



Minnesota Market Survey – 2019 Pin Foundations, Inc.

We recognize user data and experience is an important additional perspective and Pin Foundations, Inc. (PFI) strives to learn from our clients who have real world experience with the performance of the Diamond Pier system. They range from specific site case studies to market surveys that PFI conducts to better understand how Diamond Pier footings compare to generic prescriptive footings.

In the fall of 2019, PFI surveyed the central Minnesota market regarding their experience with and the performance of the Diamond Pier product. The survey was sent to Diamond Pier users and the general building trades through a series of email blasts and social media postings asking professional builders to compare the DP-50 and DP-75 Diamond Pier models when used as an alternative to a prescriptive concrete footing.

Comparing the performance statistics presented in the accompanying report (“Performance of Diamond Pier Foundations in Frost Zone Soils – 2019 Frost Study”), Diamond Pier footings successfully resisted frost heave in 99.7% of installations. The results of this survey are consistent with the PFI performance data.

Only 6% of survey respondents report not having any issues with prescriptive code footings resisting frost heave, while more than 25% reported having issues with traditional piers heaving in 1 of 10 of their projects.

55% of respondents report that they take additional steps beyond code prescriptive to provide better resistance to frost heave when installing a prescriptive concrete footing.

66% of respondents report that they have replaced a prescriptive code compliant footing that had failed due to frost heave with a Diamond Pier footing.

48% of respondents claimed that the Diamond Pier footing performed perfectly when it was used to replace a prescriptive concrete footing that failed to resist frost heave.

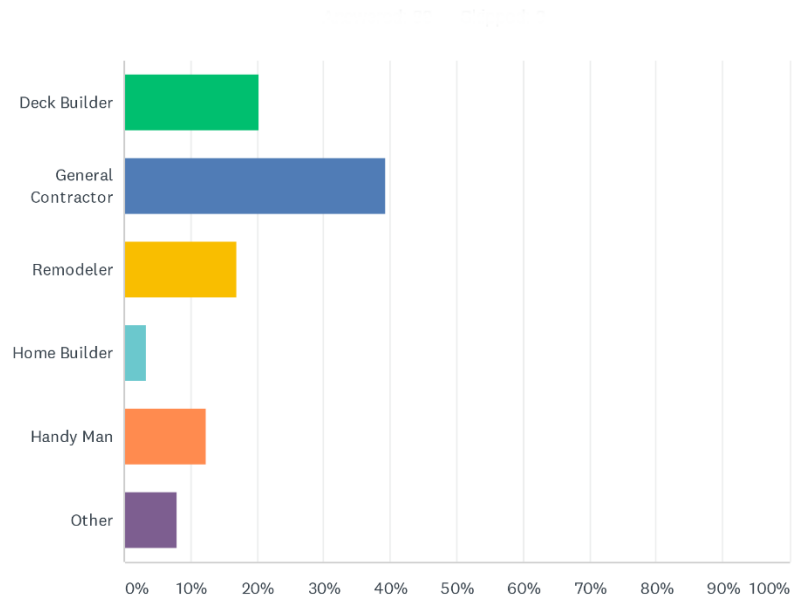
88% of respondents claimed that the Diamond Pier footing performs better than a prescriptive concrete footing in resisting frost heave forces.

The survey results are provided on the following pages.

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Diamond Pier Survey

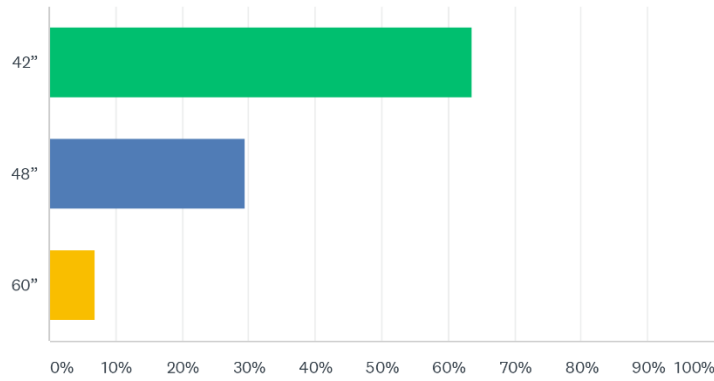
What best describes your business?



