

Virtual Public Involvement Technical Assistance Workshop Summary Report

Honolulu, Hawaii

DECEMBER 10-11, 2019

Host Agency:

- Hawaii Department of Transportation

Participating Agencies and Organizations:

- Oahu Metropolitan Planning Organization
- City and County of Honolulu
- Hawaii County
- Maui County
- Hawaii Community Development Authority
- Ulupono Initiative
- University of Hawaii at Manoa
- Allana Buick & Bers
- G70 Design
- Jacobs, Inc.
- WSP USA

Peers:

- Jon Rees, Iowa Department of Transportation
- Jim Talley, FHWA Eastern Federal Lands Highway Division



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13. ABSTRACT (Maximum 200 words) This report summarizes the presentations, activities, and discussions that took place during the Federal Highway Administration (FHWA) Virtual Public Involvement (VPI) Workshop held in Honolulu, Hawaii, on December 10-11, 2019. The purpose of the workshop was to provide the Hawaii Department of Transportation (DOT), metropolitan planning organizations (MPOs), Hawaii local governments, and transportation consultants who work in Hawaii with information about and examples of VPI tools, specifically project visualizations and VPI applications and public comment management software.				
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Hawaii DOT VPI Technical Assistance Workshop Report

Overview

This report summarizes the presentations, activities, and discussions that took place during the Federal Highway Administration (FHWA) Virtual Public Involvement (VPI) Workshop held in Honolulu, Hawaii, on December 10-11, 2019.

The purpose of the workshop was to provide the Hawaii Department of Transportation (DOT), metropolitan planning organizations (MPOs), Hawaii local governments, and transportation consultants who work in Hawaii with information about and examples of VPI tools, specifically project visualizations and VPI applications and public comment management software.

VPI Overview Presentation

FHWA VPI team member (and project visualization expert peer) Jim Talley of the FHWA Eastern Federal Lands Highway Division presented an overview of the VPI initiative and VPI tools. At the beginning of the presentation, Mr. Talley described the challenges inherent in public involvement, which often include:

- Low or inconsistent participation;
- Lack of diverse viewpoints among participants;
- Language and cultural barriers;
- Busy work, family, and social schedules;
- Expensive and time-consuming for agencies; and
- Changing expectations of a 21st century population.

VPI tools help agencies improve the effectiveness and efficiency of public involvement by providing opportunities to engage those who would otherwise be unable to participate in transportation planning and project development, and by making participation more convenient and accessible, more interactive, and more enjoyable for the public. Virtual involvement activities can sometimes be accomplished at a lower cost than in-person involvement, and in most cases require fewer staff hours to prepare, execute, and document and organize public feedback. The feedback that agencies receive through VPI tools can be more representative of the community because more people can be engaged at the right time, reducing the likelihood of delays late in the planning or project development process.

Mr. Talley then walked through eight types of VPI tools and techniques and provided examples of each:

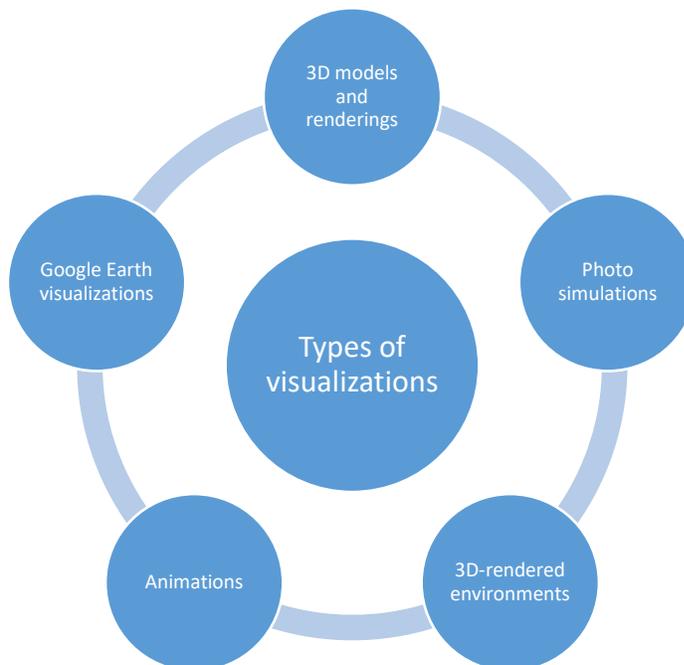
- [Mobile Applications](#)
- [Do-It-Yourself Videos](#)
- [Project Visualizations](#)
- [Crowdsourcing Tools](#)
- [Virtual Town Halls](#)
- [Online Mapping Tools](#)
- [All-in-One Tools](#)
- [Digital Tools to Enhance In-Person Events](#)

