

MADISON DEPARTMENT



OF TRANSPORTATION

Transportation Demand Management Program

City of Madison Department of Transportation

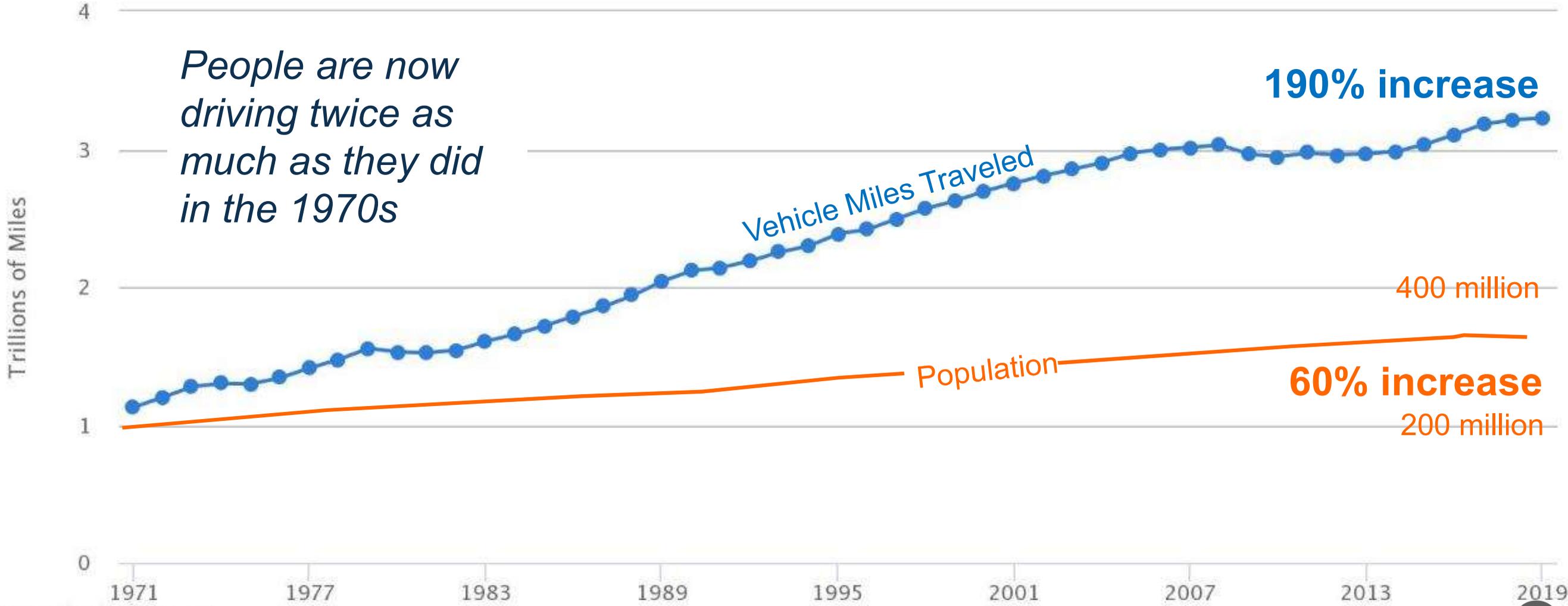
Philip L. Gritzmacher, Jr., AICP

WHAT IS TRANSPORTATION DEMAND MANAGEMENT?

A package of policies and strategies designed to increase transportation system efficiency and shift travel patterns to reduce the number and length of single-occupancy vehicle (SOV) trips.



