MEMORANDUM REPORT NO. 201

STUDY OF A LAKE PARKWAY (STH 794) EXTENSION FROM EDGERTON AVENUE TO STH 100 IN MILWAUKEE COUNTY

Prepared by the

Southeastern Wisconsin Regional Planning Commission

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PRELIMINARY DRAFT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
MEMORANDUM REPORT NO. 201

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INTRODUCTION

This report documents the findings of a study conducted by the Southeastern Wisconsin Regional Planning Commission of the extension of the Lake Parkway (State Trunk Highway 794) from its current terminus at Edgerton Avenue to State Trunk Highway (STH) 100 in Milwaukee County. The study was prepared at the unanimous request of the Milwaukee County Board of Supervisors and County Executive and the Cities of Cudahy, Oak Creek, St. Francis, and South Milwaukee. The purpose of the study was to develop and evaluate possible alternatives for a Lake Parkway extension, and determine whether a recommendation should be made to the Commission's Advisory Committee on Regional Transportation System Planning and to the Commission that an extension of the Lake Parkway be added to the regional transportation system plan and whether a request should be made that the Wisconsin Department of Transportation (WisDOT) conduct the necessary preliminary engineering and environmental impact studies for the extension.

The study was guided by an Advisory Committee composed primarily of elected officials. The responsibility of the Advisory Committee was to make the preliminary and final study recommendations. The Advisory Committee met seven times between August of 2010 and March of 2012. Also guiding the study was a Technical Subcommittee, consisting of the technical staff of the elected officials on the Advisory Committee. The rosters for the Advisory Committee and Technical Subcommittee are located inside the front cover of this report.

The first section of the study report documents the development of possible alternative designs for a Lake Parkway extension, including alternative alignments, cross-sections, and roadway crossing treatments, intended to assist the Advisory Committee in selecting an initially preferred design for a Lake Parkway extension. The alternative designs were developed by the Commission staff under guidance from the study Advisory Committee, and the Technical Subcommittee, and attempted to minimize impact on existing and planned land uses. The Commission staff also prepared comparative analyses of the costs, benefits, and impacts of the alternative crossing treatments at each roadway. Concurrent with

development of alternative designs, the Commission staff had numerous discussions with utility companies with facilities located along the potential Lake Parkway extension corridor, and as well with General Mitchell International Airport (GMIA) staff and representatives of the 128th Air Refueling Wing of the Wisconsin Air National Guard.

The Advisory Committee's preliminary recommendations are summarized in the second section of the study report. Following the development of alternatives, the Advisory Committee selected an initially preferred design, including an alignment, cross-section, and roadway crossing treatments. The Commission staff then estimated the initially preferred design's potential benefits, estimated construction cost, and anticipated right-of-way acquisition and impacts. Based on this evaluation and comparison of the costs and benefits of a Lake Parkway extension, the Advisory Committee determined to make a preliminary recommendation that a Lake Parkway be extended from Edgerton Avenue to STH 100, and approved presenting the initially preferred design to the public for comment.

The third section of the study report includes a summary of the public comment received on the Advisory Committee's preliminary recommendations. Public comment was obtained from oral and written comments at a public meeting held on February 29, 2012, at the South Milwaukee Performing Arts Center, as well as via letter, e-mail, or through the study website: www.sewrpc.org/LakeParkway. Public comment was received during a formal public comment period of February 15, 2012, through March 15, 2012. Following the public meeting and public comment period, the Commission staff prepared a record of the public comments received, including responses to comments as appropriate, and presented the record to the study Advisory Committee.

[Should the Advisory Committee continue to recommend a Lake Parkway extension, the Commission staff will include a paragraph of text here to summarize the Advisory Committee's final recommendations.]

DEVELOPMENT OF ALTERNATIVES

This section documents the development of possible alternative designs for a Lake Parkway extension, including alternative alignments, cross-sections, and roadway crossing treatments, intended to assist the Advisory Committee in selecting an initially preferred design for a Lake Parkway extension. The alternative designs were developed by the Commission staff under guidance from the study Advisory Committee, and the Technical Subcommittee, and attempted to minimize impact on existing and planned land uses. This section also includes analyses prepared by the Commission staff to compare the relative

advantages and disadvantages of the alternative crossing treatments at each roadway. Also during the development of alternative designs, the Commission staff had numerous discussions with utility companies with facilities located along the potential Lake Parkway extension corridor, and as well with General Mitchell International Airport (GMIA) staff and representatives of the 128th Air Refueling Wing of the Wisconsin Air National Guard. These discussions are summarized in this section as well.

Alternative Alignments

Potential alternative alignments for a Lake Parkway extension were first developed by the Commission staff under guidance from the Technical Subcommittee, and were presented to the Advisory Committee. In developing the potential alternative alignments, the Commission staff initially reviewed an environmental impact statement for a proposed extension of the Lake Parkway between Layton Avenue in Milwaukee County and State Trunk Highway 31 in Kenosha County, which had been prepared by WisDOT in 1994. The potential alternative alignments are shown in Map 1 of this study report. The following is a general description of the alternative alignments:

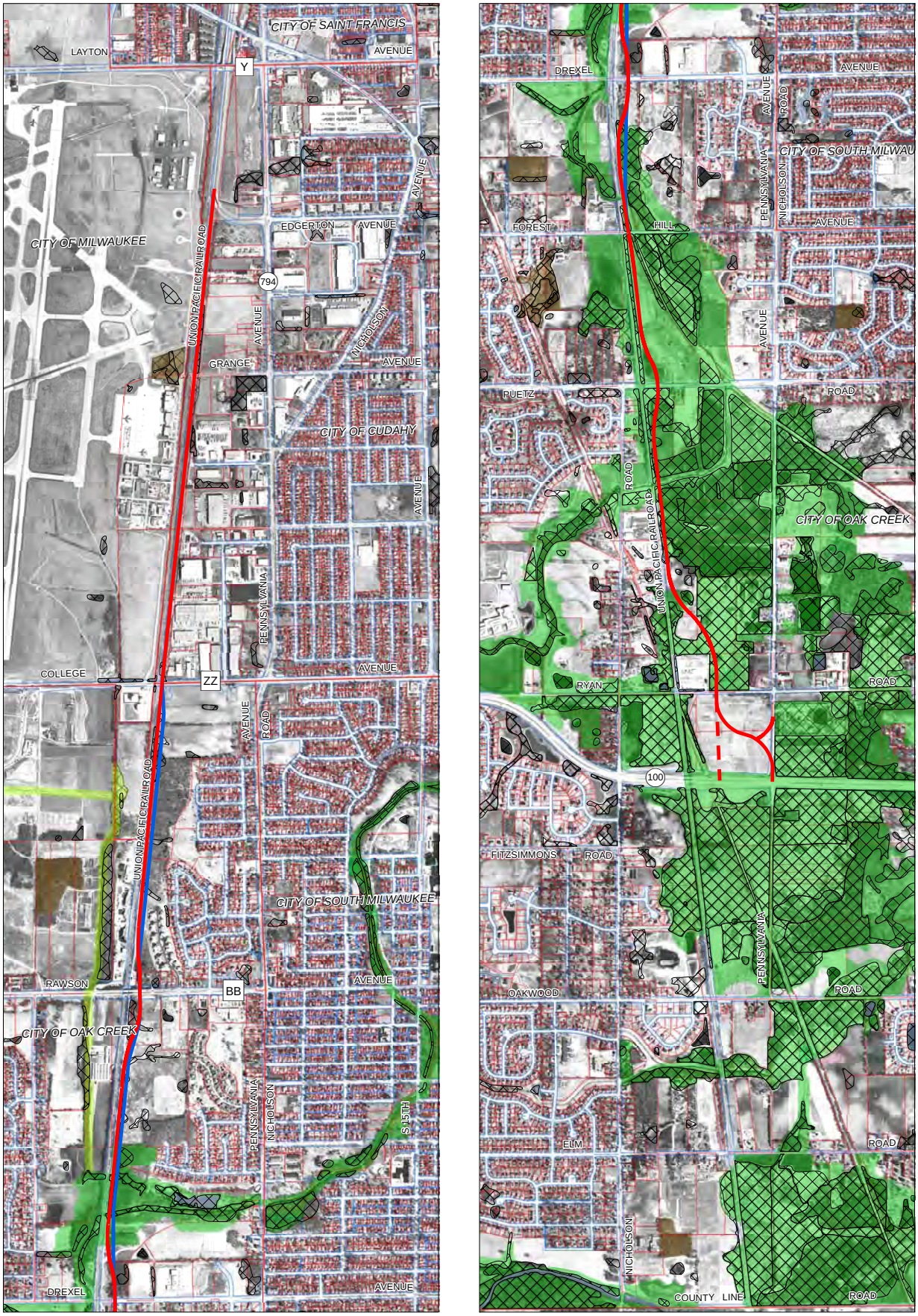
- Between Edgerton Avenue and College Avenue (CTH ZZ), an alternative alignment was located adjacent to the UPR rail right-of-way within the existing We Energies right-of-way.
- Two alternative alignments were developed between College and Forest Hill Avenues—one alignment continuing within the We Energies right-of-way and one alignment outside but adjacent to the We Energies right-of-way to avoid the need for relocation of existing utilities.
- South of Forest Hill Avenue, an alternative alignment continued adjacent to the UPR rail right-of-way, until just north of Ryan Road, where two alternative alignments were shown—one alignment shifted east to intersect with STH 100 at the existing intersection of STH 100 and Pennsylvania Avenue and one alignment continuing south to intersect STH 100 at a point west of Pennsylvania Avenue.

