

This paper describes the starting point for discussion of network implementation barriers and policies during the November 2009 CNU Transportation Summit. The two key areas for discussion – looking to develop a recommended CNU position – *are highlighted in bold italics*

## IMPLEMENTATION BARRIERS AND POLICIES FOR “COMPLETE NETWORKS”

(Built upon discussions at CNU XVI in Austin)

### Network Group Premise and This Paper

The underlying premise is that *the network is the solution to (most) transportation challenges*. This paper addresses the common existing barriers to successful implementation of viable, sustainable transportation networks and proposed policies to make such networks in reality.

### Existing Practice

In almost all states, urban network planning on a community scale is mainly done by or for metropolitan planning organizations (MPOs) and municipalities. At the scale of a subarea or development, network planning is done for developers by consulting urban planners, architects, and transportation or civil engineers, then proposed to municipal planning departments by the developers or their agents. Depending on scale, the proposed network additions (or changes) are reviewed and approved by the MPOs as part of the regional plan and by the municipality with jurisdiction. Outside municipalities the county usually serves the local agency role.

All MPOs and most cities maintain an adopted transportation plan that includes a network of functionally classified major thoroughfares (expressways, arterials, collectors, but not locals). Municipal thoroughfare plans are usually, but not always, part of a comprehensive plan. Most MPO transportation plans are “multimodal,” but most are mainly roadway plans driven by vehicle capacity projections with an added transit element that reflects minor improvements to the existing bus system. There are usually bicycle elements of the plan, but they are often not well integrated and are often almost “afterthoughts.” Pedestrian components of the plan usually consist of sidewalks along streets in accordance with local policy plus sometimes a few special facilities like hike-bike trails or localized pedestrian improvements (e.g., downtown).

True multimodal transportation network planning takes place in only a few places. Since implementation follows planning, the multimodal part of the plan is often lower priority and lacking in funds. In addition, implementation is in increments and those increments are often spread around geographically for political reasons. Project priorities are not usually based on network considerations. In most (but not all) areas, provision for the motor vehicle is given highest priority, gets the most funding, and receives operational priority. Even more perplexing is the disconnect between transportation network and land use/development planning and decision-making at the block or development scale. Unless a developer proposes to provide enhanced pedestrian, bicycle, or transit facilities, these modes are usually left with little more than policy-standard sidewalks and bus stops sign at selected corners.

Implementation starts from planning. Planning is often disjointed without what new urbanists would consider proper comprehensiveness and priorities. Resulting implementation is also disjointed as well as being prioritized and funded toward the motor vehicle.

Moreover, federal laws and regulations can influence selection of improvements and insert more requirements and bureaucracy into the process. Regional transportation planning and implementation is a highly technical and refined process driven by Federal laws with heavy state DOT involvement that could present obstacles that could be difficult to change.

## Desired Practice

Desired planning practices should be described in other subgroup reports. However, desired implementation practices should move toward more balanced priority and funding of all modes, to serve all users, and supporting adjacent land uses and activities as well as broader network needs. Sufficient funding should be provided to build or improve facilities and enhancements for all modes in an area at the same time. Those improvements and surrounding development should be implemented together to produce “complete, fully functional, ‘walkable’ areas.” *(Note: My use of “walkable” in the previous sentence may not be completely correct. We want fully multimodal areas (walkable, bikable, transit-able, and drivable...to different degrees. How do we describe that condition, remembering that not all areas will have the same characteristics and needs.)*

## Summary of Identified Barriers

Seven basic types of barriers have been identified as preventing or discouraging development of desirable and complete networks. Some are more critical than others and they probably cannot all be overcome. *The Implementation Subgroup needs to prioritize these barriers in accordance with how seriously they obstruct good practices (in this and following sections).*

### 1. Existing infrastructure, service life, right-of-way, and development

Existing streets last 20-30 years before reconstruction is needed so the opportunity to reconfigure network components may be years away. Right-of-way may be constrained by patterns of existing development which has its own practical life. When individual developments are proposed, or local capital projects are developed, many designers look at what is adjacent and say that standard is good enough. The result: the project often does not have to upgrade that facility with better sidewalks or bike lanes or transit facilities.

### 2. Funding availability There are several aspects to this constraint including:

- Not enough resources available at federal, state and local levels (this will always be true, but more funding would make multimodal transportation – and choices – more widely available).
- Funding, as a result of the standard (MPO or CIP) process, is allocated by project rather than by network; once detailed planning begins, focus is on corridor, not network.
- Different agencies responsible for network components have different processes, procedures, and priorities
- Some funding eligibility is by functional classification (federal) – more flexibility is needed
- Public does not understand the true cost of transportation

3. Disconnected transportation and land use/development decision making
  - Many transportation and development decisions are made by different agencies or departments; regional decision making is needed (works best with regional implementation agency)
  - Transportation modal decision making is often also disconnected; network connections are especially essential for pedestrians, but not prioritized since pedestrians are not prioritized.
  - Detailed (transportation) planning and problem solving is often on a single-issue, project basis; this tends to neglect or de-emphasize a network approach
  - Environmental analyses are performed by project rather than cumulatively over network; positive network effects often overlooked.
4. Insufficient understanding of the value of networks and connectivity
  - There is too little understanding on the part of staffs, decision makers, and public
  - Not enough communication, public outreach and education
  - Insufficient documentation of benefits of extensive street networks
  - Negative perception of networks as fostering increased traffic.
  - Little factual research exists; supporting arguments rely too heavily on suppositions
5. Outdated codes and ordinances proliferate ineffective planning and implementation
6. Existing development patterns
7. Topographic and environmental barriers
8. Superblock and large footprint developments
  - Developers often argue for closing existing blocks of streets, subtracting from existing networks
  - Large new developments often do not include network components
  - Incorrect perception that limiting network and access will control traffic problems

