

# Distress Identification Guide

## Publication #: LTAP-05-001, Aug 05'

### 1. FATIGUE CRACKING

#### Description

Occurs in areas subjected to repeated traffic loadings (wheel paths). Can be a series of interconnected cracks in early stages of development. Develops into many-sided, sharp-angled pieces, usually less than 0.3 m (1 ft) on the longest side, characteristically with a chicken wire/alligator pattern, in later stages. Must have a quantifiable area.

#### Severity Levels

##### LOW

An area of cracks with no or only a few connecting cracks; cracks are not spalled or sealed; pumping is not evident.

##### MODERATE

An area of interconnected cracks forming a complete pattern; cracks may be slightly spalled; cracks may be sealed; pumping is not evident.

##### HIGH

An area of moderately or severely spalled interconnected cracks forming a complete pattern; pieces may move when subjected to traffic; cracks may be sealed; pumping may be evident.

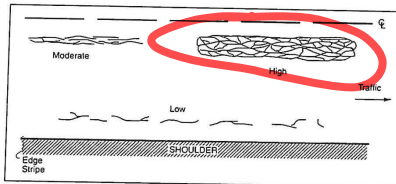


Figure 3: Distress Type ACP 1—Fatigue Cracking

#### How to Measure

Record square meters (square feet) of affected area at each severity level. If different severity levels existing within an area cannot be distinguished, rate the entire area at the highest severity present.

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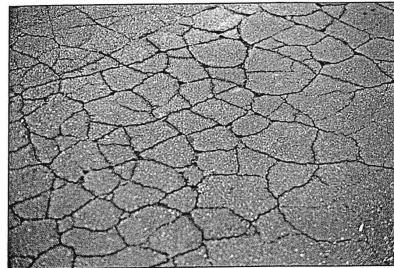


Figure 4: Distress Type ACP 1  
Chicken Wire/Alligator Pattern Cracking  
Typical in Fatigue Cracking



Figure 5: Distress Type ACP 1 - Low Severity  
Fatigue Cracking

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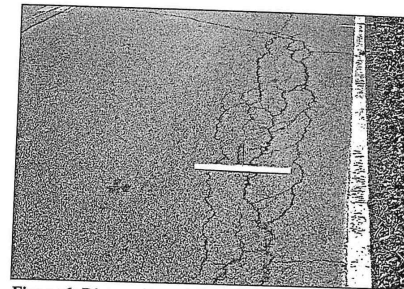


Figure 6: Distress Type ACP 1  
Moderate Severity Fatigue Cracking



Figure 7: Distress Type ACP 1  
High Severity Fatigue Cracking with Spalled  
Interconnected Cracks

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#### Rehabilitation Alternatives

If distress is localized:

##### Low Severity

Apply surface seal coat.  
Rejuvenators may also be considered as an alternative.  
A rejuvenator could be used if it will aid in healing the surface and reducing the amount of water that can center the base.

Expected life of the treatment will range from less than a year to 5 years, depending on the structure and the section traffic.

##### Medium Severity

Partial Depth Patch  
Full Depth Patch

##### High Severity:

Partial Depth Patch  
Full Depth Patch

If distress is more wide spread:

##### All Severities

Structural Rehabilitation Including;

