

WASHINGTON STATE

SPRING 2021

Public Works

THE OFFICIAL PUBLICATION OF WASHINGTON PUBLIC WORKS PROFESSIONALS



UNMATCHED PRODUCT SUPPORT TO MAXIMIZE YOUR UPTIME



ALL JETVAC



ALL EXCAVATE



ALL SWEEP



ALL CATCH



ALL VAC

Vacall offers the toughest trucks for your toughest applications. Now offered with 4-year extended warranty and backed by the unparalleled product support of Papé Machinery, you are guaranteed maximum uptime and unmatched productivity. Offering service across five states, through 24 locations, **PAPÉ KEEPS YOU MOVING®**.

PAPÉ
MACHINERY

For more information call
John Monaco | 458-221-3156 | jmonaco@papemachinery.com

VACALL[™]



SHOWING POTHOLE'S WHO'S BOSS



GUARANTEED PERMANENT • WORKS IN WATER & ALL WEATHER

Available in bulk, 50 lb bags & bulk sacks



www.lakesideindustries.com

For more information contact:
Rob Rosson, Sales Director

425-677-6833

rob.rosson@lakesideindustries.com

EXPERIENCE MAKES A DIFFERENCE

Trust Your Project to a Proven Leader



Described by our clients as knowledgeable, experienced, and proactive, we provide land and right of way acquisition services to state and local public agencies, electric transmission, utility, pipeline and engineering companies. With over 20 offices nationwide, we combine the personal service and value of a regional office with the expertise, credentials and capacity of a national firm.

- Land and Right of Way Acquisition
- Project Management
- Cost Estimates
- Environmental/Survey
- GIS/Mapping
- Route Selection
- Title Search/Due Diligence
- Database Management
- Survey Permissions
- Relocation Assistance
- Construction Support
- Property Management

To Learn More About our Comprehensive Portfolio of Services, contact our local offices.

Oregon Office:

LESLIE FINNIGAN, SR/WA

Vice President, Western Region

2659 Commercial Street, SE, #248, Salem, OR 97302

T: (503) 399-8002 | E: lfinnigan@ufsrw.com



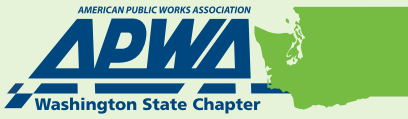
Washington Office:

MITCH LEGEL, SR/WA

Vice President, Northwest Region

111 Main Street, #105, Edmonds, WA 98020

T: (425) 673-5559 | mlegel@ufsrw.com



2601 Fourth Avenue, Suite 800
 Seattle, WA 98121-1280
washington.apwa.net
 Federal tax #36-2202880

2021 OFFICERS

President Donald J. Huling, PE
Vice President Scott Sawyer, PE
Secretary Lauren Behm
Treasurer Tara Olsen, PE
Past President Lorelei Williams, PE

2021–2022 Directors

Steve M. Worley, PE
 Max Phan, PE
 Jennifer Walker, PMP
 Mallory Wilde, PE

2020–2021 Directors

Thanh Jeffers
 Bob Desgrosellier
 Scott Rood
 Molly Toy

Chapter Delegate

Peter DeBoldt, PE

Alternate Chapter Delegate

Mike Clark, PE

Magazine Editorial Team

Patrick Skillings, PMP, Publication Chair
 LILTdesign.com

Published by:



Tel: (866) 985-9780
 Fax: (866) 985-9799
 Email: monique@kelman.ca
www.kelmanonline.com



Managing Editor:

Monique Doyle, monique@kelman.ca

Design/Layout:

Dia Chea

Marketing Manager:

Darrell Harris, darrell@kelman.ca

Advertising Coordinator:

Stefanie Hagdiakow

All rights reserved. The contents of this publication may not be reproduced in whole or in part without the express consent of the publisher.

Features:

2021 Virtual Spring Conference 10
The Stage Rehearsal: Featuring a legislative update, networking opportunities, and the Project of the Year Awards.

Bothell, WA Achieves American Public Works Association Accreditation12
Learn how the Bothell Public Works Department received full accreditation by the American Public Works Association.

APWA Publishing Committee..... 15
This article from the Publishing Committee Chair explains how articles are selected and how you can submit an article for the magazine.

Implementation of Hazard Mitigation Planning for Public Works..... 16
This is a story of how one agency has successfully used various FEMA funding programs to address chronically damaged areas of their transportation system.

Transportation Solutions to Save Lives 19
A recap of the recent virtual presentation on Practical Transportation Solutions to Save Lives.

The Value of Public Works: Defining the Contribution to Our Quality of Life..... 21
In November, the chapter's Value Team hosted a virtual workshop with a diverse group of participants to brainstorm a tag line for public works.

The 2021 Legislative Session Gets Off to an Uneven Start..... 25
The Government Affairs Committee is keeping up with weekly conference calls and tracking bills that could affect the public works community.

Remembering Allan L. Kimbel 27
Allan Kimbel was a Life Member of APWA, who joined the Washington State Chapter in 1967.

At-A-Glance 2020 Report..... 29
A summary of the Washington State Chapter's events and highlights from 2020.

Departments:

President's Message 6

Association News..... 9

Ask MRSC 22

History 31

Ostrowski's New Outlook..... 37

Advertiser Product & Service Center 46



Donald Huling, 2021 Chapter President



Full Speed Ahead

As we begin 2021, our industry stands on a precipice. Behind us is a year of great suffering, uncertainty, and isolation. Ahead of us is a year of continued uncertainty but unbounded opportunity. David Bowie once said, "I don't know where we are going from here, but I promise it won't be boring." Well, much like David Bowie, I cannot tell you exactly what the pandemic has in store for our chapter in 2021, but I can promise you, I am going to do everything in my power to make sure it is not boring! To that end, I am dedicating 2021 to be the year that we reunite our chapter and hold the long overdue Reunion Tour.

As the COVID-19 vaccines are rolled out by our state government, aka "the man," we are hopeful that the horrific effects of this illness are reduced, and it will become safe for us to rock in person again. I know that all of you are yearning for that feeling of companionship that can only be achieved with face-to-face interactions. I can assure you; the band is getting back together, and we will rock harder than we ever rocked before! Although it may not seem very metal, our transition back to holding in-person chapter events must occur with deliberate consideration of the health and safety of our members. I have developed a taskforce of chapter leaders that will be focusing, throughout the year, on development and implementation of our chapter's plans and protocols for a safe return to in-person events in 2021. This taskforce will follow the guidance provided by our state government (the man), Department of Health, and APWA National.

Our chapter leadership has evaluated the current state of the pandemic/ vaccine roll-out and determined that it is highly unlikely that we could safely hold our April in-person Spring Conference. Therefore, with great regret, I announce that we will be canceling our in-person



Spring Conference in Tacoma, the first stop of the Reunion Tour. To ensure that the Tour maintains momentum, we will be offering a one-day virtual Reunion Tour: Stage Rehearsal event, focused on the Washington State legislative update and complete with virtual networking opportunities.

None of us has a crystal ball. We can't know how the rest of the year is going to play out. However, I am extremely optimistic that we will begin to have opportunities to safely transition back to some form of in-person events in late spring or possibly summer. I know that everyone wants to see their APWA friends and family again. We are currently doing some preliminary planning, and, if the pandemic wanes as hoped, it possible that there will be some outdoor APWA networking events for summer. Further details associated with these opportunities to rock with your peers and colleagues will be provided in the coming months.

We are currently moving full speed ahead with plans for our Fall Conference,

in Yakima, Washington, to be the headlining stop of our 2021 Reunion Tour. This will be a conference that I have had nearly 2.5 year to plan, will not be boring by any stretch of the imagination, and you will not want to miss.

Until we can hold these epic in-person events, we encourage all committees to continue your great work virtually and look for opportunities to provide virtual training and networking events. Remember the words of Steve Prefontaine, "To give anything less than your best, is to sacrifice the gift." Do not sacrifice your gifts, my friends!

If you have any questions pertaining to guidance for future events, feel free to reach out to me at any time. Until we see each other again, stay safe, stay healthy, and rock on my friends! ▀

Donald J. Huling

Donald J. Huling, P.E.
Washington State
APWA Chapter President

FIND US ON WA DES VEHICLE CONTRACTS: FREIGHTLINER TRUCK CHASSIS 01513 FREIGHTLINER WALK-IN VANS 00814



GORDON TRUCK CENTERS DEALER FAMILY

PARTS · SERVICE · NEW SALES · USED SALES · FINANCE & INSURANCE · BODY SHOP



ALL
NORTHWEST
ROADS
LEAD TO US!

GOVT. TRUCK SALES

NICK KRALLIS

MOBILE (360) 529-7408

WWW.FREIGHTLINERNORTHWEST.COM

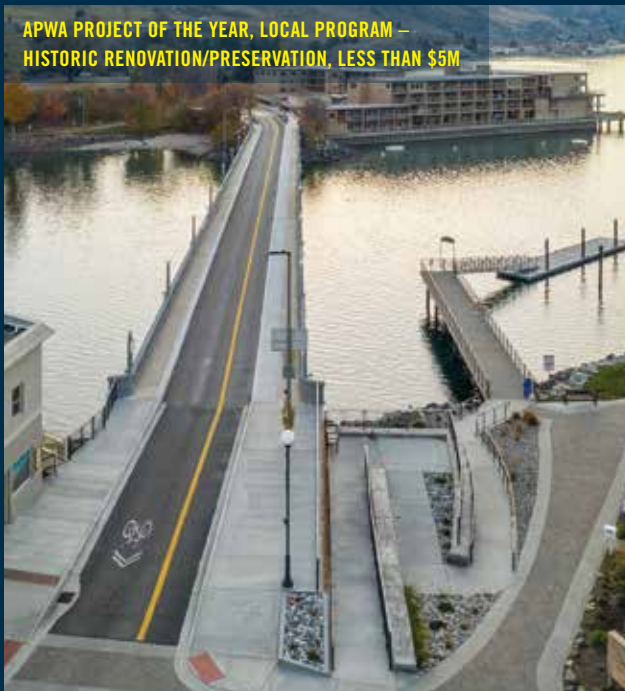
GOVT. TRUCK SALES

PAUL BUCKEL

MOBILE (206) 601-5117

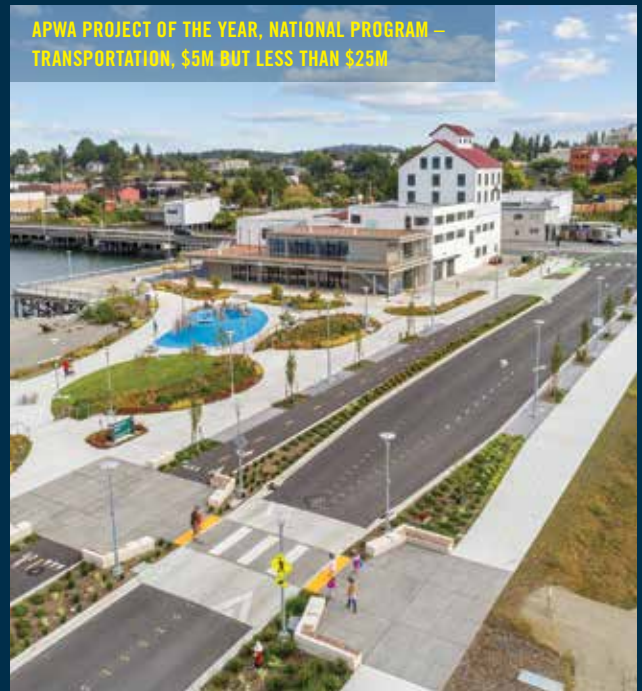
Woodin Avenue Bridge, Chelan

APWA PROJECT OF THE YEAR, LOCAL PROGRAM –
HISTORIC RENOVATION/PRESERVATION, LESS THAN \$5M



Granary Avenue and Waypoint Park, Bellingham

APWA PROJECT OF THE YEAR, NATIONAL PROGRAM –
TRANSPORTATION, \$5M BUT LESS THAN \$25M



PACIFIC NW OFFICES:

