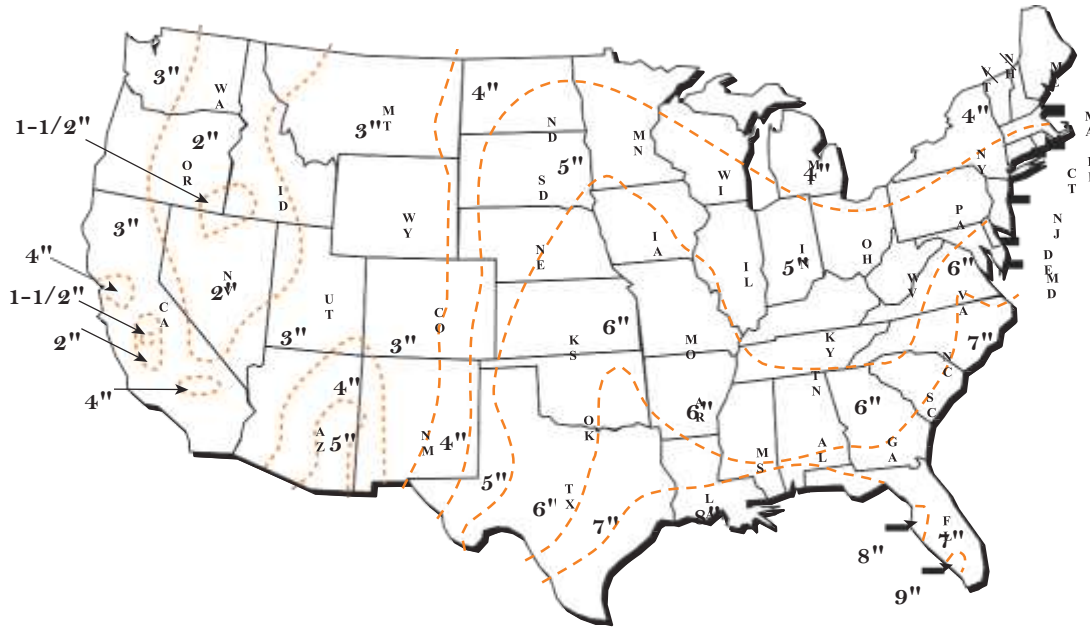


# Thunderbird Products, Inc. Roof Drain



Use the above sketch in combination with the table of the variable rainfall rates below to determine the appropriate quantity and size of the roof drains required when you know:

- a) the total roof area
- b) the approximate drain diameter you will use

**Note:** When determining the number roof drains required recognize that the smaller the roof drain outlet diameter the more drains you will need. Conversely, the larger the drain outlet diameter the fewer you will need.

### How to calculate the quantity of drains required:

- 1.) Calculate the roof area to be drained.  
Example: Roof area is 100' x 50' = 5,000 sq. ft.
- 2.) Estimate the roof drain outlet size you will likely use.  
Example: 2" roof drain
- 3.) Determine your building's location on the above map to determine the approximate rainfall as measured in inches per hour.  
Example: The location of San Diego, CA shows 3" of rainfall per hour.
- 4.) Select a reference of a roof drain size with hourly rainfall together with the roof area square footage you have estimated and then determine from the chart below how many roof drains you require.  
Example: Each 2" drain size in a 3" hourly rainfall area will accommodate drainage of 960 sq. ft. of roof area. Therefore, the 5,000 sq. ft. area roof will require  $5,000 \div 960 = 5.2$  or 6 roof drains for ideal drainage.

### CALCULATE AREA DRAINAGE BY ROOF DRAIN SIZE AT VARIOUS RAINFALL RATES

DRAIN OUTLET		HOURLY RAINFALL (in)									
PIPE SIZE (inches)	OPEN AREA (sq. inches)	1	1.5	2	2.5	3	4	5	6	7	8
		ROOF AREA SQUARE									
2	3.14	2,880	1,920	1,440	1,150	960	720	575	480	410	360
3	7.06	8,880	5,860	4,440	3,520	2,930	2,200	1,760	1,470	1,260	1,100
4	12.56	18,400	12,700	9,200	7,360	6,130	4,600	3,680	3,070	2,630	2,300