At the end of the presentation, Mr. Talley described the technical assistance opportunities and resources that the FHWA VPI team offers. Available assistance and resources include peer exchange workshops, direct technical assistance peer groups, hands-on technical assistance, a database of policies and contracts, and a variety of other resources including case studies, video demonstrations, and more. Many of these resources can be found on [FHWA's Virtual Public Involvement website](#).

Project Visualizations Presentation

Jim Talley gave a presentation on project visualizations. Mr. Talley described his work at the FHWA Eastern Federal Lands Highway Division Office, which works with public lands agencies to design, build, and maintain roads across the country. To illustrate why project visualizations are useful and powerful tools to communicate complex information about transportation projects, Mr. Talley walked through an exercise by showcasing a project to the group. He started with a verbal description, followed by a sketch, and then closed with a visualization of the project, to illustrate that the longer it takes to explain something, the greater chance there is for misunderstanding or confusion about a project. Effective visualizations can reduce this likelihood.

Mr. Talley defined project visualization as any technique for creating images, diagrams, or animations to communicate a message. Project visualizations can be anything from a sketch to a 2D graphic to a 3D model. He outlined five different types of project visualizations:



Examples of some of these types of visualizations are shown below in Figures 1-3.



Figure 3. This photo simulation superimposes a model of a proposed bridge onto an existing photograph to show what the bridge could look like in this environment. Source: FHWA.

Mr. Talley provided the following advice about choosing a project visualization method. First, he recommended looking for signs that a visualization might be required, such as high cost, locations near wetlands or sensitive habitats, or a likelihood of public attention or concern. He then recommended considering the following factors:

Money	Time	Audience
<ul style="list-style-type: none"> •What is the project budget? •Time is money. •What kind of visuals could be developed to present the project within the available budget? 	<ul style="list-style-type: none"> •What is the timeframe for developing the visualization? •A shorter timeframe may require more creativity in developing a visualization. 	<ul style="list-style-type: none"> •Who is the audience for the visualization? •What is their background? •What are their concerns? •What visualization method can most effectively present and communicate relevant information?

Mr. Talley described [a project at the Blue Ridge Parkway](#) in North Carolina for which he developed a project visualization. The project involved multiple partners, including FHWA, the National Park Service, the North Carolina Department of Transportation, and the public. He described how he considered the stakeholders' varying perspectives in developing visualizations for the project to ensure they appropriately captured and communicated relevant information.

Mr. Talley concluded by describing his own background. He has no formal training in visualization, but rather developed expertise by consulting online resources, referencing books, and attending conferences. He recommended that workshop attendees feel empowered to develop visualization skills, and that it is not as hard as it may seem. He added that even if they do not have the desire or passion to develop their own visualizations, participants should be familiar with some of the visualization methods and how they are developed in order to get a more complete and economical product if they contract out their agency's visualization work.

Project Visualizations Facilitated Discussion

Meesa Otani of the FHWA Hawaii Division joined Jim Talley for a facilitated discussion with workshop participants following Mr. Talley's presentation. Participating agencies and organizations shared their experience with project visualizations, which included:

- Maui County uses 3D visual models for larger capital projects and has employed consultants who have developed project visualizations.
- WSP USA consultants develop project visualizations for Hawaii DOT and FHWA, including bridge replacement and highway tunnel projects.
- The City and County of Honolulu has used project visualizations for bridge projects.

Participants discussed some of the challenges of using project visualizations. One challenge a participating agency experienced was when a project visualization can create controversy, such as when a visualization is either not detailed enough or too detailed. Another challenge discussed is that project visualizations can be expensive, which can limit the ability of agencies to use them more widely.