SEATTLE TACOMA SPOKANE LACEY PORTLAND EUGENE BOISE

KPFF is an Equal Opportunity Employer

www.kpff.com





ABOVE AND BELOW GROUND CLEANING EQUIPMENT & TOOLS

(206)283-5252
SALES@SEATTLEPUMP.COM

16750 REDMOND WOODINVILLE ROAD NE SUITE C-101

WOODNVILLE, WA. 98072

HYDRO EXCAVATION TOOLS



SEWER JETTERS



WASHBAY SYSTEMS



VAC PARTS



PIPELINE INSPECTION



VAC TUBES



WWW.SEATTLEPUMP.COM

New and Returning Members

December 1, 2020 to January 26, 2021

Benjamin Ressler, Assoc. Engineer –
CIP, City of Sammamish

Catherine D. Morey, Sr. Engineer,
City of Kelso

Cory Johnson, Engineer II, Development
Review, City of Shoreline

Christie Lovelace, SW Program Specialist,
City of Shoreline

Laura Reiter, Engineer II, Project Mgr.,
City of Shoreline

Stuart Whitford, Senior Water Program
Specialist, City of Shoreline

Kenny Alcantara, Field Ops Manager,
King County Department of
Local Services

Wally Archuleta, Managing Engineer,
King County DOT

Tricia Davis, Roads Div. Director, King
County Department of Local Services

Trevor Threde, Strategic Planner, Pierce
County Planning and PW

Scott Allen, Hill Street Lead,
City Puyallupo

Kerry Obermire, Transportation Engineer,
Pierce County Public Works

Mike Todd, Director, PW/DS, City of Mill
Creek, Washington

Cheikh Ndiaye

Garren Melton, Natural Resource
Specialist, City of East Wenatchee

Tony West, City of University Place

Tondi Rainey, Administrative Assistant
Lead, City of Bothell

Yolanda Fagundo, Program Manager,
City of Bellevue

Andrew Vining, Project Engineer,
City of Snoqualmie

Dave Della, Design Engineer,
City of Yakima

Kerry Jones, Fleet and Facilities Mgr.,
City of Yakima

Dan Ferguson, City of Cheney

APWA Bylaws Vote Notification

Chapter membership will soon be asked to vote electronically on proposed bylaws changes. These changes will cover a variety of adjustments to bylaws. They are being proposed by the Chapter Board to better facilitate running the chapter's business and have been vetted by APWA National. The full content of the changes will be posted online during the voting period.

Bylaws Voting Period: April 31 – May 28

>> Bylaws Review & Voting Available at <http://bit.ly/APWABylaws> (during the voting period)

Thanks for participating in APWA. 



 **NPDESPro**

Turn-key solutions for
stormwater compliance

NPDESPro is a customizable, cloud-based system designed for inspectors and water-quality professionals to keep records up-to-date while streamlining the entire process.

NPDESPro.com · 800.204.1598

Comply with confidence

NPDESPro users in Washington:

- City of Algona
- City of Auburn
- City of Bellevue
- City of Bremerton
- City of Edmonds
- City of Federal Way
- City of Newcastle
- City of Oak Harbor
- City of Sequim
- City of Skagit County
- Port of Tacoma



The Stage Rehearsal

April 22, 2021

Virtual

aka

Rocking a Desk Near You

Member: \$50

Non-Member: \$75

The Chapter has chosen to scale back the Spring Conference in response to the membership's desire to connect over a shorter period of time. Our "Stage Rehearsal" virtual event will feature the Legislative Update session and additional Networking Opportunities on the new online platform. We look to the future to connect with you at the Fall Conference in Yakima. In the meantime, Rock On!

To learn more: WWW.APWAWACONF.COM



Legislative Update

Thursday, April 22, 12PM

Hear directly from the Chapter's lobbyist and a panel of industry and legislative experts about the status of funding programs and other legislative issues related to Public Works. A particular focus will be the impacts of the COVID-19 pandemic and how this is impacting our profession at both the state and national levels. The session includes a question and answer period.

Mike Shaw Principal Shaw Government Relations	Ashley Probart Executive Director Transportation Improvement Board	Jane Wall Managing Director WSACE	Maggie Douglas Legislative & Policy Analyst AWC
---	--	---	---

Networking Opportunities

The Chapter is using an exciting new networking platform called Remo. With avatars that allow users to wander a virtual conference space (like a video game), change "tables," see who else is in the room, and connect directly through chat messages, we predict that this will be a next level virtual networking event. We'll be using structured questions to guide conversations.

You can preview Remo here: <http://bit.ly/APWARemoNetworking>

The PROJECT OF THE YEAR Awards

Viewing Party

Date Coming Soon!

For more info visit:

APWAWAconf.com/POY

APWA-WA is honoring the best of the best in Public Works with the Project of the Year Awards. We will be hosting a special viewing party to recognize the 2020 winners!

The Project of the Year recognizes excellence in management and administration to successfully complete public works projects. Awards fall into five categories, with dollar volume differentials (Less than \$5M, <\$25M, \$25M - \$75M, and over \$75M) within each category:

- » *Emergency/Disaster Preparedness*
- » *Historical Restoration/Preservation*
- » *Structures*
- » *Transportation*
- » *Environment*



BOTHELL, WA ACHIEVES AMERICAN PUBLIC WORKS ASSOCIATION ACCREDITATION

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS



INTEGRATED SERVICES FOR PUBLIC WORKS PROJECTS

Geotechnical Engineering	Geologic Hazard Evaluations
Seismic Engineering	Construction Dewatering
Hydrogeology	Environmental Remediation
Tunneling	Natural Resources
Instrumentation	Surface Water

Seattle (HQ) | Tri-Cities | Portland | Anchorage | Fairbanks | Sacramento
Los Angeles | Denver | Salt Lake City | Saint Louis | Madison | Jacksonville
206/632-8020 | www.shannonwilson.com



Erin Leonhart, PW Director

The Bothell Public Works Department has recently received full accreditation by the American Public Works Association. This accreditation formally verifies and recognizes that the agency is in full compliance with the recommended management practices set forth in APWA's *Public Works Management Practices Manual*.

The prestigious accreditation was formally awarded by APWA's Accreditation Council December 21, 2020. The Bothell Public Works Department joins the ranks of 162 current agencies in North America to be awarded APWA Accreditation designation, and the 10th agency in the State of Washington. In addition to Bothell, the accredited agencies in Washington are Bellevue Utilities, Bellevue Transportation, Clark County, Clark Regional Wastewater District, Kitsap County, Pierce County, Shoreline, Tacoma, and Thurston County.

The purpose of accreditation is to promote excellence in the operation and management of a public works agency, its programs, and employees. Accreditation is designed to assist the agency in continuous improvement of operations and management, and in providing a valid and objective evaluation of agency programs as a service to the public and the profession.

"The entire City of Bothell organization is proud to receive APWA Accreditation and our peers' recognition of Bothell Public Works' excellence. Our mission is to enhance the quality of life for Bothell residents, visitors, business owners, and employees. Achieving accreditation confirms that we are on the right path. The Bothell Public Works Department is committed to the continuous improvement necessary to meet our mission and maintain accreditation. I am so proud of this team and the accomplishment, particularly given the challenges we faced along the way." – Erin Leonhart, Director, Public Works Department.

APWA's accreditation process includes:

- **Self-assessment:** Using the *Public Works Management Practices Manual* to perform an internal review of an agency's practices against the recommended practices.
- **Improvement:** After the agency has completed the self-assessment, the agency will work to bring all practices into an acceptable level of compliance with the recommended practices.
- **Evaluation:** The agency requests a site visit that consists of a review and evaluation of the agency to determine the level of compliance with all applicable practices.
- **Accreditation:** The Accreditation Council will review the site visit results and recommendation from the team, voting to award or deny accreditation.

Open to all governmental agencies with responsibilities for public works functions, initial accreditation from APWA is for a four-year period, during which semi-annual updates will be required to demonstrate continuing compliance. After that time, there is a re-accreditation process which builds on the original accreditation, encouraging continuous improvement and compliance with newly identified practices.

The Washington Chapter congratulates the City of Bothell and the Bothell Public Works Department on this achievement. To learn more about accreditation visit: apwa.net.



Our Reason Is Water™

Preventing the contamination of waterways from pollutants and sediment swept up in stormwater runoff is critical. At ADS, we manufacture and supply water quality solutions you can rely on to ensure your next project effectively manages stormwater, while protecting our waterways.

ADS Water Quality Solutions

- StormTech® Isolator® Row Plus
- Barracuda® Stormwater Separators
- BaySeparator Stormwater Treatment System
- BayFilter® Stormwater Media Filter
- Catch It® Basin & Curb Inlet Filters

To learn more about ADS water quality solutions or any ADS product, please go to adspipe.com or contact 800-821-6710.



© 2020 Advanced Drainage Systems, Inc. 11/20 MH



**IMPORTANT
ANNOUNCEMENT**



Camel



Mud Dog

**Western Systems & Super Products
ARE NOW ON THE STATE CONTRACT
All models: Camel, Mud Dog & Jetter**

DES Master contract # 00120 at great discounts.



Jetter

CONTACT YOUR LOCAL PROFESSIONAL SALES REPRESENTATIVE 800.456.7886





APWA Publishing Committee

Patrick Skillings
Publishing Committee Chair
pskillings@skillings.com

What does public works mean to you? What does it mean to others in your organization? Here is your chance to tell us about your role in public works. The *Washington State PublicWorks* magazine is our chapter-sponsored, quarterly magazine that features major projects, news on relevant topics, and profiles on industry professionals. The goal of the *PublicWorks* magazine is to be a resource to the public works community, inform and educate APWA WA members, showcase public works, and help our membership be prepared to meet the challenges of the twenty-first century. In addition to our APWA members, the magazine is sent to elected officials, City Managers, and public schools across the state. This is our chance to educate and advocate for public works!

How are articles selected?

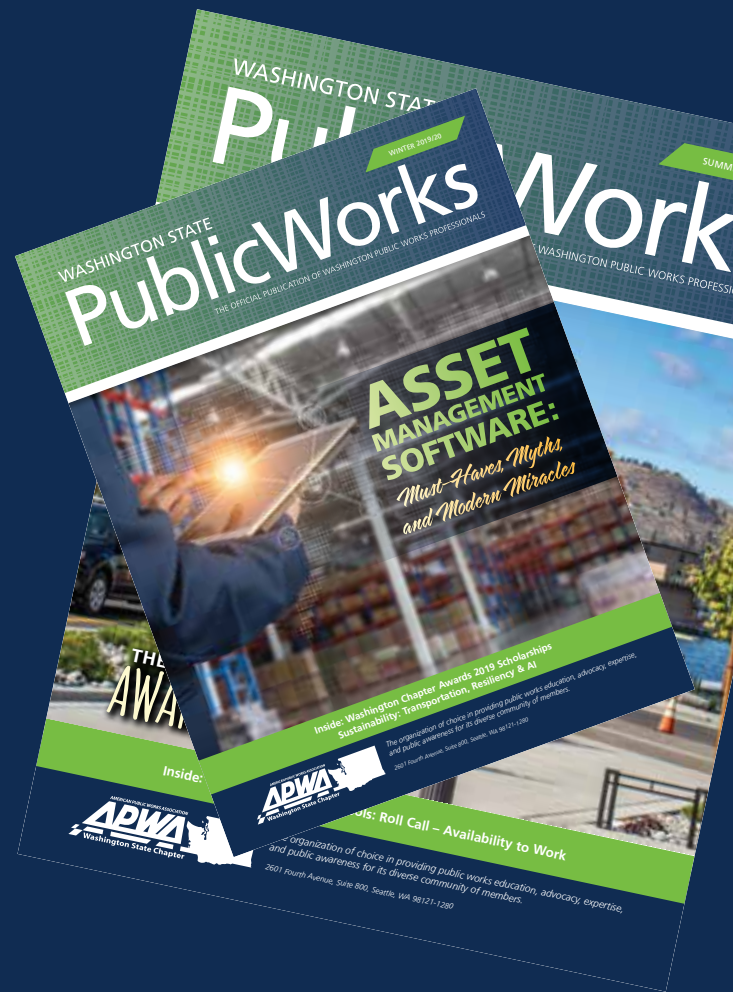
Publication of the *PublicWorks* magazine occurs four times a year. The Publishing Committee works with the Board and our chapter marketing consultant to develop a publishing calendar for the year, lining up topics and aligning it with the relevant chapter committees to prepare articles. If you are a committee member, talk to your committee chair and see if your committee has been identified on the publishing calendar.