Alternative Cross-sections

Potential alternative cross-sections for a Lake Parkway extension were developed by the Commission staff under guidance from the Technical Subcommittee, and were presented to the Advisory Committee. These potential alternative cross-sections are shown in Figure 1 of this study report. The potential alternative cross-sections were developed to be a continuation of the existing Lake Parkway (STH 794), with a speed limit of 40 miles per hour—consistent with that of the existing Lake Parkway—assumed for each alternative cross-section. Each alternative cross-section shows an urban divided roadway with four travel lanes, two auxiliary lanes, a median, and buffer areas on either side. The difference between the two alternative cross-sections is that one includes a multi-use trail to accommodate bicycles and

Map 1

POTENTIAL ALTERNATIVE ALIGNMENT CENTERLINES FOR A POTENTIAL LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100 IN MILWAUKEE COUNTY



POTENTIAL ALIGNMENT CENTERLINE WITHIN WE ENERGIES RIGHT-OF-WAY

POTENTIAL ALIGNMENT CENTERLINE OUTSIDE OF WE ENERGIES RIGHT-OF-WAY

ALTERNATIVE ALIGNMENT CENTERLINE AT STH 100

PRIMARY ENVIRONMENTAL CORRIDOR

SECONDARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

SURFACE WATER

WETLANDS

N

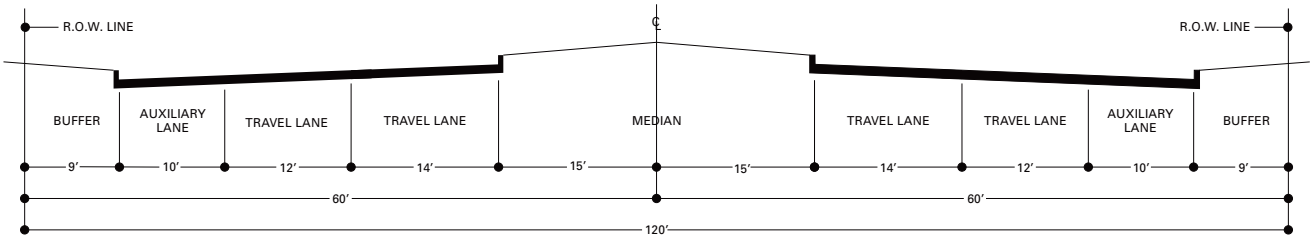
GRAPHIC SCALE

0 500 1,000 1,500 Feet

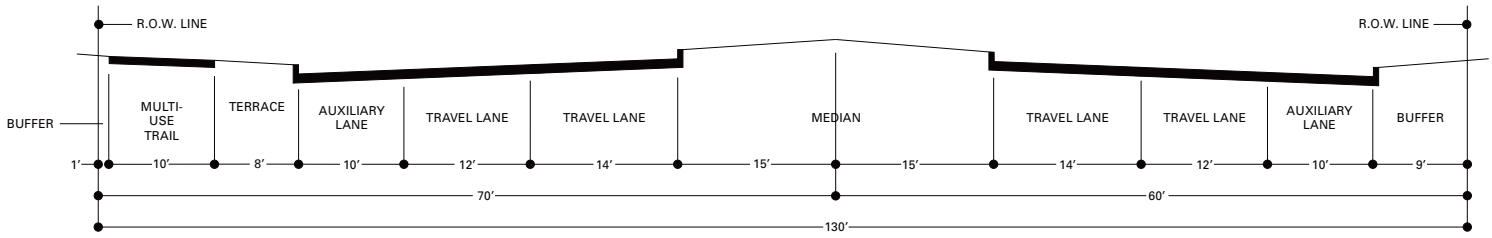
Figure 1

POTENTIAL TYPICAL CROSS-SECTIONS FOR POSSIBLE LAKE PARKWAY EXTENSION

TYPICAL CROSS-SECTION
DIVIDED LOW SPEED (SPEED LIMITS OF 40 MPH OR LESS)
FOUR-LANE URBAN ARTERIAL WITH AUXILIARY LANES



TYPICAL CROSS-SECTION
DIVIDED LOW SPEED (SPEED LIMITS OF 40 MPH OR LESS)
FOUR-LANE URBAN ARTERIAL WITH AUXILIARY LANES AND MULTI-USE TRAIL



NOTE: THE ABOVE CROSS-SECTIONS WOULD BE USED SHOULD THE POSTED SPEED LIMIT ON THE LAKE PARKWAY EXTENSION BE 40 MILES PER HOUR OR LESS. BETWEEN INTERSECTIONS WITH MAJOR ARTERIALS, THERE MAY BE THE POTENTIAL TO REDUCE THE WIDTH OF THE MEDIAN AND RIGHT-OF-WAY BY ABOUT 25 FEET.

pedestrians, while the other does not. The existing Lake Parkway does not provide pedestrian or bicycle accommodations, but Federal and State law require that bicycle and pedestrian accommodations be considered on any new or reconstructed roadway utilizing State or Federal funding. It was assumed that the auxiliary lanes shown on the two alternative cross-sections could potentially provide bicycle accommodations, or an off-street multi-use path could be used.

Alternative Roadway Crossing Treatments

With regard to access to a Lake Parkway extension, it was assumed that no access to abutting properties, such as private driveways, would be provided along a Lake Parkway extension between the major roadway crossings. Potential alternative roadway crossing treatments (at-grade intersection or grade-separated interchange) were developed by the Commission staff under guidance from the Technical Subcommittee, and were presented to the Advisory Committee. The Commission staff also received t input from staffs at the Cities of Cudahy and Oak Creek regarding the alternative roadway crossing treatments that would be located in each of their communities. The potential alternative roadway crossing treatments that were considered by the Advisory Committee included:

- Layton Avenue and Edgerton Avenue
    - Convert the existing half interchange at Layton Avenue to a full interchange (construct a southbound on-ramp and northbound off-ramp) and remove the current connection at Edgerton Avenue.
    - Maintain the existing half interchange at Layton Avenue (southbound off-ramp and northbound on-ramp) and construct an at-grade intersection at Edgerton Avenue.
    - Southbound on-ramp at Layton Avenue and northbound on- and off-ramps at Edgerton Avenue.
- Grange Avenue[1]
    - Overpass with no access (Lake Parkway extension over).
- College Avenue
    - Overpass with jughandle ramp access (Lake Parkway extension over).
    - Overpass with no access (Lake Parkway extension over).
- Rawson Avenue
    - Grade-separated interchange (Lake Parkway extension under).

[1] Although an overpass with no access was the only alternative roadway crossing treatment considered at Grange Avenue, the Commission staff noted that it may be possible to construct a Lake Parkway extension at-grade with cul-de-sacs provided on Grange Avenue on each side of a Lake Parkway extension should the 128th Air Refueling Wing be able to relocate the secured access to their facilities and close the existing access at Grange Avenue.

