Item #2

APPROVAL OF MINUTES

Item #3

OVERVIEW OF TRAC AGENDA
Committee Goals

- Learn about the RTC including its roadway and transit priorities, as well as projects and priorities of state and local governments
  - Pre-summer: Roadway
  - Post-summer: Transit

- Provide input on our transportation and mobility priorities and projects

- Determine if additional funding is necessary and if so provide recommendations on funding mechanisms for projects.

Item #4

PRIORITIZATION OVERVIEW
Metrics, Dashboards and Stakeholders: Connecting Performance Measures to Community Values

John V. Thomas, PhD
US EPA Office of Sustainable Communities

Transportation Resource Advisory Committee
April 7, 2016

A Wide Range of Uses for Metrics

• Prospective / Forecast Performance of a Plan
• Project Evaluation
• Project / Plan Monitoring
• Identification of Gaps and Priority Areas for Investment
Sources of Metrics

• Models
  – Estimated based on a scenario
• Studies
  – Anticipated outcomes of projects
• Monitoring Data
  – Tracking metrics over time
• Qualitative “Scoring”
  – Rating points for consistency with regional priorities or supporting key goals

Effective Use of Metrics

• A meaningful process
  – City – General Plans, Capital Plans, Projects, Evaluation of Policies
  – Neighborhood – Corridor Plans, Station Area Plans, Neighborhood Design / Redevelopment, Individual Development Projects
• The right measures
  – Rigorous and detailed but easy to use and maintain
  – Transparent
  – Ability to visualize at a regional and community scale
  – Connect to community values
RTC is Laying the Foundation

Examples of Performance Measures
How Performance Measures Can Help

- Priority setting when project needs are greater than available resources
- Provide a view of the potential co-benefits of investment choices
- Provide a way to structure a conversation about the shared vision and how the project portfolio can best match with those priorities
Communicating plan outcomes with a dashboard of metrics

Source: Sacramento Regional Blueprint (2010) Blueprint’s Impact on the Region and Resident’s Quality of Life
Design for Quality:

The design details of any land use development—such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (like sidewalks, connected streets and paths, bike lanes, the width of streets)—are all factors that can influence the attractiveness of living in a compact development and facilitate the ease of walking and biking to work or neighborhood services. Good site and architectural design is an important factor in creating a sense of community and a sense of place.

Source: Sacramento Regional Blueprint (2010) Blueprint's Impact on the Region and Resident's Quality of Life
Measures that Identify Gaps

Source - Metropolitan Council, Transportation Performance in the Twin Cities Region

Evaluating Opportunities to Improve Performance Across Modes

FDOT Quality Level of Service Handbook
OUTREACH AND PRELIMINARY SURVEY RESULTS

VALUE PRIORITIZATION SURVEY

SOUTHERN NEVADA
WE WANT TO HEAR FROM YOU!
AND YOU! AND YOU! AND YOU!
AND YOU! AND YOU! AND YOU!
YES, WE WANT TO HEAR FROM ALL OF YOU.

rtcvision.metroquest.com
VALUE PRIORITIZATION SURVEY

Your Vision for the Valley’s Transportation Future

The Regional Transportation Commission of Southern Nevada is seeking your input on what the Valley’s transportation system should look like between now and 2040. Please share your transportation-related values and priorities to help the RTC develop our long-range Regional Transportation Plan.

4500+ Responses

The RTC guides Southern Nevada Strong, the Valley’s first regional plan for improving quality of life through transportation, economic development, education, housing, and smart growth.
Main Findings

RTC Values Ranked (Based on Survey Results)

1. Increase Safety
2. Congestion Management
3. Enhance Modal Connectivity (transit & ped-bike)
4. Increase Accessibility
5. Maintain Current Infrastructure
6. Improve Freight Movement
7. Support Economic Vitality
8. Promote Efficient System Operation
9. Protect Environment
OVERVIEW OF VALUES

TRANSPORTATION VALUES

THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
RTC Transportation Values

Improve Economic Vitality

Support economic growth and opportunity.

1. Capture Economic Impact

Cost = Up to $12 B
Impact = Up to 178 B
Improve Economic Vitality

2. Avoid Economic Loss

If We Do Nothing.....

Economic Loss = Up to $79 B over 30 years

3. Reduce Transportation Costs

Average Housing + Transportation Costs as % of Income

- Housing: 45%
- Transportation: 32%
- Remaining Income: 23%

$12,000/year
4. Reduce Commute Times

5. Attract the Next Generation of Workers
Improve Economic Vitality

How Transit Improves Economic Vitality:

1. Capturing Economic Impact
2. Avoiding Economic Loss
3. Reducing Transportation Costs
4. Reducing Commute Times
5. Attract the Next Generation of Workers

RTC Transportation Values

Increase Safety

Reduce serious crashes.
Increase Safety

Crashes by Road User

- Vehicle Occupant: 48%
- Motorcycle: 19%
- Pedestrian: 28%
- Bicyclist: 2%
- Scooter/ATV: 3%

Reported Traffic Fatalities Per 100,000 Inhabitants in Selected U.S. Cities

- Atlanta: 9.7
- Las Vegas: 8.8
- Phoenix: 7.8
- Denver: 4.7
- Los Angeles: 4.5
- Salt Lake: 4.0
- Orlando: 3.5
- Chicago: 3.3
- New York: 3.2
- Washington DC: 2.8

Reported Fatality Rate in 2015 (Per 100,000 Population)
Increase Safety

5 Year Rolling Average

Serious Injuries
Fatalities

No Level of Fatalities or Critical Injuries on the Road are Acceptable

In Every Situation a Person Might Fail....

