



## 2019 IDDEA Conference Announcement

Scheman Center, Iowa State University, Ames, Iowa  
Workshops October 2nd & October 4th  
Conference Day October 3rd

With this newsletter, I am pleased to announce the agenda for the 2019 IDDEA Conference. This year's conference will be held on October 2nd through the 4th and will provide a great learning environment for every attendee. The IDDEA conference will showcase our users' practices, MicroStation, OpenRoads Designer, and show everyone the future of design and analysis.

The IDDEA Board has worked hard to put together a conference full of sessions and workshops that highlight both the current and future MicroStation and Civil software that Bentley offers. We are bringing in presentations from the industry, Bentley professionals, as well as presentations from the Iowa Department of Transportation. We have sessions for beginners through advanced users to fulfill everyone's needs. Many of these sessions and workshops come to you directly from the 2019 Bentley LEARNING Conferences held this year.

Our keynote, "**Design to Construction, Building the Digital Twin**" presented by Corey Johnson, from Bentley, will share his perspective on the Design to Construction trend and "Digital Twins", that seems to be the industry buzz word. Corey will put a realistic spin on it and explain how it will impact Iowa in the near future.

Once again this year the board is hosting a social event and prize giveaway on Thursday, Oct 3rd, following the conference. The intent is to provide an opportunity to meet with peers as well as the presenters and sponsors. Hors d'oeuvres will be provided and a cash bar will be available for refreshments. All conference participants are invited to attend the social event following the closing remarks.

To register for the conference, you can make use of our on-line registration service. Sign up right away, as workshop attendance is based on a first come, first serve basis. The site is located at our web address: [www.iddea.org](http://www.iddea.org). At this site you can download the conference newsletter, register for the conference, find information about the IDDEA Group, and download electronic copies of presentations that we have received from presenters. Please register on our site if you have not already.

As a bonus, any presentations that we receive before the conference will be available for download the day of the conference. Simply bring a USB drive to the registration desk, and IDDEA Board members will copy any presentations that we have onto your drive. If you forget your USB drive, these presentations will be posted on our website for later downloading.

As always, we put this conference together for you, our membership. Let a board member know if you have any suggestions for future sessions or workshops that you would like to see. Please let us know any ideas or if you are interested in giving a presentation.

We look forward to seeing you at the 2019 IDDEA Conference on October 2nd through the 4th at the Scheman Center on the Iowa State University Campus in Ames.

Hope to see you there!!

Russ Lemke  
Chair, The IDDEA Group

## Registration Information

To register for the IDDEA Conference visit: [WWW.IDDEA.ORG](http://WWW.IDDEA.ORG)

**Note: We hope you will become a member before registering for the conference, but it is not required.**

A variety of payment options are available during the registration process. A confirmation email will be sent when payment is received.

Payment must be **received no later than Wednesday, September 25, 2019**. The deadline to cancel and receive a refund is also **Wednesday, September 25, 2019**.

Make checks payable to: The IDDEA Group

Send to: Iowa DOT  
Office of Bridges and Structures  
c/o Annette Jeffers  
800 Lincoln Way  
Ames, Iowa 50010

A copy of the registration form will serve as an invoice for most purposes.

½ day workshop - \$75

Full day Workshop - \$150

Conference day - \$90

Students – (Conference day only) - \$30

[Register On-Line Here](#)

## Conference Location & Hotel Accommodations

**IOWA STATE UNIVERSITY**

Google - [Directions to Iowa State University](#)

Iowa State University – [Online Campus Map](#)

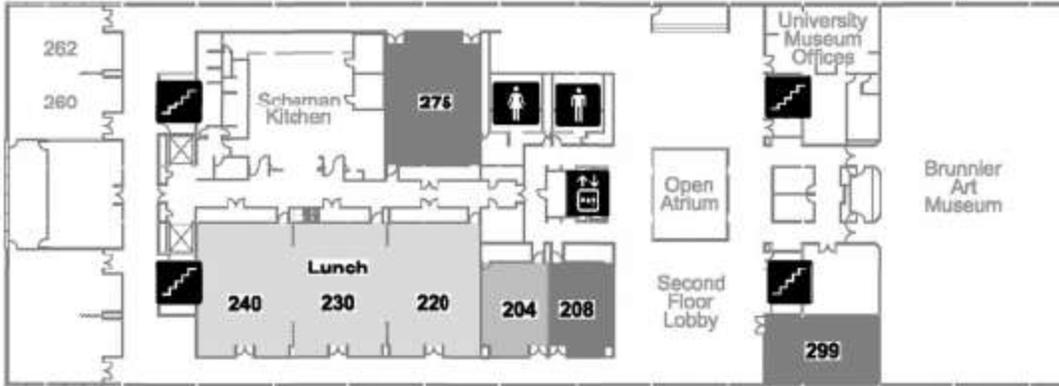
Hotel Accommodations – [Ames Convention and Visitors Bureau](#)

Dining – [Ames Convention and Visitors Bureau](#)