Participants also discussed opportunities associated with using project visualizations. Participants expressed a sense that even for smaller projects, visualizations can be useful tools for public involvement, including reaching communities not well served by existing public involvement practices, including people with disabilities, people with limited English proficiency, and environmental justice (EJ) communities.

Public Involvement Management Application (PIMA) Presentation

Jon Rees of Iowa DOT gave a presentation on [Iowa DOT's PIMA tool](#). Iowa DOT continues to do traditional public involvement through public hearings and other meetings, but developed the PIMA tool five years ago to better manage public involvement activities and to improve virtual outreach. The PIMA tool now is [a centralized public portal](#) for all of Iowa DOT's projects and includes online meetings and project websites. Other VPI techniques that Iowa DOT uses include social media, [videos on YouTube](#), and virtual reality goggles at in-person events. Iowa DOT also uses ArcGIS StoryMap software for some online content, as it is a user-friendly tool that can quickly provide the public with useful information relevant to specific projects.

The PIMA tool is owned by Iowa DOT, and Iowa DOT makes it available through memoranda of understanding to other state DOTs. Georgia DOT, Massachusetts DOT, and Kansas DOT have all used the PIMA tool, and Massachusetts DOT is currently working to develop native Apple and Android smartphone apps for the PIMA tool.

Mr. Rees then provided a live demonstration of the PIMA tool. During the demonstration, he mentioned that the PIMA tool has streamlined Iowa DOT's public meetings. Iowa DOT staff bring iPads with them to public meetings to allow the public to sign-in digitally, integrating into the PIMA tool, and also to submit comments directly into PIMA. This integration ensures that relevant members of the public can be contacted via email with a single click through the PIMA tool. Iowa DOT also developed an offline version that can be used in areas with limited internet connectivity; however, this version has only been used once in the past year, as internet connectivity is typically available, even in Iowa's rural communities.

Mr. Rees described and demonstrated various features of the PIMA tool, including:

- The single-pane operation of the PIMA tool. The PIMA tool is contained entirely within one window, for both public users and staff, making it easy to use on each specific project;
- How staff can setup email notifications for new comments and reminders for comments that have not yet received a staff response;
- How to export all comments for a project with relevant information to attach to National Environmental Policy Act (NEPA) documentation or to assist in Planning and Environment Linkages (PEL) activities; and
- How Microsoft Outlook integration works, allowing the system calendar to provide updates and reminders for meetings.

Mr. Rees also described and demonstrated the [public portal](#), which is how the public engages with PIMA online. The main feature of the public portal is a map of the project location, which shows color-coded comments based on whether they are positive, neutral, or negative related to the project (Figure 4). Users can select projects by clicking on their location on the main map, which will open a description of the project, provide its status (e.g., in development, under construction, etc.), and provide an opportunity to leave a comment. Users can also see what percent of comments are in support of the project and read all comments left on a project.