Annual Vehicle Miles Traveled in the United States



Last updated: February 2020
Printed on: May 5

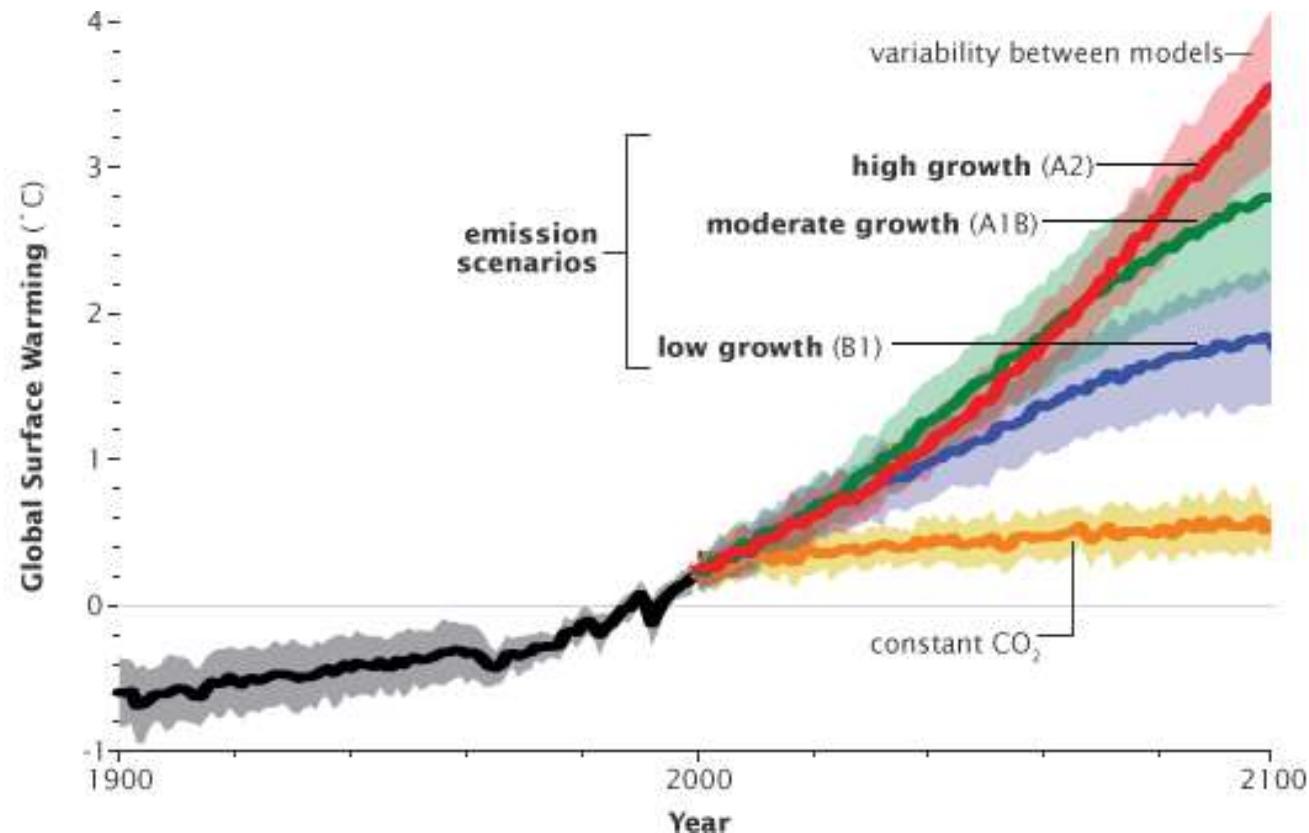


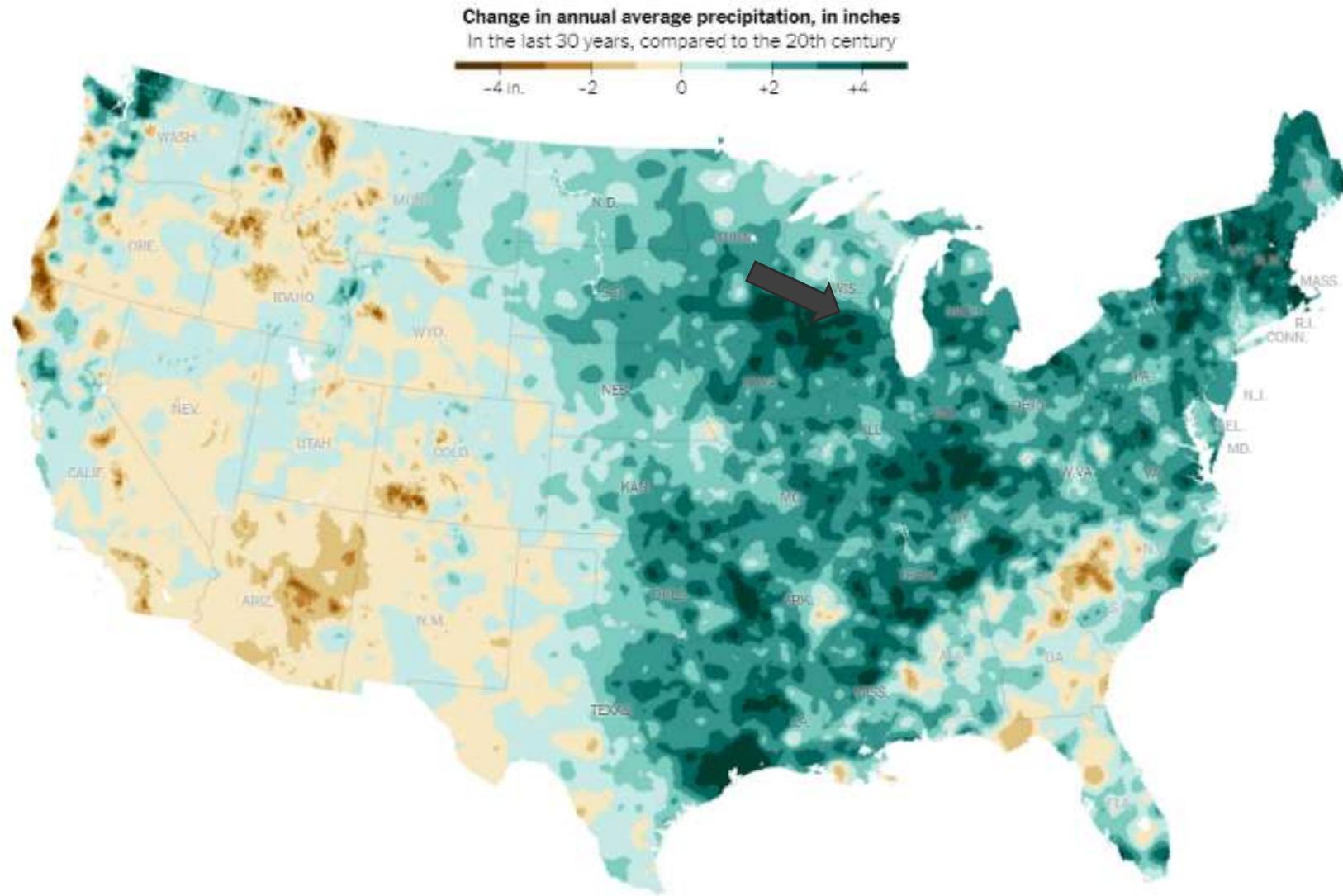
At capacity with limited opportunities for expansion

A Hotter Future Is Certain, Climate Panel Warns. But How Hot Is Up to Us.

Some devastating impacts of global warming are now unavoidable, a major new scientific report finds. But there is still a short window to stop things from getting even worse.

NASA Prediction Models



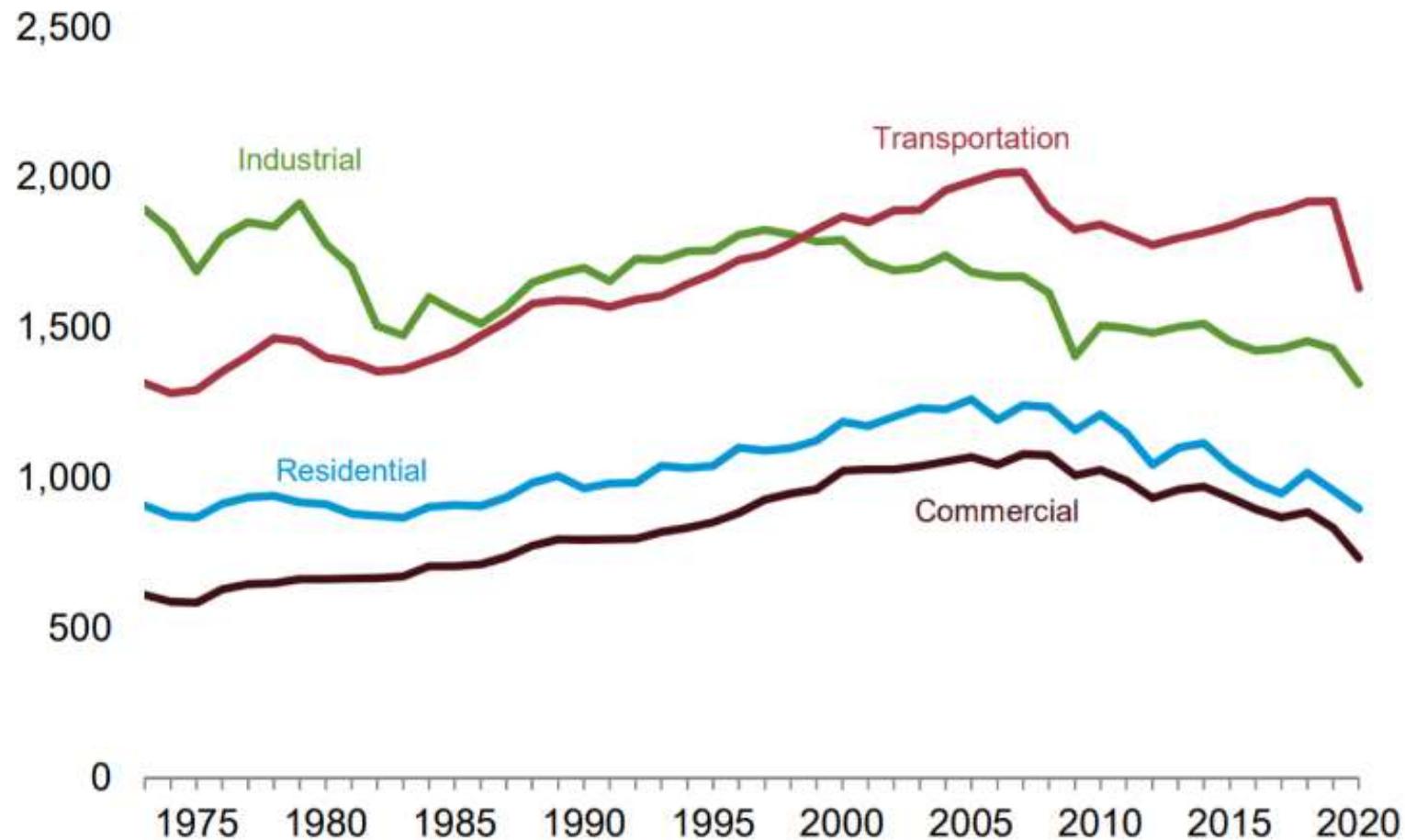


Source: [NOAA's National Centers for Environmental Information](#)



Carbon Dioxide Emissions by Sector

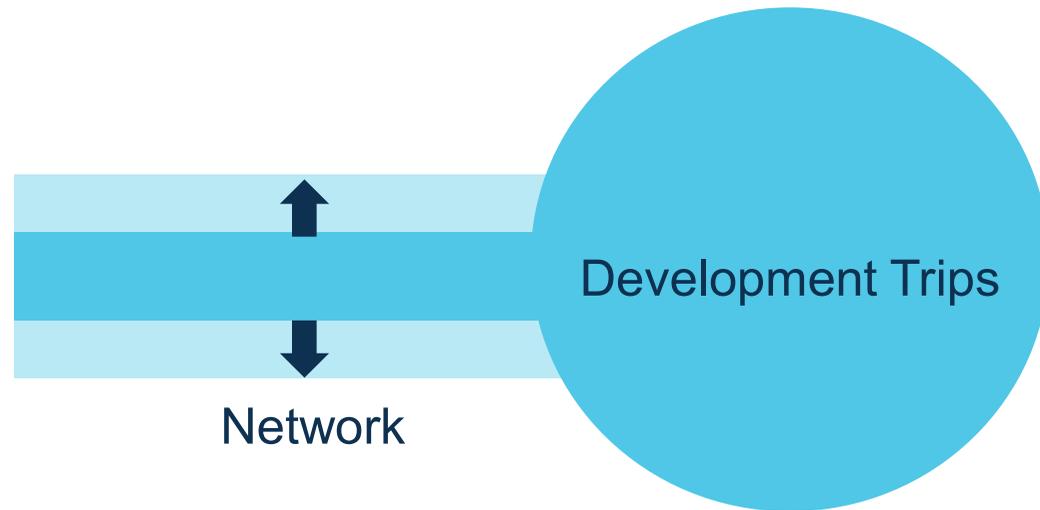
Total [a] by End-Use Sector [b], 1973–2020



Transportation is the largest contributing sector

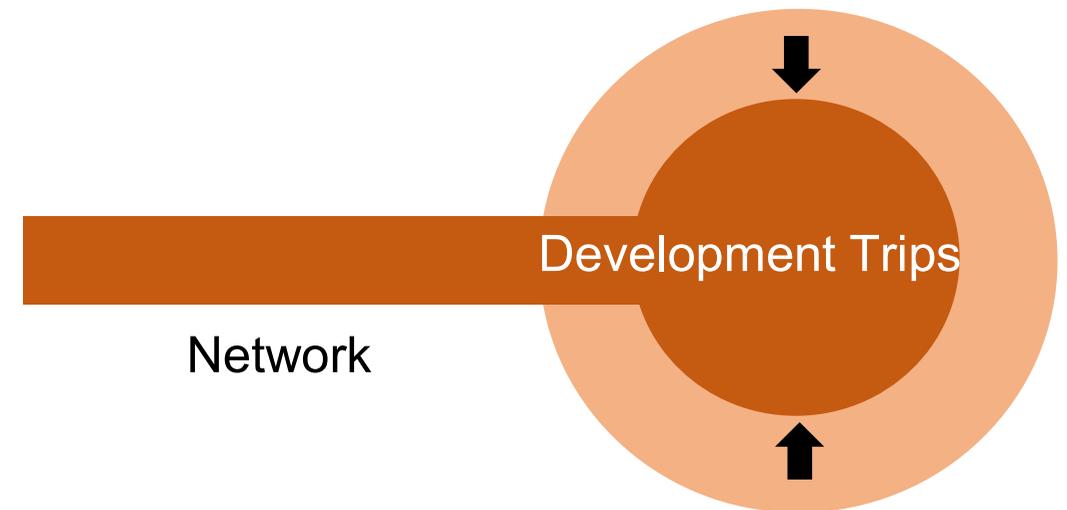
Methods of Facilitating Growth

Traditional



Increase network capacity to accommodate trips

TDM



Reduce trips to accommodate network

Here are 200 people in 177 cars



How Do We Do this?

