

# Gregg Software Incorporated

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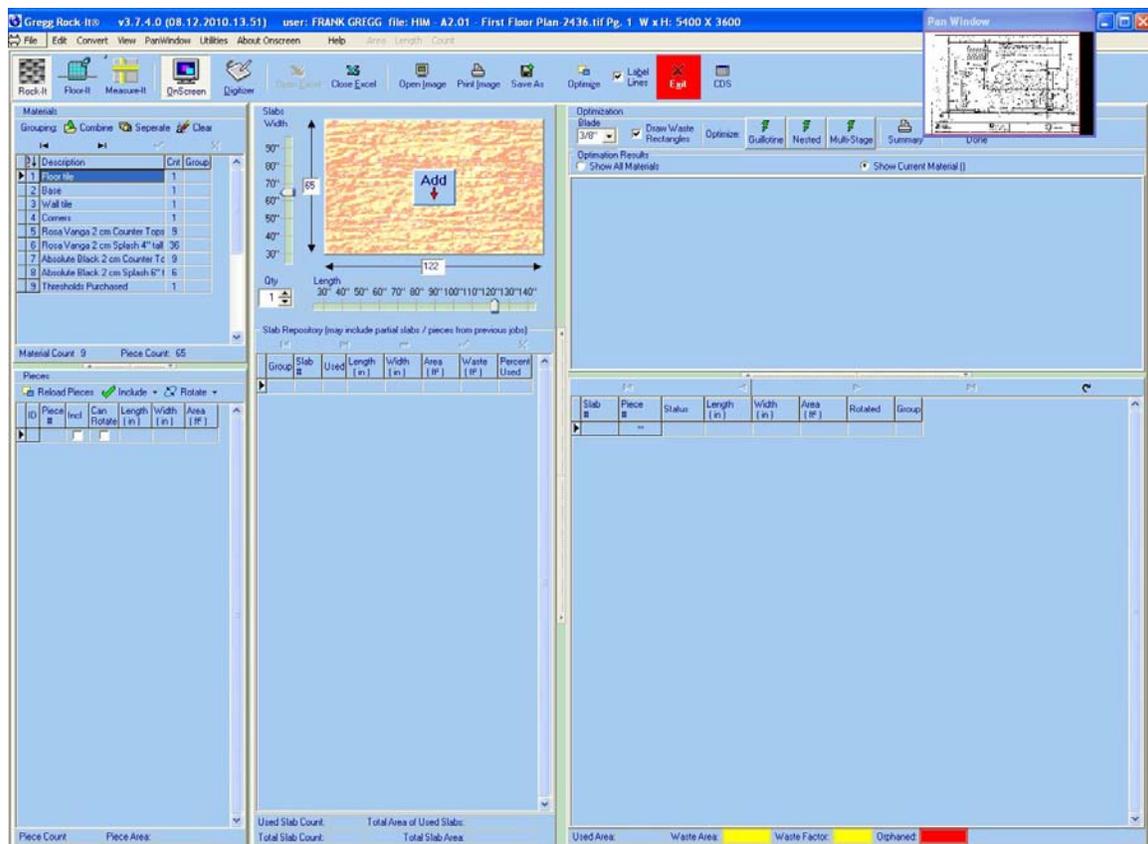
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## Gregg Optimization in Rock-It

Gregg optimization will show you how to layout the various stone pieces on to slabs from your project, obtain the job waste factor, how many slabs are needed for each material on the project and how to cut the job in the most efficient manner.

Gregg Rock-It, for stone fabricators will measure and obtain the pieces required for the project. Once the entire job is identified through the takeoff, the user only has to select the Optimize button in Rock-It.