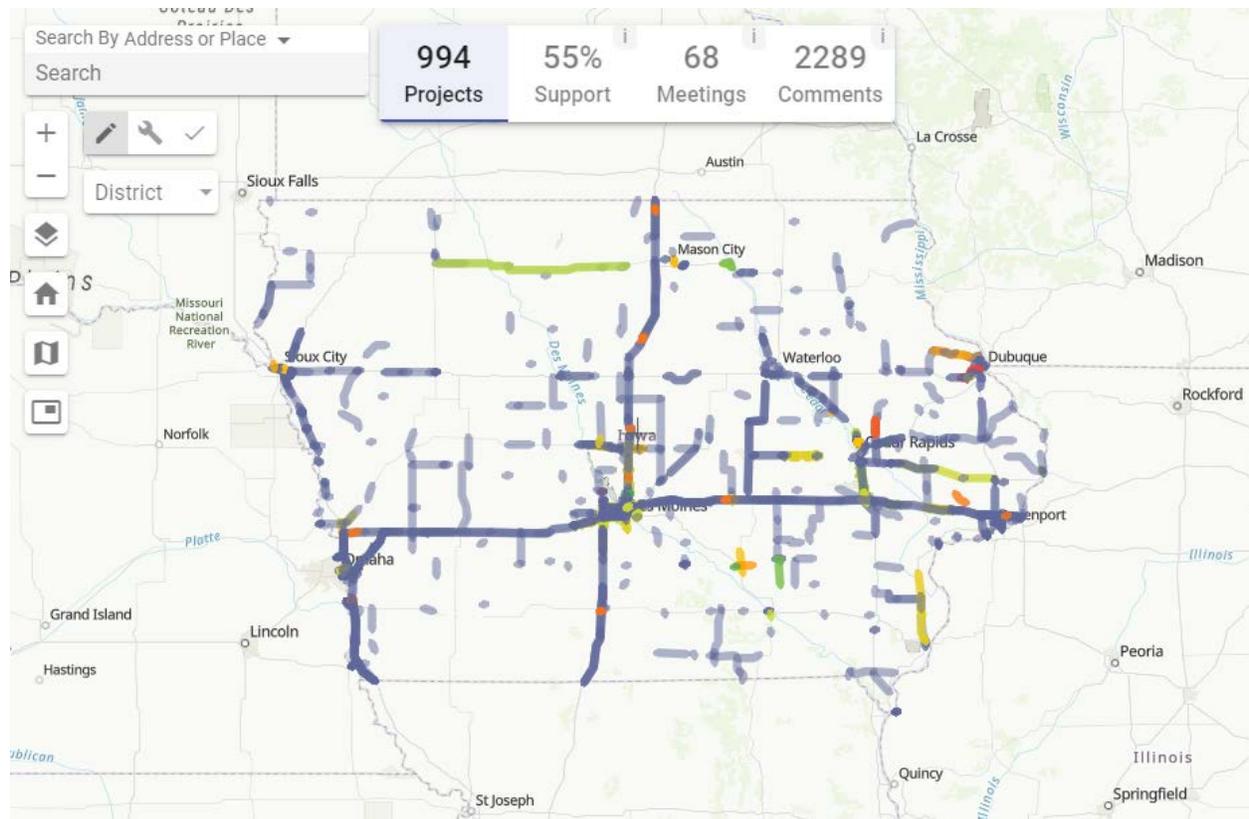


Figure 4. Screenshot of Iowa DOT's PIMA public portal, featuring projects color-coded by level of support. Source: Iowa DOT.

PIMA Presentation Facilitated Discussion

Meesa Otani of the FHWA Hawaii Division joined Jon Rees for a facilitated discussion with workshop participants following Mr. Rees's presentation. Participants shared their experiences with public involvement management software and challenges they have encountered with implementing VPI techniques.

For example, Hawaii DOT shared that they currently have a three-year contract in place with a software provider to begin more online public involvement activities. Agencies also shared that Hawaii's open meetings (or "sunshine") law can be challenging for using digital tools for online meetings, as compliance can be difficult when remote participants call-in or livestream a public meeting required under state or federal laws.

Participants also discussed different types of software that can be used for online meetings and the tradeoff between livestreaming meetings or providing recorded meetings online after they occur. For example, Hawaii's Sunshine Law may prevent the ability to livestream certain meetings. Additionally, livestreaming meetings can introduce technical challenges that require additional resources to adequately address. Methods of promoting online meetings were also discussed, and included social media, traditional flyers, email announcements, and word of mouth.

PIMA Breakout Session

On the second day of the workshop, Jon Rees of Iowa DOT led a breakout session to provide a more in-depth and hands-on demonstration of the PIMA tool and public portal. Mr. Rees also provided virtual

reality goggles that Iowa DOT uses at some public involvement events for workshop participants to test during the breakout session. The breakout session was followed by a question-and-answer session with workshop participants. Some questions and answers discussed during the breakout included:

- **Question: Can you categorize comments that you receive?**
 - Answer: You can sort by categories, including selecting multiple ones. You cannot add in custom categories yet, but Iowa DOT is working to add that capability.
- **Question: What is the startup cost of developing immersive 3D visualization scenarios for the virtual reality goggles?**
 - Answer: On average, it costs about \$50,000 per custom immersive 3D visualization scenario.
- **Question: How do you advertise the availability of the PIMA tool and let the public know about projects?**
 - Answer: We send out physical letters to stakeholders when we have a project. If we have available email address within the PIMA tool from past correspondence, we will also send an announcement to those email addresses. All correspondence includes a link to the project website, which is integrated with the PIMA tool.