- **Walking**
- **Biking**
- **Transit**

without cars



How Do We Do this?

- **Walking**
- **Biking**
- **Transit**

on 3 buses

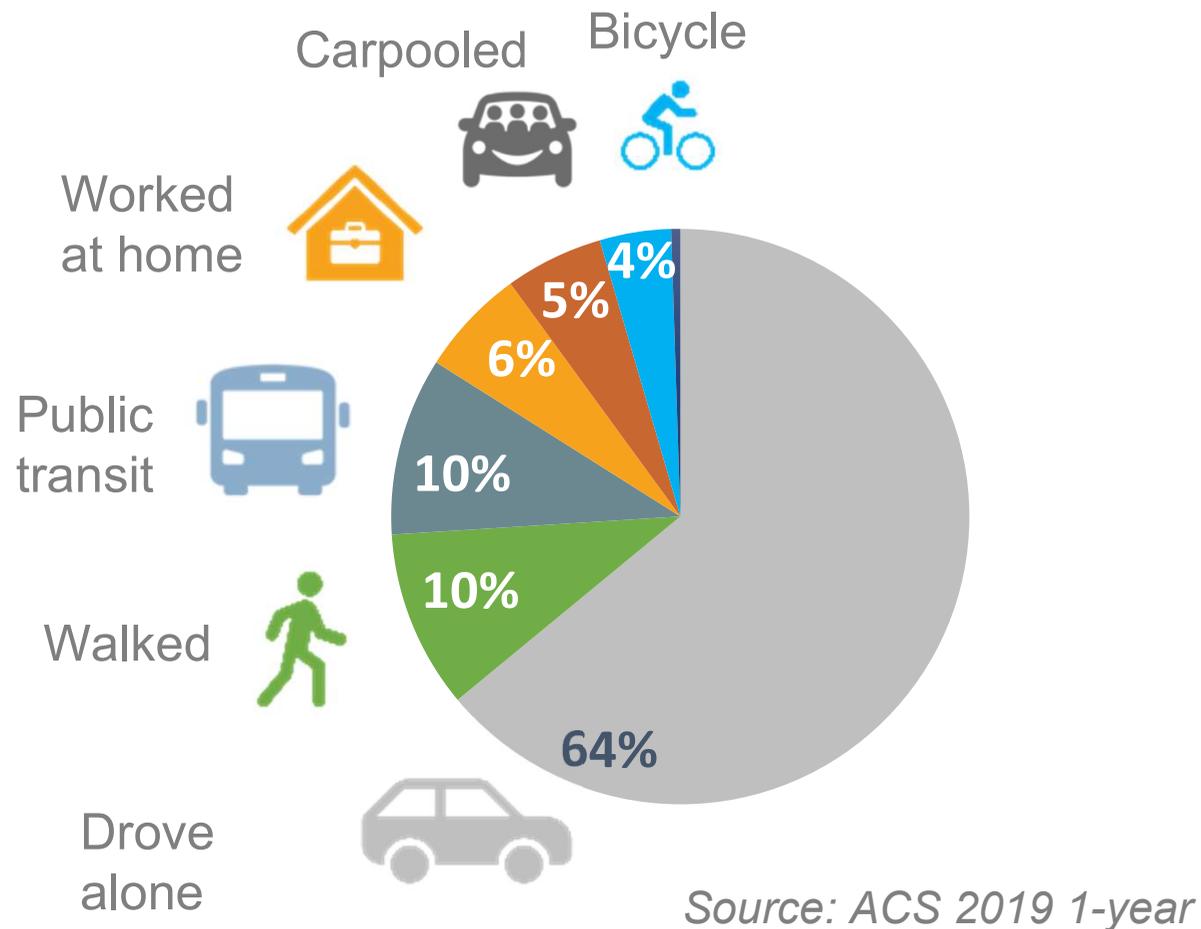


How Do We Do this?

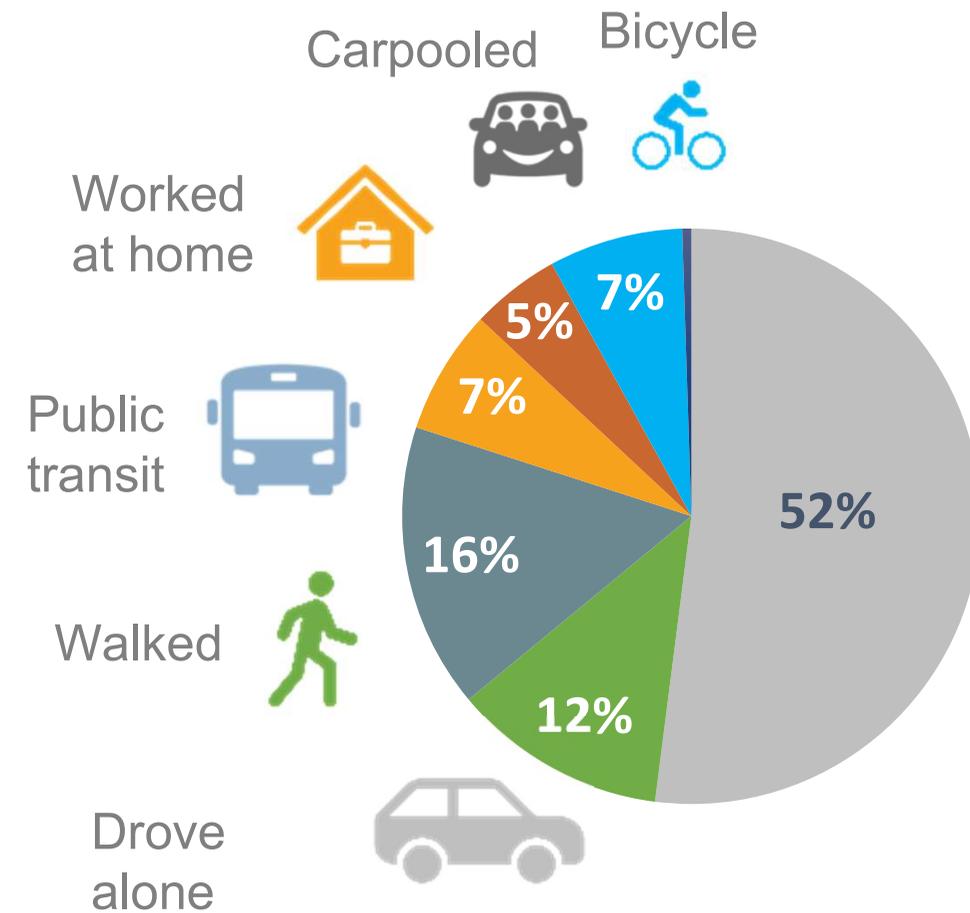
- **Walking**
- **Biking**
- **Transit**

What Would a New TDM Program Do?

