DSA   PR 18-05

PROCEDURE: ELECTRONIC PLAN REVIEW FOR CONSULTANT PLAN REVIEWER

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

PURPOSE

This procedure (PR) is one of multiple documents that in combination describe the process and requirements for Electronic Plan Review (EPR) of projects under DSA jurisdiction. Since October 2018 the review and approval of all project applications and post approval documents have been processed in digital format through this EPR procedure, which reduces resource consumption and aligns with the sustainability policies and goals of both the Governor's Office and the Department of General Services.

SCOPE

This document covers the duties of technical consultants retained by DSA to perform EPR of conventional project applications. It does not cover the duties and responsibilities of EPR Administrators, professionals (i.e., architects and engineers) responsible for the design of the project, nor DSA plan review staff. Similarly, this PR does not cover project applications using the over-the-counter (OTC) process. These EPR subjects are addressed in various internal DSA procedure documents and the following external PR documents:

- *PR 18-04: Electronic Plan Review for Design Professionals*
- *PR 18-09: Electronic Plan Review for Over-the-Counter Projects*

BACKGROUND

EPR is performed on the Bluebeam Studio platform, which is a cloud-based centralized location for document storage and collaboration. Bluebeam Studio is accessed via the internet using the software application Bluebeam Revu. Bluebeam Studio consists of both Projects (file storage and management) and Sessions (collaboration), both of which can be accessed with an unlicensed version of Revu (though some operations described in this procedure require a licensed version).

The Bluebeam Studio platform allows internal DSA staff and external stakeholders to share, view, and collaborate in real time in a single electronic location. Each submitted project will have a single Bluebeam Studio Project (BSP) and one or more Bluebeam Studio Sessions (BSS). DSA will generate a BSS for each plan review increment and each applicable post approval document type. This gives organization and facilitates a well-managed project from registration through certification. While various file types can be stored in BSP, the review and approval documents in BSS are required to be in PDF file format.

The BSS environment allows multiple users to concurrently access and edit a common document. Different background colors are used to distinguish the markups of each plan review discipline. Throughout this document, detailed instructions may refer to icons or buttons within the software represented by graphics. Such icons or buttons are referred to by the text that appears when hovering the cursor over the graphic.

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PROCEDURE

The instructions provided in this document specific to the Bluebeam Revu software application are based on Version 20.2.90. Users with other versions of Bluebeam Revu may find the interface to differ from that described herein.

1. PREPARATION

Prior to the consultant plan reviewer (CPR) commencing plan review, the project will have already passed through preparatory steps. These include the creation of the project-specific Bluebeam Studio environment by the EPR Administrator and the initial phase 1 plan review.

1.1 Phase 1 Plan Review

Phase 1 plan review is commonly referred to as "intake" and is performed by DSA plan review staff, correspondingly referred to as the intake architect and intake structural engineer. A project will not be sent to a CPR until the phase 1 plan review is completed.

1.1.1   Prior to the phase 1 plan review, the EPR Administrator will set up the Bluebeam Studio environment for the project, which includes creation of the BSP and the plan review BSS. All documents submitted by the design professionals will be uploaded in a "Version 1" subfolder under the "B. DSA Review\1. Plan Review Documents" folder in the BSP. For projects with increments, the "Version 1" subfolder will be located in the applicable increment subfolder. Refer to Table C1.1 below for the BSP folder structure.

1.1.2   The phase 1 plan review will confirm the project as submitted by the design professionals is complete and ready to proceed to a detailed plan review by all disciplines. Any additional documents required of and submitted by the design professionals during the course of the phase 1 plan review will be uploaded by the intake architect or structural engineer to the "Version 1" subfolder described in Section 1.1.1 above.

1.1.3   Upon completion of the phase 1 plan review, the intake architect or structural engineer will add the approval documents (e.g., DWG_V1.pdf, SPC_V1.pdf, and 103_V1.pdf) to the plan review BSS.

1.2 Consultant Plan Reviewer Preparation

Prior to receiving a project for review, the CPR shall perform the preparatory steps described in this section. These steps are generally only required prior to the initial project assignment and do not need to be repeated for subsequent plan review assignments.

1.2.1   Install the Bluebeam Revu software application.

1.2.2   Create a Bluebeam Studio account as described in PR 18-04 Section A1.1.

1.2.3   Set the preferences associated with the Bluebeam Studio account as described in PR 18-04 Section A1.2.

1.2.4   Become familiar with the Bluebeam Studio environment as described in PR 18-04 Section A2.

1.2.5   Load the latest DSA Bluebeam Studio Profile provided per Section 1.3.3 below. The profile can be loaded by double-clicking the ".bpx" file with Bluebeam Revu open.

1.3 Notification of EPR Project Assignment

When DSA and the CPR have reached an agreement for plan review services, DSA will provide the CPR access to the project Bluebeam Studio environment and supporting resources necessary to complete the plan review, back check, and project approval.

1.3.1   The DSA supervisor of the consultant's plan review discipline (i.e., structural safety,

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access compliance, fire and life safety, or sustainability) will contact the CPR with the project assignment.

1.3.2   The supervisor will identify and provide contact information for a DSA plan reviewer who will serve as the consultant's point of contact (PoC) for the project. The PoC will perform certain project tracking tasks that require access to DSA internal systems. The CPR should direct all questions and requests to the PoC throughout the course of the plan review and back check. If the supervisor does not identify a PoC for the project, the CPR can assume the supervisor will act as the PoC.

