

The Development of the Interstate System: Historical Patterns and Consequences

**Presentation to the National Surface Transportation
Policy and Revenue Study Commission**

**Bruce E. Seely
Michigan Technological University**

July 25, 2006



MichiganTech

Highway Basics

Federal-aid Highway Program (1916): Federalist partnership with the States

Central Role of Bureau of Public Roads, especially Chief **Thomas H. MacDonald** , 1919-1953

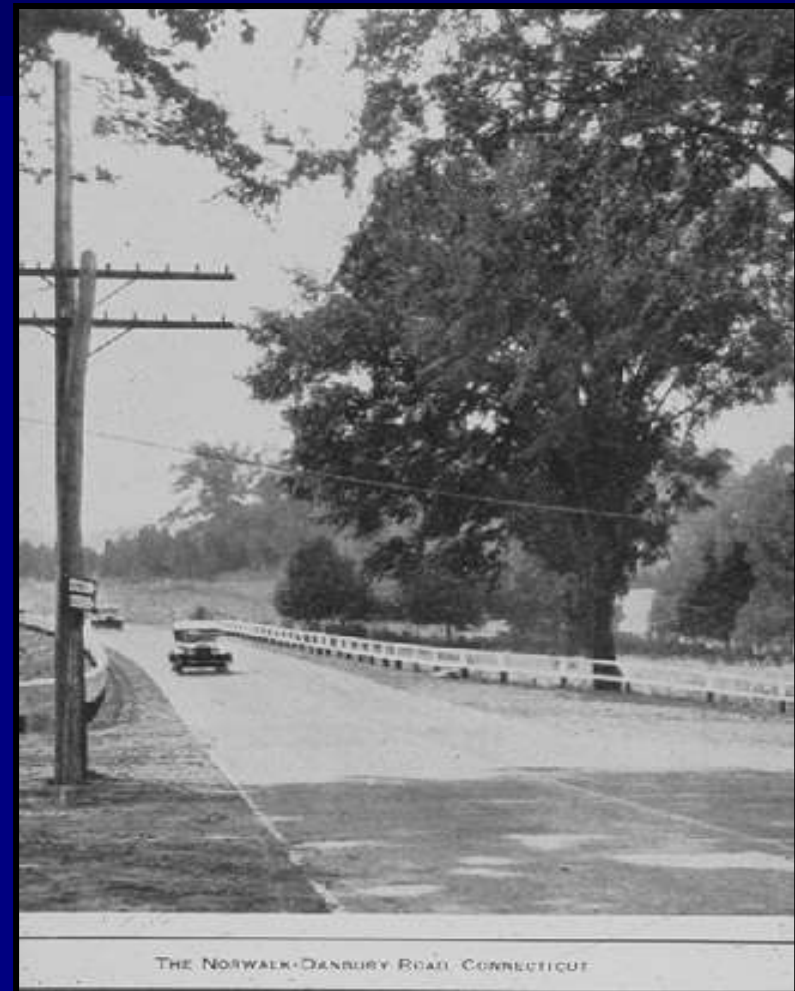
Trust in Apolitical Expertise

Federal-aid Highway System (U.S. numbered system) identified during 1920s

Financing: No tolls!

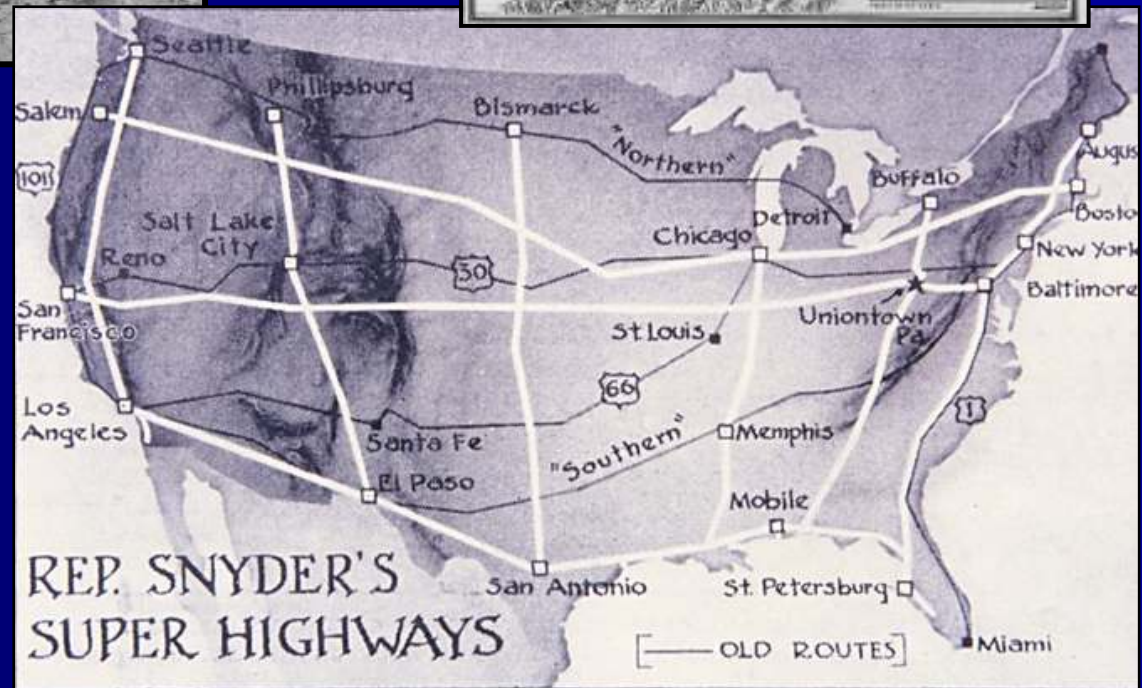


1920s: Planning for Traffic



"We pay for good roads whether we have them or not." (T.H. MacDonald)

