

DFD Bluebeam Review Workflow (DFD PM Process) V3.0

Why Bluebeam?

The electronic Bluebeam review process allows users to simultaneously make comments directly onto the same electronic document which allows for collaboration, saves time, reduces duplication, provides for more accurate commenting and ultimately increases efficiency.

Getting Started with Bluebeam (See **BLUEBEAM USER GUIDE**)

Complete the following Steps:

1. Bluebeam Default (Sets Bluebeam as the default pdf reader)
2. Changing Comment Author Username (Allows other users to identify who made what comments)
3. Importing Profiles and Tool Sets (Customizes the Bluebeam view and tool chest for the different users)

Working with Sessions (See **BLUEBEAM USER GUIDE**)

4. Creating a Bluebeam Session Account (Allows the user to send documents to Bluebeam's server)
5. Using Sessions in Bluebeam (Allows all users to participate in a plan review on the same electronic document)
6. Additional Information on Sessions

Other information such as accessing files from network drives, working with large PDFs, creating a set, comparing documents and attaching a hyperlink can be found in the document **DFD BLUEBEAM ADDITIONAL TIPS V1.0**.

Note: Steps 1-4 above only need to be completed when a user is creating their first Bluebeam session and will not be required each time a session is set up. Step 3 above will need to be completed each time DFD revises the Profile or Tool Set.

DFD Process for Bluebeam Reviews

1. A/E uploads pdf review documents onto SharePoint
 - a. Prior to uploading documents, the A/E shall follow the Drawing Requirements and Project Manual Requirements below for information on drawing and specification submittal requirements (combined PDFs, bookmarks, searchable text, etc.)
2. DFD Project Manager (PM) sets up a Bluebeam review session (See **BLUEBEAM USER GUIDE**)
3. DFD PM sends an email or Outlook invite with the Bluebeam review Session ID (XXX-XXX-XXX) and Session URL link (<https://studio.bluebeam.com/join.html?ID=XXX-XXX-XXX>) to the technical reviewers, prime A/E and Agency Contact. Users can either join by entering the Session ID into Bluebeam or by entering the Session URL link into their web browser.
 - a. Note: If the Agency or A/E team do not have a Bluebeam license, they will still be able to make comments during the Bluebeam review. A free trial version can be downloaded here: <https://www.bluebeam.com/trials/>. The trial version will provide users with Markup Mode for 30 days and then switch to View Mode, which allows for read-only access in Bluebeam. However, when a user is in View Mode, they will still be able to participate in Bluebeam reviews that are created by DFD.
 - b. Note: Bluebeam is not compatible with MAC computers. Work with the DFD PM regarding an alternative step to complete the electronic review.
4. All reviewers (internal and external) comment on the same document

- a. Customized tool sets and colors have been created for various DFD discipline areas, the Agency, and the A/E.
5. When finished with their review, the DFD PM and technical reviewers finalize their review in Bluebeam (see **BLUEBEAM USER GUIDE**). They also score the A/E in WisBuild and include a comment that their review has been completed. In the WisBuild DSF Review Comments box, the reviewer should include the following: *The [PR/FR Review] is complete, and comments have been made using Bluebeam Studio Session*. The scoring in WisBuild notifies the A/E with an automatic email that comments are complete.
6. When finished with their review, the Agency finalizes their review in Bluebeam and sends an email to the DFD PM to notify them that their review is complete.
7. As noted above, the prime A/E will be sent the Bluebeam session information at the start of a review. This allows them to track and review comments throughout the review process. The prime A/E will be responsible for sending the Bluebeam session information to their subconsultants. It is common for DFD reviewers to revise some of their comments throughout their review. The A/E team shall discuss any significant revisions with the DFD PM if they choose to modify the project documents prior to the scheduled review deadline.
8. To reply to comments, the A/E shall right click on a comment and select *reply*, which will nest their response with each comment. The response will show up in the Markups List window at the bottom of the screen.
9. A/E finalizes their review in Bluebeam and posts a response in WisBuild when all comments have been replied to.
10. Once all review comments have been responded to by the A/E team, the DFD PM closes the Bluebeam review session. See **BLUEBEAM USER GUIDE**. The SharePoint files contain all the review comments and responses and can be downloaded by the A/E and Agency for their records.
 - a. Review comments that do not make it into the Bluebeam session before it is closed will need to be documented in the project files.

