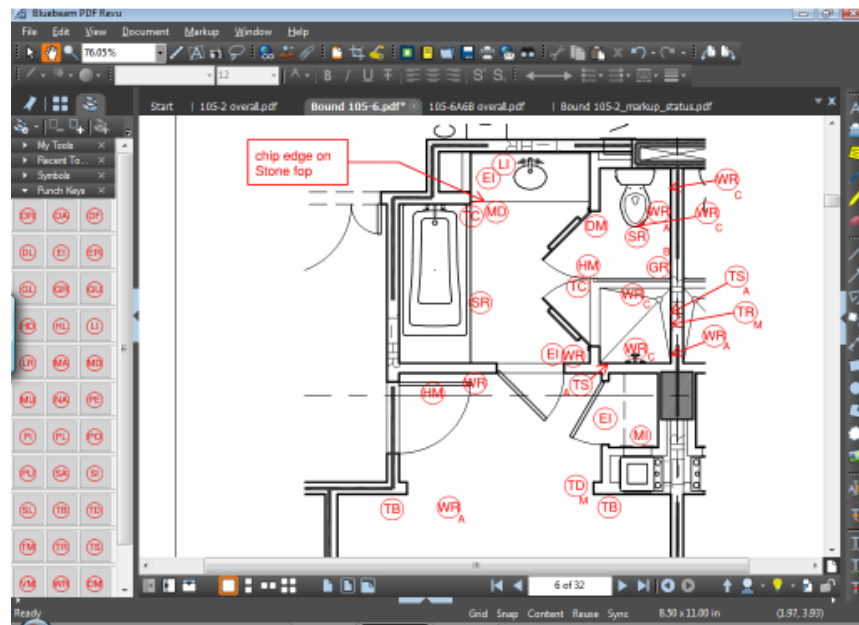


Real World Results – Using Bluebeam PDF Revu for Punchlists and Back Checks

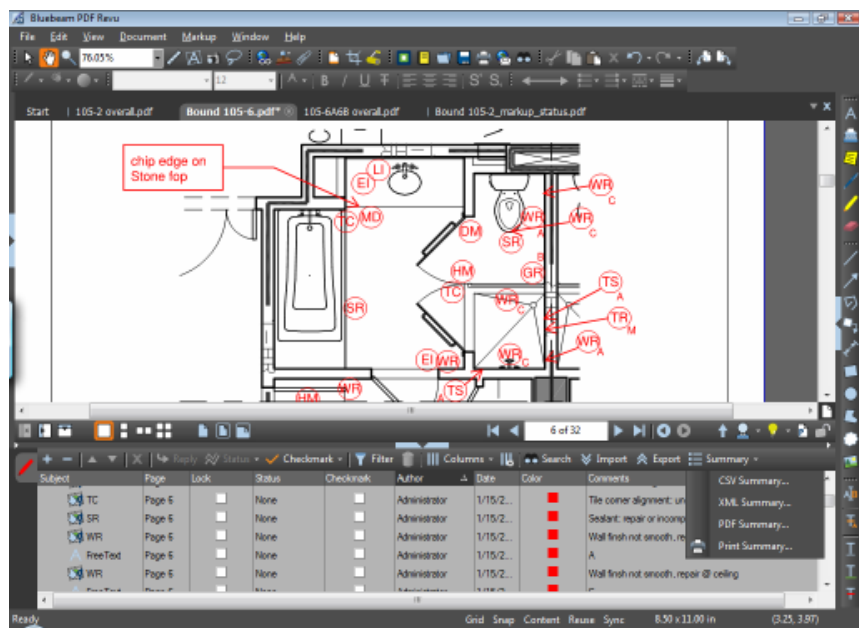
Sample – Screenshots from Bluebeam PDF Revu

Punch List Keynotes or Symbol Library.

Keynotes or Punchlist Symbols can be dragged and dropped onto the sketch. Each Keynote has associated comments or text which is predefined to describe the work to be completed. For example, “GR = Grout Repair: clean, smooth” or “EI = Electrical: Incomplete switch or other installation.”