1. Overlay
2. Mill and Overlay
3. Recycling
4. Reconstruction

### 2. BLOCK CRACKING

#### Description

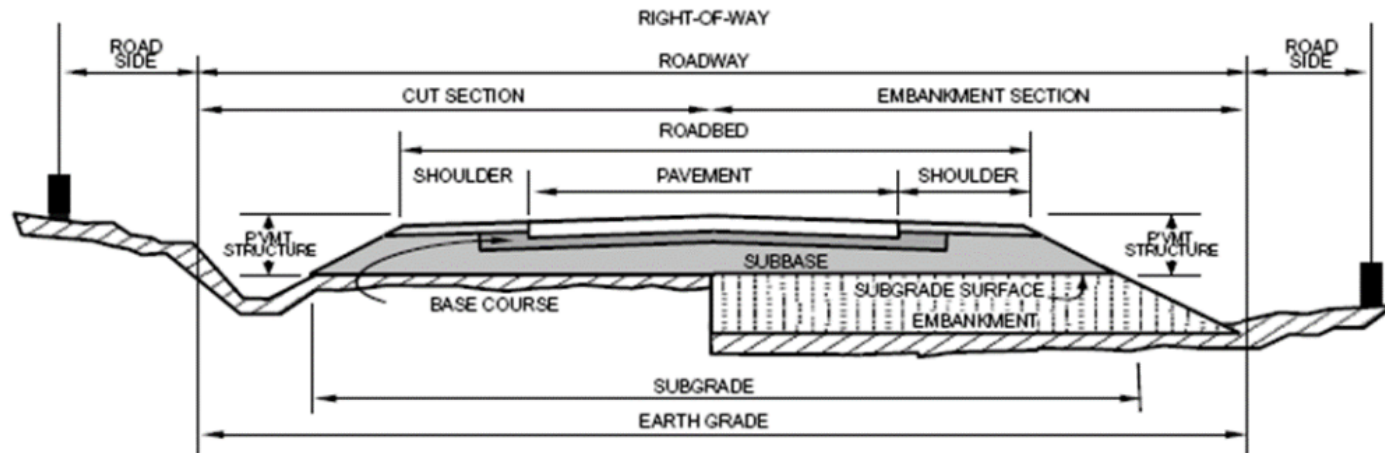
A pattern of cracks that divides the pavement into approximately rectangular pieces. Rectangular blocks range in size from approximately 0.1 m<sup>2</sup> (1 ft<sup>2</sup>) to 10 m<sup>2</sup> (100 ft<sup>2</sup>).

#### Severity Levels

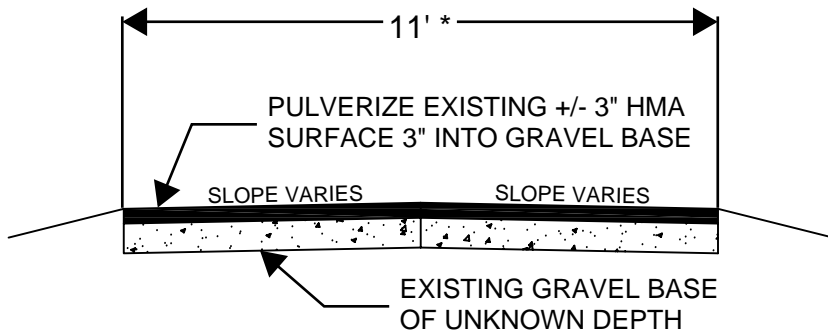
##### LOW

Cracks with a mean width  $\leq$  6 mm (0.25 in); or sealed cracks with sealant material in good condition and with a width that cannot be determined.

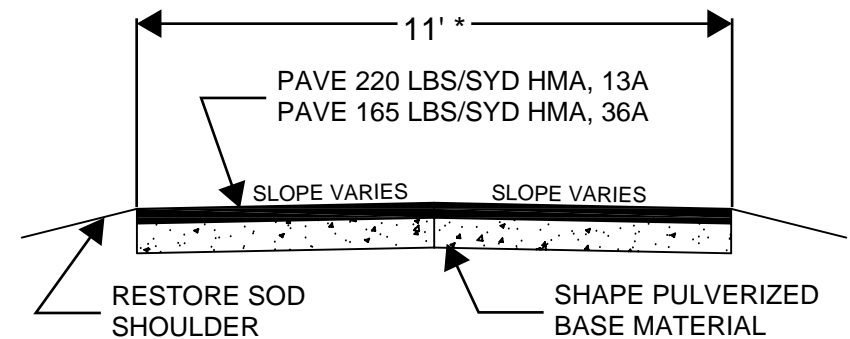
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Roadway Nomenclature



TYPICAL EXISTING CROSS SECTION  
\* WIDTH VARIES AT H AVE AND PUMP STATION



TYPICAL PROPOSED CROSS SECTION  
\* WIDTH VARIES AT H AVE AND PUMP STATION