

Survey and Design ORD Versioning Guidance

Based on the frequency of Bentley ORD updates, coinciding TDOT ORD workspace updates, and the duration of TDOT project schedules, it will not be uncommon for a project to have design deliverable files on one ORD version and survey deliverable files on an earlier ORD version. While ORD provides an uplift process for moving older files to newer schemas, the changes in both the software and the workspace updates (to align with compatibility in the new software) may affect the integrity of the original survey. There is no guarantee that the uplifting process will not fundamentally change an aspect of the survey deliverable files. Therefore, **survey deliverable files that have been uplifted to a different ORD version are not considered the same survey deliverable files that were previously qualified and accepted via the QA/QC process. Uplifted survey deliverable files, post QA/QC process completion, would need to be resubmitted to complete the QA/QC process again.**

Survey and Design ORD Versioning Best Practices

- Surveyors will use the latest version of ORD adopted by TDOT (with an accompanying TDOT workspace release) at the time of creating initial survey deliverable files. All survey deliverable files will be created on this same version of ORD and the same TDOT workspace release. Prior to submitting survey deliverable files for QA/QC, if a newer ORD version becomes available and is adopted by TDOT with an accompanying TDOT workspace release, the decision to uplift all the survey deliverables files will be completed on a case-by-case basis. This uplifting decision needs to be made by understanding that required re-work is possible, but also by weighing the benefits of working with a newer ORD version. Consult with TDOT CADD Support if there are any questions about the cost/benefit analysis to this uplifting decision.
- After the QA/QC process has been completed on all survey deliverable files, they will not be uplifted to a newer ORD version without a resubmittal of all the survey deliverable files to complete the QA/QC process again. The ORD software and TDOT workspace versions used on the survey deliverable files will be documented in the Project Notebook (Section 1.2).
- Then the survey deliverable files will be shared with design. Designers will use the latest version of ORD adopted by TDOT (with an accompanying TDOT workspace release) at the time of creating initial design deliverable files. All design deliverable files will be created on this same version of ORD and the same TDOT workspace release. The ORD software and TDOT workspace versions used on the design deliverable files will be documented in the Project Notebook. The designer will reference the survey respective Model.dgn, Aerial Model.dgn (where applicable), Terrain.dgn, Alignment.dgn, and Utility.dgn files

into the design respective deliverables. Older ORD version files can always be used as references in newer ORD version files without uplifting and without changes to the said reference files. Attached reference files are read-only in a master file.

- The survey deliverable files are submitted to QA/QC, prior to the design hand-off, without an assumed view rotation (orientated North by default) to provide consistency during the survey deliverable review process. If the designer decides to rotate their view for sheet creation purposes, the annotation from the survey deliverable files that is setup in the TDOT workspace to rotate horizontal based on the view rotation may now create overlap issues and need to be moved in the survey deliverable files. Moving already annotated text does not fundamentally change the survey deliverable files, but must be completed in the same ORD software and TDOT workspace versions used on the survey deliverable files. When new ORD versions are pushed/electively installed, the previous ORD version(s) should remain installed. However, the designer should contact TDOT CADD Support if they do not have access to the same ORD software and TDOT workspace versions used on the survey deliverable files. Older ORD versions that have been uninstalled can always be reinstalled if needed.
- If design needs to tie to existing drainage and utility, the survey respective Utility.dgn should not be opened in the ORD software and TDOT workspace versions used on the design deliverables (assuming the survey and design versions are different). Survey drainage and utility submodels should be exported from the survey respective Utility.dgn and then be imported into the design deliverable files. The survey drainage and utility submodels in the survey respective Utility.dgn need to be exported from the same ORD software and TDOT workspace versions used on the survey deliverable files. The designer should then review and modify the imported survey drainage and utility submodels for analysis purposes.
- A supplemental survey that is added to the initial survey deliverable files after the survey deliverable QA/QC process has been completed will need to be resubmitted to complete the survey deliverable QA/QC process again. Coordination between design and survey may be needed to determine file deliverables to be used as a basis of the supplemental survey. Supplemental survey information and initial survey information should be on the same version of ORD and the same TDOT workspace release. Updated survey deliverable files will then be submitted to design for incorporation and use. See the TDOT Survey Standards Manual Sections 4.14.3 and 4.14.4 for further guidance regarding supplemental surveys.