



Q&A From Update on Bentley ORD/OBM/DU/Survey & Utilities Deployment Consultant Webinar Dated March 10, 2023

General

- G1 Q: Are you planning to integrate the item types into the feature definitions?
- A: Yes, this will be developed and implemented as part of a future Version 10.12 release of the Workspace.
- G2 Q: How will this new version of ORD / OBD coincide with the current versions? Will this require an update in the schemas?
- A: Version 10.12 does include a schema change from version 10.10. A future update of our Workspace will be compliant with 10.12 and this schema change.
- G3 Q: Would you please confirm the TxDOT training website address? www.txdot.gov/business/resources cannot be found.
- A: <https://www.txdot.gov/business/resources/design-tools-training.html>
- G4 Q: Are you partnering with Bentley so future software upgrades don't require starting over with feature definitions and other environmental settings?
- A: For ORD, updates to the Workspace mostly involve add-ons to the previous configuration, not replacement of previously developed feature definitions and other environmental settings. However, some updates to the Workspace do have minor, cosmetic impacts to the way sheets appear visually.
- For OBM, we do not change the Out of the Box (OTB) feature definitions for the same reason. Files still will require a manual sync with the feature definitions but only for new elements. The already placed elements should remain intact.
- G5 Q: The current version of TxDOT ORD workspace supports 10.10.01.03 as TxDOT mentioned as the expected new release in March of Bentley/ORD 10.12.xx, including TxDOT workspace. Does the ongoing project have to convert to the new release?
- A: Confirm with the District for whom you're working, but TxDOT Divisions anticipate projects that have already kicked off prior to the release of the new Workspace in March will be grandfathered into being completed with the previous version that was in effect at the time of project kickoff.
- G6 Q: Is there any update in TxDOT's timeline to go full digital deliverable?
- A: This remains to be determined, but the first pilot project to be designed, let, and constructed via Digital Delivery is scheduled to let in March 2024.
- G7 Q: Is there any timeframe for training on ORD/OBM/DU/Survey and utility?
- A: Contact khartl-c@txdot.gov for more info on survey training. As of this time there is no training offered or planned for utility modeling.

- G8 Q: Is the new TxDOT workspace waiting on the ORD 10.12 release?
A: No, the new workspace will be released in March 2023. A later release will occur that will be compatible with ORD Version 10.12.
- G9 Q: Can you post samples of digital delivery 3D submittals?
A: TxDOT: Divisions will be working with our Digital Delivery consultant over the next few years to provide guidance on Digital Delivery submittals. Survey has plans to develop survey templates and examples.
- G10 Q: There is a workspace dated 2/28/2023 on TxDOT's website. Is that considered Version 2, and we are waiting on Version 3?
A: That was a beta version of Release 3. We have found and corrected a couple of bugs in that version and the final Release 3 has now been posted to TxDOT.gov (dated March 15, 2023).
- G11 Q: So you recommend keeping the 10.10 and 10.12 workspaces separate?
A: Correct, and ORD allows side-by-side installations of different versions of Workspaces.
- G12 Q: Do you anticipate keeping an older schema for current projects and using a newer schema for upcoming projects to be an issue?
A: We recommend isolating projects designed in 10.10 versions of our Workspace (Releases 1 through 3) from future projects to be designed in the upcoming 10.12 versions of the Workspace. We do not recommend designing in a single project in two different versions of ORD (i.e., don't design some sheets in 10.10 and other sheets in 10.12).
- G13 Q: In future versions, for surface creation will there be a way to modify feature line elevations on a table instead of the profile view?
A: TxDOT will share this interest / request with Bentley.
- G14 Q: Are go-by plan sheets created with ORD available on TxDOT website or PS&E Prep Manual (not updated since 2017)?
A: Other sections of Design Division are currently working with a consultant to update the PS&E Prep Manual. Please email Max.Proctor@txdot.gov and David.Ramirez@txdot.gov for the status.
- G15 Q: What about Low Distortion Projection (LDP) in ORD?
A: Currently, Low Distortion Projections are on a project-by-project basis until the National Geodetic Survey develops the statewide LDPs. Their current estimate is 2025.