    - At-grade intersection on the existing Rawson Avenue bridge (Lake Parkway extension under).
    - Underpass with no access (Lake Parkway extension under).
- Drexel Avenue
    - Grade-separated interchange (Lake Parkway extension over).
    - At-grade intersection.
    - Overpass with no access (Lake Parkway extension over).
- Forest Hill Avenue
    - At-grade intersection.
    - Overpass with no access (Lake Parkway extension over).
- Puetz Road
    - Grade-separated interchange (Lake Parkway extension over).
    - At-grade intersection.
- Ryan Road
    - Cul-de-sac on each side of a Lake Parkway extension.
- STH 100
    - At-grade intersection west of Pennsylvania Avenue.
    - At-grade intersection at Pennsylvania Avenue.

To assist the Advisory Committee in selecting an initially preferred design for a Lake Parkway extension, the Commission staff compared the relative advantages and disadvantages of the alternative roadway crossing treatments considered by the Advisory Committee. A summary of the comparative analyses presented to the Advisory Committee is included in Appendix A of this report.

Discussions with Utility Companies

During the development of the alternative designs for a Lake Parkway extension, the Commission staff contacted utility companies with facilities located along the potential Lake Parkway extension corridor to determine potential impacts to their facilities that may result from the construction of a Lake Parkway extension. Specifically, the Commission staff contacted We Energies, American Transmission Company (ATC), McLeodUSA, Milwaukee Metropolitan Sewerage District (MMSD), and West Shore Pipeline. The following provides a summary of the existing facilities owned and maintained by each of the utility companies, and notes whether an extension of the Lake Parkway would potentially require relocation of any of their facilities. Further detail on the potential impacts to the facilities is provided in Appendix C of

this report, which includes an evaluation of the potential benefits, impacts, and costs of a Lake Parkway extension.

- **We Energies** – We Energies owns three types of facilities within their right-of-way between Edgerton Avenue and Forest Hill Avenue—electric distribution lines and poles, gas pipelines and regulator stations, and fiber optic cables leased to McLeodUSA. We Energies indicated that construction of a Lake Parkway extension within We Energies right-of-way would require the relocation of the electric and gas facilities. A Lake Parkway extension could be constructed over the existing fiber optic lines if McLeodUSA is provided access to maintain them.

- **American Transmission Lines (ATC)** – ATC owns double-circuit electric transmission lines and poles located within We Energies right-of-way between a point about 1,000 feet north of College Avenue and about Forest Hill Avenue. The poles are spaced about 500 to 600 feet apart, and would likely need to be relocated where a Lake Parkway extension would be constructed within the We Energies right-of-way. ATC indicated that they desire an easement of about 80 feet for maintaining their lines. However, a narrower easement of about 60 feet may be possible. If the lines are relocated east of a Lake Parkway extension, ATC would desire the lines to be at least 40 feet from any existing development. If the lines are relocated west of a Lake Parkway extension, ATC would desire the lines to be located at least 25 feet from the Union Pacific Railroad (UPR) rail right-of-way and would desire that the lines not be relocated within the UPR rail right-of-way. However, because there would not be adequate undeveloped land available east of the We Energies right-of-way to accommodate a Lake Parkway extension between Rawson Avenue and a point about 1,000 feet north of College Avenue due to the existing residential and industrial development, the proposed U.S. Postal Service facility, and the existing railroad, the We Energies and UPR rail right-of-ways would not be wide enough to accommodate both the relocated ATC transmission lines and a Lake Parkway extension based on ATC's desired easement width for their transmission lines. ATC indicated that their transmission lines potentially could be relocated within or along the UPR rail right-of-way with a less than desired easement provided that the transmission line poles can be constructed immediately adjacent to a Lake Parkway extension and that the minimum required separation from the existing UPR rail line is maintained. This would result in ATC needing to purchase an easement from UPR and ATC needing to coordinate with WisDOT and UPR when improving or maintaining the relocated transmission lines. ATC also indicated that their transmission lines could be buried along this section of the We Energies right-

of-way, but that burying them would be undesirable primarily due to the difficulty in maintaining buried lines and the significantly higher cost to bury lines.

- **Milwaukee Metropolitan Sewerage District (MMSD)** – MMSD owns and maintains an interplant solids pipeline (ISP) consisting of four 16-inch force mains connecting the South Shore and Jones Island wastewater treatment plants. The ISP is located within the We Energies and UPR rail rights-of-way between Edgerton Avenue and about Forest Hill Avenue. A Lake Parkway extension could likely be constructed above the ISP, should MMSD be able to maintain access to the ISP from the surface.

- **West Shore Pipeline** – During the study process, MMSD purchased an idle petroleum pipeline from West Shore Pipeline that MMSD intends to use as part of a longer pipeline that would transport methane gas from a landfill site in the Muskego area to the Jones Island wastewater treatment plant. From 650 feet south of Layton Avenue to a point midway between College and Rawson Avenues, the pipeline is located west of the UPR rail right-of-way and would not likely be impacted by a Lake Parkway extension. However, the pipeline could be impacted should a southbound on-ramp to the extension be constructed at Layton Avenue, where the pipeline is located within the We Energies right-of-way from Layton Avenue to about 650 feet south of Layton Avenue.

Discussions with General Mitchell International Airport and 128th Air Refueling Wing

The Commission staff also contacted General Mitchell International Airport (GMIA) staff and representatives of the 128th Air Refueling Wing of the Wisconsin Air National Guard to determine the potential restrictions of constructing a Lake Parkway extension along GMIA and potential impacts to the 128th Air Refueling Wing. The following provides a summary of the potential restrictions and impacts of constructing a Lake Parkway extension along GMIA. Further detail on the potential restrictions and impacts is provided in Appendix C of this report, which includes an evaluation of the potential benefits, impacts, and costs of a Lake Parkway extension.

GMIA staff indicated that construction of a Lake Parkway extension along GMIA would need to follow Federal Aviation Administration (FAA) requirements limiting the construction of a facility within the navigable airspace of an airport, and Milwaukee County's ordinance restricting the height of new facilities adjacent to GMIA. In regards to FAA requirements, GMIA staff indicated that the existing UPR rail line would likely be considered a controlling obstruction along the east side of GMIA. They also

indicated that the height of the structure (i.e. roadway or railroad) would include the height of the tallest vehicle that would utilize the structure. In addition, they indicated that the height of light poles would also be considered by FAA, which may limit the number and height of light poles that could be constructed adjacent to GMIA. In the evaluation of the construction of a Lake Parkway extension along GMIA, FAA would also consider planned improvements to GMIA, such as the new east-west runway planned north of College Avenue. GMIA staff also informed the Commission staff of FAA restrictions regarding the construction of facilities that could attract wildlife, which could affect the location and type of stormwater management facilities and landscaping features that could be provided adjacent to GMIA.

A Milwaukee County ordinance restricts the height of new facilities around GMIA. The height restrictions are 35 feet above existing ground adjacent to GMIA, and are higher further away from GMIA. However, a variance could potentially be granted by Milwaukee County should FAA approve the proposed construction of the facility.

Representatives of the 128th Air Refueling Wing expressed three major concerns regarding the potential extension of the Lake Parkway along GMIA—the potential effect of the extension on their planned facilities along Grange Avenue, the need to maintain the security of existing and future facilities, and the need for suitable locations for secured access to their existing and planned facilities. The 128th Air Refueling Wing is currently planning to expand facilities on property they own along Grange Avenue east of the UPR rail line and Lake Parkway extension. They indicated that they desire the stationing of newer refueling tanker planes at their site. Construction of a Lake Parkway extension along or through the expansion site may affect the level of security possible at the site.

In regards to security, the representatives of the 128th Air Refueling wing indicated their preference that a Lake Parkway extension not be located adjacent to their planned facilities along Grange Avenue. However, if a Lake Parkway extension is constructed, they would desire it to be constructed as far east as possible and below the elevation of the existing UPR rail line. Where a Lake Parkway extension would need to be elevated, they would desire the use of barrier walls. In addition, they would prefer a full interchange at Layton Avenue over an at-grade intersection at Edgerton Avenue.

