

# Status Update and Vision Overview Presentation to City Council

City of Southfield Non-motorized & Transit Vision  
December 5, 2011

City of Southfield Non-motorized and Transit Plan  
Status Update and Vision Overview



Monday, December 5, 2011  
7:00 PM

City Council Meeting

Norman Cox, ILLA, ASLA  
The Greenway Collaborative, Inc.



### Why Undertake a Non-motorized and Transit Plan?

- A means to build consensus on how to best accommodate alternative transportation
- Establish a logical framework for implementation
- Promote physical fitness through active transportation
- Improve quality of life for residents
- Improve safety for pedestrian, bicyclists and transit users



Healthy, Livable Communities  
Cool Cities  
Smart Growth  
Safe Routes to School

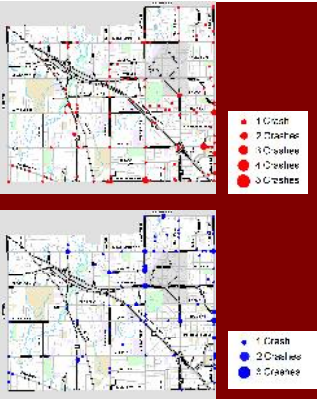

All have common ground in improving non-motorized facilities



### Pedestrian and Bicycle Crashes

2004 through 2010:

- 129 Pedestrian Crashes
  - 10 Fatal
  - 21 Incapacitating Injuries
- 101 Bicycle Crashes
  - 3 Incapacitating Injuries

### Creating "Complete Streets" in Key to Everything

- Complete streets are
  - planned,
  - designed,
  - operated and
  - maintained
- such that all users may
  - safely,
  - comfortably and
  - conveniently
- move along and across streets
- throughout a community



All users include:

- Pedestrians
- Bicyclists
- Transit users
- Motorists
- Trucks

All users include:

- Children
- Elderly
- People of various abilities



### No Such Thing as a Typical Pedestrian or Bicyclist

Wide Range of:

- Ages
- Education
- Skills
- Physical abilities
- Travel speeds
- Vehicle characteristics (for bicyclists and mobility assistance devices)

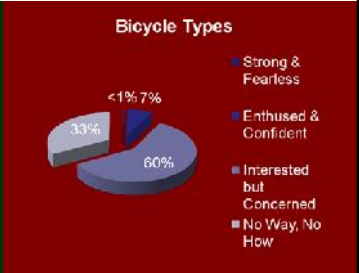


It is challenging to plan and design for the variety of non-motorized user types



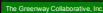
### Different Types of Bicyclists

- Strong & Fearless
  - <1%
  - Always Biking
  - Any Road Regardless of Condition
- Enthusied & Confident
  - 7%
  - Frequently Bike
  - Like Designated Facilities Such As Bike Lanes
- Interested but Concerned
  - 60%
  - Occasional Rider
  - Local Roads and Trails
- No Way, No How
  - 33%



Not Really This Clear Cut. There Is Movement Between the Groups.

Developed by Roger Geller, Bicycle Coordinator, Portland Office of Transportation




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### Bike Lanes

- Designated travel lane for bicyclists
- Delineated by solid white stripe, bike icon pavement markings and signs
- Bicyclists travel the same direction as motorized vehicles
- 5' minimum width, increase width as speeds and traffic volumes increase



Target Audience: "Enthusied and Confident" Bicyclists  
Context: Used on Primary Roads in urban and suburban areas

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### Roadside Pathways

- A shared-use path separate from the road but still within a road ROW
- Issues include:
  - Conflicts with motorists at intersecting driveways and roadways
  - Pedestrian / bike conflicts
  - Getting to destinations on other side of the road
  - Transitions to on-road facilities




Target bicyclists: "Interested but concerned"  
Context: used along primary roads in areas with limited vehicular conflict points

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### Roadside Pathways vs. Bike Lanes

- Motorists are not looking for bicyclists on sidewalks or roadside paths especially when they are bicycling opposite the flow of traffic
- Bicycling on the sidewalk is generally slower and more inconvenient than bicycling on the roadway.
  - the presence of pedestrians
  - motorists that block the sidewalk or crosswalk.



Bike lanes are the current best practice for primary roads to reduce the number of crashes involving motorists and bicyclists

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### Neighborhood Connectors

- Local roads and connecting pathways
- Signs provide wayfinding to key destinations using routes appropriate for most bicyclists
- Often provide a low traffic alternate route to a major road
- Help to identify routes that may not be obvious



Target bicyclist: "Interested but concerned"  
Context: generally used on local residential roads and rural routes with moderate speed and traffic volumes.