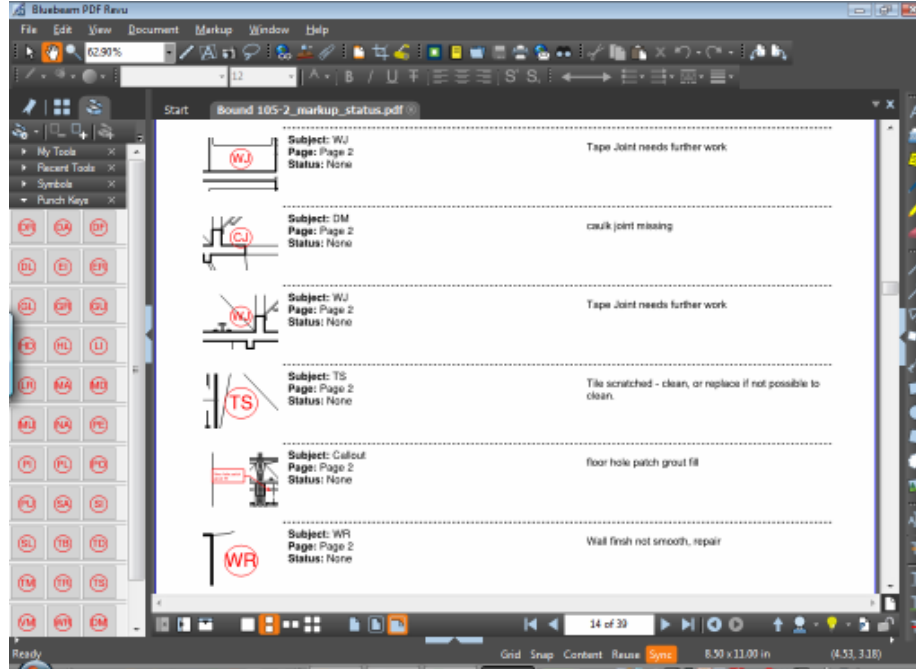


An output list of Punchlist Items is automatically generated as each Keynote is placed on the sketch. This list can then be output to either an appended PDF file to the sketch or an XML file which can be opened and viewed in Excel.



Real World Results – Using Bluebeam PDF Revu for Punchlists and Back Checks

Sample – Screenshot of Output from Bluebeam PDF Revu as a PDF file and as an Excel file



The above PDF punchlist includes a thumbnail view of the Keynote on the sketch in addition to the selected fields and item descriptions. Each thumbnail is hyperlinked back to the original location in the sketch for ease of navigation. Below is the punchlist output to Excel for distribution to subs.