The 128th Air Refueling wing is currently planning to move their existing secured gate to Grange Avenue just west of Pennsylvania Avenue. Thus, a Lake Parkway extension (along with the UPR rail line) would be behind the relocated secured gate. They indicated that the secured gate could be relocated to College Avenue and Layton Avenue. The use of locations other than Grange Avenue may allow for the Grange

Avenue entrance to be closed, which would allow a Lake Parkway extension to potentially be constructed at-grade at this location. There is an existing entrance along College Avenue, which is occasionally used to access 128th Air Refueling Wing facilities. Should the existing gate be used as a new entrance, a roadway from the gate to their facilities would need to be constructed. They indicated that the road would need to be constructed with a serpentine route. However, the road would need to be constructed mostly on a property owned by the City of Milwaukee containing a remediated landfill site. Because the ground above this remediated area is unstable, construction of such a roadway may not be feasible. For an entrance at Layton Avenue, the 128th Air Refueling Wing representatives indicated that they could utilize the existing gate system located at that location.

PRELIMINARY RECOMMENDATIONS FOR LAKE PARKWAY EXTENSION

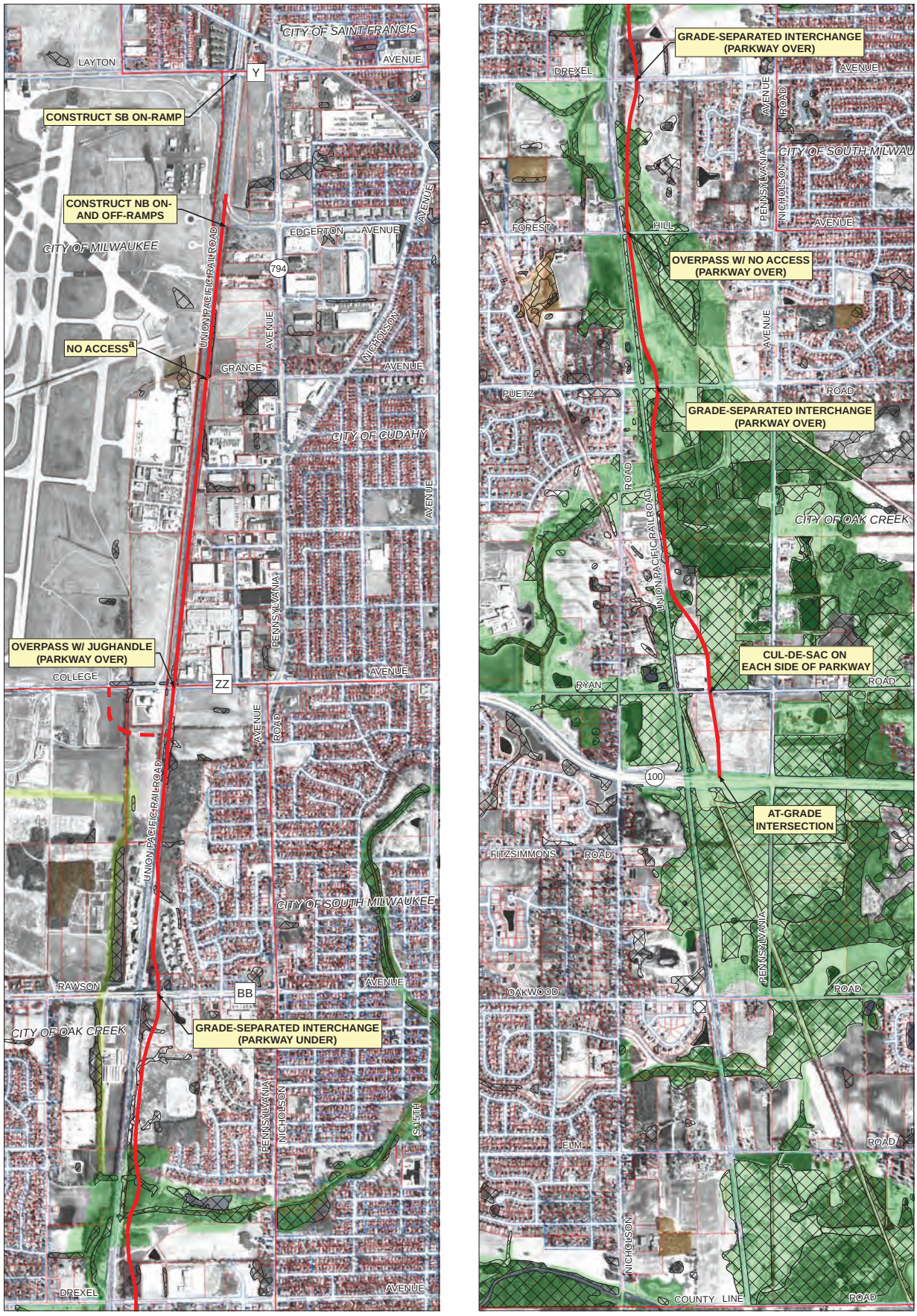
Following the development and evaluation of Lake Parkway extension alternative designs, the Advisory Committee selected an initially preferred design, including an alignment, cross-section, and roadway crossing treatments. To assist the Advisory Committee in determining whether or not to make preliminary recommendations for a Lake Parkway extension, the Commission staff then estimated the initially preferred design's potential benefits, estimated construction cost, and anticipated right-of-way acquisition and impacts. Based on this evaluation, the Advisory Committee determined to make preliminary recommendations that a Lake Parkway be extended from Edgerton Avenue to STH 100, and approved presenting the initially preferred design to the public for comment. The initially preferred design included in the preliminary recommendations, along with the evaluation of that design, is summarized in this section.

Initially Preferred Alignment

- Map 2 shows the initially preferred alignment of a Lake Parkway extension between Edgerton Avenue and STH 100 in Milwaukee County.
- Between Edgerton Avenue and Rawson Avenue (CTH BB), the alignment is shown located adjacent to the UPR rail line within a portion of the UPR rail right-of-way and within the existing We Energies right-of-way.
- Between Rawson Avenue and Forest Hill Avenue, the alignment is shown outside but adjacent to the We Energies right-of-way to avoid the need for relocation of existing utilities.
    - South of Forest Hill Avenue, the alignment continues adjacent to the UPR rail right-of-way and intersects STH 100 at a point west of Pennsylvania Avenue.

Map 2

PREFERRED CENTERLINE ALIGNMENT AND ROADWAY CROSSING TREATMENTS FOR A POTENTIAL LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100 IN MILWAUKEE COUNTY



CENTERLINE ALIGNMENT OF LAKE PARKWAY EXTENSION

JUGHANDLE RAMP AT COLLEGE AVENUE

PRIMARY ENVIRONMENTAL CORRIDOR

SECONDARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

SURFACE WATER

WETLANDS

GRAPHIC SCALE
0 500 1,000 1,500 Feet

[a] *WisDOT should work with 128th Air Refueling Wing and General Mitchell International Airport during preliminary engineering and environmental impact study to accomplish appropriate exchange of land to allow secured access to 128th Air Refueling Wing facilities to be relocated to College Avenue and Layton Avenue and secured access at Grange Avenue to be closed. This would allow Lake Parkway extension to be constructed at-grade with cul-de-sacs provided on Grange Avenue on each side of extension.*

Initially Preferred Cross-section

- Figure 2 shows the initially preferred cross-section for a Lake Parkway extension.
- The typical cross-section consists of an urban divided roadway with four travel lanes and two auxiliary lanes.
- The cross-section also includes a multi-use trail to accommodate bicycles and pedestrians. The two auxiliary lanes may also provide adequate bicycle accommodations.
- The overall right-of-way width for the cross-section is 130 feet. However, between intersections with major arterial roadways, there may be the potential to reduce the width of the median and right-of-way by about 25 feet.
- A speed limit of 40 miles per hour—similar to that of the existing Lake Parkway—was assumed for the cross-section.