1.3.3   The following information will be provided to the CPR by the DSA supervisor or designated PoC with the project assignment notification:

1.3.3.1   Nine-digit BSP identification number.

1.3.3.2   Current DSA Bluebeam Studio Profile for the consultant's plan review discipline.

1.3.3.3   PoC contact information per Section 1.3.2 above.

1.3.3.4   Project schedule requirements.

1.4   Access Project Files

Through receipt of the notification described in Section 1.3 above, the CPR is given access to the Bluebeam Studio environment specific to the assigned project.

1.4.1   Using the nine-digit identification number provided per Section 1.3.3.1 above, the CPR will join the BSP as described in Section B1.1 below.

1.4.2   The folder structure of the BSP will be as shown in Table C1.1 below. The collapsed view of any folder can be expanded to show its contents by double clicking. Documents submitted by the design professionals with the project application will be found in the "B. DSA Plan Review\1. Plan Review Documents". Applications with multiple increments will have a separate folder for each increment. Refer to Section 1.1 above.

1.4.3   From the BSP joined per Section 1.4.1 above, the CPR will join the BSS as described in Section B1.2 below.

1.4.4   The BSS will contain the documents described in this section. Some projects may not require all document types. For applications with multiple increments, the filenames shown below will include an additional prefix identifying the increment number in accordance with Table C2.1 below.

1.4.4.1   _PR Tracking Table.pdf: This internal document is used to log reviewer contact information and document versions received and reviewed.

1.4.4.2   DWG_V1.pdf: Version 1 of the construction drawings prepared by the design professionals and submitted for review and approval.

Note: The "DWG" file shall not contain reference drawings. All reference drawings shall be submitted as separate supporting document file(s) per PR 18-04. If there are any reference sheets in the "DWG" file, the consultant plan reviewer shall provide a comment requiring the design professional to remove reference sheets from the corrected "DWG" file.

1.4.4.3   SPC_V1.pdf: Version 1 of the project specifications prepared by the design professionals and submitted for review and approval.

1.4.4.4   103_V1: Version 1 of the form *DSA 103: List of Required Structural Tests and Special Inspections* prepared by the design professionals and submitted for review and approval.

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2. PLAN REVIEW PHASE

The CPR shall perform the plan review as described in this section. The CPR is responsible to update the column of the "PR Tracking Table" document in the BSS dedicated to their plan review discipline in accordance with Section B2.1 below.

2.1 Review and Comment

The CPR shall review the submitted documents and make plan review comments as appropriate.

2.1.1 At the initiation of plan review, the CPR shall update the "PR Tracking Table" document in the BSS in accordance with Section B2.1 below.

2.1.2 All plan review comments shall be made on documents in the BSS. The CPR shall perform their review work and apply comments directly to the files in the BSS so DSA can monitor review progress and conformance to EPR standards. Compiling comments on copies of the files outside the BSS and then copying them onto the BSS files in bulk is not permitted.

2.1.3 The CPR will add comments to the documents by performing the following actions:

2.1.3.1 Navigate Bluebeam Studio in accordance with Section B1.3 below.

2.1.3.2 Navigate pages within each document using page labels, bookmarks, and/or hyperlinks at the preference of the CPR.

2.1.3.3 Use the tool chest and DSA Bluebeam Studio Profile markup tools designated for the plan review discipline of the CPR to add comments.

2.1.3.4 Edit the text of existing comments in the document by double-clicking the existing markup component on the sheet or in the "Comments" column of the markup list. Markups in BSS can only be edited by the Studio account that originally authored the markup.

2.1.4 During plan review of the DWG_V1 document, each CPR shall track the plan review status upon the completion of each sheet as follows:

2.1.4.1 For sheets with plan review comments for the given discipline, the CPR shall apply the "Y" markup from the standard toolbox (refer to Table C3.1 below) to the lower right corner of the sheet.

2.1.4.2 For sheets without plan review comments for the given discipline, the CPR shall apply the "N" markup from the standard toolbox (refer to Table C3.1 below) to the lower right corner of the sheet.

2.1.5 The CPR may benefit from filtering markups during the plan review process. Filtering the "Markups Lists" panel is activated by selecting the "Filter List" tab. In this mode, the CPR can select the filtering header over any column to filter the list by the contents of that column. When filtering markups, the CPR shall take care not to place markups that cover or obscure the markups of other plan reviewers.

2.1.6 If the CPR determines there is insufficient space on the BSS documents described in Section 1.4.4 above to contain the required plan review markups, the CPR may request the PoC add the "DSA Additional Comments" file to the BSS to provide more space.

2.1.7 While in the BSS, the CPR shall ensure online connectivity by confirming the Connected/Disconnected icon (plug graphic) on the Studio tab is green, which indicates the connected status.

2.1.8 If a CPR encounters the need to comment on a supporting document, the comment shall be made in the BSS. The CPR may comment on a supporting document by copying the relevant content onto one of the BSS documents described in Section 1.4.4 above or the "DSA

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Additional Comments" file per Section 2.1.6 above. This is accomplished by performing the following actions:

2.1.8.1   With the supporting document open and active, select the snapshot tool button from the "Edit" pull-down menu or by applying keystroke "G".

2.1.8.2   Click one corner of the subject region on the document, hold, and drag the cursor to the opposite corner to capture the content to be copied.

2.1.8.3   Navigate to the BSS document location where the content will be pasted and apply keystroke "Ctrl+V" to paste the image.

2.1.8.4   Add comments and other markups as required to the pasted image in the BSS document using the tool chest and DSA Bluebeam Studio Profile markup tools.