G16 Q: In the cut sheets models, when we turn levels off, they do not stay off. If you change the view, all the turned off levels come back, even when you do the save settings. Is there a way to keep them off?

A: Adjusting the nesting settings and/or toggling on "Save Settings Upon Exit" in the backstage (I.e. File menu) should resolve this.

Roadway

R1 Q: In ORD, is there a way to add the sheet scale callout within the title block on the roadway design sheets?

A: The way I did this in OBM was by adding the callout as part of the drawing seed, and it worked fine. If this is needed in ORD, an update to the drawing Seed can be made. Alternatively, a sheet scale cell from the cell library can be manually placed in the sheet model.

R2 Q: Back to the Roadway, the vertical curve shown was a sag. Does SSD come out with Crv Data on the Crest Vert Crvs?

A: This is not displayed with the vertical curve data as it's an engineering property, not a geometric property. TxDOT will work with Bentley to see if the option to display it with vertical curve data can be incorporated into future releases of the Workspace.

R3 Q: So when working on plan layout sheets, you make changes to the sheets. When you go and make the reference active to make a change or different model to annotate, you go back, and any work you just made is undone. Is there any way to fix the bug?

A: There are some known bugs with the Civil Labeler that have been fixed in Version 10.12 of ORD. A version of TxDOT's Workspace that is compatible with 10.12 will be released by the summer of 2023.

R4 Q: If stopping sight distance is referenced for vertical curves, does it consider horizontal curvature and noted obstructions (i.e., trees, buildings) as well?

A: TxDOT will check with Bentley on this question.

Bridge

B1 Q: What about break back on abutments?

A: Bentley is continuing to work on this. We do have parametric cells that support the break back in the abutment, and they are included in the workspace.

B2 Q: When are these OBM updates expected?

A: According to Bentley, Q1 of 2023.

- B3 Q: When displaying an OBM model into a profile view, is there a way to see all bridge elements regardless of where the section cut is placed?
- A: The only way at the moment is to change the presentation setting in the references dialog of the 3D cut from Cut to Forward; however, this presentation is not as clean as the Cut and will show all lines that are represented in the 3D view.
- B4 Q: How will retaining walls be modeled?
- A: Retaining walls will be modeled in ORD.
- B5 Q: Will there be a plugin for a TxDOT tab in OBM?
- A: TxDOT has not included a TxDOT tab in the workspace.
- B6 Q: Is there a link for a Consultant to the TxDOT CADD manual? I need to know what is intended to include in each folder of the new folder structure. Also, a CADD file naming convention that includes all the new ORDs file types. 0 – Contracts 1 – Survey 2 – APD 3 – ROW 4 – Des.
- A: Other sections of Design Division currently are working with a consultant to update the PS&E Prep Manual. Please email Max.Proctor@txdot.gov and David.Ramirez@txdot.gov for the status.
- B7 Q: Please provide an update or direct to information about interfacing PGSuper with OBD?
- A: There is no direct interface between PGSuper and OBM. All data in PGSuper is in table format so data can be copied and pasted into OBM, such as the camber.
- B8 Q: Will there be bridge annotation styles similar to ORD Roadway annotation style that reflect TxDOT bridge-specific annotation?
- A: We have not developed anything like this since the annotation tools are strictly for 2D. When OBM has the same workflow (2D in 3D) as ORD, we will consider developing some annotations. We do use the same text as ORD, and we do have the text styles and dimension styles.
- B9 Q: What is the expectation about using the steel and concrete features of OBD so that analysis and design can be a dynamic part of the process?
- A: We will continue to use PGSuper for concrete superstructure, which offers no interface with OBM. For now, we are using OBM strictly for modeling and plan production. It is up to the engineer to determine the engineering application for their design. TxDOT is not specifying a design software, just OBM for modelling purposes at this time.
- B10 Q: Is there expectation of using OBM for quantities?
- A: Consultant Contracts were updated to have a submittal at 100% of a letter that compares geometry and quantities between OBM and traditional methods. We are working with Bentley to make enhancements including the reports in both OBM and ProStructures.