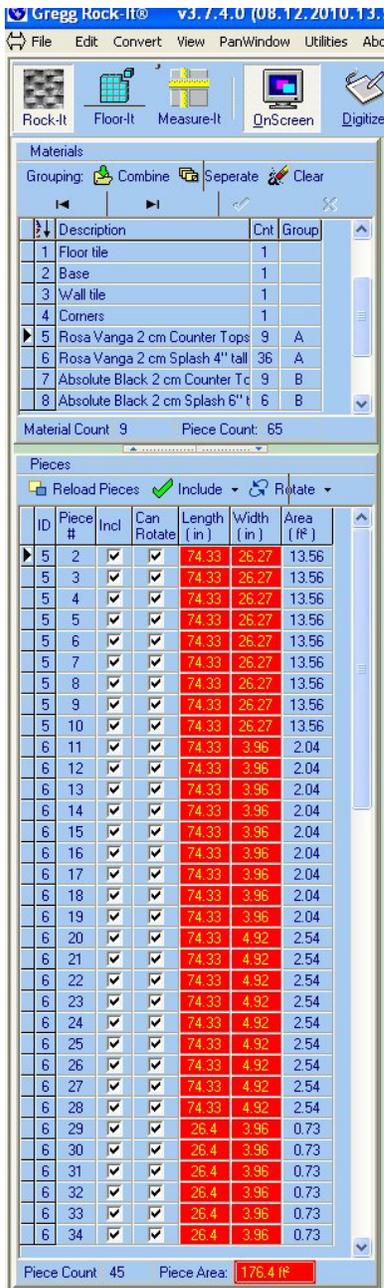


The material list from the pricing program loads in the top left window.

Materials			
Grouping:  Combine  Separate  Clear			
	Description	Cnt	Group
▶ 1	Floor tile	1	
2	Base	1	
3	Wall tile	1	
4	Corners	1	
5	Rosa Vanga 2 cm Counter Tops	9	
6	Rosa Vanga 2 cm Splash 4" tall	36	
7	Absolute Black 2 cm Counter Tc	9	
8	Absolute Black 2 cm Splash 6" t	6	
9	Thresholds Purchased	1	

Material Count: 9      Piece Count: 65

The user must select the items to optimize and may use characters or numbers to identify the groups. Multiple items may be grouped together as shown below. Five of the items were tile or other items that do not need to be optimized the other four items are the stone slab materials to be optimized. Material five and six list Rosa Vanga Countertops and splash. Material Seven and eight list the Absolute Black Countertops and Splash. They are all 2 cm materials so each color can be optimized together while being priced separately for the client.



Once the groups are created you can select an item from that group and the entire group will appear in the box below the material list labeled pieces. At the bottom of the piece box, the total number of pieces and the total area footage those pieces represent are listed. Each piece in the list of pieces has two check box options, first is a check box to include or not to include a piece in the optimization list, second is a check box to select if a piece can be rotated or not rotated. If it has a vein, such as a marble it might not work properly if rotated. The piece list shows each piece number and the size of the piece in inches from the pricing takeoff page. They are in red as an indication that there are no slabs listed in the slab list to optimize with.

Gregg Rock-It® v3.7.4.0 (08.12.2010.13.51) user: FRANK GREGG file: HIM - A2.01 - First Floor Plan

File Edit Convert View PanWindow Utilities About Onscreen Help Area Length Count

Rock-It Floor-It Measure-It OnScreen Digitizer Open Excel Close Excel Open Image Print Image Save As

Materials

Grouping: Combine Separate Clear

Description	Cnt	Group
1 Floor tile	1	
2 Base	1	
3 Wall tile	1	
4 Corners	1	
5 Rosa Vanga 2 cm Counter Tops	9	A
6 Rosa Vanga 2 cm Splash 4" tall	36	A
7 Absolute Black 2 cm Counter Tc	9	B
8 Absolute Black 2 cm Splash 6" t	6	B

Material Count: 9 Piece Count: 65

Pieces

Reload Pieces Include Rotate

ID	Piece #	Incl	Can Rotate	Length (in)	Width (in)	Area (ft²)
▶ 5	2	✓	✓	74.33	26.27	13.56
5	3	✓	✓	74.33	26.27	13.56
5	4	✓	✓	74.33	26.27	13.56
5	5	✓	✓	74.33	26.27	13.56
5	6	✓	✓	74.33	26.27	13.56
5	7	✓	✓	74.33	26.27	13.56
5	8	✓	✓	74.33	26.27	13.56
5	9	✓	✓	74.33	26.27	13.56
5	10	✓	✓	74.33	26.27	13.56
6	11	✓	✓	74.33	3.96	2.04
6	12	✓	✓	74.33	3.96	2.04
6	13	✓	✓	74.33	3.96	2.04
6	14	✓	✓	74.33	3.96	2.04
6	15	✓	✓	74.33	3.96	2.04
6	16	✓	✓	74.33	3.96	2.04
6	17	✓	✓	74.33	3.96	2.04
6	18	✓	✓	74.33	3.96	2.04
6	19	✓	✓	74.33	3.96	2.04
6	20	✓	✓	74.33	4.92	2.54
6	21	✓	✓	74.33	4.92	2.54
6	22	✓	✓	74.33	4.92	2.54
6	23	✓	✓	74.33	4.92	2.54
6	24	✓	✓	74.33	4.92	2.54
6	25	✓	✓	74.33	4.92	2.54
6	26	✓	✓	74.33	4.92	2.54
6	27	✓	✓	74.33	4.92	2.54
6	28	✓	✓	74.33	4.92	2.54
6	29	✓	✓	26.4	3.96	0.73
6	30	✓	✓	26.4	3.96	0.73
6	31	✓	✓	26.4	3.96	0.73
6	32	✓	✓	26.4	3.96	0.73
6	33	✓	✓	26.4	3.96	0.73
6	34	✓	✓	26.4	3.96	0.73

