

# New York State Department of Transportation

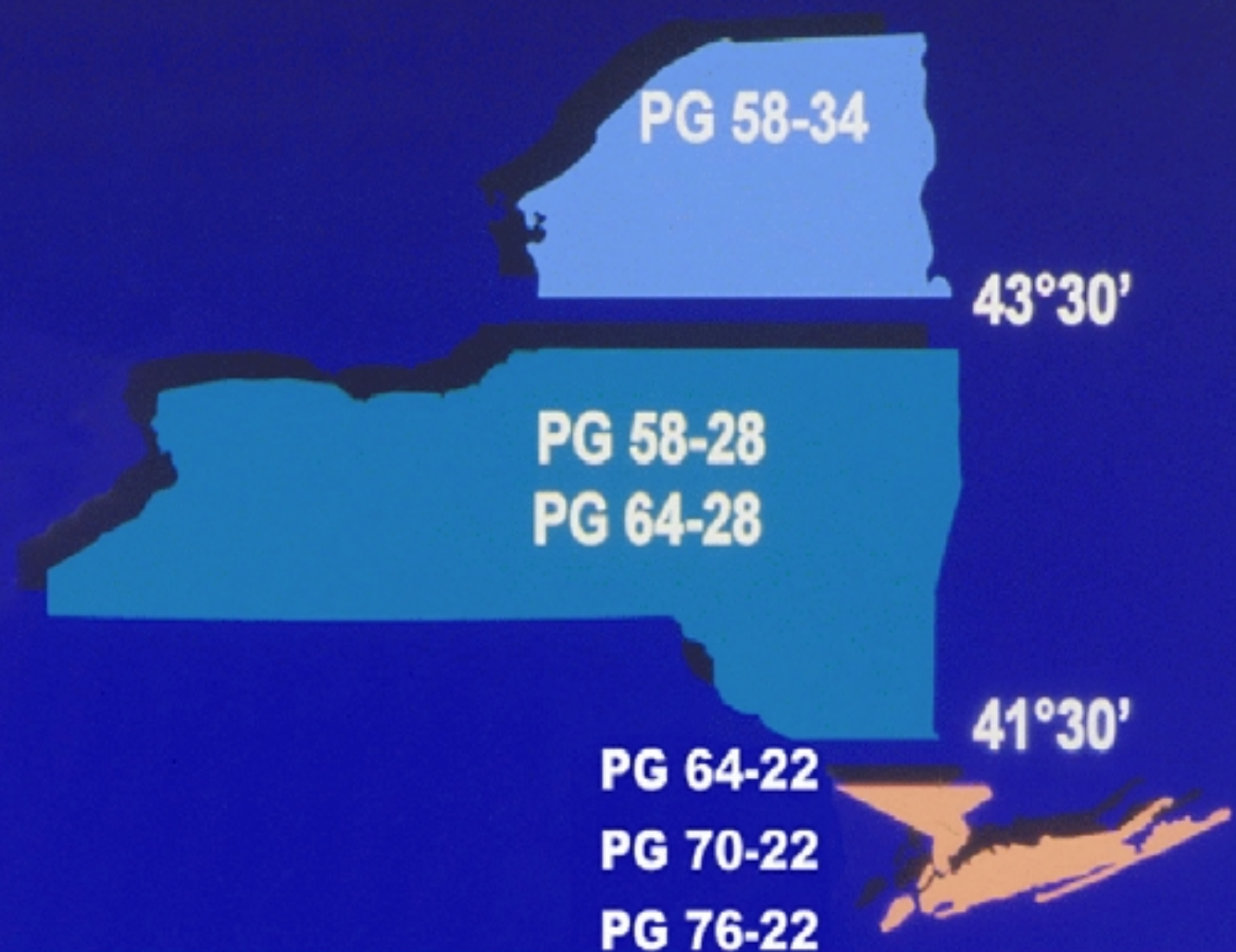
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## Performance Graded Binders NYSDOT Experience