1930s: Roads & Relief

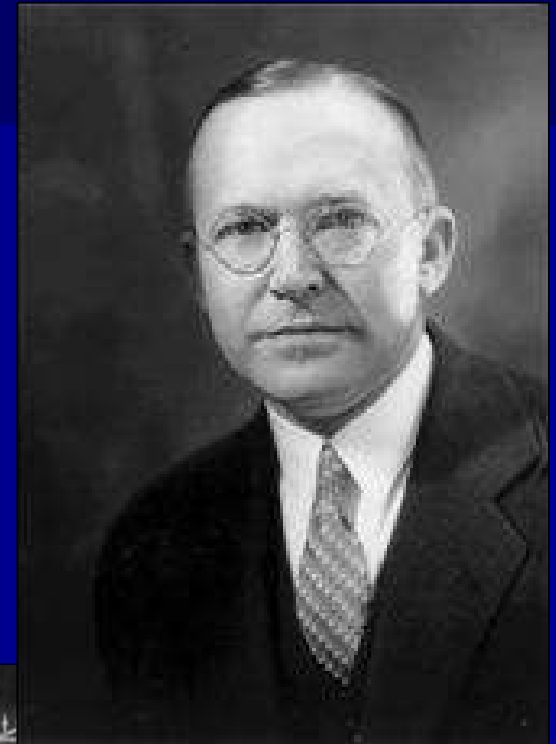


Slide 4

BES1

Bruce Seely, 1/9/2005

Statewide Highway Planning Surveys



**H.S.
Fairbank**



Toll Roads & Free Roads, 1939



PLATE 33.—A two-lane toll road widened to four lanes approaching an access point at which only one toll booth is provided, showing the grade separating structure necessary to avoid hazards of left turns on the toll road.

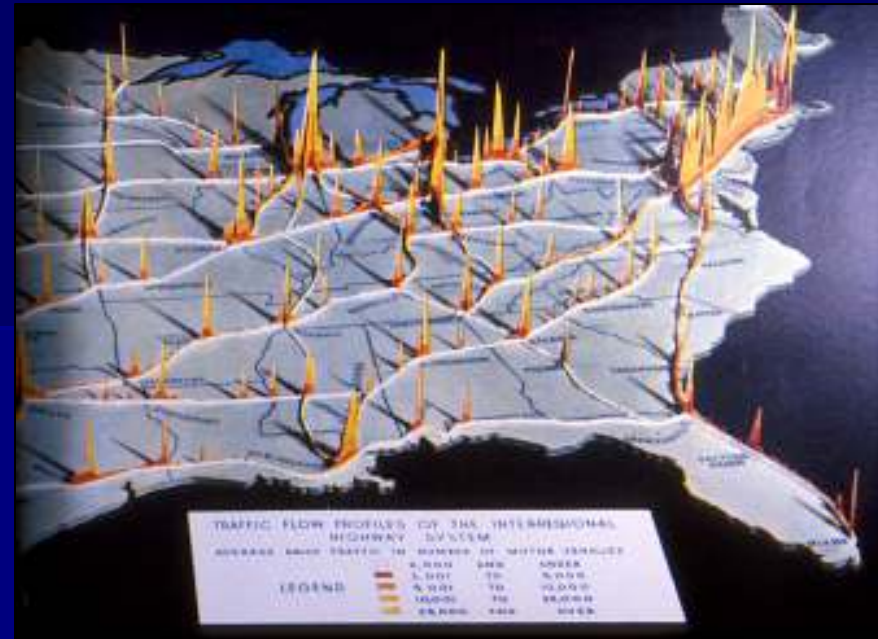


FIGURE 1—The interstate system tentatively proposed as an interregional highway system by the Public Roads Administration in the report, Toll Roads and Free Roads.

Slide 6

BES2

Bruce Seely, 1/9/2005

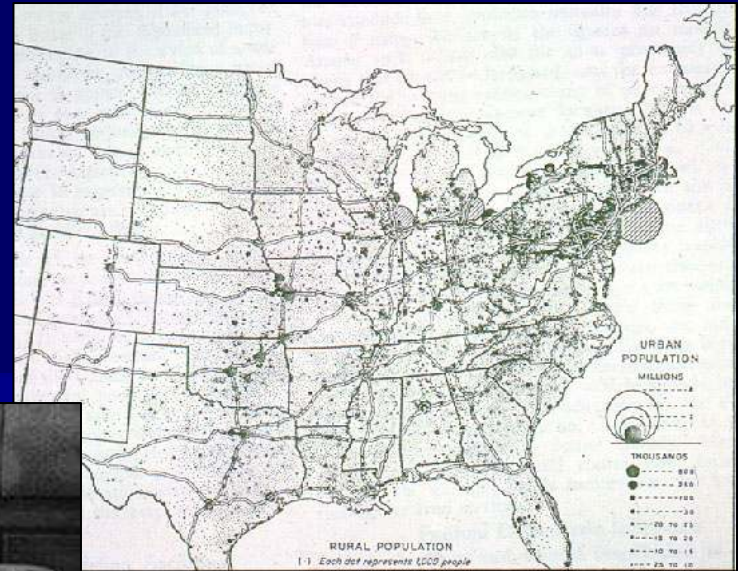
1930s Visions: Futurama



1930s Visions: Pennsylvania Turnpike



National Interregional Highway Commission: Recession fears & legislation



The Henry Hudson Parkway continues the West Side Highway in New York City northward to a junction with the Westchester County Parkway System, and with these connections provides a continuous express highway through the Nation's greatest metropolis. In this view the Parkway is at the left. The road at the right is one of the local service roads.