What if my committee is not on the publishing calendar or I'm not on a committee?

That is okay! We want to see your article in the magazine. Contact the Publishing Committee and we will help coordinate to get your article published. This publication is the voice of our chapter. This is a place for us to come together and share ideas and experiences, learn from each other, and promote public works. Committees are the heart and soul of our chapter, keeping us up-to-speed on everything from new technology to government affairs, and the Publishing Committee is committed to making the magazine as diverse in content and thought as our chapter is.

What if I have a great idea, but writing isn't my top skill?

If you need help getting your idea into an article format or have questions, the Publishing Committee can help! Our chapter magazine is our biggest opportunity to advocate for public works outside of our chapter. Whether working for an agency or as a consultant, you should be proud of your participation with public works. From day-to-day maintenance of our infrastructure to complex design solutions, the work we do provides a better quality of life for our communities. The Publishing Committee is dedicated to shining a light on public works.



By sharing both our successes and challenges, we can educate those inside and outside our industry.

2020 was a historic year from many perspectives, forcing our industry to adapt. In 2021, we look forward to coming back together and putting the lessons learned in 2020 into action. As with any reunion tour, some things will be familiar and some things new. The *Washington State PublicWorks* magazine is a little of both, so join me in making this the best public works publication in the nation.



IMPLEMENTATION OF HAZARD MITIGATION PLANNING FOR PUBLIC WORKS

BY KIRK HOLMES, PERTEET; JILL FITZSIMMONS,
CHELAN COUNTY PUBLIC WORKS



In the past three years, the Chelan County Flood Control Zone District has garnered nearly \$2.3 million in pre-disaster mitigation grants from FEMA. The grants will be used to construct two unique mitigation projects that were identified as high priorities in the district's Comprehensive Flood Hazard Management Plan.

How did Chelan County get access to this funding and how can your agency do the same thing? Required Hazard Mitigation Planning may not sound exciting, but by actively participating in your agency's planning process, it can help fund and build your most challenging projects. Creating a resilient system starts with a mind-set that focuses on building a culture of preparedness within an organization. Strategic resource investment can be done with minimal up-front costs and by learning what programs are currently available. This is a story of how one agency has successfully used various FEMA funding programs to address chronically damaged areas of their transportation system.

CHELAN COUNTY SUCCESS STORY

In 2018, a pre-disaster mitigation grant of nearly \$1.3 million was awarded to the Flood Control Zone District (FCZD) for its Slide Ridge Retrofit project, which consists of building a bridge-like structure on the south shore of Lake Chelan. The ominously named Slide Ridge is the site of violent discharges of soil and rocky material that have become more frequent over recent years.

Lake Chelan is frequently hit by intense rain and thunderstorms that can deliver more than an inch of rainfall in an hour's time. Rainfall on Slide Ridge results in water flowing down its steep slopes, where it dislodges rock down the slope to the lake. The storms have left a mix of woody, rocky, and

muddy debris as high as 12 feet on South Lakeshore Road, the only north-south corridor for residents living along the west side of Lake Chelan, one of the largest tourist destinations in the state.

The project's construction, which starts this summer, will cost about \$3 million. The existing roadway and a 72-inch culvert will be removed at the site, and a bridge will be built over the current earthen channel to allow mud and debris flows to free pass under – not over – the roadway.

"To help the state understand the magnitude of Slide Ridge and its potential for loss of life and damage to property, we invited our mitigation program manager and his team to join us on site. It really gave the state a realistic picture of what we're dealing with in Chelan County," said Jason Detamore, environmental affairs coordinator for Chelan County Public Works. "Landslides at Slide Ridge have been happening for hundreds of years; they aren't going away."

With the success of the first grant and a relationship now built between the county and state, the FCZD was encouraged to seek out additional pre-mitigation funding. So the district went back to its Comprehensive Flood Hazard Management Plan.

In 2019, a pre-disaster mitigation grant of nearly \$1 million was awarded to the FCZD to build four manmade basins in No. 1 Canyon, a historically flood-prone area just west of Wenatchee, Chelan County's largest city. The basins are a proactive flood control measure designed to capture and release water, mud, woody debris and rocks, better protecting public and private property in the increasingly residential canyon that leads into the city and to the Columbia River.

The project should reduce the chance of potential flooding, require less road maintenance (material would be retained in one location rather than throughout the basin or on roads), and allow



the already-established stormwater system to work at a higher capacity because of less debris and sedimentation in the urbanized system.

The basins project is expected to go out for bid in early 2021 and construction, which will cost about \$1.3 million, starts in summer 2021.

Detamore said he did not want to minimize the legwork the district did to be able to compete for these pre-mitigation grants.

"The process of completing our Comprehensive Flood Hazard Management Plan allowed us to identify those flood-prone areas of greatest impact to our community as well as the projects that could mitigate those hazards," he said. "With a completed plan in hand, we then built a relationship with our mitigation program manager."

Detamore added that these pre-disaster mitigation grants provide big opportunities for small communities such as Chelan County. "We are a small county with a young flood control district," he said. "It would have taken us years to construct these important flood mitigation projects without the federal grant dollars. Projects like these elevate our flood control efforts from reactionary to proactive."

Understanding how to participate in your agency's mitigation planning requirements is a good first step to learning how to create eligibility for your projects. If you are unsure if your agency is eligible for these funding programs, reach out to your agency emergency management team. Adding mitigation funding into your programs is not difficult and is not the complete solution, but with proper planning it could be critical to closing challenging funding gaps. ▀



EQUIPMENT & ACCESSORIES FOR PUBLIC WORKS

- SEWER CLEANING
- VALVE OPERATING
- HYDRO-EXCAVATING
- ROOT CONTROL
- PIPELINE INSPECTION
- GREASE /ODOR CONTROL
- LINE LOCATING
- STREET SWEEPING
- LEAK DETECTION
- PATHOGEN PROTECTION



CHECK OUT OUR ONLINE STORE shop.owenequipment.com

VACTOR

2100i

RDB 19

The revolutionary new boom telescopes 10 feet out and extends the debris hose down 15 feet.

IntuiTouch

New, reliable touch buttons with backlit feedback enables operators to know if a selected function is active.

owenequipment.com/2100i
info • specs • videos • demos

FOUR FULL-SERVICE LOCATIONS
Portland • Kent • Fairfield • Salt Lake City **(844) GOT-OWEN**

by Vactor Mfg., Inc.

TRUVAC is brought to you by Vactor® Manufacturing, Incorporated, the proven leader in quality vacuum equipment, to focus on vacuum excavators and safe-digging.

For more than 100 years, Vactor Mfg., Inc has set the standard for excellence in operator-focused innovation.

owenequipment.com/SONETICS

CALL NOW FOR A FREE DEMO OF ANY OF OUR PRODUCTS

ONE-STOP SHOP

With projects large and small, we deliver cost-effective, long-term solutions.

- Airports
- Buildings
- Development
- Industrial
- Natural Resources
- Surveying
- Transportation
- Water-Wastewater



 Morrison
Maierle
engineers • surveyors • planners • scientists

Jeff Ashley, PE
Helena, Great Falls, and Spokane Operations Manager
jashley@m-m.net | 509.315.8505

Transportation Solutions to Save Lives

During the chapter's 2020 Virtual Conference, Brian Chandler, PE, PTOE, RSP2IB, the National Director for Transportation Safety for DKS Associates, gave a presentation on Practical Transportation Solutions to Save Lives. By rethinking the way in which we approach traffic fatalities and injuries we have the potential to save lives. Every day 100 people die in traffic accidents across the country. Traditionally, our society has viewed collisions as an individual responsibility, entirely inevitable, occurring at unpredictable locations, and an expensive thing to prevent or fix. However, by using a systemic approach we can flip that thinking and change the way in which we approach traffic death solutions.

Previously, we have attempted to fix crash heavy roadway location through infrastructure changes that are often costly and frequently only somewhat effective. What we have learned is that while the locations in which traffic deaths occur can be unpredictable, the top three reasons that traffic deaths occur remains consistent year after year. The top three fatal car crash types are: being unbelted, being run off the road, and impaired driving. By addressing the systems that cause these three issues, and incorporating the expectation of human failing, we can reduce and prevent deaths, frequently through existing low-cost methods. By focusing on the predictable and overlapping ways severe crashes occur as roadways are planned, evaluated, upgraded, and maintained we can find common solutions that impact driver behavior and avoid traffic deaths.


Using new and existing roadway data, and on-the-ground observation (and/or use the observations of community members) we can identify risk factors on roadways and use low-cost solutions to keep vehicles on the roadway and mitigate the effects of roadway departures.




Each solution is intended to create driver awareness and change behavior *before* a crash occurs. On-pavement changes such as stripes/pavement-markings, rumble strips, and rumble stripes can all alert drivers before a vehicle leaves the roadway. Changing traffic signs to increase viewing, adding lighting, and increasing the amount of signage can also affect driver awareness and prevent crashes. For vehicles that do leave the roadway, appropriate shoulders and clear zones, edge-barriers, increased edge barrier-markings, and break-away signs all impact survival and can be included with minimal cost.

Additional behavior modifiers such as setting safe speed limits that are safe for *all* roadway users including pedestrians and bicyclists, adjusting cross-walk wait/lead times and directions, and using automated traffic enforcement (speed cameras) have also shown tremendous impact on preventing deaths. Maintenance of existing infrastructure is also important to increasing or maintaining traffic safety. Trimming vegetation, repairing sign knock-downs and vandalism, and ensuring that signs are visible during the night and day with appropriate reflectivity can show big effects on roadway safety.

Transportation engineering is vital to ensuring safe roadways, and being aware of the systems at play can transform a roadway network with low-cost features that save lives. Data gathered through new technologies and old-fashioned leg-work can combine with well-proven methods to create a safe roadway network for all users. ▀



HOLT SERVICES INC. Environmental Geotechnical Water Resources



WA 253-604-4878
OR 253-693-3760
www.holt-services-inc.com



Washington

Seattle | Tacoma | Wenatchee

11 in-house services

- Architecture
- Aviation Services
- Civil Engineering
- Construction Services
- Landscape Architecture
- Surveying/Mapping
- Stormwater Engineering
- Transportation Planning
- Traffic Engineering
- Utility Engineering
- Urban Design

www.kpg.com



THE CITY OF OLYMPIA'S LEGION WAY INTERSECTION



Helping Our Community Prosper

We are a public infrastructure engineering firm crafting the communities we live in.

Covering Washington

Bellevue / Everett / Seattle / Spokane / Tacoma / Vancouver

www.murraysmith.us



Water



Wastewater



Stormwater



Transportation

murraysmith





By Lauren Behm, MPA

THE VALUE OF PUBLIC WORKS: DEFINING THE CONTRIBUTION TO OUR QUALITY OF LIFE

In January 2020, before COVID-19 was even a glimmer in our eyes, the Board of the APWA Washington Chapter looked forward to new beginnings and bringing our chapter back together after the 2019 PWX. We met for a strategic planning retreat and determined four new initiatives to carry the chapter forward through the next five years:

- **Voice** – Be the policy voice of public works to government leaders, media, and communities
- **Value** – Define public works in our community and show its value to our quality of life
- **Education & Networking** – Ensure excellence in education and provide networking opportunities for all of public works
- **Grow Diverse Membership** – Grow and engage a diverse and inclusive membership

The pandemic has made implementation difficult, but it has also underlined the importance of these initiatives for our members, our communities, and our industry.