2.1.9   Each plan review discipline is assigned a unique background markup color for ease of visual recognition. The CPR shall use markups with the background color assigned to their discipline as established by each respective DSA Bluebeam Studio Profile and summarized in Table C3.1 below.

2.1.10   The DSA Bluebeam Studio Profile for each plan review discipline provides multiple tool sets containing markup tools commonly used in the EPR process. Table C3.1 below provides examples of some commonly used markup tools. The CPR should consult the "Tool Chest" tab in their respective profile for a complete list of available tools.

2.2 Additional Documents

When the CPR determines that additional or revised supporting documents are required, the CPR shall add a plan review comment indicating those documents that are required but missing. The additional or revised documents will then be reviewed during the back check per Section 3 below. One purpose of the phase 1 plan review is to ensure that all documents required for an efficient and effective plan review are received as described in Section 1.1.2 above. However, if the CPR feels the absence of a missing document will prevent such a review, the CPR should consult the PoC for options to obtain the missing information during the plan review.

2.3 Plan Review Progress Tracking

During the plan review, the CPR shall regularly update DSA regarding the status and progress of the review. The CPR shall report the following to the PoC on a weekly basis or more frequently when required by DSA:

2.3.1   Estimate of the plan review progress as a percentage of completion.

2.3.2   Update of the anticipated plan review completion date.

2.3.3   Immediate notification of plan review completion.

2.4 Final Review

Upon completion of the plan review performed by the CPR, the project will be subject to a final review for quality assurance purposes.

2.4.1   The final review may be performed by the DSA supervisor of the consultant's plan review discipline or another DSA plan reviewer so designated (e.g., the final review may be delegated to the PoC).

2.4.2   The plan review supervisor (or delegated final reviewer) may add comments to the documents during the final review.

2.4.3   The plan review supervisor (or delegated final reviewer) may require the CPR to add,

delete, or modify comments or other markups made during the plan review.

2.4.4   The plan review supervisor (or delegated final reviewer) will communicate with the CPR in a manner dictated by the nature of the required plan review corrections. In some cases, this process may require the CPR to attend a virtual or in-person meeting at the local DSA regional office.

2.5   Completion of Plan Review

After the final review described in Section 2.4 above, the CPR will complete the plan review phase in accordance with this section. When plan review is complete for all applicable disciplines, the reviewed documents will be returned to the design professionals for correction by invitation to the BSS.

2.5.1   The CPR shall verify all comments requiring a response from the design professional are made in the color red by performing the following actions for each file in the BSS except the "PR Tracking Table":

2.5.1.1   Select the "Filter List" tab in the "Markups List" panel.

2.5.1.2   Click on the filtering header above the "Author" column and select the name of the CPR.

2.5.1.3   Click on the filtering header above the "Color" column and select all colors that are not red.

2.5.1.4   Scroll through the filtered markup list and identify any markups that require a response from the design professional. Change markups requiring a response to red as necessary:

2.5.1.4.1   Right-click on the markup and select "Properties" from the resulting context menu.

2.5.1.4.2   In the "Properties" tab, select the "Color" field and choose red from the resulting context palette.

2.5.2   The CPR shall remove from the documents in the BSS those markups used as an interim method to keep track of the progress of the review. These markups are typically the background color assigned to the plan review discipline, are created using the pen or highlight tool as shown in Table C3.1 below, and do not include the sheet status markups described in Section 2.1.4 above. These markups do not communicate substantive information to the design professional. Delete these markups from each BSS file by performing the following actions:

2.5.2.1   Select the "Filter List" button in the "Markups List" panel.

2.5.2.2   Click on the filtering header above the "Author" column and select the name of the CPR.

2.5.2.3   Click on the filtering header above the "Color" column and select the background color matching the tool chest pen tool of the consultant's plan review discipline.

2.5.2.4   Select a markup from the resulting filtered list.

2.5.2.5   Apply "Ctrl+A" keystroke to select all the markups in the filtered list.

2.5.2.6   Right-click on a markup in the filtered list and select "Delete" from the resulting context menu.

2.5.3   The CPR shall report to the PoC the estimated time required for their first round of back check.

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3. BACK CHECK PHASE

After plan review comments have been addressed by the design team, the design professional will contact DSA to coordinate the back check. When the plan review discipline of the CPR is the assigned LPR discipline per the Glossary below, the PoC will place a plan review comment on the first sheet of the DWG_V1 document in the BSS directing the design professional to contact the PoC. The CPR is responsible to maintain the column of the "PR Tracking Table" document in the BSS dedicated to their plan review discipline in accordance with Section B2.1 below.

3.1 Back Check Scheduling

The back check process starts with an initial desk back check and progresses to an in-person back check meeting if the project is not approved after the desk back check. The back check may require multiple rounds of in-person back check meetings. The PoC will coordinate the scheduling of back check milestones and meetings with the CPR. While Section 3 of this IR establishes general EPR procedures to be used by the CPR throughout the back check process it does not detail all scheduling steps, sequences, or deadline requirements.

3.1.1   If the plan review discipline of the CPR is the assigned Lead Plan Reviewer (LPR) discipline per the Glossary below, the PoC will perform the LPR duties and coordinate scheduling of back check milestones and meetings for all parties.

3.1.2   If the plan review discipline of the CPR is not the assigned LPR discipline per the Glossary below, the DSA staff member designated as the LPR will coordinate scheduling of back check milestones and meetings, which will be communicated through the PoC to the CPR.

