

**BULLETIN #3**

*May 1, 1978*

**1977 FINAL RETURNS FOR PROJECT PINPOINT**

The final returns from 512 Project Pinpoint Baseline Data forms are in and have been tabulated. At present, we can only give you simple number and percentage break outs of the categories of information. The survey results come from the three Project Pinpoint mailings sent out last year. A more detailed examination of some of the interesting results in comparison to previous year's results will appear in the next edition of *Roofing Spec.*

Total number of jobs reported — 512

Combined total of job squares reported — 235,000 roof squares

Average job size — 459 roof squares

Median size — not calculated

TYPE OF ROOF DECK	BASELINE DATA	
	No. of Cases	Percentage
Lightweight Insulating Concrete	22	4%
Metal	225	44%
Poured Gypsum Concrete	24	5%
Poured Reinforced Concete	65	13%
Precast Prestressed Concrete	49	10%
Structural Cement-Wood Fiber	13	2%
Thermo-Setting Insulating Fill	3	1%
Wood Plank or Plywood	98	19%
Other	12	2%
No Answer	1	-
<b>TOTAL</b>	<b>512</b>	<b>100%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The Baseline Data continues to indicate a preponderance of metal/wood/prestressed concrete decks. The wood deck figure is still surprisingly high, but somewhat more in line with expectations."

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The following figures along with all tabulations labeled "Problem Job Data" are tabulated from 40 Project Pinpoint Problem Job Forms submitted during 1977. The figures represent a total of approximately 35,000 squares of problem roofs. The average job size was 875 roof squares (875,000 square feet of roof area) with a median figure of 400 roof squares. Due to the small number of problem jobs reported, we caution against using the following data as a predictive device. While these figures are useful when combined with data from other years, they are not statistically reliable when used alone. We present the data to give you an idea of some of the failures contractors have encountered over the past year, and also as a plea that you use the Problem Job Forms to report failures in the field. If you do not have the proper forms, please request more forms in writing. They will be sent immediately.

TYPE OF ROOF DECK	PROBLEM JOB DATA	
	No. of Cases	Percentage
Lightweight Insulating Concrete	2	5%
Metal	20	50%
Poured Gypsum Concrete	2	5%
Poured Reinforced Concrete	8	20%
Precast Prestressed Concrete	1	3%
Structural Cement-Wood Fiber	1	3%
Thermo-Setting Insulating Fill	0	0%
Wood Plank or Plywood	2	5%
Other	2	5%
No Answer	2	5%
<b>TOTAL</b>	<b>40</b>	<b>101%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "There is a relatively smooth liability, except for steel decks, which have a liability of 12 percent more than expected. It might be interesting to know what span and gauge is involved in the problem metal decks."

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THICKNESS OF INSULATION	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
None	114	22%	6	15%
Less than 1/4"	1	0%	0	0%
5/16" to 1"	95	18%	4	10%
1-1/16" to 2"	176	34%	17	43%
Greater than 2"	54	10%	7	17%
Multiple-Layer	62	12%	4	10%
No Answer	10	2%	2	5%
TOTAL	512	98%	40	100%

TYPE OF ROOF INSULATION	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
Cellular Glass	9	2%	0	0%
Glass Fiber Board	67	13%	10	25%
Perlitic Board	157	31%	9	23%
Polystyrene Foam Board	27	5%	1	3%
Polyurethane Foam Board	23	4%	6	15%
Wood Fiberboard	35	7%	3	7%
None	119	23%	6	15%
Other	72	14%	5	13%
No Answer	3	1%	-	-
TOTAL	512	100%	40	101%

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "Again, we are looking at three kinds of materials or non-materials. 'None,' which shows an 8 percent advantage as to problems, 'Perlitic,' which also shows an 8 percent advantage and 'Glass Fiber,' which seems to show a 12 percent advantage. I don't feel that any of these numbers are significant technically."

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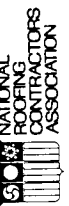
COATED BASE SHEET	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
None	185	36%	8	20%
Solid-Mopped	201	39%	18	46%
Strip-Mopped or Channel-Mopped	15	3%	0	0%
Mechanically Fastened	64	13%	7	17%
Other	11	2%	3	7%
No Answer	36	7%	4	10%
TOTAL	512	100%	40	100%

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The differences between baseline and problem job data are probably not valid, except for the initial item, which indicates that coated base sheets are not desirable. There is some indication that channel-mopping is preferred if a base sheet is involved, but the total amount of data is inadequate to make a definite statement about this practice."

