Randall/Orchard Corridor
BRT Feasibility Study

2040 Corridor Visioning Workshop

October 26, 2010
Funded through the Energy Efficiency and Conservation Block Grant (EECBG) Program

Of the

American Recovery and Reinvestment Act (ARRA)
Purpose of Study

- Identify conditions required for successful BRT operation in 2040

- Evaluate potential benefits from BRT service in Randall/Orchard Road corridor

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Randall/Orchard Corridor Fiber Optic Investment

Multi-Million Dollar County Investment

Supports business and development
• Fiber backbone for voice and data communications
• Gives the Randall/Orchard Corridor a technical advantage
• Network services for government, public safety, health, and education

Supports the County’s growing ATMS (Advanced Traffic Management System)
• Could accommodate Traffic Signal Priority for BRT
1980 Land Uses

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1980 Land Uses

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1980 Land Uses

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1980 Land Uses

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1980 Land Uses
2040 Projections

Population, Households, and Employment for Kane County, IL

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2040</th>
<th>Change in Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>532,852</td>
<td>802,231</td>
<td>269,379 (51%)</td>
</tr>
<tr>
<td>Households</td>
<td>179,702</td>
<td>274,085</td>
<td>94,383 (53%)</td>
</tr>
<tr>
<td>Employment</td>
<td>224,546</td>
<td>368,494</td>
<td>143,947 (64%)</td>
</tr>
</tbody>
</table>

Source: Chicago Metropolitan Agency for Planning, 2010.
Changing Demographics

In 1970...

- 81% of households were families
- Most family households included kids (55%)
- Average household size: 3.6 persons
- Only 10 percent of the population was 65 or over

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Today…

• 66% of households are married couples and families (Roughly half of these households include children)
• 27% of households are single people living alone
• Average household size is 2.6 persons
Changing Demographics

The Baby Boomers are Beginning to Retire

Expected Age Pyramids, 2010 - 2050

Source: US Census Bureau, Strategic Economics
Changes Shaping A New Housing Market

• *Singles* will soon be the new majority – 55% of households by 2030
• *Seniors* will outnumber young people by mid-century
• *Echo Boomers* are a growing proportion of the population

These fastest growing groups are more likely to want to live in mixed-use neighborhoods with good access to retail, services, and other amenities.
Consumer Preferences are Changing

Multiple surveys show that between 30 and 55 percent of Americans want to live in mixed use, mixed density places.

- Option of Urbanism by C. Leinberger

Demand for transit-oriented development can be conservatively estimated at 25% of all households by 2030.

- Hidden in Plain Sight, Center for Transit-Oriented Development

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Why Bus Rapid Transit?

- Incremental implementation
- Improve quality of transit service
- Improve customer experience
- Shorten trip lengths
- Shift trips to transit
- Create vibrant, livable communities
- Foster economic development
## Elements of Rapid Transit

<table>
<thead>
<tr>
<th>Rapid Bus</th>
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<tbody>
<tr>
<td>• Unique branding</td>
</tr>
<tr>
<td>• Widely-spaced “station stops” with superior amenities</td>
</tr>
<tr>
<td>• Speed and reliability improvements</td>
</tr>
<tr>
<td>• Quality access – all modes</td>
</tr>
<tr>
<td>• Frequent service – no schedule needed</td>
</tr>
<tr>
<td>• Low-floor vehicles, multi-door boarding</td>
</tr>
<tr>
<td>• Dedicated lanes</td>
</tr>
</tbody>
</table>

Full BRT
Conditions for Successful BRT Projects

- Perceived as a quality option
  - Transit travel time improvements
  - Branding to differentiate service
Conditions for Successful BRT Projects

• Transit supportive land uses
  – Mixed use
  – Multistory development
  – Multimodal connectivity

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Economic Benefits

- Reduced travel times
- Reduced congestion
- Opportunity to catalyze (re)development
- Potential for increased economic activity and/or agglomeration of businesses
- Increased market values, tax base
- Construction jobs
- Improved access to jobs
Social and Environmental Benefits