INTERREGIONAL HIGHWAYS

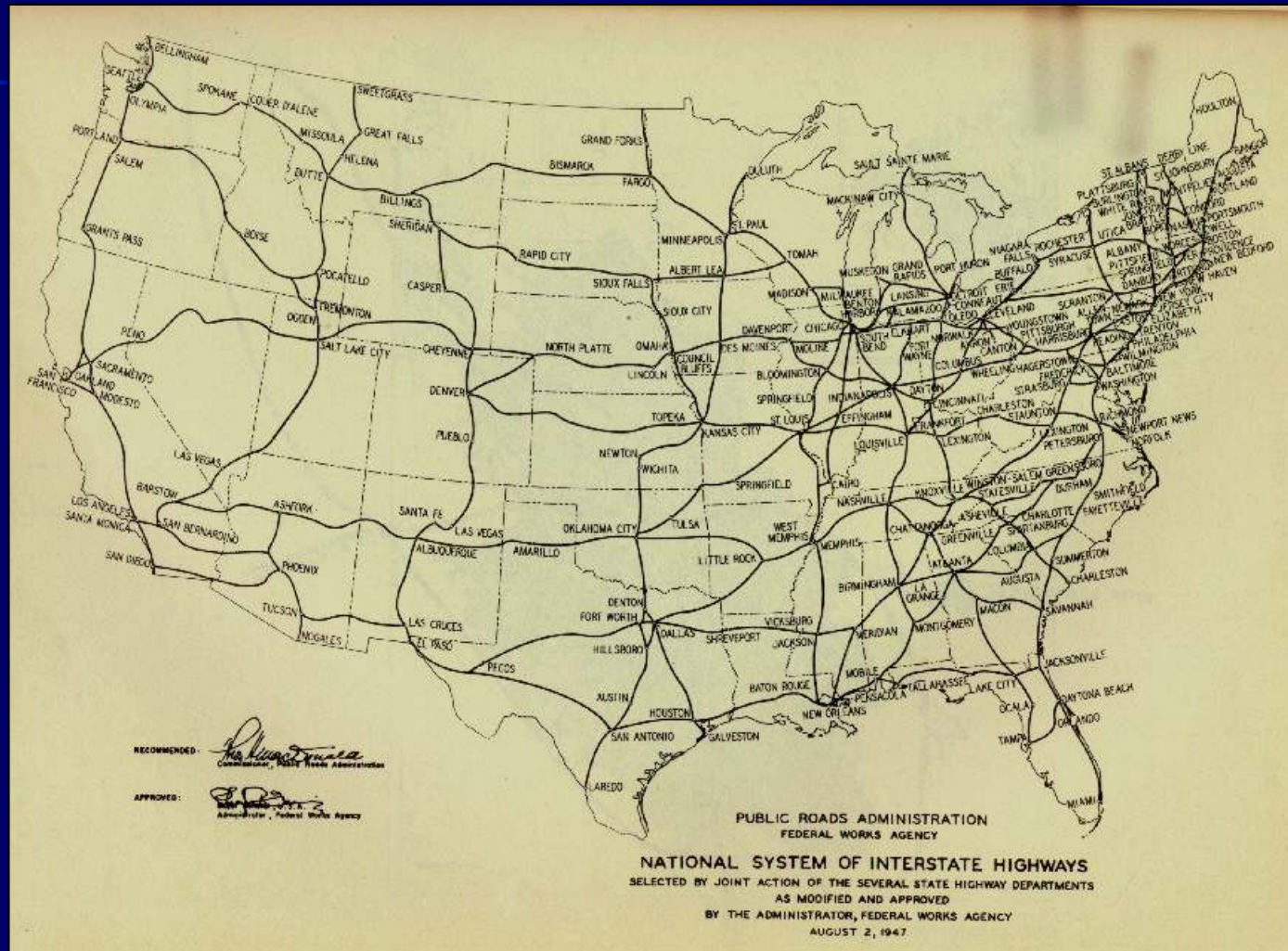
Indicated by State-Wide Highway Planning Surveys

By H. S. FAIRBANK

Chief, Division of Information, Public Roads Administration, Federal Works Agency



