

Google Maps - Phase 3:

Feature Prioritisation & PRD:

1. Problem:

As a user, I find Google Maps routes unreliable through the roads that are unsuitable for four-wheelers — such as narrow two-wheeler lanes, gated communities, or under-construction roads — leading to unsafe, inefficient, and frustrating driving experiences.

2. Root causes:

- A. Incomplete or outdated metadata of Indian roads - Information such as Road width, Speed limit, One-way or two-way, Vehicle restrictions
- B. Weak vehicle-type segmentation - In car mode, validations of road type, turning radius, surface quality, etc doesn't happen
- C. Limited real-time construction signals- Quite a lot of constructions happening in India - new roads, flyovers, temporary closures, one-way routes. This info isn't integrated.
- D. Poor gated-community and private roads detection - on Satellite imagery, these roads look connected. Unless feedback given multiple times, it isn't corrected.
- E. Algorithm gives preference to the shortest time than checking the passability.
- F. Rural/semi-urban mapping gaps: Low telemetry
- G. Feedback loop - Slow correction; fast changes; Low structured reporting

3. Solution:

Solution	Short Description	Key Assumption	Category
Car Suitability Score	Score computed based on road width, vehicle type, user feedback, telemetry (slow speed, reversals), construction probability. If score < threshold → avoid by default; show warning: “Narrow lane ahead”.	Google can enrich missing metadata using AI + telemetry signals.	High Confidence

Explicit Road width & Access Labels	Show road width and labels such as “private road”, “one-way”, “kaccha road ahead”, “Under construction”. Improved transparency even when route isn’t avoided.	User value visibility over black-box routing	High confidence
Give an option to select “Avoid narrow lanes”	Add a toggle under route option, similar to “avoid tolls”. This would filter out routes with below average road width for the chosen car type.	User prefer control and time estimation in high crowded and uncertain routes.	High confidence (quick win)
Improve user feedback	Enhance user feedback from “Report an issue” to the type of issue - narrow road, under construction, unsuitable for SUVs. One-tap submission to increase adoption	Timely reporting can improve correction rate	Medium-High (as it is user feedback dependent)
SUV vs hatchback mode activated	Users allowed to select SUV and hatchback within “car” vehicle type	Vehicle type significantly affect road time in India, since the roads are double lane most of the times	Medium

Use aggregated Telemetry data	Detect patterns like frequent U-turns, reverse exits, sudden slowdowns, multi-car abandonments. Those paths should be highlighted as problematic ones and excluded from the routes, unless shortest path chosen.	There would be significant actionable data.	Medium
Civic API integrations	With BBMP, MCD, Mumbai Municipal	Municipal bodies provide structural feed	Medium (Long term)

Wireframe

1. Route cards would show:

- Narrow route ahead
- Car type selection in mode of transport
- Under construction
- Private road probability

CTA: Switch to reliable route (+4 mins)

2. Issue reporting will be more probing with options such as:

- Too narrow road
- Under construction
- Unpaved road
- Private route
- Parking on roads

One tap, no typing required

3. Under Route options, show the following

- Avoid toll gates
- Avoid narrow lanes
- Take safer routes

4. Success Metrics

Primary:

1. Reduction in route abandonment rate

Definition:

% of routes where user deviates within first 1 km

User takes a U-turn

User takes a reroute in 3 mins

Goal:

Reduce by 30% in Indian metros

Secondary:

1. Initial increase in user feedback on route-related, followed by decrease in the same
2. Increase in user trust score (post navigation rating)
3. Adoption of “too narrow” toggle
4. Increase in car-mode retention

Guardrail metrics:

ETA accuracy should not decrease

Route time increase should not increase by >5%

No spike in complaint volume

5. Identify Pitfalls & Mitigations

Pitfalls	Impact	Mitigation
Low telemetry in rural areas	Low telemetry in rural areas	Role out first in metros
User feedback are spam	Noisy signals	Act only upon multiple feedback crossing a threshold
Reroute increasing time by >8%		
Over-filtering roads - Longer ETAs	User dissatisfaction	Offer toggle, not forced filtering
Municipal data is unreliable	False negative	Cross-validation with telemetry