Current Modeshare



Modeshare After TDM



TDM is Aligned with City Plan Strategies



Strategy 5 Action:

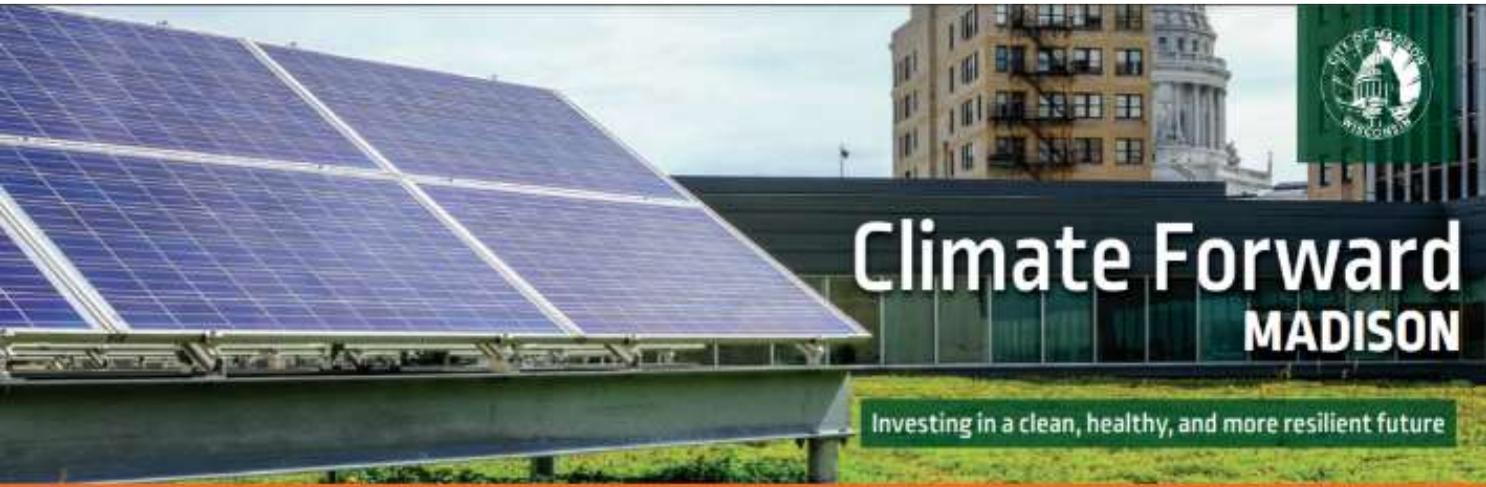
c) Facilitate the creation of transportation management associations and implementation of **TDM strategies to serve high-intensity development** at Activity Centers and along major transit corridors.



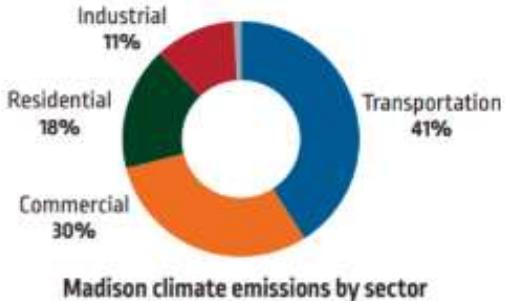
Priority Recommendations:

11. Develop a prototype TMA in Madison, at an appropriate area of the city, to organize individual employers and **administer TDM initiatives**.
12. Evaluate employer-based **TDM measures to increase the use of alternatives to the SOV** and reduce the need for parking.

Aligned With Sustainability Vision



Climate change threatens our health, our economy, our environment, and our quality of life. Simply put, it is one of the greatest threats of our time, and we all need to do our part to fix it. Madison is ready to do its part. We know that making a big dent in our emissions will mean doing things a little differently. Luckily, changing our ways comes with a lot of benefits – cleaner air and water, lower asthma rates, lower energy bills, less flooding, and more jobs. Madison is ready to step up and build a better economy and community for our future.



#3 Continue to invest in transit and other low-carbon transportation modes

- Charge forward by constructing a bus rapid transit system with clean electric buses
- Continue improving and expanding Metro routing to provide fast, frequent service
- Require new development to incorporate features that help future residents and workers get around without a car
- Construct bike lanes and bike paths to eliminate barriers and reach unserved areas
- Keep improving our street crossing to improve access and connectivity for walking

Source: Climate Forward Agenda Unveiled by Mayor Rhodes-Conway on 21st April 2021

TDM In Madison Land Use Regulations

Conditional Use

Give consideration to TDM measures and participation in a transportation management association (TMA).

Planned Development District

A TDM plan may be required to resolve traffic and parking concerns. It should include measurable goals, strategies, and actions to encourage travelers to use alternatives to driving alone, especially at congested times of day.

Employment Campus District

Requirement of master plan for any rezoning submittal which needs to have a TDM Plan with measurable goals, strategies, and actions to encourage non-SOV trips.

Mixed Use Center District

City Traffic Engineer may require a traffic impact analysis (TIA) to determine the impacts of the District. A TDM plan may be required to resolve traffic and parking concerns.

Big-box Retail

Single retail business establishments of or over 40,000 sq. ft. with 100 or more full-time employees are required to have a TDM Plan or participate in a TMA.



Current TDM Challenges

- Madison has been requesting/requiring some form of TDM and transportation impact mitigation through the development review process for over 20 years.
- Its application has been uneven.
- Developers are unsure what TDM measures may be required.
- Plan Commission and Council members struggle to determine how many TDM measures are enough to warrant approval – leading to prolonged discussions.
- Environment of uncertainty for developers and policy makers.

TDM in Madison – Madison Yards

- 4/13/20 PC
- 4/27/20 PC
- 5/19/20 CC
- 6/8/20 PC
- 6/17/20 TPPB
- 7/14/20 CC – over 1 hour
- 7/27/20 CC