### Additional Barriers

Additional barriers that restrict or hinder successful network implementation are:

- Localized goals conflicting with regional (network) goals
- Property owner opposition to “traffic” on their streets or “more roads”
- NIMBY attitudes
- Policy to rely on developer rather than public funds to construct streets and the adverse delay and configuration effects caused by such policy
- Lack of decision maker commitment to street networks, including support of adopted network plans
- Insufficient network detail in regional travel demand models
- Failure to understand need to provide for “all users,” especially those for whom network connectivity is most important (pedestrians and transit users)
- Lack of desire to fund early planning efforts (e.g., charrettes, extensive public or stakeholder involvement)

- High degree of structure of MPO planning process
- Lack of use of network metrics to measure status and progress
- Insufficient, fully evaluated, good examples of successful development and effective networks (e.g., Florida DOT's multimodal transportation district)
- Transportation modeling that is primarily based on vehicle level of service and air quality goals.

## POTENTIAL POLICIES FOR IMPLEMENTING IMPROVED NETWORK PLANS

(Not necessarily in any order)

The following policies would assist agency staffs and decisionmakers as well as other practitioners to more fully implement viable, sustainable transportation networks. *The Implementation Subgroup needs to focus and prioritize this list to identify what needs to be pursued earliest; consider critical actions for success.*

- Establish recommended criteria or guidelines for urban transportation network plans, including, but not limited to:
  - Multimodal/complete streets and system
    - Pedestrian
    - Bicycle
    - Transit
    - Roads
  - Connectivity (with minimum criteria?)
  - Classification or other system of describing roles of thoroughfares (including non-road facilities) Spacing/cross-section for major thoroughfares
    - Basis
    - Maximum recommended
  - Block sizes
  - Measures of effectiveness, as applicable
  - Base criteria on research results of implemented features rather than assertions
    - Identify needs
    - Develop research statements
    - Seek sponsors and funding
  - Others?
- Compile examples to use in publicizing, marketing criteria/guidelines
  - "Good" network plans at all levels
  - Adopted "good" network plans
  - Benefits and positive results of "good" network plans (lists and supporting research that supports conclusions)
  - ?? Creators of good plans (to be shared with any agency looking for someone to produce "good" network plans)
  - Short fact sheets on network benefits; exploding network myths
- Market criteria/guidelines to adopting and implementing "urban" transportation agencies (*too many; will need to focus*)
  - MPOs
  - Cities
  - Urban counties

- Transit authorities
- State DOTs
  - state HQ/division level
  - Urban districts
- (where applicable) other agency types that may be involved in planning, adopting, implementing urban *networks* (?? no need to chase agencies that implement other agencies' plans)
- FHWA and FTA (to get them to promote or agree publicly with criteria/guidelines)
- EPA (air quality regulations)
- Others? More than needed?

Note: If the final product is connected to complete streets policy adoption, can be marketed through National Complete Streets Coalition channels; the coalition is already successfully marketing complete streets projects at all of the above agencies/levels.

- Market criteria/guidelines to professional associations (*too many; will need to focus*). Where possible and applicable, pursue adoption of criteria/guidelines as an association policy/recommendation/standard or whatever they might have.
  - AMPO
  - APA
  - CNU
  - ITE
  - APWA
  - AASHTO
  - City Managers?
  - NLC?
  - Mayors?
  - ULI (for developers)
  - Others? More than needed?

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- Actively publicize and recommend criteria/guidelines, selecting high impact venues where possible
  - Presentations (will need “speakers bureau”)
  - Articles
  - Interviews (organization newsletter, journal writers)
  - Press releases
  - *Other?*
- Where it does not yet exist with sufficient provisions (would be based on our guidelines), encourage state legislation requiring adoption of area transportation plans that include multimodal networks (as appropriate) down to but not including local streets.
- Provide assistance to MPOs, cities and others that wish to develop a context sensitive (or “complete”) transportation plan
  - “Rudat” type workshops
  - Technical assistance
  - Reviews and assessments of existing plans
  - Other? Too much?
  - Inclusion of a network module in the Complete Streets Implementation Assistance

## Workshop package

- Establish metrics to monitor successful implementation of network improvements that meet established criteria. Examples *might* include:
  - Percent of network improvements meeting planning criteria (e.g., number of improvements, miles of improved network, etc.)
  - Improvement in connectivity index (e.g., yes/no, percent change in index for the project's area – could be a section or other sector)
  - Others?

Note: Connectivity is one of nine elements of effective complete streets policies. This work could fit in as the technical support for this policy element.

## SUMMIT DISCUSSION TOPICS

Participants in the network subgroup on Implementation barriers and policies will initiate their discussion with the following topics:

- Are there any additional *critical* barriers to implementation of improved networks?
- Prioritize the listed barriers in accordance with how seriously they obstruct good practices. Include only those viewed to be critical. Should any be deleted from the list?
- Focus and prioritize the list of policies to identify what needs to be pursued earliest; consider critical actions for success. Delete those felt to have little consequence.
- Suggest metrics to monitor and quantify success in implementation of desired network characteristics. Recommend the most appropriate to use.
- Suggest 2-3 actions (e.g., initiate action in accordance with one or more of above policies) for CNU to take to advance implementation of highly connected, multimodal, urban networks that can serve all users.