

#### Department of Planning & Community & Economic Development

# **Planning Division**

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August 1, 2018

Dear Members of the Common Council-

At your August 7, 2018 meeting, you will consider adoption of the City of Madison Comprehensive Plan, based on a July 30, 2018 recommendation by the Plan Commission. In May, each Alder was given a copy of the May 1, 2018 Draft Comprehensive Plan, which was formally reviewed by 18 boards, committees, and commissions. The Plan Commission, as the lead, has worked carefully over the last three months to review comments received from these bodies and from the public.

The materials on the following pages include all changes to the Comprehensive Plan text and Generalized Future Land Use Map as recommended by the Plan Commission. This packet of information will be added to Legistar, and includes the following specific items for your reference:

- 16-page spreadsheet outlining the text changes the Plan Commission recommends to the May 1 Comprehensive Plan document (generally listed in the order they appear in the Plan)
- 8-page red-lined document with more substantial text changes that would not fit well on the spreadsheet
- 18-page "UrbanFootprint Analysis" section recommended by Plan Commission to be added to the Plan
- 2-page Generalized Future Land Use Map showing all changes the Plan Commission recommends to the May 1 Map

Please feel free to contact me (266-5974, <a href="https://hstouder@cityofmadison.com">hstouder@cityofmadison.com</a>) or Project Manager Brian Grady (261-9980, <a href="https://bgrady@cityofmadison.com">bgrady@cityofmadison.com</a>) with any questions you may have leading up to next Tuesday's meeting.

Respectfully,

Heather Stouder, Director

City of Madison Planning Division

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
1	Community Development Authority	1. Intro	N/A	Maintain accountability to stakeholders/participants. Specifically provide information on how feedback through Imagine Madison is resulting in positive change during Plan implementation.	Incorporate language in the Introduction's "Assessing Progress" section.
2	Economic Development Committee	1. Intro	N/A	Provide more information on how the lenses were applied.	Incorporate this change.
3	Planning staff	1. Intro	N/A	[State Statute Requirements] Issues & Opportunities: Need to address age distribution trends.	Add age distribution trends from page 4 of the City Snapshot document to page 3 of the Plan.
4	Planning staff	1. Intro	N/A	[State Statute Requirements] Implementation. Include "a compilation of programs and specific actions to be completed in a stated sequence." Plan update process.	Add sentence at the end of the first paragraph on page 5: "Each element lists strategies and actions in a general sequence of priority."
5	Planning staff	1. Intro	page 6	This example of how the lenses were used could be improved.	Use a Strategy instead of a Goal and improve the example via specific Actions used and reasoning.
6	Planning staff	2. Eng. Process	page 10	Should we add a comment here or elsewhere about our general marketing efforts?	Add a line in the paragraph before community meetings on page 10: "Imagine Madison used many methods and marketing techniques to inform and involve"
7	M. Berger	3. GF	N/A	Growth Priority Areas Map language. Need to clarify purpose of map and explain what corridors, centers, and growth priority areas are.	See attached red-lined document titled "Growth Priority Areas."  In addition, Alder Zellers suggested a footnote be added to the GPA map or discussion that states historic districts are NOT growth priority areas; Cantrell noted that noncontributing buildings in a district may still be appropriate for redevelopment. Staff will add a footnote to the GPA map.
8	Alder Zellers	3. GF	N/A	Need descriptive language regarding NMU areas abutting residential.	Insert the following language on page 22, top of the second column, after the sentence ending in "level.":  "Mixed-use development must also be carefully designed where the use adjoins less intense residential development. Additional setbacks and architectural features such as stepbacks may be needed to transition mixed-use development to less intense surrounding development. See also Land Use and Transportation Strategy 5, Action b. "
9	Alder Zellers	3. GF	N/A	Should recognize historic districts on GFLU Map.	The Plan Commission did not want to add historic districts to the GFLU map, but specified that a footnote should be added to reference the historic district maps. Staff recommends: "Please see Strategy #2 of the Culture and Character Element for maps of the City's historic districts."
10	Transit & Parking Commission	4. LU&T	1	Include discussion of special assessments as a means of funding BRT.	Staff edit: Revise action to cover TIF and other funding sources: "Explore opportunities to use TIF alternative methods to fund BRT infrastructure." Revise LU&T 1d to add a sentence at the beginning: "BRT will likely require a variety of nontraditional funding sources to be implemented" and additional language at the end: "Other methods for funding BRT that should be explored are special assessments and transit impact fees."
11	Alder Zellers	4. LU&T	1	Why not impact fees for transit? Can we add language about exploring this?	Staff edit: Add a mention of transit impact fees to the Plan at the end of LU&T 2a: "The City should also explore other methods of paying for transit service expansion, such as transit impact fees."
12	Transit & Parking Commission	4. LU&T	2	Strategy should include a mention of 5-year Transit Development Plan (TDP).	Integrate into text of LU&T Strategy 2.
13	Transit & Parking Commission	4. LU&T	2	Should we add a note that the cost of extending transit service when we do peripheral development needs to be accounted for? Right now we just stretch existing service to new areas, not add service.	Add language under Strategy #2 (either in intro or under Action 2a) to discuss this topic.
14	Transit & Parking Commission	4. LU&T	2	Discussion of exploring a transit impact fee should be added to the Plan - it could help finance the capital costs of transit expansion.	Add language under Strategy #2 (either in intro, under Action a, or as a new action) to discuss this topic. See also recommendation for #11.

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15	Alder Zellers	4. LU&T	5	For Action b - add something about parking/traffic issues. For action c - would like something added about clearing bike lanes on streets with snow.	Add a mention of parking/traffic issues under LU&T 5b, right before the last sentence in the existing paragraph for 5b: "Such plans should include an analysis of existing and projected traffic and parking issues and methods that could be used to mitigate such issues."			
16	jhirsch	4. LU&T	5	[page 36, paragraph for action b.] What is the definition and scope of "sub-area" plan? How are the details determined?	Add definition of "sub-area plan" and clarify the types of sub-area plans: see the "Consistency Between Sub-Area Plans and the Comprehensive Plan" markup.			
17	Planning staff	4. LU&T	5	We talk about plans and zoning here. Do we include Urban Design requirements as well?	[page 38] Add to the last sentence "established in city ordinances such as zoning, historic preservation ordinance, urban design districts."			
18	Alder Zellers	4. LU&T	6	Overall the language does not focus enough on the best places for infill/redevelopment. Recognize infill growth "in the right places" and not just all over in neighborhoods.	Add language under Action c to specify that redevelopment should be properly located and reference the Growth Priority Areas map: "Redevelopment should be integrated into corridors and established and transitioning mixed-use centers identified on the Growth Priority Areas map, consistent with this Plan and adopted sub-area plans."			
19	Food Policy Council	4. LU&T	6	Strategy 6: "Reduce the demand for development of farmland on the periphery of the city." (page 39) This statement clearly assumes the importance of preserving farmland, but says nothing about why. Add the italicized phrase to Action (a) expressing the need to Update Neighborhood Development Plans: "While they included some forward-thinking aspects, the layouts and mix of land uses tended to be disconnected, caroriented, and low-intensity, and significantly under-valued agricultural land for food production."	Incorporate the change shown in italics to the left.			
20	Community Development Block Grant Committee	4. LU&T	6	Modify the wording of Strategy 6 so it is better understood by the layperson.	See attached red-lined document titled "Land Use and Transportation Strategy 6," which recommends "Facilitate compact growth to reduce the development of farmland" for the title of the Strategy.			
	Sustainable Madison Committee	4. LU&T	6	Include new language provided by the Food Policy Council regarding the value of agricultural land.  1. Add a clause in the second sentence of the paragraph for Action (a)  "While they included some forward-thinking aspects, the layouts and mix of land uses tended to be disconnected, car-oriented, low-intensity, and significantly under-valued agricultural land."	See Recommendation for #19.			
22	Transit & Parking Commission	4. LU&T	7	Mention working with the State under the Park-and-Ride action.	Integrate the following text at the end of Action 7d: "The City should work with the Wisconsin DOT on developing and implementing a park-and-ride plan. Park-and-ride planning should also include options for park-and-bike."			
23	Alder Zellers	4. LU&T	7	In the description for Action b, <del>new</del> downtown events - remove the word "new."	Incorporate this change.			
24	Ped/Bike/ Motor/Vehicle Commission	4. LU&T	8	Change language to " <u>Develop</u> and adopt a citywide bicycle plan and citywide pedestrian plan" and change the detailed discussion under Action d accordingly.	Change language to "Develop and adopt a citywide bicycle plan and citywide pedestrian plan " and change the detailed discussion under Action d accordingly.			
25	Alder Zellers	4. LU&T	8	Would like language added to address winter biking. For 8d, clarify between recreational and peripheral paths vs. commuting paths and on-street bike lanes.	Revise language to clarify that "primary" paths are paths that are used for both commuting and recreation, whereas "secondary" paths are used almost exclusively for recreation.			
26	Harald Kliems	4. LU&T	8	I find this sentence misleading. The reconstruction projects on Williamson and Monroe have decided not included substantive improvements for bike infrastructure. And the examples are almost all pedestrian improvements.	Add "bike boxes, striped bike lanes" to list of amenities.			

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27	City of Verona	4. LU&T	8	Bicycle Facilities Map: o The colors on the bicycle facilities map are too close to each other and make it difficult to read. o Cross Country Road – Planned off-street from Hemlock Drive to Tamarack Way. Existing off-street from Hemlock Drive to Reddan Soccer Park to Madison line. Change to existing on-street facility from Enterprise Drive to east of Reddan Soccer Park. o Basswood Avenue – Planned on-street from N. Nine Mound Road to planned and existing off-street facilities. Change to existing on-street facility. o Tamarack Way – Planned on-street from Cross Country Road to Basswood Avenue. Change to existing on-street facility. o Hemlock Drive – Planned on-street from Cross Country Road to Basswood Avenue. Change to existing on-street facility. (See attached email from City of Verona staff, Adam Sayre.)	Incorporate these changes.
28	Board of Public Works	4. LU&T	9	Need more of a "global" look at parking than Action 9c. Many neighborhoods have parking issues - should be considering challenges beyond just downtown.	Add discussion under LU&T 5b: " should have guidance on the design of appropriate transitions between different building types and scales and strategies to address anticipated parking impacts."
29	Long Range Transportation Planning Committee	4. LU&T	1, 2	Consider flip-flopping the order of LU&T Strategies #1 and #2.	Change the order of strategies #1 and #2 in the LU&T Element.
30	Transit & Parking Commission	4. LU&T	N/A	Parking is not discussed enough - adequate parking is needed for economic development.	Staff edit: Add mention under LU&T 9c of changing transportation technology and how it may impact parking demand: "Advancements in other transportation-related technology will also impact parking demand and management. Ridesharing continues to increase in popularity, and autonomous vehicle technology continues to evolve. The City will need to account for these, and other, advancements it its parking management strategy." Add mention under LU&T 7d that while downtown can always add more parking, the streets to get cars to that parking are near, or at, capacity during peak hours: "Increasing parkand-ride options also allows more people to access downtown and the campus without increasing traffic on the isthmus. Substantial increases in parking downtown may create diminishing returns, as there are no plans to increase road capacity leading to downtown on roads that are already congested during peak travel times."
31	Transit & Parking Commission	4. LU&T	N/A	Need a stronger link to Madison in Motion in the LU&T chapter, with the acknowledgement that other governments (County, State) have control over some roads.	Add additional language in the LU&T introduction to specifically call out Madison in Motion.
32	Transit & Parking Commission	4. LU&T	N/A	The Plan should address parking impacts in mixed-use centers - demand will go up as redevelopment occurs. Should there be more City lots? What is the role of the parking utility as we create more mixed-use areas? Also see #s 22, 30, 31.	Add discussion of addressing parking within the plans mentioned under LU&T 5d (see item #30). Add further discussion on page 15 of handling parking in the Growth Priority Areas (see attached red-line document titled "Growth Priority Areas," end of middle column on first page).
33	Sustainable Madison Committee	5. N&H	2	Include a recommendation about increasing programming and resources for seniors. It was suggested this would belong in Action 2b regarding life cycle housing.	Leave the Action the same but reword last sentence in action descriptive paragraph to read "and proximity to healthcare, basic needs, and programing and resources for seniors."
34	Petert	5. N&H	2	[page 49] Accessory Dwelling Units (housing added onto existing residential lots such as an additional unit on top of a detached garage or in a back yard) should be described here. Given the amount of land in Madison that is currently detached single family, ADUs would appear to be a much greater source of additional housing than the other options described and one of the only options to add density without demolition of existing houses.	Add "Accessory Dwelling Units" to Missing Middle box list.  Add to glossary: Accessory Dwelling Unit - a second dwelling unit contained within a single-family dwelling or within a detached building located on the same lot as a single-family dwelling. This definition includes accessory buildings constructed in connection with a private garage or a private garage converted into a dwelling unit.

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35	Alder Zellers	5. N&H	3	Action 3d doesn't acknowledge the issues of number of bedrooms in the units.	Include reference to other mentions of building mix (Growth Framework page 20 and N&H #7 page 56).
36	Alder Zellers	5. N&H	3	[page 50] The paragraph on left column starting with "While this Plan" should be revised to reflect that when offered the opportunity to pick specific locations for infill/redevelopment, residents frequently chose places like East Towne and West Towne, as well as sites along transit corridors.  Should also remove percentages and talk about underutilized auto-oriented sites.	Replace paragraph 2: "The city limits will continue to expand to accommodate new growth. However, when asked where to accommodate Madison's projected new housing needs, Imagine Madison participants across all engagement channels generally indicated a preference for infill and redevelopment. Much of the infill over the last decade has occurred in the downtown and isthmus areas, and this will continue to some extent. Directing redevelopment and infill to existing auto-oriented commercial centers and other areas as identified in the Growth Priority Areas Map, GFLU Map and sub-area plans will help accommodate needed growth while protecting the historic character of older neighborhoods."  Begin paragraph 3: "The general preference for infill and redevelopment This sentement sometimes clashes"
37	Alder Zellers	5. N&H	3	Second paragraph is misleading, it comes across as allow infill anywhere. It should be more specific.  See also comment #36.	See recommendation for #36.
38	Housing Strategy Committee	5. N&H	4	Add Action E:  "Support and partner with non-profit organizations to preserve affordable housing for the long term."  Suggested narrative:  "Many of the affordable housing units across the City are subsidized in order to limit rents households for certain income levels. The most common mechanism, which the City has strongly supported, is the WHEDA Section 42 tax credit program. Housing units constructed with this type of financing must remain affordable for specified income levels for a period of 30 years, but could then revert to market-rate housing units. The City should be aware of the timelines for each subsidized housing development and partner with property owners and non-profit organizations to explore ways to extend the life of affordable housing beyond the required period."	Incorporate this change.
39	Alder Zellers	5. N&H	5	Action 5c, what is the "action" related to homelessness?	Change title to "Permanent Supportive Housing"
40	Alder Zellers	5. N&H	6	Action 6a - mention state pre-emption	Add to end of action paragraph text: "The City should work within the limits of State legislation to use inspections to ensure safe housing for all Madisonians."
1 41	Community Development Block Grant Committee	5. N&H	6	Expand Action 6c to include rehabilitation of privately-owned rental properties.	Incorporate this change.
	Housing Strategy Committee	5. N&H	8	At the very beginning of the narrative, change the first sentence back to language that was previously drafted: "Access to healthy food is one of the most basic life-sustaining strategies of the Comprehensive Plan."	Incorporate this change.