The four members of the Value Team are Jennifer Walker, Thurston County Public Works Director; Tara Olsen, WSP Supervising Transportation Engineer; Justin Matthews, KPFF Principal Transportation Engineer; and Lauren Behm, Skillsing Business Development Manager. And this team was not going to let COVID-19 affect our progress on this initiative.

As a first step, our team determined the vision of success for the Value initiative:

- Develop a clear and simple definition of public works that is powerful in conveying the importance of our work to the community and can be used to attract new talent to the industry
- Create and implement a marketing campaign to share more about public works with the general public

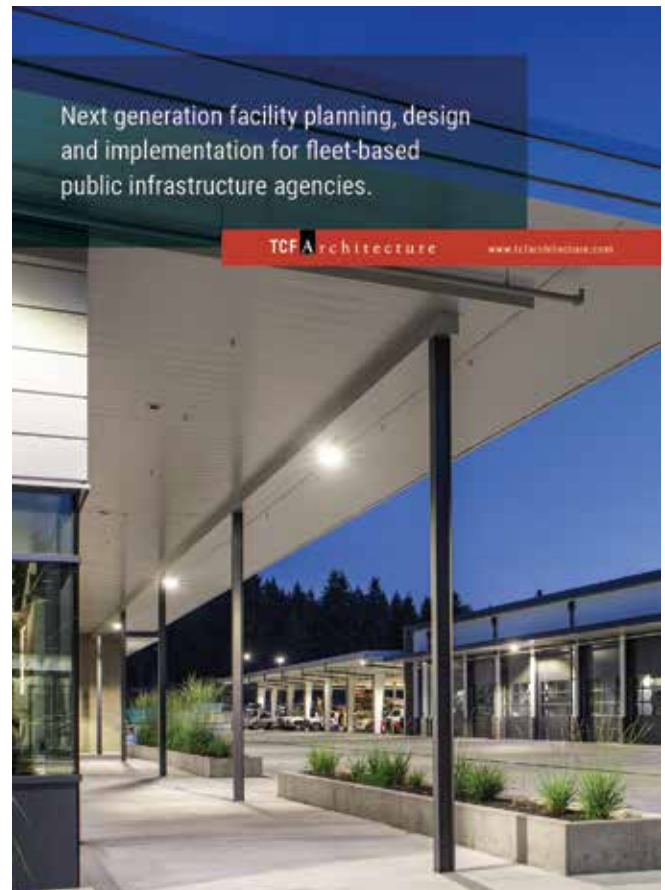
The team then completed an environmental scan to find what definitions public agencies, APWA National, and other APWA chapters are using to describe public works. What we found from this research was that the existing definitions of public works are not interesting or inspiring, and do not convey the “value to our quality of life.” With that, the team decided that an attention-grabbing tagline supported by imagery would be a more effective way to tell our story.

In November, the Value Team hosted a virtual workshop with a diverse group of participants to brainstorm a tag line for public works. The results of this discussion were several creative and engaging ways to talk about public works in a way that expresses its contribution to our quality of life.

The Value Team will now work with the chapter’s Marketing Committee to finalize the tag line and distribute the materials to our member agencies.

HOW CAN I GET INVOLVED?

Our success depends on member agencies getting involved. Look for opportunities to grab the new materials and share them on your personal social media and your agencies’ digital platforms. Together we can build the belief – with our communities, our students, and our elected officials – that public works is the foundation to our way of life. **■**





MRSC is a research nonprofit that offers local government staff free, one-on-one guidance with legal and policy consultants. Below are inquiry responses the MRSC Public Works Consultant. If you work for a city, county, or contracted special purpose district, Ask MRSC by calling 800-977-6553 or emailing mrsc@mrsc.org.

Questions About Contracts

Q: *Is there is a time limit from Final Completion/ Acceptance of a public works project to when an agency must remit final payment to a contractor? We approve final acceptance via city council, the following day the Notice of Completion (NOC) is filed. Do we have a time limit for payment to be issued either from the date of Final Acceptance via the council or from the date the NOC is filed?*

A: The prerequisites to releasing the contract retainage are:

- Obtaining all the approved Affidavits of Wages Paid forms from all the contractors and subcontractors; and
- On contracts over \$35,000, submitting the NOCs to the Department of Revenue (DOR), Employment Security Division (ESD), and Labor & Industries (L&I), and obtaining back a Certificate of Release from all three state agencies.
- Any liens on retainage must be resolved before releasing funds subject to a lien.

Once the above prerequisites are satisfied, retainage should be remitted. The agency must release the retainage to the contractor between 45 and 60 days after the “completion of all contract work,” assuming there are no claims or liens against the retainage (RCW 60.28.011). If the affidavits are not approved until after this period of time, the agency should release the retainage in a timely manner after receipt of approvals to avoid monetary penalties and possible liability for attorney fees under chapter 39.76 RCW.

The date of “completion of all contract work” in your situation appears to be the date of final acceptance by the council. If you describe some other occurrence that fulfills this date (i.e., in your contract), then you would use that date from which to apply the time limit. But in any case, retainage could not be released without the approved affidavits. See the language of the following statute, RCW 60.28.051.

Duties of disbursing officer upon completion of contract.

Upon completion of a contract, the state, county, or other municipal officer charged with the duty of disbursing or authorizing disbursement or payment of such contracts shall forthwith notify the department of revenue, the employment security department, and the department of labor and industries of the completion of contracts over thirty-five thousand dollars. Such officer shall not make any payment from the retained percentage fund or release any retained percentage escrow account to any person, until he or she has received from the department of revenue, the employment security department, and the department of labor and industries certificates that all taxes, increases, and penalties

due from the contractor, and all taxes due and to become due with respect to such contract have been paid in full or that they are, in each department’s opinion, readily collectible without recourse to the state’s lien on the retained percentage.

Q: *For unit-priced public works contracts, does an agency have to require payment and performance bonds equal to the total amount of the contract or can we require bonds based on the individual task order amounts (assuming the task order amounts trigger a bond requirement)? The concern is that smaller contractors may be unable to obtain bonds in the total contract amounts and there is a concern these contractors may subsequently be excluded from related contracting opportunities.*

A: The unit-price contract is awarded for a period of time and the bond is to be acquired for the full period and for the full contract amount, similar to other project contracting. This question arose in a training and auditor input was obtained, which is as follows: “For unit-priced contracts, the retainage or bond must be held until the contract’s completion.”

Q: *Which RCW identifies public notice requirements when closing a public works project?*

A: The following statute contains the requirement for filing Notice of Completion (NOC):

RCW 60.28.051

Duties of disbursing officer upon completion of contract.

Upon completion of a contract, the state, county, or other municipal officer charged with the duty of disbursing or authorizing disbursement or payment of such contracts shall forthwith notify the department of revenue, the employment security department, and the department of labor and industries of the completion of contracts over thirty-five thousand dollars. Such officer shall not make any payment from the retained percentage fund or release any retained percentage escrow account to any person, until he or she has received from the department of revenue, the employment security department, and the department of labor and industries certificates that all taxes, increases, and penalties due from the contractor, and all taxes due and to become due with respect to such contract have been paid in full or that they are, in each department’s opinion, readily collectible without recourse to the state’s lien on the retained percentage.

There is no statutory requirement to provide public notice upon the completion of a project for the purposes of claim submittal. Some agencies will describe a process in their solicitations and/or contracts, which they have devised for this purpose.



“There is no statutory requirement to provide public notice upon the completion of a project for the purposes of claim submittal.”

Q: We have an HVAC maintenance contract that is expiring. We are very pleased with the work and service. They were the low bid two years ago and have agreed to keep the same pricing. Is it necessary to go out for quote again or can the contract be extended for two more years?

A: The steps you can or cannot take will rely on the language in your expiring contract. If you provided in the initial bid and contract that it could be extended for a specific, additional term, then you will need to put your extension in place before it does expire. If you made no mention of an extension, then you will need to rebid. Extensions should only be allowed for reasonable lengths of time, such that periodic rebidding verifies you are continuing to pay a fair and reasonable price and to open the opportunity to other bidders. You will want to consult your legal group for their direction.

You would also need to be sure the extensions do not exceed the threshold of your initial bid process or any contract cap based on a dollar amount. For example, if you bid using the limited public works process (allowed up to \$50k), and an extension would put you over the \$50k limit of that bidding threshold, you would need to rebid the contract rather than extend it.

Q: Is there any issue with using a company from out of state on a public works project? An out-of-state company would not have an Employment Security Division (ESD) number, and for project closeout, the Department of Revenue (DOR), Labor and Industries (L&I)

and ESD all are sent the Notification of Completion (NOC). Does an out-of-state contractor need to have an ESD number if they want to be considered a responsible bidder to do work in Washington?

A: RCW 18.27.030 allows a substitution of the Unified Business Identifier (UBI) number for the employment security number (and workers' compensation) if Washington employees are not going to be used on the project. You could have this company in question verify that they do not have any Washington workers and document this information in the contract folder. If using a checklist of required criteria, insert "N/A" on the line for the ESD number with the explanation "no Washington employees." If you would likely want to verify this information with ESD, you may contact olympiaamc@esdesd.wa.gov.

Here are some additional, pertinent RCWs:

- RCW 39.04.350 (1 a-g) outlines the criteria for responsible bidder.
- RCW 18.27.020 (1) states contractor registration is required.
- RCW 39.06.010 indicates contracts may not be issued to unregistered contractors.
- RCW 18.27.030 Section 1(e) provides for the substitution of the UBI number instead of the employment security number (and workers compensation) if there are no Washington employees.

Although this does not address sending the NOC to ESD in closeout, there is no statutory exception noted. Subsequently it could be advisable to continue to follow that practice unless otherwise directed. ▀

WE REFUSE TO BE A TYPICAL CONTRACTOR.

We don't shift blame
or shirk responsibility.

We face problems
and provide solutions.

We own our self-performance
like we own our company.

ENR RANKS US

#1 WATER
SUPPLY

#1 WATER
TRANSMISSION LINES

#6 SEWERAGE AND
SOLID WASTE

#9 WASTEWATER
TREATMENT PLANTS



GARNEY.COM



The 2021 Legislative Session

Gets Off to an Uneven Start

At the time of this being written, we are entering the fourth week of the 2021 Session of the Washington State Legislature. The COVID-19 pandemic has significantly reduced the pace of legislative activity. Legislators in both chambers are generally adhering to restriction from leadership to limit bills to only those that fit very narrow criteria. The primary focus of this session is COVID-19 relief, housing, and Governor Inslee's environmental agenda. The virtual nature of the session is proving problematic, reducing the ability to pass the normal volume of bills.

Transportation Funding

The surprise of this session is amount of activity around transportation funding. On January 19, the House Democrats unveiled a \$26 billion (over 16 years) transportation package at a press conference. The priorities in the plan include maintenance and preservation, investing in frontline communities, supporting economic recovery, carbon reduction, and living up to prior commitments, including the restoration of fish passages. This proposal is unique in that it raises new revenue without borrowing through bonds. The primary sources of revenue are an \$.18 gas tax increase, a \$15/ton carbon fee that increases to \$25/ton, and various other licensing fees.

In the Senate, the Senate Transportation Committee Chair, Sen. Hobbs, continues to refine his transportation funding proposal called Forward Washington and held a work session on January 28. Vice Chair Sen. Saldaña is working on a proposal based on stakeholder meetings she has had over this interim and Ranking Minority Member, Sen. King, may unveil his own transportation funding proposal in a few weeks.

Despite the economic challenges present by the pandemic, at this time it appears possible to move a transportation package during this session in part due to the desire to pass a carbon tax of some sort – something that is unlikely unless it is used to fund transportation.