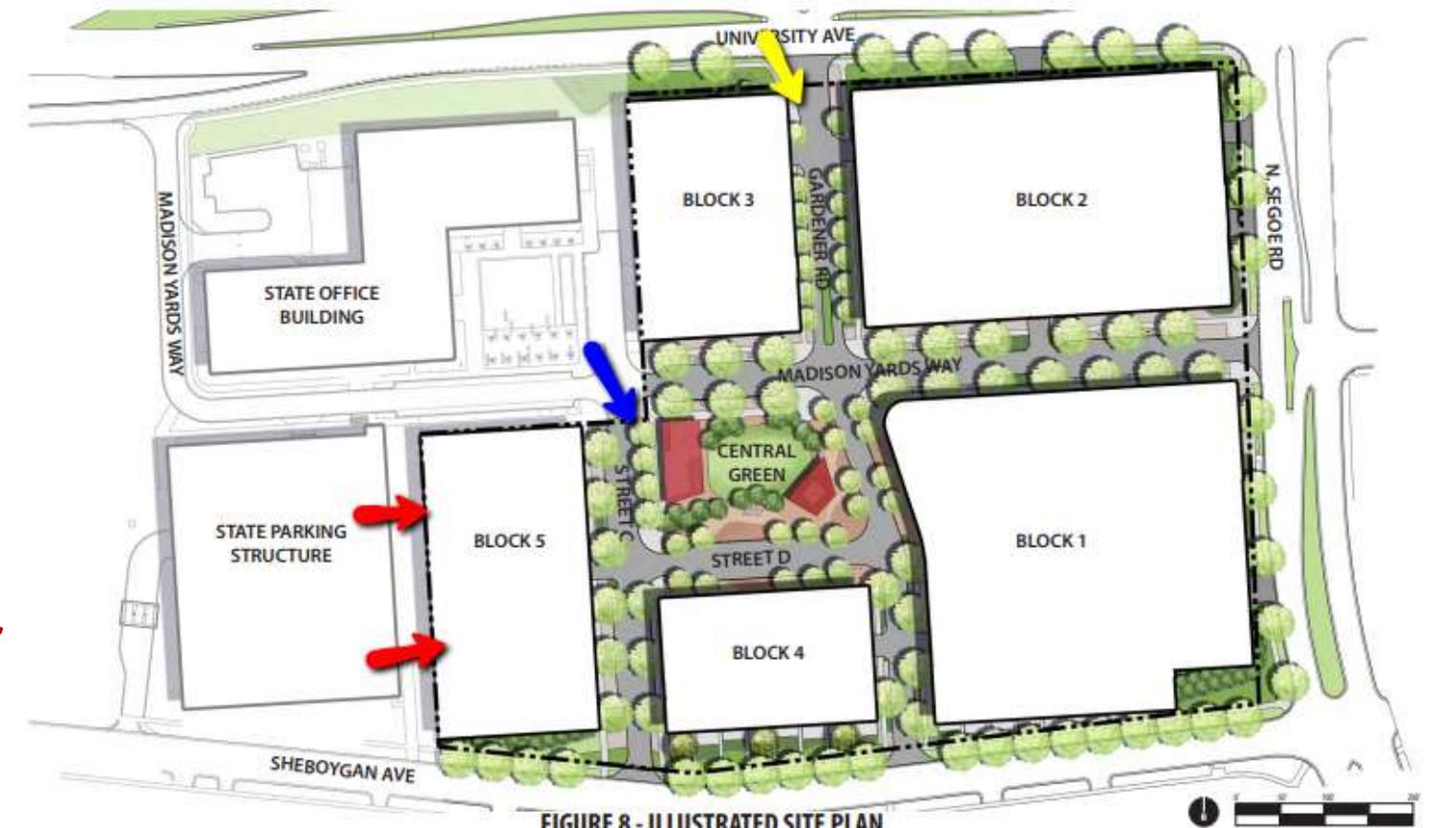


FIGURE 8 - ILLUSTRATED SITE PLAN

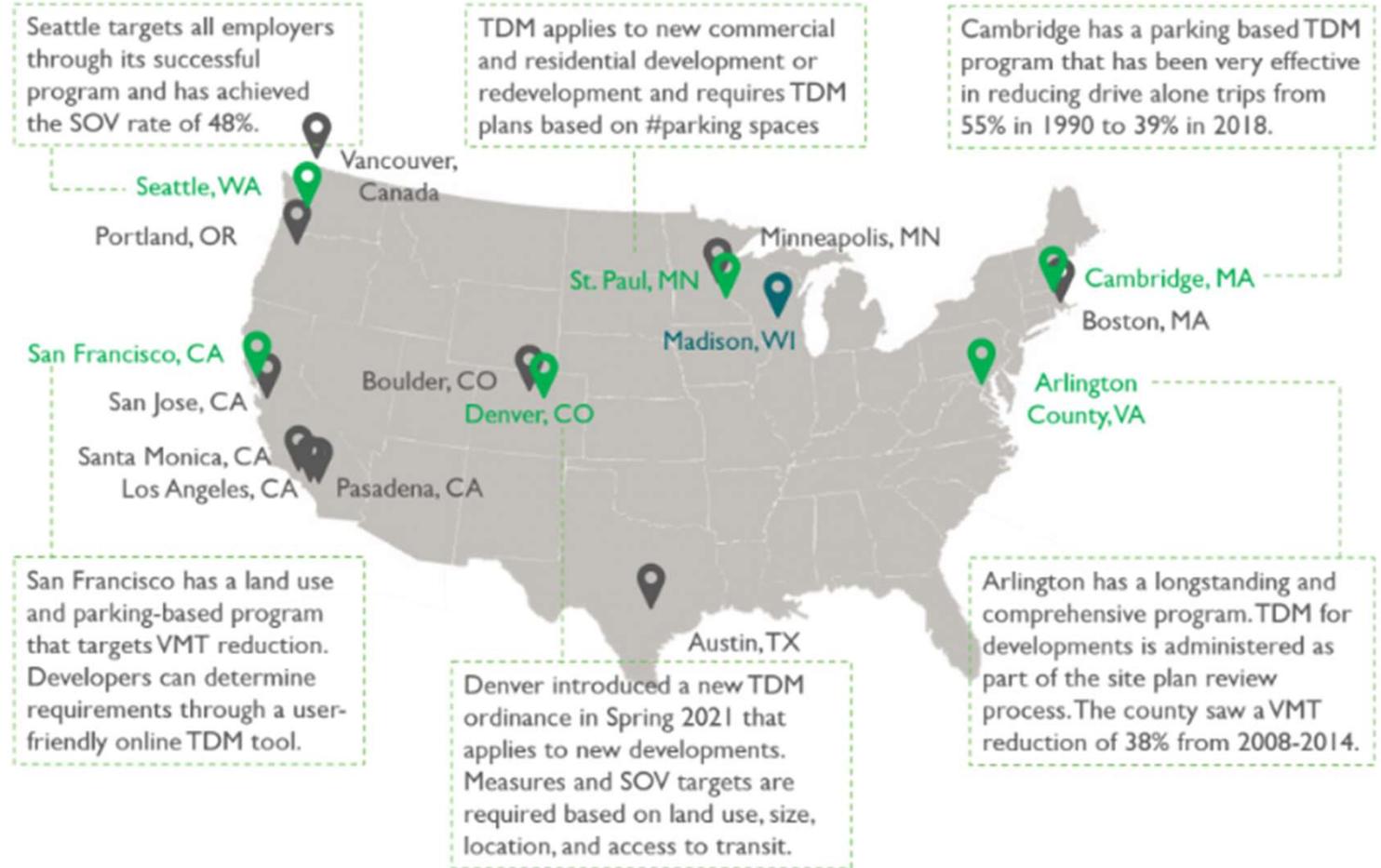
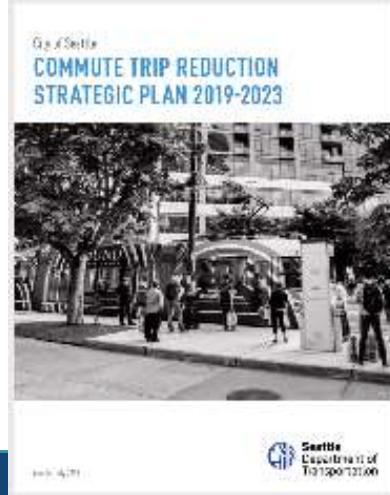
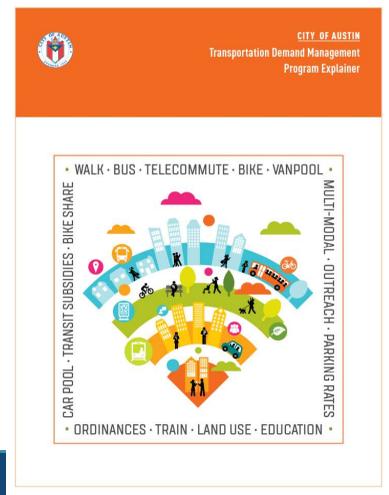
SMITH **Gilbane**



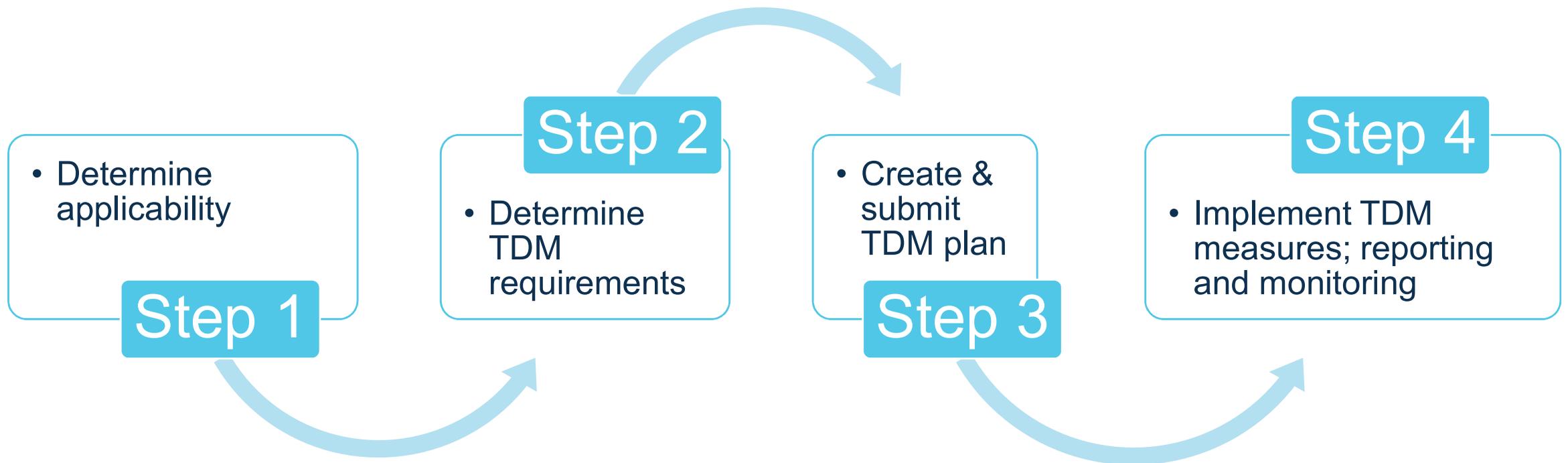
MADISON YARDS
HILL FARMS

SMITHGROUP **JJR**
GDP ZONING SUBMITTAL
DECEMBER 20, 2017

Communities Across the Country are Implementing TDM Programs



Madison's Proposed TDM Process



Factors That Determine TDM Requirements



Land use(s)

Requirements and measures vary across residential and non-residential uses (employment, commercial, institutional).



Development size

Requirements are proportional to the development size, i.e., number of residential units or non-residential floor area.



Proposed parking

Requirements also depend on parking capacity. Higher parking ratios mean more TDM requirements.



Location

Proximity to transit service provides base points. Ability to implement measures influences TDM requirements.