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43	Food Policy Council	5. N&H	8	Strategy 8: "Ensure access to food that is affordable, nutritious, and culturally specific" (page 58) For some reason, a very significant, sentence was removed from the initial draft of the Comp Plan that read "Access to food is one of the most basic life-sustaining strategies of the Comprehensive Plan"; it was replaced by the much more limited statement "Access to healthful foods, especially for families with children, has major impacts on quality of life". Noting that seven of the fifty strategies in the plan involve food, the Work Group recommends – and the Housing Strategy Committee supported – restoring the original sentence, and adding the word "healthy" so it reads as follows: "Access to healthy food is one of the most basic life-sustaining strategies of the Comprehensive Plan."	Incorporate this change - add the sentence in italics as shown to the left.
44	Food Policy Council	5. N&H	8	Simply expanding farmers' markets and food stands to more areas of the city does not necessarily reach many more people, especially those who are food insecure Add the following sentence to the end of paragraph for Strategy 8, Action c: "Expanding the Double Dollars program and Farmers' Market Nutrition Program to farmers' markets and food stands throughout the city would help people afford to buy food there and create additional demand for local food businesses."	Leave Action C as is. Add "Farmers' Market Nutrition Program" to list of programs in Action A.
45	Board of Health	5. N&H	8	Per request by the Food Policy Council Comprehensive Plan Work Group, change phrasing from "Access to healthful foods, especially for families with children, has major impacts on quality of life" to "Access to healthy food is one of the most basic life-sustaining strategies of the Comprehensive Plan."	See #44 above.
46	Community Development Block Grant Committee	5. N&H	8	Per request by the Food Policy Council Comprehensive Plan Work Group, change phrasing from "Access to healthful foods, especially for families with children, has major impacts on quality of life" to "Access to healthy food is one of the most basic life-sustaining strategies of the Comprehensive Plan."	See #44 above.
47	Planning staff	5. N&H	N/A	[State Statute Requirements] Address housing age and value.	Add "Housing Units by Year Built" from page 6 of City Snapshot to page 55 of the Plan. Add new housing value pie chart to page 53.
48	Finance Committee	6. E&O	5	Include a reference in E&O 5a to the EG section regarding co-location of City/community facilities.	Incorporate this change.
49	Food Policy Council	6. E&O	6	[page 70] provide a graphic showing the share of market that is food-related as a replacement for the whiteboard photo.	Incorporate this change.
50	Food Policy Council	6. E&O	7	[Action a] Our suggestion broadens the previous focus of this strategy from a "northside food innovation district" to include other areas and resources in the city: "Madison is positioned to develop strong local and regional food-related infrastructure, and strengthen its economy. The city can progress with this vision by further clustering and incentivizing the growth of aggregation, processing and distribution facilities. The developing Public Market will anchor a food innovation district connected to the north side, linking the FEED Kitchens, Madison College's culinary school and, importantly, the former Oscar Mayer plant site. There will be similar opportunities in south Madison, and elsewhere in the city. Having food-related businesses cluster in close proximity will provide benefits from sharing ideas, talent, vendors, and infrastructure. Food innovation districts in Madison will, in turn, support growers, processors and buyers in Dane County and the region."	Foster Food Innovation Districts  Madison is positioned to develop strong local and regional food-related infrastructure, and strengthen its economy. The City can progress with this vision by further and partners should seek opportunities to clustering and incentivizing the growth of aggregation, processing, and distribution facilities. The developing Public Market will anchor a food innovation district connected to the north side, linking the FEED Kitchens, Madison College's culinary school and, importantly, the former Oscar Mayer plant site. There will be similar opportunities in south Madison, and elsewhere in the city. Having food-related businesses cluster in close proximity will provides benefits from sharing ideas, talent, vendors, and infrastructure. Food innovation districts in Madison will, in turn, support growers, processors and buyers in Dane County and the region.
51	Economic Development Committee	6. E&O	7	Move Action 7b "Business Incubators" to Strategy 6.	Move Action 7b to Strategy 6 and move Action 6c to Strategy 7.
52	Committee on the Environment	6. E&O	7	Action 7c - add Public Health to "Lead Agencies" in appendix chart.	Incorporate this change.

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53	Alder Zellers	6. E&O	7	Rehabbing buildings provides more local impact - can we include this somewhere?	Revise the second sentence of E&O Action 6b to read: "Madison's consistently strong real estate market produces a strong demand for contractors in the construction and building rehabilitation sectors."
54	Economic Development Committee	6. E&O	7	The Food Policy Council suggested changing the language to:  Foster food-related infrastructure across Madison  Madison is positioned to develop strong local and regional food-related infrastructure, and strengthen its economy. The city can progress with this vision by further clustering and incentivizing the growth of aggregation, processing and distribution facilities. The developing Public Market will anchor a food innovation district connected to the north side, linking the FEED Kitchens, Madison College's culinary school and, importantly, the former Oscar Mayer plant site. There will be similar opportunities in south Madison, and elsewhere in the city. Having food-related businesses cluster in close proximity will provide benefits from sharing ideas, talent, vendors, and infrastructure. Food innovation districts in Madison, will, in turn, support growers, processors and buyers in Dane County and the region.	See recommendation for #50.
55	Economic Development Committee	6. E&O	N/A	There are only a few references to Madison College. They are an important entity for education and training for middle class jobs.	Incorporate this change.
56	Alder Zellers	7. C&C	1	Action 1c. Include something about restoration of historic assets.	Insert a sentence after the third sentence in C&C action 1c to read: "Restoration of historic assets can be an important part of context-sensitive design (Culture and Character Strategy 2, Action c also covers this topic)."
57	Lehnertz	7. C&C	2	See email from Linda Lehnertz (attached in Legistar). Excerpt below:  Strategy 2: Preserve historic and special places that tell the story of Madison and reflect our racially and ethnically diverse cultures and histories [page 76].  The following sentence should be removed:  "Community feedback received during the Imagine Madison process indicated a preference for increasing density in already developed areas over lower-density development on the edge of the city."	Page 76, paragraph 4 revisions:  One of the greatest challenges for the City regarding historic and cultural resource preservation is balancing preservation with infill and redevelopment. Community feedback received during the Imagine Madison process indicated a general preference for accommodating more growth through infill and redevelopment over new development increasing density in already developed areas over lower-density development on the edge of the city. Madison will need to find the balance between encouraging redevelopment and infill with while protecting the qualities that made existing neighborhoods appealing to begin with. Redeveloping existing auto-oriented commercial centers and other areas as identified in the Growth Priority Areas Map, GFLU Map, and sub-area plans will help accommodate needed growth while respecting the historic character of older neighborhoods.  In addition, see attached red-line document titled "UrbanFootprint Appendix" for corresponding updates to the UrbanFootprint appendix. Add the number of participants for each engagement method.
58	Lehnertz	7. C&C	2	See email from Linda Lehnertz (attached in Legistar). Excerpt below:  The following sentence should be modified:  "Madison will need to find the balance between encouraging redevelopment and infill while protecting the qualities that made existing neighborhoods appealing to begin with."  This strategy is not about protecting "existing neighborhoods." It is about preserving and protecting historic and special places. The sentence should reflect that goal and be changed to:  "Madison will need to find the balance between encouraging redevelopment and infill while protecting and preserving historic and special places."	See recommended revisions above for item #57.
59	Landmarks Commission	7. C&C	2	Madison's 1st Landmarks Ordinance was adopted in 1971 (not 1969). page76	Incorporate this change.

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60	Landmarks Commission	7. C&C	2	2b. text: delete "which has changed little during that time." New second sentence: "The city in 2015 adopted a thorough revision of the Ordinance's provisions relating to process and procedure, and is currently updating the standards in each of the local historic districts." Add to end of third sentence: ", and recent state legislation." (page 76)	Incorporate this change.		
61	Landmarks Commission	7. C&C	2	Add an action under strategy 2 that would update the Zoning Code to ensure preservation of historic districts and protection of other historic corridors. The wording could be modeled after C&C Action 1d.	Incorporate this change - add new action 2d: "Update the zoning code and height maps to better link the code with the City's historic preservation plan and ordinance." New text for action 2d: "The City was drafting a Historic Preservation Plan (HPP) and modifying its historic preservation ordinance as this Plan was written. Both the HPP and the ordinance have elements that relate to the City's zoning code. The zoning code should be reviewed with respect to the new HPP and the revised historic preservation ordinance and modified as needed to ensure that the provisions of the code are consistent with the HPP and the historic preservation ordinance."		
62	Alder Zellers	7. C&C	2	Include something regarding Heritage tourists stay longer and spend more money.	Incorporate into the text of the 5th (last) paragraph before the discussion about specific actions.		
63	Lehnertz	7. C&C	2	See email from Linda Lehnertz (attached in Legistar). Excerpt below:  Add language regarding the value of historic preservation. The language does not discuss the importance of historic preservation, other than in economic terms (heritage tourism; keeping material out of the landfills; not wasting the embodied energy contained in the building; and, less expensive rental opportunities).	Incorporate language into the final introductory paragraph for the Strategy along the lines of: "Historic preservation also has many other benefits. It contributes toward establishing a sense of place that makes Madison feel unique and embodies the social aspects of the city's history that helped shape Madison."		
64	Lehnertz	7. C&C	2	See email from Linda Lehnertz (attached in Legistar). Excerpt below:  The following phrase should be removed: "This is important to ensure that the ordinance achieves the community's preservation priorities in balance with modern construction methods and materials."	Delete: "in balance with modern construction methods and materials."		
65	Board of Park Commissioners	7. C&C	3	Feedback is related to Strategy 3b: "Design and program a wide variety of new parks and public spaces in developing parts of the city for enjoyment by a broad range of users." Proposed new parks will be acquired as identified in Neighborhood Development Plans or to address parkland deficiencies and planned and developed in accordance with the adopted Master Plan policy. The City of Madison Parks Division does not program park facilities.	Remove the word "program" from Action 3b.		
66	Food Policy Council	7. C&C	3	There's currently a sentence at the end of the third paragraph in the introduction that reads "This includes providing culturally appropriate venues for events, family gatherings, traditions, music and exhibits". This sentence omits an important suggestion from the Work Group to include food on this list. Suggest the following revision: "This includes providing culturally appropriate venues for events, family gatherings, food, music, and exhibits."	Incorporate this change.		
67	Community Development Block Grant Committee	7. C&C	3	There's currently a sentence at the end of the third paragraph in the introduction that reads "This includes providing culturally appropriate venues for events, family gatherings, traditions, music and exhibits". This sentence omits an important suggestion from the Work Group to include food on this list. Suggest the following revision: "This includes providing culturally appropriate venues for events, family gatherings, food, music, and exhibits."	See #66 above.  Incorporate this change. Add the word food: " family gatherings, food, music, and exhibits."		
68	Economic Development Committee	7. C&C	N/A	The Between the Waves Conference and Festival is unique in the US. The Plan should reference this event.	Incorporate this change.		
69	Alder Zellers	7. C&C	N/A	Support the letter submitted by Linda Lehnertz. See attached letter (on Legistar). It seems that the highest priority was to remove the reference to "modern construction methods and materials" as a reason for updating the ordinance.	Revise the last sentence under the discussion of Action 2c to delete the reference to "modern construction methods and materials".		

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70	Committee on the Environment	8. G&R	1	Add language about specifically working with large entities, such as the UW and Madison Metropolitan School District, on improving winter salt application practices.	Add language about working with large entities such as UW and MMSD to the end of 1b text: "The City should coordinate with large entities that manage substantial grounds, such as UW-Madison and Madison Metropolitan School District, to facilitate participation in the program."	
71	Board of Public Works	8. G&R	2	Should consider advocating for using trees with lower phosphorus leaves in terraces to reduce phosphorus in lakes.	Incorporate this change - revise action text: "It might be surprising, but leaves are actually a major threat to surface water quality in Madison. Leaves, like all living things, contain phosphorus. When I Leaves that fall or are swept into the streets, they are picked up by stormwater, carrying more and carry phosphorus directly to our lakes and streams. This overabundance of phosphorus supporting the growth of algae, which harms and harming fish and other native aquatic organisms. The City should increase the frequency of leaf collection and street sweeping to reduce the amount of phosphorus runoff into local waterways. The amount of phosphorus in leaves varies between tree species - the City should denote which tree species appropriate for street tree plantings are low in phosphorus and facilitate their planting without creating an overabundance of a handful of species." Note: the Plan Commission recommended removal of the last sentence.	
72	Sustainable Madison Committee	8. G&R	2	Add additional action: City should participate in phosphorous removal program for "legacy phosphorus" in lake beds and streams, within the county and city environs.	Add reference to removing "legacy phosphorous" from our waterways to the end of G&R 2a text: "The City should also work with other entities to remove "legacy phosphorus" that has accumulated in river and lake sediment."	
73	Sustainable Madison Committee	8. G&R	2	Add the word "efficiency" to Action b so it reads: "Increase frequency and efficiency of leaf collection and street sweeping to reduce phosphorus runoff." Update corresponding descriptive paragraph.	Incorporate this change.	
74	Sustainable Madison Committee	8. G&R	2	Add language about Madison being committed to phosphorus reduction regardless of federal requirements.	Add this language to the end of the introduction paragraph for Strategy 2: "Regardless of state and federal requirements, the City is committed to reducing phosphorus and improving regional river and lake water quality."	
75	Committee on the Environment	8. G&R	2	Add discussion of how infiltration is important method in maintaining surface water quality. We need a clearly defined infiltration policy as part of any discussion of storm water management.	Add discussion of how infiltration is important for maintaining surface water quality - modify G&R 2c to read: "Rain gardens and other types of green infrastructure result in infiltration of water into the ground, thus reducing the amount of contaminants that enter lakes and rivers our water resources. The City should further incentivize use of green infrastructure by updating ordinances to create greater financial incentives for installation, especially for property owners. Additionally, the City should consider creating a grant program to encourage property owners to install rain gardens and other green infrastructure on private property. These actions and others will help capture and infiltrate runoff closer to the source and improve surface water quality."  See also new Action recommended in #76.	

