

Road Building 101

General Road Construction Information

Drainage: A Critical Factor

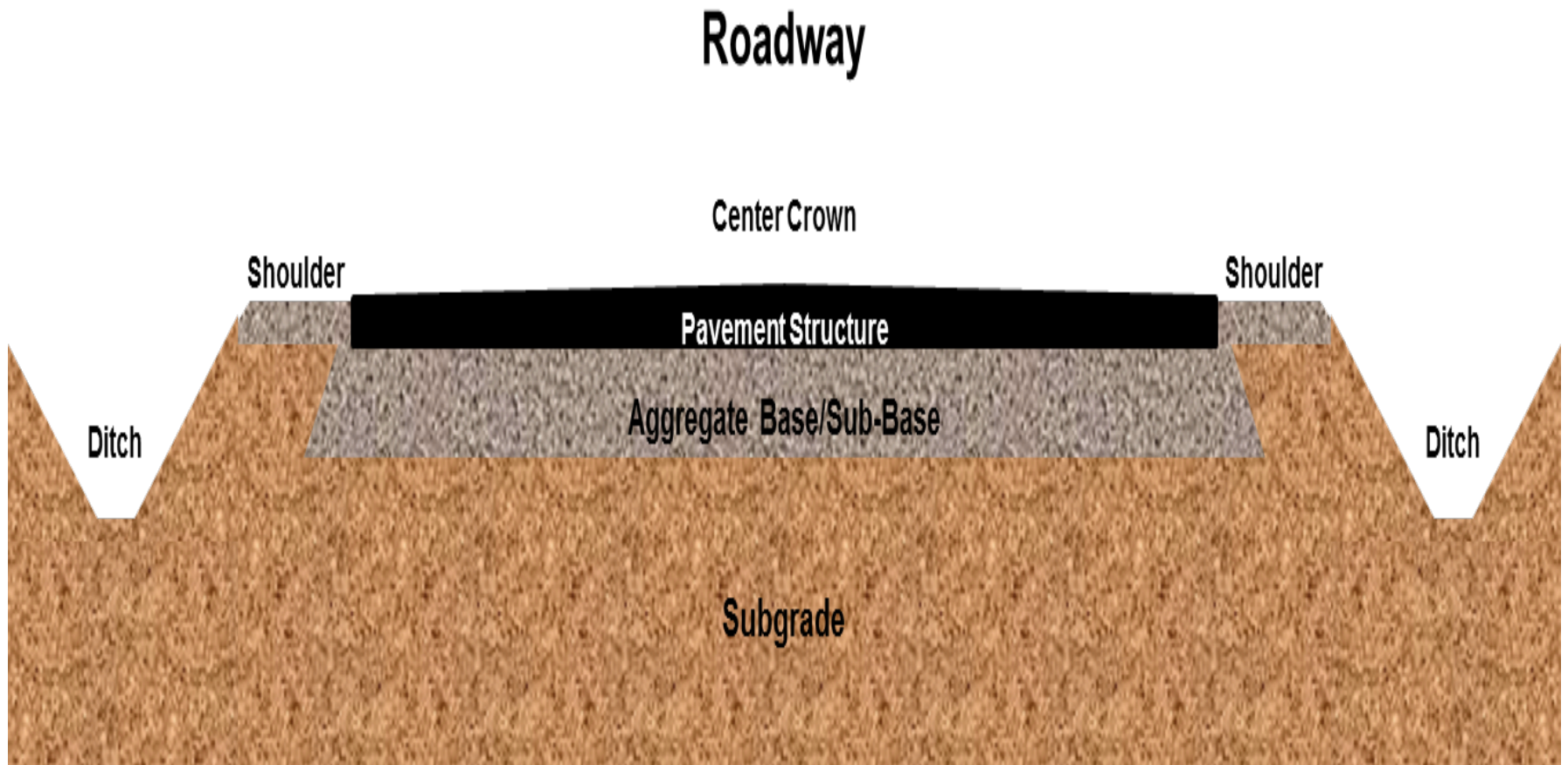
Drainage impacts pavement performance when the subgrade materials and pavement layer materials are saturated and lose strength. Water that falls on the pavement surface must be drained to curb and gutter systems or ditches. Water that penetrates the pavement from the surface; infiltrates from the sides of the road; or rises from under the pavement should not be allowed to compromise the overall strength.

To account for surface water drainage, it is important that the road be constructed with a crown or cross slope. Typically, a crown is placed in the center of the road and the pavement is sloped 2% in each direction.

Key Road Building Components

- Crown:
 - The road surface should be higher in the center, not flat
- Pitch:
 - Road surface should be sloped 2 to 3 degrees lower from the center line to the edges
- Base:
 - The road surface should be supported by a strong base material, usually gravel
- Shoulders:
 - Each edge of the road should have a gravel shoulder
- Ditches
 - Wherever possible ditches should extend a short distance beyond each shoulder

Basic Roadway Construction Diagram



Typical Northwoods Chip Seal Cross Section



Chip Seal Surface

Gravel Base

Soil Type: Sand

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