Identify Mitigation Measures

- Each measure is worth points ranging from one to ten.
- Points depend on efficacy in reducing vehicle travel, documented best practices, cost, and contextual relevance for Madison.
- Measures may include modifiers for proximity to transportation services (transit, carshare, bikeshare)

Category	Code	TDM Measures	Max Points
Active Transportation	AT-1	Dedicated Access to Bike Parking	1
	AT-2	Indoor Covered Bike Parking	1
	AT-3	Bicycle Maintenance Facilities	1
	AT-4	Clothes Lockers and Showers	1
	AT-5	Bicycle Lockers or Secure Storage Room	2
	AT-6	Shared Fleet of Bikes for On-site Users	2
	AT-7	Off-site Bike Infrastructure	1-4
	AT-8	Off-site pedestrian infrastructure	1-4
	AT-9	Traffic calming	1-4
Transit	T-1	Validate Transit Passes for Visitors	1
	T-2	Subsidize Monthly Transit Passes OR Daily Passes	1-3
	T-3	Fund Transit Facilities and Amenities	1-4
	T-4	Complementary Transit Passes	7
Parking Management	P-1	Cash out for employees	10
	P-2	Unbundle Parking	10
	P-3	Market-Rate Parking Fees	10
	P-4	Shared Parking Agreement or Off-Site Parking	5
	P-5	Carpool preferential/free parking	1
Shared Mobility	SM-1	Provide a Shuttle bus	3
	SM-2	Provide Vanpool	3
	SM-3	Provide car share parking space.	2
	SM-4	Car share memberships	2
	SM-5	Install a bike share station	6
	SM-6	Provide memberships to employees and residents	2
	SM-7	Emergency Ride Home program	2
	SM-8	Shared Fleet of Vehicles	1
Information & Communication	I-1	Marketing & informational campaign	1
	I-2	Multimodal wayfinding signs	1
	I-3	Alternative Transportation Kiosk	2
Delivery	D-1	Delivery Supportive Amenities	1
	D-2	Package Drop-Off Area	2
	D-3	Provide VMT-Reducing Delivery Services	1
Land Use	LU-1	Affordable Housing at 30% AMI	1-10
	LU-2	Affordable Housing at 60% AMI	1-5
	LU-3	Add Land Use Mix	1-5
	LU-4	On-site Daycare Facility	4
	LU-5	Provide Other Specific Trip-reducing Service	1
Employer Policies	EP-1	Flexible Work Schedules Policy	1
	EP-2	Work from Home Policy	1
Other	O-1	Join a Transportation Management Association (TMA)	1
	O-2	Innovative measure	As desired

Developments in "General Urban" would only be required to meet 90% of the score of a development in Downtown