Slabs Width

90" 80" 70" 60" 50" 40" 30"

65

Add

122

Qty Length 30" 40" 50" 60" 70" 80" 90" 100" 110" 120" 130" 140"

1

Slab Repository (may include partial slabs / pieces from previous jobs)

Group	Slab #	Used	Length (in)	Width (in)	Area (ft²)	Waste (ft²)	Percent Used
A	1		122	65	55.07		
A	2		122	65	55.07		
A	3		122	65	55.07		

Used Slab Count: 0 Total Area of Used Slabs:

Total Slab Count: 3 Total Slab Area: 176.4 ft²

Piece Count: 45 Piece Area: 176.4 ft²

In the second column of boxes the top box shows a slab with slab size changing capabilities so you can set the size of each slab from your inventory. You can send one at a time or a group of slabs the same size. Once the first slab is sent to the slab inventory, the piece list on the left bottom box removes the red color and returns to the normal color. But the piece footage at the bottom and the new slab total footage both stay red. As each slab is selected, it is placed in the inventory box. The total slab footage and piece footage totals will stay red until the slab footage reaches the total piece footage.

ID	Piece #	Incl	Can Rotate	Length (in)	Width (in)	Area (ft²)
5	2	✓	✓	74.33	26.27	13.56
5	3	✓	✓	74.33	26.27	13.56
5	4	✓	✓	74.33	26.27	13.56
5	5	✓	✓	74.33	26.27	13.56
5	6	✓	✓	74.33	26.27	13.56
5	7	✓	✓	74.33	26.27	13.56
5	8	✓	✓	74.33	26.27	13.56
5	9	✓	✓	74.33	26.27	13.56
5	10	✓	✓	74.33	26.27	13.56
6	11	✓	✓	74.33	3.96	2.04
6	12	✓	✓	74.33	3.96	2.04
6	13	✓	✓	74.33	3.96	2.04
6	14	✓	✓	74.33	3.96	2.04
6	15	✓	✓	74.33	3.96	2.04
6	16	✓	✓	74.33	3.96	2.04
6	17	✓	✓	74.33	3.96	2.04
6	18	✓	✓	74.33	3.96	2.04
6	19	✓	✓	74.33	3.96	2.04
6	20	✓	✓	74.33	4.92	2.54
6	21	✓	✓	74.33	4.92	2.54
6	22	✓	✓	74.33	4.92	2.54
6	23	✓	✓	74.33	4.92	2.54
6	24	✓	✓	74.33	4.92	2.54
6	25	✓	✓	74.33	4.92	2.54
6	26	✓	✓	74.33	4.92	2.54
6	27	✓	✓	74.33	4.92	2.54
6	28	✓	✓	74.33	4.92	2.54
6	29	✓	✓	26.4	3.96	0.73
6	30	✓	✓	26.4	3.96	0.73
6	31	✓	✓	26.4	3.96	0.73
6	32	✓	✓	26.4	3.96	0.73
6	33	✓	✓	26.4	3.96	0.73
6	34	✓	✓	26.4	3.96	0.73

Group	Slab #	Used	Length (in)	Width (in)	Area (ft²)	Waste (ft²)	Percent Used
A	1		122	65	55.07		
A	2		122	65	55.07		
A	3		122	65	55.07		
A	4		122	65	55.07		

Piece Count: 45    Piece Area: 176.4 ft²

Used Slab Count: 0    Total Area of Used Slabs:    Total Slab Count: 4    Total Slab Area: 220.3 ft²

While the total slab footage is equal or up to 30% above the piece footage the totals are yellow.

