

InfraTalk On The Road: Paula Hammond
Women's History Month and Women Leading Innovation Specialty Episode

Greg Nadeau:

Paula Hammond. Welcome.

Paula Hammond:

Hello.

Greg Nadeau:

Welcome to InfraTalk America. It's such a pleasure to have you. I was sort of reflecting back as I was looking at your glorious record and back in 2008 you were appointed the first woman.

Paula Hammond:

Seven, actually.

Greg Nadeau:

2007, the first woman secretary of transportation in the state of Washington.

Paula Hammond:

That's correct.

Greg Nadeau:

You recently completed service, the American Road and Transportation Builders Association (ARTBA) as their first woman board chair.

Paula Hammond:

Yes.

Greg Nadeau:

And also, the first former state DOT's CEO to serve in that.

Paula Hammond:

Ah, you know, I hadn't noticed that distinction, but yes

Greg Nadeau:

I can't find another example.

Paula Hammond:

Very good. And that was in ARTBA's 120-year history

Greg Nadeau:

A 120-year history?

Paula Hammond:

I broke that glass ceiling.

Greg Nadeau:

Well, that seems to be a pattern with you. So, I want to do a little bit of just background, talk a little bit about your-

Paula Hammond:

Sounds good.

Greg Nadeau:

- as I said, impressive array of accomplishments over the years. But so really beginning you had a, how many years total with the state of Washington?

Paula Hammond:

At WSDOT? 34.

Greg Nadeau:

34 years.

Paula Hammond:

Went to Oregon State University, civil engineering degree and then came to work at WSDOT as a surveyor and asphalt plant inspector.

Greg Nadeau:

That's how it all started.

Paula Hammond:

Yup, Engineer one.

Greg Nadeau:

So a woman, serving in that role. You know, fairly far back.

Paula Hammond:

Yeah a lot, 44 years ago.

Greg Nadeau:

44 years. I didn't want to fail on the math. Can you give us a sense of being a woman in what was probably a reasonably male dominated environment back then?

Paula Hammond:

Yeah, it started in college.

Greg Nadeau:

Really?

Paula Hammond:

Where in my class at Oregon State of 120 graduating seniors, there were eight women.

Greg Nadeau:

Wow.

Paula Hammond:

And so, you know, that's kind of lonely, which is why I joined a sorority right when I got there. But, and then coming to Washington State, D.O.T., the agency hadn't hired a lot of folks in the previous ten years, it had kind of been in an interesting maintain and preserve mode. And so they hired a pretty large class of graduating engineers into the agency.

And there was a handful of women, but we were an oddity, certainly. Hard for the field crews and the field offices to get used to seeing a young woman amongst their midst, especially a civil engineer. So that was interesting. But, you know, I probably could have quit two or three times during that first year or felt like it.

But once I persevered and kind of decided I'm going to make this my career, then it got easier each time and I had so many good mentors in the agency who recognized something in me. Who said, you know, let's go try this. Why don't you take this job? This would be a good promotion. This would be a great area for you to learn everything about transportation.

And that's what helped me become secretary, was that experience I've had over those years.

Greg Nadeau:

I'm trying to recollect. I joined Federal Highway in 2009 and prior to that was Deputy Commissioner Maine DOT, which is where we first met.

Paula Hammond:

That's right.

Greg Nadeau:

I think that was even before you were secretary, when you were still active in AASHTO.

Paula Hammond:

That's right at the AASHTO table. Yeah. Yeah. Very active.

Greg Nadeau:

So at that point, you were already becoming, I think, a fairly impressive influencer, if you will, in the AASHTO community. It didn't take long.

Paula Hammond:

I was the chief of staff for the seven years prior to becoming secretary. So, during the Doug MacDonald era.

Greg Nadeau:

Right. So, you began your sort of national exposure in national activities prior to becoming secretary?

Paula Hammond:

Yeah, early 2000s.

Greg Nadeau:

Yeah, big difference. And that is as I said, that's where we met along the way.

Paula Hammond:

That's right.

Greg Nadeau:

On the circuit, if you will. And you know, there's another milestone. You also were recently chaired the women's Transportation Seminar, which is an international organization.

Paula Hammond:

Yes, my personal passion

Greg Nadeau:

It has been a personal passion, of yours for a long time. So we can see a there's a theme here. Obviously, you've been a trailblazer, a leader and workforce development is another passion of yours.

Paula Hammond:

Yes.

Greg Nadeau:

So I want to talk about that.

Paula Hammond:

Okay.

Greg Nadeau:

And you know what we're facing as the industry, certainly the public sector and the challenges associated with that.