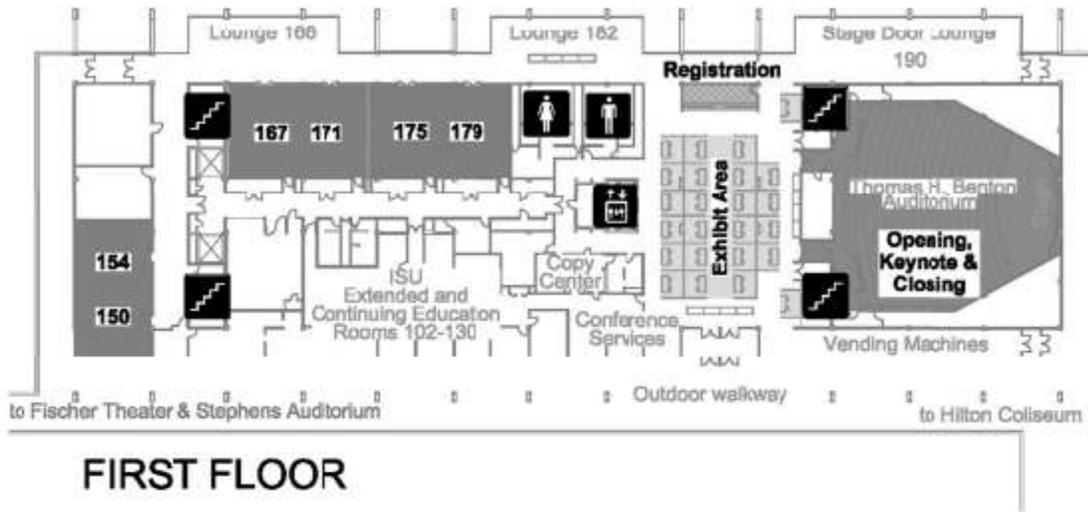


# IOWA STATE CENTER - IOWA STATE UNIVERSITY

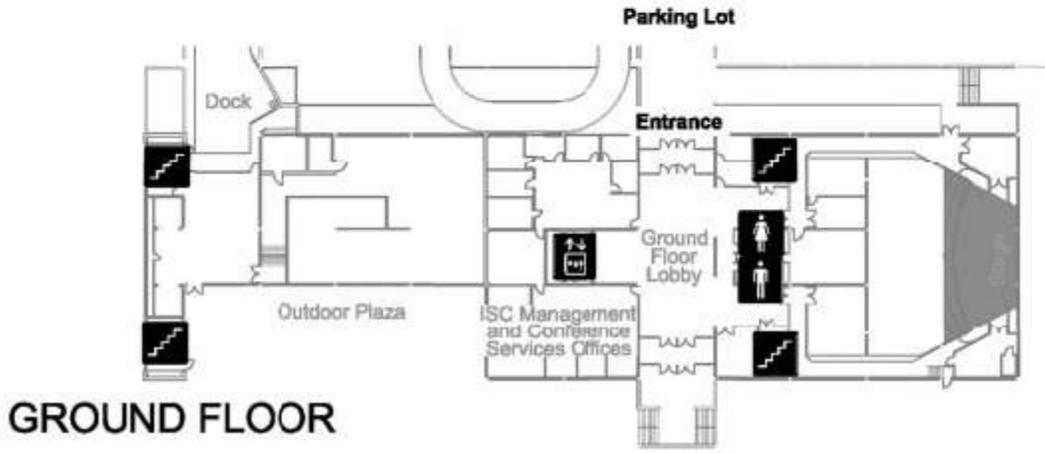
## Scheman Building



**SECOND FLOOR**



**FIRST FLOOR**



**GROUND FLOOR**

**Corey Johnson, Bentley Systems, Inc.**

Corey Johnson is Director of Product Management, Project Delivery for Bentley Systems. In this role, Corey is responsible for overseeing the design and development within the SYNCHRO product line, which includes Progress Tracking, Construction Modeler and Inspections. Corey comes to Bentley Systems with more than 25 years' experience in and around the Infrastructure industry. For the past 20 years, he has worked in the civil infrastructure industry covering from survey to design through construction. With a focus on model-based deliverables he has coordinated with architects, engineers, construction teams and owners. Before Joining Bentley Systems, he was a Director of Product Management for a Construction focused product company. He worked his way up to be a Manager of Virtual Design and Construction in a large construction company providing consulting services to many internal organizations specializing in Civil Modeling focusing on BIM software and deliverables. With a real-world background and deep passion for modeling, Corey works closely with industry leaders, owners and users to ensure that the proper business outcomes are achieved with the right solutions. Corey has spoken throughout the US as well as in Canada and Europe.

Workshop Presenters

**Mike Barkasi, Bentley Systems, Inc.**

[Mike.Barkasi@bentley.com](mailto:Mike.Barkasi@bentley.com)

Mr. Barkasi has over 20 years of experience in Civil engineering and working with Geographic Information Systems. With a Temple University graduate and Post Baccalaureate Certificate in GIS from Penn State, he has worked for Bentley Systems since 2006 using InRoads, GEOPAK, and OpenRoads Civil Cell Technology. Most Recently Mr. Barkasi has been involved within Bentleys Reality modeling group developing workflows for ContextCapture models within Bentleys design software applications.

**Keith Boteler, Bentley Systems, Inc.**

[Keith.Boteler@bentley.com](mailto:Keith.Boteler@bentley.com)

With over 30 years of experience in the Transportation industry (25 years using GEOPAK), Mr. Boteler is a Professional Engineer with strong technical and applied expertise. He is an experienced internal and external consultant with deep knowledge in the areas of AEC software management, information standards design, workflow analysis, solutions training, customization and development. His background as CADD Engineer for Mississippi DOT provides him with invaluable insight for client requirements.