Project Visualizations Breakout Session

Jim Talley provided a live demonstration of creating a project visualization. Using a previously developed visualization, Mr. Talley showed the project file on a projector and walked through some of the basic tools that can be used to create the visualization. He also showed how to create photo simulations as a second example and walkthrough. The question-and-answer portion of the breakout session included the following:

- **Question: Where did the proposed bridge photograph come from prior to working on this visualization?**
 - Answer: This bridge was modeled in a computer-aided design drafting (CADD) software. From that model, the bridge can then be turned into a 3D model.
- **Question: For the colorization example, what format were the original plans in?**
 - Answer: The original plans were in a PDF file and imported into the image editing software. Many file types can be imported, including PDFs (either generated or scanned from paper documents) and JPEGs.
- **Question: If you are just starting out with visualizations, where should you look for resources?**
 - Answer: Jim recommended checking online resources, such as YouTube videos, where many experts demonstrate how to do specific things in visualization software free of charge. He also suggested that participants could feel free to reach out to him directly via email.

Synthesis Discussion

The workshop concluded with synthesis discussion of the material presented and next steps for Hawaii DOT and other participating agencies. Meesa Otani of the FHWA Hawaii Division facilitated the discussion. Key points addressed and identified during the discussion included:

- Leadership buy-in for acquiring software, training staff, and pursuing VPI techniques can be challenging. Iowa DOT leadership is willing to engage in webinars for Hawaii DOT leadership related to the PIMA tool, as it has done for other states, if helpful.
- Collaboration and coordination in Hawaii among Hawaii DOT and local public agencies can help advance VPI techniques across the state. A regularly scheduled conference call among Hawaii agencies to discuss public involvement was suggested as one idea to enhance collaboration and coordination.
- Adding a requirement for the use of VPI techniques in consultant contracts can be a way to advance implementation in Hawaii.

Appendix A: Workshop Agenda

Dates: December 10-11, 2019

Location: Daniel K. Inouye International Airport
Interisland Terminal (Terminal 1)
7th Floor, Room 3
Honolulu, HI

Day 1 Agenda

Time	Topic
9:00 – 9:30 a.m.	Registration and Networking
9:30 – 9:45 a.m.	Welcome and Introductions FHWA and Hawaii DOT welcome attendees, do a round of introductions, review the agenda, and establish ground rules for discussions.
9:45 – 10:15 a.m.	Virtual Public Involvement Overview FHWA staff present an overview of VPI and provide context on the importance of public involvement in MPO planning. Q&A will be included.
10:15 – 10:30 a.m.	Break
10:30 – 11:45 a.m.	Project Visualizations Presentation FHWA will provide a presentation showing a range of visualization techniques (including both low-cost and more advanced techniques) drawing from their own expert experience as well as featuring examples from other State DOTs and MPOs. Q&A will be included.
11:45 a.m. – 12:45 p.m.	Lunch
12:45 – 1:45 p.m.	Project Visualizations Facilitated Discussion FHWA staff will facilitate a discussion among the attendees and peers on visualization in a public involvement context. Possible discussion questions include: <ul style="list-style-type: none"> • What types of project visualizations are being used in Hawaii? • When does the group currently consider it appropriate to use project visualizations? Controversial projects only? • Are there any project visualization software training modules available? • Can project visualizations be used in planning? • Can project visualizations better meet the needs of ADA, EJ, and LEP communities?
1:45 – 2:30 p.m.	Public Involvement Management Application (PIMA) Presentation Iowa DOT will provide a presentation discussing their experiences using their custom built online/virtual public involvement application, PIMA, and their need for the tool. They will discuss and demonstrate how they use PIMA to manage public involvement events, as well as interact with the public, respond to, and manage comments received both during and outside of public meetings. Q&A will be included.
2:30 – 2:45 p.m.	Break

Time	Topic
2:45 – 3:45 p.m.	<p>Virtual Public Involvement Applications and Public Comment Management Software Facilitated Discussion</p> <p>FHWA staff will facilitate a discussion among the attendees and peers on virtual public meetings and comment management software. Possible discussion questions include:</p> <ul style="list-style-type: none"> • How do you market virtual meetings to your communities? • How do you respond to public comments provided during virtual meetings? • How can virtual meetings help expand outreach to underserved populations? • What specific tools are available for conducting virtual meetings? • What are the best practices for conducting virtual meetings? • What tools are best suited to be scaled appropriately for smaller agencies?
3:45 – 4:15 p.m.	<p>Key Takeaways Discussion and Preview of Day 2</p> <p>FHWA staff will facilitate a discussion of key takeaways from the day’s presentations and discussions, and will provide a preview of the discussions planned for Day 2.</p>