Can you first talk about your current role, your senior vice presidency at WSP a little bit about, you know, what that entails?

Paula Hammond:

I think I have the best job in the consulting world because I'm really a utility player and help people achieve their strategic goals, whether it's a state DOT or whether I'm working with a region or whether it's a local agency or even within our own company, as we bring in new people and different parts of our organization are growing.

There's a need to help fit things together that make sense and to bring everybody along together. And so for DOTs today, just think of the changes they've gone through, the transformation mission, not just of how we used to do things, but how transportation operations and autonomous and connected vehicles are going to change the world. But how we're thinking about how we fund and price our transportation system that's equitable and fair.

There's so many things that DOTs have to deal with now that perhaps they either weren't equipped with when they came into the job, or are having to find new ways to strategically get things done. So that's what I love about my job is I can say, hey, here's what another state is doing, or have you thought about lining things up strategically this way to help you achieve those goals.

And I'm also a big champion of performance management and performance-based investments. And to me, it's all just so logical. Maybe that's my engineering background. But when you think about having strategic goals and things you know you want to accomplish, then using performance data and actions that can help guide what you do first, second and third. I think is a logical and good way to achieve some positive outcomes.

And that's what we're all about now, right, is outcomes at a time when our workforce is really low and we're developing and bringing new people into the industry that don't have the 40 years that we have under our belt. So I think it's just an exciting time in transportation.

Greg Nadeau:

Isn't it, though?

Paula Hammond:

Yeah.

Greg Nadeau:

And so and workforce again, the challenge we all have targeted technology sectors and the two principal ones are that are the current focus, have been for the last few years, is digital project delivery.

Paula Hammond:

Yeah.

Greg Nadeau:

And sustainable composite structures.

Paula Hammond:

Yes.

Greg Nadeau:

And those are two areas. And the big focus on digital right now given all that's going on.

Paula Hammond:

Right.

Greg Nadeau:

And one of the issues that hinder the potential for state DOTs to really accelerate the advancement of a digital approach in digitizing the project delivery system, just, you know, we'll stipulate the benefits are extraordinary.

Paula Hammond:

Sure.

Greg Nadeau:

You save money, you save time. Technology can translate into a much more sustainable approach to project delivery. It's all upside. The change it would take or does take. We had a state DOT, you know, culturally and then just, you know, from the standpoint of the transition and training-

Paula Hammond:

Staff development.

Greg Nadeau:

Staff development. And so, the workforce issue, I've concluded, really is a big factor in our ability to accelerate that.

There's a Trimble, one of our premier sponsors, is a global company, and they did an analysis on a project in Norway this year. You know, they're several years ahead of us and the open standards and all the things it takes to really accelerate this technology.

Paula Hammond:

Yeah, sure.

Greg Nadeau:

But they concluded a 90 to 95% reduction in change orders was a result of what I call a really, I call it a full-scale digital approach.

Paula Hammond:

Wow, that's fantastic.

Greg Nadeau:

It's massive. If you look at the Federal Aid Highway program over the next 10 or 15 years, we're talking billions of savings and those dollars, as you know, become available for more projects hopefully.

Paula Hammond:

Yeah, turn it back into concrete and steel.

Greg Nadeau:

So, the imperative to really move this ahead is there, so now that leads us to one element of the workforce challenge.

Demographics don't lie, unless particularly in the civil engineering world, we have got to get more young women and girls interested in pursuing a career and in civil engineering, one. Then somehow compete with the private sector to recruit them.

Paula Hammond:

Yeah.

Greg Nadeau:

After they're trained engineers, which is becoming a much more difficult task. So women are a key factor in how we're going to meet these workforce challenges.

So, one, is my thesis accurate? And two, what do we do? How do we get more girls and young women interested in this profession?

Paula Hammond:

And I would say yes and, one of the things that's the downside of the workforce challenges certainly, is that there's not enough people in our industry. Civil engineering has struggled over the years to get more diverse and to grow. The computer engineering world that I live in, in Seattle. You know, they take people away from the kinds of dirty boots engineering that we grew up to do. And so that's a challenge.

But the opportunity, the upside is that there's space and room for women and minorities to join the ranks of DOTs to really, truly represent the populations that we're serving. That's always been our challenge, you know, bunch of white guys.

And so, for us to now engage differently with our communities and better than we ever have before, we need to start having that good representation of the communities we serve in. But also, I think that the enterprise, as I call it, of transportation, is consultants, private sector, and public. We're all challenged. We're all in a better place these days to help each other.

I mean, I think this digital future is one the consulting world and suppliers can really help develop and deliver. And I think the states are recognizing that. But I also think that the other part of our enterprise needs to address the workforce shortages together. I don't think it's all civil engineers that we need.