The Road System Should Not
Increase Safety

RTC Transportation Values

Increase Accessibility

Get people where they want to go.
Increase Accessibility
Increase Accessibility
Increase Accessibility

Walk Score of Select US Cities

New York
San Francisco
Boston
Chicago
Los Angeles
Portland OR
Denver
Salt Lake City
San Diego
Orlando
Las Vegas
Phoenix
RTC Transportation Values

Protect Environment

Protect natural resources and conserve energy.

The mission of the Outside Las Vegas Foundation is to connect people to Southern Nevada’s special outdoor places.

OLVF envisions a community that enjoys, values and protects Southern Nevada’s special outdoor places.
OLVF Programs Achieve our Mission and Vision

OLVF has three major program areas:

- Education Programs
- Volunteer programs
- Outreach Programs

2015 Accomplishments

- Over 80 field trips for schools and after school programs were sponsored by Outside Las Vegas Foundation, connecting over 3,000 young people to the outdoors!
- Outside Las Vegas Foundation hosted 70 events, generating over 5,500 volunteer hours in our urban parks and trails, helping to care for these special outdoor places!
- 277 educational programs were held at events & community centers, introducing over 23,000 people to the Nevada outdoors!
Importance of Environment as it relates to TRAC:

Negative effects of congestion

- CO2 Emissions – Greenhouse gases
- Health effects of traffic congestion

Benefits of well-cared for outdoor assets:

- Health & wellness benefits of the outdoors
- Education benefits of the outdoors
- Economic benefits of outdoor resources

Complete Streets and Transportation Alternatives can contribute to a comprehensive strategy to address climate change
Health and Wellness and the Outdoors
Research on Education and the Outdoors

Getting outside is good for minds, bodies, and the economy

Protecting Gold Butte is expected to have a positive economic impact for local communities.

The time is now to protect Nevada’s piece of the Grand Canyon. #ProtectGoldButte

- With Gold Butte’s proximity to nearby cities, designation and preservation is expected to draw:
  - 35,000 additional visits per year.

- The total economic impact for the community would be:
  - $2,700,000 in additional revenue per year.
  - At least $100,000
  - And create 28 full-time jobs in the community.

Additional visitors will require local or nearby facilities, providing a potential boon to the nearby city of Mesquite.
Protect Environment

Protect natural resources and conserve energy.

Protect Environment

- Industry: 21%
- Transportation: 14%
- Buildings: 6%
- Agriculture, Forestry, and Other Land Use: 24%
- Other Energy: 10%
- Electricity and Heat Production: 25%
Protect Environment

RTC Transportation Values

Reduce Congestion

Reduce traffic delays.
Reduce Congestion

Causes of Road Congestion

- Special Events: 5%
- Poor Traffic Signal Timing: 10%
- Bottlenecks: 40%
- Traffic Incidents: 25%
- Road Construction: 10%
- Bad Weather: 25%

Reduce Congestion
Reduce Congestion

Reduce traffic delays.

RTC Transportation Values

Enhance Modal Connectivity

Give people transportation choices.
Enhance Modal Connectivity

Commuters by Mode
- Car - Driver: 84%
- Car - Passenger: 7%
- Public Transit: 6%
- Walk or Bike: 2%
- Other: 1%

Enhance Modal Connectivity
Enhance Modal Connectivity

Average Southern Nevada Commute Time (minutes)

<table>
<thead>
<tr>
<th>Auto Commuter</th>
<th>Transit Commuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>60</td>
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</table>

Enhance Modal Connectivity

Intersection Density in Select U.S. Cities

Using 2009 American Community Survey/Census Data

<table>
<thead>
<tr>
<th>City</th>
<th>Intersection Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
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<tr>
<td>San Francisco</td>
<td>11</td>
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<tr>
<td>Philadelphia</td>
<td>5</td>
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<tr>
<td>Phoenix</td>
<td>13</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>0.5</td>
</tr>
</tbody>
</table>
RTC Transportation Values

Promote Efficient System Operation

Help traffic flow better.
Promote Efficient System Operation

Promote Efficient System Operation
Promote Efficient System Operation

RTC Transportation Values

Maintain Current Infrastructure

More than fixing bumps and potholes.
Maintain Current Infrastructure

- Transportation system is a MAJOR public asset:
  - ~$110 billion (estimated cost to build current network in current dollars)
- Regular maintenance is 25% the cost of reconstruction
- Regular average vehicle maintenance costs are about $500/year. Poor roads cost average Las Vegas drivers an additional $440/year
  - This totals about $660 million/year!
Maintain Current Infrastructure

Quality of Minor Roads

- Poor or Mediocre: 36%
- Medium: 13%
- Good or Excellent: 51%

RTC Transportation Values

Improve Freight Movement

Reduce freight delays.
69.1% of America’s freight is moved by trucks
Trucking in Nevada
Trucks Transport
94% of total manufactured tonage in Nevada
That is 132,817 tons per day
Over 80% of Nevada communities depend exclusively on trucks.

