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**CHALLENGE**  
SERIES

# **KEGEL** NAVIGATION PATTERNS





### BEATEN PATH 4531



This 41 foot pattern is much like the MIDDLE ROAD but two feet longer. Because of this added length, the options of attack will be a little more limited and the pattern will usually play where the most worn or highest friction part of the lane surface is. The players who excel in reading the lanes will easily find the BEATEN PATH and make this pattern look relatively easy. If you veer too far off the BEATEN PATH, it will play more difficult.

#### Latitude Ratio Coordinates

22' 4.5 to 1

39' 3.1 to 1

#### Longitude Ratio Coordinates

Outside Taper 3.6 to 1

Inside Taper 3.3 to 1

#### Pattern Distance

41 Feet

#### Pattern Volume

Forward 12.05 mL

Reverse 12.20 mL

Total 24.25 mL

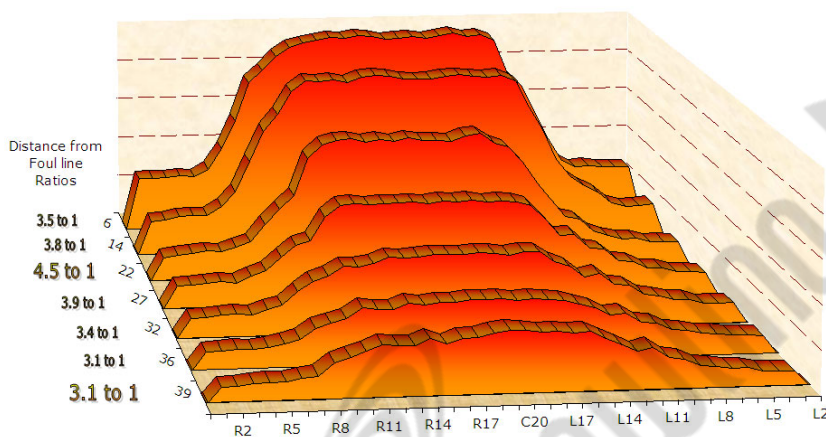


### BEATEN PATH 4541

#### Latitude Ratio Coordinates

22' 4.5 to 1

39' 3.1 to 1



The 2D chart on the left was generated by Lane Monitor showing select tapes and ratios at key distances throughout the pattern. USBC Sport Bowling ratios are calculated at 22' and 2' before the end of the pattern. All Latitude Ratio Coordinates are calculated from these two distances.

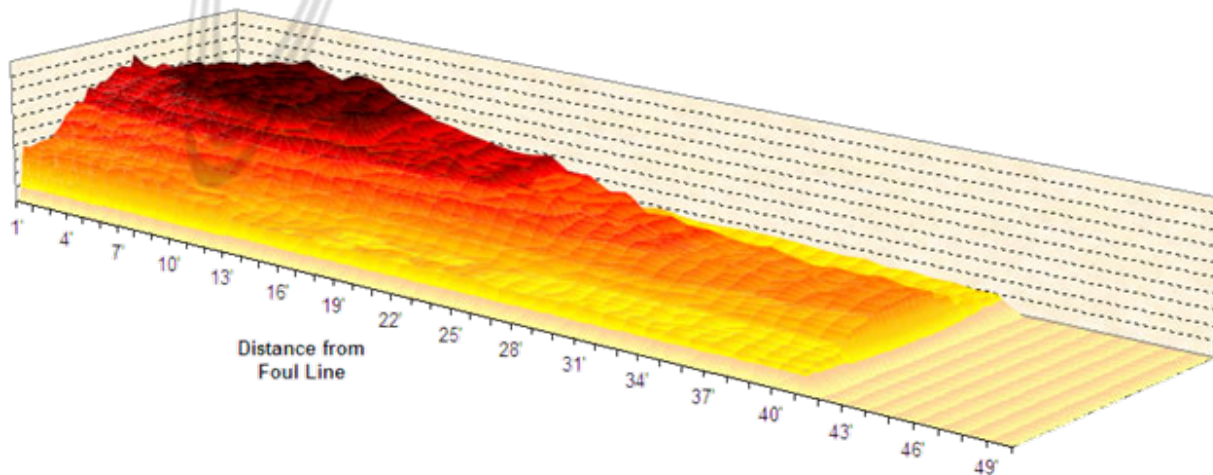
Latitude ratios in the last half of the pattern can be an indicator of the difficulty of a pattern. Generally, the lower the ratios down lane, the more difficult the pattern.

#### Longitude Ratio Coordinates

Outside Taper 3.6 to 1

Inside Taper 3.3 to 1

The 3D chart below was generated by taking tapes every foot of the pattern. This gives a visual of how the conditioner tapers off from the front to the end of the pattern.





