

# Tolling: A Nationwide Overview

Baruch Feigenbaum  
Assistant Director Transportation Policy  
Reason Foundation  
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# Outline

- Why Tolling
- Types of Tolling
- Tolling and Delivery Method
- 21<sup>st</sup> Century Tolling
- Four Federal Tolling Programs
- Tolls and Transit



# Why Tolling

- Provides a revenue-source for construction, maintenance and operations
- Follows users-pay/users-benefit principle used for 100 years
  - Ensures transportation does not have to compete with other priorities
- Tolling/MBUFs are likely successor to gas tax
  - Gas tax first introduced in Oregon in 1919
  - Due to improving fuel efficiency, electric vehicles gas tax does not provide same purchasing power
- Tolling has advantages over the gas tax
  - Charges motorist for exact roadway used
  - Can help manage congestion
  - Tolling and transit encourages person throughput



# Many Types of Tolling

- Thirty-five states have some form of tolling
- Basic types of tolling
  - Roadway tolls: Long-distance turnpike or regional tollroad
    - Ex) New Jersey Turnpike, Dulles Tollway (VA)
  - Bridge tolls: Specific bridge, tunnel
    - Ex) Foley Beach Express (AL), Lincoln Tunnel (NY)
  - Managed lanes: Some lanes on highway variably-priced
    - Ex) SR 91 Express Lanes (CA), I-35W Express Lanes (MN)
  - Congestion pricing: All lanes on highway variably priced
    - Ex) I-66 Inside the Beltway peak-direction (VA)
  - Cordon Pricing:: All entrances to zone, region priced typically at geographic boundary
    - Ex) Manhattan Cordon Pricing Plan
    - Limited use in U.S. to NYC, SF, DC?

