|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Analytical Context / Geographic Scope** | **Analytical Tools / Methodologies :**  **Sketch Planning** | **Analytical Tools / Methodologies : Travel Demand Models** | **Analytical Tools /**  **Methodologies : Analytical / Deterministic Tools ( HCM Based )** | **Analytical Tools / Methodologies : Traffic Optimization** | **Analytical Tools / Methodologies : Macroscopic Simulation** | **Analytical Tools / Methodologies : Mesoscopic Simulation** | **Analytical Tools / Methodologies : Microscopic Simulation** |
| Planning:  Isolated Location | **○** | **○** | • | ∅ | **○** | **○** | **○** |
| Planning:  Segment | • | **○** | • | **○** | ∅ | ∅ | ∅ |
| Planning:  Corridor / Small Network | ∅ | • | **○** | **○** | ∅ | ∅ | ∅ |
| Planning:  Region | ∅ | • | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| Design:  Isolated Location | Not Applicable | Not Applicable | • | • | • | ∅ | • |
| Design: Segment | Not Applicable | **○** | • | ∅ | • | • | • |
| Design:  Corridor / Small Network | Not Applicable | ∅ | **○** | **○** | • | • | • |
| Design: Region | Not Applicable | ∅ | Not Applicable | Not Applicable | **○** | **○** | ∅ |
| Operations / Construction:  Isolated Location | Not Applicable | Not Applicable | • | • | • | ∅ | • |
| Operations / Construction:  Segment | ∅ | **○** | • | • | • | • | • |
| Operations / Construction:  Corridor / Small Network | Not Applicable | ∅ | **○** | ∅ | • | • | • |
| Operations / Construction:  Region | Not Applicable | ∅ | Not Applicable | Not Applicable | ∅ | **○** | ∅ |

**Steps to analyze traffic light**

**Step1:**

***Review Key Definitions:*** Understand the definitions associated with each traffic light color (e.g., green for good, yellow for caution, red for issues).

**Step2:**

***Gather Data:*** Collect data or information relevant to the traffic light management system.

**Step3:**

***Identify Metrics:*** Determine the specific metrics or criteria used to assign traffic light statuses.

**Step4:**

***Examine Current Status:*** Assess the current status of tasks, projects, or processes using the traffic light system.

**Step 5:**

***Analyze Trends:*** Look for patterns or trends in how statuses change over time.

**Step 6:**

***Compare to Targets:*** Compare the current statuses to predefined targets or goals.

**Step 7:**

***Identify Deviations:*** Highlight areas where there are deviations from expected or desired statuses.

**Step 8:**

***Prioritize Actions:*** Determine which tasks or areas require immediate attention based on red or yellow statuses.

**Step 9:**

***Develop Action Plans:*** Create action plans to address issues and improve performance.

**Step 10:**

***Monitor and Adjust:*** Continuously monitor the system, make necessary adjustments, and track progress towards improving statuses over time.