Greg Nadeau: Oh no.

Paula Hammond:

And the ability now for us to have such a diverse kind of range of disciplines to help a DOT do its job, I think is what's exciting communicators, data scientists, climate scientists, planners.

Greg Nadeau:

You know, ten years ago I never would have said DOTs are in need of data scientists.

Paula Hammond:

Well, there you go. But if you look around at what we all, if we got together and created a campaign for people to join us in changing our transportation future, think of what we could do together. That's the frustrating part of each of our associations and organizations that we belong to.

We're all trying to have some kind of workforce initiatives, and we would be so much better together if we created a national campaign. So, I'm signing up today to help.

Greg Nadeau:

Interesting idea.

Paula Hammond:

So I'm going to help do that. So if you go ahead and start it, I'll be the yes person.

Greg Nadeau:

It might be beyond our scope, but will certainly support it and talk about it and report on it.

Paula Hammond:

I think it's something we need to do because our transportation future depends on it.

Greg Nadeau:

It really does. And as the other challenge, of course, is the generational shift and the rapid decline of civil engineering of our generation.

Paula Hammond:

The boomers.

Greg Nadeau:

The boomers.

Paula Hammond:

Off we go.

Greg Nadeau:

So as that trend continues and we know it will, there's going to be a point at which state DOTs are in trouble.

Now, the other dynamic that results in. You know, we've seen for years now that the consulting engineering community has become critical to helping state DOTs deliver projects, deliver their program, do studies, do analysis, which is basically mitigating the difficulties of attracting staff. And often it may be the most effective means because you're really buying services from, you know, a company, from firms that have real depth of expertise-

Paula Hammond:

Sure, yeah.

Greg Nadeau:

-can really provide something on a project basis that you wouldn't invest in a full-time employee year-round.

Paula Hammond:

There you go, I think that's true.

Greg Nadeau:

There's a real growing dependency on that. Do you see that and is that going to grow even further?

Paula Hammond:

I do. And of course, the Infrastructure Act has helped, you know, promote a lot of projects, a lot of new starts right now. So, I think everybody's really busy, which is another part of the challenge of the workforce.

But I also have had state DOTs say when you all come on to our project and, you know, help with whatever, you know, corridor interchange, etc., we also need you to train our people on how to be good project managers, how to put a good program and project out. And so, they're asking us, which is not the way it used to be, you know, the state project manager or project engineer was the boss, and that person, you know, directed everything.

Now it's a much more collaborative, we have project engineers in a state DOT that only have two or three years of experience and they're running major projects. And so, the DOTs are starting to recognize there's a staff development component to the consultant support as well. A lot of embedded co-located, sit with our people. helped deliver this project together and I think that then strengthens the DOTs.

Greg Nadeau:

The other conversation I have with a number of people is the transformation of state DOTs what they once were-

Paula Hammond:

Oh yeah.

Greg Nadeau:

- to this new age digital technology driven institutions. Do you think that transformation is going to, can serve as a recruitment tool for the current and next generation?

Paula Hammond:

Oh sure, all the video gamers, I think so. And the more we can progress as state DOTs with good technology, good computer systems, etc., which was not always the legislator's top priority, remember, you got to get them to buy the equipment.

Greg Nadeau:

Exactly, and we're working toward having a real policy audience at the state level. And I like them to hear this because the resources invested up front.

Paula Hammond:

Absolutely.

Greg Nadeau:

In technology and training will pay back huge.

Paula Hammond:

Huge dividends. Yeah. And so, yes, I mean, that's part of my campaign to have a transportation career, is this is an exciting place to be. And you can help change, you know, the transportation system in your community. Why wouldn't you want to be a part of that? Yeah, with all the technology and skills, younger people have today.

Greg Nadeau:

You heard it here first, folks. Paula Hammond is going to lead this national campaign to address our workforce development.

Paula Hammond:

I need to learn to stop saying no to things- start saying no to things.

Greg Nadeau:

You've never been very good at saying no because you've been in so many roles.

Paula Hammond:

No, I'm awful at it. I'm a joiner.

Greg Nadeau:

So, I kind of want to sort of begin to wind things up because we could do this all day, and I promise you I won't.

But we've sort of posed an overarching question to a number of interviews we've done in the last few weeks, and it's basically how do we move innovation in a more effectively and more quickly throughout the Federal Aid Highway program? And that's a question we could spend another half hour on by itself.