- Healthier lifestyles
- More equitable access to jobs and activity centers
- Reduced tailpipe emissions and greenhouse gases
- Reduced noise levels
Benefits to the Urban Form

• Enable more sustainable development
  – Reduced infrastructure requirements
  – Use of fewer utilities and resources

• Create vibrant, livable communities
Station Area Development

• Development within walking distance of a station
• Scale of development
• Station area typologies
  1. Mixed Use Employment
  2. Mixed Use Residential
  3. Mixed Use Retail
  4. Destination
  5. Commuter

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# 1. Mixed Use Employment Typology

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Able to sustain job growth</td>
</tr>
<tr>
<td></td>
<td>• Provides a regional employment base or draw</td>
</tr>
<tr>
<td></td>
<td>• High transit connectivity</td>
</tr>
<tr>
<td>Commercial Uses</td>
<td>Small and large scale office, light manufacturing</td>
</tr>
<tr>
<td>Residential Uses</td>
<td>Compact development (condos and apartments) and townhomes</td>
</tr>
<tr>
<td>Retail Uses</td>
<td>Neighborhood markets, convenience</td>
</tr>
<tr>
<td>Employment Centers</td>
<td>Job clusters and individual businesses</td>
</tr>
<tr>
<td>Institutional Uses</td>
<td>Neighborhood libraries, post offices and clinics</td>
</tr>
<tr>
<td>Entertainment Uses</td>
<td>Small venues</td>
</tr>
</tbody>
</table>
## 2. Mixed Use Residential Typology

| Characteristics          | • Able to sustain housing growth  
• Smaller centers without regional destinations  
• Moderate transit connectivity |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Uses</td>
<td>Some small scale office</td>
</tr>
<tr>
<td>Residential Uses</td>
<td>Compact development (condos and apartments, townhomes and single family)</td>
</tr>
<tr>
<td>Retail Uses</td>
<td>Neighborhood markets, convenience</td>
</tr>
<tr>
<td>Employment Centers</td>
<td>Individual businesses</td>
</tr>
<tr>
<td>Institutional Uses</td>
<td>Elementary through high schools, neighborhood libraries, post offices and clinics</td>
</tr>
<tr>
<td>Entertainment Uses</td>
<td>Small venues</td>
</tr>
</tbody>
</table>
### 3. Mixed Use Retail Typology

| Characteristics | • Able to sustain housing growth  
|                | • Smaller centers without regional destinations  
|                | • Moderate transit connectivity |
| Commercial Uses | Some small scale office |
| Residential Uses | Compact development (condos and apartments, townhomes) |
| Retail Uses | Regional retailers, neighborhood markets, convenience |
| Employment Centers | Individual businesses |
| Institutional Uses | Neighborhood libraries, post offices and clinics |
| Entertainment Uses | Small venues |
## 4. Destination Typology

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Anchored by major destination</td>
<td></td>
</tr>
<tr>
<td>• Provides a regional employment base or draw</td>
<td></td>
</tr>
<tr>
<td>• High transit connectivity</td>
<td></td>
</tr>
<tr>
<td>Commercial Uses</td>
<td>Small and large scale office</td>
</tr>
<tr>
<td>Residential Uses</td>
<td>Compact development (condos and apartments)</td>
</tr>
<tr>
<td>Retail Uses</td>
<td>Regional retailers, neighborhood markets, convenience</td>
</tr>
<tr>
<td>Employment Centers</td>
<td>Job clusters and individual businesses</td>
</tr>
<tr>
<td>Institutional Uses</td>
<td>Government, hospitals, universities/colleges, libraries, post offices</td>
</tr>
<tr>
<td>Entertainment Uses</td>
<td>Large and small venues</td>
</tr>
</tbody>
</table>