3.2 Back Check Readiness

The design professional will submit corrected documents for the back check by uploading files to the "A. Submission\1. Plan Review Documents" folder of the BSP. For applications with multiple increments, files will be uploaded to the applicable increment folder. The design professional is also responsible for responding to plan review comments in the BSS in accordance with PR 18-04 Section 3.2 and 3.3.

3.2.1   If the plan review discipline of the CPR is the assigned LPR discipline per the Glossary below, the CPR shall evaluate the following aspects of the design professionals' readiness for back check. If the plan review discipline of the CPR is not the assigned LPR discipline, this section does not apply.

3.2.1.1   The CPR will join the BSP as described in Section B1.1 below and shall verify the design professional has submitted all required revised documents.

3.2.1.2   The CPR will join the BSS as described in Section B1.2 below and shall verify the design professional has completed the following:

3.2.1.2.1   All original red comments authored by DSA plan review staff and the CPR have had their status changed to "INCORPORATED" (i.e., color changed to green).

3.2.1.2.2   All original red comments with text authored by DSA plan review staff and the CPR are provided with a "reply" authored by the design professional that explains how the comment has been addressed.

3.2.1.3   The CPR shall communicate to the PoC the findings of their back check readiness evaluation. The final determination of back check readiness will be made by the PoC. If the project is found to be not ready, the back check will be rescheduled.

3.2.2   The DSA staff member designated as the LRP or the PoC will evaluate the back check submission relative to the file naming convention and document preparation requirements of PR

18-04.

3.2.3   If it is determined per Section 3.2.1 or 3.2.2 above that the project is not ready for back check, the CPR and design professionals will be so notified by the LPR (or PoC acting as the LPR), and the back check will be rescheduled.

3.2.4   If it is determined per Sections 3.2.1 and 3.2.2 above that the project is ready for back check, the LPR (or PoC acting as the LPR) will move all submitted files from the "A. Submission" folder to the "B. DSA Review" folder. The LPR (or PoC acting as the LPR) will add the approval documents (e.g., DWG_V*.pdf, SPC_V*.pdf, and 103_V*.pdf) to the BSS.

3.3   Perform Back Check

The CPR will review the corrected documents and responses to plan review comments during the back check as described in this section. The actions described herein will be performed in both the initial desk back check and any subsequent in-person back checks.

3.3.1   The CPR may benefit from filtering markups during the back check process. Filtering the "Markups List" panel is activated by selecting the "Filter List" tab. In this mode, the CPR can select the filtering header over any column to filter the list by the contents of that column. During back check it is recommended to filter first by "Author" (i.e., select the CPR name) and second by color (i.e., select the green associated with "INCORPORATED" markups).

3.3.2   The CPR shall change the status of markups as follows:

3.3.2.1   Change markups that have been adequately addressed and resolved by the design professional to "CLOSE".

3.3.2.2   Change markups that have not been adequately addressed and resolved by the design professional to "OPEN".

3.3.2.3   Change markups that require additional communication with the design professional to "ADDITIONAL REVIEW REQUIRED". The design professional is not required to provide an additional written response or change the status of markups set to "ADDITIONAL REVIEW REQUIRED" prior to discussion with the CPR. If the CPR expects an additional written response or status change from the design professional, the markup should be set to "OPEN" in accordance with Section 3.3.2.2 above.

3.3.3   Adding plan review comments to previously submitted content on plans, details, documents, and specifications is not permitted without the approval of the plan review supervisor. The CPR should consult the PoC if such approval is sought.

3.3.4   Comments may be added to new or revised content on plans, details, and specifications. Clarifying comments may also be added where design professional responses are incorrect, incomplete, or do not fully resolve the original comment.

3.3.5   At the initiation of the back check and upon completion of each round, the CPR shall update the "PR Tracking Table" document in the BSS in accordance with Section B2.1 below.

3.3.6   During the back check, the design professionals may make further corrections to the documents as described in PR 18-04 Section 4.3.3.

3.3.7   Upon completion of each round of the back check, the CPR shall update the PoC with the status of the back check by reporting the following:

3.3.7.1   Whether the project is approved or an additional round of back check is required.

3.3.7.2   If the project is not approved, the estimated hours required for the next round of back check.

3.3.7.3   Estimate of the back check progress as a percentage of completion.

3.3.7.4 Which approval documents (if any) require a new version to be submitted prior to the next round of back check.

3.4 Completion of Back Check

When the project is approved, the CPR shall finalize the back check in accordance with this section.

3.4.1 The CPR shall delete all markups they may have added during the back check process to the approved version of the documents that will be stamped by DSA.

3.4.2 The CPR shall report to the PoC any supporting documents intended to be retained by DSA that remain in the "A. Submission" folder of the BSP. The PoC will move these files to the "B. DSA Review" folder of the BSP. The CPR shall then update the "PR Tracking Table" document in the BSS to place an "X" in the box designating *Supporting documents moved from "A. Submission" folder to "B. DSA Review" folder or no documents to be moved.*

3.4.3 The CPR shall update the "PR Tracking Table" document in the BSS in accordance with Section B2.1 below.

A DSA Procedure documents a process or series of steps that DSA staff and/or external stakeholders must complete in order to fulfill one or more administrative requirements of DSA's review and approval of plans and specifications and construction oversight programs.

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ABBREVIATIONS

BSP – Bluebeam Studio Project

BSS – Bluebeam Studio Session

CPR – Consultant Plan Reviewer

EPR – Electronic Plan Review

LPR – Lead Plan Reviewer

PoC – DSA Point of Contact

GLOSSARY

Bluebeam Studio Project (BSP)

Digital space to manage project files and project review sessions.

Bluebeam Studio Session (BSS)

Collaborative digital space for reviewing, commenting on documents, and the closeout of comments.