Version	Document	Subject	Page	Lock	Status	Checkmark	Author	Date	Color	Comments
1	Bound 105-6.pdf MI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:54:47 PM	FFFF0000	Mechanical	incomplete
2	1 Bound 105-6.pdf EI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:55:08 PM	FFFF0000	Electrical	incomplete switch or other installation
3	1 Bound 105-6.pdf HM	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:55:16 PM	FFFF0000	Hardware	missing
4	1 Bound 105-6.pdf WR	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:55:34 PM	FFFF0000	Wall finish	not smooth, repair above
5	1 Bound 105-6.pdf WJ	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:55:36 PM	FFFF0000	Wall finish	not smooth, repair above
6	1 Bound 105-6.pdf EI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:55:45 PM	FFFF0000	Electrical	incomplete switch or other installation
7	1 Bound 105-6.pdf DF	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:56:06 PM	FFFF0000	Door finish	damaged, repair
8	1 Bound 105-6.pdf EI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:56:50 PM	FFFF0000	Electrical	incomplete switch or other installation
9	1 Bound 105-6.pdf DM	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:56:57 PM	FFFF0000	Door	Missing
10	1 Bound 105-6.pdf HM	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:57:02 PM	FFFF0000	Hardware	missing
11	1 Bound 105-6.pdf EI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:57:09 PM	FFFF0000	Electrical	incomplete switch or other installation
12	1 Bound 105-6.pdf LI	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:57:18 PM	FFFF0000	Light	incomplete installation
13	1 Bound 105-6.pdf WR	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:58:02 PM	FFFF0000	Wall finish	not smooth, repair
14	1 Bound 105-6.pdf GR	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:58:17 PM	FFFF0000	Grout repair	clean, smooth, below
15	1 Bound 105-6.pdf WJ	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:59:01 PM	FFFF0000	Tape Joint	needs further work
16	1 Bound 105-6.pdf Arrow	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 3:59:19 PM	FFFF0000		
17	1 Bound 105-6.pdf WR	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:00:00 PM	FFFF0000	Wall finish	not smooth, repair above
18	1 Bound 105-6.pdf DF	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:03:15 PM	FFFF0000	Door finish	damaged, repair
19	1 Bound 105-6.pdf WB	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:03:23 PM	FFFF0000	corner bead mudding	incomplete
20	1 Bound 105-6.pdf DM	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:03:50 PM	FFFF0000	caulk joint	missing above
21	1 Bound 105-6.pdf WR	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:04:17 PM	FFFF0000	Wall finish	not smooth, repair
22	1 Bound 105-6.pdf WB	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:04:50 PM	FFFF0000	corner bead mudding	incomplete
23	1 Bound 105-6.pdf DM	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:05:11 PM	FFFF0000	caulk joint	missing above
24	1 Bound 105-6.pdf Arrow	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:04:58 PM	FFFF0000		
25	1 Bound 105-6.pdf Room No.	Page 1	Unlocked	None	Unchecked	Administrator	1/14/2009 4:05:29 PM	FFFF0000	4207	
26	1 Bound 105-6.pdf Room No.	Page 2	Unlocked	None	Unchecked	Administrator	1/14/2009 4:06:11 PM	FFFF0000	4208	
27	1 Bound 105-6.pdf HM	Page 2	Unlocked	None	Unchecked	Administrator	1/14/2009 4:06:17 PM	FFFF0000	Hardware	missing
28	1 Bound 105-6.pdf EI	Page 2	Unlocked	None	Unchecked	Administrator	1/14/2009 4:06:24 PM	FFFF0000	Electrical	incomplete switch or other installation
29	1 Bound 105-6.pdf EI	Page 2	Unlocked	None	Unchecked	Administrator	1/14/2009 4:06:28 PM	FFFF0000	Electrical	incomplete switch or other installation

Real World Results – Using Bluebeam PDF Revu for Punchlists and Back Checks

Sample – Screenshot of competing technology output versus Bluebeam PDF Revu

- Contractors Punch List

ID	Created	Room	Level	Area	Elev.	Sub Contractor	Type	Sub-issue (1)	(2)	Sub-issue (3)	Notes (Optional)	Observer Name	Status	Date Completed
D-451	12/09/08	1125-BR	1	1A	NA	PACIFIC ARCHITECTURAL MILLWORK	CASE	MILLWORK	DAMAGED		repair cabinet network		Open	
D-450	12/09/08	1125-BR	1	1A	NA	Ruggieri	CERAMIC TILE	FLOOR TILE	BAD GROUT		Patch Grout at toilet Area near shower		Open	
D-447	12/09/08	1125-BR	1	1A	NA	RPG	DOORS	HARDWARE	HINGES		Bedroom Doors		Open	
D-446	12/09/08	1125-BR	1	1A	NA	Ruggieri	CERAMIC TILE	WALL TILE	BAD GROUT		above sink		Open	
D-445	12/09/08	1125-BR	1	1A	NA	PAN Pacific	PLUMBING	PLUMBING	SINK	ADJUST	Hot cold handles not symmetrical		Open	
Room: 1125-GR														
D-449	12/09/08	1125-GR	1	1A	C	Martie Bros./Masco	CEILING	DRYWALL / TAPING	DAMAGED		Check on ceiling		Open	
Room: 1127-BR														
D-459	12/16/08	1127-BR	1	1A	NA	MASCO	DOORS				Toilet door and shower door not level		Open	
D-444	12/09/08	1127-BR	1	1A	NA	PAN Pacific	PLUMBING	PLUMBING			Tub-Hot cold handle isn't loose		Open	
D-443	12/09/08	1127-BR	1	1A	NA	GENERAL CONTRACTORS	DOORS	WOOD / HM	PAINT	PAINT TOP OF DOOR	Bathroom door		Open	
D-442	12/09/08	1127-BR	1	1A	NA	Ruggieri	CERAMIC TILE	FLOOR TILE	DAMAGED		Replace broken tile at toilet area		Open	
D-441	12/09/08	1127-BR	1	1A	NA	MASCO	DOORS	HARDWARE			Toilet door middle pedestal is not flush		Open	
Room: 1127-GR														
ID	Created	Room	Level	Area	Elev.	Sub Contractor	Type	Sub-issue (1)	(2)	Sub-issue (3)	Notes (Optional)	Observer Name	Status	Date Completed

12/19/2008 8:19 am Page 2 of 48

The above sample output from the competing technology highlights its limitations. The only output is text, which makes back checking, to go back and locate an original item, almost impossible. To improve the efficiency, the client put together his own Excel spreadsheet which was then used by the General Contractor and himself to do back checking. Essentially, the competing technology's output had little value.

