NCITE Geometric Design Committee
2/14/2019 Meeting Minutes
8:30 AM – 10:30 AM

Location: HR Green, Inc.
2550 University Avenue W., Suite 400N
St. Paul, MN 55114

Committee Chair:
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Committee Co-Chair:
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Meeting Agenda:

I. Introductions

II. Brief items:
   a. Next NCITE Section meeting:
      i. Thurs., Feb. 21, 2019 7:30 am – 9:30 am
         Jax Café 1928 University Ave. NE Minneapolis, MN 55418
         Minnesota's Connected and Automated Vehicles (CAV-X) Program
   b. Future meeting topics (subject to change)
      i. April: Signalized Roundabouts by: Denny Ehler
      ii. Late May: Continuous Green T Intersections by: Will Stein, FHWA, and Vic Lund, St. Louis Co., MN

III. Presentation and Follow-up Discussion. See meeting notes on next page(s).

   Updates to MnDOT Land Use Context Design Guidance
   By: Jim Rosenow, MnDOT, and Greg Pates, MnDOT

IV. Next Meeting: TBD (April)
Meeting notes:

- (Greg distributed handout of MnDOT Technical Memorandum No. 18-07-TS-05 “MnDOT Land Use Contexts: Types, Identification, and Use”, available online here: http://dotapp7.dot.state.mn.us/edms/download?docid=2056227)

- LUCT = Land Use Context Type

- This Tech Memo is “phase 1”, and an upcoming “phase 2” will further discuss how to identify and use Land Use Contexts (see below)

- The concept is to recognize that places are different, and previous guidance oversimplified land use context. An additional purpose of the Tech Memo is to go beyond classifications of rural, suburban, and urban roadways and functional classification.

- The 2017 MN State Transportation Plan promoted and led to this, but ITE and others were promoting this well before that

- The tech memo identifies place, activities, and other distinctions to guide design decisions

- The Tech Memo defines 9 Land Use Context types:
  1. Natural
  2. Rural
  3. Rural Crossroad
  4. Industrial-Warehouse-Port
  5. Suburban Commercial
  6. Suburban Residential
  7. Urban Commercial
  8. Urban Residential
  9. Urban Core

- Much information in the tech memo was based on NCHRP Report 855, available online here: http://www.trb.org/Publications/Blurbs/176004.aspx, but is more qualitative

- Land Use Contexts affect all types of plans/projects, and the concepts will play a large part in the overhaul of the MnDOT Road Design Manual (working name is the “Facilities Design Guide”)

- MnDOT’s new Geometric Design Framework:
  o Land Use and Functional Class (who are we serving?)
  o Outcome (what are we trying to achieve?)

- Target speed is more of an outcome of the process rather than an input

- This guidance helps decide what level decisions are made at (regional, community, or local)

- This also helps in categorizing design standards and is part of Jim’s “3 F’s”: Facts, Flexibility, and Framework, to, basically, help people think about their projects

- The guidance includes continuums showing how mobility, speed, and access vary (conceptually)

- Speed is integrally related and may be more context-based than functional class based, and will be addressed more in the upcoming “phase 2” work
- Additional items to be fleshed out in the upcoming “phase 2” work:
  o Better define how to use the different types
  o Provide new geometric design framework (AASHTO 7th edition)
    ▪ Land use + functional classification + outcomes
    ▪ Performance based practical design. Consider who is being served
    ▪ Use outcomes to define needs (safety, failing infrastructure, etc.) and
      goals (ADA, multimodal considerations, capacity, etc.)
    ▪ Get away from roadway functional class system
  o Speed outcomes will have 3 groups: Low 30/35, Intermediate 40/45, and High
    50+
    ▪ Could also consider a Very Low 20/25 for Urban Core contexts
  o Better define rural small towns, where many LUCTs exist
    ▪ NCHRP 737 diagrams zones, speeds, and other design guidance.
- Related publications are:
  o NCHRP Synthesis 412 (speed reduction techniques):
    http://www.trb.org/Publications/Blurbs/165210.aspx
  o NCHRP Report 737 (high to low speed transition zones):
    http://www.trb.org/Publications/Blurbs/168309.aspx