Drawing Requirements

Final electronic review drawings from A/E shall be submitted to DFD in PDF format.

1. A single PDF shall be created for each volume of drawings. Each volume shall be limited to a maximum of 125 drawings.
2. Vestiges of CAD work (e.g. AutoCAD SHX markups) should be “Flattened” as to not be shown as a comment in the PDF.
3. Create bookmarks for each drawing contained within the PDF. Bookmarks shall include the sheet number (e.g. T100, M100, E100). It is acceptable to also include the DFD Project Number, Phase, and document status as a prefix to the Sheet Number (e.g. “PROJ#-00-PR-E100”). Extra bookmarks that result from conversion from CAD to PDF shall be removed prior to submittal to DFD.
4. Drawings rendered as PDF images are not acceptable except for original pages containing manually generated registration stamps, signatures, etc.
5. All text shall be searchable and not be “rendered”.
6. All PDF files shall be created with a minimum resolution of 150 dpi and be a ‘flat’ image with no layering or other AutoCAD attributes.
7. Compile the drawing set in the same order as indicated on the Sheet Index.
8. Drawings should be presented in “Landscape” orientation.
9. Bookmarks shall open the sheet to “Fit Page” view (Full sheet displayed).
10. An outline organizing bookmarks by Divisions of Work (e.d. M-Series, E-Series) is encouraged but not required.
11. Page name of each sheet shall match the bookmark for that sheet.

Project Manual Requirements

Final electronic review specifications from A/E shall be submitted to DFD in PDF format.

1. A single PDF file shall be created for each specification volume (approximately 300 pages). Photographs, cut sheets, or 8 ½” x 11” drawings within the specification volume must be included as part of the single PDF.

2. Specifications rendered as PDF images are not acceptable except for any original pages containing manually generated registration stamps, signatures, etc. Documents shall be created to allow for all text to be “searchable”.
3. Add blank pages as required so that each section starts on an odd-numbered page in the PDF.
4. Blank pages shall be indicated as intentionally left blank.
5. Provide page numbering and a margin of one inch on all edges to facilitate printing and binding of the specification volume, should the recipient of the electronic files choose to print the documents.
6. Compile the specification document files in the same order as the specification volume Table of Contents.
7. Set “Navigation” to “Single Page” rather than “Continuous”.
8. Provide electronic bookmarks for each PDF specification volume (approximately 300 pages). Bookmarks shall be created to reference the Cover Sheet, TOC, first sheet of each specification section (e.g. 01 74 19, 22 05 00, etc.), and for each individual form and/or segment listed under the Bidding Requirements of the specification volume Table of Contents. Also create individual bookmarks for photos, cut sheets, or drawings (e.g. Bid Form, Bid Bond Form, A101, A102, etc.) in the specification volume.
9. Bookmarks shall be edited as to not include unnecessary content (e.g. PART or Article Headings).
10. Bookmarks shall open the page to “Fit Page” view (Full page displayed).
11. An outline organizing bookmarks by Divisions or Work (e.g. Div. 23, Div. 26) is encouraged but not required.

Notes:

1. When a session is created, the file is stored on Bluebeam’s server. This allows multiple users to access and comment at the same time.
2. For DFD PMs and Technical Reviewers: when opening the document to review after a session has been created, enter through Bluebeam and not through the pdf file that was used to create the Bluebeam session. You can then select which review session to participate in.
3. When commenting, avoid covering existing background information on the page. Try to drag comment in an open space on the sheet or use a sticky note if the sheet is too cluttered.
4. Avoid duplicating comments throughout document – may be able to state the comment applies to all sheets.
5. On more complex projects, the Bluebeam session can be used as a tool during a plan review meeting to go through review comments since they will be in one location. Additional comments or decisions can be documented in the Bluebeam session during the review meeting.
6. Training videos on using Bluebeam Revu can be found here: <https://support.bluebeam.com/training-videos/>