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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Department of Transportation Federal Highway Administration Office of Planning, Environment, and Realty (HEP) 1200 New Jersey Avenue, SE Washington, DC 20590				10. SPONSORING/MONITORING AGENCY REPORT NUMBER
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12a. DISTRIBUTION/AVAILABILITY STATEMENT This document is available to the public				12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words) The General Modeling Network Specification (GMNS) defines a common human and machine readable format for sharing routable road network files. It is designed to be used in multi-modal static and dynamic transportation planning and operations models. It will facilitate the sharing of tools and data sources by modelers. GMNS has two origins. First, at the end of the SHRP2 C10 Integrated Travel Model projects, it became clear that network management was a significant issue for the development of large integrated travel models. The FHWA / Volpe team decided to use the remaining SHRP2 C10 funds to further pursue the development of a network specification. Meanwhile, in 2017, several transportation modelers from the Metropolitan Planning Organization (MPO), consulting, and academic world came together to establish the Zephyr Transport Foundation , whose mission is to "advance rigorous transportation and land use decision-making for the public good by advocating for and supporting improved travel analysis and facilitating its implementation." One of the Zephyr initiatives for 2018-2019 is the development of a Network Data Standard and Management Tools . This effort is overseen by a project management group (PMG) that includes modelers from city governments and MPOs, USDOT, private sector software developers, and academics.				
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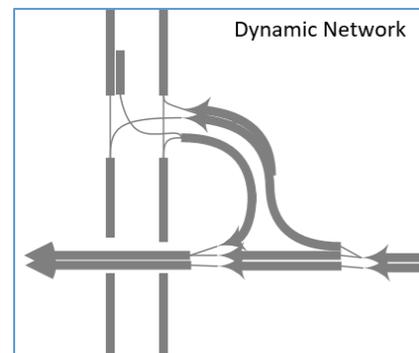
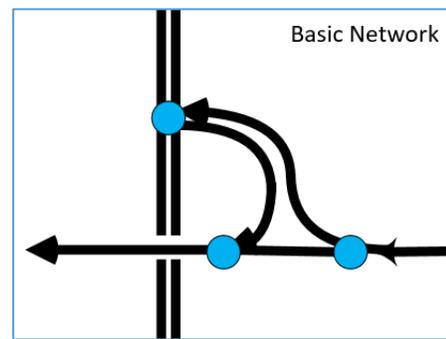
The objective of the General Modeling Network Specification (GMNS) is to provide a common human and machine-readable format for sharing routable road network files.

- It is designed to be used in multi-resolution and multi-modal static and dynamic transportation planning and operations models.
- It will facilitate the sharing of tools and data sources by modelers.

The project is overseen by a project management group, with MPO, city, industry, academic and US DOT participation. In 2019, with support from the Federal Highway Administration, the team developed requirements and an initial release of the specification.

High Level Requirements

- Data, not software
 - Not tied to a specific software tool
- Extensible, not universal
 - Base specification supports basic network routing
 - Simple link / node structure
 - Can accommodate several modes: AUTO, TRUCK, WALK, BIKE, etc.
 - Extensions include data needed for dynamic networks
 - Locations along a link
 - Link segments (e.g., pocket lanes)
 - Turning movements, lanes, traffic signals
 - Option for pedestrian networks
 - Locations may represent transit stops (GTFS)
- Reflects infrastructure, services and policies
 - Physical roads, intersections and traffic controls
 - Tolls and time-of-day restrictions
- Human and machine readable



To learn more

GMNS is now available on GitHub, at <https://github.com/zephyr-data-specs/GMNS>

1. Read the [Wiki](#) (specification reference) to learn about the GMNS format.
2. Look at our [small examples](#), including a freeway interchange, a portion of a multimodal city network, and a small city.
3. Build and test your own small network. We have basic tools in Python and R for [conversion](#) and [validation](#).
4. Please leave specific comments under [Issues](#) in GitHub.

Please send general feedback or requests to be involved to the chair of the GMNS project management group, at gmns@zephyrtransport.org