Consultant Plan Reviewer (CPR)

A plan reviewer contracted and trained by DSA to perform plan review and back check with the design professional.

Design Professional

The licensed architect or engineer in responsible charge of the project (or his/her authorized representative) and other architects and engineers delegated responsibility for a portion of the work. The design professional's responsibilities in the EPR process are described in IR 18-04.

Desk Back Check

Back check performed by plan reviewers independently without a face-to-face meeting with the design professionals (i.e., similar to how plan review is conducted).

DSA Bluebeam Studio Profile

A DSA Bluebeam Studio Profile has been created for each discipline. The profile will lay out the Bluebeam Studio interface for digital design review and contains the tool sets required to complete each discipline's review.

DSA Point of Contact (PoC)

DSA staff member assigned to a consultant plan reviewed project to complete internal DSA tasks, uploading resubmittal documents, updating eTracker completion percentages, etc.

EPR Administrator

DSA staff member with specified EPR duties. The EPR Administrator will set up Bluebeam Studio environment, including the BSP and BSS.

In-Person Back Check

Back check performed by plan reviewers in a face-to-face meeting with design professionals in the local DSA regional office.

Lead Plan Reviewer (LPR)

DSA plan reviewer who arranges the back check with the design professional and the other plan reviewers and notifies the EPR Administrator when the plan review documents are approvable.

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The LPR is assigned based on the plan review disciplines required to approve the project as follows:

- Structural Safety (SS) plan reviewer for projects with SS review.

- Accessibility (ACS) plan reviewer for projects without SS review.

- Fire and Life Safety (FLS) plan reviewer for projects without SS and ACS review.

- When the discipline designated as the LPR is performed by more than one plan reviewer, the plan reviewer assigned the largest percentage of the review shall perform the LPR duties.

Plan Review Tracking Table

A document (i.e., "_PR Tracking Table.pdf") in the plan review BSS used to keep track of the plan review status of each document. This document is for DSA and CPR use only.

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APPENDIX A: NOT USED

Refer to Appendix A of *PR 18-04: Electronic Plan Review for Design Professionals* for information on getting started using Bluebeam Revu and Studio. Because most CPR typically have served as a design professional on a project under DSA jurisdiction, this information is not repeated here.

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APPENDIX B: WORKING IN BLUEBEAM STUDIO WITH BLUEBEAM REVU

B1. STUDIO OPERATIONS

B1.1   Join a Bluebeam Studio Project (BSP)

The notification described in Section 1.3 above may include a direct hyperlink the CPR can use to directly join the BSP. If a hyperlink is not provided, the notification will provide a unique nine-digit number that identifies the BSP. The CPR can use this number to join the BSP by performing the following actions:

B1.1.1   Use the cursor to highlight the nine-digit BSP identification number from the notification email and apply keystroke "Ctrl+C" to copy the number.

B1.1.2   Open the Bluebeam Revu software application.

B1.1.3   Log on to Bluebeam Studio as described in PR 18-04 Section A1.2.1.

B1.1.4   Under the "Studio" tab click on the "+" button and select "Join" from the resulting context menu. A dialog box titled "Join" will open.

B1.1.5   Place the cursor in the "Studio ID" field of the dialog box and apply keystroke "Ctrl+V" to paste the nine-digit BSP identification number.

B1.1.6   Click the "OK" button to close dialog box and join the BSP.

B1.1.7   After a BSP has been joined from a Bluebeam Studio Account, it will thereafter appear in the list of "Joined" BSP found on the "Studio" tab. The user can join this BSP in the future simply by clicking on the BSP name in the "Joined" list.

B1.2   Join a Bluebeam Studio Session (BSS)

Users can join a BSS by performing the following actions:

B1.2.1   Join the BSP as described in Section B1.1 above.

B1.2.2   Right-click on the BSP name and select "Sync" from the resulting context menu.

B1.2.3   Right-click on the BSP name and select "Show Sessions…" from the resulting context menu. A dialog box titled "Available Sessions" will open.

B1.2.4   From the resulting dialog box select the desired BSS. The BSS used by the CPR will contain "Plan Review" in the name. When a project consists of more than one increment, the BSS used for plan review will also contain the increment number. See Table C1.2 below.

B1.2.5   Click the "Join" button to close the dialog box and join the BSS.

B1.2.6   After a BSS has been joined from a Bluebeam Studio Account, it will thereafter appear in the list of "Joined" BSS found on the "Studio" tab. The user can join this BSS in the future simply by clicking on the BSS name in the "Joined" list.

B1.3   Navigation in Bluebeam Studio

Navigation of folders and files in Bluebeam Studio is performed using the various operations described below.

B1.3.1   To expand and show the contents of a collapsed folder in BSP, double-click on the folder name.

B1.3.2   To open a file in BSP or BSS, right-click on the file name and select "Open" from the resulting context menu.

B1.3.3   To "check out" an open BSP file, click on the lock icon in the document name tab and select "Check Out" from the resulting context menu.

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B1.3.4   To save a checked out BSP file, select "Save" from the "File" pull-down menu or apply keystroke "Ctrl+S".

B1.3.5   To "check in" an open BSP file, click on the page icon in the document name tab and select "Check In" from the resulting context menu. A dialog box titled "Check In" will open. Add a comment if desired and click the "Check In" button on the resulting dialog box. The "check in" process saves changes made to the document while it was checked out.

B1.3.6   To undo the "check out" an open BSP file, click on the page icon in the document name tab and select "Undo Checkout" from the resulting context menu. The "undo check out" process discards (i.e., does not save) changes made to the document while it was checked out.