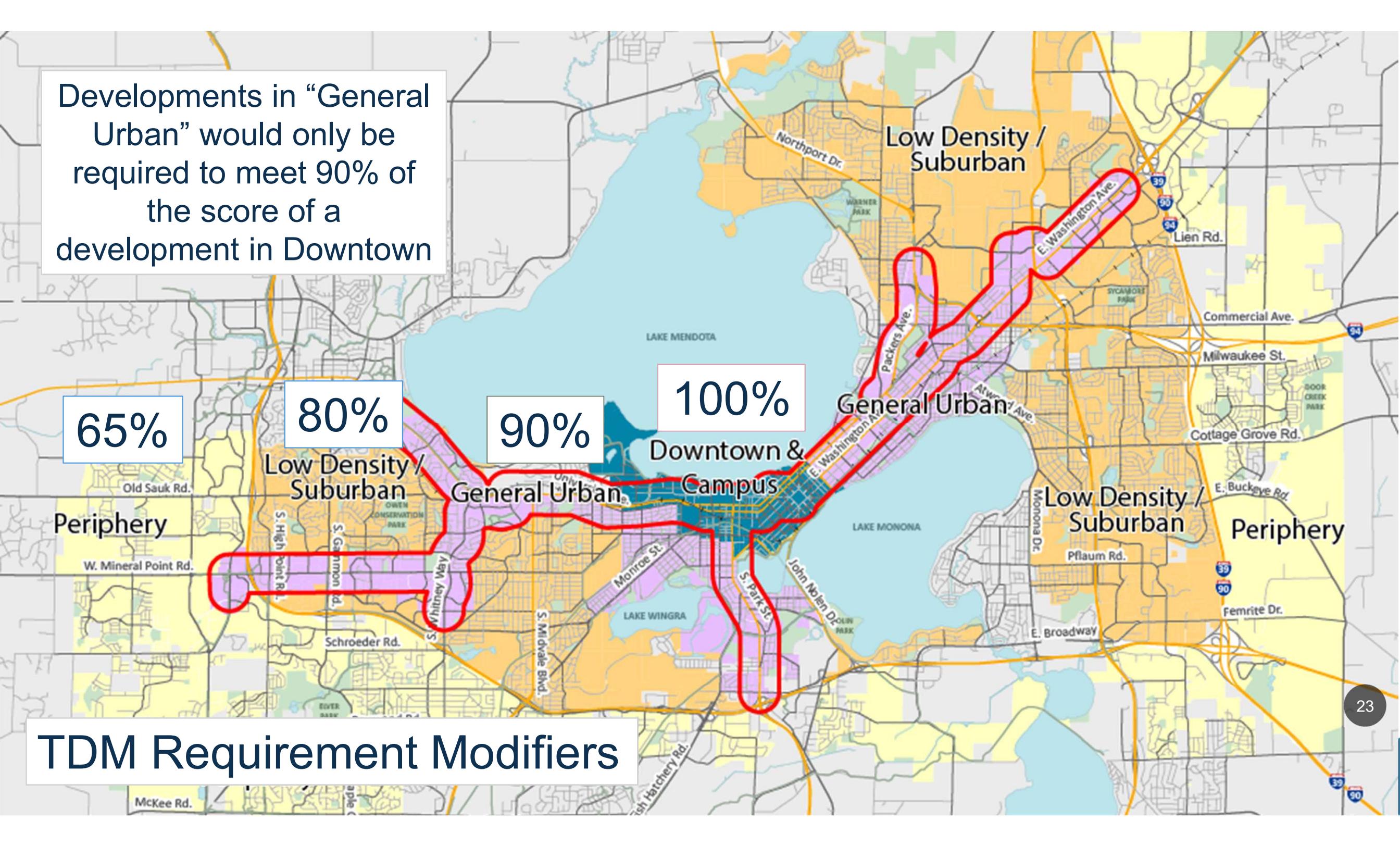
65%

80%

90%

100%

TDM Requirement Modifiers



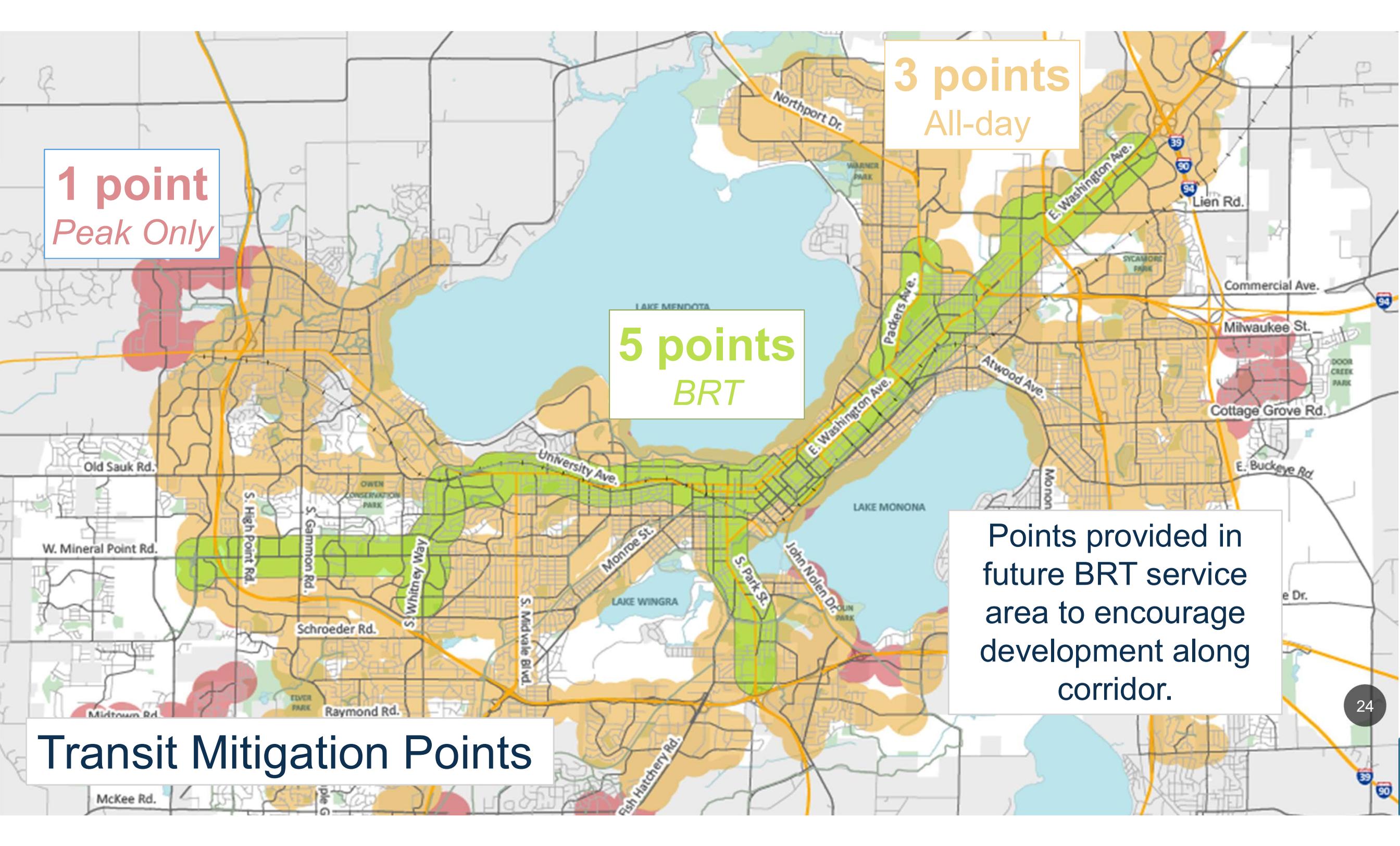
1 point
Peak Only

3 points
All-day

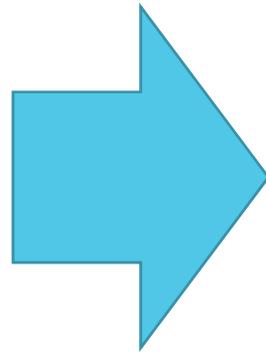
5 points
BRT

Points provided in future BRT service area to encourage development along corridor.

Transit Mitigation Points



Would Use TDM Tool For Process



Proximity to Alternative Transportation

With all-day transit service area?

[Click here for Map \(coming soon\)](#)

With 1/4 mile of bike sharing station?

[Click here for Map](#)

With 1/4 mile of car sharing station?

[Click here for Map](#)

What Zone is your Project Located In

[Click here for Density Zone Map \(coming soon\)](#)

What kind of Project is this?

Use Category (or categories)

Project Details

Enter project information into the boxes marked in blue. To find minimum parking required by ordinance for Commercial, Educational, or Institutional uses, go to: [Chapter 28.141 of the Municipal Code -- Table 281-3, Off-Street Parking Requirements.](#)

Residential Use Characteristics		Employment Use Characteristics	
<input type="text" value="100"/>	Number of Dwelling Units	<input type="text"/>	Floor area square footage
<input type="text" value="150"/>	Parking Provided	<input type="text"/>	Parking Provided
<input type="text" value="1.50"/>	Parking Ratio	<input type="text"/>	Parking Provided per 500 sq ft.
<input type="text" value="18"/>	TDM Required	<input type="text" value="N/A"/>	TDM Required

Commercial Use Characteristics		Educational Use Characteristics	
<input type="text"/>	Floor area square footage	<input type="text"/>	# of Students
<input type="text"/>	Parking Provided	<input type="text"/>	Parking Provided
<input type="text"/>	Parking Minimum by Ordinance	<input type="text"/>	Parking Minimum by Ordinance
<input type="text" value="0.00"/>	Parking Ratio of Provided to Min	<input type="text" value="0.00"/>	Parking Ratio of Provided to Min
<input type="text" value="N/A"/>	TDM Required	<input type="text" value="N/A"/>	TDM Required

Institutional Use Characteristics	
<input type="text"/>	Floor area square footage
<input type="text"/>	Parking Provided
<input type="text"/>	Parking Minimum by Ordinance
<input type="text" value="0.00"/>	Parking Ratio of Provided to Min
<input type="text" value="N/A"/>	TDM Required

Required Points	Provided Points	Compliant
<input type="text" value="18"/> Residential	<input type="text" value="23"/> Residential	<input checked="" type="checkbox"/> YES
<input type="text"/> Employment	<input type="text"/> Employment	<input type="checkbox"/>
<input type="text"/> Commercial	<input type="text"/> Commercial	<input type="checkbox"/>
<input type="text"/> Educational	<input type="text"/> Educational	<input type="checkbox"/>
<input type="text"/> Institutional	<input type="text"/> Institutional	<input type="checkbox"/>

(Calculated based on your inputs from Step 1)

VMT Reduction Strategies

All Blue Boxes Require Additional Input. Please Fill In!

Active Transportation Strategies

Check	Category	Strategy	Points	Description
<input checked="" type="checkbox"/>	Infrastructure	Dedicated Access to Bike Parking	1	Provide a convenient and separate access to the bike parking area without stairs (e.g. on the same level as the entrance, or via a ramp or elevator).
<input checked="" type="checkbox"/>	Infrastructure	Indoor covered bike parking near Entrance	1	Locate the bike parking in a covered, indoor space, less than 100 feet from the main entrance.
<input checked="" type="checkbox"/>	Infrastructure	Bicycle Maintenance Facilities	1	Provide a bicycle maintenance station for on-site employees, tenants, residents and visitors. Tools and supplies should include at minimum: a bicycle pump, wrenches, a chain tool, lubricants, tire levers, hex keys/ Allen wrenches, torx keys, screwdrivers, and spoke wrenches.
<input type="checkbox"/>	Infrastructure	Clothes Lockers and Showers	1	Provide 1 shower along with 5 clothes lockers for every 30-50 bike parking spaces.
<input type="checkbox"/>	Infrastructure	Bicycle Lockers or Secure Storage Room	2	Provide lockers for secure, long-term storage of bikes: 1 locker for every 20 DUs or 30 employees.
<input type="checkbox"/>	Programmatic	Shared Fleet of Bicycles	2	Provide an on-site shared fleet of free loner bicycles for use by residents/ employees. Fleet should include at least 1 bicycle for every 10 DUs or 30 employees, with a minimum of 5 bikes.
<input checked="" type="checkbox"/>	Infrastructure	Improve Surrounding Pedestrian Infrastructure	4	Improve pedestrian infrastructure (side walks, curb ramps, crosswalk, RRFB, etc.) on adjacent properties within 500 ft. of project consistent with city plans and ordinances and federal accessibility requirements. 1 point per 100ft of infrastructure, up to 4 total points.
<input type="checkbox"/>	Infrastructure	Improve Surrounding Bicycle Infrastructure	0	Improve bicycle infrastructure (bicycle lanes, cycle tracks, new crossings, bike-ped paths, etc.) within 500 ft. of project consistent with city plans, ordinances, and federal requirements. One point per amenity or one point per 100 ft. of infrastructure, up to 4 points.
<input checked="" type="checkbox"/>	Infrastructure	Traffic Calming Measures	2	Install traffic calming measures such as speed humps and roundabouts. One point per small-dollar measure (e.g. pedestrian flags, temporary speed hump) and two points per large-dollar measure (e.g. RRFB, permanent speed hump). Must be located within 500 ft. of project and be consistent with city plans, ordinances, and federal requirements. One point per amenity or one point per 100ft of infrastructure, up to 4 points.

Transit Strategies

The the project within the all-day transit service area?
 Measures worth 50% less if not. (From Step 1)

<input type="checkbox"/>	Programmatic	Validate Transit Passes for Visitors	1	Validate Transit Passes for all residents, employees, or visitors	
<input type="checkbox"/>	Programmatic	Subsidize Monthly Transit Passes OR daily passes	% subsidy 50%	Points 0.75	Provide subsidized monthly transit passes to employees/residents (one per DU or employee). 1 point per 25% subsidy, up to 75%.
<input type="checkbox"/>	Infrastructure	Fund transit facilities and amenities	# Inc. 0	Points 0	Build or fund transit facilities and existing or proposed stops including benches, trash receptacles, shelters, and real-time arrival screens. Up to 1 point per feature, up to a maximum of 4 points. Metro Transit must accept proposal prior to points being awarded.
<input type="checkbox"/>	Programmatic	Complementary Transit Passes	3.5	Provide complementary monthly transit passes to employees/residents (one per DU or employee).	