ID	Piece #	Incl	Can Rotate	Length (in)	Width (in)	Area (ft²)
5	2	✓	✓	74.33	26.27	13.56
5	3	✓	✓	74.33	26.27	13.56
5	4	✓	✓	74.33	26.27	13.56
5	5	✓	✓	74.33	26.27	13.56
5	6	✓	✓	74.33	26.27	13.56
5	7	✓	✓	74.33	26.27	13.56
5	8	✓	✓	74.33	26.27	13.56
5	9	✓	✓	74.33	26.27	13.56
5	10	✓	✓	74.33	26.27	13.56
6	11	✓	✓	74.33	3.96	2.04
6	12	✓	✓	74.33	3.96	2.04
6	13	✓	✓	74.33	3.96	2.04
6	14	✓	✓	74.33	3.96	2.04
6	15	✓	✓	74.33	3.96	2.04
6	16	✓	✓	74.33	3.96	2.04
6	17	✓	✓	74.33	3.96	2.04
6	18	✓	✓	74.33	3.96	2.04
6	19	✓	✓	74.33	3.96	2.04
6	20	✓	✓	74.33	4.92	2.54
6	21	✓	✓	74.33	4.92	2.54
6	22	✓	✓	74.33	4.92	2.54
6	23	✓	✓	74.33	4.92	2.54
6	24	✓	✓	74.33	4.92	2.54
6	25	✓	✓	74.33	4.92	2.54
6	26	✓	✓	74.33	4.92	2.54
6	27	✓	✓	74.33	4.92	2.54
6	28	✓	✓	74.33	4.92	2.54
6	29	✓	✓	26.4	3.96	0.73
6	30	✓	✓	26.4	3.96	0.73
6	31	✓	✓	26.4	3.96	0.73
6	32	✓	✓	26.4	3.96	0.73
6	33	✓	✓	26.4	3.96	0.73
6	34	✓	✓	26.4	3.96	0.73

Group	Slab #	Used	Length (in)	Width (in)	Area (ft²)	Waste (ft²)	Percent Used
A	1		122	65	55.07		
A	2		122	65	55.07		
A	3		122	65	55.07		
A	4		122	65	55.07		
A	5		122	65	55.07		

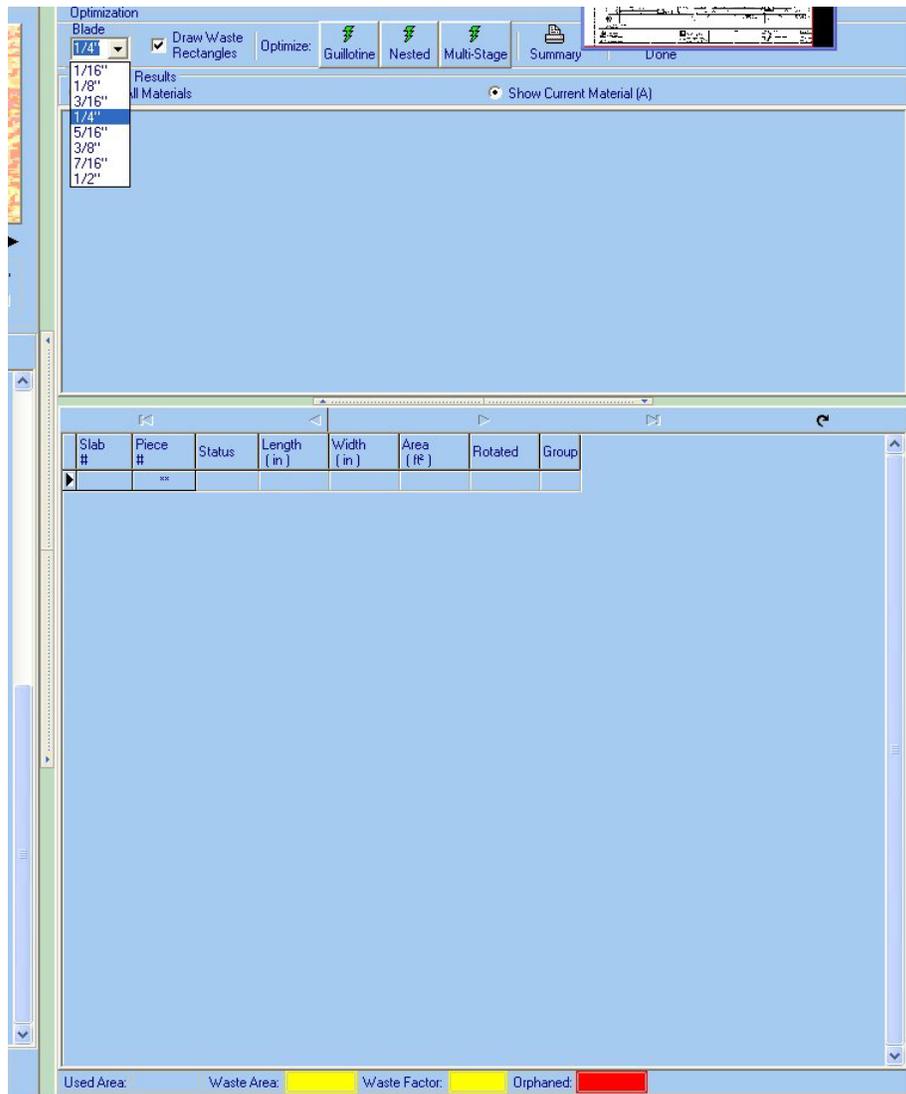
Piece Count: 45    Piece Area: 176.4 ft²