omment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
76	Committee on the Environment	8. G&R	2	Improving monitoring of stormwater management/erosion control measures during construction needs to be discussed. Education (and enforcement?) should be expanded. Consider increasing the intensity of storm that must be addressed in preventative erosion control measures.	Add new Action d to G&R Strategy 2: "Continue adaptive stormwater management and erosion control to prepare for more intense rain events."  d. Stormwater Management and Erosion Control Climate change has increased the frequency of intense rain storms. The resulting runoff causes localized flooding, increased pollutant transport, and erosion. The City should continue to implement mitigation techniques for this issue including emergency planning, increasing the capacity of the storm sewer system when rebuilding streets, and upgrading greenways to handle the increased flows. The increased frequency of larger storm events also impacts the erosion control efforts at building and street construction sites. Focusing on proper erosion control installation and maintenance, and working with contractors and design engineers to improve the overall level of erosion controls is critical in reducing the risk of sediment and phosphorus transport from construction sites.
77	Anne Walker	8. G&R	2	Stormwater is increasing in intensity, the temperature of stormwater is increasing as a result of increased impervious surface, fluctuating temperatures in the winter are negatively affecting vegetation.	See #76 above.
78	Sustainable Madison Committee	8. G&R	3	Add a reference to the Energy Plan and MOU with MG&E to the introduction for Strategy 3.	Incorporate this change.
79	Sustainable Madison Committee	8. G&R	3	Create a new Action (listed as the first Action) about implementing the Carbon Neutral program. Add text discussing the City's role in energy efficiency upgrades. Move the first sentence of the paragraph for Action of the introduction for the Strategy.	See attached red-lined document titled "Green and Resilient Strategy 3."
80	Sustainable Madison Committee	8. G&R	3	Expand and strengthen Action 3d so that is about more than just electric vehicles. Also add to Action d: "expand the use of electric vehicles and ecosystem-friendly fuel sources, including" Include more specific details about being in the implementation stage of converting City fleet.	See attached red-lined document titled "Green and Resilient Strategy 3."
81	Petert	8. G&R	3	Is "partnering with electrical utilities" the ONLY option to educate Madison residents about renewable energy and energy efficiency? Absolutely not. The plan should identify the other options for increasing energy efficiency and renewable energy such as: The City actively participate in regulatory cases at the Public Service Commission of Wisconsin, particularly when the utilities serving Madison propose rate structures directly at odds with energy efficiency and renewable energy, such as MGE's current rate structure. Madison participated, hired expert witness and formally opposed MGE's current rate structure and this type of participation will be needed in the future; identify alternative methods to meet aggressive goals for energy efficiency and renewable energy such as negotiating the City's electrical contracts with utilities and investigating the formation of a municipal utility. Many cities across the county are identifying the costs and benefits of switching from investor owned utilities (like MGE and Alliant) to a municipal utility like the ones operated by diverse cities including Austin, TX, Sacramento, CA, Springfield, IL and Sun Prairie, WI. Cities currently investigating a switch explicitly to meet aggressive energy efficiency and renewable energy goals include Boulder CO, Decorah, IA, and Davis, CA.	Add text that addresses other alternatives to educating the community about how renewable and energy efficiency can be provided.
82	Alder Zellers	8. G&R	4	The Plan Commission recommended changes to G&R 4b. Suggested addition underlined and shown in red: Pursue acquisition of parkland in areas planned for or which have had significant redevelopment.	Add this language to the Action 4b text. "Pursue acquisition of parkland in areas planned for or which have had significant redevelopment." Edit to paragraph describing Action 4b: "In areas where Madison has or is expecting to see a significant increase of housing development, the City should pursue parkland acquisition to serve those new residents."
	Anne Walker	8. G&R		Glass on the newer buildings in the city create a difficult environment for birds.	Add a reference to this subject in G&R Strategy 5.

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
84	Board of Park Commissioners	8. G&R	6	For G&R Strategy 6 (diverse tree canopy), practices that protect the ecosystem should be considered in selecting tree species, such as native tree species and species beneficial to pollinators.	Incorporate this change - add language to the end of G&R 6a: "In addition to species diversity, other factors, such as native tree species and species that are beneficial to pollinators should be considered."
85	Sustainable Madison Committee	8. G&R	6	Add something about an education component - including that most trees are on private property.	Add sentence about education component and trees on private property into the introductory paragraph(s) for the Strategy.
86	Sustainable Madison Committee	8. G&R	6	Under Action b, add something about working with non-City entities: MG&E, construction companies, developers.	Incorporate this change by revising the final sentence under G&R 6b to read: "As development and redevelopment continues, City departments must work together internally and with MG&E and developers to increase the tree canopy."
87	Anne Walker	8. G&R	6	Overhead wires, commercial storefronts, and other conflicts make it difficult to get good trees in urban neighborhoods.	Incorporate a version of suggested language.
88	Planning staff	8. G&R	6	"Optimize" should be changed to "maximize" in the 6b action text.	Change "optimize" to "increase."
89	Planning staff / Rewey	8. G&R	6	Explain why undergrounding utilities is an important policy with regards to the canopy. See also request #90.	Add language to emphasize that <b>high voltage</b> overhead wires are an important factor that prevents tree plantings. Add language that mentions that underground parking and bike parking can also impact tree planting. Add a mention that the City should review standards for terrace tree plantings and the proximity of trees to intersections.
90	Alder Zellers	8. G&R	6	Action 6c - should mention that spacing of trees on terraces and proximity of trees to intersections. Please see also request #89.	See also request #90.  Emphasize that high voltage overhead wires are an important factor that prevents tree plantings. Add language that mentions that underground parking and bike parking can also impact tree planting. Add a mention that the City should review standards for terrace tree plantings and the proximity of trees to intersections.
91	Board of Park Commissioners	8. G&R	7	Recommend clarifying language under G&R Strategy 7 (page 95) "Improve public access to lakes." The City would not pursue purchase of protected shoreline easements without ensuring public access. This section should be clarified to ensure this does not mean purchasing easements to maintain shoreline on private property.	See also request #89.  Add the phrase "public access" on page 95, first sentence of the second column to read "The City should identify the highest priority lakeside properties and purchase or option <u>public access</u> easements when these properties become available."
92	Planning staff	8. G&R	7	What is a "beach day"?	Remove the phrase "out of 99 beach days" on page 95.
	Planning staff	8. G&R	8	Revert Strategy language back to "Reduce landfilled waste" to simplify language for readers.  The "reduce landfilled waste" strategy language had been included in an initial staff draft, but was changed due to a suggestion from another department. However, Planning staff feels that the current (May 1) language is too complicated.	Incorporate this change.
94	Food Policy Council	8. G&R	9	Include the following description for Urban Agriculture on page 97. "Urban agriculture involves the production of food for personal consumption, market sale, donation, or education, and includes associated physical structures, policies, and programs in cities and suburbs. Urban agriculture exists in multiple forms and for multiple purposes, including market farms, community gardens, school gardens, full-year vegetable production in greenhouses, orchards, rooftop gardens, and the raising of chickens, fish and bees.  Madison has supported a recent growth in urban agriculture through its Zoning Code, and other City ordinances permitting community gardens, fruit and nut trees, beehives and backyard chickens. The Zoning Code allows the creation of Urban Agriculture Districts to encourage small-scale farming within the city, one example being the 4.5-acre Troy Community Farm on Madison's north side. A joint city/county citizen work group has also been formed to develop supportive policies for urban farms and community gardens across Madison and Dane County."	Planning staff proposes edits to the proposed text to ensure consistent and accessible Plan language: Urban agriculture involves the production of food for personal consumption, market sale, donation, or education, and includes associated physical structures, policies, and programs within cities and suburbs. Urban agriculture exists in multiple forms and for multiple purposes, including market farms, community gardens, school gardens, full-year vegetable production in greenhouses, orchards, rooftop gardens, and the raising of chickens, fish, and bees.  Madison has supported a recent growth in urban agriculture through its Zoning Code, and other City ordinances permitting community gardens, fruit and nut trees, beehives, and backyard chickens. The Zoning Code allows the creation of Urban Agriculture Districts to encourage small-scale farming within the city, one example being the 4.5-acre Troy Community Farm on Madison's north side. A joint city/county citizen resident work group has also been formed to develop supportive policies for urban farms and community gardens across Madison and Dane County.

	Revised August 1, 2018 for August 7, 2018 Common Council Meeting					
Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation	
95	Sustainable Madison Committee	8. G&R	9	Descriptive paragraphs should highlight the <u>social</u> aspect of community gardens. Relationships are important.	Add to end of penultimate sentence in Action 8b text: "and encourage neighborhood interaction and increase social capital."	
96	Community Development Block Grant Committee	8. G&R	9	Include the Food Policy Council language for Urban Agriculture.	See recommendation for #94.	
	Sustainable Madison Committee	8. G&R	9	Include new Action language and descriptive paragraph provided by the Food Policy Council: <u>Action: Establish guidelines for agricultural best practices.</u> "We must also work to reduce the amount of fertilizers, pesticides and herbicides used, as they have negative environmental and health impacts. Fertilizers contain high levels of phosphorus that negatively affect the lakes and waterways; compost is one natural alternative to provide the soil with needed nutrients. Guidelines should be established for community gardens and other forms of urban agriculture to promote best practices that support both the natural environment and public health."  Additional information can be found in the memo from FPC.	See recommendation for #98.	
98	Food Policy Council	8. G&R	9	[For Strategy 9] There was a third action in the April draft that the Sustainable Madison Committee voted to restore: <u>Guidelines for Sustainable</u> Agricultural Best Practices  "We must also work to reduce the amount of harmful fertilizers, pesticides and herbicides used, as they have negative environmental and health impacts. Some fertilizers contain high levels of phosphorus that negatively affect the lakes and waterways; compost is one natural alternative to provide the soil with needed nutrients. Guidelines should be established for community gardens and other forms of urban agriculture to promote best practices that support both the natural environment and public health."	Action text: "Establish guidelines for sustainable agricultural best practices."  Establish Guidelines for Sustainable Agriculture Best Practices  Madison should We must work to reduce the amount of harmful fertilizers, pesticides, and herbicides. that Pesticides have negative environmental and health impacts. Fertilizers contain high levels of phosphorus which negatively affects the lakes and waterways. Guidelines should be established for urban agriculture to promote best practices that support the natural environment and public health in our community.  Note: staff made revisions to the language based on the two suggested versions of text provided by the Food Policy Council.	
99	Board of Health	8. G&R	9	Add an action on "Guidelines for Sustainable Agricultural Practices," to read:  "We must also work to reduce the amount of fertilizers, pesticides, and herbicides used, as they have negative environmental and health impacts. Fertilizers contain high levels of phosphorus that negatively affect the lakes and waterways; compost is one natural alternative to provide the soil with needed nutrients. Guidelines should be established for community gardens and other forms of urban agricultural to promote best practices that support both the natural environment and public health."  Related to the above, a definition is recommended for the appendix for Sustainable Agriculture: "Sustainable agricultural systems respond to site-specific conditions by integrating cultural, organic, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity."	See recommendation for #98. See #130 for recommended definition for Sustainable Agriculture.	

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
100	Community Development Block Grant Committee	8. G&R	9	Add an action on "Guidelines for Sustainable Agricultural Practices," to read: "We must also work to reduce the amount of fertilizers, pesticides, and herbicides used, as they have negative environmental and health impacts. Fertilizers contain high levels of phosphorus that negatively affect the lakes and waterways; compost is one natural alternative to provide the soil with needed nutrients. Guidelines should be established for community gardens and other forms of urban agricultural to promote best practices that support both the natural environment and public health."  Related to the above, a definition is recommended for the appendix for Sustainable Agriculture: "Sustainable agricultural systems respond to site-specific conditions by integrating cultural, organic, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity."	See recommendation for #98.
101	Sustainable Madison Committee	8. G&R	Intro	Add more specific language to reflect items already being worked on, particularly the Energy Plan and MOU with MG&E. Add a reference to the City's Sustainability Plan in the Introduction for the chapter.	Add a reference to the Sustainability Plan in the introduction for the chapter.
102	mike.s.barnett	8. G&R	Intro	[page 86] City tracks its CO2 emissions related to city operations and the community. If one of the goals is to reduce our City's contribution to climate change, shouldn't we include the data for these CO2 emissions in this section of the report?	Add City CO2 data from page 19 of City Snapshot document to the Plan's G&R introduction.
103	Petert	8. G&R	Intro	[page86] Missing: Madison's single largest current and long term environmental liability: the new and recently expanded coal plants that supply the majority of the electricity to the city. Plenty of data available to illustrate Madison's financial and environmental liabilities to the Columbia coal plant in Portage WI and the Elm Road coal plant in Oak Creek WI. If the plan can devote data snapshots to water quality and beach closures, surely something as significant as the coal dependency of the two utilities serving Madison (MGE and Alliant) is warranted.	Add to either G&R intro (pg 86) or G&R Strategy 3 (pg 90): "Madison Gas & Electric (MGE), which provides electric power to most Madison customers, sources 12% of its electricity from renewable resources and purchases 19% of its electricity, some of which may be renewable. Alliant Energy (Wisconsin Power & Light), which serves portions of the city, obtains 15% of its electricity from renewable sources plus 5% from nuclear power."
104	Transit & Parking Commission	8. G&R	N/A	There is no discussion of global warming or the City's carbon footprint - what is our plan to address carbon emissions?	Add text about what the City is doing and plans to do regarding carbon emissions by discussing the Energy Plan/Carbon Neutral Program. See attached red-line document titled "Green and Resilient Strategy 3."
105	Food Policy Council	9. EG	1	Revise the title and description for Action 1c. The language below is more explicit about potential partners, places more active emphasis on key components, and strengthens the supply chain of the local food system than the original language in the draft.  Work with Dane County and other municipalities in the county/region to develop a regional food systems plan.  Dane County has some of the most productive agricultural land in the world, as well as a strong food economy. The City should support Dane County and other entities in developing a regional food systems plan that would identify key components and prioritize development of the regional food supply chain. Strengthening our local supply chain will bring additional food security to our region, job opportunities for residents with a wide range of backgrounds, and support preservation of our agricultural land.	Incorporate the following:  "Work with Dane County and other municipalities in the county/region to develop a regional food systems plan.  Dane County has some of the most productive agricultural land in the world, as well as a strong food economy. The City should support Dane County and other entities in developing a regional food systems plan that would identifies key components and prioritize development of improvements to the regional food supply chain. Strengthening our local supply chain will bring additional food security to our region, job opportunities for residents with a wide range of backgrounds, and support preservation of our agricultural land."
106	Food Policy Council	9. EG	1	Slight revisions to the descriptive paragraph for Action c shown in italics: "Dane County has some of the most productive agricultural land in the world, as well as a strong food economy. The City should support Dane County and other entities in developing a regional food systems plan that would <i>identify key components</i> and prioritize development of the regional food supply chain. Strengthening our local supply chain will bring additional food security to our region, job opportunities for residents with a wide range of backgrounds, and support preservation of our agricultural land."	Incorporate this change shown in italics to the left.