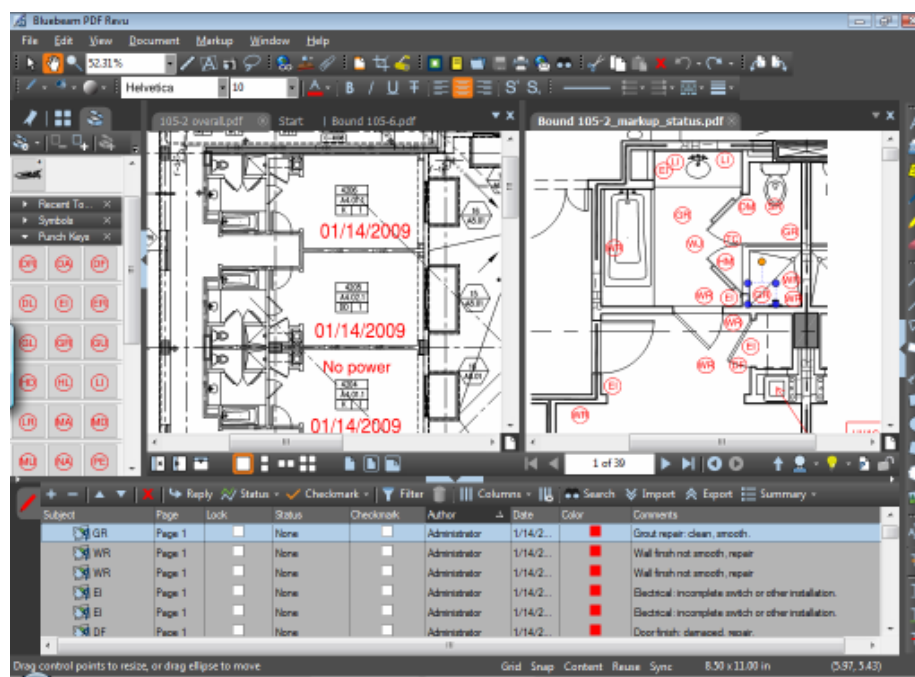
For the first phase there were several back checks. At first back check, only half of the items that were documented by the client were completed by the subcontractors. Additional back checks were required to complete the punch items. This result is likely due to the lack of a visual relationship with the punch item to the physical location, which in the Bluebeam example is represented by the sketch. With only a list of items, some of which can be very large, the subcontractors have very little to go on as to whether the item they are repairing or believe repaired matches the item on the list itself. This increases the rework, back checks, and costs on the project.

Real World Results – Using Bluebeam PDF Revu for Punchlists and Back Checks

Sample – Bluebeam PDF Revu example with split views, keynotes, and punchlist output visible

The setup illustrated below can be used for back check wherein a user would select an item in the lower list, that item would automatically highlight and become viewable in the above screen, and if the item has been corrected, by simply changing the status from none to complete, the user name and date stamp will automatically be applied. Once a room is complete, a date stamp can be placed on the drawing to indicate completion. This view can easily be opened or closed with a click of a button either using the file Tabs at the top or via the split screen technology.

Please note, once an item is marked complete, the filter function can be used to highlight the remaining items that are not complete, a new list generated, and redistributed to the relevant subs in either PDF or Excel format. If another back check is required, the same document, filtered, can be used for the punchwalk and marked as complete accordingly.



The project study was conducted to highlight how Bluebeam PDF Revu can be used in the punch process. The findings indicate that the technology is sufficiently flexible to accommodate this project, the user interface is simple with minimal learning required, and the output is applicable and useful to all parties. What is most amazing is that Bluebeam PDF Revu costs \$149.00 (\$2700 including a Tablet PC) while the competing technology runs \$85,000.