B1.3.7   To delete a file from a BSP, right-click on the file name and select "Delete…" from the resulting context menu. The CPR only has permission to delete files from the "A. Submission" folder of the BSP. To delete a file from the "B. Plan Review" folder of the BSP, contact the PoC.

B1.3.8   To delete a file from a BSS, contact the PoC. Files can only be deleted from a BSS by its owner.

B1.4   Add a File to Bluebeam Studio Project (BSP)

Users with permission to do so based on the security settings of the target folder will add files to a BSP by performing the actions described below. The CPR only has permission to add files to the "A. Submission" folder of the BSP and relies upon the PoC to add files to the "B. Plan Review" folder of the BSP.

B1.4.1   Join the BSP as described in Section B1.1 above.

B1.4.2   Navigate to the target folder in the BSP to which the file(s) is to be uploaded as described in Section B1.3. above.

B1.4.3   Right-click on the target folder.

B1.4.4   Select "Upload Files…" from the resulting context menu. A dialog box titled "Upload Files" will open.

B1.4.5   In the resulting dialog box, click on the "Add" button.

B1.4.6   Select "Files" from the resulting context menu. A navigation window titled "Add Files" will open.

B1.4.7   Navigate to the location where the file(s) to be uploaded has been saved locally.

B1.4.8   Select the file(s) to be uploaded. Multiple files can be selected concurrently by holding down the "Ctrl" key.

B1.4.9   Click the "Open" button. The navigation window will close.

B1.4.10   Click the "OK" button to close the dialog box and upload the files.

B1.5   Download a File from Bluebeam Studio Project (BSP)

Users with permission to do so based on the security settings of the subject folder will download files from a BSP by performing the following actions:

B1.5.1   Join the BSP as described in Section B1.1 above.

B1.5.2   Navigate to the subject folder in the BSP from which the file(s) is to be downloaded as described in Section B1.3. above.

B1.5.3   Right-click on the name of the file to be downloaded.

B1.5.4   Select "Download Copy" from the resulting context menu. A navigation window titled "Save As" will open.

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B1.5.5 Navigate to the location where the downloaded file will be saved locally.

B1.5.6 Click the "Save" button to close the window and complete the download.

B1.6   "My Tools" Tool Set

The "My Tools" tool set allows users to save frequently used markups. Markups can be added to the "My Tools" tool set by performing the following steps:

B1.6.1 Create a markup on any document. It is recommended to create the markup with settings that match one of the default tools in the DSA tool chest.

B1.6.2 Right-click on the markup.

B1.6.3 Select "Add to Tool Chest" from the resulting context menu.

B1.6.4 Select "My Tools" from the resulting subordinate context menu.

B2. EPR OPERATIONS

B2.1 Managing the "PR Tracking Table" Document

During the review of a project the CPR will use the "PR Tracking Table" document to manage information including plan reviewer contact information and the documents received and under review.

B2.1.1 The CPR shall use the "PR Table" tool set provided in the DSA Bluebeam Studio Profile to update the "PR Tracking Table" document.

B2.1.2 The "Document Review Summary" section shall be updated by the CPR as follows.

B2.1.2.1 At the beginning of the plan review, add the "Status Text Box" markup from the "PR Table" tool chest to "Document Review Summary" section. Edit the text box in accordance with the received documents that are subject to review and approval.

B2.1.2.2 During back check, update the "Status Text Box" markup to reflect new document versions received and being reviewed. Double-click the text box to edit the text as required.

B2.1.2.3 When the version of a review document is superseded by a corrected version, use the "Strikethrough" tool to strikethrough the text corresponding to the name of the superseded document.

B2.1.2.4 When the new version of a review document is received, add the document name below the names of the preceding documents.

B2.1.2.5 When a document is approved, append the document name by adding the suffix "_A".

B2.1.2.6 When a document is approved contingent upon revisions made to the file by the design professional in the BSS, append the document name by adding the suffix "_As Corrected".

B2.1.3 The "Status" section shall be updated by the CPR at the conclusion of the back check by placing an "X" in the box designating *Supporting documents moved from "A. Submission" folder to "B. DSA Review" folder or no documents to be moved.* See Section 3.4.2 above.

B2.1.4 The EPR Administrator will use the "PR Tracking Table" document to identify the documents to be stamped out and archived.

B3. TROUBLESHOOTING IN BLUEBEAM

Refer to Appendix B2 of *PR 18-04: Electronic Plan Review for Design Professionals* for information on troubleshooting challenges in Bluebeam Revu and Studio.

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APPENDIX C: STANDARDS AND NAMING CONVENTIONS

Table C1.1: Bluebeam Studio Project (BSP) Folder Structure	
BSP Folders	**Description**
0 Increments	Root folder indicates the number of increments
A. Submission	This is the BSP folder where the design professional submits Version 2 (_V2) and greater documents.
1. Plan Review Documents*	
Sub-folders for each Increment as applicable	
2. Post Approval Documents*	
A. Deferred Submittals	
Sub-folders for each Increment as applicable	
B. Revisions	
Sub-folders for each Increment as applicable	
C. Addenda	
Sub-folders for each Increment as applicable	
D. Construction Change Documents	
B. DSA Review	This BSP folder is where DSA places project documents and sends them to sessions (as required) for mark-up.
1. Plan Review Documents*	
Sub-folders for each Increment as applicable	
2. Post Approval Documents*	
A. Deferred Submittals	
Sub-folders for each Increment as applicable	
B. Revisions	
Sub-folders for each Increment as applicable	
C. Addenda	
Sub-folders for each Increment as applicable	
D. Construction Change Documents	
C. Approval	This is the BSP folder where DSA places the approved documents.
1. Plan Review Documents*	
Sub-folders for each Increment as applicable	
2. Post Approval Documents*	
A. Deferred Submittals	
Sub-folders for each Increment as applicable	
B. Revisions	
Sub-folders for each Increment as applicable	
C. Addenda	
Sub-folders for each Increment as applicable	
D. Construction Change Documents	
* BSP used for the review of reports do not include this folder or its sub-folders.	