The Trucking Industry in Nevada
- Provides approx. 49,270 Jobs
- Average salary $45,409
There are a total of 6098 Nevada Trucking Companies.

59.8% of Nevada trucking companies have 1 truck.

85.4% of Nevada trucking companies have 5 trucks or less.

25 Nevada trucking companies or .06% have 100 trucks or more.

59.8% of Nevada trucking companies have 1 truck.

85.4% of Nevada trucking companies have 5 trucks or less.

95.4% of Nevada companies trucking have 10 trucks or less.
25 Nevada trucking companies or .06% have 100 trucks or more

Essentiality
**WHEN TRUCKS STOP!**

**TIMELINE:**

- **A FEW HOURS**
  - Just in time manufacturing will stop.

- **1–2 DAYS**
  - Fuel supplies will run out and planes will be grounded—trucks deliver 90% of fuel to the nation’s airports.

- **3 DAYS**
  - Significant food shortages will occur, especially perishables. Uncollected waste will cause serious health impacts. Banks will run out of cash and regular bank functions will cease.

- **7–10 DAYS**
  - Oxygen supplies will be depleted, as will some pharmaceuticals. Radio-pharmaceuticals for cancer treatments will become unusable within hours.

- **2–4 WEEKS**
  - Supplies of clean drinking water will run dry—trucks deliver chlorine to purify water every 7–14 days.
Same 2,000 Trucks After 72 Hours

Same 2,000 Trucks After 5 Days
Clark County, NV Truck Operations

- 40,765,625 truck GPS points used to determine truck origins, destinations and routes
- 21,893 total truck trips determined for analysis
- 3 weeks of 2015 data were used
  - One week from October, November and December
State origins of truck trips
Truck routes from originating states to Clark County

Percentage of trips ending in Clark County Census Block Groups

Percentage of truck trips ending in each census block group of Clark County
Cargo Length Limits - Examples

- No Length Limit for Power Unit.
- 95 feet maximum
- Triples
- 95 feet maximum
- Rocky Mountain Doubles
- 95 feet maximum
- Turpikle Doubles
- 98 feet maximum
- Truck-Trailer
- 98 feet maximum
- Truck-Trailer-Trailer
  Maximum weight of 120,000lbs with annual permit for divisible loads
  Nevada

Costs and taxes
Average 2014 operating costs:

- Per mile--$1.68
- Hourly--$67.00

$277 million in federal and state roadway taxes and fees. The industry paid 36 percent of all taxes and fees owed by Nevada motorists.

- $7,322 paid in state highway user fees and taxes on a typical five-axle tractor-semitrailer combination.
- $8,906 in federal user fees and taxes over and above the typical taxes paid by businesses in Nevada.

Total: $15,093

Nevada had 33,907 miles of public roads over which all motorists traveled 22 billion miles. Trucking’s use of 2008 public roads was 1.6 billion miles.

- Trucking accounts for 7% of all miles traveled in Nevada.
Truck Taxes—IFTA

IFTA-International Fuel Tax Agreement
Implemented in 1997
48 contiguous States and Canada
Base state concept
Registers fleet, not individual vehicles
Quarterly reporting and payment
Carrier records must be kept in base state for audit
Only collects taxes imposed statewide
$ 7,000,000,000
Is spent each year by the Trucking Industry on Safety

Drivers are required to carry medical cards and be enrolled in a drug testing consortium.

Required to perform Daily Vehicle Inspections pre and post-trip.

Hours of Service – daily driving time of 11 hours, 14 hours on duty.
Average Truck Driver Age: 49
Average American Worker Age: 42
Future
Motion and purpose are a truck's greatest virtue.
Item #7

PRIORITIZATION OF VALUES WORKSHOP

RTC Transportation Values
Item #8

PRIORITIZATION RESULTS AND RECOMMENDATIONS

RTC Transportation Values

TRAC Prioritization Results:
1. Improve Economic Vitality (x votes)
2. Increase Safety (x votes)
3. Increase Accessibility (x votes)
4. Protect Environment (x votes)
5. Reduce Congestion (x votes)
6. Enhance Modal Connectivity (x votes)
7. Promote Efficient System Ops (x votes)
8. Maintain Infrastructure (x votes)
9. Improve Freight Movement (x votes)
RTC Transportation Values

TRAC Prioritization Results:
1. A (9 votes)
2. B (8 votes)
3. C (7 votes)
4. D (6 votes)
5. E (5 votes)
6. F (4 votes)
7. G (3 votes)
8. H (2 votes)
9. I (1 vote)

Item #9

OPEN DISCUSSION
Item #10

FINAL CITIZENS PARTICIPATION