Gary Frederick

# SUPERPAVE

*PGB Selection 2000 View*



# Thermal Cracking

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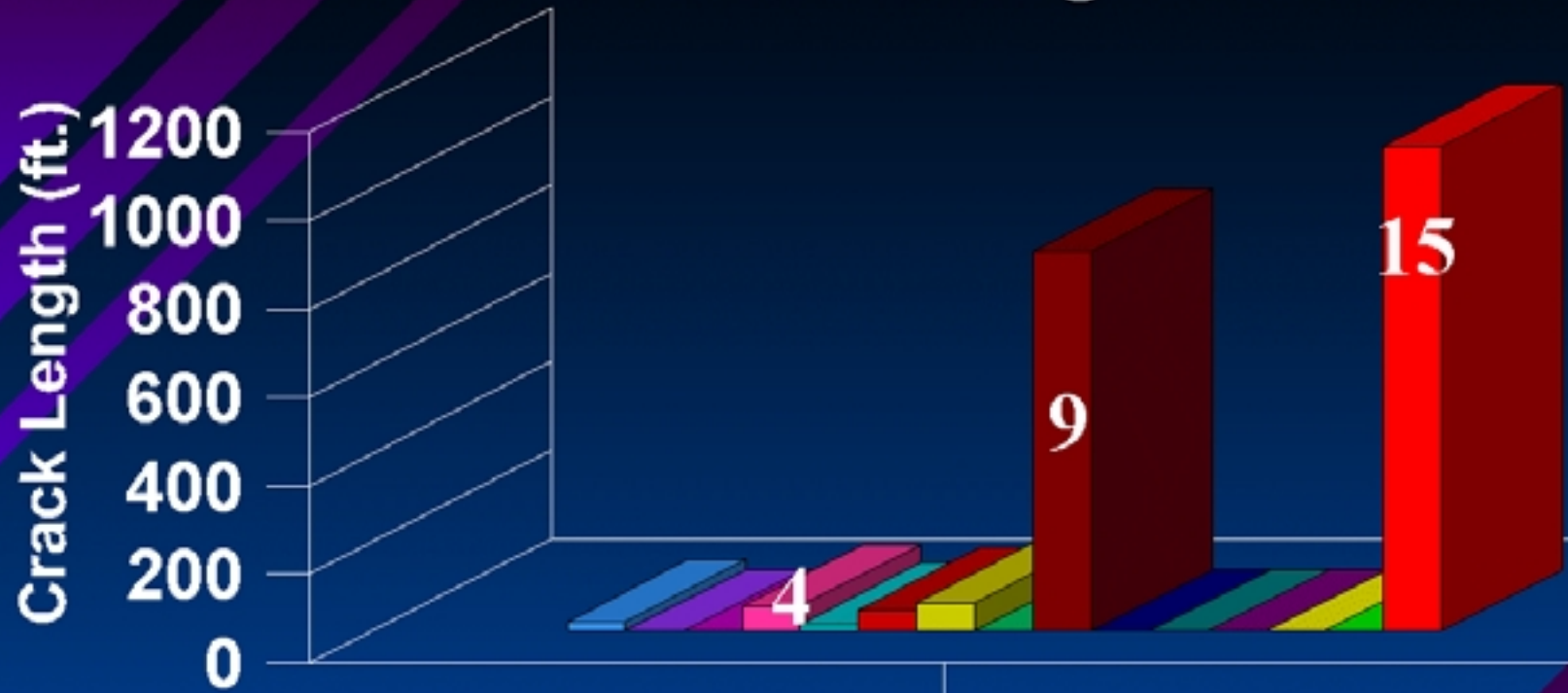
## Effectiveness of Performance Graded Binders

1995 fifteen test sections on five projects

- Marshall mixes using PG binders
- Control section full depth with AC-20 (#4)
- Test sections varied by
  - Number of layers (top, binder, base, CIPR)
  - Number of layers with PG Binder