Initially Preffered Roadway Crossing Treatments

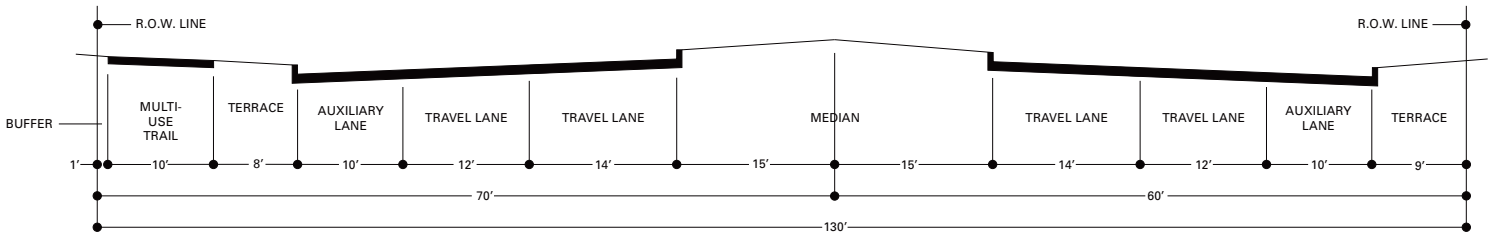
The Advisory Committee considered alternative, and selected initially preferred, crossing treatments for each roadway crossing of a Lake Parkway extension between Edgerton Avenue and STH 100. The Advisory Committee recommended that access to the potential Lake Parkway extension be restricted to main arterial roadways. Table 1 and Map 2 provide the initially preferred crossing treatment for each roadway crossing along a Lake Parkway extension. Table 1 also indicates whether access to a Lake Parkway extension would be provided at each roadway. Maps of all the preferred roadway crossing treatments where access would be provided are included in Appendix B.

- Layton Avenue and Edgerton Avenue – Access would be provided by constructing a southbound on-ramp at Layton Avenue and northbound on- and off-ramps at Edgerton Avenue (see Map B-1).
- College Avenue – Access would be provided by constructing an overpass with jughandle ramp access (see Map B-2).
- Rawson Avenue – Access would be provided by grade-separated interchange (see Map B-3).
- Drexel Avenue – Access would be provided by grade-separated interchange (see Map B-4).
- Puetz Road – Access would be provided by grade-separated interchange (see Map B-5).
- STH 100 – Access would be provided by an at-grade intersection west of Pennsylvania Avenue (see Map B-6).
- No access to the Lake Parkway extension would be provided at Grange Avenue, Forest Hill Avenue, and Ryan Road.

Figure 2

TYPICAL CROSS-SECTION FOR LAKE PARKWAY EXTENSION

DIVIDED FOUR-LANE URBAN ARTERIAL WITH AUXILIARY LANES AND MULTI-USE TRAIL



NOTE: BETWEEN INTERSECTIONS WITH MAJOR ARTERIALS, THERE MAY BE THE POTENTIAL TO REDUCE THE WIDTH OF THE MEDIAN AND RIGHT-OF-WAY BY ABOUT 25 FEET.

Table 1

PREFERRED ROADWAY CROSSING TREATMENTS AND ACCESS AT EACH ROADWAY CROSSING ALONG THE POTENTIAL LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100 IN MILWAUKEE COUNTY

Roadway Crossing	Potential Crossing Treatment	Access Provided
Layton Avenue	Add southbound on-ramp to existing half interchange	Yes
Edgerton Avenue	Replace current connection with northbound on-and off-ramps	Yes
Grange Avenue	No access[a]	No
College Avenue (CTH ZZ)	Overpass with "jughandle" ramp access between Lake Parkway and College Avenue (Lake Parkway over)	Yes
Rawson Avenue (CTH BB)	Grade-separated interchange (Lake Parkway under)	Yes
Drexel Avenue	Grade-separated interchange (Lake Parkway over)	Yes
Forest Hill Avenue	Overpass with no access (Lake Parkway over)	No
Puetz Road	Grade-separated interchange (Lake Parkway over)	Yes
Ryan Road	Cul-de-sac on each side of Lake Parkway	No
STH 100	At-grade intersection west of Pennsylvania Avenue	Yes

[a] *WisDOT should work with the 128th Air Refueling Wing and General Mitchell International Airport during preliminary engineering and environmental impact study to accomplish the appropriate exchange of land to allow the secured access to the 128th Air Refueling Wing facilities to be relocated to College Avenue and Layton Avenue and the secured access at Grange Avenue to be closed. This would allow the Lake Parkway extension to be constructed at-grade with cul-de-sacs provided on Grange Avenue on each side of the extension.*

- At Grange Avenue, the Advisory Committee recommends that WisDOT work with the 128th Air Refueling Wing and GMIA during preliminary engineering and environmental impact study to accomplish the appropriate exchange of land to allow the secured access to the 128th Air Refueling Wing facilities to be relocated to College Avenue and Layton Avenue and the secured access at Grange Avenue to be closed. This would allow the Lake Parkway extension to be constructed at-grade with cul-de-sacs provided on Grange Avenue on each side of the extension.

Evaluation of Initially Preferred Design

Following the Advisory Committee's selection of an initially preferred design for a Lake Parkway extension, the Commission staff estimated the initially preferred design's potential benefits, impacts, and costs, and presented this evaluation to the Advisory Committee. The evaluation is included in Appendix C of this report, and is briefly summarized below.

Anticipated Benefits:

- Improvement in Traffic Congestion (Comparing Year 2035 Forecast Traffic Volumes)
  - The Lake Parkway extension is forecast to carry 24,000 to 29,000 vehicles per average weekday between Edgerton Avenue and Puetz Road, and about 9,000 vehicles per average weekday between Puetz Road and STH 100.
  - In general, traffic volumes on north-south arterial roadways adjacent to the Lake Parkway extension—including Pennsylvania Avenue, Howell Avenue, 13th Street, Puetz Road, and STH 32 (Chicago Avenue)—would be significantly reduced with the Lake Parkway extension. Projected future congestion would be expected to be eliminated on Pennsylvania Avenue between College Avenue and Edgerton Avenue, and on Howell Avenue between Puetz Road and Drexel Avenue. However, traffic volumes would increase, resulting in modest congestion, on the segment of Pennsylvania Avenue between Edgerton Avenue and Layton Avenue, due to northbound traffic exiting the Lake Parkway extension at Edgerton Avenue to get to Layton Avenue.
  - Traffic volumes on some segments of the east-west arterial roadways that would be used to access the Lake Parkway extension—including Rawson Avenue, Drexel Avenue, Puetz Road, and STH 100—would be significantly increased with the Lake Parkway extension. These increases would not result in congestion, with the exception of modest congestion on STH 100 between Pennsylvania Avenue and 15th Avenue.

- With the Lake Parkway extension, the planned widening from two to four travel lanes on Pennsylvania Avenue between Rawson Avenue and Milwaukee Avenue and on 13th Street between Rawson Avenue and Puetz Road may no longer be needed.

- Improvement in Accessibility
  - The estimated travel time between STH 100 and Layton Avenue would be reduced by 5 minutes (10 minutes on the Lake Parkway extension; 15 minutes on Pennsylvania Avenue without the Lake Parkway extension).
- Improvement in Safety
  - Based on an analysis of estimated crash rates, it would be expected that there would be an overall reduction of vehicular crashes with the implementation of the Lake Parkway extension.
  - Between intersections, the crash rate on the Lake Parkway extension would be about half that of Pennsylvania Avenue—the primary arterial roadway which would carry traffic in absence of a Lake Parkway extension.
  - For at-grade intersections of the Lake Parkway extension—the College Avenue jughandle ramp and STH 100—crash rates on the Lake Parkway extension may be slightly higher than those of at-grade intersections along Pennsylvania Avenue.
  - For the crossings with grade-separated interchanges—Layton, Edgerton, Rawson, and Drexel Avenues, and Puetz Road—crash rates where the crossing roadways intersect ramps of the Lake Parkway extension may be slightly higher than intersection crash rates of at-grade intersections along Pennsylvania Avenue. However, the total number of intersection crashes would be less for a grade-separated interchange than an at-grade intersection as through traffic on the Lake Parkway extension would freely flow through an interchange and avoid conflicts with the traffic on the crossing roadways.

Potential Impacts

- Right-of-way Impacts
  - Residential structure acquisition/relocation: 1 structure
  - Right-of-way acquisition: 118 acres
  - Primary environmental corridors impacted: 41 acres
  - Wetlands impacted: 27 acres
  - Park/recreational land impacted—Oak Creek Parkway: 20 acres
  - A total of 57 acres of primary environmental corridors, wetlands, or park/recreational land would be impacted. (Eight of the 27 acres of impacted wetlands are outside of the

impacted primary environmental corridors and eight of the 20 acres of impacted park/recreational land are outside of the impacted primary environmental corridors and wetlands.)

  - No commercial, industrial, or institutional structures would need to be acquired or relocated.
  - 56 residential units and 12 commercial/industrial structures would be disrupted based on being located within 200 feet of the Lake Parkway extension.
  - No secondary environmental corridors, isolated natural resource areas, or prime agricultural land would be impacted.
  - We Energies electric and gas facilities and American Transmission Company electric transmission lines within the We Energies right-of-way between Edgerton Avenue and Rawson Avenue would need to be relocated.