Interstate System Map: 1947

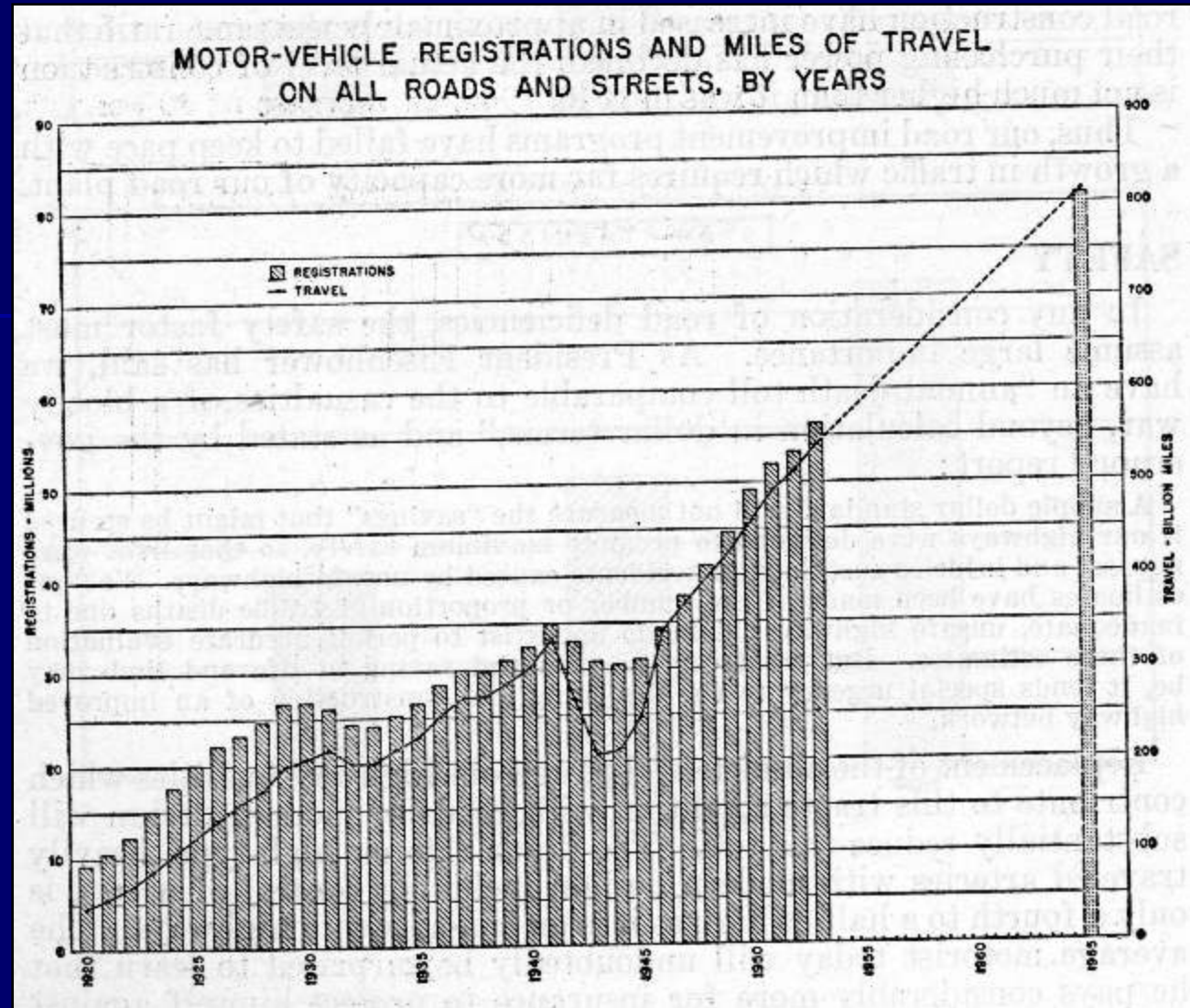


1945-52 Stalemate: Traffic, Funding, & State Capacities



“We are being overwhelmed by a flood of traffic.”

BPR, 1951



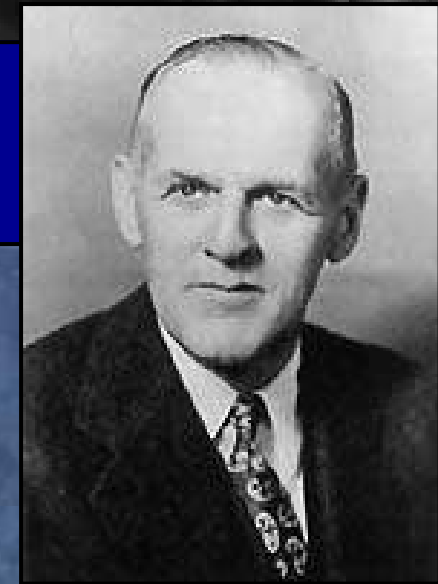
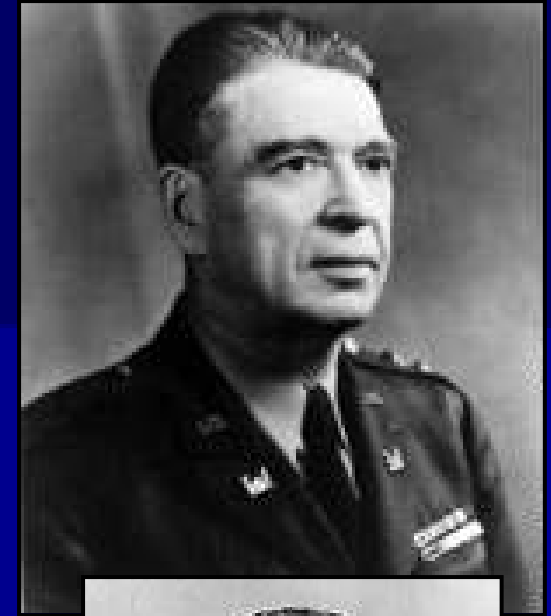
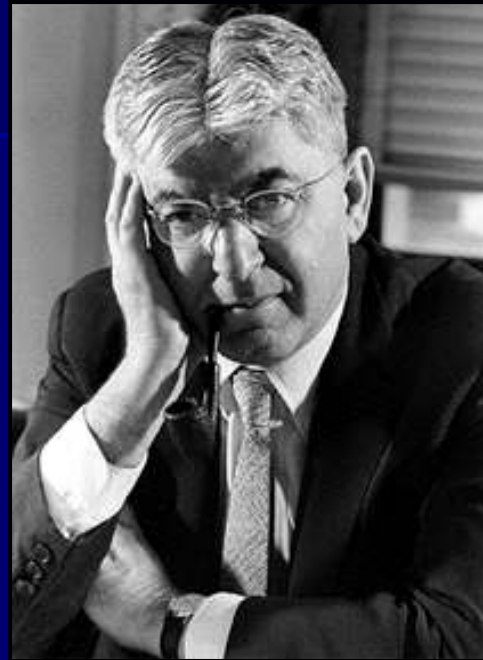
1945: 31 million
1949: 44.7 million
1953: 56 million



1950s: The Turnpike Boom



1954: Changing the Script: Eisenhower's Administration

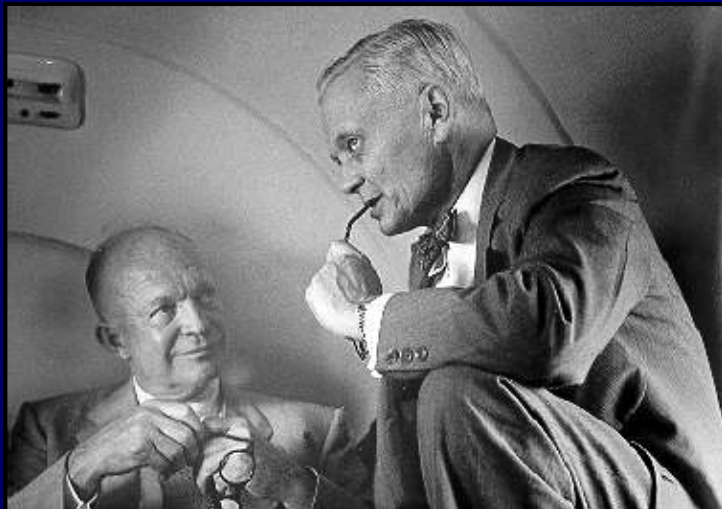




Eisenhower and Clay, 1945.