**Brad Hodor, Civil Solutions, Inc.** [bhodor@CivilSolutionsInc.com](mailto:bhodor@CivilSolutionsInc.com)

Mr. Hodor has over 25 years of experience in the transportation and site engineering fields. He has worked as a project engineer and project manager on numerous road projects for various clients including IDOT, Illinois Tollway, and other municipal and private entities. He is experienced in Phase I, II, and III engineering and teaches civil application classes. Mr. Hodor is proficient with AutoCAD®, Civil 3D®, MicroStation®, GEOPAK®, InRoads®, and Open Roads® with at least twenty-five (25) years of experience on Highway/Roadway/Site Development projects. He is experienced in CADD drafting and is responsible for analyzing business requirements for project design at the complex - intermediate level for small to large-sized projects or systems that are of above-average complexity, and that could span multiple business units. Mr. Hodor owns and manages Civil Solutions, Inc., a Civil Engineering software training corporation. Brad determines, advises, and implements procedures necessary to achieve appropriate accuracy and consistency standards. Civil Solutions, Inc. provides training and technical guidance to others in major Civil Engineering technologies and applications.

**Steve Litzau, EnvisionCAD**

[steven.litzau@envisioncad.com](mailto:steven.litzau@envisioncad.com)

Since completing his degree in Civil Engineering at Colorado State University, Steve has accumulated fifteen years of experience in the AEC industry. His experience spans all phases of project development from conceptual design through to final construction documents delivered on both Autodesk and Bentley civil platforms. While specializing in geometric design and modeling of linear projects, Steve also provided three-dimensional modeling for simple and complex site design projects. Following ten years of civil engineering design, Steve followed his passion for process and workflow into design technology systems, support and management. While at a national AEC firm, Steve supported over 150 engineering and design applications, serving as a subject matter expert for numerous applications, including Bentley's GEOPAK and Autodesk's Civil 3D. As the Manager of Design Technology, Steve oversaw teams tasked with all aspects of design technology application support from installation and licensing to software customization and training. Now with EnvisionCAD Steve leverages this experience to provide a full spectrum of support to organizations and agencies including configuration, project support, education and strategic planning.

**Steve Rick, Bentley Systems, Inc.**

[steve.rick@bentley.com](mailto:steve.rick@bentley.com)

With over 30 years' experience in engineering technology, Steve provides technical support for all Bentley platform software, project management tools and server products. He is proficient at generating custom tools and workspaces. As a Bentley certified instructor, develops and delivers client-specific Bentley training. Has performed a wide variety of MicroStation-related training as a certified instructor since 1994, to such clients as Minnesota DOT, South Dakota DOT, North Dakota DOT, Iowa DOT, Nebraska Department of Roads, USACE, US Army as well as many others. Standard MicroStation-related training he has performed includes Bentley's Essential MicroStation, Moving to MicroStation, Productive MicroStation, Managing MicroStation, Administering MicroStation, Everything 3D, MicroStation Animation and Rendering, Bentley Map, Map Administrator and some ProjectWise Knowledge as well. He has also developed custom courseware for some of these agencies.

**Jeff Vaske, Midwest CAD Solutions.**

Jeff has been a CAD consultant for the past twelve years working with a diverse client base from civil engineering to power/gas utility companies. He has provided CAD support, developed custom documentation, and conducted MicroStation, GEOPAK, Descartes, and OpenRoads training for all skill levels. Jeff currently provides CAD management for a large utility company with over 150 users spanning multiple states. Before being a consultant Jeff was a civil technician with MnDOT and two consultant firms designing various State, County, and City projects. His six years of road construction rounds out his background enabling him to relate design to field application.

**Steve Willoughby, Bentley Systems, Inc.**

[steve.willoughby@bentley.com](mailto:steve.willoughby@bentley.com)

Steve started his career working for Illinois DOT. He began working for GEOPAK Corp. in 1995. He has worked in the Bridge Information Modeling Group since its inception providing consulting, training, and support services. He has nearly 30 years of experience in using, implementing, training, and supporting civil engineering design software. He has worked with over two dozen DOT's and countless engineering firms in his time with Bentley Systems.

Workshop Presenters Continued

**Timothy Wright, Bentley Systems, Inc.**

[Timothy.Wright@bentley.com](mailto:Timothy.Wright@bentley.com)

For the past 29 years Tim has worked in the CADD field. First for private contractors then nearly 20 years at the Illinois Dept. of Transportation where he supported District operations statewide, ran the training program and worked closely with the surveyors. Now working with the Training Materials production group at Bentley he works with the team to produce training courses, videos and hosting webinars. Tim also founded the Illinois Bentley User group, was instrumental in its growth and also occasionally moonlights at a local community college teaching MicroStation.

Conference Presenters

**Mike Barkasi, Bentley Systems, Inc.**

[Mike.Barkasi@bentley.com](mailto:Mike.Barkasi@bentley.com)

**Keith Boteler, Bentley Systems, Inc.**

[Keith.Boteler@bentley.com](mailto:Keith.Boteler@bentley.com)

**Dan Calistrat, DTM Solutions**

[dan@dtm-solutions.com](mailto:dan@dtm-solutions.com)

**Thomas Hamski, Iowa DOT**

[thomas.hamski@iowadot.us](mailto:thomas.hamski@iowadot.us)

**Brad Hodor, Civil Solutions, Inc.**

[bhodor@CivilSolutionsInc.com](mailto:bhodor@CivilSolutionsInc.com)

**Steve Litzau, EnvisionCAD**

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**Dan Messerich, Iowa DOT**

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**Jonathan Miranda, Iowa DOT**

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**Patrice Rhodes, P. H. Rhodes, Inc.**

[Patrice@PHRhodesInc.com](mailto:Patrice@PHRhodesInc.com)