- B11 Q: Will you be providing level of detail guidelines for OBM? For example, do you expect steel splices to be shown, etc.?
- A: TxDOT will be creating guidance on Level of Detail of the models in the future. For now, the model needs to have 3D elements for slab, beams, abutments, wingwalls, caps, columns, and foundations. However, we will not be requiring details that OBM is not capable of creating. We still will have to create a 2D file to provide those additional details such as the break backs on abutments.
- B12 Q: Mention was made about MicroStation. Eventually, the goal is to move away from MicroStation and have plan production done through ORD and OBM, correct?
- A: Correct for all geometric projects (meaning those that have earthwork and / or changes to the vertical or horizontal alignments. For non-geometric projects, MicroStation CONNECT Edition may suffice. In Bridge Division we use both OBM and MicroStation. It is easier for a Technician to use MicroStation than OBM, but you do not have to have both applications. OBM is more than enough to do all plan production needs.
- B13 Q: Is riprap around a bridge expected to be modeled in ORD for now and not in OBM?
- A: OBM added the ORD tools to model ripraps. But it is the same workflow as ORD. I believe they added the tools on 2020 R2 and on, so it will be part of the 10.12 upgrade as well.
- B14 Q: Regarding the new ORD/OBD versions, will they be backward compatible?
- A: The short answer is no, because the schema changes. I believe the earlier versions of OBM will be able to open as Read Only.
- B15 Q: Are TxDOT customizations for OBM included by Bentley, or is there a version update from TxDOT?
- A: Those are updates available to all, nothing custom for TxDOT. All OTB updates.
- B16 Q: Is there a SOP in modeling riprap around bridges?
- A: RIPRAP Video: <https://youtu.be/8rOXXlm9dN8>
- B17 Q: Can we use OBD to model 2 bridges (open joint) with the same substructure?
- A: Yes, Bentley has posted several videos about this process on YouTube.
- B18 Q: Is bridge widening possible (i.e., using both older bridge standards to newer)?
- A: Yes. However, the haunch placed by OBM is restricted by the Deck, so if the Deck is cut partially on the top flange, the haunch will stop at that location as well.

- B19 Q: Do we have to install OBM to design bridges and bridge class culverts even though we have ORD on our computer?
- A: Bridge class culverts are in ORD, no need for OBM. If it is a bridge (not culvert), you do need OBM to create the model, but OBM does not do design, [it] is purely modeling. Design can be done using LEAP or RM, or any other external tool like VBent, CAP18, etc.
- B20 Q: Will there be a library on TxDOT site where we can download updated cell libraries? Particularly parametric cells for various custom abutments / piers?
- A: Any and all parametric cells we develop for OBM are included in the workspace.

Drainage & Utilities

- D1 Q: Do we have cells added for SETs?
- A: Yes.
- D2 Q: It would be great to have the ability to annotate plan and profile elements similar to ORD civil tools with specific bridge format annotation styles.
- A: We will be developing the annotations and labeling once 10.12 is available. Thank you for the suggestion.
- D3 Q: Will ORD allow arcs or curves in drainage areas?
- A: Yes. This will be available in 10.12.
- D4 Q: Is there an option to add inlet at an offset on dual barrel boxes instead of at center of the dual boxes?
- A: The JB cells on workspace 3 have a connection region on each side of the center of the box. Pipe offsets are possible if the connection region is modified to cover the entire wall. With Version 10.12 a new capability will be available where the pipes can connect to the center of the box and trimmed at the JB walls.
- D5 Q: Will there be profile and cross-section grid annotation groups set up for different sheet scales?
- A: Annotation groups will be developed once 10.12 is available.
- D6 Q: Is clash detection for xs labels coming?
- A: XS labels that include utilities will be developed when 10.12 is released.
- D7 Q: Can you expand on the utility / SUE updates to the workspace? Any standardization of line styles and utility features?
- A: We will be working with Survey to standardize the line styles and ensure that we include all the utility features that we work with in the next release.

