Working together to share ideas, build knowledge, promote best practices,
foster leadership and encourage bold transportation solutions

Road Safety Checklist for TAC Committees

This checklist was developed by the Road Safety Standing Committee to guide TAC committees in applying a "safe systems" lens to TAC technical projects. It will help users to identify five categories of road safety considerations that could arise and/or be addressed through those projects:

- Category 1: Safe Roads and Roadsides
- Category 2: Safe Speeds
- Category 3: Safe Vehicles
- Category 4: Safe Road Users
- Category 5: Road Safety Management

Category 1: Safe Roads and Roadsides. The safe systems approach acknowledges that humans have limitations. Road designs that accommodate road user limitations and mistakes allow designers to share responsibility for safety outcomes with users.

Will your project consider the following issues related to safe roads and roadsides?

a) The likelihood or severity of lane-departure collisions
b) The provision of information to road users for safe decision-making
c) Practices that have different effects on the safety of different groups
d) Traffic volumes, congestion levels, safe gap availability, driver patience, risk-taking, signal timing, operational control, compliance with traffic control, or severity of non-compliance with traffic control
e) The condition of the road or roadside (e.g. snow, ice, friction, temporary conditions, rutting, etc.)
f) The accommodation of road users in work zones
g) The design, planning or operation of intersections or mid-block crossings
h) The design, planning or operation of facilities for vulnerable road users
i) Road safety for trucks and other commercial vehicles

Category 2: Safe Speeds. Speed has a larger effect on road safety than any other factor. Survivable speed thresholds are 30 km/h for vulnerable road users, 50 km/h for right-angle impacts, and 70 km/h for head-on impacts[1]. Speed management aims to either achieve operating speeds below survivability thresholds, or remove the possibility of a conflict.

Will your project consider the following issues related to safe speeds?

a) Operating speeds in relation to safe systems survivable speed thresholds
b) The degree of user separation and conflict mitigation provided at speeds above thresholds

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[1] Wramborg, P. (2005). "A New Approach to a Safe and Sustainable Traffic Planning and Street Design for Urban Areas". Swedish Road Administration. Road Safety on Four Continents Conference Proceedings.

Category 3: Safe Vehicles. Vehicle features such as lane keep assist, emergency automatic braking, ABS braking, automatic stability control, airbags, curtain airbags, crumple zones, and seatbelt pre-tensioning can all reduce the likelihood and/or severity of collisions. On the horizon, autonomous vehicles offer additional opportunities for safe vehicles.

Will your project consider the following issues related to safe vehicles?

a) Impacts on the vehicle fleet in any way related to safety
b) The safety of autonomous vehicles
c) The safety of trucks and other commercial vehicles as affected by standards, regulation or enforcement

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Category 4: Safe Road Users. A safe systems approach seeks to manage users in the system, and to control their admittance and exit from the system. It does not depend on error-free users, but it does help users act more safely when possible. A high proportion of fatalities involve alcohol, unbelted occupants, excessive speeds, distracted driving, and young/novice drivers.

Will your project consider the following issues related to safe road users?

a) The alertness of road users
b) The compliance of road users
c) The creation of requirements for new road user skills, knowledge and/or attitudes
d) The safety of commercial vehicle operators

Category 5: Road Safety Management. Road safety management takes a systematic, data-driven and evidence-based approach to safety improvement in the network. It links desired safety outcomes to all relevant agency business processes, and involves network screening, prediction tools, safety-specific programming, and integration of safety with regular programming.

Will your project consider the following issues related to road safety management?

a) Transportation or traffic data collection processes
b) The organization of transportation agency leadership or service delivery
c) The process for developing transportation policy goals, objectives or performance measures
d) Transport investment prioritization and assessment criteria, or the budget planning process
e) Monitoring and evaluation practices for projects, policies or programs

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