Day 2 Agenda

Time	Topic
9:00 – 9:30 a.m.	Networking
9:30 – 9:45 a.m.	<p>Recap of Day 1 and Introduction to Day 2 Discussion Topic</p> <p>FHWA staff will recap the key discussion points from Day 1 and introduce the topic for Day 2.</p>
9:45 – 11:00 a.m.	<p>Breakout Sessions – Demonstrations and Exercises</p> <p>Expert peers will lead two breakout sessions to demonstrate visualization and virtual meeting/comment management tools in more depth.</p>
11:00 – 11:15 a.m.	Break
11:15 a.m. – 12:15 p.m.	<p>Synthesis Discussion – Institutionalizing VPI</p> <p>FHWA staff will facilitate a discussion among the attendees and peers on how agencies can apply what they learned at the workshop in their agencies, and how to advance their agencies’ implementation of VPI overall. Possible discussion questions include:</p> <ul style="list-style-type: none"> • Has your agency developed VPI policies, handbooks, or standard operating procedures? • How did you get leadership buy-in? • How have you integrated VPI strategies into your overall communications strategy or public participation plans? • What challenges did you encounter when trying to institutionalize VPI, and how did you overcome them? • What are some effective practices for remaining in compliance with Title VI, EJ, and ADA laws and regulations while implementing VPI? • What plans, projects or initiatives targeted in the next year could implement some of the VPI tools/techniques that we discussed?
12:15 – 12:30 p.m.	<p>Summary of Future VPI Engagement Opportunities and Closing Remarks</p> <p>FHWA will summarize next steps for the VPI initiative and Hawaii DOT will make closing remarks.</p>

Appendix B: Workshop Participants

First Name	Last Name	Agency/Organization
Ramon	Acob	Hawaii DOT
Rachel	Adams	WSP
Pua	Aiu	Hawaii DOT
George	Atta	Hawaii Community Development Authority
Kathleen	Chu	Jacobs, Inc.
Beverly	Chun	Hawaii Dot
Silas	Collier	Allana Buick & Bers
Aaron	Couch	G70 Design
Travis	Crayton	U.S. DOT – Volpe Center
Taylor	Ellis	Oahu MPO
Agnes	Fisher	Hawaii DOT
Amy	Ford-Wagner	FHWA Hawaii Division
James	Fu	Hawaii DOT
Hynia	Gardner	Hawaii DOT
Katherine	Hernandez	City and County of Honolulu
Andrew “Andy”	Hirano	Hawaii DOT
Clarice	Kam	City and County of Honolulu
Shelly	Kunishige	Hawaii DOT
Malie	McClellan	WSP
Keiko	Mercado	Hawaii County
Dan	Milz	University of Hawaii at Manoa
Laura	Mo	City and County of Honolulu
Meesa	Otani	FHWA Hawaii Division
Kiana	Otsuka	Oahu MPO
Lisa	Powell	FHWA Hawaii Division
Jon	Rees	Iowa DOT
Erin	Roh	Ulupono Initiative
Kahaa	Rezantes	FHWA Hawaii Division
Ray	Severn	Hawaii DOT
Dayea	Shim	University of Hawaii at Manoa
Robin	Shishido	Hawaii DOT
Matthew	Small	WSP
Meredith	Soniat	City and County of Honolulu
Natasha	Soriano	Hawaii County
Genevieve	Sullivan	Hawaii DOT
Richelle	Takara	FHWA Hawaii Division
James “Jim”	Talley	FHWA Eastern Federal Lands Highway Div.
Jill	Tanabe	Hawaii DOT
Ken	Tatsuguchi	Hawaii DOT
Patrick	Tom	Hawaii DOT
Herman	Tuiolosega	Hawaii DOT
Brian	Tyau	Hawaii DOT
Erin	Wade	Maui County
Ron	Whitmore	Hawaii County