# Thermal Cracking - 5 Years

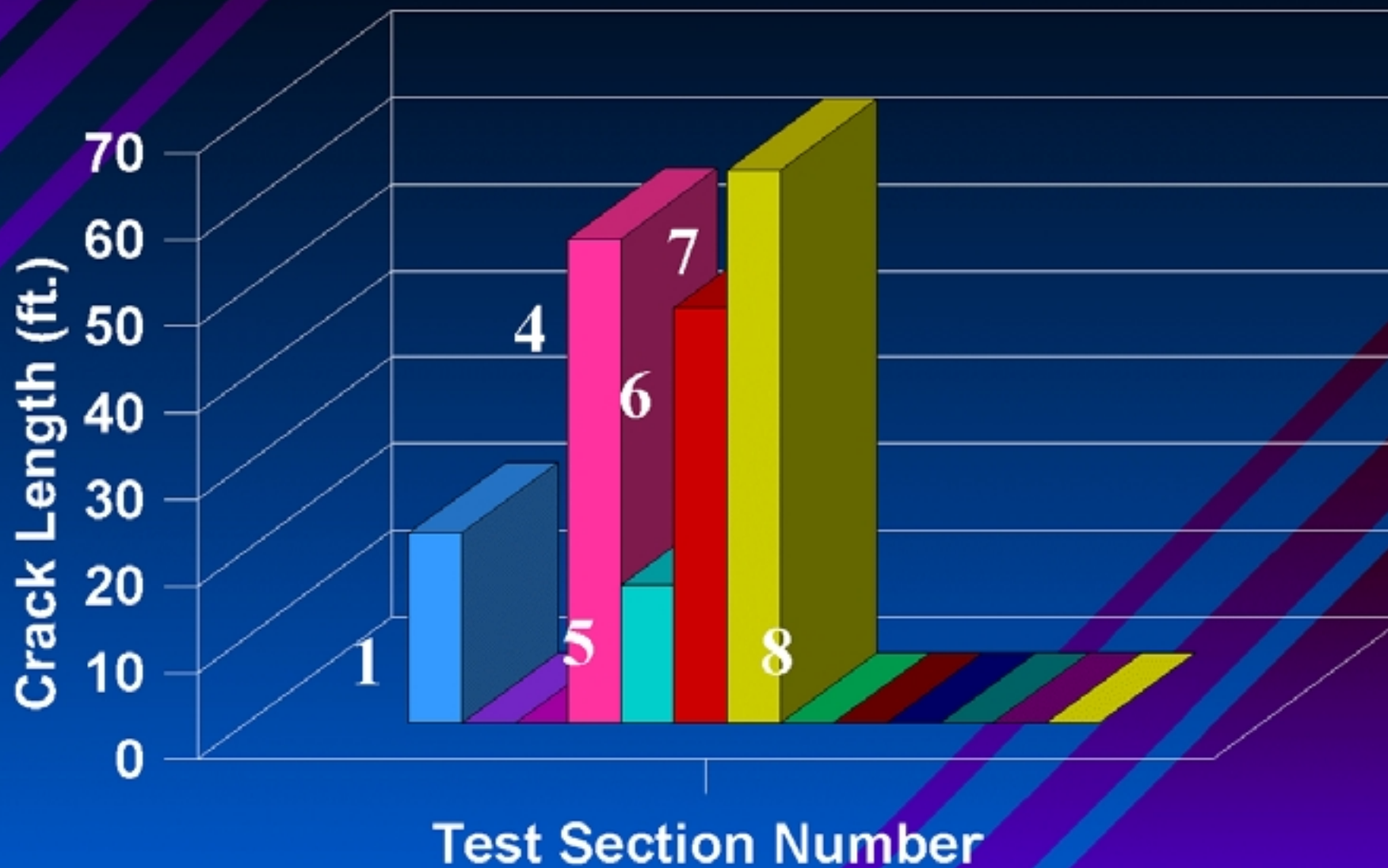


Test Section Number