Used Slab Count: 0    Total Area of Used Slabs:    Total Slab Count: 5    Total Slab Area: 275.3 ft²

Once you add enough slabs to go over the piece total plus 30% the color turns to a normal color. That does not mean that all pieces will fit. Projects that cannot be rotated or have unusual sizes where only one piece fits on a slab can have waste factors of a larger percentage than 30%.

Placing a couple of extra slabs is Ok and will be not be used if they are not needed. At any time you may add slabs if needed to optimize.

In the top right column starting on the left side we can set the blade width and select if we want the waste to draw.



The next set of icons are the types of cutting you can use during optimize. The first icon is Guillotine cutting. (Cutting from one outer edge in until all pieces are cut out) The second icon is Nested or Non guillotine cutting; a given rectangle can be extracted without supplementary cuttings. Cutting machines with CNC capability such as laser or water jet can perform non-guillotine cuttings. The third icon is Multi stage cutting, Only horizontal or vertical cuttings are performed in the first step and only vertical or horizontal cuttings are performed in the second step and so on until finished. The user can try each of the selections to obtain the best layout. To view Optimization results there are two options, show All or just the current item.

By selecting guillotine, the program will take the group A pieces and place them on the slabs needed in the box below the icon and in the bottom box a placement list appears. You can scroll through the slab list with the scroll bar or the new placed list in the bottom box. The items in yellow are the waste or non used pieces. You can select each of the cutting methods to visually agree with which method you want to use on the project.

The screenshot displays a software interface for material optimization. At the top, the 'Blade' is set to '1/4\". The 'Optimize' section includes buttons for 'Guillotine', 'Nested', and 'Multi-Stage', with 'Guillotine' selected. The 'Optimization Results' section has radio buttons for 'Show All Materials' and 'Show Current Material (A)', with the latter selected. The main area shows three groups of material slabs:

- Group: A Slab 6 [122 x 65] [58.5% used 32.2 / 55.1 ft<sup>2</sup>]**: Contains pieces (6) 74.3x26.3, (21) 74.3x4.92, and (22) 74.3x4.92. A yellow area labeled [B] is shown to the right.
- Group: A Slab 5 [122 x 65] [82.2% used 45.3 / 55.1 ft<sup>2</sup>]**: Contains pieces (5) 74.3x26.3, (2) 74.3x26.3, (23) 74.3x4.92, and (24) 74.3x4.92. A yellow area labeled [B] is shown to the right.
- Group: A Slab 5 [122 x 65] [82.2% used 45.3 / 55.1 ft<sup>2</sup>]**: Contains pieces (9) 74.3x26.3, (8) 74.3x26.3, (27) 74.3x4.92, and (26) 74.3x4.92. A vertical column of pieces (28) through (45) with dimensions 3.96x26.4 is shown to the right, along with a yellow area labeled [C].

At the bottom, a status bar displays: Used Area: 176.36 ft<sup>2</sup>, Waste Area: 150.17 ft<sup>2</sup>, Waste Factor: 85.1%, and Orphaned: [red box].

Optimization  
Blade: 1/4"  Draw Waste Rectangles Optimize: Guillotine Nested Multi-Stage Summary Done

Optimization Results  
 Show All Materials  Show Current Material (A)

[B]