But just generally speaking, somehow you know, the Federal Aid Highway program is, the Federal Highway program is defined in lies federally assisted in state administered by 52 individual institutions throughout the Federal Aid Highway program that have extraordinary independence and ability to make decisions about how to deliver projects and contracting methods, whatever the case may be.

That's not dictated by the federal government. Federal government provides money and broad oversight of policy.

Paula Hammond:

And a lot of hoops.

Greg Nadeau:

And a lot of hoops. So, if you have a technology and innovation, and we're involved in several, including composite bridges, talk about obstacles. But that's beginning to improve as knowledge and education occurs. So how do we break that down from going door to door, to 52 institutions and somehow creating a more streamlined approach to acceptance of new age innovation?

Paula Hammond:

Well, I think part of the trick is to get out of our own way. And I mentioned, hoops, you know, processes to get funds and grants out, you know, to the people who can try, and innovation just have to be so much more streamlined than they are. I also think innovation is bred in a culture of creativity and risk taking.

And we as public agencies, I still say we, we don't accept risk very well because usually we get our heads taken off if we fail. But the culture of risk and testing and trying things has to

be created from the top of the agency all the way to the bottom to give people the space to try new things and to say, I'll have your back if you fail because we have to try these things.

So, I think it's an insecure thing.

Greg Nadeau:

Yeah, well said. I've used that very same illustration myself, because you're exactly right. And when I was at Federal Highway and we were developing and implementing the Everyday Counts program, I used to describe that as top down, bottom up. Didn't work otherwise.

Paula Hammond:

Yeah, if I was going to mention Everyday Counts because I think that's a really great long, sustained program.

And when Victor, Victor Mendez had that initial creation, it was perfect.

Greg Nadeau:

Yeah, I remember it well.

Paula Hammond:

It took a while to get going, but it's great.

Greg Nadeau:

It was remarkably quick.

Paula Hammond:

Yeah, Yeah.

Greg Nadeau:

I remember when we rolled out the first the first round at EDC, we had a number of initiatives, including warm mix asphalt. It's a favorite of mine because at the time in 2010 of total asphalt production in the country, that warm mix represented about 4%.

Yeah, I just did an interview with Audrey Copeland, the head of NAPA, National Asphalt Paving Association, a few several months ago, and she said today it's upwards of about 44%.

Paula Hammond:

Wow.

Greg Nadeau:

And represents about 200,000 cars a year in greenhouse gas reduction.

Paula Hammond:

That's amazing.

Greg Nadeau:

So, they're doing some really progressive things in terms of climate change.

Paula Hammond:

And you know what else it did? Everyday Counts brought people together locally to talk differently about what they could do in an innovative way and built relationships, so you can't go wrong with that.

Greg Nadeau:

So the State Transportation Innovation Council, STICs for short-

Paula Hammond:

Yeah.

Greg Nadeau:

-one in every state there are a number of them, are very active. It really has catalyzed that local conversation and not just within their own organizations, but academia, contractors. So yeah, it definitely had an impact in the fact that it's still going on means the states sort of embraced it, run it, own it. And Federal Highway continues to be an important catalyst to make it all happen.

So, yeah it is a good approach but the state DOT itself and being open and willing to take those risks because the risk aversion will come from the top buying in and communicating

effectively, with the front-line champions of change project managers if they have that confidence, I think you're exactly right.

I think that risk tolerance really grows, and you can't advance. You can't be successful in advancing innovation, if you're not willing to take it.

Paula Hammond:

And one way to kind of help educate people above on that is to say this is risky. We don't even know if it's going to work, but watch us try this and be a champion as we try something different and then help us celebrate success or we'll tell you what we learned.

Greg Nadeau:

That's great. When I when we're doing Everyday Counts, I traveled to a lot of state states, federal highway division offices to really help our folks understand what we're after. And clearly there was there was a need for that kind of communication, particularly at the division level. And the relationship they have is, you know, at state DOTs is critical to insure.

Paula Hammond:

Absolutely.

Greg Nadeau:

So I really, really appreciate your observations on this. I think they're well founded and a direction that all states need to go and a lot of them are.

Paula Hammond:

Yes. We have some great folks working out there now.

Greg Nadeau:

I wish we could do this all day. As I said, but we're not going to.

Paula Hammond:

It's been a pleasure.

Greg Nadeau:

It's been a rare pleasure. And again, thank you for your service over the years and the work you continue to do.

Paula Hammond:

Oh, you're welcome, Greg.

Greg Nadeau:

Very active with AASHTO. So, a lot of the work you're doing very much is in the public interest.

Paula Hammond:

Thank you.

Greg Nadeau:

So thank you for that. And thank you for joining us.

Paula Hammond:

All right. Thank you.