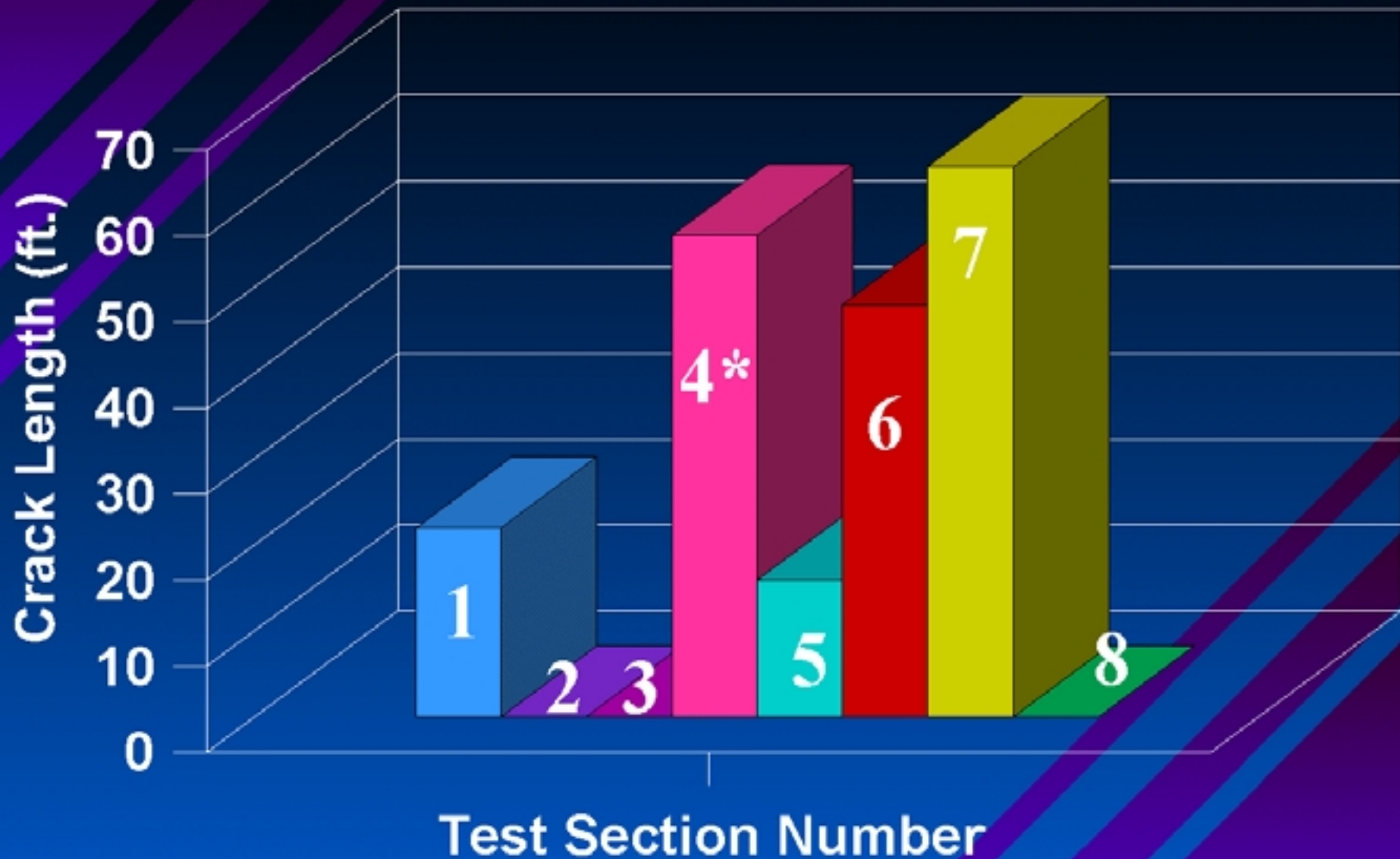


Note: 9 and 15 are single course overlays