ANSWER CHOICES	RESPONSES
Deck Builder	20.22%
General Contractor	39.33%
Remodeler	16.85%
Home Builder	3.37%
Handy Man	12.36%
Other	7.87%
TOTAL	

Diamond Pier Survey

10. What is the code specified frost depth in your business area?

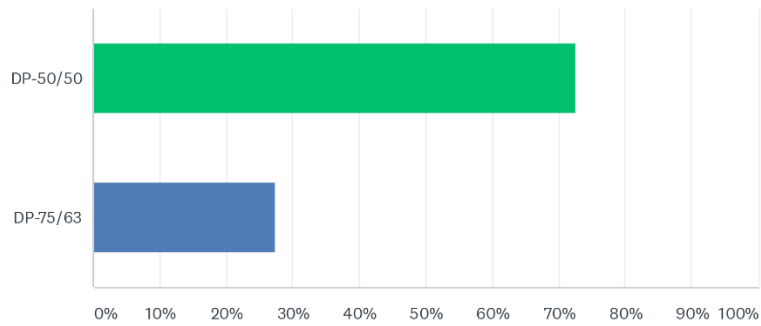


ANSWER CHOICES	RESPONSES
42"	63.64%
48"	29.55%
60"	6.82%
TOTAL	100%

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Diamond Pier Survey

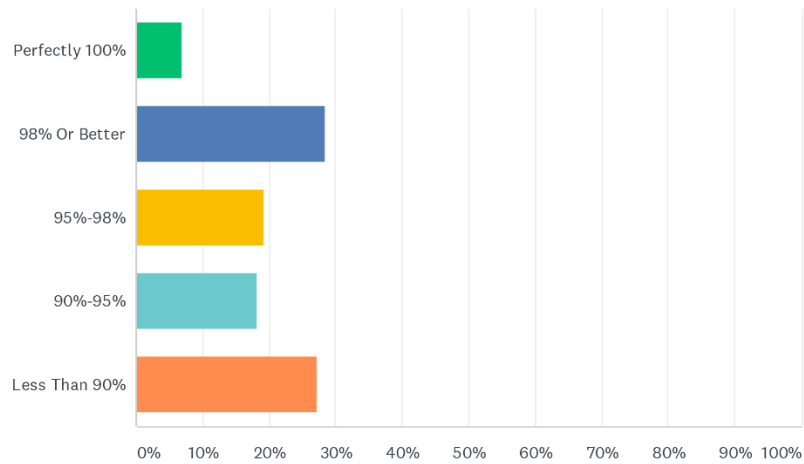
What size diamond pier do you use?



ANSWER CHOICES	RESPONSES
DP-50/50	72.62%
DP-75/63	27.38%
TOTAL	

Diamond Pier Survey

Q1 In your experience, how well do traditional concrete, code compliant, footings resist frost heave?

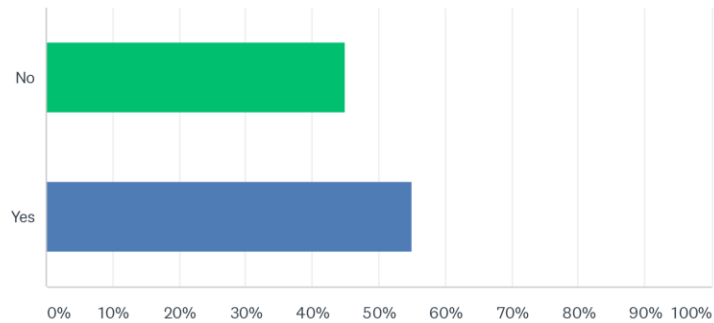


ANSWER CHOICES	RESPONSES
Perfectly 100%	6.82%
98% Or Better	28.41%
95%-98%	19.32%
90%-95%	18.18%
Less Than 90%	27.27%
TOTAL	

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Pin Foundations, Inc.

Diamond Pier Survey

Have you ever taken additional steps during traditional footing installation to provide better resistance to frost heave? If yes, please describe.

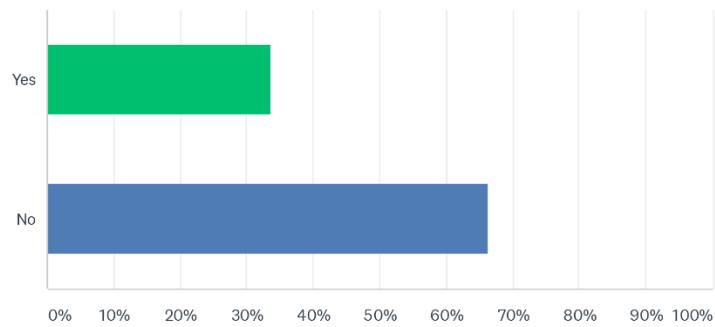


ANSWER CHOICES	RESPONSES
No	44.94%
Yes	55.06%
TOTAL	

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Diamond Pier Survey

Have you ever replaced a heaved traditional concrete footing with a Diamond Pier?