Other Considerations

- Program would go into effect 6 months after approval
- Program would not impact existing properties until:
 - Expansion of Parking
 - Expansion of Use
 - Change of Use
 - Redevelopment

Modifications due to Stakeholder Feedback

- Have made approximately 40 modifications to program due to developer/stakeholder feedback
- Feedback has made program more feasible & implementable
- Changes hopefully reduce burden while maintain effectiveness



Department of Transportation

Thomas Lynch, PE, PTOE, PTP, AICP, Director of Transportation

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September 28, 2022

Re: Proposed Changes to Draft TDM Measures

From: Philip Gritzmacher, AICP

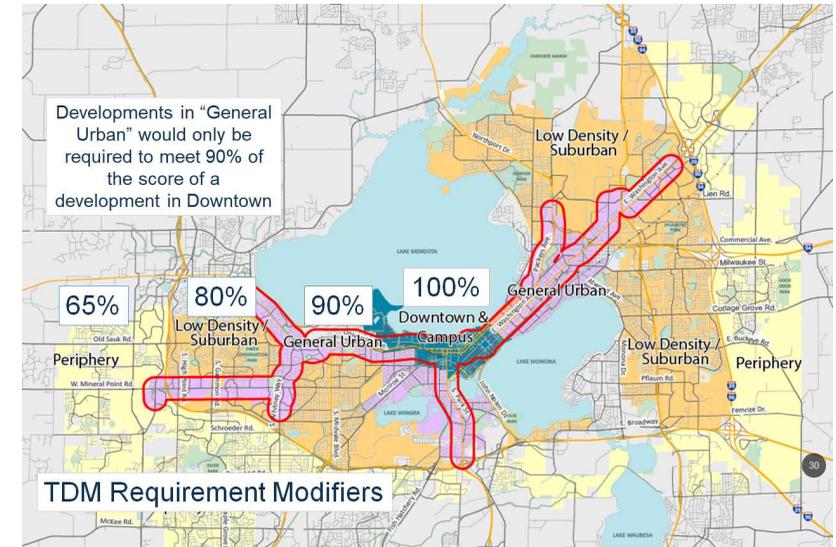
Since developing the final draft of the TDM program in December 2021, DOT staff has revised the program in response for feedback from other city staff, elected officials, and impacted stakeholders. Generally, the plan was revised to ensure that the plan is achievable, equitable, and fair for all that may take part in the program. These refinements include:

Adjustments of Mitigation Measure Definitions and Values

- Indoor Covered Bike Parking Near Entrance – allow for indoor covered bike parking to be near any building entrance, rather than just main entrance
- Bike Lockers or Secure Storage Room - reduce emphasis on lockers. Removed requirement for specific number of storage lockers, changed to suggestion.
- Bicycle Maintenance Facilities – removed requirement for lubricants, changed to suggestion.
- Clothes Lockers and Showers – Adjusted language to allow to lockers, showers, or both. Increased value of measure to provide 2 points for both lockers and showers, or one point for either lockers or showers alone.
- Shared Fleet of Bikes – removed requirement for number of bicycles in shared fleet, changed mandate to recommendation.
- Provide Complimentary Bikeshare Membership or Passes - clarified language to specify that passes are only required to be distributed to employees that wish to obtain one.
- Shared Fleet of Vehicles – adjust definition for clarity based on stakeholder feedback.
- Emergency Ride Home Program – adjusted definition for clarify and to deemphasize Greater Madison MPO.
- Subsidize Monthly Transit Passes OR daily passes and Complementary Transit Passes – adjust language to ensure it is clear that passes are only offered to employees/residents that want them.
- Validate Transit Passes or Provide Free Two-Ride Passes – removed option for transit pass validation and adjusted definition for clarity.

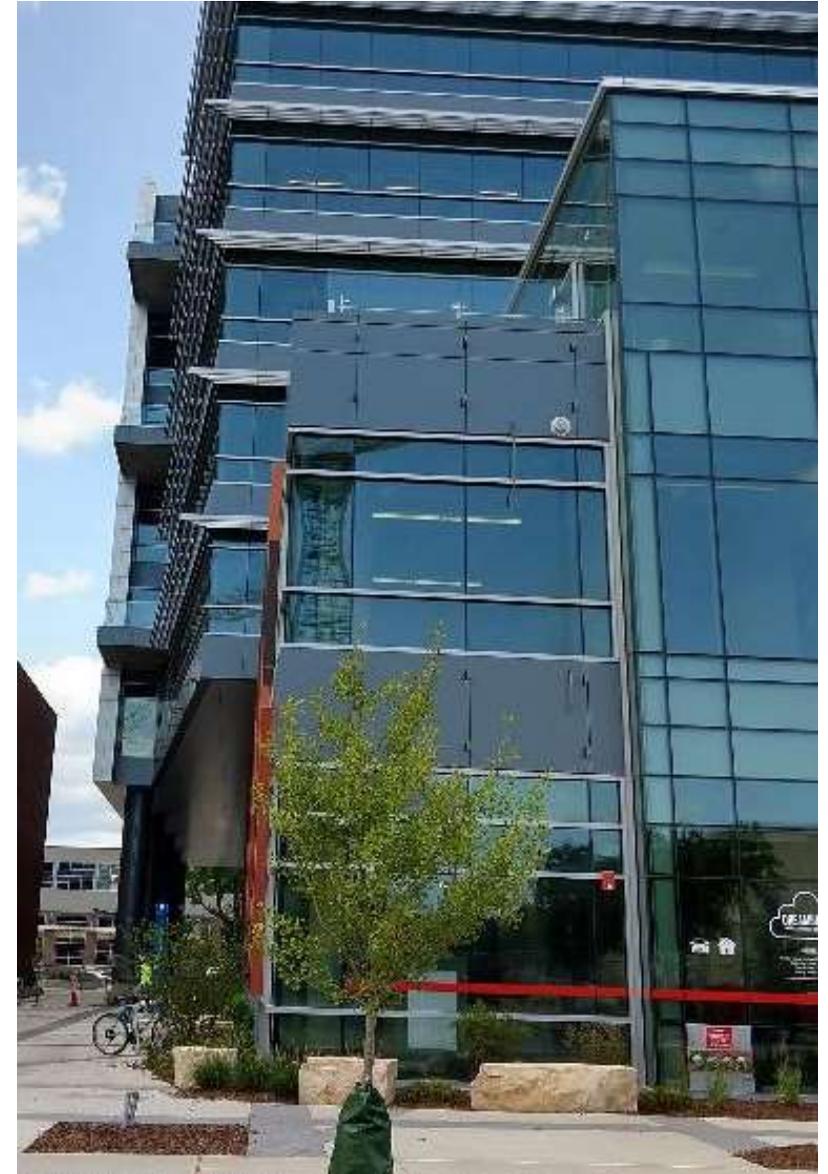
Modifications due to Stakeholder Feedback

- TDM modifiers to reduce points requirements where TDM measures are harder to implement (periphery).
- Reduced the reliance on Walkscore, which penalized new developments.
- Streamlined measures to reduce complexity.
- More closely aligned point values to coincide with cost to implement
- Developed procedure for existing mall and other multi-use sites.



Modifications due to Stakeholder Feedback

- Point reduction / appeals process added for special circumstances /cases
- Clarify Mitigation Measure Definitions
- Split some measure to make them more achievable
- Moved to bi-annual re-certification to reduce administrative burden for stakeholders
- Adding additional outreach meetings
- Adding report-out after 6 months, to gather feedback from those participating in program



Timeline

- Introduction to Council – Nov 1
- Plan Commission – Nov 21
- Sustainability Committee – Nov 28
- Transportation Commission – Nov 30
- TPPB – Dec 5
- Consideration at Council – Dec 6

Required Points		Provided Points		Compliant
18	Residential	23	Residential	YES
	Employment		Employment	
	Commercial		Commercial	
	Educational		Educational	
	Institutional		Institutional	

(Calculated based on your inputs from Step 1)

VMT Reduction Strategies

All Blue Boxes Require Additional Input. Please Fill In!

Active Transportation Strategies

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<input checked="" type="checkbox"/>	Infrastructure	Indoor covered bike parking near Entrance	1	Locate the bike parking in a covered, indoor space, less than 100 feet from the main entrance.
<input checked="" type="checkbox"/>	Infrastructure	Bicycle Maintenance Facilities	1	Provide a bicycle maintenance station for on-site employees, tenants, residents and visitors. Tools and supplies should include at minimum: a bicycle pump, wrenches, a chain tool, lubricants, tire levers, hex keys/ Allen wrenches, torx keys, screwdrivers, and spoke wrenches.
<input type="checkbox"/>	Infrastructure	Clothes Lockers and Showers	1	Provide 1 shower along with 5 clothes lockers for every 30-50 bike parking spaces.
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<input type="checkbox"/>	Programmatic	Shared Fleet of Bicycles	2	Provide an on-site shared fleet of free loner bicycles for use by residents/ employees. Fleet should include at least 1 bicycle for every 10 DUs or 30 employees, with a minimum of 5 bikes.
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Transit Strategies

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<input type="checkbox"/>	Programmatic	Subsidize Monthly Transit Passes OR daily passes	0.75	Provide subsidized monthly transit passes to employees/residents (one per DU or employee). 1 point per 25% subsidy, up to 75%.
<input type="checkbox"/>	Infrastructure	Fund transit facilities and amenities	0	Build or fund transit facilities and existing or proposed stops including benches, trash receptacles, shelters, and real-time arrival screens. Up to 1 point per feature, up to a maximum of 4 points. Metro Transit must accept proposal prior to points being awarded.
<input type="checkbox"/>	Programmatic	Complementary Transit Passes	3.5	Provide complementary monthly transit passes to employees/residents (one per DU or employee).

Questions?

Contact Info:

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