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### Off-Road Pathways

- A Shared Use Path Outside of a Road ROW
- Suitable for Bicyclists and Pedestrians
- Complement, But Do Not Replace On-road Facilities
- Wonderful Recreation Resource
- Great Place for Inexperienced Bicyclists to Build Skills




Provide Transportation and Recreation Links with Minimal Exposure to Motorized Vehicles

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### Importance of Direct Travel for Pedestrians

- Most walking trips for personal business are about ¼ to ½ mile (5 to 10 minute walk)
- Think of out of direction travel as a percentage of the total trip distance and walking time
- Thus a 10% detour for a ½ mile walking trip is 264' (less than a city block)
- Really important at bus stops



Signs and barriers have little impact on changing people's behaviors

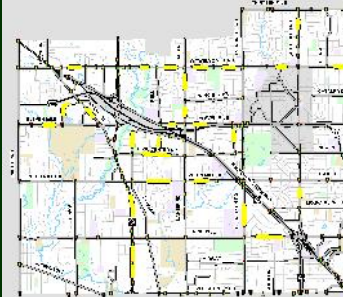
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## City of Southfield Non-motorized & Transit Vision December 5, 2011

### Crossing Demand

- Looked at where there is probable demand to cross the road and a long distance between crosswalks
  - Bus stops
  - Land use
- Identified areas where pedestrians and bicyclists have to go over 1/8 mile out of their way to cross the road at a crosswalk
- These areas are identified in yellow



Demand for Crossing Improvements

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### Rectangular Rapid Flash Beacon

- High intensity LED flashers that are paired with crosswalk signs to get motorists attention when the crosswalk is in use
- Push-button or passively activated (automatic detection)
- Can be linked to advanced warning signs with LED flashers




Most important aspect is that the flashers are only on when someone is about to or is crossing the road

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### Crossing Islands



- Cross the road in two stages
- Only requires a gap in traffic from one direction at a time
- Zig-Zag Crossing Provide Room for Multiple Bicycles, Trailers and Tandems

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### Hybrid Pedestrian Beacon


- Good for locations where crossing islands are not practical
- Evaluation of 21 locations found a 69% reduction in pedestrian crashes after installation
- Minimal delay to motorized traffic

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### Non-motorized Network Diagram


- Improvements to the primary road system
  - Some more automobile focused
  - Others more bike/pedestrian focused
- Bicycle and pedestrian routes
  - Using local roads and connecting pathways
- Crossing improvements
- Off-Road Trails



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### Bicycle and Pedestrian Focused Corridors

- Some roads are more important to bicyclists and pedestrians than others
- Some of these roads are currently good roads to walk and bicycle on, others need improvements



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### Pedestrian/Bicycle Focused Corridors

**Typical Elements:**

- Bike lanes & Sidewalks
- Crossing islands
- Planted medians
- Street trees
- 4 to 3 lane conversions
- Narrow travel lanes

Diagram labels include: "Average of 100 ft wide sidewalks", "Crossing islands between the sidewalk and travel lane", "Planted medians", "Narrow travel lanes", and "Bike lanes and sidewalks".

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### Pedestrian/Bicycle Focused Corridors

- Minimize speed differential between motorists and bicyclists
- Design roadway such that motorists naturally drive 35 MPH or less
- Utilize traffic calming measures that also improve safety and aesthetics

Diagram labels include: "Speed bumps", "Narrow travel lanes", "Planted medians", "Crossing islands", "Traffic calming measures", "Bike lanes and sidewalks", and "Narrow travel lanes".

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### Neighborhood Connector Routes

- Expanded on the current bike routes and the ideas from the last meeting
- Tried to create a complete network
- Some of the routes still need further evaluation

Map legend: Blue dashed line for Neighborhood Connector routes, Green solid line for Existing Pathways, Green dashed line for Potential Pathways.

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### Neighborhood Connectors

**Common Elements:**

- Restriction of through motor vehicle travel
- Mini roundabouts
- Curb extensions
- Wayfinding
- Street trees

Diagram labels include: "Mini roundabouts", "Curb extensions", "Street trees", "Traffic calming measures", "Wayfinding", and "Restriction of through motor vehicle travel".