COVID-19 Relief

On Friday, January 22, the House and Senate Democrats announced a plan for community and economic recovery, starting with \$2.2 billion in federal funds to aid families and businesses who have been impacted by the COVID-19 pandemic. The proposal provides funding in critical areas, starting with \$240 million in small business grants; \$668 million to school districts to

address learning loss; \$618 million for the Department of Health to use for vaccine distribution, contract tracing, and testing; \$325 million for direct rental and utility payments; \$5 million for rental and foreclosure assistance; \$4.7 million for food assistance programs with an additional \$26.3 million in block grants for hunger relief organizations; \$50 million for child care grants and incentives, prioritizing providers in childcare deserts and supporting racial equity across the state; \$65 million for the Immigrant Relief Fund for those people left out of federal stimulus payments; \$9 million for TANF and \$12 million in Disaster Cash Assistance. The bills that reflect this proposal should pass the Legislature by mid-February if not before.

Policy Bills Tracked by the Government Affairs Committee

Although the pace is much slower this year, the Government Affairs Committee is keeping up our weekly conference calls and tracking a few bills that could have impacts on the public works community.

- SB 5188 would create a state bank. The GAC is tracking this bill because it could impact how some programs important to local governments such as the Public Works Trust Fund, the Water Pollution Control Revolving Fund, and the Drinking State Revolving Fund.
- SB 5333 Would prevent make void an unenforceable clause in construction contracts related to delays caused by the COVID-19 pandemic emergency.
- HB 1084 and SB 5093 would require steps to eliminate carbon emissions from new commercial and residential buildings.
- HB 10391 and SB 5231 would require the State to adopt rules to reduce the carbon intensity in transportation fuels.
- HB 1114 would put in places measures to reduce urban heat inland through tree planting, green roofs, and other measures.
- HB 1280 would make it the policy of the state to ensure greenhouse gas emission reduction practices are include in the design of public facilities and require the department of Enterprise Service to develop life-cycle cost analysis guidelines for public facilities.
- HB 1308 would require 15% of labor hours on public works contracts over \$200,000 be performed by apprentices.

It is too early in session to predict the fate of this bills. The GAC will continue to monitor these bills and any other bills that are introduced that with impact public works. ▀

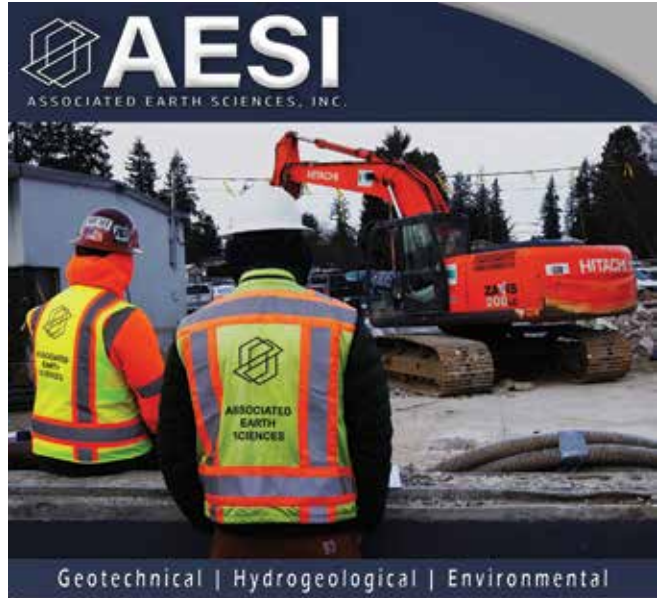


Providing efficient, effective, and economical solutions for municipal public works clients since 1967

**STORMWATER • ROADWAYS • WATER • WASTEWATER
UTILITY PLANS • LAND/HYDRO/AERIAL SURVEYING**

Consulting → Planning → Design → Construction

WilsonEngineering.com
360.733.6100 | Bellingham, WA



Proudly providing integrated geotechnical engineering, environmental and hydrogeological services for all types of public works projects.

www.aesgeo.com



CONTRACT LAND STAFF
www.contractlandstaff.com
425-822-1767

TIERRA RIGHT OF WAY SERVICES
www.tierra-row.com
206-363-1556

- Property & Easement Acquisition
- Relocation Assistance

- Cultural Resources
- GIS & Mapping
- Staffing Support
- Title Services

Washington Locations: BELLEVUE, EVERETT*, LACEY, SPOKANE*, WENATCHEE
*Cultural Resources Division

Contract Land Staff and Tierra are part of the CLS Family of Companies

Follow Us  

Remembering Allan L. Kimbel

1934–2020

There are many people in the public works family who spend most of their lives working to make things better for society without any thought of personal fame or glory. Al Kimbel was one of those people. He passed away in December 2020 at the age of 86.

Al was a Life Member of APWA, joining the Washington State Chapter in 1967. Over the years, he served as President and as Membership Chairman during years of rapid chapter growth. Along the way he was also a founder of the City Engineers Association in 1981. He was honored on the chapter level with the James Robertson Award in 1974, and on the national level, he was recognized as a Top Ten Leader in 1984 and received the Harry S. Swearingen Award in 1987. However, his most cherished award was one presented to him by the Mayor of Olympia on behalf of the city’s public works employees. Al served as Olympia’s City Engineer



Lee Sphar, June Rosentreter, and Allan Kimbel (at right) with Governor Dixie Lee Ray for her signing of the proclamation for 1979 Public Works Week.

for almost 30 years. Among the award-winning projects he headed in Olympia were the LOTT Wastewater Treatment Plant and the waterside Percival Landing Park.

Al and his late wife Mary raised four children (Mark, Mike, Jeff, and Karen) in the Olympia area. He was a veteran of the U.S. Coast Guard and a graduate of

St. Martin’s College. After retiring, Al and Mary moved to the shore of Totten Inlet, raising oysters and developing salmon spawning beds in the creek next to their home.

Al never sought the limelight, but his life’s work was always recognized by a grateful profession. ▀

Oakes Road
(Race Road to Houston Road Connector)
Island County, Washington

otak.com

ENGINEERING
WATER & NATURAL RESOURCES
LANDSCAPE ARCHITECTURE
PLANNING
URBAN DESIGN
ARCHITECTURE
SURVEYING
PROJECT MANAGEMENT

2021 ACEC Washington Engineering Excellence
– SILVER AWARD –
for Future Value to the Engineering Profession and Perception by the Public

WASHINGTON
Everett, Redmond, Vancouver

OREGON
Portland

COLORADO
Denver, Louisville



NATIONAL PUBLIC WORKS WEEK

MAY 16-22, 2021

**Stronger
Together**





Webinars Launch
 On March 27 (2 weeks after schools closed) the Chapter launched their webinar series initially focused on Emergency Management & COVID response.

475
webinar attendees

**Project of the Year
 Recognized**



12 Chapter Winners, 7 National Winners



Summer

Virtual Happy Hour Series

Emerging Professionals Committee launched a series on job skills in the time of COVID.



Diversity Series

Diversity Committee kicked off series on people of color in response for more dialog specific to our industry.



Legislative Advocacy

The Government Affairs committee and lobbyist tracked 40 bills with impact to Public Works. 2 bills passed with APWA engagement.



SB 5457



SB 6420



Fall

1st Virtual Conference

Attended by 233 people who watched 694 sessions and participating in 9 networking opportunities.



Excellence Awards Recognized



7 Individuals, 2 Organizations

Scholarships Awarded 10k



1 University



1 Tech School

CAEC & MPAC Training Goes Online

Training for contract management and public administration both transitioned to online learning sessions.



Winter

Webinars Year Totals

Webinars concluded with a total of 823 attendees over 14 sessions which when combined with our Conference is a total of 1,056 attendees!

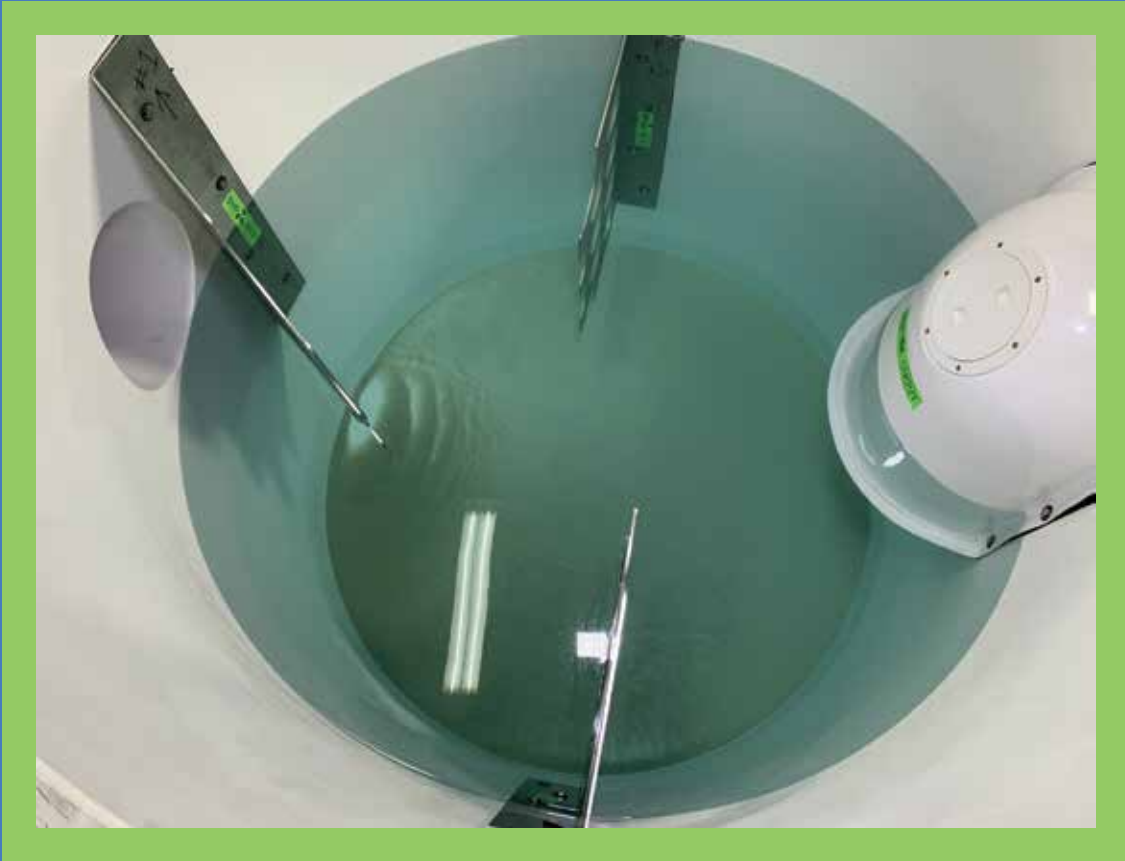
1,056
webinar attendees

2020-2025 Strategic Plan

A new strategic plan was created and first steps were taken with a brand audit and mentorship program study.



“TURBOCHARGE” Sediment Removals



The **Turbo Plate**® from Best Management Products, Inc. reduces Total Suspended Solids (T.S.S.) from stormwater runoff. Designed to work with the **SNOUT**® water quality hood in an online sump structure, these stainless steel plates decrease the velocity and turbulence to increase the capture of fine solids.

The Turbo Plates showed an 80% removal rate in 3rd party testing at Alden Labs in Holden, MA, for a sediment sample with a 50-1000 micron particle size distribution at 225 gallons per minute. Turbo Plates are suitable for new construction or retrofitting sumped structures with both an inlet and outlet pipe.

TURBO PLATE

Affordable, Proven, Effective



Made in the USA, with over 85,000 SNOUTs installed world-wide.

For more information on how our system can solve your stormwater quality issues, contact us at (800) 504-8008 or visit us at bmpinc.com.

US Patents D892972, D893672 Int'l Patents Pending

Bad Roads to Good Roads

The Great Races 1908–09: Part Four

In the early part of the first century, the United States could boast two million miles of highways, but the truth was that many of these roads became impassable in rain and snow. Two long-distance endurance automobile races with ties to Washington State helped to focus public attention on the deplorable condition of American roads: the 1908 New York to Paris Race and the 1909 Ocean to Ocean Race from New York City to Seattle.

- Part One of this series touched briefly on the 1908 New York to Paris Race.
- Part Two looked at the 1909 Ocean to Ocean Race and, in particular, the travails of that race.
- Part Three set the stage for the 1909 Ocean to Ocean Race by detailing the race routes and rules.