- Other Potential Issues
  - The Lake Parkway extension would need to be constructed to follow Federal Aviation Administration (FAA) and Milwaukee County height restrictions for new structures along and near General Mitchell International Airport.
  - Should the Lake Parkway extension proceed to implementation, potential security concerns relating to existing and planned 128th Air Refueling Wing facilities would need to be addressed during preliminary engineering and environmental impact studies.

Estimated Cost

- Capital Costs (Year 2010 Dollars)
  - Construction: $192.8 million
  - Right-of-way: $5.7 million
  - Utility Relocation: $8.7 million
  - Total: $207.2 million

PUBLIC COMMENTS AND RESPONSES

Public comment was obtained regarding the Advisory Committee's preliminary recommendations for a Lake Parkway extension from oral and written comments at a public meeting held on February 29, 2012, at the South Milwaukee Performing Arts Center, as well as via letter, e-mail, or through the study website: www.sewrpc.org/LakeParkway. Public comment was received during a formal public comment period of February 15, 2012, through March 15, 2012. Following the public meeting and public comment

period, the Commission staff prepared a record of the public comment received, including responses to comments as appropriate, and presented the record to the study Advisory Committee. This record of public comments is documented in the Commission's "*Record of Public Comments, Preliminary Recommendations of Lake Parkway (STH 794) Extension Study*".

A total of 86 persons provided comments on the Advisory Committee's preliminary recommendations. Forty-four of the total 86 persons expressed support for a Lake Parkway extension. Four of the total 86 persons indicated that they may support a Lake Parkway extension, but only if certain conditions were met. Nineteen of the total 86 persons expressed opposition to a Lake Parkway extension. The remaining 19 of the total 86 persons expressed neither support for, nor opposition to, a Lake Parkway extension.

Comments in Support of a Lake Parkway Extension

A total of 44 persons expressed support for a Lake Parkway extension.

- Nineteen persons cited that a Lake Parkway extension would provide benefits to the South Shore communities, including the Cities of Cudahy, Oak Creek, St. Francis, and South Milwaukee. Ten of the total 19 persons suggested that an extension would encourage economic growth, attract businesses and residents, and increase access to jobs, in the South Shore Communities. Seven of the total 19 persons suggested that an extension would provide better access from surrounding communities to the South Shore communities. Six of the total 19 persons suggested that an extension would provide better access to downtown Milwaukee for residents of the South Shore communities. Five of the total 19 persons suggested that an extension would provide a viable alternative to Interstate Highway (IH) 94 for residents and visitors of the South Shore communities. One of the total 19 persons suggested that an extension would improve the aesthetics of the existing industrial area in the City of Cudahy.

- Eighteen persons suggested that WisDOT initiate work on a Lake Parkway extension as soon as possible.

- Twelve persons cited that a Lake Parkway extension would reduce traffic volumes on local streets adjacent to a Lake Parkway extension, in particular on Pennsylvania Avenue and Nicholson Road. Four of the total 12 persons cited concerns regarding the present safety of driving on Pennsylvania Avenue between College and Layton Avenues.

- Five persons expressed support for the bicycle and pedestrian accommodations included in the preliminary recommendations for a Lake Parkway extension.

- One person stated that a Lake Parkway extension would have minimal impact to existing commercial and industrial development.

- One person expressed support for the jughandle ramp access to a Lake Parkway extension at College Avenue.

A total of four persons indicated that they may support a Lake Parkway extension, but only if certain conditions were met.

- Two persons indicated they could only support a Lake Parkway extension if it had a speed limit greater than 40 miles per hour.

- Two persons indicated they could only support a Lake Parkway extension if there was a grade-separated interchange on the existing Lake Parkway at Oklahoma Avenue, rather than the existing overpass with jughandle ramp access.

- One person indicated they could only support a Lake Parkway extension if there was a grade-separated interchange at College Avenue, rather than the preliminary recommendation for an overpass with jughandle ramp access.

- One person indicated they could only support a Lake Parkway extension if the Daniel Hoan Memorial Bridge (Hoan Bridge) on IH 794 is to be repaired and maintained.

Comments in Opposition to a Lake Parkway Extension

A total of 19 persons expressed opposition to a Lake Parkway extension.

- Nine persons suggested that new or existing transit services should be funded rather than constructing a Lake Parkway extension. Seven of the total nine persons suggested that the planned Kenosha-Racine-Milwaukee commuter rail service would be preferred to an extension. Four of the total nine

persons suggested that it would not be appropriate to fund an extension given the current financial problems facing the existing Milwaukee County Transit System.

Response: The current year 2035 regional transportation system plan for the seven-county Southeastern Wisconsin Region has long recognized the need for a balanced, multimodal transportation system, including both highways and public transit. The regional transportation plan recommends travel demand management, transportation systems management, public transit, bicycle and pedestrian, and arterial street and highway actions and improvements necessary to meet existing and year 2035 transportation needs and objectives within the Region. The public transit element of the regional transportation plan recommends a nearly doubling of transit service in the Region by the year 2035, including significant improvement and expansion of local bus transit service and a commuter rail line connecting Milwaukee, Racine, and Kenosha. The regional transportation plan has also recognized that implementation of the recommended expansion of public transit is dependent upon continued State funding of public transit and attaining dedicated local funding for public transit. Most public transit systems nationwide have dedicated local funding, typically a sales tax of 0.25 to 1.0 percent.

- Six persons suggested that the estimated travel time reduction between STH 100 and Layton Avenue of five minutes—10 minutes on a Lake Parkway extension compared to 15 minutes on Pennsylvania Avenue—does not justify the estimated impacts and costs of an extension.

Response: The Commission staff has estimated the potential benefits, costs, and impacts of a Lake Parkway extension, which the study Advisory Committee will use when determining whether to continue to recommend an extension. As noted in the comment, one of the potential benefits would be an estimated travel time reduction of five minutes between STH 100 and Layton Avenue on a Lake Parkway extension compared to on Pennsylvania Avenue. Should the Advisory Committee continue to recommend an extension, the Commission's Advisory Committee on Regional Transportation System Planning and the Commission would consider the potential benefits, including a potential travel time reduction, along with the costs and impacts of an extension, when determining whether to add an extension to the regional transportation plan. Ultimately, WisDOT will consider the potential benefits, costs, and impacts when determining whether to implement an extension, and would develop alternative designs for an extension during preliminary

engineering and environmental impacts studies, identifying the specific benefits, costs, and impacts associated with those design alternatives.

- Five persons cited that a Lake Parkway extension would have negative environmental impacts. The potential negative environmental impacts cited included decreased or degraded primary environmental corridor, wetlands, and park/recreational land; impacts to wildlife; reduced stormwater retention capacity; and stormwater runoff issues.

Response: The potential right-of-way impacts of a Lake Parkway extension estimated by the Commission staff include approximately 41 acres of primary environmental corridor, 27 acres of wetlands, and 20 acres of park/recreational land. A total of 57 acres of primary environmental corridors, wetlands, or park/recreational land would be impacted. These and other potential impacts, along with the potential benefits and costs, will be considered by the study Advisory Committee when determining whether to continue to recommend an extension. Should the Advisory Committee continue to recommend an extension, the Commission's Advisory Committee on Regional Transportation System Planning and the Commission would also consider the potential benefits, costs, and impacts of an extension, when determining whether to add an extension to the regional transportation plan. Ultimately, WisDOT would consider the potential benefits, costs, and impacts when determining whether to implement an extension, and would develop a alternative designs for an extension during preliminary engineering and environmental impacts studies, identifying the specific benefits, costs, and impacts associated with those design alternatives.

- Four persons suggested that a Lake Parkway extension is not necessary given the proximity of IH 94 and north-south arterial roadways adjacent to an extension, asserting that they already provide north-south connections between the South Shore communities and downtown Milwaukee.

