Transportation Planning 101
What is FMPO?

- The Flagstaff Metropolitan Planning Organization or FMPO carries out planning, coordination, and integration of activities necessary to maintain a comprehensive, cooperative, and continuing multi-agency transportation planning program.

- Jurisdictions that make up the FMPO include the City of Flagstaff, Coconino County, and the Arizona Department of Transportation (ADOT).

- The FMPO receives funding from federal, state and local governments.
What is the FMPO?

- 525 Square miles region
- Manager, Multimodal Planner, Administrative Specialist
- Programming federal transportation dollars spent in the region
- Includes transit spending and coordination with NAIPTA

www.flagstaffmopo.org
What is the FMPO?
What is Transportation Planning?

- Transportation planning is an integral part of overall urban planning and needs a systematic approach.

- The ultimate aim of urban transportation planning is to generate alternatives for improving the transportation system to meet future demand and selecting the best alternative after proper evaluation.
How does a Specific Plan relate to Transportation Planning?

- **Regional Plan**
  - Policy
    - (General Locations)
  - Coconino County Comprehensive Plan

- **Specific Plans**
  - Criteria and Ratios
    - (Refine Locations)
  - Coconino County Specific Plans

- **Implementation**
  - Rules and Standards
    - Specific Locations; Funding = Public and Private
  - CIP | Zoning Code | Housing | Engineering | Standards | Annual Budget

*RTP: Regional Transportation Plan
*CIP: Capital Improvement Program
The Transportation Process

- Monitoring
- Project Development & Operation
- Visioning & Goals
- Objectives & Performance Measures
- Regional Agencies
- States
- Tribal Government
- User/Special Interest Groups
- MPO
- Federal Government
- Private Sector
- Legal System
- The Public
- Program Development
- Alternatives
- Plan Approval
- Analysis & Evaluation
- Need Identification
The big picture: Many factors

Integrated Planning

Integrated Approach

Opportunities to support multiple community goals and improve quality of life

Land Use System
Transportation System
Water Resources System
Other Natural, Cultural Resource Systems
How to...

- **Traditional way** – model based, susceptible to manipulation, may not be suitable for fast growing cities with resource constraints

- **Contemporary way** – strategic planning approach based on professional understanding and public participation

- **The “Flagstaff” way** – a solid combination of both
Basic Terms

- Origin-Destination
- Production-Attraction
- Intermodal
- Connectivity
- Multi-modal
  - Complete Streets
- Functional Classification
  - Arterial
  - Collector
- Mobility vs. Access
- Level of Service
  - “A – F”
  - Capacity
  - Volume or Demand
- Performance Measurements
- Accessibility
Basic Modeling

- **Four step model**
  - **Trip generation** (how many trips): based on production (homes) and attraction (work) factors
  - **Trip distribution** (where they go): growth factor models and gravity models (how much activity, how far away)
  - **Modal split** (how they go): walk, bike, bus, car
  - **Trip assignment** (which way they go): Is the first choice now too crowded?
A Simple Illustration

Large Subdivision

(origin / production)

Downtown

(destination / attraction)

Small Subdivision

• How many?
• How far?
• What for?
• What choices?
• How crowded?

• Context: Urban? Suburban?
• Complete: walk, bike, bus, car, truck?
• Connections: One? Many?
Regional Plan Transportation Goals

1. Improve mobility and access throughout the region.
2. Improve transportation safety and efficiency for all modes.
3. Provide transportation infrastructure that is conducive to conservation, preservation, and development goals to avoid, minimize, or mitigate impacts on the natural and built environment.
4. Promote transportation infrastructure and services that enhance the quality of life of the communities within the region.
5. Increase the availability and use of pedestrian infrastructure, including FUTS, as a critical element of a safe and livable community.
Regional Plan Transportation (Cont’d)

6. Provide for **bicycling** as a safe and efficient means of transportation and recreation.

7. Provide a **high-quality, safe, convenient, accessible public transportation system**, where feasible, to serve as an attractive alternative to single-occupant vehicles.

8. Establish a **functional, safe, and aesthetic hierarchy of roads and streets**.

9. Build and sustain **public support** for the implementation of transportation planning goals and policies, including the financial underpinnings of the Plan, by actively seeking meaningful community involvement.
How does the Neighborhood Plan include these Transportation goals?

**Mobility and access** – Milton and Route 66 microsimulations

**Mitigate impacts on...built environment/enhance quality of life** – Clay Ave discussion

**Pedestrian and Bicycling infrastructure** – identify FUTS, Milton and Route 66 crossings, Missing sidewalks

**Convenient, accessible public transportation system** – Bus routes and busway

**Public support** – YOUR feedback, values, ideas improve the outcomes of the transportation planning process
Picking Projects: Evaluation Factors

Traditionally Considered
- Financial costs to governments
- Vehicle operating costs (fuel, tolls, tire wear)
- Travel time (reduced congestion)
- Per-mile crash risk
- Project construction environmental impacts

More Recently Considered
- Downstream congestion
- Impacts on non-motorized travel (barrier effects)
- Vehicle ownership and mileage-based depreciation costs.
- Project construction traffic delays
- Indirect environmental impacts
- Strategic land use impacts (sprawl versus smart growth)
- Transportation diversity and equity impacts
- Per-capita crash risk
- Public fitness and health impacts

(Victoria Transport Policy Institute)
The Stations
Bicycle and Pedestrian Infrastructure

- FUTS trails
- Sidewalks
- Road crossings
- Railroad underpass
The Stations
Clay Ave Improvements and Extension

- Street improvements
- Potential mitigations for increased traffic
- Landscaping
- Parking
- Bus routes
- Tradeoffs
The Stations
Milton and 66 Microsimulations

Existing conditions

Description:
Relatively quiet residential streets with occasional cut-through traffic motivated by high-congestion levels on the arterial roadways bordering the neighborhood. Sometimes challenging bicycle and pedestrian connectivity due to the railroad and busy highways. Sub-standard or missing sidewalks or bike lanes in some locations also contribute.

Trade-offs:
• Reasonable access to services
• Occasional challenges to mobility and access due to congestion and wide, busy streets

What you’ll see:

• General description
• Trade-offs
• Figure showing lane layouts

• Aerial photo with road layout
  • Cycle length / U=unsignalized
  • “A – F” = Movement LOS