CTP – Plan Definitions (Resilience)

Description

The purpose of this procedure is to provide additional terms to be included in the "Appendix B: Comprehensive Transportation Plan Definitions" specific to the Resilience Map as part of the Comprehensive Transportation Plan (CTP) maps development.

Responsibility

Transportation Planning Division (TPD) Engineer

Procedure

| 1 These definitions should be added to the "Appendix B: Comprehensive | |
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| Transportation Plan Definitions" and should be included when creating the Resilience Map for the Comprehensive Transportation Plan (CTP). | |
| Definitions for map development: Disaster (historic event) – An event that has severely impacted the transportation infrastructure and services, leading to challenges in mobility, safety, and economic activities. A disaster is a sudden, catastrophic event that significantly disrupts the normal functioning of a community or society and causes human, material, economic, or environmental losses that exceed the affected community's or society's ability to cope using its own resources. | ıt |
| Hazard (existing) – A known location of a hazard that could disrupt the functioning of the transportation system or pose risks to its users. A hazard is natural or man-made event or condition that has the potential to cause harm damage to people, property, infrastructure, or the environment. | a or |
| Vulnerable (linear and spot) - A potential linear or spot transportation asset which may be susceptible to hazard impacts. Vulnerability is the degree to wh a system, asset, or population is susceptible to and unable to cope with adve effects of natural or man-made hazards. | iich se |
| Resilience (linear and spot) - A potential linear or spot transportation asset which may be made more resilient through recommended transportation improvements. Resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. | 1 |
| • Risk (linear and spot) - A potential linear or spot transportation asset where there is potential for loss, damage, or other adverse impacts resulting from a hazard. Risk is often represented as the product of the probability of a hazard event and its consequences (e.g., damage, injury, loss of life). | |

Sources: FEMA EOP SLG-101 Glossary of Terms (2022); FEMA hsdl.org phases of emergency management; NCDOT POLICY F.35.0102 (2021); TRB Regional TSMO Committee's Glossary; NASA (2020); IPCC Glossary; NOAA (2018); USDN (2022); USGS (2020)

Record of Revision

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CTP – Resilience Team Review (Resilience)

Description

This procedure provides guidance for including resilience in the review of the Comprehensive Transportation Plan (CTP). The Resilience Team will be made up of members of the Hydraulics Unit, Geotechnical Unit, Environmental Policy Unit, Statewide Initiatives, and Division of Aviation.

Responsibility

Follow the Resilience Team Review process:

- Supervisor, Unit Head, and Division Manager to supervise the review of the CTP maps, project sheets, and reports.
- Project Engineer (PE) to ensure that the Draft CTP is reviewed and approved based on this procedure prior to submission for the Internal management review.
- Transportation Planning Division (TPD) Staff Engineer to select/assign the Resiliency Review Team and upload products to the TPD Team Site document library.

Procedure

| Step | Action | | | |
|---|---|--|--|--|
| 1 | TPD project engineer submits resilience materials to Statewide Initiatives Engineer to be reviewed during the next Resilience Team meeting. | | | |
| 2 | During the Resilience Team Review, which will take place along with the Interagency Coordination Protocol (ICP) review, the team will review resilience related materials, including bridge map, recommendation sheets, and resilience/environmental maps. The CTP Resilience Team Review will ensure that resilience considerations are appropriately included and should follow a consistent methodology. | | | |
| <u>The following includes prompts that resilience reviewers may consider:</u> <u>Vulnerability and Risk Assessment:</u> How thoroughly has the vulnerability and risk analysis been of existing transportation assets under current conditions? Are existing transportation assets under current conditions? Are existent and climate events adequately considered in the associate of the analysis follow state-of-the-practice vulnerability and analysis frameworks, and does it leverage resilience data and outlined in the Collect Data step? | | | | |
| | How effectively does the Resilience Map identify critical resilience needs within the transportation network? How are existing resilience deficiencies identified based on the vulnerability and risk assessment? Are the acceptable risk thresholds for the community clearly defined and applied consistently? Are there specific examples of locations where the depth of flooding or other hazard impacts exceeds the community's acceptable risk threshold, and how are these locations prioritized for action? Integration with State Transportation Improvement Program (STIP) and Division Engineer: | | | |

| Step | Action |
|------|---|
| | Have the locations with potential resilience deficiencies been cross-referenced against the STIP and Division Engineer's records to confirm if any capital improvements or maintenance activities are already planned or underway to address the deficiencies? Is there a clear process in place for updating the resilience plan and STIP based on the findings of the vulnerability and risk assessment? Has there been coordination with the Division or State Departments relevant to emergency evacuation plans (i.e., emails with state agencies about who may be impacted throughout the CTP process to keep them informed)? |
| | Integration of Resilience in the Recommendation Sheets: |
| | Are there clear deficiencies and recommendations for enhancing the resilience of transportation infrastructure and services? |
| | How effectively do recommendations incorporate resilience needs identified from the community survey in the recommendation sheets? |
| | Do recommendations align with and address findings included within the NCDOT Resilience Improvement Plan (RIP)? |

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CTP Maps – Internal Review (Resilience)

Description

The purpose of this guidance is to assist Project Engineers, Supervisors, Unit Head, and Division Managers in incorporating resilience considerations when reviewing Comprehensive Transportation Plan (CTP) maps and making sure findings related to resilience needs are accurately reflected.

Responsibility

Project Engineers, Supervisors, Department Managers, and Division Managers

Procedure

| Step | Action |
|------|---|
| 1 | Consult resilience experts and stakeholders in the review process to make sure resilience related data, analysis results, findings and recommendations are accurately reflected by the CTP maps. These include both resilience experts that are on the CTP steering committee and NCDOT Resilience Team, as well as other internal and external stakeholders. |
| | The project engineers should take the lead in sending the draft CTP maps to resilience experts and stakeholders for review and obtaining and addressing their comments. |
| | Supervisors, Department and Division Managers should check and confirm the comments and suggestions from the resilience experts and stakeholders are appropriately addressed. |

Record of Revision

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