- D8 Q: Can the cell library that now includes the 1800+ cells for SETs and other drainage items be downloaded and used in Version 10.10 ongoing Projects?
- A: You just need to upload the new workspace. The library is included in the new workspace. All previous work done on an on-going project will remain in the DGN file.
- D9 Q: Will ORD be adding impervious cover to be able to calculate a composite C value in a drainage area based on different land use?
- A: The land-use C-values have been added to the workspace. However, automated calculation of composite C-value will be available when 10.12 is released.
- D10 Q: Can you post the link to download the cell library?
- A: The workspace has been released. The new cell library is included in the new workspace. Bentley CONNECT Edition data (txdot.gov)
- D11 Q: Will there be callout templates for DU civil labeler?
- A: Yes, it will be available in Version 10.12.
- D12 Q: Is the updated drainage cell library on TxDOT website for download / use in current project? This is what is on the TxDOT webpage: "When will District specific cells be included in the workspace? For Districts that requested drainage cells, Division currently is planning and scheduling the build of District cells. Inclusion of District cells will be in Release 3 or 4."
- A: The updated cell library, which includes the newly created District cells, is part of the new workspace which is available for download: Bentley CONNECT Edition data (txdot.gov)
- D13 Q: Can you add climatic adjustment to composite CN values?
- A: The short answer is no. The climatic adjustment factors were always only intended for CN values using a hydrograph method and for C values using the Rational Method.
- D14 Q: Can DU interface with other software like HEC-HMS or SWMM?
- A: The possibility of bringing information from or converting ORD DU data so it can be read by other programs exists. Models created in SWMM can be loaded and invert, pipe size information and location of nodes and links can be brought into a DGN file and used. The only issue is that the information will be in a generic default format. It won't have the attributes and feature definitions from the ORD DU software. ORD DU is intended to replace GEOPAK Drainage for storm sewer design, and it is not a comprehensive tool.
- D15 Q: Do we have a guide or key that shows where the control point is for all drainage cells?
- A: Currently there is no guide available.

- D16 Q: Will these control points be added to the drainage Standards?
- A: The control point has been added to the PCO and PCU standards. The control point is usually at the center of the node or at the Gutter FL elevation for curb inlets. As you are placing the structure, your cursor will attach to said control point. Eventually it will be added to the standards, but it will take time to go through the application and approval process.
- D17 Q: When will GEOPAK drainage officially “go away”?
- A: GEOPAK continues to be relevant for legacy projects or change orders for projects under construction. GEOPAK is a Bentley proprietary software that is no longer supported or being upgraded. In time compatibility between GEOPAK and the operating system used to run it will be lost and GEOPAK will no longer function. Any new project should be done on the ORD DU platform.

Survey

- S1 Q: Will there be training on more advanced processes for surveying aspect?
- A: Yes, more advanced training is in development. Contact Kris Hartley khartl-c@txdot.gov for details.
- S2 Q: Does the workspace contain the Parcel Output File template for ROW Acq?
- A: Yes, it does.
- S3 Q: Survey – Can TxDOT request Bentley to add an “RSME” report to ORD for Ground truthing survey points to flight data / lidar data?
- A: I believe they added the tools on 2020 R2 and on, so it will be part of the 10.12 upgrade as well.
- S4 Q: All the training has been design based. What about parcel/ROW mapping?
- A: The basic covers some parcel/ROW mapping, but we will be developing additional training for parcel and ROW mapping.
- S5 Q: Can you provide a link to the basic training?
- A: Can you contact me directly? Send me an email at Ronny.Lackey@txdot.gov so I have your email.
- S6 Q: With the new cell library, will the survey sheet legend change?
- A: Yes. There will be a transition period for staff to get used to the new legend.