### BEATEN PATH 4541

#### Kegel Sanction Technology™ Lane Machine Settings

Oil per Board (Pump Setting): 50 µL

Pattern Distance: 41 feet

| Forward Settings                                       |                    |                     |                                      |                       |                                   |                                |                           |                      |                          |
|--|--------------------|---------------------|--------------------------------------|-----------------------|-----------------------------------|--------------------------------|---------------------------|----------------------|--------------------------|
| Screen #   | Left End of Stream | Right End of Stream | # Loads or Streams                   | Travel Speed (in/sec) | Beginning Distance of Load (feet) | Ending Distance of Load (feet) | # Boards Crossed per Load | Total Boards Crossed | Total Volume of Oil (µL) |
| 01F  | 2                  | 2                   | 2                                    | 10.00                 | 0.00                              | 1.40                           | 37                        | 74                   | 3700                     |
| 02F  | 8                  | 8                   | 1                                    | 14.00                 | 1.40                              | 3.30                           | 25                        | 25                   | 1250                     |
| 03F  | 10                 | 9                   | 2                                    | 14.00                 | 3.30                              | 7.20                           | 22                        | 44                   | 2200                     |
| 04F  | 12                 | 10                  | 3                                    | 14.00                 | 7.20                              | 13.10                          | 19                        | 57                   | 2850                     |
| 05F  | 14                 | 12                  | 2                                    | 14.00                 | 13.10                             | 17.00                          | 15                        | 30                   | 1500                     |
| 06F  | 16                 | 14                  | 1                                    | 18.00                 | 17.00                             | 19.50                          | 11                        | 11                   | 550                      |
| 07F  | 2                  | 2                   | 0                                    | 18.00                 | 19.50                             | 27.00                          |                           |                      |                          |
| 08F  | 2                  | 2                   | 0                                    | 22.00                 | 27.00                             | 34.00                          |                           |                      |                          |
| 09F  | 2                  | 2                   | 0                                    | 26.00                 | 34.00                             | 41.00                          |                           |                      |                          |
| Forward Buff Screens: 3                                |                    |                     | Forward # Boards Crossed   Volume mL |                       |                                   |                                |                           | 241                  | 12.05                    |
| Reverse Settings                                       |                    |                     |                                      |                       |                                   |                                |                           |                      |                          |
| Screen #   | Left End of Stream | Right End of Stream | # Loads or Streams                   | Travel Speed (in/sec) | Beginning Distance of Load (feet) | Ending Distance of Load (feet) | # Boards Crossed per Load | Total Boards Crossed | Total Volume of Oil (µL) |
| 01R  | 2                  | 2                   | 0                                    | 30.00                 |                                   | 32.00                          |                           |                      |                          |
| 02R  | 15                 | 13                  | 1                                    | 22.00                 | 32.00                             | 28.90                          | 13                        | 13                   | 650                      |
| 03R  | 13                 | 12                  | 2                                    | 18.00                 | 28.90                             | 23.80                          | 16                        | 32                   | 1600                     |
| 04R  | 11                 | 11                  | 2                                    | 18.00                 | 23.80                             | 18.70                          | 19                        | 38                   | 1900                     |
| 05R  | 9                  | 9                   | 1                                    | 18.00                 | 18.70                             | 16.20                          | 23                        | 23                   | 1150                     |
| 06R  | 7                  | 7                   | 1                                    | 14.00                 | 16.20                             | 14.30                          | 27                        | 27                   | 1350                     |
| 07R  | 2                  | 2                   | 3                                    | 14.00                 | 14.30                             | 8.40                           | 37                        | 111                  | 5550                     |
| 08R  | 2                  | 2                   | 0                                    | 14.00                 | 8.40                              | 0.00                           |                           |                      |                          |
| 09R  |                    |                     |                                      |                       |                                   |                                |                           |                      |                          |
| Reverse # Boards Crossed   Volume mL                   |                    |                     |                                      |                       |                                   |                                |                           | 244                  | 12.20                    |
| <b>Forward plus Reverse Boards Crossed   Volume mL</b> |                    |                     |                                      |                       |                                   |                                |                           | <b>485</b>           | <b>24.25</b>             |





### BEATEN PATH 4541

The charts on this page are generated by Kegel's KOSI software from the lane machine program sheet.

The **OVERHEAD CHART** on the right shows where the conditioner is applied on both the forward and reverse screens. The gradient area is a calculation of how the conditioner might bleed off the buffer brush.

The **COMPOSITE GRAPH** below shows the total amount of conditioner applied to every board. A good way to think about this graph is to envision all the conditioner on the lane being pushed back to the foul line. Once all the conditioner is stacked up, this is what it would look like.



Forward Oil  
Reverse Oil  
Combined Oil  
Buff Area