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation	
107	Economic Development Committee	9. EG	1	The Food Policy Council's Comprehensive Plan Workgroup suggested changing the language to:  Work with Dane County and other municipalities in the county/region to develop a regional food systems plan  Dane County has some of the most productive agricultural land in the world, as well as a strong food economy. The City should support Dane County and other entities in developing a regional food systems plan that would identify key components and prioritize development of the regional food supply chain. Strengthening our local supply chain will bring additional food security to our region, job opportunities for residents with a wide range of backgrounds, and support preservation of our agricultural land.	See recommendation for #105.	
108	Eskrich	9. EG	2	Regarding the RTA, may want to make a more generalized statement to include other potential mechanisms for regional transit funding, in case an RTA isn't possible.	Incorporate this change and see also #109 & #110.	
109	Transit & Parking Commission	9. EG	2	Discuss the County having a role in the establishment of an RTA.	Incorporate this change.	
	Transit & Parking Commission	9. EG	2	More discussion of transit funding is needed - it won't all be covered by an RTA.	Add more discussion of funding (RTA and other sources) to EG strategy #2 and/or cross-reference with additional discussion.	
111	Planning staff	9. EG	2	Other important partners are the other major metros in the state, primarily Milwaukee/Racine, but also Appleton/Oshkosh, Green Bay, and interstate metros like Kenosha/Chicago, Superior/Duluth, and maybe even the counties bordering the Twin Cities. [page 101]	Incorporate this change: modify the first sentence under EG 2a to read: "The City and region should build coalition of local governments in Dane County and governments in other metro areas throughout the state to make the case for RTA enabling legislation with the State."	
112	City of Verona	9. EG	4	[page 104] Intergovernmental Boundary Agreement Map - The City of Fitchburg boundary agreement line color needs to be changed in the legend to match the map. (See attached email from City of Verona staff, Adam Sayre - attached in Legistar.)	Incorporate this change.	
113	City of Verona	9. EG	8	[page 110] - "Lack of trust in the Madison Police Department MPD) was" Change MPD) to (MPD).	Incorporate this change.	
114	Alder Zellers	9. EG	9	Action 9c about programmed building inspections - should mention this is blocked by state legislation.	Note reference to State law and how it changes programmed inspections. A resolution is now required before the City does programmed inspections. Add commentary about State pre-emption of local action at the beginning of the Plan.	
115	Alder Zellers	9. EG	9	Action 9a - Report a problem could be better used to collect data on contacts and resolution.	Staff edit: Add language to the end of the EG 9a text: "Collection of data on how Report a Problem is us and how problems are addressed could help the City analyze the service and make improvements to enhance the user experience and responsiveness of the service."	
116	Planning staff	9. EG	9	EG 9c is very similar to Neighborhoods & Housing - Action 6A.	Remove 9c, leave N&H 6a, combine some of the EG language, add cross-ref of N&H 6 in the EG intro, and fix in matrix.	
117	Long Range Transportation Planning Committee	9. EG		Add language to the Plan to "Engage Dane County in the funding and shared governance of public transit"	Incorporate this change.	
118	City of Verona	10. Matrix	N/A	[page 119] Strategy 4 Actions: – Change letter a to letter d.	Incorporate this change.	

	Nevised Adgust 1, 2018 for Adgust 7, 2018 Common Council Meeting				
Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
119	Alder Zellers	11. LU Supple- ment	N/A	In the first sentence on page 124 - the word "intended" is not clear enough. Midway through the second paragraph on page 124, beginning with "But if in the neighborhood plan" The Plan should specify what wil happen in the case of an inconsistency (i.e. the Comp Plan should be changed).	Incorporate the following revisions to page 124:  "If an inconsistency is identified between this Plan and a reasonably contemporary sub-area plan, substantial weight should be given to the sub-area plan. Additionally, either the sub-area plan or this Plan should be amended to eliminate the inconsistency. In cases where a sub-area plan land uses are is determined by the Plan Commission or Common Council to be inconsistent with this Plan, either the sub-area plan should be revised to be consistent, or an amendment to this Plan should be adopted to change the land use designation for the area of remedy the potential conflict. Because amending this Plan is a substantial undertaking, the City may not immediately amend this Plan to reflect sub-area plans that have been newly adopted (or amended) as a supplement to this Plan. Instead, it may aggregate GFLU amendments and other edits recommended by sub-area plans edits into a single, larger update. The City will still review proposals with respect to their compliance with sub-area plans that have been adopted as a supplement to this Plan even if such an update to this Plan has not yet been adopted."
120	Planning staff	11. LU Supple- ment	N/A	[State Statute Requirements] Address transportation systems for persons with disabilities, electric personal assistive mobility devices, air transportation, trucking, water transportation. Incorporate state, regional and other applicable transportation plans.	See attached red-lined document titled "Land Use and Transportation Supplement" page to be inserted on page 127 of the Plan.
121	Planning staff	11. LU Supple- ment	N/A	[State Statute Requirements] Land Use: Address trends in the price of land; amount, intensity, net density of existing land uses.	See attached red-lined document "Land Use Trends and Land Demand Analysis" to be inserted at the beginning of Land Demand Analysis.
122	Food Policy Council	11. LU Supple- ment	N/A	[page 122] Consider adding language about "agri-hoods" as a TND design principle. Add a definition for "agri-hoods" to the glossary.	Add the following text to the end of G&R Action 9b (the new text concerning Troy Gardens is in red): "The City should also identify locations that would be suitable for agrihoods, where development is integrated with a working farm. Troy Gardens on Madison's north side is a good example. Agrihoods could be developed at a variety of scales, but may be most appropriate on the edge of the city where they could serve as a transition to existing rural uses."
123	Food Policy Council	11. LU Supple- ment	N/A	Add something about balancing the need to preserve farmland on the periphery.	See attached red-lined document titled "Land Use and Transportation Strategy 6." This will be added to the LU&T chapter instead of the Land Use Supplement.
124	Alder Zellers	11. LU Supple- ment	N/A	Bassett Plan is missing from the list of plans [page 124]	Incorporate this change.
125	Alder Zellers	11. LU Supple- ment	N/A	[page 123] last sentence on the page - the use of "may be" in the sentence. Suggested to say: This Plan "will be" modified if a sub-area plan makes	Change phrasing to "should be".
126	Alder Zellers	11. LU Supple- ment	N/A	The list of sub-area Plans (beginning on page 124) - some have amendment dates and some do not. Should be consistent and ideally should include the amendments dates.	Incorporate this change.
127	Alder Zellers	11. LU Supple- ment	N/A	[page 125] In text for sub-area Plan retirement, near middle of the long first paragraph - who decides whether the plan reflects current City priorities?	[In 1st paragraph] Revise sentence to read: "As the city continues to grow and change, plans that have largely been implemented, have been superseded by a more recently adopted plan for the same area, or no longer reflect current priorities, as determined by this Plan, the Plan Commission, and City Council, should be retired."  Add a sentence in the middle of the second paragraph: "Stakeholders of areas covered by the plan will be
					engaged in the review and determination of whether the plan should be retired."

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
128	Alder Zellers	11. LU Supple- ment	N/A	Add a sentence: "If an inconsistency is identified between this Plan and a sub-area plan which is reasonably contemporary when this Plan is adopted, the sub-area plan shall be granted substantial weight. Additionally, either sub-area plan or this plan should be amended so they are consistent."	Incorporate the following revisions to page 124:  "If an inconsistency is identified between this Plan and a reasonably contemporary sub-area plan, substantial weight should be given to the sub-area plan. Additionally, either the sub-area plan or this Plan should be amended to eliminate the inconsistency. In cases where a sub-area plan land uses are is determined by the Plan Commission or Common Council to be inconsistent with this Plan, either the sub-area plan should be revised to be consistent, or an amendment to this Plan should be adopted to change the land use designation for the area of remedy the potential conflict. Because amending this Plan is a substantial undertaking, the City may not immediately amend this Plan to reflect sub-area plans that have been newly adopted (or amended) as a supplement to this Plan. Instead, it may aggregate GFLU amendments and other edits recommended by sub-area plans edits into a single, larger update. The City will still review proposals with respect to their compliance with sub-area plans that have been adopted as a supplement to this Plan even if such an update to this Plan has not yet been adopted."
129	Planning staff	12. Ref. Maps		All streets in the city not covered by the other categories have 0-5,000 ADT, yet only some are shown on the map. We should note why (not sure of TE's methods for deciding to do counts, but guessing they are done on all arterials and collectors).	Check if this is a state requirement and revise map so that it makes more sense.
130	Food Policy Council	13. Glossary		Add the following definitions to the glossary:  • SEED Program: The City of Madison budget includes annual funding to be distributed as micro-grants by the Madison Food Policy Council. The MFPC encourages community groups to submit proposals that improve the local food system and make food more accessible to Madison residents.  • Double Dollars: A program for FoodShare users in Dane County, offering a dollar-for-dollar match for EBT transactions at participating farmers' markets, farm stands, and food retail locations. The program is available year-round at sites throughout the Madison area.  • Sustainable Agriculture: Sustainable agricultural systems respond to site-specific conditions by integrating cultural, organic, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.  • Urban Agriculture: Urban agriculture involves the production of food for personal consumption, market sale, donation, or education, and includes associated physical structures, policies, and programs in cities and suburbs.	Planning staff proposes edits to the proposed text to ensure consistent and accessible Plan language. Incorporate the following definitions:  • SEED Program: The A City of Madison budget includes annual funding to be distributed as micro-grants program administered by the Madison Food Policy Council. The MFPC encourages community groups to submit proposals that that provides grants to improve the local food system and make food more accessible to Madison residents.  • Double Dollars: A program for FoodShare (Wisconsin's version of the federal Supplemental Nutrition Assistance Program) users in Dane County, offering a dollar-for-dollar match for EBT transactions purchases at participating farmers' markets, farm stands, and food retail locations. The program is available year-round at sites throughout the Madison area.  • Sustainable Agriculture: Sustainable agricultural systems respond to site-specific conditions by integrating cultural, organic, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. An integrated system of plant and animal production practices having a site-specific application that will, over the long term: satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole. (Source: USDA)  • Urban Agriculture: The production of food for personal consumption, market sale, donation, or educational purposes, and includes associated physical structures, policies, and programs within cities and suburbs.
131	City of Verona	15. General	N/A	The layout and photos are very sharp. Please adjust the maps to make it easier to read by adding labels on all of the major roads (CTH M, PD, etc.) and placing the polygons underneath the roads.	Make changes as suggested.
132	Planning staff	10. Matrix	page 118	Change back to previous Strategy language for G&R Strategy 8: "Reduce landfilled waste." The "reduce landfilled waste" strategy language had been included in an initial staff draft, but was changed due to a suggestion from another department. However, Planning staff feels that the current (May 1) language is too complicated. If something is being used, it is not waste.	Change back to previous Strategy language: "Reduce landfilled waste."

Comment #	Requested By	Chapter	Strategy	Requested Change	Final Plan Commission Recommendation
133	Alder Zellers	14. UF		UrbanFootprint analysis needs to go beyond just talking about the positives of infill. Should include discussion of gentrification as well as the pressure it creates on historic properties. Redevelopment can also remove housing stock suitable/supportive of families. Commissioner Polewski would like to see the gentrification topic cover lower-cost housing near places of employment as well.	Page 165, first column, last full paragraph, revise to read: "Of course, infill and redevelopment can have negative impacts. While overall VMT is reduced, local traffic may increase. Additionally, demand for low-cost or free on-street parking can increase. While harder to quantify, infill and redevelopment can change the general feel of an area, especially an area with a prevalence of historic buildings. While infill and redevelopment can add exciting new destinations, larger buildings are sometimes seen as out of scale with their surroundings and are not always embraced by some residents who value the current look and feel of a corridor or neighborhood. Redevelopment can also lead to increased housing costs and commercial rents, as newer units typically rent for higher prices than development that may have previously been present on a redevelopment site. Loss of existing low-cost residential units and commercial spaces can lead to displacement of current residents and businesses."

## **Growth Priority Areas**

(Item #7 and #32 on spreadsheet) Update to page 15

The Growth Priority Areas Map on the following page shows Activity Centers and corridors planned prioritized for mixed-use infill development and redevelopment. It also, as well shows as prioritized peripheral growth areas and new Activity Centers that are planned to become the cores of new neighborhoods (see Strategy 5 in thethis Land Use and Transportation Element for a definition of "Activity Center").

#### **Activity Centers**

Activity Centers are broken down into Regional, Community, and Neighborhood Activity Centers, based on the centers' general size, position within the metro area, and current or prospective ability to draw from the surrounding area or region. Regional Activity Centers tend to be larger in size, along major streets and transit routes, and have the capacity to serve as a relatively intense mixed-use center for both the surrounding area and the city as a whole. Community Activity Centers still tend to have access to transit and major streets, but are expected to develop at a lower intensity than regional centers and serve a smaller area. Neighborhood centers tend to draw primarily from the surrounding neighborhoods, generally have less transit access, and are sometimes located along less busy streets or sections of streets.

Activity Centers are also broken into categories based on whether they are already established

as a mixed-use center, have existing commercial or employment development that should transition to a mix of uses, or are currently undeveloped but planned for a future Activity Center. Established Activity Centers have tended to attract the majority of redevelopment since the last Comprehensive Plan in 2006, as they have the walkability, transit service, destinations, and other amenities already in place that residents demand. Established Activity Centers will continue to see redevelopment, but unlocking the potential of Activity Centers that are identified for a transition to mixed-use development will be a major key in addressing the strong preference for redevelopment expressed throughout the public interactions that took place as part of the Imagine Madison process (see Strategy 6 in the Land Use and Transportation Element for further discussion). A significant amount of public feedback expressed a desire to initiate or increase redevelopment in existing single-use commercial areas to convert them to more mixed-use areas. -That feedback informed the high number of areas that have been identified as Transitioning Activity Centers on the Growth Priority Areas- map.

The City should continue to encourage appropriate context-sensitive redevelopment within Activity Centers and mixed-use corridors through implementation of strategies and aActions within this Plan, but will also need to undertake detailed planning to set the stage for some identified current commercial and employment areas to transition to vibrant mixed-use Activity Centers. Such planning efforts should address the role of the City in facilitating

transitions to mixed-use areas, especially with regard to parking.

Some Transitioning and Future Centers may take 20 or more years to become Established Centers. While creating more Established Activity Centers is a major focus of this Plan, there is no specific timetable for building out the various Transitioning and Future Activity Centers. Implementation of some Future Activity Centers will depend upon annexation of land into the city under existing boundary agreements.

#### **Corridors**

The Growth Priority Areas Map also shows corridors that have potential for a mix of uses along their length. These corridors are broken down into two categories. Community Corridors tend to be smaller arterial streets that serve the surrounding neighborhood and City. Regional Corridors are larger arterials that serve both the city and the region. The main considerations for designating a Community or Regional Corridor were generally:

- Good existing or planned transit service; and
- A mix of land uses along the length of the corridor, as shown in the Generalized Future Land Use Map.

Some major streets in the city, like Whitney Way and North Sherman Avenue, have planned BRT, but are primarily lined with Low Residential land uses, and are therefore not designated as corridors. Other major streets, such as John Nolen Drive and Packers Avenue, have some transit, but lack a diversity of existing or planned future land uses along the corridors. All corridors, with the exception of Williamson Street and portions of the Monroe/Regent

corridor, are (or will be) transitioning from their current auto-oriented development to more transit-, walk-, and bike-friendly styles of development.

## **Peripheral Growth Areas**

New peripheral growth will still be allowed, but should occur within priority areas, as shown on the map on the following page. The City has an opportunity to capture the high regional demand for walkable living as part of newly developed Traditional Neighborhood Developments (TNDs) on the periphery. The smaller lots, gridded streets, and Activity Centers that are a part of TNDs not only aid in creating a strong sense of place, but also create high-value development and allow for more residents to be served with less infrastructure. When combined with continuing redevelopment, which tends to generate even more property value and occurs in areas where infrastructure and services are already present, the City's growth priorities will help contribute towards long-term financial stability.