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Table C1.2: Bluebeam Studio Sessions (BSS) Naming and Associated BSP Folder	
BSP Folder	**BSS Name**
Project Without Increments	
B. DSA Review	
1. Plan Review Documents	*RO_APPLNO* Plan Review *Project*
2. Post Approval Documents	
A. Deferred Submittals	*RO_APPLNO* Deferred Submittal *Project*
B. Revisions	*RO_APPLNO* Revision *Project*
C. Addenda	*RO_APPLNO* Addendum *Project*
D. Construction Change Documents	*RO_APPLNO* CCD *Project*
Project With Increments (2 Increment example shown)	
B. DSA Review	

1. Plan Review Documents
    Increment #1
    Increment #2
	RO_APPLNO INC 01 Plan Review *Project*
	RO_APPLNO INC 02 Plan Review *Project*

2. Post Approval Documents	

A. Deferred Submittals
      Increment #1
      Increment #2
	RO_APPLNO Deferred Submittal *Project*

B. Revisions
      Increment #1
      Increment #2
	RO_APPLNO Revision *Project*

C. Addenda
      Increment #1
      Increment #2
	RO_APPLNO Addendum *Project*

D. Construction Change Documents	*RO_APPLNO* CCD *Project*

Legend:

RO – Two-digit DSA Regional Office identification number (01: Oakland, 02: Sacramento, 03: Los Angeles, or 04: San Diego)

APPLNO – Six-digit project application number assigned at registration.

Project – Project name as recorded in eTracker.

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Table C2.1: Plan Review Document File Naming Convention			
	Document Type	**Example Name (Project without Increments)**	**Example Name (Project with Increments: Increment 1 shown)**
Initial Documents with Version 1 (_V1) Identifier	Drawings, typical	DWG_V1	INC 01_DWG_V1
	Drawings, multiple volumes when size exceeds 1 GB	DWG1_V1 DWG2_V1	INC 01_DWG1_V1 INC 01_DWG2_V1
	Specifications	SPC_V1	INC 01_SPC_V1
	DSA 103	103_V1	INC 01_103_V1
	Seismic Mitigation Program (SMP) Phase 1 Eligibility Evaluation Report	SMP1_V1	Not applicable
	SMP Phase 2 Replacement versus Rehabilitation Report	SMP2_V1	Not applicable
	Evaluation and Design Criteria Report	EDCR_V1	Not applicable
	Supporting Documents	See Table C2.2 below	See Table C2.2 below
	Additional blank pages as required by DSA	DSA Additional Comments	INC 01_DSA Additional Comments
Resubmitted Documents at Back Check with Version 2* (_V2) Identifier	Drawings, typical	DWG_V2	INC 01_DWG_V2
	Drawings, multiple volumes when size exceeds 1 GB	DWG1_V2 DWG2_V2	INC 01_DWG1_V2 INC 01_DWG2_V2
	Specifications	SPC_V2	INC 01_SPC_V2
	DSA 103	103_V2	INC 01_103_V2
	SMP Phase 1 Eligibility Evaluation Report	SMP1_V2	Not applicable
	SMP Phase 2 Replacement versus Rehabilitation Report	SMP2_V2	Not applicable
	Evaluation and Design Criteria Report	EDCR_V2	Not applicable
	Supporting Documents	See Table C2.2 below	See Table C2.2 below
* All documents submitted after the initial submittal must have sequential version numbers			

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Table C2.2: Plan Review Supporting Document File Naming Convention		
Document Type	**Example Name (Project without Increments)**	**Example Name (Project with Increments: Increment 2 example shown)**
Structural Calculations	Structural Calcs_V*	INC 02_Structural Calcs_V*
Hydraulic Calculations	Hydraulic Calcs_V*	INC 02_Hydraulic Calcs_V*
Geotechnical Report	Geotechnical Report_V*	Geotechnical Report_V*
Geohazard Report	Geohazard Report_V*	Geohazard Report_V*
Flood Zone Map	FloodZone_V*	FloodZone_V*
Form DSA 1	DSA1_V*	DSA1_V*
Form DSA 1-INC	DSA1-INC_V*	DSA1-INC_V*
Form DSA 1-RUH	DSA1-RUH_V*	DSA1-RUH_V*
Form DSA 1-MR	DSA1-MR_V*	INC 02_DSA1-MR_V*
Form DSA 3	DSA3_V*	INC 02_DSA3_V*
Original drawings of existing construction	A#*RO-APPLNO* Existing Drawings	A#*RO-APPLNO* Existing Drawings
Meeting Minutes (e.g., pre-application meeting, etc.)	MtgMinutes_V*	INC 02_MtgMinutes_V*
CGS Review Letter	CGS_V*	CGS_V*
CGS Acceptance Letter	CGS_A	CGS_A
Product Cut Sheets	CutSheet_*TYPE*_V*	INC 02_CutSheet_*TYPE*_V*
Structural Analysis Model	StructModel _*INFO*_V*	INC 02_StructModel _*INFO*_V*

Legend:

* Sequential version number starting with 1.