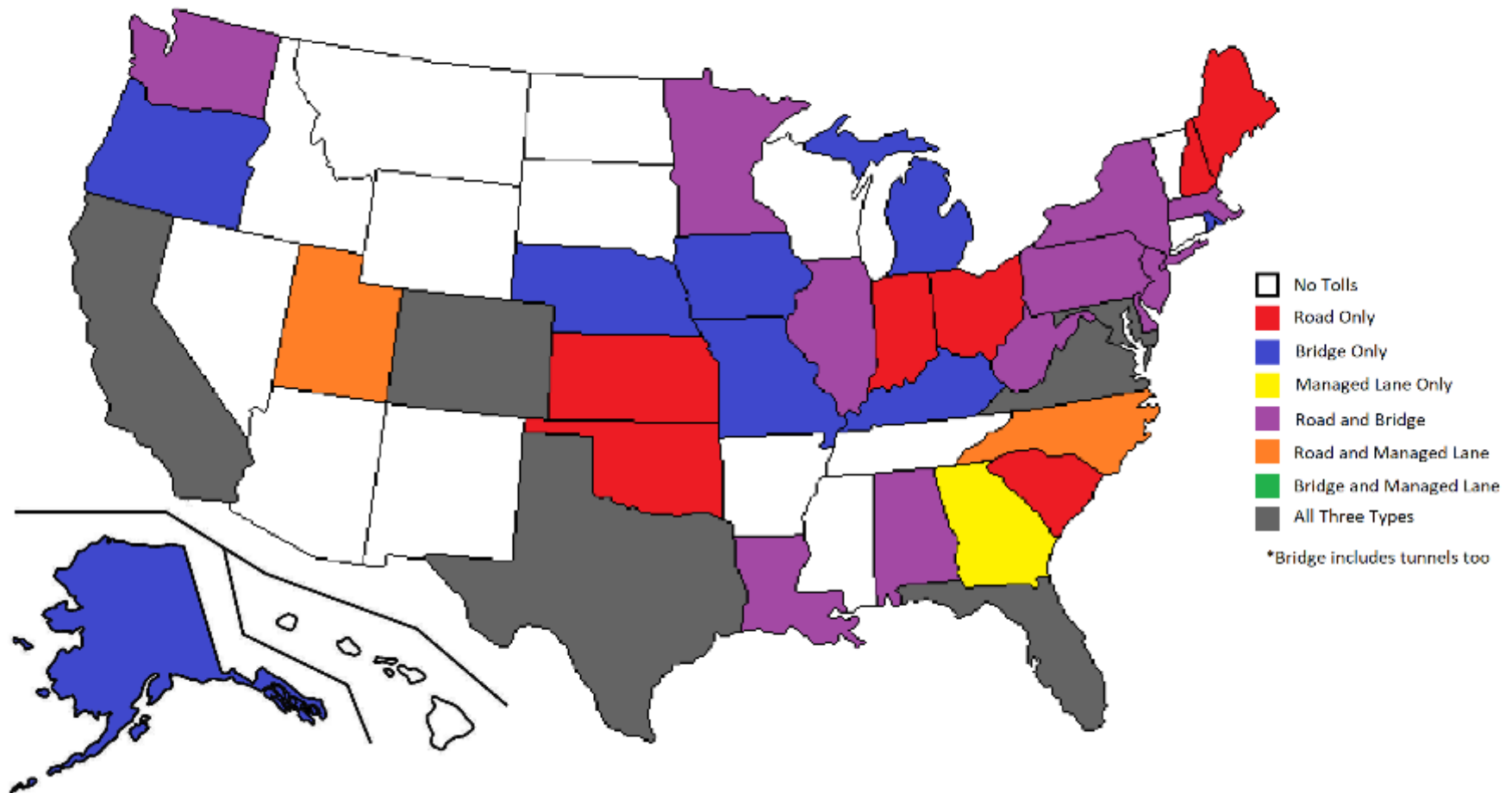


# Fixed, Variable and Time of Day Tolls

- How to adjust tolls
  - Fixed: Same rate every day, all day regardless of congestion
    - New Jersey Turnpike
  - Time-of-day or By day: Adjusts based on fixed schedule or day of week
    - CA 91 Express Lanes adjusts based on hour
      - Different schedules for M-R, F and weekends
    - DE 1 charges different prices for weekdays and weekends
  - Variable based on congestion: Adjusts based on traffic congestion
    - VA I-495 Managed Lanes
  - Each type of tolling can be Fixed, Time-of-day or Variable except congestion pricing
  - Variable has advantage of managing traffic conditions, but includes learning curve to understand and accept



# Types of Toll Roads per State





# Many Types of Tolling

- Types of Agencies
  - Statewide: Oversees all toll facilities in state
    - Ex) Maryland Transportation Authority, Georgia State Road and Tollway Authority
  - Regional: Oversees toll facilities in region
    - Ex) Central Texas Regional Mobility Authorities, Northwest Parkway (CO)
- Types of Operators
  - Public: Owned and operated by state or regional government
    - Ex) New Jersey Turnpike, C-470 Toll lanes
  - Public-Private Partnership: Leased and operated by private party. Private party must meet state requirements to operate roadway
    - Ex) Indiana Tollroad, I-495 Express Toll Lanes
  - Private: Owned and operated by a private entity
    - Ex) Foley Beach Expressway (AL), Orchard Pond Parkway (FL)



# Toll Operating Authorities



- Statewide operating entity
- Regional operating entity
- Statewide and regional operating entity
- Private operating entity
- Authorization to toll, but no state or regional facilities
- No toll facilities



# Tollroad Delivery Method

- Range from states build themselves through design-build (DB) to full public private partnership (P3) and private tollroad
  - Private construction option for tollroads and bridges but not managed lanes, congestion pricing or cordon pricing
    - Limited in use
  - At minimum states use design-build not design-build-bid
  - Options in middle design-build-finance (P3 lite)
- Biggest advantage of P3 is risk transfer
  - Two types of P3s
    - Toll concessions: Tolling provides revenue
    - Availability payments: Revenue can be from any source
- P3s provide financing tools, tolls provide funding
- State DOTs give up some elements of control



# Usage and Tolling

- Tollroad usage
  - Open to all vehicles
    - Ex) Ohio Turnpike, I-66 outside the beltway express lanes (VA)
  - Car-only
    - Ex) Garden State Parkway, I-85 HOT lanes (GA)
- Toll payment structure
  - All vehicles pay proportionate rate, trucks pay four times rate of cars
    - Ex) Kansas Turnpike, Triangle Expressway (NC)
  - Only trucks pay
    - Ex) Rhode Island bridge tolls
  - Out-of-state/region pay more
    - Henry Hudson Bridge (NYC), Rejected I-81 tolls (VA)