TYPE OF ROOF MEMBRANE	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
No. 15 Asphalt Organic	190	37%	6	15%
No. 20 Asphalt Organic	2	-	0	0%
No. 15 Tarred Organic	70	14%	3	7%
No. 15 Asphalt Asbestos	124	24%	13	32%
Asphalt Glass Fiber	56	11%	4	10%
No. 30-33 Coated Organic	21	4%	8	20%
No. 30-35 Coated Asbestos	5	1%	1	3%
No. 40-43 Coated Organic	3	1%	2	5%
Other	38	7%	2	5%
No Answer	3	1%	1	3%
TOTAL	512	100%	40	100%

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "Again, we have the fact that most roof membranes consist of No. 15 organic, No. 15 asbestos and No. 15 tarred organic felt."

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NUMBER OF PLYS	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
One Ply	18	4%	0	0%
Two Plys	71	14%	17	42%
Three Plys	288	56%	17	42%
Four Plys	127	25%	6	15%
Other	7	1%	0	0%
No Answer	1	-	-	-
TOTAL	512	100%	40	99%

ADHESIVES FOR MOPPING FELT PLYS	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
Dead Level (Type I) Asphalt	134	26%	11	27%
Standard (Type II) Asphalt	67	13%	9	23%
Steep (Type III) Asphalt	208	41%	16	40%
Special Steep (Type IV) Asphalt	7	1%	0	0%
Coal Tar Pitch	70	14%	3	7%
Other	21	4%	1	3%
No Answer	5	1%	0	0%
TOTAL	512	100%	40	100%

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "This specific data would make the use of coal tar and Type II asphalt look good with respect to Type I and Type III asphalt, which show an average performance level."

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SURFACING	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
Slag	61	12%	3	7%
Gravel	255	50%	19	48%
Crushed Stone	62	12%	0	0%
Other Aggregate	23	4%	2	5%
Smooth-Surface Asphalt Coating	55	11%	7	17%
Smooth-Surface Emulsion Coating	11	2%	3	7%
Smooth-Surface Aluminum Coating	9	2%	1	3%
Other	35	7%	4	10%
No Answer	1	-	1	3%
TOTAL	512	100%	40	100%

ROOF SLOPE	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
None	85	17%	16	40%
Up to 1/4"	339	66%	19	47%
5/16"-1"	50	10%	4	10%
1-1/16"-2"	11	2%	0	0%
Greater Than 2"	11	2%	1	3%
No Answer	16	3%	0	0%
TOTAL	512	100%	40	100%

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The figures only indicate that roofs with slopes of 1/4 inch or less are built more frequently than roofs with slopes of more than 1/4 inch. Also, there appears to be a bias in favor of roofs with slopes between 0 and 1/4 inch as opposed to dead level."

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TYPE OF BASE FLASHING	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
None	34	7%	1	3%
Reinforced Asbestos with Cap Sheet	323	63%	25	61%
Three No. 15 Asphalt Felt with Cap Sheet	42	8%	1	3%
Metal Base Flashing	19	4%	0	0%
Other	89	17%	12	30%
No Answer	5	1%	1	3%
<b>TOTAL</b>	<b>512</b>	<b>100%</b>	<b>40</b>	<b>100%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The question is probably somewhat confusing. Reinforced asbestos base flashings account for 3/5 of the data and perform normally."

PERIMETER CONDITIONS	BASELINE DATA		PROBLEM JOB DATA	
	No. of Cases	Percentage	No. of Cases	Percentage
Parapet Walls	292	57%	19	47%
Open Eaves	109	21%	10	25%
Raised Edges	90	18%	10	25%
Other	18	3%	1	3%
No Answer	3	1%	0	0%
<b>TOTAL</b>	<b>512</b>	<b>100%</b>	<b>40</b>	<b>100%</b>

AGE OF PROBLEMS	PROBLEM JOB DATA	
	No. of Cases	Percentage
Less Than One Year	13	32%
One to Two Years	7	17%
Two to Three Years	5	13%
Three to Five Years	10	25%
Five to Ten Years	5	13%
Over Ten Years	0	0%
<b>TOTAL</b>	<b>40</b>	<b>100%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The liability would seem too high for the first three years and from five to ten years."

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TYPE OF PROJECT	BASELINE DATA	
	No. of Cases	Percentage
New Construction	295	57%
Reroofing	212	42%
Other	3	1%
No Answer	2	-
<b>TOTAL</b>	<b>512</b>	<b>100%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "The ratio between new roofing and reroofing is reasonable."

CHIEF VISIBLE CHARACTERISTIC OF THE ROOF PROBLEM	No. of Cases	Percentage
Blistering	19	47%
Splitting	16	40%
Ridging	3	7%
Buckling	1	3%
Ply Separations	0	0%
Fishmouths	0	0%
Slippage	0	0%
Blow-Off	0	0%
Other	1	3%
<b>TOTAL</b>	<b>40</b>	<b>100%</b>

Comment by Edwin C. Mertz, NRCA Technical Services Manager: "As expected, blistering and splitting are the overwhelming problems."