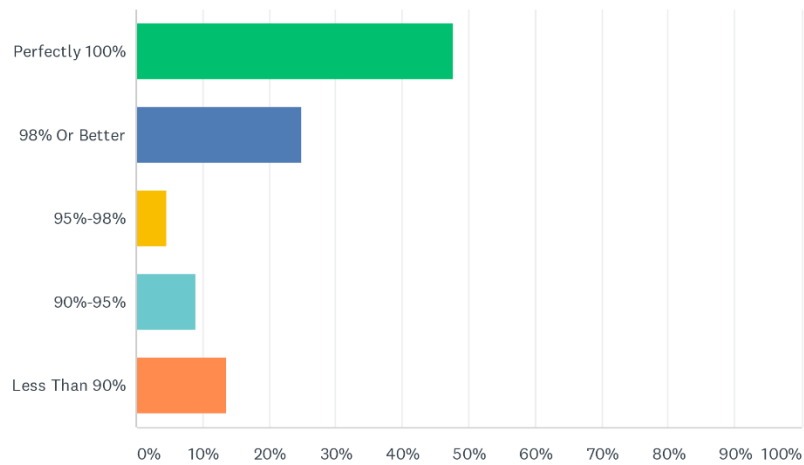


ANSWER CHOICES	RESPONSES
Yes	33.71%
No	66.29%
TOTAL	

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Diamond Pier Survey

Q10 If you regularly use Diamond Pier footings to replace heaved footings, what percentage of the Diamond Pier footings successfully resisted frost heave?

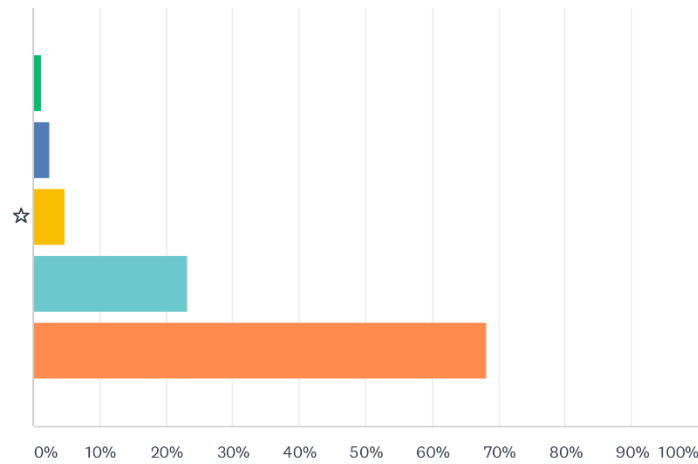


ANSWER CHOICES	RESPONSES
Perfectly 100%	47.73%
98% Or Better	25.00%
95%-98%	4.55%
90%-95%	9.09%
Less Than 90%	13.64%
TOTAL	

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Diamond Pier Survey

Rate your overall experience using the Diamond Pier.



★ 1 2 3 4 5

	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
★	1.22%	2.44%	4.88%	23.17%	68.29%		4.55

DiamondPier®

FOUNDATION SYSTEM

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	DISAGREE	MILDLY DISAGREE	SOMEWHAT AGREE	MOSTLY AGREE	AGREE	TOTAL	WEIGHTED AVERAGE
Diamond Pier increases the ease/speed of the footing installation.	1.18%	0.00%	3.53%	18.82%	76.47%		4.69
Diamond Pier allows for efficient project scheduling.	1.18%	0.00%	7.06%	17.65%	74.12%		4.64
Diamond Pier helps me complete projects faster.	2.35%	0.00%	3.53%	18.82%	75.29%		4.65
Diamond Pier allows me to frame the first day onsite.	1.18%	0.00%	5.88%	14.12%	78.82%		4.69
Diamond Pier helps keep the job-site clean.	1.18%	0.00%	7.06%	11.76%	80.00%		4.69
Diamond Pier is affordable.	2.35%	3.53%	23.53%	25.88%	44.71%		4.07
Diamond Pier provides consistent structural rating.	2.38%	0.00%	7.14%	26.19%	64.29%		4.50
Diamond Pier resist frost heave better than traditional concrete code compliant footings.	3.70%	8.64%	13.58%	24.69%	49.38%		4.07