Response: The Commission staff prepared forecast year 2035 average weekday traffic volumes for the proposed Lake Parkway extension study area. These forecasts indicated that with implementation of an extension, there would be a reduction of about 5,000 vehicles per average weekday on IH 94 between Rawson Avenue and the Mitchell Interchange and a reduction of about 5,000 vehicles per average weekday on IH 94/IH 43 north of the

Mitchell Interchange. The forecasts also indicated an expected improvement in traffic congestion on several north-south arterial roadways adjacent to an extension, including Pennsylvania Avenue, Howell Avenue, 13th Street, Puetz Road, and STH 32 (Chicago Avenue). This improvement in traffic congestion would be particularly beneficial to the segments of these north-south arterial roadways with a high degree of access via driveways to residences and businesses. An extension would also be expected to improve accessibility in terms of an estimated travel time reduction of about five minutes between STH 100 and Layton Avenue, and improve safety in terms of an expected overall reduction of vehicular crashes with implementation of an extension. The study Advisory Committee will consider these and other potential benefits, along with the costs and impacts, when determining whether to continue to recommend an extension.

- Four persons suggested that a Lake Parkway extension is not affordable given the current financial problems facing local, State, and Federal governments.

Response: The study Advisory Committee includes local, County, and State elected officials. These elected officials will consider the potential cost and affordability of a Lake Parkway extension when determining whether to continue to recommend an extension. Should the Advisory Committee continue to recommend an extension, the Commission's Advisory Committee on Regional Transportation System Planning and the Commission would consider the cost and affordability of an extension when determining whether to add an extension to the regional transportation plan. Ultimately, WisDOT will consider the cost and affordability when determining whether to implement an extension.

- Three persons cited that a Lake Parkway extension would negatively impact residential properties located near an extension. The potential negative impacts cited included increased noise, diminished aesthetics, and reduced property values.

Response: The potential right-of-way impacts estimated by the Commission staff include one acquisition of a residential structure and an estimated 56 disrupted residential structures (i.e. within 200 feet of the extension right-of-way). The study Advisory Committee will consider these impacts when determining whether to continue to recommend an extension. Should the Advisory Committee continue to recommend an extension, the Commission's Advisory Committee on Regional Transportation System Planning and the

Commission would also consider these impacts when determining whether to add an extension to the regional transportation plan. Ultimately, WisDOT would consider these impacts when determining whether to implement an extension, and would develop alternative designs for the extension during preliminary engineering and environmental impacts studies, identifying and attempting to reduce the specific impacts associated with those design alternatives.

- Two persons suggested that a Lake Parkway extension would encourage urban sprawl.

Response: A Lake Parkway extension would primarily serve the Cities of Cudahy, South Milwaukee, and Oak Creek. The Cities of Cudahy and South Milwaukee are older, denser, close-in suburbs. The City of Oak Creek has a considerable amount of undeveloped land, but this land is planned to be developed at medium urban densities, regardless of whether or not an extension is implemented.

- Two persons suggested that a Lake Parkway extension would not attract new businesses to the South Shore communities, but would instead cause existing businesses to relocate along an extension from other areas of the South Shore communities.

Response: While it is difficult to estimate the specific economic impact of a Lake Parkway extension, and whether or not businesses would relocate along an extension, the Commission staff has estimated potential benefits of an extension that would likely benefit both new and existing businesses in the South Shore communities. One of these potential benefits is an expected improvement in traffic congestion on several north-south arterial roadways adjacent to an extension, including Pennsylvania Avenue, Howell Avenue, 13th Street, Puetz Road, and STH 32 (Chicago Avenue). Another benefit would be an estimated travel time reduction of about five minutes between STH 100 and Layton Avenue. The reduced traffic congestion and travel time would increase the ability of residents and visitors of the South Shore communities to access the existing businesses along the north-south arterial roadways adjacent to an extension, and would likely make these communities a more attractive location to new businesses.

- One person suggested that a Lake Parkway extension would negatively impact the Oak Leaf Trail.

Response: A Lake Parkway extension, as located in the study's preliminary recommendations, would cross the Oak Leaf Trail in one location, just north of Drexel Avenue. At this location—given the preliminary recommendation at Drexel Avenue for a grade-separated interchange with an extension over Drexel Avenue—it is anticipated that an extension would be on structure over the Oak Leaf Trail, with the Oak Leaf Trail essentially maintaining its existing route. In addition, should an extension be implemented, it may be possible to increase connections to the Oak Leaf Trail by providing access to the multi-use trail proposed within the right-of-way for an extension.

- One person suggested that a Lake Parkway extension would increase traffic volumes on northbound IH 43 and westbound IH 94 traveling away from downtown Milwaukee.

Response: The Commission staff prepared forecast year 2035 average weekday traffic volumes for the proposed Lake Parkway extension study area. These traffic forecasts indicated that an extension would attract local traffic largely from adjacent north-south arterial roadways between STH 100 and Layton Avenue, including Pennsylvania Avenue, Howell Avenue, 13th Street, Puetz Road, and STH 32 (Chicago Avenue). The forecasts did not indicate any increase in traffic volumes on IH 43 north of the Marquette Interchange or IH 94 between the Marquette Interchange and the Zoo Interchange, as a result of implementing a Lake Parkway extension.

- One person suggested that additional traffic from a Lake Parkway extension would increase traffic congestion on Puetz Road west of the Union Pacific Railroad (UPR) rail line.

Response: The Commission staff prepared forecast year 2035 average weekday traffic volumes for the proposed Lake Parkway extension study area. These traffic forecasts indicated that with implementation of an extension, year 2035 forecast traffic volumes would increase on Puetz Road between the UPR rail line and Howell Avenue from about 18,000 to about 21,000 vehicles per average weekday, and would decrease on Puetz Road between Howell Avenue and 13th Street from about 16,000 to about 11,000 vehicles per average weekday. The year 2035 regional transportation plan recommends the provision of four traffic lanes on Puetz Road between 27th Street (STH 241) and STH 32, which includes the segment of Puetz Road between the UPR rail line and Howell Avenue. Should four traffic lanes be provided, the Commission staff would anticipate little or no traffic

congestion on Puetz Road between the UPR rail line and Howell Avenue, regardless of whether or not an extension is implemented.

- One person suggested that existing roadways should be repaired and maintained rather than constructing a Lake Parkway extension.

Response: The proposed Lake Parkway extension would be a State Trunk Highway, should it proceed to implementation. As part of the decision regarding whether to proceed to implementation, the State of Wisconsin would need to first determine whether to conduct preliminary engineering. At the conclusion of preliminary engineering, the State of Wisconsin Legislature and Governor would then need to decide whether to proceed to final engineering and design. Throughout each of these steps, the State would need to consider the priority of a Lake Parkway extension relative to the need to repair and maintain existing State highways.

Comments Suggesting Changes to Specific Elements of the Preliminary Recommendations for a Lake Parkway Extension

- Ten persons suggested changes to how and where to provide access to a Lake Parkway extension. Eight of the total ten persons suggested that a grade-separated interchange be considered at College Avenue—rather than an overpass with jughandle ramp access at College Avenue—which would result in all access to the extension being provided via grade-separated interchanges. One of the total ten persons suggested that a northbound off-ramp be constructed at Layton Avenue to create a full grade-separated interchange, rather than constructing northbound on- and off-ramps at Edgerton Avenue. One of the total ten persons suggested that the existing southbound Lake Parkway exit to Pennsylvania Avenue at Edgerton Avenue should be maintained—rather than removed to construct northbound on- and off-ramps at Edgerton Avenue. One of the total ten persons suggested that providing access at Drexel Avenue and Puetz Road would not be necessary. One of the total ten persons suggested that not providing access at Puetz Road—rather than a grade-separated interchange—would minimize the impact to primary environmental corridor and wetlands at that location. One of the total ten persons suggested that crossing roadways of the extension be constructed over—rather than under—the extension to eliminate the need for at-grade railroad crossings on those crossing roadways.

Response: Regardless of the specific roadway crossing treatments included in the study Advisory Committee's final recommendations, should the Advisory Committee continue to recommend a Lake Parkway extension, WisDOT would consider alternative crossing treatments at each roadway crossing for an extension during preliminary engineering and environmental impact studies, should an extension proceed to implementation.

The Advisory Committee's preliminary recommendations for a Lake Parkway extension included an overpass with jughandle ramp access at College Avenue to minimize the potential impact on existing businesses northwest of the intersection of Pennsylvania and College Avenues and to minimize the potential impact on the site for a proposed U.S. Postal Service facility southwest of the intersection of Pennsylvania and College Avenues. Should the proposed U.S. Postal Service facility not proceed to implementation, the existing available land southwest of the intersection of Pennsylvania and College Avenues could potentially be utilized for a grade-separated interchange at College Avenue, with the ramps located south of College Avenue on either side of the UPR rail right-of-way to minimize the potential impact on the existing businesses northwest of the intersection of Pennsylvania and College Avenues.