Part Four, the final in this series, will describe hardships faced by the 1909 Ocean to Ocean Race drivers, with emphasis on that portion of the race route that passed through Washington State.

Roads? Where We're Going There Ain't No Roads

The movie *Back to the Future Part II* starts with:

Marty: "Hey, Doc, we better back up. We don't have enough road to get up to 88 mph."

Doc: "Roads? Where we're going, we don't need roads." That catchphrase, adapted to the 1909 Ocean to Ocean Race could be: Roads? Where We're Going There Ain't No Roads!

Quotes and pictures from the four sources listed at the end of this article illustrate the hardships faced by crew members of the five cars that made the full trip from New York City to Seattle.

The Story of the Race, Ford Motor Company, 1929 (source #4) describes the weather and the disastrous impact it had on the racecourse:

"[I]t rained – not your ordinary showers, but hard pelting torrents when the heavens seemed to open and pour out their contents in floods. Roads ceased to be anything but mud trails and waterways. The fields provided better going than the highways. Mile after mile cross country made fast time impossible. In 15 hours, on June 11th, the two Ford cars covered 90 miles. Five inches of water fell June 10th and 11th."

"To get into Rawlins [Wyoming] necessitated using the railroad ties for a mile, including the approach to and the railroad bridge over the Platte River at Fort Steele. The track was not ballasted and the ties [were] 15 to 18 inches apart. [The] 30-inch wheels hit every separate tie, a distinct and separate bump, and each [Ford Model T] car came into Rawlins with a broken wheel. It delayed [the crew] twelve hours making repairs and [the cars were] now second and 3rd."

Ocean to Ocean by Model T: Henry Ford and the 1909 Transcontinental Auto Contest (source #1) includes firsthand accounts from H.B. Harper, the relief driver and mechanic for the Ford Model T No. 2:



"'Every day we wore rubber coats and hip boots and pushed through mile after mile of mud,' Harper wrote. In places the 'clinging, clayey mud' was like quicksand. 'Then we thanked our lucky stars that we of the Ford crews were driving light cars,' Harper added. 'Where a heavy car had to resort to horses and a block and tackle, the two men in each Ford car could pick up their car, place the wheels on planks and proceed across.' Thirty-five miles from Denver both Ford cars became mired in quicksand in the bed of Sand Creek. 'We were 30 feet from shore and working in water up to our waists,' Harper said. 'If we had not had light

HISTORY

cars, we might have been there yet, but with the aid of the roof of a deserted pig pen which ... we shoved under the wheels after lifting the back end of the car, we got both cars out and made Denver.”

“After Wyoming the two Fords decided to split up, as the powerful Shawmut car jockeyed with them for the lead. By the time Ford No. 1 reached Pocatello, Idaho, it had opened up a nine-hour lead. ‘We began to plan on what to do with our money,’ Harper wrote. ‘We might better have saved our breath.’ He said the pilot recommended by the local Ford dealer was a ‘bone-headed’ individual, whose ‘previous experience must have been largely confined to piloting schooners over the bar.’ The Idaho pilot proceeded to run them out of gasoline and get them lost in the desert 55 miles off the road.”

A near disaster for the leading Ford Model T (No. 2) occurred in the small town of Prosser in central Washington. While an attendant was filling the car with gas, a bystander struck a match on the side of the tank and it exploded in flames. The crew lost much of their gear but, remarkably, the Model T was only slightly damaged.

Snoqualmie Pass

Racing teams had to battle rain and mud while crossing Kansas and Wyoming, but it was Snoqualmie Pass that proved to be the most difficult part of the transcontinental route. The route through the Pass had only opened to automobile traffic just four years prior. King, Kittitas, and Yakima counties had worked to improve the route in anticipation of the race, but it was still little more than a wagon road by 1909.

Ocean to Ocean by Model T: Henry Ford and the 1909 Transcontinental Auto Contest describes the stretch in these terms:

“The very worst road on the entire trip, according to Bert Scott, was the fifty-mile-long stretch through Snoqualmie Pass in the Cascade Mountains east of Seattle. Scott and mechanic Smith



struggled through the deep snow without sleep for nineteen hours. ‘Besides the snow,’ Scott said, ‘there were steep grades, and it was pushing, pulling, holding back and digging all the way through the fifty miles.’ Helping the exhausted driver and his mechanic dig out of the snow were R. P. Rice, a local Seattle Ford dealer, and [Ford Company] President Henry Ford himself, who had come out from Detroit to help his Model T’s race to victory.”

On the west side of the Cascades in King County, a portion of the road followed the Snoqualmie Riverbed. Firsthand testimony from a Ford Model T crew member in *The Story of the Race*, Ford Motor Company, 1929, describes the experience this way:

“We were at the top of the last difficulty. We had pushed through the snow with less trouble than we had expected.

PUTTING PEOPLE FIRST

Whether with our clients, our employees, or the community at-large, relationships are at the core of our business and take center stage in every project we undertake.

LOCHNER



Issaquah-Fall City Road Improvements
Sammamish, Washington



SR 523 (N/NE 145th Street) & I-5 Interchange Improvements
Shoreline, Washington

LEARN MORE AT HWLOCHNER.COM OR FOLLOW US ON   

We would be in Seattle by four o'clock. When a rock hidden in the mud and snow sprang up to give us a last foul blow. For seven hours we worked on the top of a tall mountain up among the clouds, remedying the trouble that that rock caused. At 5 PM, we were going again. A half mile over the ties of the new 'Milwaukee' railroad brought us to the down grade and ninety miles from the finish. The rest was easy."

The Not-So-Photo Finish

Ocean to Ocean by Model T: Henry Ford and the 1909 Transcontinental Auto Contest describes the finish line:

"In front of a crowd of approximately 10–15,000 people, the exhausted crew of Ford No. 2 – followed closely by manager [and Seattle-based Ford dealer] R.P. Rice and Henry Ford in another car – crossed through the gate of the Alaska-Yukon-Pacific Exposition at 12:55 p.m. on June 23, having covered the 4,106 miles from New York in almost exactly 23 days. [Crew] Scott and Smith looked like they were on the verge of collapse; both men were badly sunburnt and covered with grime. They were too tired to celebrate, unlike company President Henry Ford, whom one newspaper described as the happiest man in Seattle. The Shawmut arrived second seventeen hours later, while Ford No. 1, driven by Frank Kulick, arrived third the following day, again escorted to the finish line by Seattle Ford dealer Rice and Henry Ford. Ford No. 1 had been ruled ineligible for prize money, as it had been forced to change a broken axle in Snoqualmie Pass. The Acme reached Seattle a week later, while Robert Guggenheim's Itala, hopelessly in last place, dropped out in Cheyenne, Wyoming."

After the Ocean to Ocean Race, an elated and shrewd Henry Ford used the Ford victory to launch a massive, nationwide publicity effort promoting the Model T. This proved to be an excellent distraction from what was happening behind the scenes,



Ford advertisement in the *Seattle Times* announcing the Model T's victory in the 1909 Ocean to Ocean contest.



Parametrix

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

We deliver inspired solutions for complex infrastructure projects, meeting the needs of society while protecting and enhancing our environment.



WATER

ENVIRONMENTAL

TRANSPORTATION

COMMUNITY BUILDING

HISTORY

as crews from two competing cars, the Acme and the Shawmut, challenged race results, charging that the winning car, the Model T No. 2 had replaced an engine and even bribed a ferry operator to delay their teams by several hours. However, comparatively few people heard about this, and roughly five months after the race, the winning Ford car was disqualified for illegally changing an engine and the Shawmut was quietly declared to be the winner. On October 29 a dispatch from race sponsor, the Automobile Club of America, was issued from New York City, stating:

The contest committee ... today awarded the Robert Guggenheim trophy and \$2,000 prize to the Shawmut car, which finished second in the race last summer. The committee found that the Ford [Model T No. 2] car, which finished first, put in a new engine at Weiser, ID.

So, the official order of the finish for the 1909 Ocean to Ocean Race is:

- In first place and winner of the cash prize of \$2,000 and the Guggenheim Trophy worth \$3,500 was the Shawmut, which arrived in Seattle on June 23. The driver and mechanic were Bert Scott and James Smith.
- In second place was the Model T No. 1, which spent seven hours at Snoqualmie Pass, arriving in Seattle on June 23.
- Third place went to the Acme, which arrived in Seattle about June 30.
- The Model T No. 2 completed the race and arrived in Seattle on June 23, before the Shawmut, but it was disqualified post-race because it was found that the engine was replaced during the race, in violation of the rules.
- The Itala arrived in Seattle on a freight car.
- The Stearns never made it past New York State.



Sources:

- *Ocean to Ocean by Model T: Henry Ford and the 1909 Transcontinental Auto Contest*, by Terrence M. Cole, Associate Professor of History, University of Alaska Fairbanks, in *Journal of Sport History*, Vol. 18, No. 2 (Summer, 1991)
- HistoryLink.org
- *The 1909 Ocean to Ocean Endurance Contest*, C. Cunningham, April 2017
- *The Story of the Race*, Ford Motor Company, 1929

LEADERS IN STREET LIGHTING, ENERGY & CONTROL SOLUTIONS

Sea-Tac Lighting & Controls
206.575.6865
www.seataclighting.com

More Than Lights And Poles



Geotechnical Engineering
 Environmental Remediation
 Water Resources
 Stormwater
 Data & Mapping



www.aspectconsulting.com/contact

pac-imd

pacific inter-mountain distribution

Providing High Performance Products to Heavy Industry™
 Soil Stabilization • Dust & Erosion Control • Tailing Ponds • Haul Roads • Reclamation



Listed on WSDOT QPL - 9-14.5(7)B
 Approved for SWPPP in all of
 Washington State



"We build strong bonds"™

1001 South Main Street, Suite 550 • Kalispell, MT 59901 • 406.407.0070 • www.pac-imd.com



Transportation • Stormwater • Drinking Water • Wastewater
 Public Facilities • Natural System Restoration

We have all of your public works needs covered



Arlington • Olympia • Seattle • Vancouver • Wenatchee • Yakima

www.g-o.com

PLAY

IS THE HIGHEST FORM OF RESEARCH

WHERE INCLUSION & ACCESSIBILITY MATTER

ONE-STOP SHOP
 INSTALLATION
BENCHES
 SHELTERS PARTS
SPRAY-PARKS
PLAYGROUNDS AND MORE
 CUSTOM DESIGN

PARKS & RECREATION

KCDA

NASPO
ValuePoint

PURCHASING CONTRACTS
 Saves you time, the bid process is already completed.

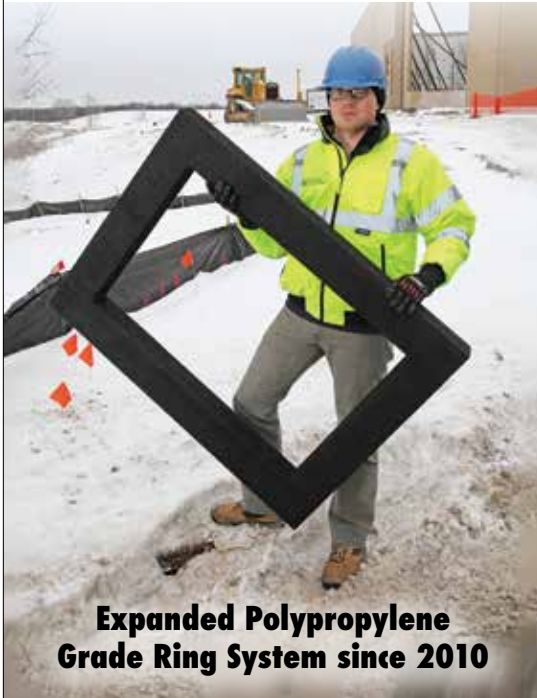
Northwest Playground
nwplayground.com

800-726-0031
sales@nwplayground.com



NOW AVAILABLE

Washington State DOT Catch Basin Type 1 Rectangular Adjustment Ring 20 x 24



Expanded Polypropylene Grade Ring System since 2010

- Made from expanded polypropylene
 - High strength to weight ratio
- Available Thicknesses
 - 3/4", 1", 1 1/4", 1 1/2", 2"
 - 3" and 4"
 - 1" x 2" tapered
- Traffic Rated
 - AASTHO HS25 and HS20
- Lightweight
 - Safer and Faster for workers
- No mortar/grout needed to install
- Chemical Resistant
 - Resistant to road salt
- 50 Year design life
- 25 Year Warranty



Since 1981
 (800) 345-3764
 info@cretexseals.com
 www.cretexseals.com

Relationship. Collaboration. Community.