**Steve Rick, Bentley Systems, Inc.**

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**Steve Willoughby, Bentley Systems, Inc.**

[Steve.Willoughby@bentley.com](mailto:Steve.Willoughby@bentley.com)

**Timothy Wright, Bentley Systems, Inc.**

[Timothy.Wright@bentley.com](mailto:Timothy.Wright@bentley.com)

7:30-8:00	<b>Workshop Registration</b>		
<b>Room No.</b>	<b>150-154</b>	<b>167-171</b>	<b>175-179</b>
<b>8:00 - 12:00</b>			
<b>Break Sponsored by Stanley Group</b>	<b>Templates Triggers and Switches and Quantities and Earthwork</b> <i>Keith Boteler</i>	<b>Creating a Reality Model and Integrating Reality Models into Civil Design</b> <i>Mike Barkasi</i>	<b>OBM to LEAP - Bridge Concrete and Back, Steel and Back</b> <i>Steve Willoughby</i>
<b>12:00 - 1:00</b>	<b>Lunch (Stage Door Lounge 190) Afternoon Registration</b>		
<b>1:00 - 5:00</b>			
	<b>Intro to ORD for GEOPAK, InRoads, and MXROADS Users, and Intro to ORD Concepts and Capabilities</b> <i>Keith Boteler</i>	<b>Using and Editing Terrain Models and Creating Terrain from LiDAR Data</b> <i>Tim Wright</i>	<b>OpenBridge Modeler Workshop</b> <i>Steve Willoughby</i>

### **Templates Triggers and Switches and Quantities and Earthwork**

*Presenter – Keith Boteler and Tim Wright, Bentley Systems, Inc.*

In the first part of this workshop, learn how to create templates that use null points with component display rules. These act as triggers (or switches) to display and un-display parts of your template when linear geometry is added as corridor reference elements to a corridor. In the second part of this workshop, you will learn various tools and methods to extract and compute quantities and end area volumes from the corridor model, and much more.

### **Creating a Reality Model and Integrating Reality Models into Civil Design**

*Presenter – Mike Barkasi, Bentley Systems, Inc.*

In the first half of this workshop you will learn how to build a reality model using ContextCapture from photogrammetry. Civil users will gain valuable insight into the accuracy level provided from these models. The user will learn to include ground control on a captured roadway project and access detailed reports attesting to accuracy. Learn what it takes to generate a survey accurate reality model for use in civil design projects. In the second half of this workshop you will work with disparate data aligning spatially referenced information to generate a working design for volume comparison between various models all within the Open Roads environment. The user will also be introduced to how the reality models are generated inside of ContextCapture by creating a basic Photogrammetric model.

### **OpenBridge Modeler to LEAP – Bridge Concrete and Back, Steel and Back**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

The newest version of OpenBridge Modeler supports exchanging geometric changes and analytical information between LEAP Bridge Concrete and OpenBridge Modeler. This workshop will focus on the interaction between the two products as well as new OpenBridge Modeler reporting capabilities and the drawing generation tools.

## **Intro to ORD for GEOPAK, InRoads, and MXROADS Users, and Intro to ORD Concepts and Capabilities**

*Presenter – Keith Boteler and Tim Wright, Bentley Systems, Inc.*

This course is an overview of the capabilities of OpenRoads Designer for existing GEOPAK, InRoads, and MXROAD OpenRoads Technology users. Topics covered in this course include:

- Moving from SS3 and SS4 to OpenRoads Designer - What's The Same?
- Moving from SS3 and SS4 to OpenRoads Designer - What's Changed?
- Moving from SS2 to OpenRoads Designer - What's Changed?
- OpenRoads Designer Interface
- Import Existing Ground Data from Legacy Formats
- Import and Annotate Geometry from Legacy Formats
- Corridor Modeling
- Superelevation
- Integration with OpenBridge Modeler
- Subsurface Utilities
- Cross Section Sheet
- Plan and Profile Sheet Creation

## **Using and Editing Terrain Models and Creating Terrain from LiDAR Data**

*Presenter – Keith Boteler and Tim Wright, Bentley Systems, Inc.*

This first part of this workshop reviews how to display terrain models to view different source and computed features including the boundary, triangles, and contours; and teaches how to display the terrain model thematic height illustrations. You will also learn how to create terrain models by importing graphic elements, identify and fix terrain model problems, and combine multiple terrain models together. In the second part of this workshop, you will learn how to process large LiDAR data sets to a manageable terrain model suitable for use within a project.

## **OpenBridge Modeler Workshop**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

This hands-on workshop will introduce you to the world of OpenBridge Modeler where you will learn how to create a model for a steel girder bridge. This course will be taught using the OpenBridge Modeler Connect Edition software.

