

# SCAN TOUR ON HIGHWAY GEOMETRIC DESIGN

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## Scan Basics

- ◆ FHWA, AASHTO, APWA, Academia
- ◆ Review and document procedures and practices in highway geometric design and CSD
- ◆ Denmark, Sweden, Netherlands, Great Britain, Germany

## Scan Topics of Interest

- ◆ Project Planning
- ◆ Environmental Concerns
- ◆ Speed
- ◆ Design Flexibility
- ◆ Rural Roads
- ◆ Traffic Calming
- ◆ Roundabouts
- ◆ Bikes and Peds

## Project Planning

- ◆ Focus on improving the existing system by making better use of it
- ◆ Improve safety while remaining sensitive to community needs
- ◆ Similar but longer planning process

## Environmental Concerns

- ◆ U.S. NEPA has been integrated more efficiently within the project development process
- ◆ Recognition of environmental concerns is an every-day practice
- ◆ Issues presented were mainly human related

## Speeds

- ◆ Safety correlated with speed
- ◆ Narrow range of speed per road category for consistent design
- ◆ Self-explaining, self-enforcing roads
- ◆ Acceptance of lower operating speeds by road users

## Self Explaining, Self Enforcing



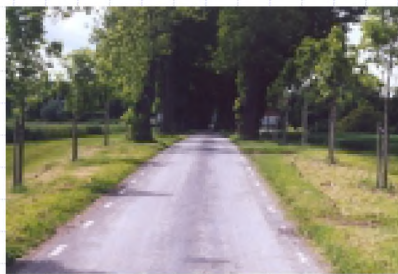
## Design Flexibility

- ◆ Design guidelines and design exception process for all countries
- ◆ Design flexibility responsive to site specific limitations
- ◆ Public acceptance of lack of flexibility on motorways

## Rural Roads

- ◆ Focus on controlling and reducing speeds
- ◆ Use of narrower lane widths
- ◆ Clear zones not typically provided
- ◆ 2+1 facilities with customized design by country

## Rural Roads



## 2+1 Lanes



## Traffic Calming

- ◆ Commitment to reduce speeds through urban areas
- ◆ Integration of all modes and users in the same space
- ◆ Area wide strategy and community acceptance is essential for success

## Traffic Calming



## Traffic Calming



## Roundabouts

- ◆ Extensive use in all countries
- ◆ Safety and capacity gains
- ◆ Flexibility to accommodate site specific conditions

## Roundabouts





## Roundabouts



## Bicyclists and Pedestrians

- SW, DK, and NL use systematic efforts to promote alternative use of transport modes
- ◆ Also provide separate facilities as part of network
- ◆ GB and G give lower priority
- ◆ Mobility needs have priority in urban areas

## Bike facilities



## Conclusions

- ◆ Roadways are designed for a specific purpose, implement an aesthetic approach to visually explain this concept, and address safety in a way that considers all users
- ◆ Willingness to provide roadways that self-enforce speed reductions, potentially increase levels of congestion, and promote alternative modes

## Implementation

- ◆ Investigate the use of design workshops
- ◆ Promote “self-explaining, self-enforcing” roads concept
- ◆ Encourage proper use of roundabouts and traffic calming devices
- ◆ Support development of workshops on Context Sensitive Design

Thank You!