The *new normal* has changed some of how **CPH** delivers service, where we create from, and how we communicate—what it will never change is a focus on our clients, long-term relationships, and the communities we serve. **CPH** continues to grow our team to meet future challenges and opportunities.



CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | PLANNING & LAND USE CONSULTING | PROJECT MANAGEMENT

WASHINGTON Kirkland and Wenatchee

www.cphconsultants.com



The New **O**strowski's outlook 28

It's been just over 50 years since the first "Earth Day." Much of the environmental movement in America traces its roots to that event. We didn't celebrate the 50th anniversary with much fanfare because, in April 2020, we had a rampant disease to deal with. We also may have been reluctant to call attention to how little we had done over 50 years to save the earth.

Some public works people think of themselves as environmentalists and probably think we should be saving the world. I myself spent a large part of my career cleaning up the environment. I was building sewage treatment plants and water treatment plants, trying to manage stormwater, building recycling programs, etc., so I thought of myself as something of an environmentalist.

But I'm not a radical environmentalist: I'm an engineer, after all, and engineers build things. You might see a common thread of building activity in my list of efforts to clean up the environment. Radical environmentalists try to stop things, not build things. It's a difference in philosophy that speaks to our role in managing the public works of America, and what it says about who we are really working for.

Ian McHarg wrote a book in 1969 called *Design with Nature*. In that book – and in other places – he opined that Western civilization is based on the Judeo-Christian belief that we are placed on this planet to subdue nature for our benefit. McHarg thought that Eastern civilizations are based on more of an idea of being at one with nature rather than trying to subdue it. Even though, for example, the Chinese built walls and canals, McHarg thought basic Eastern philosophy was more compatible with environmental health.

McHarg's approach to community design was that the best spots to build were those with the least impact on the environment. He developed a design technique using multiple overlays of environmental factors mapping the area to be developed. I became aware of the process when I worked for the highway department and was tasked with finding a route for I-90 around North Bend with the least environmental impact. My work didn't actually show a route for the road, but it was easy to see areas that reflected no or minimal environmental impact for wildlife habitat or agricultural soil, as well as areas that could present an impediment to construction, like slope and drainage. That study was made part of the project's environmental impact statement, and the route for I-90 is located almost exactly where the study said the least impact would be.

The funny thing is that I never used the method again for anything I worked on even though I had opportunities. The approach affected my thinking, but the method was left behind. This despite the fact that modern technology has made the mapping part of the exercise way easier than the Mylar overlays I was using in the old days.

In 1996 McHarg spoke at the APWA Congress in Washington D.C., and afterwards, I introduced myself and told him how much his work had influenced me. He was unimpressed. Maybe he heard that same thing so many times that it no longer had any meaning for him or maybe he was old and didn't care anymore. (Actually, at that time he was as old as I am now so that shouldn't have mattered.) I wanted him to be pleased with how much he had influenced me, and I was disappointed with his reaction.

It might have been that he didn't think influencing public works directors made much difference in making the planet healthy. And that brings me back to my original concern: What have we accomplished in the last 50 years?

How do we measure accomplishment? We measure the key elements we need to improve and then monitor them over time to see if things get better or worse. We can measure a lot of things we've been working on and I do think many of those things have gotten better. We can measure

FUEL FLEET DATA

*Real-time fuel transactions
and system diagnostics*



syntech

Kevin Buhr | 425.754.4325
Kevin.Buhr@MYFUELMASER.com

water quality and recycling and reuse rates and lots of other things that are important. But an overall measure of environmental health had eluded us – until we discovered thermometers.

Global warming is easy to measure (not really, but humor me) and we can even find ways to recreate the temperature measurements in ancient times.

Heat is easy to understand and everyone can take their own measurements. It's a very egalitarian measure.

But it's been getting hotter and it looks like it will continue to get hotter in spite of all of our efforts to clean up the environment – and maybe even because of our efforts to clean up the environment. Sewage treatment plants, water pump stations, recycling collection

vehicles: these all use a lot of energy, energy that comes at the expense of the environment, somewhere.

So we've gotten smart about our energy use and have continued to try to reduce our carbon footprint. All this is good but it's like we live in two different worlds. Public works people are trying to clean up the mess that's a natural by-product of human habitation while environmental activists want to stop the pollution caused by human habitation by encouraging humans to stop making a mess.

That may be what disappointed McHarg. Public works folks have been trying to design with nature and cause the least environmental impact with our work, but it's not enough to change the world because we're still out trying to subdue the earth for human purposes. Even Eastern philosophy has been overtaken by Western thought, and China is trying to copy the consumer society found in America.

I said earlier that a difference in philosophy speaks to our role in managing the public works of America and what it says about who we are really working for. We're working for people; we're not working for the planet. Even the people who would argue that we should not reshape the earth for the benefit of people are really saying that they like nature being in control and they like the way the world looks and works if we keep our grubby mitts off of it. In other words, they want the world to look the way they want it to look, and the people who want it to look more manufactured are wrong and part of the problem.

So, while that Eastern/Western philosophical difference is interesting, it's probably the wrong way to characterize the dispute today. It's probably more of a debate between the naturalists and the urbanists. By the way, the urbanists are winning. Every year, more people are living in urban areas and more of the natural environment is converted to human use. If the planet is already warming, those two trends aren't likely to cool it.

So, we still have the role that McHarg framed as the builders who build with the least environmental impact, but now, how we achieve our work with the least environmental impact also has to produce more light than heat. Talk about job security.



2020

Year in Review

Growing



150
HIRED



21
INTERNS



TOP 3
FIRM IN GENDER DIVERSITY



117
PARTNERED WITH SMALL BUSINESSES



19
BABIES



2
PURCHASED FIRMS



STAFF RECOGNIZED BY DJC OR AS **WOMEN OF VISION & ICON & PHENOM**

Supporting



504
STAFF RELAXED WITH HOSTED MEDITATION SESSIONS



\$15,000
DIVERSITY SCHOLARSHIPS OF



110%
ELECTRICITY USAGE OFFSET BY WIND POWER RENEWABLE ENERGY



LEARNED ABOUT UNCONSCIOUS BIAS WITH HOWARD J. ROSS



12
WELLNESS SEMINARS

Working



1,140
PROPOSALS



5
NEW P.E.s



11
PROJECT AWARDS



45,000
MORE THAN ZOOM MEETINGS



2,991
PROJECTS

WASHINGTON
Bellevue • Everett • Olympia • Seattle • Spokane • Tacoma • Woodinville

www.deainc.com

I started this essay thinking I could come up with a new and better way to measure human and planetary progress, but I've run out of space to fully develop that idea. I also don't have an idea to develop. Maybe you will come up with one.

Whether you have a better idea or not or whether you agree with me or not, remember that you can have your position printed with future articles by sending me an email at ostrowj@pacifier.com and I'll put you on the mailing list for advance copies of

future Outlooks. In case you thought you were on the list but haven't been getting advance copies, perhaps I don't have your current email address. Now would be a good time to let me know you still want to read and perhaps contribute to future articles.

Reader Responses

Brian Ziegler, P.E.

You like tackling the easy issues, don't you? Do you really wake up thinking, "Gee, what's the appropriate human impact on the natural environment? And how can I measure that?" If so, you are a better man than I.

The answer to your question, like most questions, is about perspective. Background. Pre-conceived notions. If these aren't revealed by the answerer, then one's answer has no real value, right?

It's been said that beauty is in the eye of the beholder. That's true of impact, too. One man's impact is another man's influence is another man's "subdue nature" (yes, I am speaking as a man because I am one). But it all depends on your worldview. And worldview is a perspective we all have but rarely define. Here are some questions we professionals should be asking to clarify our worldview:

- Why does something exist instead of nothing?
- If something exists, what is humankind's purpose for being part of it?
- Are humans at the top of the food chain? If so, why?
- Why should humans care about other humans?
- Why should humans care about their impact on the environment?



Applied Professional Services Inc

425.888.2590 www.apslocates.com



Quality and Experience You Can Count On

" Supporting our Customers in the NW Since 1996 "

- Design Utility Locating
- Air Vacuum Excavation "Potholing"
- Ground Penetrating Radar "GPR"
- Sewer & Storm Inspection and locating



With over 236 years of combined locating experience APS, Inc. has been supporting our customers since 1996. Our objective has always been to provide high level Subsurface Utility Engineering support services to our extensive list of clients.



Leading with Science[®]

to provide smart solutions for a complex world

Tetra Tech is pleased to be ranked #1 in Water by Engineering News-Record for 17 years in a row.



Anchorage Transfer Station

tetrattech.com |    

So, I could give you my answers to all these questions, but they would just be my answers. And as living, breathing organisms of immeasurable complexity, humans ought to be asking these questions for themselves. And we should continually rethink our answers until they lead us to a coherent, logical, comprehensive, and beautiful conclusion.

Today is a special day on the calendar. All human time is measured against this date in history. We should consider why one baby's birthday is so meaningful to so many people. And maybe that consideration will lead us to the truth about my questions above. Thank you again for asking the tough questions, John.



Bob Moorhead, P.E. – Retired Pundit

Where might I start to offer comments? Eastern vs. Western civilizations? Naturalist vs. urbanist cultures? Re-active remediation vs. pro-active conservation? As is often the case, at least among we engineering types,

perhaps the path(s) to the future is somewhere in the middle(s).

I think a problem in identifying environmental quality positions is that even the most fervent "let's use all the resources" proponents do have some appreciation of the natural world. And even the most fervent "save the planet" voices use modern conveniences and appreciate the remedial efforts to clean up after us. So, neither extreme is truly attainable or sustainable.

The City of Seattle recently proposed to ban the use of natural gas in all new dwelling units to reduce its carbon footprint. Will there be enough clean sources of electricity to replace the gas? Will solar panels and wind turbines provide for our future energy needs, or are there detrimental effects in these technologies that we've not yet recognized? Back in the 1960s the outlook for nuclear energy seemed bright – perhaps the cleanest answer to all our future energy needs. The only problem is that now, 60 years later, we've still not developed techniques to safely deal with expended fuel rods produced by nuclear plants.

If I may, perhaps I can paraphrase an old joke that went something like: "If it wasn't for Edison's light bulb, we'd all be reading our emails by candlelight." But where would all the wax and wicks come from??

Jason Van Gilder, P.E.

I think you have captured our current predicament quite well. We have a 21st century environmental movement that finally gained the power to effectively counteract the “build more and bigger” movement of the 20th century. Perhaps the best that can be said is that neither side has all the answers or all the power. The tension between the two movements is our best chance at a balance. We public works people probably need to resign ourselves to the fact that our work is at the friction point between those two perspectives, and always will be.

One aspect you could have highlighted, which seems relevant while writing in the midst of the holiday season, is the sheer number of human stories our public works allow to happen. Our water and sewer systems allow hundreds of thousands of people to have human connections by living in closer proximity than they ever have before. Each of those people has their own story, their own interests, and are important to someone. In fact, your I-90 highway allowed me to hold my three-month-old nephew yesterday. Your desire to connect with an author whose thoughts were impactful to you is exactly that, too. And what else might justify our dramatic response to the pandemic of 2020 than a root desire to protect and preserve human life because that life is valuable and worth protecting?

Next year, I expect to see a few Christmas cards with idyllic nature settings covered in snow. There will also be Christmas cards displaying my friends and their families as idyllically as possible. Both cards are expressions of the beauty of life. Preserving our world so that both of those things can continue is why, in spite of the tensions surrounding us, we can take pride in our public works.