7:15-8:00	Conference Registration and Continental Breakfast						
8:00-9:00	Opening Remarks and Keynote: Design to Construction, Building the Digital Twin (Auditorium)						
9:00 - 9:10	BREAK (Vendor Area) - Sponsored by AECOM						
Room No.	175-179	167-171	150-154	204	208	275	299
	1	2	3	4	5	6	7
9:10-10:00	Clash Detection - Your Chance to be a Hero <i>Tim Wright</i>	Template Concepts <i>Steve Litzau</i>	Iowa DOT Terrain Models <i>Dan Messerich</i>	OpenBridge Modeler - Understanding Workspace Files and Configuration <i>Steve Willoughby</i>	Favorite MicroStation V8i (SS10) Configuration Tricks <i>Patrice Rhodes</i>	Moving to OpenRoads Designer - Where to start <i>Keith Boteler</i>	MicroStation CONNECT Edition: What's New and Improved? <i>Steve Rick</i>
10:00-10:10	BREAK (Vendor Area) - Sponsored by Bolton & Menk						
	8	9	10	11	12	13	14
10:10-11:00	OpenRoads Designer Survey Update <i>Tim Wright</i>	Advanced Corridor Concepts <i>Steve Litzau</i>	Reality Modeling for Transportation Projects <i>Mike Barkasi</i>	Plans Production with OpenBridge Designer <i>Steve Willoughby</i>	Best of MicroStation V8i (SS10) Top Ten Support Questions <i>Patrice Rhodes</i>	Under the Hood: Configuring Annotation in OpenRoads Designer <i>Keith Boteler</i>	Workflow Upgrade: GEOPAK to ORD <i>Dan Calistrat</i>
11:00-11:10	BREAK (Vendor Area) - Sponsored by Snyder & Associates						
	15	16	17	18	19	20	21
11:10-12:00	New Site Design Workflows Make for Better Projects <i>Tim Wright</i>	Iowa DOT Bentley Connect Products Implementation <i>Thomas Hamski</i>	Generating 3D Models with Context Capture (on-premises) <i>Mike Barkasi</i>	Iowa DOT Underground Utilities <i>Dan Messerich</i>	Civil AccuDraw - Leveraging the power in design <i>Brad Hodor</i>	OpenRoads Best Practice - Civil Cells <i>Keith Boteler</i>	Introduction to Parametrics and Constraints <i>Steve Rick</i>
12:00-1:00	Lunch						
	22	23	24	25	26	27	28
1:00-1:50	4D Modeling for Roads with Bentley Schedule Simulation <i>Tim Wright</i>	Iowa DOT Use of Context Capture <i>Jonathan Miranda</i>	Utilizing Descartes for Ground Extraction of Reality Meshes and Point Clouds <i>Mike Barkasi</i>	OpenBridge Designer: I have the model, What can I do now? <i>Steve Willoughby</i>	Open Roads for Managers <i>Brad Hodor</i>	Modeling ADA Compliant Ramps <i>Keith Boteler</i>	Creating Custom Line Styles <i>Steve Rick</i>
1:50-2:00	BREAK (Vendor Area) - Sponsored by HR Green, Inc.						
	29	30	31	32	33	34	35
2:00-2:50	OpenRoads Geometry - Where are my COGO Tools? <i>Tim Wright</i>	CONNECT Edition Interface Hacks <i>Steve Litzau</i>	Combining Aerial Imagery and Ground Imagery in a Reality Model <i>Mike Barkasi</i>	Analysis, Design and Optimization of Steel Bridges with LEAP Bridge Steel <i>Steve Willoughby</i>	Migrate GEOPAK Survey to ORD <i>Jeff Vaske</i>	Computing Earthwork Volumes with OpenRoads Designer <i>Keith Boteler</i>	Corridor Modeling Best Practice <i>Dan Calistrat</i>
3:00-5:00	Closing Remarks & Membership Business (Auditorium) Door Prizes and Social (Vendor Area) - Social Hour Sponsored by Foth						
*** Vendors will be exhibiting in the Lobby from 7:30 am to 5:00 pm ***							
Session Emphasis	MicroStation	Civil Products	Survey	Bridge	Reality Modeling		

8:00 – 9:00

**Keynote – Design to Construction, Building the Digital Twin***Presenter – Corey Johnson, Bentley Systems, Inc.*

Technology has redefined how we connect with one another, how we choose products or services, and even how we do our shopping. So, it's no surprise that the construction industry is shifting to see the benefits of the ever-evolving technological world we now live and work in. Technology ensures the successful delivery of Infrastructure projects (Transportation, Water, Energy) are central to the flourishing economies of the world - they form the nervous system of society. They also present the most challenging work environments and the riskiest ventures for the contractors who build them. Discover how Designers and Contractors are evolving traditional construction processes with data, and how leveraging those multiple forms of data collection from the field with the Digital Twin can transform workflows and enable better real-time decision making to optimize project outcomes. Understand how you can help transform the future, today, and deliver safer, on-time, quality-driven, profitable projects.

9:10 – 10:00

**1 – Clash Detection – Your Chance to be a Hero***Presenter – Tim Wright, Bentley Systems, Inc.*

Somebody else checked for construction conflicts, right? How much are you willing to bet? Conflict Detection is easy: in an hour's training you can rule out oversights that can blow up schedules and budgets. They may not be your utilities, but it's your project: protect it! Any 3D solid (i.e., the engineering model) can be checked for hard and soft conflicts. You can even check to see what a construction trench will conflict. Don't let a costly conflict slip through the cracks. Ensure that your project is clear. Be the hero!

**2 – Template Concepts***Presenter – Steve Litzau, EnvisionCAD*

Integral to roadway modeling, templates are the heart and soul of the corridor feature. This presentation looks to outline general concepts to bear in mind when creating a template or template library. It will address aspects of the interface and concepts to leverage in the development of templates.

**3 – Iowa DOT Terrain Models***Presenter – Dan Messerich, IA DOT*

This session will discuss terrain models in OpenRoads SS4. The DOT uses terrains from multiple sources (conventional survey, LiDAR, Mobile LiDAR, and UAS) and we will discuss how they come together. Full and Partial DTM surveys will be explained as well as the Photogrammetry Section.