# **UrbanFootprint Appendix**

(Item #57 on spreadsheet) Update to page 161

# Public Input Results – Website

UrbanFootprint analysis was used as part of an Imagine Madison website module where visitors had an opportunity to explore outcomes and view maps based on the three citywide scenarios summarized above. Website visitors could explore the anticipated land consumption, household water use, household vehicle miles traveled (VMT), and time spent walking associated with each scenario, alongside maps that depicted geographic variations in these metrics. It is important to note that in an effort to keep participation accessible and concise, dozens of other possible UrbanFootprint metrics were not presented. Further, other potential considerations that could factor in to a discussion of where to accommodate growth such as impacts on parking, transit ridership, property values, and rental rates were not covered. Upon reviewing the information that was available, participants could then choose the scenario that most closely matched their vision for the future of the city.

See the maps on the following pages for a comparison of where development of new dwelling units was generally shown for each scenario (green represents edge development and pink represents redevelopment; the darker the color, the more intense the development). Two-thirds of respondents chose-selected the Scenario #3 (which showed scenario with the

most infill and redevelopment), as the generally preferred path for future development in the city. 20% chose the scenario with an even mix of edge development and redevelopment, and 13% chose the scenario with the most edge development Scenario #2, and 13% felt Scenario #1 was most appropriate for accommodating future growth.

In addition to reviewing and selecting their preferred UrbanFootprint growth scenario, respondents could also answer three multiple choice questions covering what type of neighborhood housing they preferred, how important they felt it was to have neighborhoods close to destinations such as schools and shops, and how important they felt it was to have neighborhoods with access to public transit. Additionally, participants were asked open-ended questions about good locations for lower cost housing, what area/neighborhood should be prioritized for development and why, and for examples of valued development (i.e., favorite neighborhoods or projects that could be considered a good example for future development).

# Public Input Results – Community Meetings and Resident Panels

Imagine Madison community public meetings used UrbanFootprint in a different manner.

Background information was provided to community meeting attendees participants in an introductory presentation and via a series of displays that showed existing conditions for the

percent of trips taken by non-car modes of transportation, walking minutes per day for adults, and miles driven per household per year (also known as "vehicle miles traveled," or VMT). These maps conveyed the geographic differences between how people households travel based on where they livelocation.

Community meeting participants could explore select information from the same three scenarios that were provided on the Imagine Madison website. They were then asked to place dots on a map of the city and surrounding area to show where they thoughtfelt the city should accommodate the estimated 40,000 housing units that are anticipated in the next twenty years. As with the website, this was not a statistically valid survey, but of those electing to participate during community meetings, Nninety-one percent of dots were placed in infill and redevelopment areas. A similar growth prioritization exercise was provided to Resident Panels, though none of the UrbanFootprint background information was included. and 81% of resident panel responses prioritized dots were placed growth in infill and redevelopment areas. The multiple choice and open-ended questions that were on the website were also provided to community meeting and Resident Panel attendees.

#### **Green and Resilient Strategy 3**

(Item #79 and #80 in spreadsheet) page 90

#### Strategy 3

Increase the use and accessibility of energy efficiency upgrades and renewable energy.

#### Actions:

C.

- a. Implement the Energy Plan to reach the goal of 100% renewable and zero-net carbon emissions.
- a.b. Promote various financing tools to fund energy efficiency upgrades and renewable energy.
- b. Partner with electrical utilities to provide education aboutincrease renewable energy and provide education on the associated cost savings.
- d. Identify locations for solar installations and other renewable energy sources, including City facilities.
- e.d. Support infrastructure to expand the use of electric vehicles,—and other eco-friendly fuel sources, including the City's fleet.

The City recently adopted a community wide goal to transition to 100% renewable energy and net-zero carbon emissions. There has been a lot of change and technological advancement in the area of renewable energy in recent years. Solar and wind energy is competing with non-renewable sources such as coal and natural gas. We must continue to evaluate and address climate change impacts by reducing greenhouse gas emissions through the expanded use of renewable energy and promotion of energy efficiency measures.

The City of Madison is already advancing renewable energy through partnerships with our electrical utilities, installing solar energy systems on city buildings through the Green Madison program, and encouraging businesses and residents to install solar through MadiSUN. Regarding energy efficiency, all new City buildings are LEED certified and the City provides funding to the private sector to add insulation, upgrade lighting and HVAC systems, and trains building management staff on strategies to reduce energy use.

#### a. Implement the Energy Plan

A key part of moving toward cleaner energy will be identifying projects in public and private buildings to reduce fossil-fuel based energy consumption and expand use of renewable energy sources. The City should prioritize installation of renewable energy systems, such as solar, wind, and geothermal, on City facilities. In addition, the City's detailed sub-area plans should identify opportunities for shared solar installations.

#### **ab**. Financing Tools

The City should promote programs that finance the cost of energy efficiency upgrades and renewables. Property Assessed Clean Energy (PACE) financing, sourced through and open lending market, can cover the full cost of energy efficiency upgrades and renewables over a long repayment period. Energy savings can offset the repayment cost. Like property taxes, PACE financing may be transferred to the next property owner if the property is sold. Examples of energy efficiency upgrades that can be financed through PACE include lighting, heating and cooling, insulation, and solar panels. Shared Savings through Madison Gas and Electric and Focus on Energy are other programs which help residents and businesses reduce energy usage.

#### waste.

#### bc. Education

Another method for increasing the use and accessibility of sustainable energy practices is through awareness. The City should partner with electrical utilities and nonprofits to create an education program about the benefits of and cost savings associated with renewable energy and energy efficiency, energy cost parity, which occurs when the cost of renewable energy becomes equal to or less than electricity from conventional energy forms like fossil fuels. This program should provide materials in several languages and be promoted to community based organizations that directly work with underrepresented groups.

#### c. Identify Locations

The City recently adopted a community wide goal to transition to 100% renewable energy and net zero carbon emissions.—To implement this goal, the community must identify projects in public and private buildings to reduce our fossil fuel based energy consumption and expand use of renewable energy sources. The City should prioritize installation of renewable energy systems, such as solar, wind, and geothermal, on City facilities. In addition, the City's detailed land use plans should identify opportunities for shared solar\_installations.

#### d. Eco-Friendly Vehicle Infrastructure

Transportation is a major contributor to greenhouse gas emissions. In addition to providing alternative forms of transportation for the public, the City should plan for and support infrastructure to expand the use of electric vehicles and other eco-friendly fuel sources including biogas, natural gas, and plug-in hybrids. This vital infrastructure will support not only privately owned vehicles, but also the transition of the City's fleet to electric vehicles and biogas. Madison is in the implementation stage of converting the City's fleet to cleaner energy sources, by bringing electric cars and buses into the fleet. This vital infrastructure will support not only privately owned vehicles, but also the transition of the City's fleet to electric vehicles.

**Commented [KLL1]:** Add definitions to the glossary:

MadiSUN LEED

Biogas

# Land Use and Transportation Supplement

(Item #120 on spreadsheet) (Change "Land Use Supplement" to "Land Use and Transportation Supplement" and add a new subsection to page 127; July 30, 2018 meeting – Metro-recommended redlines in red)

# **Transportation**

# Transportation Systems for Persons with Disabilities

All of the City's Metro buses are equipped with accessibility features, including bus stop annunciators, wheelchair securement locations, ADA-accessible ramps, and a kneeling feature, enabling all individuals, with operator assistance, to board, ride, and disembark from all standard Metro buses. The City will continue to purchase such buses, including for any future implementation of bus rapid transit (BRT). Improvement of transit service through implementation of BRT (see LU&T Strategy 1) will benefit persons with disabilities, as will extension of standard Metro service (see LU&T Strategy 2).

Changes to state law have resulted in mandatory City participation in Implementation of the State of Wisconsin's Family Care program in Dane County in 2018 may result in the shifting of an estimated, which shifted \$3.9 million of funding away from Metro's paratransit program to contractors. The anticipated loss of funding will result in changes to Metro's paratransit service. The detailed work of determining the precise magnitude of the changes, when they will be implemented, and how they will be implemented will be undertaken by the City's Transportation Policy and Planning Board and Transportation Commission.

#### Air Transportation

The region's major air transportation facility is Dane County Regional Airport, which is administered by the County. The City will continue to work with Dane County to maintain and improve air passenger services and air freight services to attract, maintain, and enhance business development in the City.

#### Trucking

The City will continue to provide truck routes for the safe and efficient movement of truck traffic within the city to provide access to and serve the needs of city residents and businesses. The negative impact of trucks on existing and future residential neighborhoods should be minimized.

#### Water Transportation

City, resident, and business use of the area's lakes and rivers is generally limited to recreational purposes. The City has no plans to pursue water transportation.

#### **Regional and State Transportation Plans**

Some transportation-related planning and project development that affect the city are managed by other local, regional, or state agencies or entities. The City has an excellent relationship with the Madison Area Transportation Planning Board (MATPB), which is the federally-designated Metropolitan Planning Organization (MPO) for the Madison urban area. The MATPB is the policy body responsible for cooperative, comprehensive regional transportation planning and decision making. The City has worked closely with the MATPB to ensure that regional plans integrate the City's transportation interests and concerns. The 2050 Regional Transportation Plan goals, objectives, and policies line up well with the

transportation-related Strategies and Actions of this Plan. Similarly, the MATPB's 2015 Bicycle Transportation Plan for the Madison Metropolitan Area and Dane County continues the City's and region's strong commitment to bicycling for transportation and recreation, ensuring that City efforts to improve the bicycle system are well-integrated with adjoining municipalities. Finally, the MATPB's 2013 Bus Rapid Transit Study set the stage for the system included in this Plan. The City anticipates working closely with the Board to implement BRT, per the previously undertaken planning efforts.

While the State of Wisconsin maintains a statewide plan for transportation (Connections 2030), with statewide plans for specific detailed topics like bicycling, pedestrians, freight, and rail, the plans that tend to be most applicable to the city are for specific highways and corridors. However, with recent state transportation funding challenges, many studies and planned projects, such as the Beltline and Stoughton Road/US Highway 51, have been delayed, and it is uncertain when the projects will be restarted, making it difficult to integrate such projects and plans within this Plan. The City shares some common goals with the State, such as improving connectivity across existing limited-access highways like the Beltline. At other times, goals can be at odds, but the City will look to continue engaging with the State to ensure that local and regional interests are well-represented in State projects that impact Madison. Madison in Motion, the city's Transportation Master Plan, contains more information on how the City can connect with regional planning efforts and work with WisDOT to improve connectivity and transportation in the Madison region.

Land Use and Transportation Strategy #6 (Item #20 and #123 on Spreadsheet)
Page 39

## Strategy 6

Facilitate compact growth to reduce the development of farmland.

Dane County contains some of Wisconsin's most productive farmland. Feedback through the Imagine Madison process highlighted the importance of infill/redevelopment and compact edge growth to reduce the loss of farmland. The City of Madison strives to accommodate a large share of Dane County's growth within a small geographic area. For example, about 50% of the new housing units constructed in Madison over the last decade were infill/redevelopment projects, primarily multifamily residential projects. This compact growth pattern reduces the demand for development of farmland within the county. Even City of Madison edge development that converts farmland to housing and employment uses is an improvement over spreading the same amount of housing and employment development over a much larger rural area. The impacts of low density rural development are particularly acute when they are located in isolated areas and interrupt larger tracts of farmland and efficient farming operations.

Input on growth prioritization from Imagine Madison public feedback indicated a strong preference for infill (building on undeveloped land that is surrounded by other development) and redevelopment (building on previously developed land) over edge development (building on farmland) to satisfy continuing demand for more housing.

About 50% of the new housing units constructed in the City of Madison since 2006 have been in redevelopment projects, primarily as multifamily residential. When asked which areas of the city are most appropriate to accommodate future growth, 81% of Resident Panel survey respondents and 91% of community meeting respondents preferred land in already-developed areas. Similarly, about two-thirds of website survey respondents advocated for an even higher amount of infill and redevelopment than the city has seen since adoption of the city's last Comprehensive Plan in 2006. 20% of website survey respondents felt that aiming for a 50/50 mix was appropriate.

The strong-community preference for infill and redevelopment should not be taken as a demand for totally eliminating edge growth. Recognizing the importance of creating well-designed and complete neighborhoods, regardless of where they are located, the City should continue to reexamine peripheral neighborhood development plans and update them, seeking opportunities to allow for more efficient land use and to reduce the rate at which farmland is developed. Such changes should be accompanied by increased street, bicycle, and pedestrian connectivity to shorten trips, facilitate future transit service, and encourage more healthy transportation options such as walking and biking to nearby jobs and mixed-use activity centers. The Ceity should continue to preserve options for urban growth by exercising its extraterritorial zoning powersjurisdiction and by working with nearby communities on intergovernmental agreements that prohibit limit low density, low-value, high (municipal service) cost development in potential future city expansion areas.

This strategy and the accompanying actions are closely related to Strategy 5 on the preceding pages.

#### b. Priority Growth Areas

Peripheral growth should first occur in areas already served by utilities, followed by other areas already within the Central Urban Service Area (CUSA). Leapfrog development should be minimized, though it is sometimes unavoidable if certain landowners do not choose to develop their properties. Growth should be guided through careful planning of utility extensions and phasing plans included within updated NDPsNeighborhood Development Plans. There is currently a significant amount of undeveloped land in the CUSA\_right now—any Amendments to add land to the CUSA should be carefully considered and be consistent with adopted City plans and should-include consideration of variables including consider the amount of farmland that would be lost and the amount of development that would be accommodated. See the Growth Priority Areas Map in the Growth Framework Element for priority peripheral growth areas and priority infill-/redevelopment areas.

# **Land Use Trends and Land Demand Analysis**

(Item #121 on spreadsheet) Update to page 126

Wisconsin's Comprehensive Planning Legislation requires municipalities to provide 20-year projections for land uses in five-year increments. The required projections, shown in Table 1, are based on a variety of spatial assumptions. The projections shown here are general estimates. Changes in demand, financial changes, and other factors may considerably alter these projections. Additionally, land uses such as agriculture do not make up a significant percentage of City land and, in an urban setting, are often accessory to other land uses and are thus not included. Nevertheless, despite the shortcomings of the assumptions and difficulty in making projections in general, the land demand analysis provides a framework for estimating the amount of land the City will need to accommodate growth through 2040.

#### [insert existing Table 1 from page 126]

Trends in the price of land and the amount, intensity, and density of existing land uses are some of the attributes that dictate how land is used in Madison. The following tables and discussions provide an explanation of land price, development, intensity, and density trends. Table 2 shows that between 2000 and 2016, the city of Madison has annexed approximately 13 square miles. During the same time, the city's population increase by nearly 50,000 residents, resulting in an increase in residential density within city limits from 3,106 to 3,156 persons per square mile. During the same time, equalized land value within the city has increased from \$67,350 to \$117,485 per acre, a rate of increase nearly double the inflation rate over the same period. Table 3 shows the change in the acres of land dedicated to current land uses. Despite an increase of over 2,400 acres between 2005 and 2017, the number of acres used for agriculture or sitting vacant has declined by nearly 1,700 acres, meaning a large amount of land already within Madison city limits is being converted to other uses, primarily residential, commercial, and parks and open space. In 2017, non-vacant commercially-, industrially-, and employment-zoned parcels had an average floor area ratio of 0.25, which represent significant intensity increases over the 0.15 FAR projection for commercial uses and 0.20 FAR projection for industrial uses in the 2006 Comprehensive Plan. Table 4 shows parcel creation in Madison via plats and certified survey maps. While parcel creation fluctuates from year to year, recent totals are higher than the years of 2007-2009, when fewer than 200 new parcels were created each year. Parcel creation is still below the decade of 1997-2006, when 900 parcels were created annually on average.