RO: DSA regional office identification number (01: Oakland, 02: Sacramento, 03: Los Angles, 04: San Diego). For projects that predate the regional office identification number, use two consecutive underscore characters: "__".

APPLNO: Six-digit project application number. For projects that predate standard six-digit application numbers, add preceding zeros to achieve six-digits.

TYPE: Description of cut sheet content (e.g., "FireAlarm", "DoorHardware", etc.).

INFO: Any constructive designating information (e.g., "BldgA", "Gym", "Canopy", etc.)

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Table C2.3: Post Approval Document File Naming Convention		
Document Type (Convention)	**Example Name (Project without Increments)**	**Example Name (Project with Increments: Increment 2 example shown)**
Addenda (ADD_*ID*_V*)	ADD_01_V1 ADD_01_V2	INC 02_ADD_01_V1 INC 02_ADD_01_V2
	ADD_02_V1 ADD_02_V2	INC 02_ADD_02_V1 INC 02_ADD_02_V2
Revisions (REV_*ID*_V*)	REV_A_V1 REV_A_V2	INC 02_REV_A_V1 INC 02_REV_A_V2
	REV_B_V1 REV_B_V2	INC 02_REV_B_V1 INC 02_REV_B_V2
Deferred Submittals (DS_*Name*_V*)	See Table C2.4 below	See Table C2.4 below
Construction Change Document (CCD_*NUM*_V*)	CCD_001_V1 CCD_001_V2	CCD_001_V1 CCD_001_V2
	CCD_002_V1 CCD_002_V2 CCD_002_V3	CCD_002_V1 CCD_002_V2 CCD_002_V3
	CCD_003_V1 CCD_003_V2	CCD_003_V1 CCD_003_V2

Legend:

* Number sequentially assigned to each new version of submitted post approval document.

ID: Two-digit numeric (e.g., 01, 02, 03, etc.) or one-digit alphabetic (e.g., A, B, C, etc.) sequential designator uniquely assigned to each separate Addendum or Revision.

NUM: Three-digit sequential number (e.g., 001, 002, 003, etc.) uniquely assigned to each separate CCD.

Name: Unique name of each deferred submittal based on subject matter per Table C2.4.

Table C2.4: Deferred Submittal Document File Naming Convention		
Deferred Submittal Type	**Example Name (Project without Increments)**	**Example Name (Project with Increments: Increment 2 example shown)**
Access Floor Systems	DS_Access Floor Systems_V1 DS_Access Floor System_V2	INC 02_DS_Access Floor Systems_V1 INC 02_DS_Access Floor System_V2
Bleachers	DS_Bleacher_V1 DS_Bleacher_V2	INC 02_DS_Bleacher_V1 INC 02_DS_Bleacher_V2
Elevator Guide Rails	DS_Elevator Guide Rail_V1 DS_Elevator Guide Rail_V2	INC 02_DS_Elevator Guide Rail_V1 INC 02_DS_Elevator Guide Rail_V2
Exterior Wall System	DS_Exterior Wall System_V1 DS_Exterior Wall System_V2	INC 02_DS_Exterior Wall System_V1 INC 02_DS_Exterior Wall System_V2
Fire Pump and Water Tank	DS_Fire Pump and Tank_V1 DS_Fire Pump and Tank_V2	INC 02_DS_Fire Pump and Tank_V1 INC 02_DS_Fire Pump and Tank_V2
Skylights	DS_Skylight_V1 DS_Skylight_V2	INC 02_DS_Skylight_V1 INC 02_DS_Skylight_V2
Stage Rigging	DS_Stage Rigging_V1 DS_Stage Rigging_V2	INC 02_DS_Stage Rigging_V1 INC 02_DS_Stage Rigging_V2
Steel Joist / Joist Girder	DS_Steel Joist_V1 DS_Steel Joist_V2	INC 02_DS_Steel Joist_V1 INC 02_DS_Steel Joist_V2
Window Wall System or Storefront	DS_Window Wall System_V1 DS_Window Wall System_V2	INC 02_DS_Window Wall System _V1 INC 02_DS_Window Wall System _V2
Wood Truss	DS_Wood Truss_V1 DS_Wood Truss_V2	INC 02_DS_ Wood Truss _V1 INC 02_DS_ Wood Truss _V2

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Table C3.1: Background Colors by Plan Review Discipline and Common Markup Tools
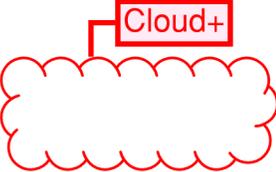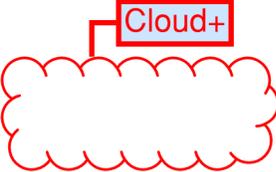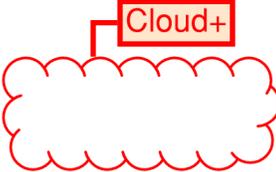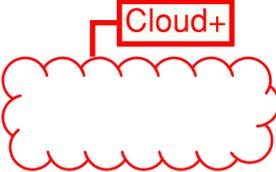
Tool	Structural Safety Phase 1 Review	Accessibility	Fire and Life Safety	CalGreen
Text Box	Text Box	Text Box	Text Box	Text Box
Call Out	Call Out	Call Out	Call Out	Call Out
Cloud+	Cloud+	Cloud+	Cloud+	Cloud+
Pen				
Sheet with Comment	Y	Y	Y	Y
Sheet without Comment	N	N	N	N