Engineering Landmark.

### **Wednesday, June 9, 5:30 pm**

#### **Seattle Section Meeting**

Location: McCormick & Schmick's Harborside Restaurant, 1200 Westlake Avenue, Seattle

Cost: \$30 per person (\$35 for late reservations), Students \$10, Unemployed members \$10

### **Saturday, July 10, 8:30 am**

#### **History & Heritage Committee Meeting**

Location: Grand Central Bakery, 1616 Eastlake Ave E, Seattle

Contact: Cindy Hirsch, P.E., (206) 438-2150,  
[Cindy\\_Hirsch@URSCorp.com](mailto:Cindy_Hirsch@URSCorp.com)

## 2011 International ASCE Pipelines Conference to Be Held in Seattle

By Ron Bard, P.E.

The ASCE Pipelines Conference will be held in Seattle July 24-27, 2011, at the Westin Hotel. This will be an opportunity for ASCE to continue to provide leadership in the field of pipeline engineering, including disciplines such as pipeline management, planning, design, construction, materials, condition assessment, trenchless technologies, corrosion protection, rehabilitation, vulnerability analysis, integrated asset management, pipeline regulations, risk assessment, and public and environmental safety.

This specialty conference will draw interest from all facets of the industry, including owners, consultants, academia, contractors, and manufacturers. Previous ASCE Pipelines conferences have drawn participation upwards of 500 professionals and 70 to 80 exhibitors, with participants from across the United States, Canada, China, India, Europe, Mexico, and other countries.

Your active participation is strongly encouraged. Watch for the Call for Papers to be issued in September 2010, and contact the conference co-chairs ([James.Chae@jacobs.com](mailto:James.Chae@jacobs.com) or [Shahrzad.Namini@kingcounty.gov](mailto:Shahrzad.Namini@kingcounty.gov)) if you are interested in sponsorship, exhibits, or volunteer opportunities.

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Seattle, WA 98154

AMERICAN SOCIETY  
OF CIVIL ENGINEERS

SEATTLE SECTION