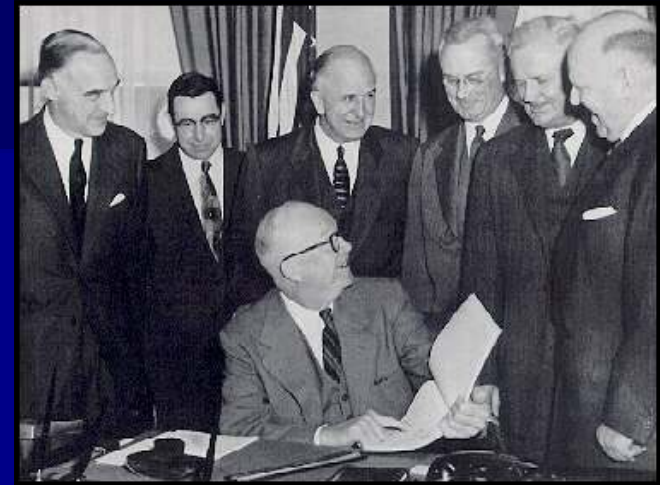
Goals of the Clay Committee: A New Philosophy

1. National System, not federal-aid or formula
2. Financial mechanism: tolls to pay off bonds
3. Roads as counter-cyclical economic tool
4. Avoid cities, but address congestion



Congress & the Clay Report

- The Problem of politics
- Interstate emphasis
- Scale of the problem: \$25 billion
- Shift funding formula
- Reimbursement formulas
- Military/civil defense rationale (PR)
- ***None of Ike's conceptual changes***



Legislative, 1955-1956: Politics, Expertise and Administration

George Fallon



- **90/10 Formula**
- **\$25 billion**
- **Taxes & the Trust Fund**



Frank Turner



Albert Gore, Sr.

Hale Boggs



Things They Got Right: Routes



H.S. Fairbank



Traffic Utilization



Roads into Cities

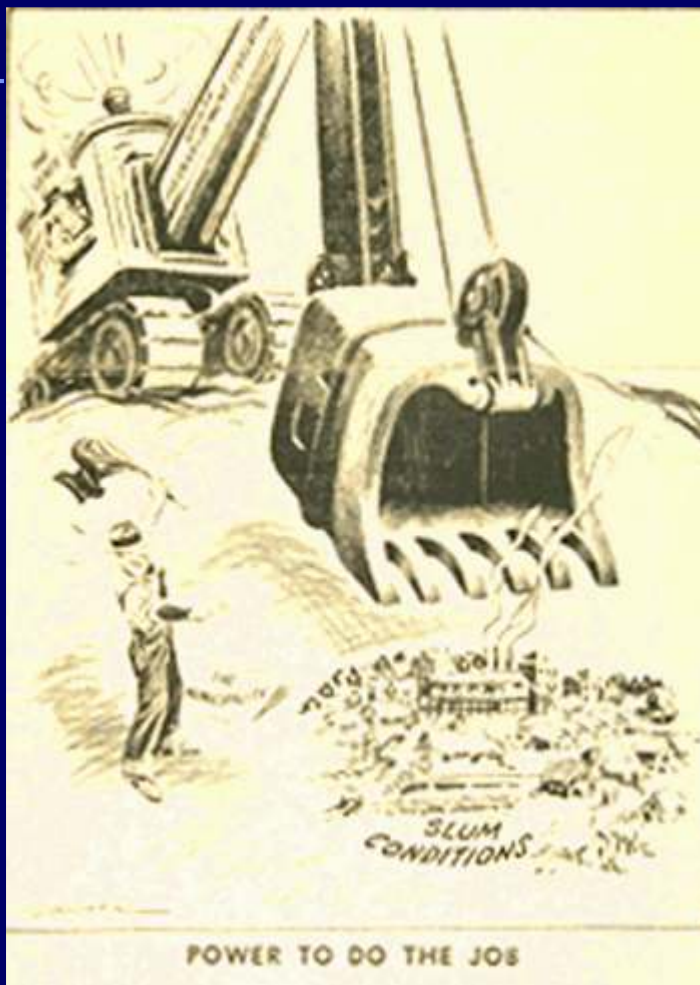
"It is within this urban zone that the Public Roads Administration will be most interested in the development of the Interstate System." (THM, 1947)