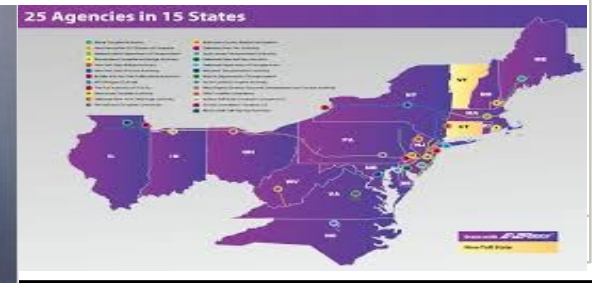
# 21<sup>st</sup> Century Tollroads

- Many different types
  - Managed Lane
  - Bridge
  - Congestion Pricing
- Uses all electronic tolling which reduces costs of collection to 5%, lower in the future
  - Motorists have prepaid accounts
  - Tolling uses windshield transponders read by antennas on overhead gantries
  - No tollbooths
  - Some systems allow collection via license plates with bill sent to motorist
  - Surveillance to catch violators
  - Prepayment options for unbanked, users concerned about privacy



# How are Tolls Collected

- No queues lead to safer highways, fewer delays
  - Traffic accidents reduced 75-90% compared to tollbooths
- Interoperability across states allows person with one account to use toll facilities in multiple states
  - Regional systems such as EZ-Pass in 17 states
  - Nationwide interoperability allows multiple technologies, types of transponders to speak with each other
    - Work in progress





# Different Federal Tolling Programs

- Four different federal tolling programs
  - Section 129 Exceptions to the Freedom From Tolls Provisions
    - On Interstate System can build new capacity as long as existing capacity remains free
      - Managed Lanes (VA I-495 Express Lanes)
    - On Interstate System can replace existing bridge or tunnel with new improved tolled bridge or tunnel
      - Rhode Island truck tolls
  - Build new tolled road
    - Loop 1 in Austin





# Different Federal Tolling Programs (2)

- Four different federal tolling programs
  - Section 166 Requirements for High Occupancy Vehicle Facilities
    - Allows states/public authorities to charge tolls to vehicles that do not meet HOV threshold
      - High Occupancy Toll (HOT) Lanes
        - Buses, vanpools do not pay tolls
    - Popular option for HOV lanes suffering from goldilocks phenomena
    - Many HOV lanes fail operating requirement of travel speeds of 45 mph or more 90 percent of the time



# Different Federal Tolling Programs (3)

- Four different federal tolling programs
  - Interstate System Reconstruction Rehabilitation Pilot Program
    - Three pilot programs in three different states to rebuild an Interstate and then add tolls
    - States have three years to execute an agreement with FHWA
    - No state may have more than one slot
    - Several states interested including Wyoming
  - Value Pricing Pilot Program
    - Funds for local transportation programs to use tolling including congestion pricing to manage congestion
      - Congestion pricing Portland, OR Interstates



# Future of Tolling

- Next surface transportation bill due in 2020 or 2021 may expand tolling
  - Senate's America's Transportation Infrastructure Act (ATIA) includes modest tolling expansion
- States need more freedom to toll roadways
- States or local governments own all roadways except for park service roads
  - States ought to be allowed to toll all Interstates with common sense restrictions
    - Value-added tolling
  - \$57 billion in needs on Interstate system
    - No current realistic revenue source
  - Added benefits
    - Service plazas on highways



# Tolls and Transit

- Tollroads have major benefits for bus rapid transit and express bus services
  - Managed Lanes transit buses can travel free of charge
  - Take advantage of consistent travel speeds, reliability to increase ridership
    - Express bus ridership in Miami increased by 400 percent
- Many regional tollroads allow buses to travel for free
  - Cost-effective transit solution



# Questions ????

- Baruch Feigenbaum, Assistant Director Transportation Policy Reason Foundation, [baruch.feigenbaum@reason.org](mailto:baruch.feigenbaum@reason.org), 404-218-6301
- Resources:
  - A Conservative Case for Highway Tolling, <https://reason.org/policy-brief/a-conservative-case-for-highway-tolling/>
  - Managed Lanes: Connecting Metro Areas, <https://reason.org/policy-study/managed-lanes-metro-areas-reconstruction-interstates/>
  - The Case for Toll-Financed Interstate Highway Replacement, <https://reason.org/policy-study/the-case-for-toll-financed-interstate-replacement/>