Table 2: City Area, Valuation, and Density

<u>Year</u>	Land Area (sq. mi.)	Equalized Value (Land only)	Value/Acre	<u>Population</u>	Population Density (per sq. mi.)
<u>2016</u>	<u>80.0</u>	\$6,017,511,950	<u>\$117,485</u>	252,557	<u>3,156</u>
<u>2014</u>	<u>78.5</u>	<u>\$5,699,050,800</u>	<u>\$113,504</u>	<u>245,674</u>	<u>3,131</u>
<u>2012</u>	<u>75.2</u>	\$5,544,386,800	\$115,271	240,315	<u>3,198</u>
<u>2010</u>	<u>75.0</u>	\$4,978,806,200	<u>\$103,779</u>	233,777	<u>3,119</u>
<u>2008</u>	<u>74.7</u>	<u>\$5,410,955,000</u>	<u>\$113,160</u>	<u>226,650</u>	<u>3,034</u>
<u>2006</u>	<u>74.2</u>	\$5,179,451,200	<u>\$109,116</u>	223,280	<u>3,010</u>
<u>2004</u>	<u>72.4</u>	<u>\$4,478,252,400</u>	\$ 96,642	<u>217,935</u>	<u>3,010</u>
2002	<u>71.6</u>	<u>\$3,635,501,300</u>	<u>\$ 79,325</u>	<u>213,679</u>	<u>2,984</u>
<u>2000</u>	<u>67.0</u>	<u>\$2,887,522,900</u>	<u>\$ 67,350</u>	<u>208,054</u>	<u>3,106</u>

Source: Land Value: DOR Statement of Changes in Equalized Value; Area: Planning Division; Population: US Census Bureau, Wisconsin Dept. of Administration

Table 3: Existing Land Use (acres)

<u>Land Use</u>	<u>2005</u>	<u>2017</u>	<u>Increase</u>
<u>Residential</u>	<u>13,140</u>	<u>15,008</u>	<u>14%</u>
<u>Commercial</u>	<u>4,133</u>	<u>4,942</u>	<u>20%</u>
<u>Industrial</u>	<u>4,079</u>	<u>4,161</u>	<u>2%</u>
<u>Institutional</u>	<u>2,334</u>	<u>2,282</u>	<u>-2%</u>
Parks & Open	<u>8,719</u>	9,645	<u>11%</u>
<u>Space</u>			
Agriculture &	<u>7,568</u>	<u>5,887</u>	<u>-22%</u>
<u>Vacant</u>			

Source: Planning Division

Table 4: Parcel Creation

<u>Year</u>	<u>Parcels</u>
	<u>Created</u>
<u>2013</u>	<u>184</u>
2014	<u>958</u>
2015	<u>316</u>
<u>2016</u>	<u>468</u>
2017	<u>649</u>

Source: CARPC Regional Trends, Planning Division

[land demand analysis continues with existing paragraph 2 and table 2, now re-labeled table 5 – all other tables must be re-labeled]

# URBANFOOTPRINT ANALYSIS

# UrbanFootprint Analysis for the Comprehensive Plan

As part of the Comprehensive Plan process, the City used a growth scenario modeling tool called UrbanFootprint to help estimate the future impacts of our land use and transportation decisions across seven major modules: energy use, water use, fiscal impacts (for both the City and for households), transportation, emissions, health, and land consumption. Growth scenario modeling works by creating a map of existing transportation, land use, employment, development density, and other aspects of urban development. Changes to land use and transportation are then made to existing conditions to create a future scenario. The impacts of future scenarios across the seven metrics are then compared to existing conditions or to other alternate scenarios. UrbanFootprint was customized for use in Madison and Dane County with local data and information from dozens of sources, including the Census, InfoUSA (employment data), Madison Water Utility, Madison Gas and Electric, Wisconsin DNR, the National Household Travel Survey, City Assessor, Capital Area Regional Planning Commission, Dane County, the Madison Area Metropolitan Planning Organization, and many others.

Three citywide scenarios were created for the Imagine Madison process, all of which assumed the addition of approximately 70,000 new residents and 37,000 new employees by 2040. Those scenarios are mapped and summarized on the following pages.

To maintain an "apples to apples" comparison, all three scenarios also assume development occurs according to the Comprehensive Plan's Generalized Future Land Use (GFLU) Map (see page 18 of the Growth Framework chapter). The difference between the scenarios was where growth would occur, not whether the Comprehensive Plan was followed.

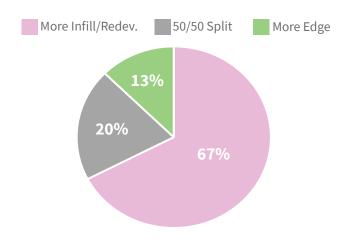
More roadbuilding and less transit were associated with Scenario #1 because edge development tends to be less intense, have a less walkable street network, have less mixing of uses, and be more difficult to serve with transit due to low development intensity and a larger service area.

More transit service was associated with Scenarios #2 and #3 because redevelopment tends to occur in areas that are already walkable and served by transit. Public feedback on Plan goals and strategies in the initial stages of the Imagine Madison process helped inform scenario development.

#### **Public Input Results - Website**

UrbanFootprint analysis was used as part of an Imagine Madison website module where visitors had an opportunity to explore outcomes and view maps based on the three citywide scenarios summarized above. Website visitors could explore the anticipated land consumption, household water use, household vehicle miles traveled (VMT), and time spent walking associated with each scenario, alongside maps that depicted geographic variations in these metrics. People could then choose the scenario that most closely matched their vision for the future of the city.

See the maps on the following pages for a comparison of where development of new dwelling units was generally shown for each scenario (green represents edge development and pink represents redevelopment; the darker the color, the more intense the development). Two-thirds chose the scenario with the most infill and redevelopment, 20% chose the scenario with an even mix of edge development and redevelopment, and 13% chose the scenario with the most edge development.



#### **Public Input Results - Community Meetings**

Imagine Madison public meetings used UrbanFootprint in a different manner. Background was provided to community meeting attendees in an introductory presentation and via a series of displays that showed existing conditions for the percent of trips taken by non-car modes of transportation, walking minutes per day for adults, and miles driven per household per year (also known as "vehicle miles traveled," or VMT). These maps conveyed the geographic differences between how households travel based on where they live.

Community meeting participants could explore select information from the same three scenarios that were provided on the Imagine Madison website. They were then asked to place dots on a map of the city and surrounding area to show where they felt the city should accommodate the estimated 40,000 housing units that are anticipated. Ninety-one percent of dots were placed in infill and redevelopment areas. A similar growth prioritization exercise was provided to Resident Panels, and 81% of resident panel responses prioritized growth in infill and redevelopment areas.

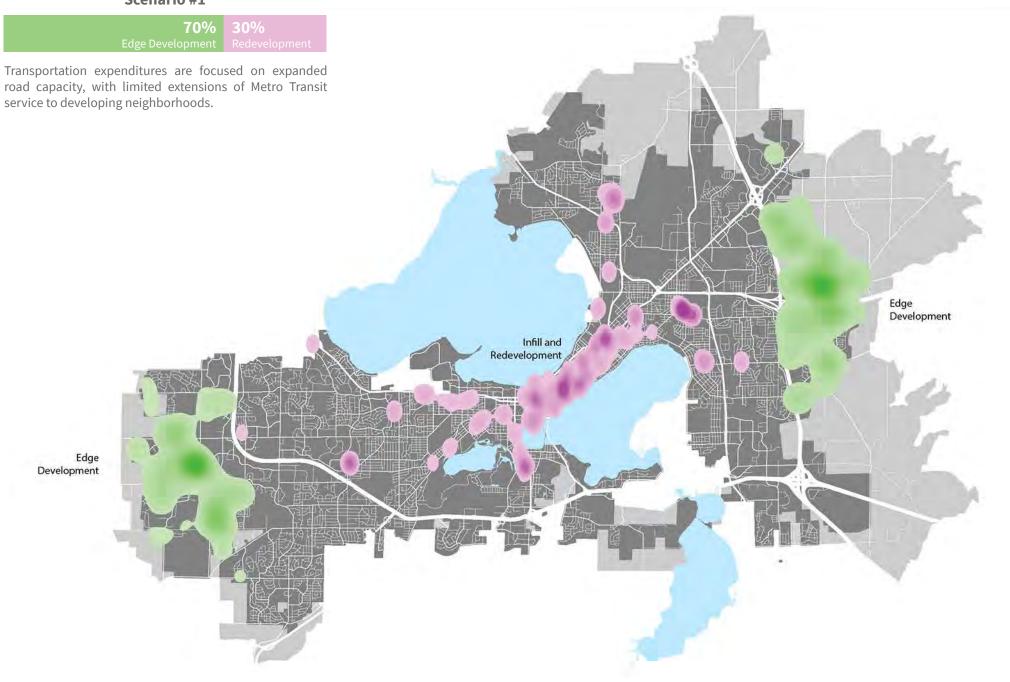
# **Implications of Growth Prioritization Results**

Implementation of the community's strong general preference for growth to be largely accommodated through infill and redevelopment will be challenging. Redevelopment, when compared to edge development, will always have more residents nearby, some of whom may not agree with a given project. When contrasted with edge development, which tends to have very few (if any) neighbors, attempting to address stakeholder concerns with a proposed redevelopment project creates uncertainty in the development process. When combined with other redevelopment challenges that generally are not present in edge development, such as building demolition, a constrained site, potential environmental contamination, and maintaining transportation circulation, the market demand and the potential financial reward of redevelopment has to be substantial before a redevelopment project can proceed.

With all of the challenges associated with redevelopment, the benefits can sometimes be overlooked. Redevelopment

Continued on page 165

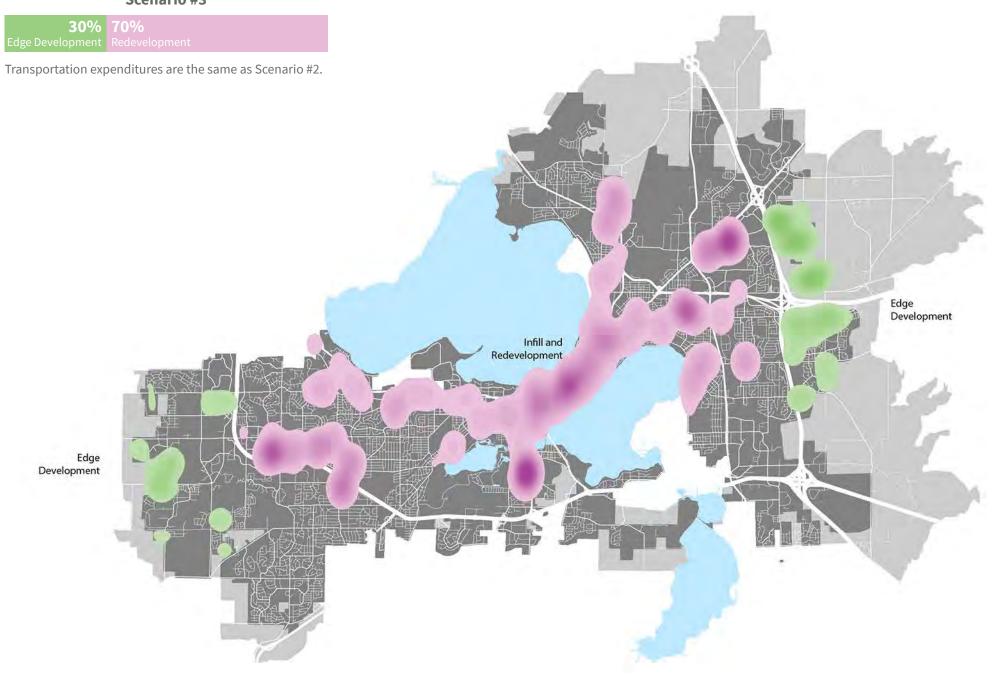
# Scenario #1



# Scenario #2

50% 50% Some transportation expenditures expand road capacity, but substantial expansion of Metro Transit is implemented, including express bus routes to outlying communities. Additionally, the full Bus Rapid Transit (BRT) system is implemented (see the BRT map in the Land Use and Transportation Element). Edge Development Infill and Redevelopment Edge Development

# Scenario #3



projects frequently have access to existing transit service, the road and utility networks have already been constructed, no additional roads need to be maintained to serve redevelopment, the area is already covered by emergency services, and property values (and therefore property tax collections) are substantially higher for most redevelopment projects, among other factors. All this adds up to redevelopment generating more tax revenue for the City while creating fewer costs to be borne by property taxpayers. Not only is that better in the short term, but redevelopment also helps sustain the fiscal health of the City over the long term – fewer maintenance liabilities are generated, and the City doesn't have to depend as much upon revenues from new growth to pay for maintaining existing services and infrastructure.

There are also a number of environmental benefits to redevelopment. Because redevelopment tends to be more intensive, with smaller lots or larger buildings, there tends to be less energy use per resident or per employee. Water use per household tends to be lower as well. For example, multifamily buildings do not have as much lawn to irrigate, and single family homes, when built as part of a redevelopment or infill project, tend to be on smaller lots with smaller lawns. Redevelopment also reduces the amount of rural farmland and forested lands needed for edge development. Finally, infill and redevelopment are effective at reducing VMT1 and the accompanying fossil fuel usage and air pollution if projects are planned and implemented with a connected and walkable street network, destinations that are accessible by walking and transit, and a diversity of land uses.

Of course, infill and redevelopment have impacts. While overall VMT is reduced, local traffic may increase. Additionally, demand for low-cost or free on-street parking can increase. While harder to quantify, infill and redevelopment often change the general feel of an area. While it can add exciting new destinations, larger buildings are sometimes seen as out of scale with their surroundings and are not always embraced by some residents who value the current look and feel of a corridor or neighborhood.

Adoption of neighborhood and other sub-area plans which address land use, built form, public infrastructure investments, and other physical, and sometimes social,

aspects of a neighborhood can help address concerns in advance of an actual proposal and reduce controversy and conflict for redevelopment, thus lessening one of the barriers to redevelopment.

## **UrbanFootprint and Madison's Future**

While UrbanFootprint helps quantify the impacts of different styles of development, simply using the tool does not guarantee a desirable outcome. Detailed plans that address factors that are unique to a given area or corridor are still needed to ensure that complete neighborhoods – both those on the edge and those experiencing redevelopment – are created. However, UrbanFootprint does help to put numbers to many of the considerations (VMT/traffic, transit use, water use, energy use, emissions, health impacts, land consumption, and fiscal impacts) that are often overlooked when development or redevelopment is proposed. UrbanFootprint was used to analyze the future of the city in two different ways:

- Three citywide scenarios were created to analyze the impacts of focusing on redevelopment versus edge development.
- Scenarios were created for three specific areas of the city that have a high capacity for redevelopment and are planned for future Bus Rapid Transit (BRT) service to analyze the short-term and potential long-term impacts of substantial transit-oriented development around planned BRT routes.

The sections below describe the approach and outcomes of each analysis. It should be noted that none of the scenarios are plans – they simply represent different potential futures for the City, all of which comply with the Comprehensive Plan's Generalized Future Land Use Map.