**4 – OpenBridge Modeler – Understanding Workspace Files and Configuration***Presenter – Steve Willoughby, Bentley Systems, Inc.*

OpenBridge Designer is delivered with a workspace structure designed to be flexible and extendable for agencies, consulting firms, and users large and small. Different organizations have different workspace needs and those needs are frequently different from project to project. The OpenBridge Designer workspace has been reconfigured to meet the needs of production environments while minimizing the need for you to be a configuration variable expert to setup your projects. This session will explain in simple terms how to use the delivered workspace, incorporate agency standards, and extend all of this with your company and project standards.

**9:10 – 10:00 CONTINUED****5 – Favorite MicroStation V8i (SS10) Configuration Tricks**

*Presenter – Patrice Rhodes, P.H. Rhodes, Inc.*

MicroStation's configuration contains powerful tools that allow you to make the software work for you. This session will cover some of Patrice's favorite configuration tricks that will fine tune MicroStation to make your work easier. It will include configuration tricks that help both users and administrators of MicroStation.

**6 – Moving to OpenRoads Designer – Where to Start**

*Presenter – Keith Boteler, Bentley Systems, Inc.*

During this session, we will consider the migration path options for moving to OpenRoads Designer from InRoads, GEOPAK, MXROAD, and PowerCivil SELECTseries 2, 3, and 4 software. Learn what can be done, the minimum that must be done, and what Bentley resources and services are available to assist you.

**7 – MicroStation CONNECT Edition: What's New and Improved?**

*Presenter – Steve Rick, Bentley Systems, Inc.*

Whether you're using V8i or an older release of MicroStation CONNECT Edition, every new update is packed full of valuable new capabilities that can help you save time and improve your design workflows. Get a tour of all of the very latest major enhancements and learn how you can get started using them immediately, whether everyone in your organization has upgraded to CONNECT Edition or not.

**10:10 – 11:00****8 – OpenRoads Designer Survey Update**

*Presenter – Tim Wright, Bentley Systems, Inc.*

A discussion on OpenRoads Designer survey functionality.

**9 – Advanced Corridor Concepts**

*Presenter – Steve Litzau, EnvisionCAD*

You have created your corridor, now what? We will look at a number of the tools that are offered to refine and enhance corridors. From point controls to parametric constraints these tools give us greater flexibility in our linear design efforts, and used wisely, can often reduce the number of needed templates/template drops.

**10 – Reality Modeling for Transportation Projects**

*Presenter – Mike Barkasi, Bentley Systems, Inc.*

Leveraging Reality Modeling allowed users of a large-scale bridge and road construction site to monitor and quantify the construction progress resulting in the discovery of major differences in the areas between the design and the actual construction.

**11 – Plans Production with OpenBridge Designer**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

During this session we will discuss all of the details, tips, and tricks to setup the drawing seeds used by the new OpenBridge Designer and how to create drawings of the bridge plan/profile, superstructure and substructure.

**10:10 – 11:00 CONTINUED****12 – Best of MicroStation V8i (SS10) Top Ten Support Questions**

*Presenter – Patrice Rhodes, P.H. Rhodes, Inc.*

In this session, I will pick ten of the best MicroStation support questions from over the years and show you the answers for those questions and how to fix those problems. This session will contain great MicroStation tips for both users and administrators.

**13 – Under the Hood: Configuring Annotation in OpenRoads Designer**

*Presenter – Keith Boteler, Bentley Systems, Inc.*

Calling all administrators, you don't want to miss this session where we open the hood and learn how to setup annotation for plan, profile, and cross section views. Setup the software once and all of your team will be sure to produce drawings that match your standards.

**14 – Workflow Upgrade: GEOPAK to ORD**

*Presenter – Dan Calistrat, DTM Solutions*

In the presentation we'll go over ways to change your methodology from "old-school" tools into the new all-graphical and all-DGN based workflows. We'll include step-by-step tool instructions to quickly get you into the new methods.

**11:10 – 12:00****15 – New Site Design Workflows Make for Better Projects**

*Presenter – Tim Wright, Bentley Systems, Inc.*

Learn how Bentley's new site design workflows will simplify the design workflow, helping engineers focus more on engineering and less on drafting. Our clients pay for the best designs and our goal is to do just that. But with ever changing regulations and pressure of time constraints, it can be overwhelming for professionals to deliver their best work. Come see how harnessing the power of parametrics and modeling will let you spend more time creating and reduce the drafting burden. The time saved in these new workflows will allow you to do more in the same amount of time. These workflows let engineers deliver the best project that meets requirements.

**16 – Iowa DOT Bentley Connect Products Implementation**

*Presenter – Thomas Hamski, IA DOT*

The Iowa DOT has engaged Bentley Systems to accelerate the migration of CONNECT software for the entire department at the same time. In this presentation we will discuss how we will be planning to roll out the software and offering Q&A with the department's implementation team.

**17 - Generating 3D Models with ContextCapture (on-premises)**

*Presenter – Mike Barkasi, Bentley Systems, Inc.*

Get an introduction to ContextCapture and discover how easy it is to generate 3D models to provide real-world digital context to your infrastructure projects. Learn about the latest ContextCapture technology updates and see what new capabilities and help streamline your workflows.

**11:10 – 12:00 CONTINUED****18 – Iowa DOT Underground Utilities**

*Presenter – Dan Messerich, IA DOT*

This session will discuss underground utilities for DOT projects. OpenRoads is using 3D pipes to show a more realistic topographic features. The end sections of drainage structures

can be shown with a 3D cell. This session will also go over the files that need to be created as to keep their sizes down. If we have time we can also discuss SUE classifications and collection.