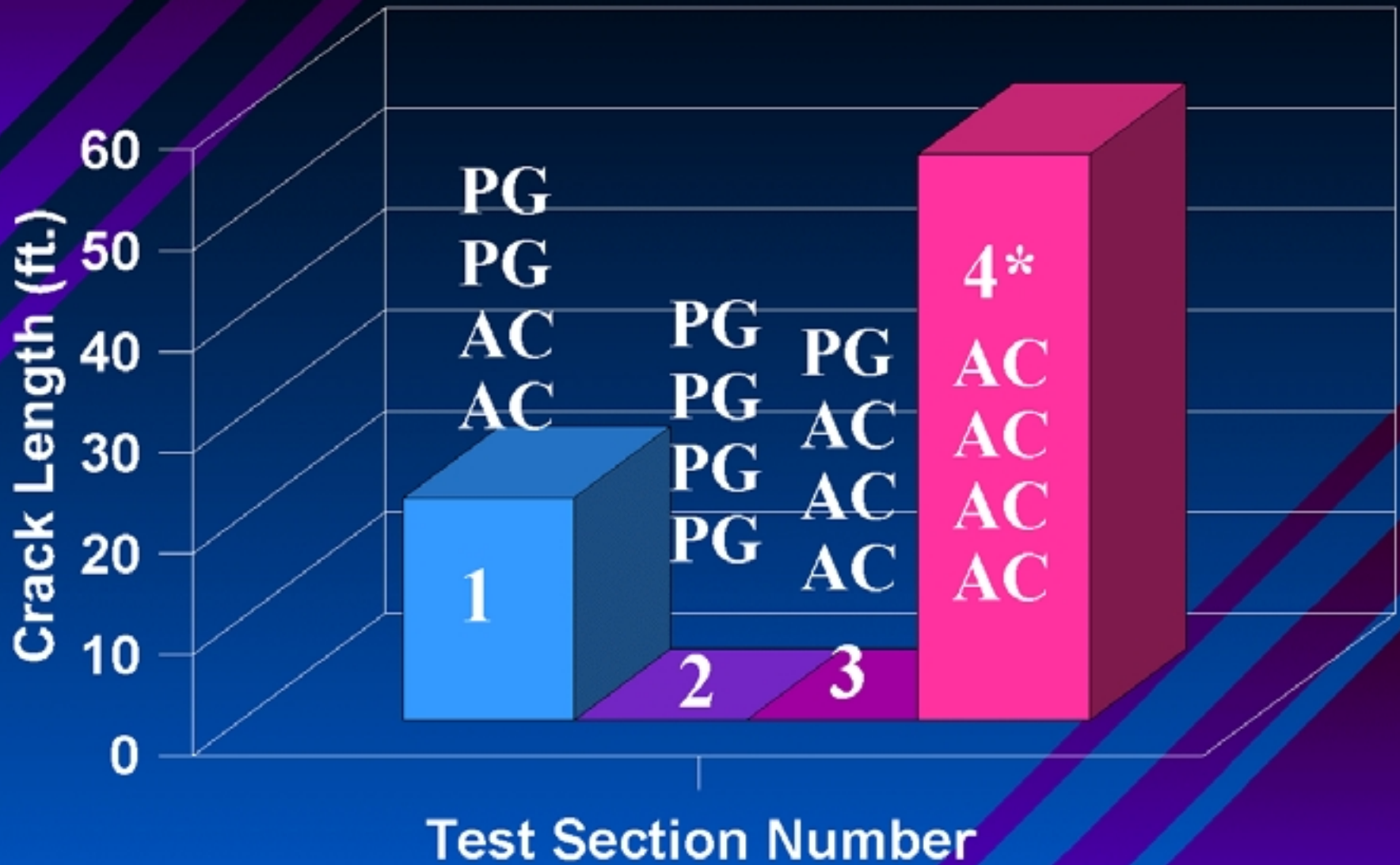
# Thermal Cracking