#### **Citywide UrbanFootprint Scenarios**

The table on the next page summarizes citywide UrbanFootprint growth scenarios. All three scenarios assumed 70,000 new residents and 37,000 new employees are added to the city through 2040. The difference between the scenarios is where the new growth is accommodated.

The table on the next page summarizes the results of UrbanFootprint scenarios for selected metrics, with further analysis following the table. Note that UrbanFootprint analyzes conditions for all of Dane County, including both existing development and planned development in future scenarios. This means that new development can only have an incremental change on future outcomes for the entire area because there are already a substantial number of people living in Dane County. The county's 2015 population was 523,643, and the UrbanFootprint scenarios anticipate adding 70,000 residents to the city. With 70,000 new residents representing 13% growth for the county as a whole, the impacts of predicted city growth become diluted. As such, some metrics, such as water consumption, are not shown in the summary table because there is not a substantial difference between scenarios. However, there are still some patterns that emerge that, in aggregate, represent meaningful differences in the outcomes attributable to the city's style of growth through 2040.

#### **Land Consumption**

The focus on accommodating growth through redevelopment in Scenario #3 results in an estimated 932 fewer acres of land that would transition from farmland to city development through 2040. As a comparison, the UW-Madison campus is just over 1,000 acres, the UW-Madison Arboretum is about 1,200 acres, and the entire isthmus (Park Street east to the Yahara River) is approximately 1,300 acres.

#### **Energy Use**

Scenario #3 results in 128.6 billion fewer British Thermal Units (BTUs) of energy consumed per year, based solely on the style of growth. Scenario #3 assumes more redevelopment, which tends to occur in multifamily buildings. Multifamily buildings are more energy efficient than single-family homes because there is less exterior wall and ceiling space per unit. With the average home in Wisconsin consuming 103 million BTUs of energy per year², Scenario #3 results in about 1,250 homes worth of residential energy consumption that is eliminated when compared to Scenario #1. Considering that Scenario #1 only adds 36,400 dwelling units, this is a significant reduction in residential energy use.

#### **Transportation-Related Greenhouse Gas Emissions**

Transportation-related Greenhouse Gas (GHG) emissions appear to show a nominal decrease from Scenario #1 to Scenario #3. However, the EPA estimates that the typical passenger vehicle emits 4.6 metric tons of carbon dioxide per year.<sup>3</sup> Scenario #3 is equivalent to removing approximately 11,100 cars from the road, which represents a significant decrease in carbon emissions attributable to the land use pattern alone.

#### **Fuel Costs**

Scenario #3, which contains more redevelopment and transit investments than Scenario #1, results in the average Dane County household spending \$106 less on gas per year than Scenario #1. With 252,653 households in the scenario, that represents a \$26.6 million reduction in spending per year on gasoline. Assuming access to enhanced transit and a steady growth rate, households would save a total of about \$577 million on gas between 2018 and 2040.<sup>4</sup> Overall, Scenario #3 anticipates approximately \$100 million less in annual passenger vehicle transportation costs per year (about \$400 per household) – a total of about \$2.15 billion from 2018 through 2040.

#### **Vehicle Miles Traveled**

Scenario #3 has about 170 million fewer vehicle miles traveled (VMT) per year than Scenario #1, which is equivalent to removing the vehicles of about 9,100 households from roadways in Scenario #3 when compared to Scenario #1. Note that VMT numbers are analyzed for the entire county, so existing development tends to dilute the gains from new transit service and new transit-oriented development. Each scenarios add, on average, about 35,400 new households. If all the new miles traveled are assigned to new households, each new household drives about 16,600 miles/year in Scenario #1, 14,000 miles/year in Scenario #2, and 11,100 miles/year in Scenario #3. Reducing the average VMT per household is a critical part of mitigating increasing traffic as the region continues to add population and jobs. In the case of these three scenarios, the reduction in VMT between Scenario #1 and #3 was achieved by adding BRT, adding express bus service, adding local bus service, and locating housing, jobs, and destinations in close proximity to each other and to transit.

#### **Citywide UrbanFootprint Scenarios Summary**

	Scenario #1:	Scenario #2:	Scenario #3:
	<b>Edge Growth Focus</b>	Edge/Redevelopment	<b>Redevelopment Focus</b>
		Balance	
Population Growth: Edge vs. Redevelopment	49,000 edge; 21,000 redev.	35,000 edge; 35,000 redev.	21,000 edge; 49,000 redev.
Jobs Growth: Edge vs. Redevelopment	25,900 edge; 11,100 redev.	18,500 edge; 18,500 redev.	11,100 edge; 25,900 redev.
Roads, Highways, and Auto Infrastructure	Programmed and planned new arterials and collectors; programmed and planned major highway expansions (Interstate 39/90 south of Beltline, US 51- Stoughton Road, US 14 south of STH 138, US 12 West freeway past CTH K, US 12/18 East freeway past CTH N; US 151 - Verona Road); Beltline capacity expansion; additional cross-Beltline connections; North Mendota Parkway.	Programmed and planned new arterials and collectors; some programmed and planned major highway expansions (Interstate 39/90 south of Beltline, US 51 - Stoughton Road, US 151 - Verona Road); limited further Beltline expansion; additional cross-Beltline connections; North Mendota Parkway.	Programmed and planned new arterials and collectors; some programmed and planned major highway expansions (Interstate 39/90 south of Beltline, US 51 - Stoughton Road, US 151 - Verona Road); limited further Beltline expansion; additional cross-Beltline connections; North Mendota Parkway.
Transit	Incremental service improvements to existing system; enhanced service to peripheral Madison neighborhoods; enhanced service to existing Metro communities.	Improvements to existing system (including service to Monona and Sun Prairie); express bus lines to outlying areas (per Figure 15 of Madison Transit Corridor Study); currently planned BRT system (per Madison Transit Corridor Study).	Improvements to existing system (including service to Monona and Sun Prairie); express bus lines to outlying areas (per Figure 15 of Madison Transit Corridor Study); currently planned BRT system (per Madison Transit Corridor Study).

The "UrbanFootprint and Bus Rapid Transit" section at the end of this Appendix has an additional comparison of what it means to locate housing and jobs next to transit.

#### **Transit Trips Per Day**

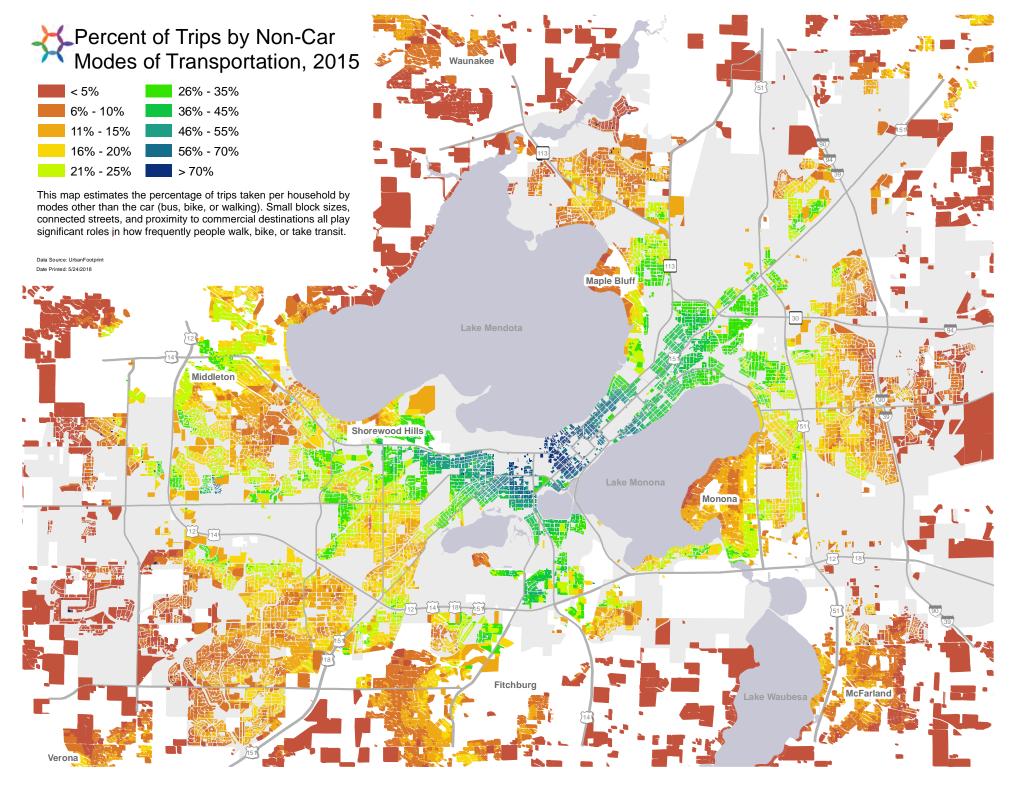
Scenario #1 projects that Metro Transit ridership will increase by about 50% by 2040. While the future population stays constant through all three scenarios, the extension of additional transit service in Scenario #2 increases transit ridership by 38% over Scenario #1 and 108% over current conditions. Scenario #3, which has more growth occurring as redevelopment, increases transit ridership about 3% over Scenario #2 and 114% over current conditions. Expansion of the City's, and region's, transit system helps reduce the growing population's impact on traffic and provides an alternative to driving.

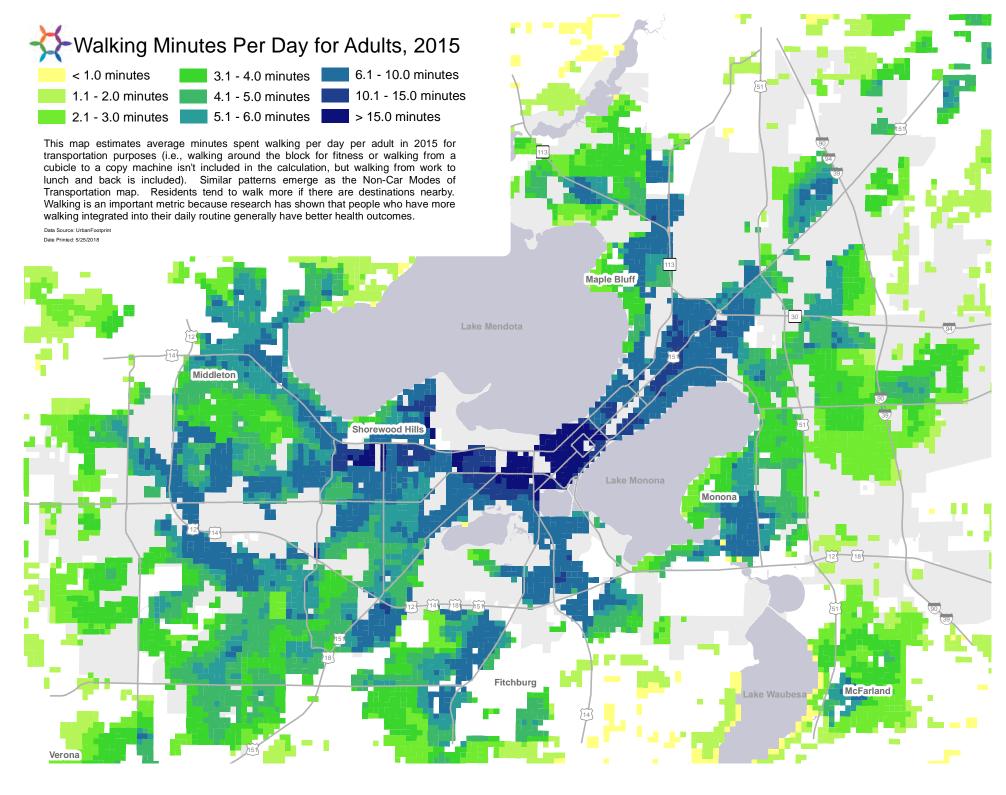
#### **Citywide UrbanFootprint Maps**

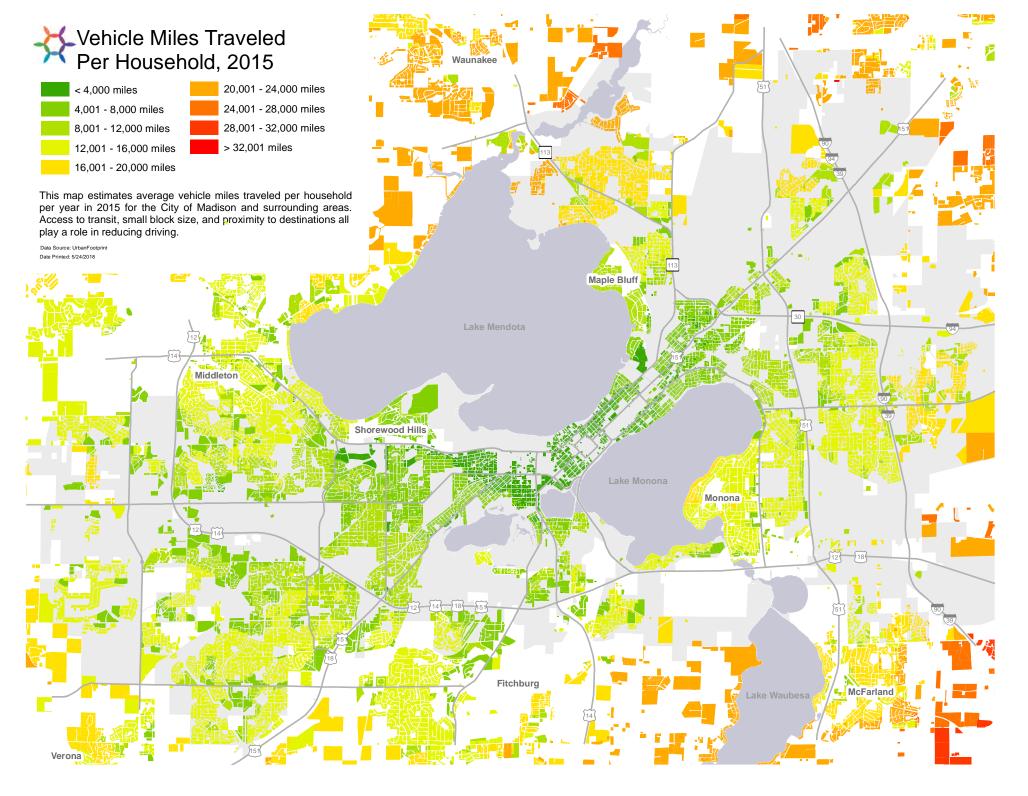
UrbanFootprint's strength is in its ability to not only provide numeric comparisons of future scenarios, but also to provide maps of existing and future conditions for the variety of modules that are available. The maps on the