**19 – Civil AccuDraw – Leveraging the power in design**

*Presenter – Brad Hodor, Civil Solutions, Inc.*

Civil Accudraw is a powerful but underutilized tool. In this workshop, Civil Accudraw will be implemented to provide dynamic information during the design process. The dynamic display provides real-time information in all views, thereby providing immediate feedback to the designer.

**20 - OpenRoads Best Practice – Civil Cells**

*Presenter – Keith Boteler, Bentley Systems, Inc.*

Join a Bentley expert as they share tips and tricks for creating and using OpenRoads civil cells. Many of these tips and tricks apply to both OpenRoads Designer, CONNECT Edition and V8i versions of InRoads, GEOPAK, MXROAD, and PowerCivil.

**21 – Introduction to Parametrics and Constraints**

*Presenter – Steve Rick, Bentley Systems, Inc.*

Models need to be altered and edited throughout the design process as quickly and easily as possible. In the past, you may have re-created models rather than edit an existing model as needed. Now, with the MicroStation CONNECT Edition, learn to create reusable models and cells that can be dynamically adjusted and sized with parametric dimensions and constraints.

**1:00 – 1:50****22 – 4D Modeling for Roads with Bentley Schedule Simulation**

*Presenter – Tim Wright, Bentley Systems, Inc.*

The Bentley Schedule Simulation tool enables you to visualize a schedule by integrating 2D or 3D engineering data with a project schedule. It is designed to help in the planning, design or construction stages of a project so that you can get a visual representation of the required tasks and prevent spatial conflicts. For the engineer or contractor, it can aid in determining constructability and sequencing of a project. This session will focus on how we can take an OpenRoads Designer 3D model plus a construction schedule and create a 4D model to show construction sequencing/phasing.

**23 – Iowa DOT Use of Context Capture**

*Presenter – Jonathan Miranda, IA DOT*

The Design Bureau survey section of the Iowa Department of Transportation uses Bentley Context Capture software to create three-dimensional (3D) modeled surfaces from a variety of survey sensing sources. This presentation will demonstrate using data from UAS, high accuracy LiDAR and other traditional survey devices to produce 3D mapping products for projects including flood recovery, vertical surface monitoring and traditional roadway design.

**1:00 – 1:50 CONTINUED****24 – Utilizing Descartes for Ground Extraction of Reality Meshes and Point Clouds**

*Presenter – Mike Barkasi, Bentley Systems, Inc.*

“Ground detection” is a Bentley Descartes tool that uses a point cloud file to create a terrain model representing the bare earth and then uses this terrain model to classify point cloud points as “ground”.

**25 – OpenBridge Designer: I have the model, what can I do now?**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

After creating the bridge model with OpenBridge Designer, learn how you can generate geometry and quantity reports, clearance checking, connect to Bentley's analytical software, model attribution, and create an iModel and open in Navigator CONNECT.

**26 – OpenRoads for Managers**

*Presenter – Brad Hodor, Civil Solutions, Inc.*

An overview of what Managers need to know what Open Roads is the capabilities and what to expect on projects.

**27 – Modeling ADA Compliant Ramps**

*Presenter – Keith Boteler, Bentley Systems, Inc.*

Join us to learn how OpenRoads Designer allows you to analyze, design, and model curb ramps. We will discuss how the combination of reality capture technology and OpenRoads Designer modeling can be used to evaluate existing curb ramps for regulatory compliance as well as stream-lining the design of ramps to meet legal requirements. The session will cover a practical example that addresses a real-world design and construction issue including the need to evaluate, re-design, and re-construct non-compliant curb ramps, using ContextCapture to model existing curb ramps, and using OpenRoads Designer to design and model compliant curb ramps.

**28 – Creating Custom Line Styles**

*Presenter – Steve Rick, Bentley Systems, Inc.*

MicroStation's custom line styles can be used to add additional definition and clarity to a design, displaying sophisticated graphics, by simply selecting a line style and drawing a line. This includes both 2D and 3D design environments. Custom line styles can range from quite simple, displaying nothing more than a series “dashes”, to quite sophisticated displays of embedded graphics, 3D geometry, and raster images. In this course you will learn to create custom line styles that contain graphics and text, 3D line styles, and raster line styles.

**2:00 – 2:50****29 – OpenRoads Geometry – Where are my COGO Tools?**

*Presenter – Tim Wright, Bentley Systems, Inc.*

Discover how to accomplish your coordinate geometry needs with Civil AccuDraw and civil geometry tools. Explore techniques to locate points, formulate parcels, and construct controlling geometry.

**2:00 – 2:50 CONTINUED****30- CONNECT Edition Interface Hacks**

*Presenter – Steve Litzau, EnvisionCAD*

The new interface of the CONNECT Edition products provides opportunities to optimize your environment for the tasks you do most. We will look at user “hacks” to customize the interface and use the delivered interface effectively. While presented in OpenRoads Designer, this presentation is applicable to other Bentley applications that implement the Windows Ribbon Framework.

**31 – Combining Aerial Imagery and Ground Imagery in a Reality Model**

*Presenter – Mike Barkasi, Bentley Systems, Inc.*

Here we use a real world example of a city block captured with drones and ground imagery combined to generate a realistic model to be used in a detailed conceptual design integration with OpenRoads Designer.

**32 – Analysis, Design and Optimization of Steel Bridges with LEAP Bridge Steel**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

Learn how to use LEAP Bridge Steel to analyze, optimize and perform LRFD design code checks for a steel I girder bridge.