Missing the Mark: Central Business Districts



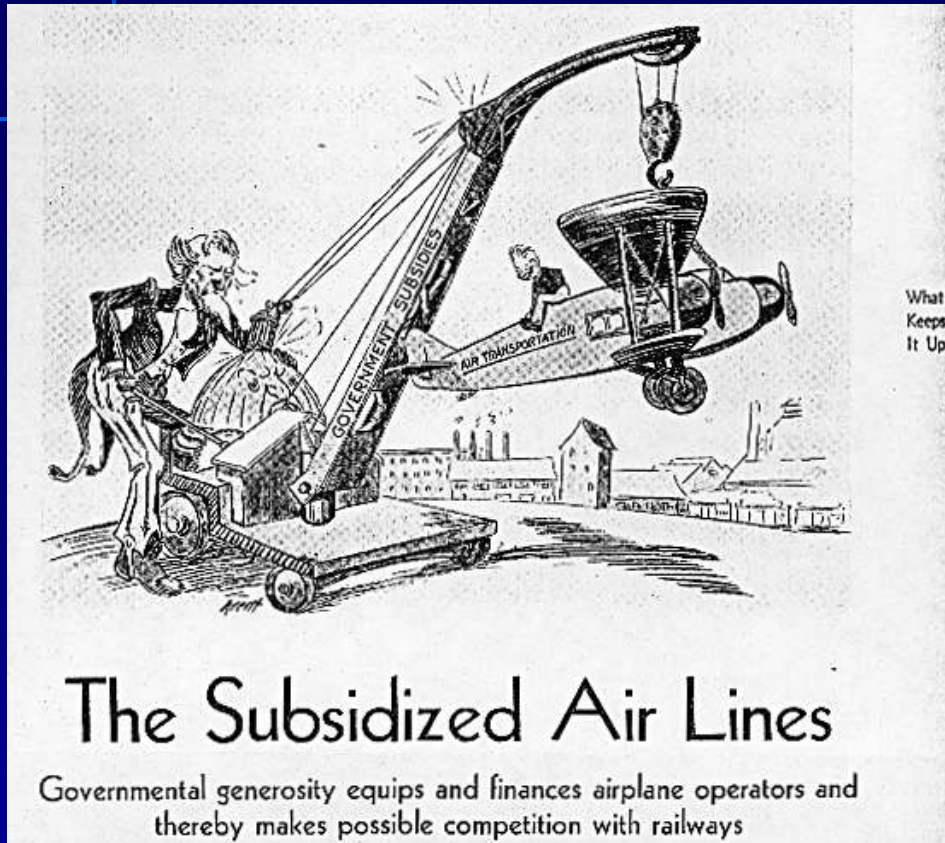
Missing the Mark: Roads & Urban Renewal



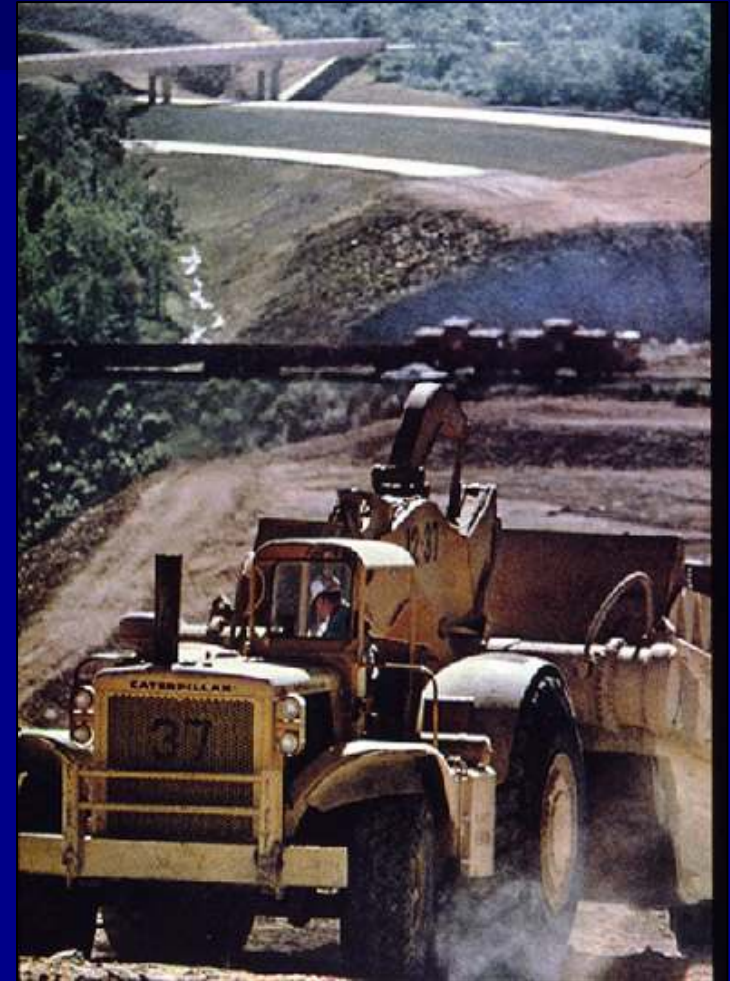
Missing the Mark: Policy Vision for Roads Alone



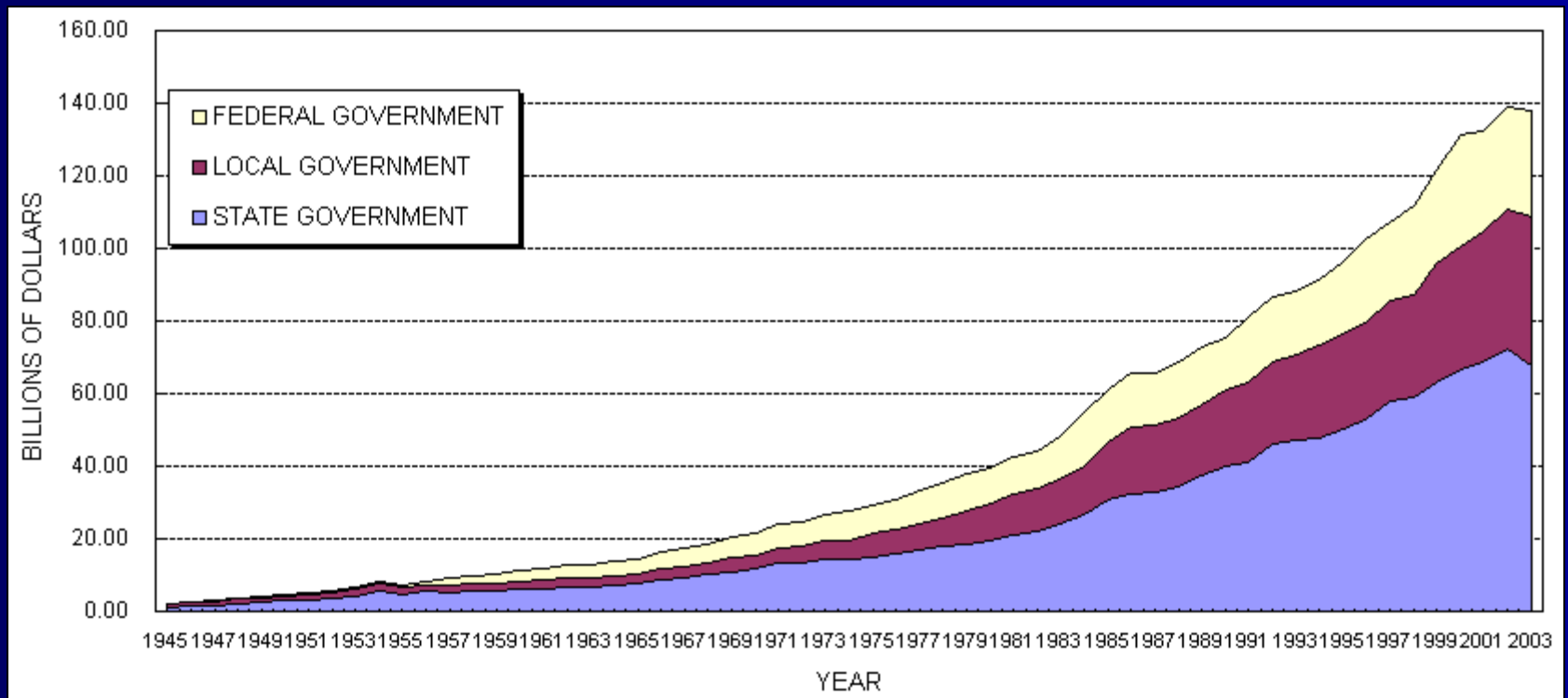
Limited Vision (cont.): Modal Politics vs. National Transportation Policy