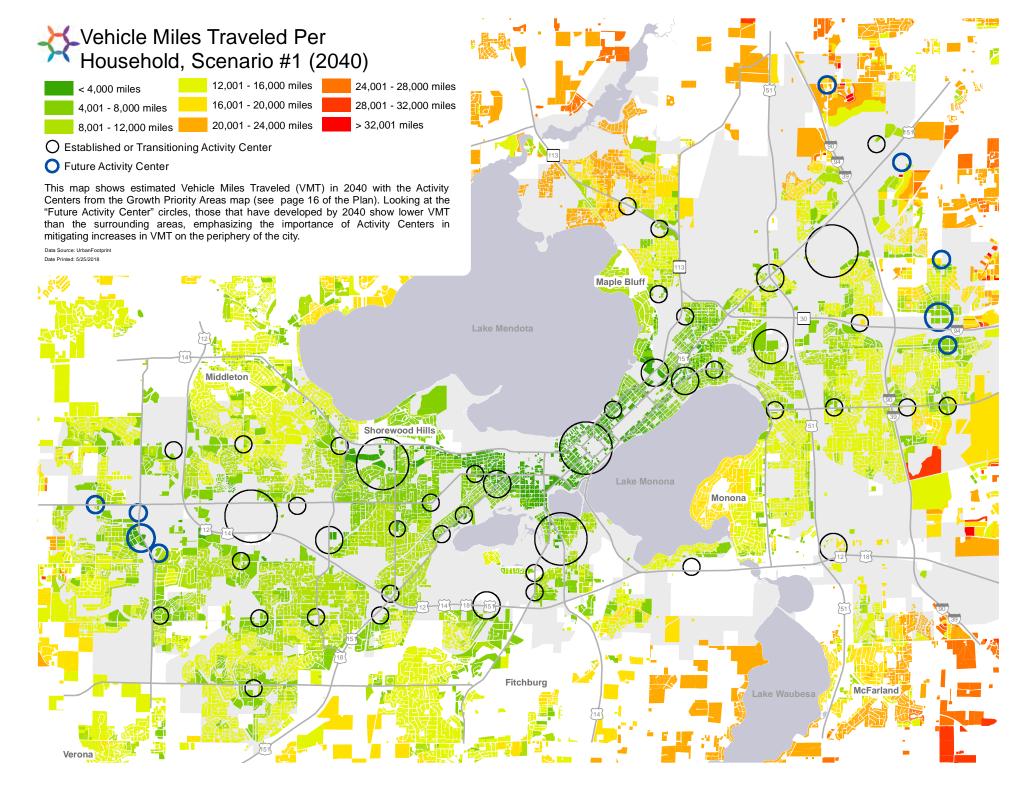
following pages show existing and future conditions across a variety of metrics:

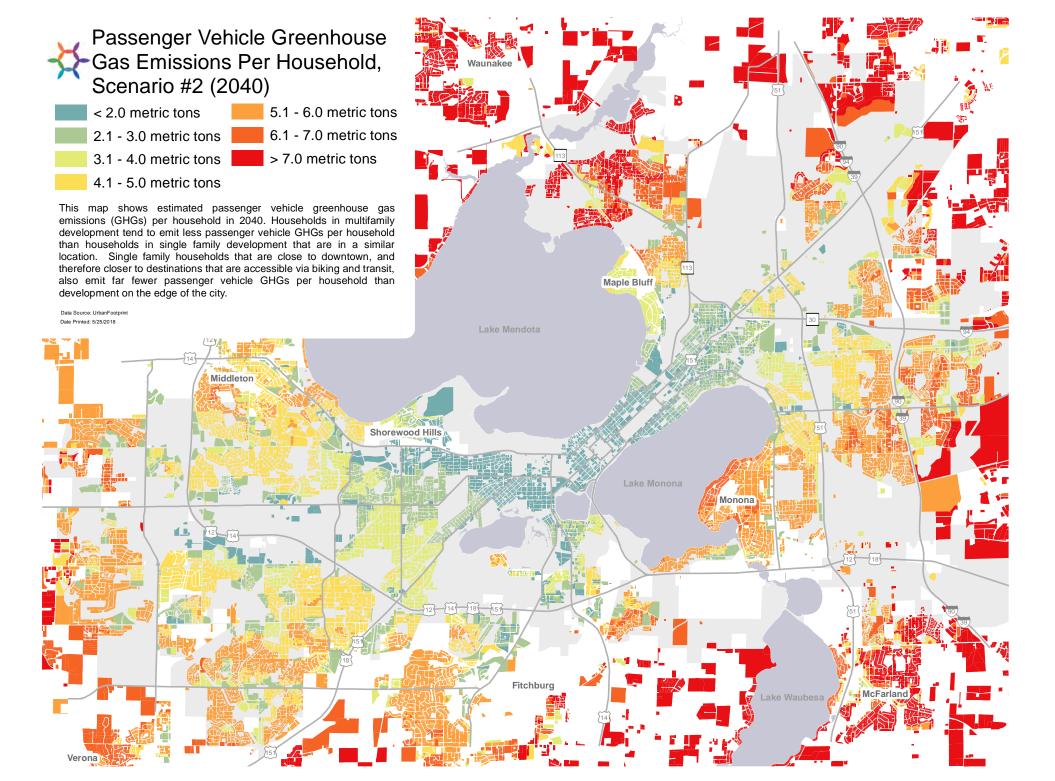
- Percent of Trips by Non-Car Modes of Transportation, 2015
- 2. Walking Minutes Per Day for Adults, 2015
- 3. Vehicle Miles Traveled Per Household, 2015 map
- 4. Vehicle Miles Traveled Per Household, Scenario #1
- Passenger Vehicle Greenhouse Gas Emissions Per Household, Scenario #2
- 6. Percent Change in Transit Use, Scenario #3

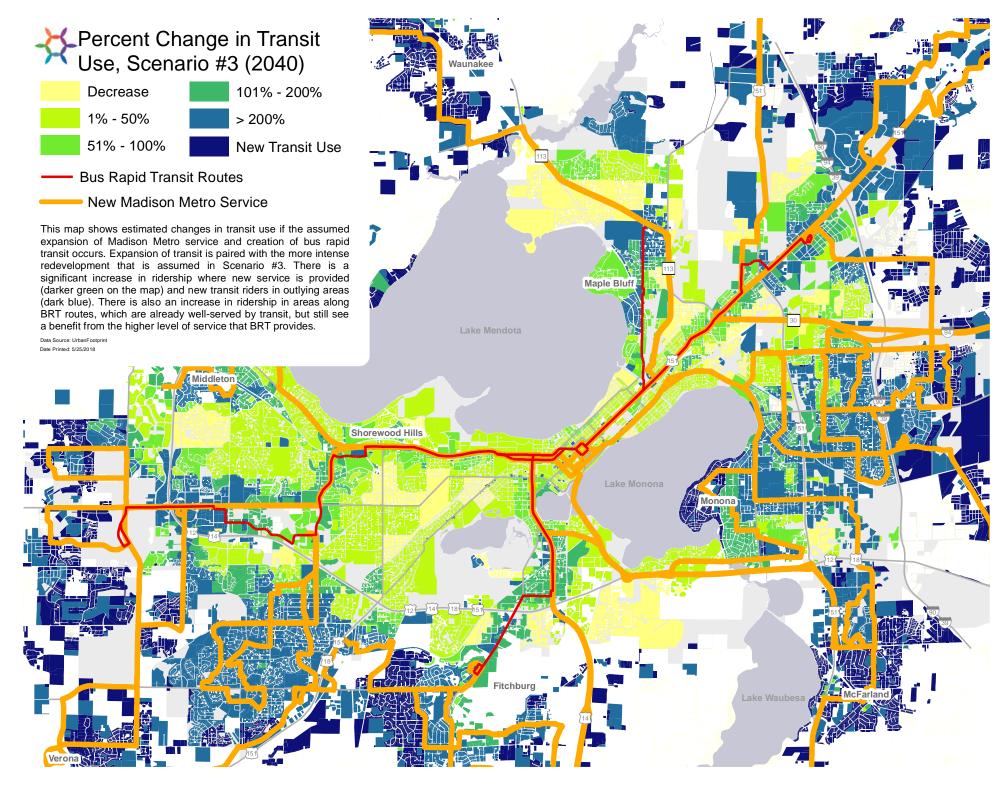










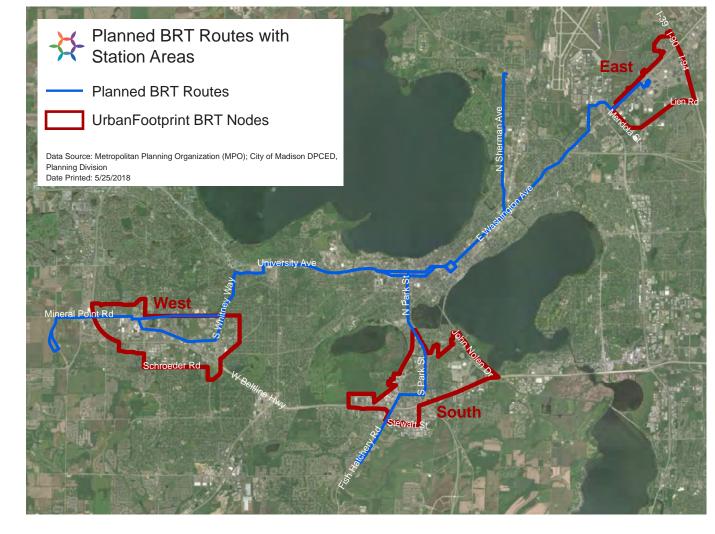


# UrbanFootprint Bus Rapid Transit Nodes Analysis

In addition to the three citywide scenarios, UrbanFootprint scenarios were developed to compare development within three areas that have significant capacity for infill and redevelopment and are planned for Bus Rapid Transit service. These three areas are shown on the map on the next page.

There are opportunities for both near-term infill and redevelopment in all three areas, as well as long-term infill at a scale that could lead to redevelopment similar to what the Hilldale area has begun to experience. While there are no detailed plans in place to guide such a substantial change to these areas, an UrbanFootprint analysis was run as an exercise to see what the potential impacts of such development would be when compared with accommodating the same number of people and employees within edge development areas (see the peripheral growth areas on the Growth Priority Areas map on page 16).

The following table summarizes the current population and jobs within the BRT nodes (according to the US Census Bureau and InfoUSA), along with potential near-term (over the next 10-20 years) additions in population and jobs through redevelopment and long-term (20+ years) infill and redevelopment. As a comparison, the isthmus (Park Street to the Yahara River) contained about 40,000 residents and 39,000 jobs on 1,336 acres in 2015. The combined BRT nodes are about three times larger than the isthmus, encompassing 3,914 acres. It should be noted that, even in the Long Term scenario, not all land in the BRT areas is assumed to be redeveloped/infilled - about 850 acres is assumed for redevelopment/infill. Overall, the 850 acres of infill can accommodate about the same amount of development as approximately 2,900 acres (4.5 square miles) of edge development, if areas on the periphery of the city developed consistent with the Generalized Future Land Use Map and Neighborhood Development Plans. With additional rights-of-way, the peripheral acreage would be even larger. The conceptual renderings on the following pages illustrate what the near-term and potential long-term development could be within certain parts of the three BRT areas.



# **UrbanFootprint BRT Areas Summary**

	Population	Jobs
BRT Areas – Current	13,000	35,600
BRT Areas – Near Term (redevelopment	20,600	43,400
in scattered areas; includes current		
population and jobs)		
BRT Areas – Long Term (substantial	68,000	93,300
build out of potential infill/		
redevelopment areas; includes current		
and Near Term population and jobs)		



West Towne Mall Area -**Near-Term Concept** 



West Towne Mall Area -**Long-Term Concept** 



South Area – Near-Term Concept



South Area – Long-Term Concept



East Towne Area -**Near-Term Concept** 



East Towne Area -**Long-Term Concept** 

The table to the right summarizes metrics that compare redevelopment within the BRT areas (the large purple dots on the Growth Priority Areas map on page 16 of this Plan) to accommodate the same number of residents and employees in edge development (the yellow areas on the Growth Priority Areas map). Some additional metrics are also provided to show the estimated impact of transitoriented development on metrics like walk minutes per day.

As would be expected, accommodating growth via redevelopment virtually eliminates the consumption of agricultural and wooded lands. Residential energy use is also reduced, as most redevelopment tends to occur as multifamily development, which is more energy efficient because there is less exterior wall and roof area per unit. Greenhouse gas emissions attributable to passenger vehicles remains virtually the same because of the larger amount of commercial space within the BRT areas, which attracts more passenger vehicles from outside of the area than the Edge Development scenario.

Vehicle miles traveled per household is cut by more than half – a substantial change that can be attributed to placing more intense development in close proximity to high-capacity, frequent transit service. This reduction also obviously means a reduction in the GHG emissions attributable to driving. Residents take about 65% more trips via transit when development is focused around newly provided BRT service. Walk minutes per day increase by 83% - with more intense, mixed-use development, there are more destinations within easy walking distance and also more frequent transit service to walk to. Finally, outdoor residential water use is decreased by two-thirds in the BRT scenario, as there is less lawn to water for residential infill/redevelopment.

# Summary

The above scenarios are meant to provide a numerical comparison, based on the UrbanFootprint modeling software, of how the city is impacted by different approaches to growth. While the city will not grow precisely as envisioned in any given scenario, knowing the potential outcomes of different styles of growth across a variety of metrics can help inform decisions on transportation expenditures and land use planning.

#### UrbanFootprint BRT Area Infill/Redevelopment Comparison With Edge Development

Scenario A:	Scenario B:	Percent Change
<b>Edge Development</b>	<b>BRT Areas</b>	
2,900	16*	-99.4%
2.04	1.81	-11.3%
289,000**	290,000**	+0.3%**
8,100	3,890	-51.0%
16,789	27,754	+65.3%
3.32	6.09	+83.4%
207	69	-66.7%
	2,900 2.04 289,000** 8,100 16,789 3.32	Edge Development         BRT Areas           2,900         16*           2.04         1.81           289,000**         290,000**           8,100         3,890           16,789         27,754           3.32         6.09

Note: All numbers assume that the only changes from 2015 are to land use and transportation to isolate the impacts of different styles of development. Annual gasoline costs per household are not available for smaller project areas.

#### Citations:

<sup>\*</sup> Some portions of University Research Park, which is included in the west BRT area, are currently undeveloped.

<sup>\*\*</sup> There is no substantial difference because the BRT areas contain a much larger amount of total commercial space and employment, which attracts more passenger vehicles. With the BRT Areas scenario having 22% more total jobs and the same population as the Edge Development scenario, having GHG emissions be virtually the same is an indication of the impact of providing a high level of transit service – the BRT Areas scenario supports 16,800 more jobs than the Edge Development scenario without generating more passenger vehicle emissions.

<sup>~</sup> Because so much of the total VMT is attributable to people driving to the scenario areas from outside the boundaries, VMT/HH/year is used instead of total VMT to illustrate the impact of households being located in close proximity to high-frequency transit.

<sup>&</sup>lt;sup>1</sup> Reid Ewing & Robert Cervero (2010) Travel and the Built Environment, Journal of the American Planning Association, 76:3, 265-294, DOI: 10.1080/01944361003766766

<sup>&</sup>lt;sup>2</sup> See https://www.eia.gov/consumption/residential/reports/2009/state\_briefs/pdf/wi.pdf, accessed 4/16/18.

<sup>&</sup>lt;sup>3</sup> See https://www.epa.gov/greenvehicles/greenhouse-gasemissions-typical-passenger-vehicle, accessed 4/16/18.

<sup>&</sup>lt;sup>4</sup>According to www.gasbuddy.com, gas prices have fluctuated widely for the Madison area from 2008 through 2018, varying from about \$4.10 per gallon to about \$1.50 per gallon. These calculations assume a price of \$3.62 per gallon.