Thank you for making the effort to connect through your articles. ▀



Civil Engineering
Structural Engineering
Construction Management



Bellevue | Bellingham | Tri-Cities | Olympia

SWS EQUIPMENT

STREET WASTE SEWER

SALES • RENTALS

Serving
Washington
Idaho
Montana
Oregon

SERVICE • PARTS

1-800-892-7831 • www.SWEquipment.com



Dedicated to serving you.



ENGINEERS | PLANNERS | SURVEYORS

www.paceengrs.com

KIRKLAND 425.827.2014

EVERETT 425.486.6533

WENATCHEE 509.662.1762

LAKE OSWEGO 503.597.3222



NE 10th Avenue Water Transmission Main - Clark Public Utilities | Vancouver, WA

HHPR Harper Houf Peterson Righellis Inc.

ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS

PORTLAND SALEM BEND VANCOUVER



HHPR's integrated services span the full range necessary to successfully and creatively bring projects to fruition.

Satisfying our CLIENTS by providing excellent service, solving their problems and meeting their needs.

Find us at hhpr.com



DOWL Redmond | Vancouver

MEETING COMMUNITY DESIGN CHALLENGES
IN EXTRAORDINARY WAYS

Environmental & Land Development	Water	Bridge, Structural, & Marine
Civil	Transportation	Geo-Construction

dowl.com

TRYGG

TRYGG Swiss Flexi

- * Available in 8 and 11,5mm / 5/16" and 7/16".
- * Super hardened wear bars give awesome grip and ensure long service life.
- * Aggressive and smooth running, this is the ideal choice for snow removal machinery working on mountain roads.
- * Tension chain and mounting instructions included.

TRYGG Square Ice

- * Available with 9/32" or 5/16" cross chains, singles and dual triple mounts, with or without cam lighteners.
- * 1/4" short link grade 80 side chain provides 15% weight loss without any reduction in the number of cross chains, traction or service life. Good news for drivers back!
- * Lever style fasteners cinch the chains tight to the tire, saving installation time and improving performance.

MADE IN NORWAY

WHITE MOUNTAIN CHAIN
P.O. BOX 869
Bonners Ferry, Id 83805
800-439-9073
email: ben@whitemountainchain.com

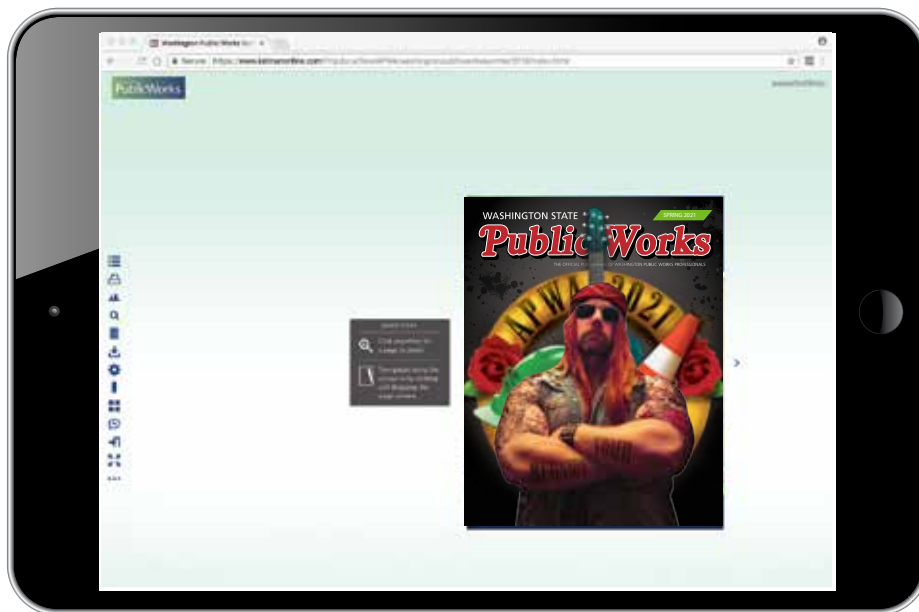
WWW.TRYGG.NO

- DISTRIBUTED IN USA -
White Mountain Chain

Interactive Edition

available online

With print and electronic communication operating hand-in-hand you can take advantage of the fact that our magazines are also available online in a highly interactive format.



A user-friendly, interactive format that includes:

1. Beautiful reading experience - presenting a beautiful digital edition that looks and feels like a real book; from flipping through the pages, realistic page turn sounds and even spine shading all adding to a highly engaging reader experience.
2. A share feature to share the digital publication amongst friends and colleagues via social networks including Facebook and Twitter or via email.
3. Active hyper-links to all websites and emails contained in the publication.
4. Active links to the specific stories from the front cover and contents page.
5. Active links to advertiser websites from their ads.
6. Searchable and zoomable content.
7. The ability to add notes and bookmarks.
8. And more...

washington.apwa.net

Improving Community Safety & Resiliency



TRANSPORTATION ENGINEERING
CIVIL ENGINEERING
STRUCTURAL ENGINEERING
AIRPORT ENGINEERING
WATERFRONT ENGINEERING
PLANNING & PERMITTING
SURVEYING & MAPPING

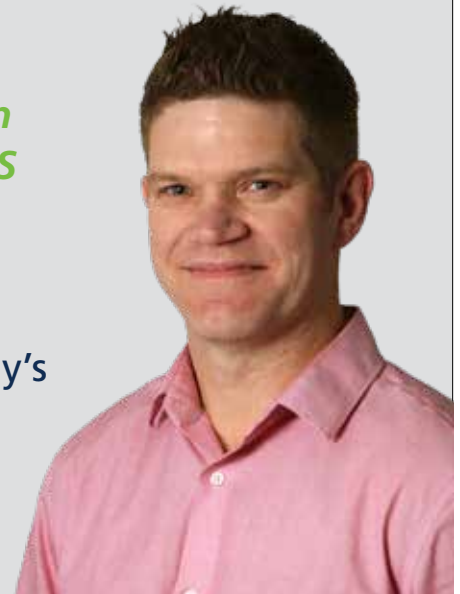
ReidMiddleton

425 741-3800
www.reidmiddleton.com

WASHINGTON STATE

PublicWorks

To reach public works professionals through *Washington State PUBLIC WORKS* magazine and its targeted readership, contact Darrell to discuss your company's promotional plans.



DARRELL HARRIS Phone: 1-877-985-9793 darrell@kelman.ca

Bold
Creative
Responsive



SKILLINGS

Recreation Park | Chehalis

Our concern for the environment is more than just talk

This publication is printed on Forest Stewardship Council® (FSC®) certified paper with vegetable oil-based inks. Please do your part for the environment by reusing and recycling.



THE
WATERSHED
COMPANY

SCIENCE & DESIGN
SINCE 1983

Arborist Services
Environmental Permitting
Growth Management Act Planning
Interpretive Design

Landscape Architecture
Mitigation and Restoration Design
Streams, Shorelines, and Fisheries
Wetlands and Wildlife

SBE & SCS Certified

4 2 5 . 8 2 2 . 5 2 4 2
WATERSHEDCO.COM

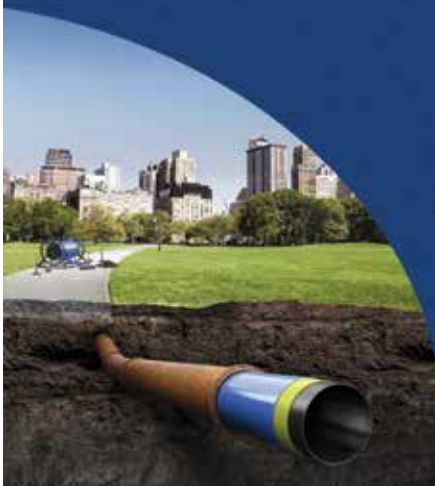


When You Think Pipe Lining Think



(360) 943-5840
insta-pipe.com

PRIMUS Line &
UV CIPP Lining





ADVERTISER PRODUCT & SERVICE CENTER

Washington State Public Works is made possible by the companies below who convey their important messages on our pages. We thank them for their support of APWA and its publication and encourage you to contact them when making your purchasing decisions. To make it easier to contact these companies, we have included the page number of their advertisement, their phone number, and, where applicable, their website.

COMPANY	PAGE	PHONE	WEBSITE/EMAIL
ADS	13	253-392-4198	travis.dodge@ads-pipe.com
Applied Professional Services, Inc.	39	425-888-2590	www.apslocates.com
Aspect Consulting LLC	35	206-328-7443	www.aspectconsulting.com
Associated Earth Sciences, Inc.	26	425-827-7701	www.aesgeo.com
Best Management Products, Inc.	30	800-504-8008	www.bmpinc.com
Contract Land Staff	26	281-240-3370	www.contractlandstaff.com
CPH Consultants	36	425-285-2390	www.cphconsultants.com
CreteX	36	262-510-2697	www.cretexseals.com
David Evans & Associates	38	425-519-6500	www.deainc.com
DOWL	42	541-385-4772	www.dowl.com
Freightliner Northwest	7	800-523-8014	www.freightlinernorthwest.com
Garney Construction	24	303-791-3600	www.garney.com
Gray & Osborne	35	206-284-0860	www.g-o.com
HHPR	42	503-221-1131	www.hhpr.com
Holt Services Inc.	19	253-604-4878	www.holtservicesinc.com
Insta-Pipe	45	360-943-5840	www.insta-pipe.com
KPFF Consulting Engineers	7	206-622-5822	www.kpff.com
KPG	20	206-286-1640	www.kpg.com
Lakeside Industries	3	425-313-2681	www.lakesideind.com
Lochner	32	425-454-3160	www.hwlochner.com
Morrison-Maierle	18	406-442-3050	www.m-m.net
Murraysmith	20	425-252-9003	www.murraysmith.us
Northwest Playground Equipment	35	800-726-0031	www.nwplayground.com
NPDESPro	9	800-204-1598	www.npdespro.com
Otak, Inc.	27	425-822-4446	www.otak.com
Owen Equipment	17	800-422-2059	www.owenequipment.com
PACE Engineers, Inc.	42	425-827-2014	www.paceengrs.com
Pacific Inter-Mountain Distribution, LLC	35	406-407-0070	www.pac-imd.com
Papé Machinery	2	541-681-5376	www.pape.com
Parametrix	33	253-863-5128	www.parametrix.com
Reid Middleton	44	425-741-3800	www.reidmiddleton.com
SeaTac Lighting & Controls, LLC	35	206-575-6865	www.seataclighting.com
Seattle Pump and Equipments Co.	8	206-283-5252	www.seattlepump.com
Shannon & Wilson, Inc.	12	206-632-8020	www.shannonwilson.com
Skillings, Inc.	44	360-491-3399	www.skillings.com
Sierra Santa Fe Corp.	47	360-887-2222	www.sierrasantafe.com
SWS Equipment, Inc.	41	509-533-9000	www.swsequipment.com
Syntech Systems/FuelMaster	37	800-888-9136	www.myfuelmaster.com
TCF Architecture	21	253-572-3993	www.tcfarchitecture.com
Tetra Tech	40	206-883-9300	www.tetrattech.com
The Watershed Company	45	425-822-5242	www.watershedco.com
Traffic Safety Supply Company	48	800-547-8518	www.tssco.com
TranTech Engineering, LLC	41	425-453-5545	www.trantecheng.com
Universal Field Services	4	425-673-5559	www.ufsrw.com
Western Systems	14	800-456-7886	www.westernsystems.com
White Mountain Chain	42	208-267-6215	www.whitemountainchain.com
Wilson Engineering	26	360-733-6100	www.wilsonengineering.com



Chip Seal
Scrub Seal
Fog Seal
MicroCoat[®]
Liquid Road[®]





**TRAFFIC SAFETY
SUPPLY COMPANY**



The finest in intelligent warning devices for Washington roadways

Available under DES contract #04616

Traffic Safety Supply Company

800.547.8518 | sales@tssco.com | tssco.com