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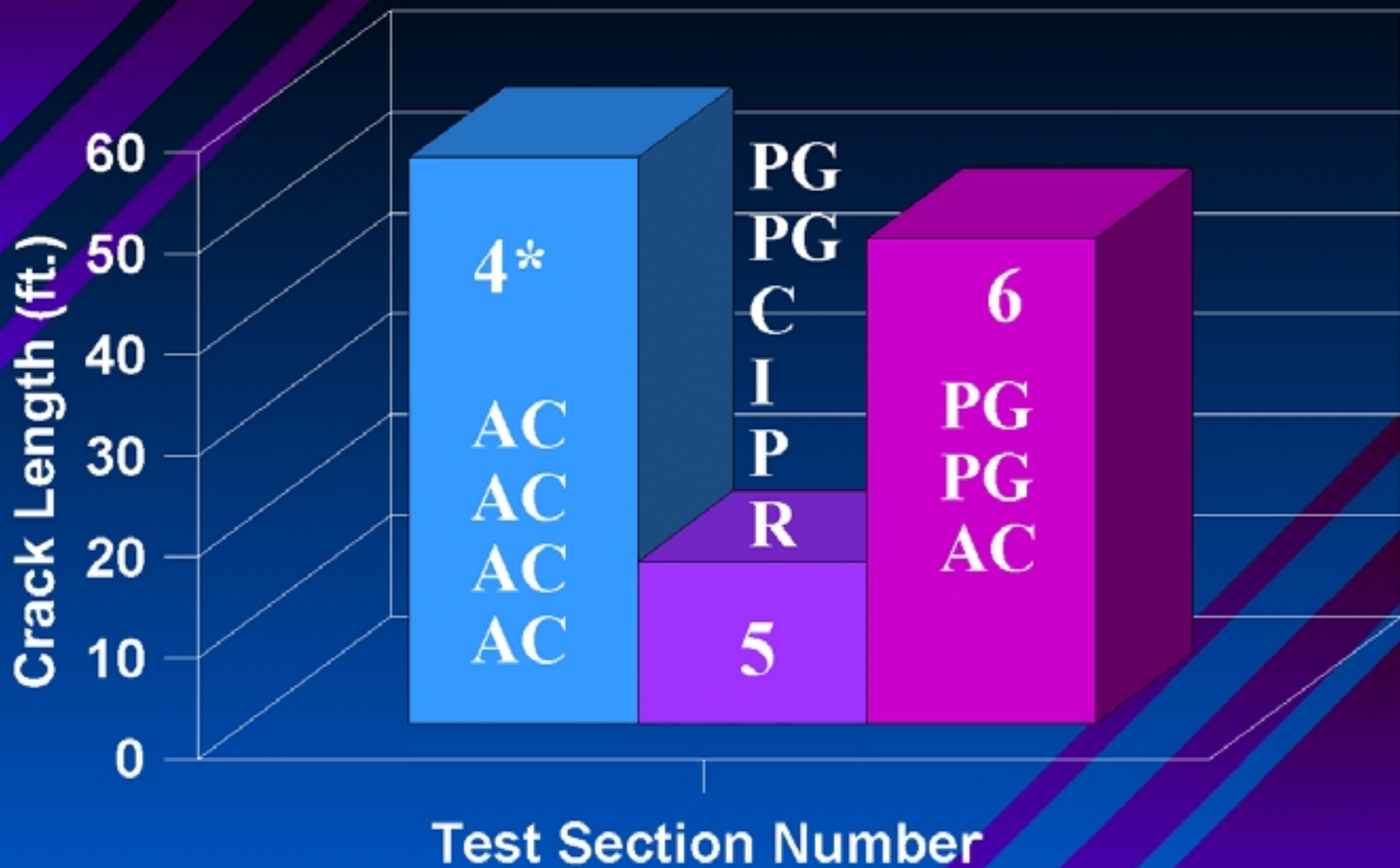