Changes & Unanticipated Consequences of the Interstates



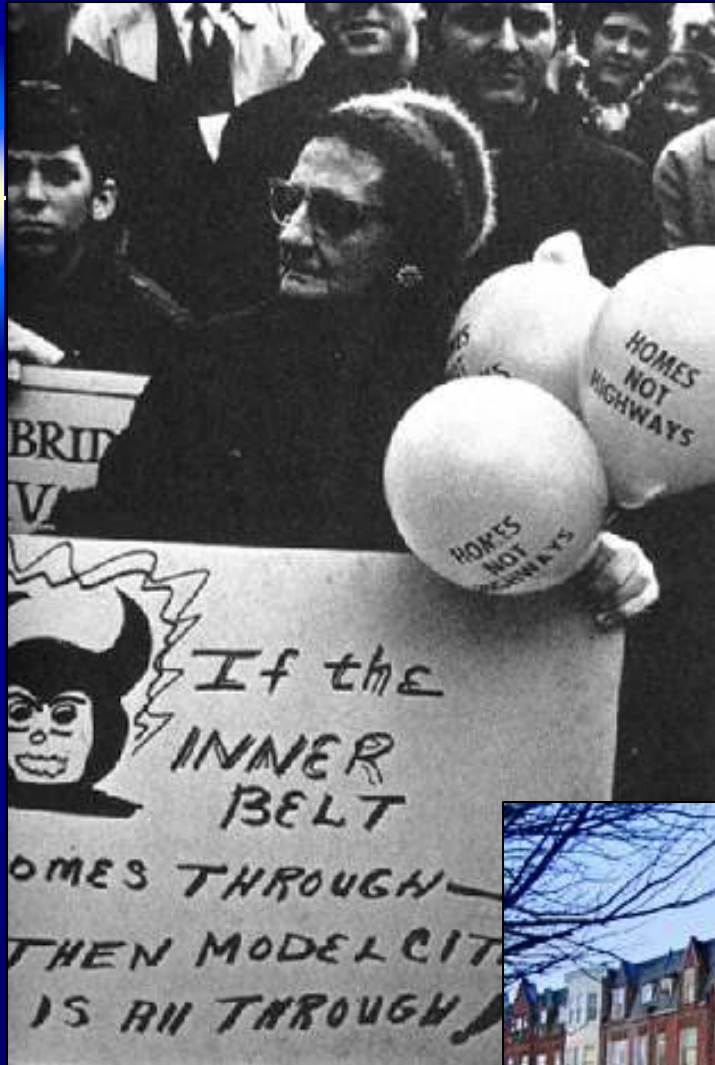
Changes: Largest Public Works Project in History



Changes: Urban Landscapes



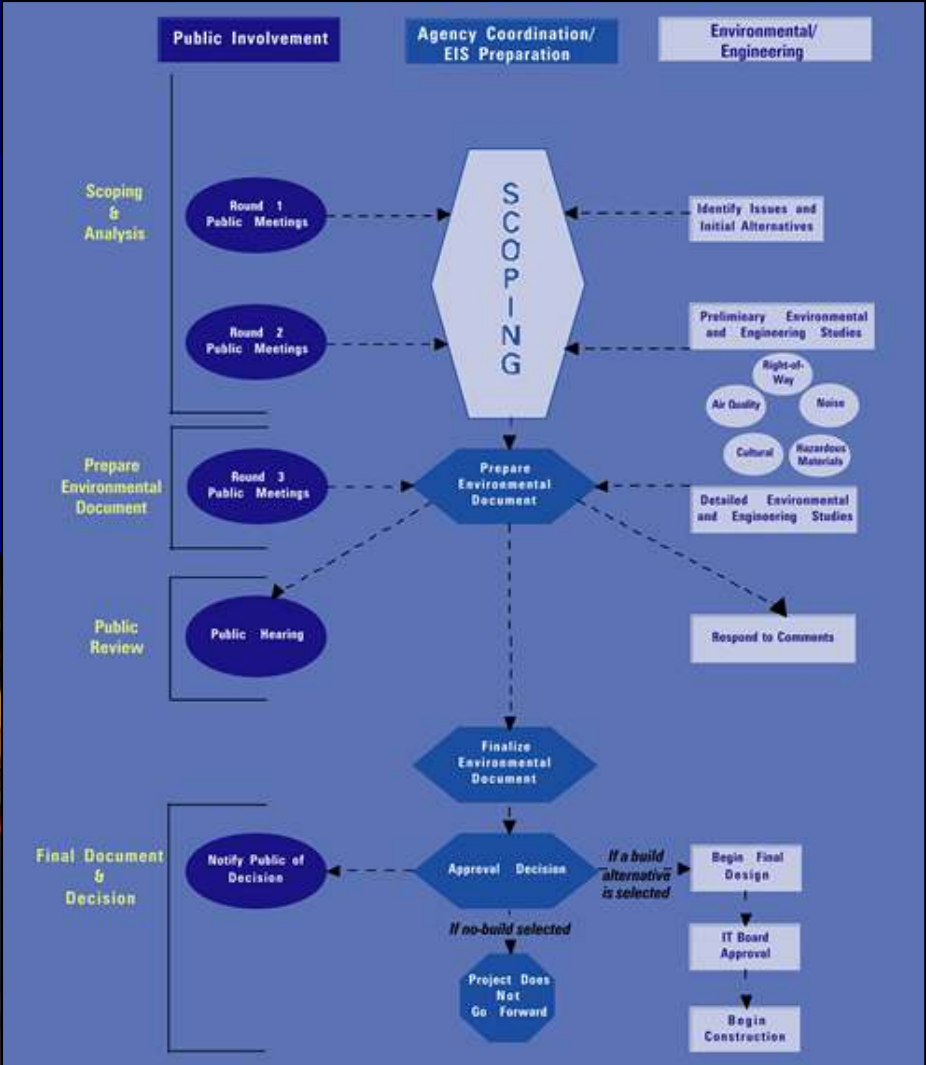
Changes: From Public Support to Freeway Revolt