**33- Migrate GEOPAK Survey to ORD**

*Presenter – Jeff Vaske, Midwest CAD Solutions*

This workshop will cover the steps to migrate your GEOPAK survey setup to OpenRoads Designer. We'll look at the differences between the two and how to utilize the OpenRoads technology for Survey.

**34 – Computing Earthwork Volumes with OpenRoads Designer**

*Presenter – Keith Boteler, Bentley Systems, Inc.*

Earthworks are one of the largest costs to consider for any project. OpenRoads Designer's model (BIM) based approach provides significant flexibility and accuracy in quantity calculations. Come see how the OpenRoads Designer model provides cut, fill, and unsuitable material meshes which are used to report volumes in a format to meet your project requirements. You can report on these 3D volumes with conventional end area volume methods, or compute volumes more accurately with a full prismoid approach directly from the 3D model, or even “slice” up the model to report volumes segregated for staged construction, different areas of the project, or for each plan sheet.

**35 – Corridor Modeling Best Practice**

*Presenter – Dan Calistrat, DTM Solutions*

In the presentation we'll go over some of the best advice around for modeling corridors efficiently and effectively. We'll include Tips & Tricks to make your modeling hassle-free and easily de-bugged.

<b>7:30 - 8:00</b>	<b>Workshop Registration</b>		
<b>Room No.</b>	<b>150-154</b>	<b>167-171</b>	<b>175-179</b>
<b>8:00 – 12:00</b>			
<b>Break Sponsored by AECOM</b>	<b>ORD – Horizontal and Vertical Alignments</b> <i>Brad Hodor</i>	<b>SUDA – Utility Feature Configuration Basics</b> <i>Steve Litzau</i>	<b>Migrate GEOPAK Survey to ORD</b> <i>Jeff Vaske</i>
<b>12:00 - 12:30</b>	<b>Lunch (Stage Door Lounge 190) Afternoon Registration</b>		
<b>12:30 – 4:30</b>			
<b>Break Sponsored by Midwest CAD Solutions</b>	<b>ORD – Advanced Corridor Modeling</b> <i>Brad Hodor</i>	<b>Site Modeling in ORD</b> <i>Steve Litzau</i>	<b>MicroStation CONNECT Edition Upgrade for CAD Managers – Configuration</b> <i>Steve Rick</i>

### **ORD - Horizontal and Vertical Alignments**

*Presenter – Brad Hodor, Civil Solutions, Inc.*

This hands-on course teaches the workflows and techniques required to layout the horizontal alignment geometry for a complex interchange including lanes, transitions, tapers and ramps. In addition to using multiple horizontal geometry tools you will use Civil AccuDraw and learning about the geometry rules created throughout the process. Learning how to utilize design standards when creating an alignment, and how to review errors. You will also learn to use vertical geometry tools. This progresses into adding 3D elevation to existing 2D geometry elements that define edges of pavement, islands, and medians in an intersection. Take these elements and create a Proposed Terrain Model, and display this model in Cross-Sections. The resulting 3D geometry elements define the skeleton of the intersection model.

### **SUDA - Utility Feature Configuration Basics Geometry**

*Presenter – Steve Litzau, EnvisionCAD*

This workshop will explore the set up and configuration of the features used by OpenRoads Designers Subsurface Utilities workflow tools. It will explore the configuration effort required for the use of the Subsurface Utility tools and provide users an understanding of the functionality leveraged in the creation of the utility model. While the process is applicable to those configuring workspace resources, understanding the manner this data is used by the software benefits any user looking to use these tools. We will explore standard node and conduit configuration and customization with User Data Extensions.

### **Migrate GEOPAK Survey to ORD**

*Presenter – Jeff Vaske, Midwest CAD Solutions*

This workshop will cover the steps to migrate your GEOPAK survey setup to OpenRoads Designer. We'll look at the differences between the two and how to utilize the OpenRoads technology for Survey.

**ORD – Advanced Corridor Modeling**

*Presenter – Brad Hodor, Civil Solutions, Inc.*

This fast-paced advanced-level course expands the knowledge of Corridor Modeler tools. Users attending will learn how to create and use templates to design roadway corridors, up to a high degree of complexity. The course walks users through template transitioning, point controls, Display Rules, Corridor References, and creating superelevation. Included in this course are discussions on grading and modeling techniques to aid in the creation of Cross-Section documents.

*Working knowledge of Corridor Models and templates is a pre-requisite.*

**Site Modeling in ORD**

*Presenter – Steve Litzau, EnvisionCAD*

OpenRoads Designer, often thought of as a “linear design” software, includes ample tools for the design and modeling of site elements efficiently and dynamically. This workshop strives to provide general site modeling concepts, design methodologies and exposure to applicable tools while using those tools in common site design applications such as parking lots, intersections and ponds.

**MicroStation CONNECT Edition Upgrade for CAD Managers - Configuration**

*Presenter – Steve Rick, Bentley Systems, Inc.*

MicroStation CONNECT Edition is the newest generation of Bentley's MicroStation CAD software. This edition of MicroStation provides many exciting new features and enhancements intended to make users more productive and efficient. During this course, you will learn to install the MicroStation CONNECT Edition, gain a working knowledge of the updates made to configuration files and configuration variables, migrate an existing V8i corporate workspace to the MicroStation CONNECT Edition, learn to define Roles, learn to create WorkSpaces and WorkSets, work with updated configuration variables and much more.

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