Rail~Volution 2017: Denver

Arterial BRT: Confronting the Challenges
Four Projects/Four Programs

Minneapolis
Eugene
Denver
Portland

James McGrath, AIA, ASLA, LEED, ENV
Global Practice Lead: Urban Corridors
a note on format
and a note of thanks
Urban Arterials, the CONTEXT...and its consequences
fragmented and discontinuous transportation system
main arterials are the ONLY elements of continuity
workhorse corridors in the old paradigm and new
with significant and diverse transit usage patterns
so, everyone for every purpose relies on them

Freight and business-supportive functions

• Neighborhood circulation and access

• Transit and pedestrian and cycling movements
land use characteristics are just as varied...

• Former county or un-incorporated land with little regulation and urban services
• Variety of uses and frontage types from a variety of development eras – no consistent form
• Diverse buildings, diverse uses, diverse communities
...and along comes funding for transit and TRANSFORMATION
everybody wants everything for everyone at all times, now...
and the wants and needs go well beyond transit...
but our precious transit resources can’t solve the legacy issues
and we’ve got to calibrate the magnitude and speed of transformation

- don’t want to eliminate access to homes or businesses
- don't want to limit on this community’s overall mobility
- don’t want to impinge on this conduit of economic vitality
...so lets talk about BALANCE
FOUR PROJECTS/FOUR PROGRAMS

Minneapolis
Katie Roth
Metro
Eugene
Sasha Luftig
LTD
Denver
Ryan Billings
C+C Denver
Portland
Kate Lyman
TriMet
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SPACING

Minneapolis

1/8 mile before
1/2 mile after
varies, 1/4 to 1 mile

Eugene

1/4 mile before
1/2 mile after
some variation to 1/3rd

Denver

1/4 + 1/2 mile before
1/3 mile after
consolidate local/limited

Portland

1/6 mile before
1/3 mile after
Average spacing, some variation
RUNNING WAY

Minneapolis
- Right Running
- Mixed Traffic
- 20% on shoulder

Eugene
- Right Running
- 68% Dedicated Lane
- Mixed Traffic remainder

Denver
- Center Running
- 50% Dedicated Lane
- 50% Mixed Traffic Right

Portland
- Right Running
- Mixed Traffic
- 1% Dedicated Lanes (legacy)
- 4% BAT Lanes
PLATFORM

Minneapolis
80’ Long
9” Tall

Eugene
60’ Long
13” Tall

Denver
150’ Long
TBD

Portland
50’ Long
10” Tall
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FREQUENCY

Minneapolis

Before:
10 minute local service frequency

After:
10 minute BRT service
30 minute local service

Eugene

Before:
15 minute peak
30 minute off peak

After:
10 minute peak
15 minute off peak

Denver

Before:
3.75 minute peak
5-7 minute off peak

After:
TBD
Span: 24/7

Portland

Before:
6 minute peak
15 minute off peak

After:
6 minute peak
12 minute off peak
Span: 20 hrs/day
RIDERSHIP

Minneapolis

- A LINE
- 4,100 before
- 5,500 after
- 85% on BRT (75% of service)
- 15% local (25% of service)

Eugene

- WEE
- 2,700 before
- 6,881 after
- Franklin EmX

Denver

- COLFA
- 22,000 before
- 50,000 after (expected)
- Increase coming from travel time savings, reliability, population and job growth along corridor.

Portland

- DTP
- 10,000 before
- TBD after
Minneapolis

DCE

Full Section 106 review was an unanticipated change

Eugene

EA

West Eugene: Started as an EIS, then downgraded to an EA

Denver

DCE

No ROW

Portland

DCE
COST

Minneapolis

$28 M total project cost
$2.8 M per mile
$1.4 M per station
$0 M of ROW

Eugene

$100 M total project cost
$11.4 M per mile
$7.14 M per station
$5.68 M of ROW

Denver

$140 - $185 M total cost
$14 - $18 M per mile
$150 M hard cap

Portland

$150 M hard cap
$10.7 per mile
$25 M of ROW
Possible Questions

1. Many transit systems across the nation are experiencing a decrease in ridership, especially off peak. It appears that arterial BRT projects have had very substantial increases in ridership, why do you think that is? What are the factors that appear to contribute to that ridership increase?

2. Federal funding for Small Starts projects seems to be not as certain as it was under the previous administration. How is that shaping the scope/schedule/budget of your projects, if at all?

3. The toolbox for arterial BRT seems to vary by project. What is the most important tool(s) (e.g. level boarding, stop spacing, TSP, off board fare payment, etc.) for your project and why? Are there tools that you thought would be important and weren’t and vice versa? How did you set expectations with the public?

4. For those agencies with “BRT” programs, is political ripeness one of the criteria that you consider when setting priorities? How did you cultivate grassroots and political leadership?

5. For someone that is thinking about attempting their very first BRT project what are the 2-3 most important things to research/consider before getting started? What were some big wins and losses?

6. Who was the champion?
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A LINE         WEEE       COLFAAX   DTP

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