⬚ Interface User Manual

⬚ Project Title:

Urban Road Maintenance Strategies using Knowledge Based Expert System and IRC Codes

⬚⬚ Developed By:

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⬚ WHAT THIS TOOL DOES:

This expert system recommends the best maintenance strategy for urban roads based on combinations of road distress type, severity, traffic load, available material, time constraints and more.

It is powered by IRC codes and field logic, offering engineers precise treatment suggestions.

⬚ HOW TO USE THE TOOL:

1. Select either **Single Distress** or **Multiple Distress** mode.
2. Fill all dropdown fields shown:
    - Distress Type
    - Severity
    - Traffic Type
    - Budget Level
    - Material Available
    - Time Limit
    - Extent of Distress
3. Click the "Show Treatment" button.
4. If a valid match is found in the expert database, treatment and procedure will be shown.
5. You can download the detailed treatment PDF.

⬚ EXPLANATION OF INPUT FIELDS:

- **Distress Type** – Road issue type (e.g., Potholes, Rutting, Cracks)
- **Severity** – Low, Medium, or High level of damage
- **Traffic Type** – Light / Medium / Heavy
- **Budget Level** – Available budget range
- **Material Available** – Bitumen, Emulsion, Cold Mix, etc.
- **Time Limit** – Urgency level: Low, Medium, High
- **Extent of Distress** – Whether it's isolated or widespread

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⬚ OUTPUT FIELDS:

- **Treatment** – The best-suited solution
- **Procedure** – Step-by-step process based on IRC code
- **Suggestions** – Practical on-site guidance
- **Cost per m²** – Indicative cost
- **Time Required** – Estimated duration
- **Equipment Required** – Tools/machines needed
- **IRC Code** – Governing IRC recommendation

⬚ EXPORTING:

After you view a treatment:

- You can export it as a PDF
- Click "⬚ **Download Treatment PDF**"

⬚ VIDEO GUIDE (Coming Soon)

You will be able to scan or click a video link directly from the interface to get a live walkthrough.

⬚ NEED HELP?

⬚ Email: phmalatesh1505@gmail.com