# Thermal Cracking



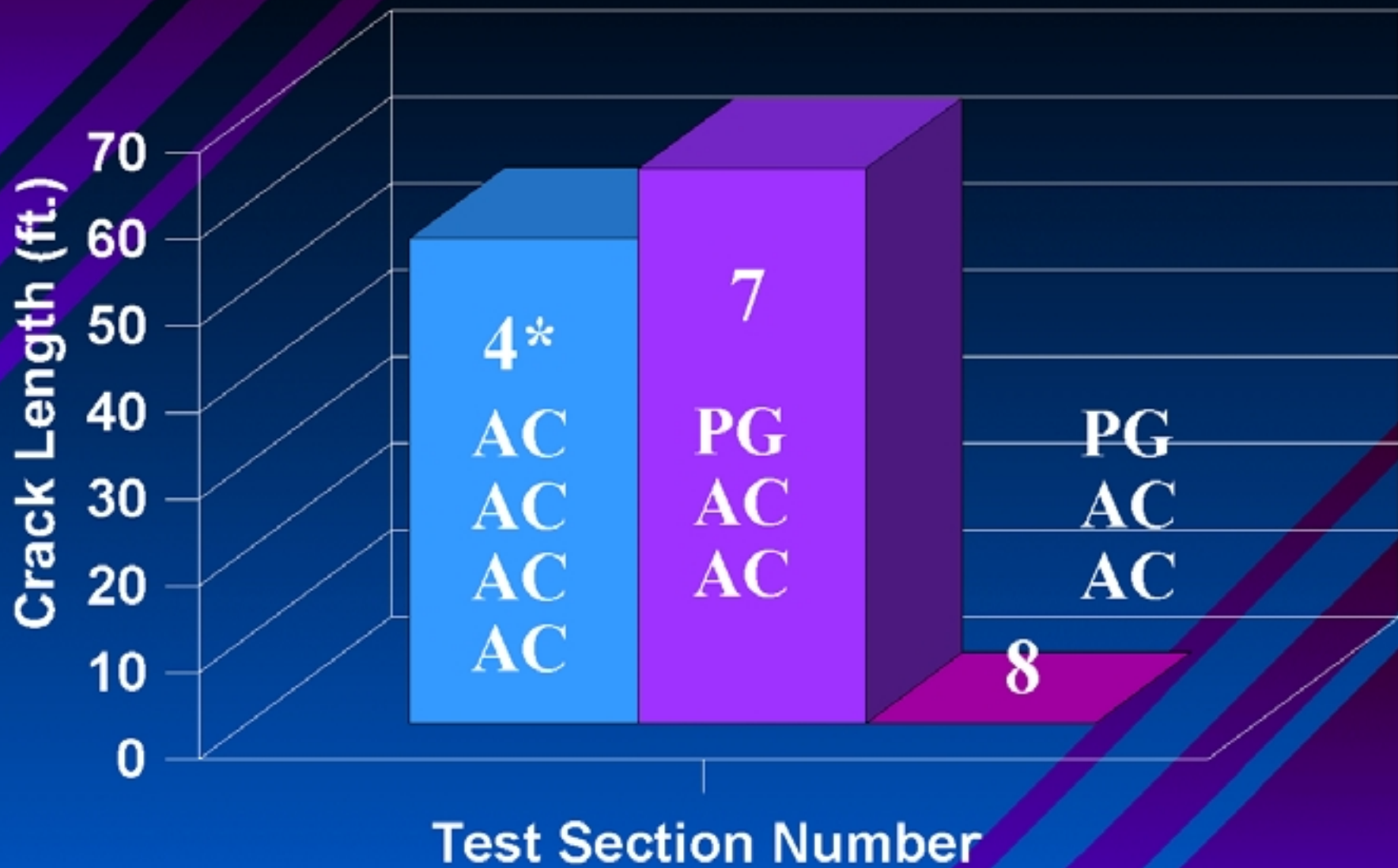


# Thermal Cracking





# Thermal Cracking



# PG Binders

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## Test Results

PG 58 - 34 = PG 58 - 34

PG 58 - 34 = PG 64 - 34

PG 58 - 34 = PG 58 - 28

PG 76 - 40 = PG 76 - 40

AC - 20 = ???

# Rutting

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## **PG Binder Selection for High ESAL Pavements**

**New York performs a “grade bump” to account for high ESALs**

**High = Over 10 million ESALs based on a 20 year design life**

**Example, bump 64-22 to a 70-22 which is the common grade for pavements such as the Long Island Expressway**



























**Any questions?**