Slab #	Piece #	Status	Length [in.]	Width [in.]	Area [ft²]	Rotated	Group
4	1	positioned	74.33	26.27	13.56	No	A
6	2	positioned	74.33	26.27	13.56	No	A
1	3	positioned	74.33	26.27	13.56	No	A
4	4	positioned	74.33	26.27	13.56	No	A
6	5	positioned	74.33	26.27	13.56	No	A
7	6	positioned	74.33	26.27	13.56	No	A
7	7	positioned	74.33	26.27	13.56	No	A
5	8	positioned	74.33	26.27	13.56	No	A
5	9	positioned	74.33	26.27	13.56	No	A
2	10	positioned	74.33	3.96	2.04	No	A
1	11	positioned	74.33	3.96	2.04	No	A
1	12	positioned	74.33	3.96	2.04	No	A
1	13	positioned	74.33	3.96	2.04	No	A
1	14	positioned	74.33	3.96	2.04	No	A
1	15	positioned	74.33	3.96	2.04	No	A
1	16	positioned	74.33	3.96	2.04	No	A
1	17	positioned	74.33	3.96	2.04	No	A
1	18	positioned	74.33	3.96	2.04	No	A
4	19	positioned	74.33	4.92	2.54	No	A
4	20	positioned	74.33	4.92	2.54	No	A
7	21	positioned	74.33	4.92	2.54	No	A
7	22	positioned	74.33	4.92	2.54	No	A
6	23	positioned	74.33	4.92	2.54	No	A
6	24	positioned	74.33	4.92	2.54	No	A
1	25	positioned	74.33	4.92	2.54	No	A
5	26	positioned	74.33	4.92	2.54	No	A
5	27	positioned	74.33	4.92	2.54	No	A
5	28	positioned	3.96	26.4	0.73	Yes	A
5	29	positioned	3.96	26.4	0.73	Yes	A
5	30	positioned	3.96	26.4	0.73	Yes	A
5	31	positioned	3.96	26.4	0.73	Yes	A
5	32	positioned	3.96	26.4	0.73	Yes	A
5	33	positioned	3.96	26.4	0.73	Yes	A
5	34	positioned	3.96	26.4	0.73	Yes	A
5	35	positioned	3.96	26.4	0.73	Yes	A
5	36	positioned	3.96	26.4	0.73	Yes	A
5	37	positioned	3.96	26.4	0.73	Yes	A
5	38	positioned	3.96	26.4	0.73	Yes	A
5	39	positioned	3.96	26.4	0.73	Yes	A

Used Area: 176.36 ft² Waste Area: 150.17 ft² Waste Factor: 85.1% Orphaned: [Red Box]

The totals at the bottom show the area placed or used, the waste or non used footage and a percent waste factor to place in the pricing program.

To do the group B, select the item in the top left box. Place the slabs to use and then the cutting method you think is the best one.

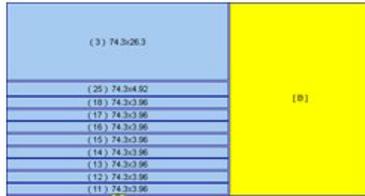
When all the groups are optimized, the show all materials radial button can be selected to show the entire project together with a total project waste factor. The summary button on

the top right will create an html file copy you can view, print or save to disc the completed project. The first image below, shows group A only.

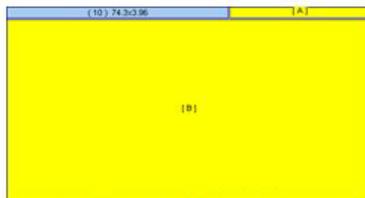
**Optimization Summary: Guillotine**

Sample Bid-14.xls

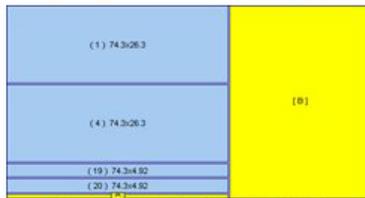
Used Area: 176.4 ff | Waste Area: 150.2 ff | Waste Factor: 55.1%



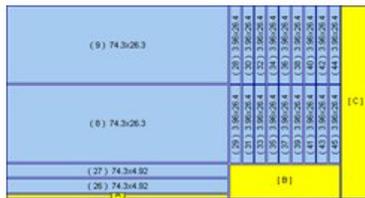
Group: A Slab: 1 [122 x 65] (55.9% used 32.5 / 55.1 ff)



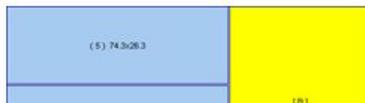
Group: A Slab: 2 [122 x 65] (3.71% used 2.04 / 55.1 ff)



Group: A Slab: 4 [122 x 65] (55.5% used 32.2 / 55.1 ff)



Group: A Slab: 5 [122 x 65] (82.2% used 45.3 / 55.1 ff)

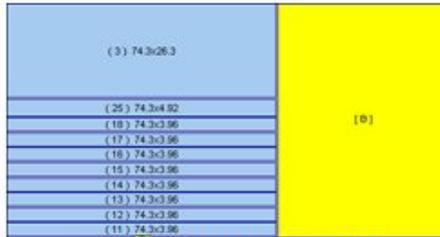


This image shows both groups combined.