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### Neighborhood Connectors

- Focus on creating a very bicycle and pedestrian friendly environment
- Often an alternative to an auto focused corridor
- Frequently a combination of local roads and short off-road trails
- May incorporate "green street" elements

Diagram labels include: "Green street elements", "Traffic calming", "Mini roundabouts", "Curb extensions", and "Street trees".

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### Neighborhood Connectors

- Use to link parks, schools and other key community resources
- Tie into transit stops
- Comfortable for an 11 year old to bike by themselves

Diagram labels include: "Link to parks, schools and other key community resources", "Tie into transit stops", "Comfortable for an 11 year old to bike by themselves", "Traffic calming", "Mini roundabouts", "Curb extensions", and "Street trees".

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**From Bike Route to Neighborhood Greenway**

- Start with a typical local roadway



Evolution of a neighborhood connector

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**From Bike Route to Neighborhood Greenway**

- Mark Bike Routes
  - Include destinations and distances
- Put in basic pedestrian facilities



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**From Bike Route to Neighborhood Greenway**

- Add traffic calming
  - Mini-roundabouts
  - Curb extensions
  - Medians




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**From Bike Route to Neighborhood Greenway**

- Add sustainable street elements
  - Permeable pavements
  - Rain gardens in the curb extensions



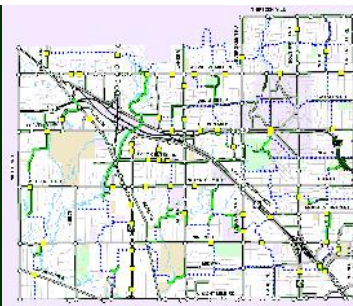


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**Road Crossing Improvements with Routes**

- Align with Neighborhood Connector Routes to provide safe crossings at major roadways
- Also added road crossing improvement at other locations
- Exact nature of the improvement not yet determined

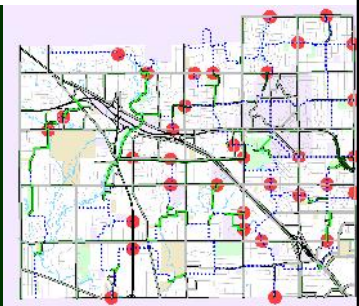


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**Super Bus Stops**

- A bus stop with additional amenities
  - Bench
  - Shelter
  - Maps and Schedules
  - Bus Pull-off area
  - Lighting
- Since there are additional amenities the stop will have a larger draw area
- Generally where a neighborhood connector route intersects bus route
- High ridership stops



Evolution of a neighborhood connector

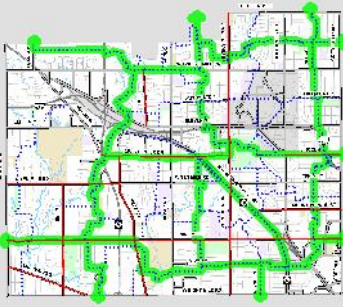
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### Key Corridors

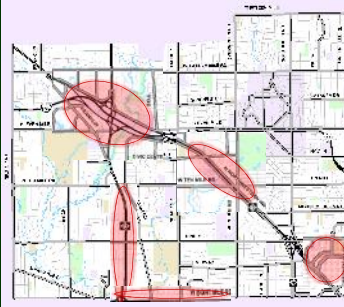
- The "backbone" of the proposed system
- Mix of Bike / Pedestrian Corridors and Neighborhood Connector Routes
- Access Across the City to key destinations



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### Areas that Need Additional Studies Exercise

- Freeway Crossings including improvements
- Civic Center and Lawrence Tech
- Northland Mall Area
- Provide connections to telegraph and eight mile (bus stops) by breaking up the large block of industrial development along these corridors



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### FutureTasks

**Tasks Beyond the Visioning Process to Make this a Comprehensive Plan:**

- Evaluate bicycle and pedestrian focused corridors to see determine what type of improvements are feasible in the near, mid, and long-term
- Evaluate the proposed trail for feasibility and environmental impacts
- Field check Neighborhood Connector Routes
- Identify ways to improve existing freeway crossings
- Determine most appropriate type of crossing improvements on the primary roads
  - Taking into account the requirements of the Jewish Orthodox Community
- Evaluate and make recommendations for policies and programs
  - Maintenance
  - ADA
  - School Transportation
- Determine the most effective education and outreach efforts
- Ways to make existing strip development more walkable, bikable and have a sense of place

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### Questions or Comments



Please Contact:

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