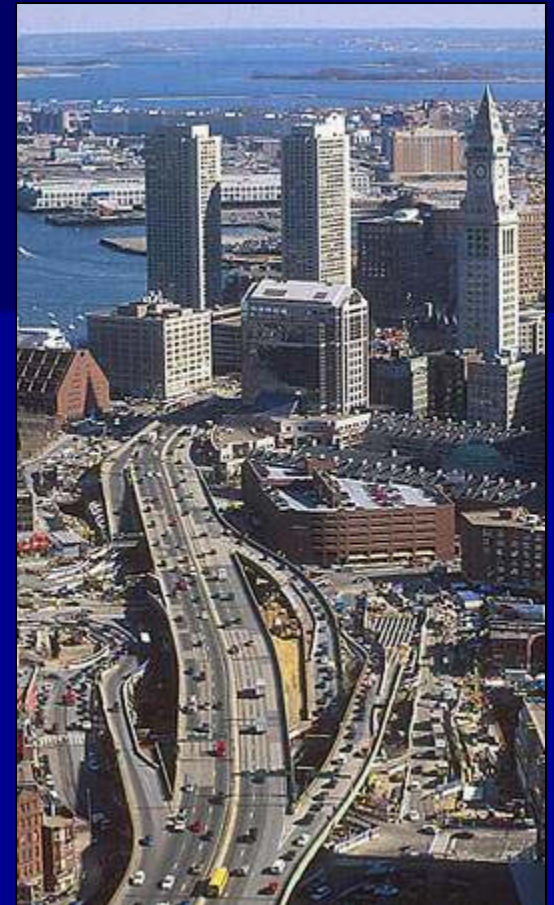
Changes: New Processes, New Roles, New Generations

NEPA (1969)

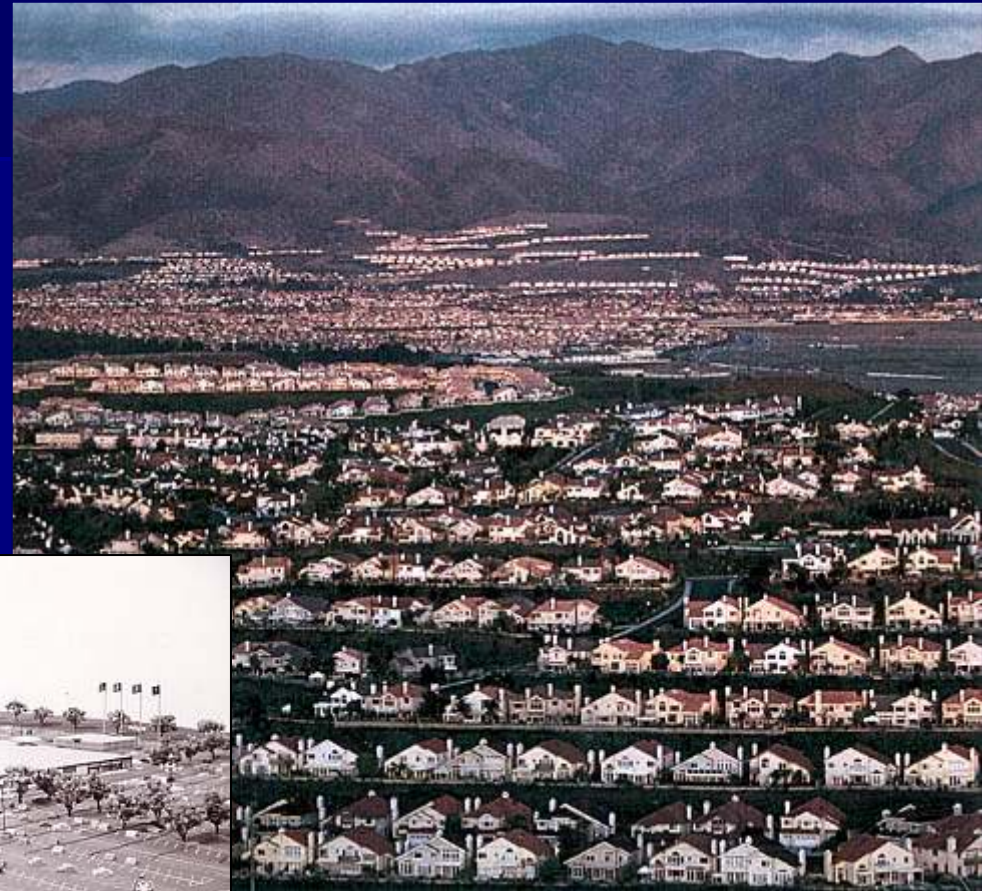
Environmental Impact Statements, Public Hearings



Changes: From Experts to Politics



Changes in Land Use: Malls & Sprawl



Changes: New Economic & Spatial Patterns



Dynamic Changes in Large Systems are Difficult to Anticipate

- Interstate: Socio-technical system, includes politics
- Expect unanticipated consequences
- Users generate different outcomes
- Infrastructure: long lived & not easily adjustable. Fixes patterns, forecloses futures options