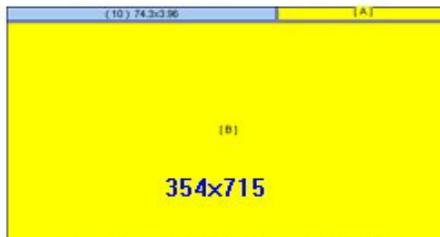
## Optimization Summary: Guillotine

Sample Bid-14.xls

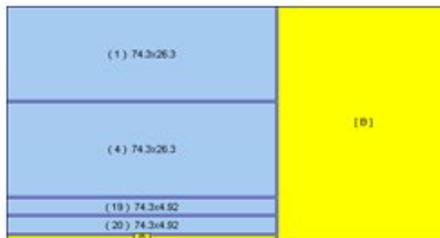
Used Area: 332.2 ff Waste Area: 212.5 ff Waste Factor: 64%



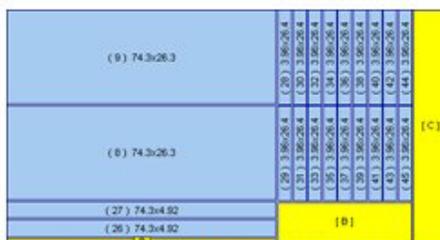
Group: A Slab: 1 [122 x 65] (58.9% used 32.5 / 55.1 ff)



Group: A Slab: 2 [122 x 65] (3.71% used 2.04 / 55.1 ff)



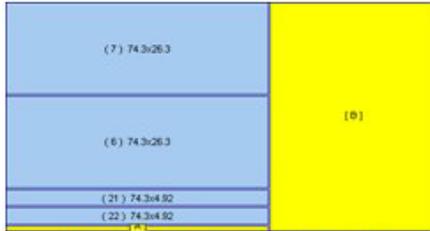
Group: A Slab: 4 [122 x 65] (58.5% used 32.2 / 55.1 ff)



Group: A Slab: 5 [122 x 65] (82.2% used 45.3 / 55.1 ff)



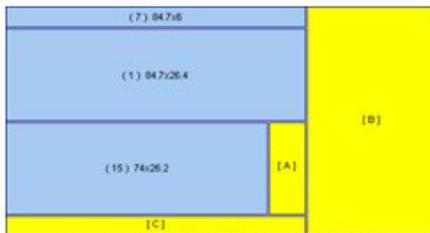
Group: A Slab: 6 [122 x 65] (58.5% used 32.2 / 55.1 ff)



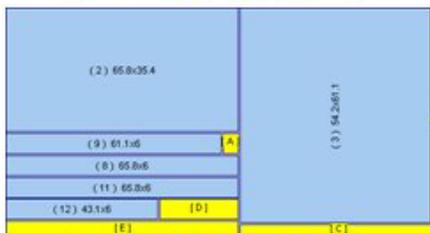
Group: A Slab: 7 [122 x 65] (58.5% used 32.2 / 55.1 ff)



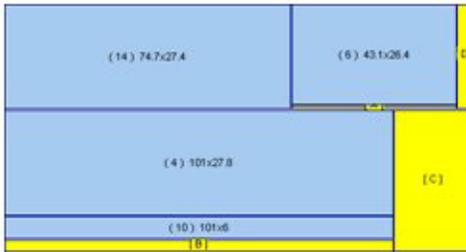
Group: B Slab: 1 [122 x 65] (51.8% used 28.5 / 55.1 ff)



Group: B Slab: 3 [122 x 65] (59% used 32.5 / 55.1 ff)



Group: B Slab: 4 [122 x 65] (88.9% used 49 / 55.1 ff)



Group B Slab: 5 [122 x 65] (83.4% used 45.9 / 55.1 ft<sup>2</sup>)

