Transportation Transformation

Back to the FUTURE

Are we there yet?

11/13/2014

Why are we here?

- Urbanity! = Efficiency
  - (let us get real... Cities created to minimize transportation costs)
- Place Making (shush... urbanity)
- Safety for all users (Civility - some not ready)
- Multi-modal (Efficiency)
- Fiscally responsible (Bang for buck)
- Right-sizing - “Road Diets” term fading

1905


1965

A new building under construction with the caption: “1965 Building Under Construction.” The building is located in a bustling city area with heavy traffic.

Modern transportation system

A modern transportation system with the caption: “Modern Transportation System.” The system includes a variety of modes of transportation, such as cars, buses, and bicycles, and is designed to be efficient, safe, and multi-modal.

1905 contrasting image

A comparison image showing the changes in transportation from 1905 to the modern transportation system. The image highlights the advancements in technology and efficiency in the transportation sector.
• Chris Comeau, Bellingham
  – Alabama Street Corridor

• Joel Pfundt, Redmond
  – Downtown East / West Corridor Study

• Kendra Breiland, Fehr & Peers
  – Kirkland, Juanita Drive Corridor Study
Transportation Transformation: 
Back to the Future

APA Washington Conference 
Spokane, WA 
October 16-17, 2014

1957

1969

Present-Day 
Alabama Street
Major east-west commuter route
Alabama ADTs
13,000 west
19,000 central
16,000 east
Arterials Intersect
Cornwall – 8,100
James – 15,100
Orleans – 9,400
Pacific – 4,400
Woburn – 19,000

Fast Forward - 2011
• Public process for Pedestrian Master Plan
• Alabama consistently identified as a major barrier to mobility
• Plan Recommendation: Alabama Corridor - Feasibility Study for Road Diet and Pedestrian Safety Improvements
Alabama = Mobility Barrier
for neighborhoods, pedestrians, bicyclists, transit riders

(2006 - 2011) 262 total & 93 injury-related collisions
(2012 - 2013) 52 total & 19 injury-related collisions = 314 collisions

Target Zero Highway Safety Program
(2006 - 2011) 262 total & 93 injury-related collisions
(2012 - 2013) 52 total & 19 injury-related collisions = 314 collisions

Collision History

Study Solutions to Known Problem & Construct Safety Improvements
(Sounds like crazy-talk, right?)

- Unacceptably high number of collisions on Alabama
- $1,461,824 grant funds awarded to reduce collisions
- Highway Safety Improvement Program (federal)
- WSDOT Target Zero Goal = Reduce collisions
- Phase 1 – Feasibility Study/Alternatives Analysis
- Phase 2 – Construction of Safety Improvements

Multi-Year, Multi-Agency Public Process
- 2011-2012 Pedestrian Master Plan (2 Open Houses)
- May-June 2012 – Alabama grant funds adopted in 6-Year TIP
- Aug-Dec 2012- Five Neighborhood Meetings
- February 2013 Alabama Public Open House #1
- 2013-2014 Bicycle Master Plan (2 Open Houses)
- March 2014 Alabama Public Open House #2
- March 2014 Transportation Commission
- April 2014 City Council Public Hearings
- May 2014 Roosevelt Community Meeting to discuss C-curb
- June 2014 City Council vote to approve safety improvements

10 Alternatives Studied
1) No action/no change
2) Comprehensive 4-to-3-lane “Road Diet”
3) Modified 4-to-3-lane “Road Diet”
4) Hybrid 4-to-3-lane “Road Diet”
5) Additional pedestrian crossings
6) Accommodation of parallel and intersecting “Bike Boulevards”
7) Strategic relocation and consolidation of WTA bus stops
8) Access Management: median, turn restrictions, & turn lanes
9) Consider resurfacing the 1.75-mile Alabama corridor
10) Examination of the speed limit
Traditional 4-to-3-lane “Road Diet”
Reallocate physical space to improve conditions for other uses
Proven method to reduce collisions; removes left-turns from travel lane
Improve traffic flow, eliminate weaving, and stops for vehicles to turn left
Generally possible up to 20,000 ADT, but also depends on pm peak at intersections
Can smooth traffic flow, but can also increase congestion
Can have negative consequences for transit service

WHY study a 4-to-3-lane “Road Diet”? 
Proven counter measure for reducing vehicle collisions and improving safety for other transportation users

WTA Concerns About Road Diet 
High-frequency transit line = most productive route in WTA system
Q. What effect would 4-to-3-lane conversion have on transit service?

Analysis of Road Diet Variations:
1) Existing; 2) Comprehensive; 3) Modified; 4) Hybrid

Feasibility of Road Diet Alternatives
Vehicle Level of Service (LOS) and Delay (seconds) per Vehicle at Signals

Conclusion: Install a hybrid 4-to-3-lane “Road Diet” on parts corridor, where feasible, with raised “C-curb” median and turn lanes on other parts
Flashing crosswalks at Grant (2010) and St. Paul (2011)

Pedestrian Hybrid Beacons
[aka High Intensity Activated Crosswalk (HAWK) signal]
Recommended for crossing 4-lanes without a center pedestrian refuge

Alabama Corridor Crossings
5 New signalized crossings of Alabama are recommended at:
- Ellis Street – Install flashing crosswalk (from St. Paul) with center lane refuge
- Grant Street – Enhance flashing crosswalk with center lane refuge
- Moore Street – Install HAWK signal across 4 lanes
- St. Paul Street – Install HAWK signal across 4 lanes
- Undine Street – Install HAWK signal across 4 lanes
- Michigan Street – Install HAWK signal and center lane refuge