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Nelson Nygaard
## 5. Commuter Typology

| Characteristics          | • Provides multimodal transportation connections  
<table>
<thead>
<tr>
<th></th>
<th>• High transit connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Uses</td>
<td>Some small scale office</td>
</tr>
<tr>
<td>Residential Uses</td>
<td>Minimal</td>
</tr>
<tr>
<td>Retail Uses</td>
<td>Regional retailers</td>
</tr>
<tr>
<td>Employment Centers</td>
<td>Individual businesses</td>
</tr>
<tr>
<td>Institutional Uses</td>
<td>Minimal</td>
</tr>
<tr>
<td>Entertainment Uses</td>
<td>Small and major venues (e.g. sports arenas)</td>
</tr>
</tbody>
</table>
Research confirms that between 7 – 30 housing units per acre:

- Transit ridership grows
- VMT/capita drops exponentially

![Graph showing the relationship between household density and VMT](image)

- Batavia - 14 Hh/Ac
- South Elgin - 8 Hh/Ac
- Geneva - 6.5 Hh/Ac
Medium Residential Density

- Longmont, CO
  Density: 7.7 units / acre
Medium Residential Density

• Longmont, CO
  Density: 12.3 units / acre
Medium Residential Density

- Shaker Heights, OH
  Density: 15.2 units / acre
High Density Residential

- San Jose, CA
  Density: 21 units / acre
High Density Residential

Dorchester, MA
Density: 29 units / acre

Addison, TX
Density: 55.2 units / acre

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High Density Residential

- Emeryville, CA
  Density: 55 units / acre
High Density Residential

- Hayward, CA
  Density: 27.7 units / acre
High Density Mixed-Use Residential

Portland, OR

Density: 60 units / acre
Housing, Retail, Structured Parking
Medium Density Office

Portland, OR
Three-Story Office

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High Density Office

- Portland, OR
- Restaurant, Commercial office, Retail
- 241,000 square feet
Station Area Developments

• Pleasant Hill Transit Village
  – 515 residential units (415 rental, 100 for-sale)
  – 40,000 square feet retail
  – Child care facility, conference facility
  – 290,000 square feet of office
Station Area Developments

- Fruitvale Village
  - $100 million of investment
  - 37,000 square feet of retail
  - 27,000 square feet of office
  - 47 residential units (rental)
  - Medical clinic, childcare, library, senior center
  - Bicycle Station
Station Area Developments

- Thornton Place at Northgate Mall, Seattle
  - 50,000 sq.ft. of retail & commercial
  - 278 apartments
  - 109 condominiums
  - 143 units of retirement living
  - Regal IMAX 14-screen Theatre

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Corridor Conditions - Opportunities

- Undeveloped parcels
- Large-lot, big box retail
- Deep setbacks
- Major attractions
- Fiber optics backbone
Current Conditions - Constraint

- Existing subdivisions
  - Little to no redevelopment
  - Limited connectivity
- High traffic corridor
  - No parallel N-S roads
  - Limited pedestrian crossing opportunities
Exercise I – Overall Strategy

• Identify types and number of station area developments

• Identify potential BRT route terminations

• Identify major links within Sustainable Urban Area to the BRT Corridor
Exercise II –
Individual Station Area Characteristics

• Identify station area
• Identify station location
• Identify station area typology
• Identify intensity of development
Define Station Area and Station Location

Example Station Area Centered on Randall

Example Station Area Off of Randall

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It’s Time to Roll Up our Sleeves

• Lunch Break
• Workshop Exercise I
• Report Back to Group
• Workshop Exercise II
• Report Back to Group
• Final Thoughts
Next Steps

- Define Stations and Station Area Developments - Fall
- Define BRT Design and Operation – Fall/Winter
- Benefits Evaluation – Winter
- Incremental Implementation Action Plan - Spring
Thank you for participating in the workshop

We look forward to your future participation on the project Working Group

Follow the project at
www.co.kane.il.us/dot/planning/BRT.aspx