Slab #	Piece #	Status	Length (in)	Width (in)	Area (ft <sup>2</sup> )	Rotated	Group
4	E	waste	65.81	4.7	2.15		B
4	D	waste	22.57	6	0.94		B
5	D	waste	3.9	27.44	0.74		B
5	C	waste	20.42	37.37	5.3		B
3	C	waste	84.72	5.87	3.45		B
1	C	waste	72.12	4.7	2.35		B
5	C	waste	10.13	65	4.57		A
4	C	waste	56	3.7	1.44		B
4	B	waste	47.48	65	21.43		A
7	B	waste	47.48	65	21.43		A
3	B	waste	298.727	16.74			B
4	B	waste	1.64	61.11	0.7		B
6	B	waste	47.48	65	21.43		A
1	B	waste	47.48	65	21.43		A
2	B	waste	122	60.85	51.55		A
5	B	waste	37.16	11.82	3.05		A
5	B	waste	101.39	3.21	2.26		B
1	B	waste	49.69	65	22.43		B
1	A	waste	6.12	34.39	1.46		B
3	A	waste	10.5	26.17	1.91		B
6	A	waste	74.33	1.86	0.96		A
4	A	waste	74.33	1.86	0.96		A
4	A	waste	4.51	6	0.19		B
1	A	waste	74.33	0.23	0.12		A
5	A	waste	43.05	0.86	0.26		B
7	A	waste	74.33	1.86	0.96		A
2	A	waste	47.48	3.96	1.31		A
5	A	waste	74.33	1.86	0.96		A
5	45	positioned	3.96	26.4	0.73	Yes	A
5	44	positioned	3.96	26.4	0.73	Yes	A
5	43	positioned	3.96	26.4	0.73	Yes	A
5	42	positioned	3.96	26.4	0.73	Yes	A
2	41	positioned	3.96	26.4	0.73	Yes	A

7	26	usage	74.33	4.92	2.54	Yes	A
5	45	positioned	3.96	26.4	0.73	Yes	A
5	44	positioned	3.96	26.4	0.73	Yes	A
5	43	positioned	3.96	26.4	0.73	Yes	A
5	42	positioned	3.96	26.4	0.73	Yes	A
5	41	positioned	3.96	26.4	0.73	Yes	A
5	40	positioned	3.96	26.4	0.73	Yes	A
5	39	positioned	3.96	26.4	0.73	Yes	A
5	38	positioned	3.96	26.4	0.73	Yes	A
5	37	positioned	3.96	26.4	0.73	Yes	A
5	36	positioned	3.96	26.4	0.73	Yes	A
5	35	positioned	3.96	26.4	0.73	Yes	A
5	34	positioned	3.96	26.4	0.73	Yes	A
5	33	positioned	3.96	26.4	0.73	Yes	A
5	32	positioned	3.96	26.4	0.73	Yes	A
5	31	positioned	3.96	26.4	0.73	Yes	A
5	30	positioned	3.96	26.4	0.73	Yes	A
5	29	positioned	3.96	26.4	0.73	Yes	A
5	28	positioned	3.96	26.4	0.73	Yes	A
5	27	positioned	74.33	4.92	2.54	No	A
5	26	positioned	74.33	4.92	2.54	No	A
1	25	positioned	74.33	4.92	2.54	No	A
6	24	positioned	74.33	4.92	2.54	No	A
6	23	positioned	74.33	4.92	2.54	No	A
7	22	positioned	74.33	4.92	2.54	No	A
7	21	positioned	74.33	4.92	2.54	No	A
4	20	positioned	74.33	4.92	2.54	No	A
4	19	positioned	74.33	4.92	2.54	No	A
1	18	positioned	74.33	3.96	2.04	No	A
1	17	positioned	74.33	3.96	2.04	No	A
1	16	positioned	74.33	3.96	2.04	No	A
1	15	positioned	74.33	3.96	2.04	No	A
3	15	positioned	74.03	16.17	13.45	No	B
5	14	positioned	74.67	27.44	14.23	No	B
1	14	positioned	74.33	3.96	2.04	No	A
1	13	positioned	74.33	3.96	2.04	No	A
1	13	positioned	72.12	15.53	12.79	No	B
4	12	positioned	43.05	6	1.79	No	B
1	12	positioned	74.33	3.96	2.04	No	A
4	11	positioned	65.81	6	2.74	No	B
1	11	positioned	74.33	3.96	2.04	No	A
2	10	positioned	74.33	3.96	2.04	No	A
5	10	positioned	101.39	6	4.22	No	B
5	9	positioned	74.33	16.27	13.56	No	A
4	9	positioned	61.11	6	2.55	No	B
4	8	positioned	65.81	6	2.74	No	B
5	8	positioned	74.33	16.27	13.56	No	A

273x775

5	6	positioned	43.05	26.39	7.89	No	B
6	5	positioned	74.33	16.27	13.56	No	A
1	5	positioned	65.81	34.39	15.72	No	B
5	4	positioned	101.39	27.78	19.56	No	B
4	4	positioned	74.33	16.27	13.56	No	A
4	3	positioned	54.17	61.11	22.99	Yes	B
1	3	positioned	74.33	16.27	13.56	No	A
6	2	positioned	74.33	16.27	13.56	No	A
4	2	positioned	65.81	35.33	16.16	No	B
4	1	positioned	74.33	16.27	13.56	No	A
3	1	positioned	84.72	26.39	15.53	No	B