Consolidate/Relocate WTA Bus Stops


Existing Bicycle Connectivity Conditions along Alabama Corridor
Adding Kentucky/Nevada/Texas Bike Boulevard Parallel to Alabama

Connectivity Improvements from Bicycle Network Implementation

Access Management
Raised “C-curb” median, turn restrictions, & turn lanes where road diet is not feasible in center section of Alabama

Resurface the Alabama Corridor
- Project 1.75-miles Cornwall Ave to base of Alabama Hill
- Riddled with cracks, very poor pavement rating
- Scheduled for 2015 arterial overlay program
- Additional $1,100,000 in local Street funds

Speed Limit Reduced
35 mph to 30 mph
Risk and severity of injury reduced for all users when vehicle speeds are lower
Minimal increase in corridor travel time for private vehicles @ 30 seconds
Minimal impacts to transit travel time
Improves neighborhood quality of life

Public Misinformation
From May 2012 when the City announced receipt of the $1,462,000 grant funds – to study methods to reduce vehicle collisions – to final City Council vote in June 2014, public misinformation from inaccurate and misleading news articles, blog posts, neighborhood web sites, email comments, and local radio talk shows negatively affected and ultimately influenced the outcome of the project

Information is a powerful force – for good and bad
Week Before Feb 2013 Open House #1 to Introduce 10 Alternatives Proposed for Study

“Roosevelt residents voiced their disapproval at a public hearing in front of the City Council in Apr ’13, and at an open house at Roosevelt Elementary School on May 14. They also picketed Alabama Street during the evening commute on May 28.”
Bellingham Herald, June 6, 2014

Recommended C-curb median was removed by City Council because it was unpopular, despite being a proven countermeasure for reducing vehicle collisions

Conclusions

- **Multimodal approach** reduces focus on automobiles; improve safety, mobility, quality of life for all users
- Vehicle collisions will be significantly reduced on east and west ends due to **proven safety counter-measures**
- Decisions based on public protest and popular opinion may not reduce vehicle collisions where needed most
- **Low-Cost, High Benefit:** For a total cost of $2,562,000 the Alabama Street Multimodal Safety Improvements will completely transform 1.75 miles of this important east-west corridor through the heart of Bellingham.
Add left-turn lane from Undine & Woburn; Raised C-curb Median from Woburn & Superior

Spot Widening to Add Left-Turn Lanes
- Widen Alabama through Valencia and Verona intersections
- Extend left-turn lane from Alabama/Woburn
- Helps Alabama/Woburn traffic congestion & transit on-time performance
- Reduces collision risk

Add left-turn lane from Superior to St. Clair with rechannelization from 4-to-3 lanes (2 EB, 1 WB)

For More Information
Chris Comeau, AICP CTP Transportation Planner
(360) 778-7946 or ccomeau@cob.org
Vision
A community of connected neighborhoods with vibrant urban centers - inspired by nature, powered by innovation, and committed to excellence.
Existing One-Way Couplet

Project Principals

- Circulation
- Parking
- Travel Choices
- Parks and Open Space
- Land Use
- Great Streets
- Cleveland Street as “main street”
- Railroad Right-of-Way

Traffic Analysis

- Used the Bellevue-Kirkland-Redmond (BKR) EMME/2 Travel Demand Model to create 2030 forecasts
- Modified the City of Redmond Synchro/SimTraffic Model to simulate 2030 peak traffic operations
- Projected travel times on Redmond Way, Cleveland Street, and Bear Creek Parkway with the conversion

Challenges

- BKR model predicted 20 to 40 percent higher traffic volumes in downtown by 2030
- Close proximity of traffic signals in downtown
- Ends of the couplet where Redmond Way and Cleveland Street connect
- State route requirements

Questions we Considered with Couplet Conversion

- What are the facts about current travel behavior?
- What is the priority of the street?
  - regional mobility or serving local access
- Is there a viable street grid to handle two way traffic operations?
- Can you meet minimum capacity needs to prevent gridlock?
- What is the risk-reward?
Downtown Project Phasing

1 – Bear Creek Parkway Extension
2 – Cleveland St Sewer
3 – Downtown Stormwater Project
4 – 161st and 164th Extensions
5 – Redmond Central Connector, Phase 1
6 – Cleveland St Streetscape
7 – One-Way to Two-Way Conversion

Cleveland Streetscape Design Issues

- Address all modes within existing right of way
- On-Street Parking
- Americans with Disabilities Act
- Stormwater Infiltration
- Arts and Culture
- Historic Preservation
- Communications During Construction

Cleveland Streetscape

- Narrow street
- Wide sidewalks
- Bicycles share travel lane
- Parallel parking
- Reduced impact on adjacent properties
- Transit on Redmond Way

Downtown Cultural Corridor Master Plan and Redmond Moving Art Center
Communications

Construction Mitigation

Project Updates
• SR 908 designation removed from west half of corridor
• Project received WSDOT approval in 2009
• Received grants and Public Works Trust Fund Loans
• Project construction Schedule
  – Bear Creek Parkway Extension - 2009
  – 161st Ave NE Extension – 2011
  – 164th Ave NE Extension – 2012
  – Redmond Central Connector – 2013
  – Cleveland Streetscape – Early 2015
  – One-Way to Two-Way Conversion – Early 2017

LIVE Downtown
• Over 1,000 new units in downtown completed since 2009
• Brings downtown units to about 3900 – The goal is to add about 4,500 new residents in 2,500 new units by 2030
• Affordable housing - 310 total inclusionary units, with 252 in Downtown and 58 elsewhere in the City
• Most buildings are mixed-use bringing business and jobs to downtown
• New residents are adding new life to downtown streets, parks, and businesses
City of Redmond
Joel Pfundt, AICP CTP
425-556-2750
jpfundt@redmond.gov