The preliminary recommendations for a Lake Parkway extension included the addition of a southbound off-ramp to the existing half interchange at Layton Avenue and northbound on- and off-ramps at Edgerton Avenue. The Advisory Committee recommended this crossing treatment as it maintains direct access to the major industrial area in the City of Cudahy via Edgerton Avenue, and avoids impacting the proposed Cobalt Partners retail development located southwest of the intersection of Pennsylvania and Layton Avenues.

With regard to the suggestion to not provide access to a Lake Parkway extension at Drexel Avenue and Puetz Road, both Drexel Avenue and Puetz Road are major arterial roadways. Providing access at these two roadways would ensure that access to the extension would be spaced about one mile apart, appropriate for the urban development planned for the southern City of Oak Creek area. It should also be noted that at-grade intersections at Drexel Avenue and Puetz Road—rather than grade-separated interchanges—should be able to adequately accommodate the forecast year 2035 traffic volumes on an extension and on these crossing roadways. At-grade intersections,

compared to grade-separated interchanges, would also reduce the amount of impacted primary environmental corridor and wetlands at these two locations.

The preliminary recommendations for a Lake Parkway extension included four locations—College, Drexel, and Forest Hill Avenues, and Puetz Road—where the extension would be constructed over a crossing roadway. At these four locations, it may be possible for the crossing roadways to be constructed over the extension, potentially eliminating the need for at-grade railroad crossings on those crossing roadways. However, this would be expected to result in additional cost, and the structures for the four crossing roadways would likely impact access and egress to residential and commercial properties along each crossing roadway.

- Nine persons suggested that modifying the southern ending point of a Lake Parkway extension should be considered. Seven of the total nine persons suggested that an extension should continue further south than STH 100 in Milwaukee County, to as far south as Racine County, Kenosha County, or the Illinois State Line. One of the total nine persons suggested that an extension should initially be terminated at Rawson Avenue, and extended further south in the future, if necessary. One of the total nine persons suggested that an extension should initially be terminated at Puetz Road, with traffic then able to use Nicholson Road between the extension and STH 100.

Response: The Commission was asked to study the feasibility of extending the existing Lake Parkway to STH 100. Should the study Advisory Committee continue to recommend an extension, and the Commission's Advisory Committee on Regional Transportation System Planning and the Commission determine to add an extension to the regional transportation plan, WisDOT could potentially consider terminating an extension at a location north of STH 100. Also, should an extension be added to the regional transportation plan, the Commission could potentially study a further extension of the Lake Parkway into or through Racine County. Studying this further extension would require interest and support from affected local governments in Racine County.

- Seven persons suggested that a Lake Parkway extension should have a speed limit greater than 40 miles per hour.

Response: The preliminary recommendations for a Lake Parkway extension included a design based on a speed limit of 40 miles per hour, consistent with the existing Lake Parkway. It may be desirable for an extension to have a speed limit greater than 40 miles per hour, particularly given that the development along an extension is generally less dense than along the existing Lake Parkway to the north. Ultimately, WisDOT would determine the most appropriate speed limit for an extension during preliminary engineering, should an extension proceed to implementation.

- Four persons suggested modifying the location or alignment of a Lake Parkway extension. Two of the total four persons suggested shifting the location of the extension west of the UPR rail right-of-way between the College Avenue and Drexel Avenue crossing treatments—rather than east of the UPR rail right-of-way—to minimize the impact to residences along that segment. Two of the total four persons suggested shifting the location of the extension east to be adjacent to the We Energies right-of-way between Forest Hill Avenue and Puetz Road—rather than adjacent to the UPR rail right-of-way—to minimize the impact to residences located in the area west of the UPR rail right-of-way along Puetz Road.

Response: Locating the Lake Parkway extension west of the UPR rail right-of-way between the crossing treatments for College Avenue and Drexel Avenue may be possible and would minimize the potential impact to residential properties located east of the UPR rail right-of-way along Rawson Avenue. However, this location may add significant cost to the construction of an extension due to the need to cross the UPR rail line in two places—a point south of College Avenue and a point north of Drexel Avenue. It would also likely result in impacts to two businesses adjacent to the UPR rail right-of-way along this segment—Sievert Trucking, Inc. located north of Rawson Avenue and Tehan Greenhouses, Inc. located south of Rawson Avenue—possibly requiring the acquisition or relocation of these two businesses.

It may be possible to shift the location of a Lake Parkway extension east to be adjacent to the We Energies right-of-way between Forest Hill Avenue and Puetz Road, rather than adjacent to the UPR rail right-of-way. Neither location would require the relocation or acquisition of any residences. In the area along Puetz Road, both locations would have one residence within 200 feet of the extension right-of-way. However, more residences along Puetz Road would be within 1,000 feet of the extension right-of-way for the

location adjacent to the UPR rail right-of-way—about 36 residences—than for the location adjacent to the We Energies right-of-way—about 3 residences. In both locations, the extension would be located within a parcel owned by the Milwaukee Metropolitan Sewerage District (MMSD) at 1730 E. Puetz Road, and would be located within primary environmental corridor. Neither location would impact wetlands, according to the most recent Wisconsin Wetlands Inventory (WWI) data available at the time of the study, which are from the year 2005.

- One person suggested that bicycles should not be allowed on a Lake Parkway extension.

Response: Federal and State law require that bicycle and pedestrian accommodations be considered during the preliminary engineering for any new or reconstructed roadway utilizing State or Federal funding. During the current study, the Commission staff worked with WisDOT staff to determine whether and how bicycle and pedestrian accommodations could potentially be provided on a Lake Parkway extension. The preliminary recommendations included auxiliary lanes that may provide adequate bicycle accommodations, and a multi-use trail that could accommodate both bicycles and pedestrians. It should be noted that the existing Lake Parkway does not currently provide bicycle or pedestrian accommodations.

- One person suggested that electric transmission lines that would need to be relocated for a Lake Parkway extension should be buried rather than relocated on overhead poles and wires.

Response: Between a point about 1,000 feet north of College Avenue and Rawson Avenue, a Lake Parkway extension would potentially impact, and require the relocation of, American Transmission Company (ATC) double-circuit, 138 kV electric transmission lines. ATC staff has indicated that it may be possible to relocate these lines on overhead poles between the UPR rail line and the extension. The transmission lines could be buried should this be determined to be infeasible. However, ATC staff indicated that burying the lines would be undesirable due to the significantly higher cost (potentially 20 times higher than relocating on overhead poles), the difficulty in maintaining the buried lines, a need for higher capacity lines, and a need for additional time to design and construct the buried lines.

Other Comments and Suggestions

- Fourteen persons suggested specific impacts of a Lake Parkway extension that should be addressed should an extension be implemented. Twelve of the total 14 persons suggested that sufficient measures should be taken to minimize the noise impact related to a Lake Parkway extension. Seven of the total 14 persons suggested that sufficient measures should be taken to minimize the impact of an extension on the quality and rate of stormwater runoff. Two of the total 14 persons suggested that impacts to wetlands should be considered. One of the total 14 persons suggested that impacts to capped landfills should be considered.

Response: The Commission staff has analyzed the potential right-of-way impacts of a Lake Parkway extension. The purpose of this necessarily general analysis was to attempt to estimate the possible impacts of an extension. The study Advisory Committee will use this analysis when determining whether to continue to recommend an extension. Should an extension ultimately proceed to implementation, WisDOT would conduct a more detailed evaluation of the extension during preliminary engineering and environmental impact studies. During those studies, WisDOT would develop alternative designs for the extension and would identify and attempt to reduce the specific impacts associated with those design alternatives.

With regard to noise impacts, WisDOT is required to identify the need, feasibility, and location of potential noise barriers on any new roadway during preliminary engineering and environmental impact studies, as defined in TRANS 405 of the Wisconsin Administrative Code. Need is established based upon existing and projected future noise levels, and noise level standards. Feasibility is defined as a maximum cost of a potential noise barrier not exceeding $30,000 (1988 dollars) per abutting residence. WisDOT also works with local communities in an effort to obtain local community understanding, and support of, needed and feasible noise barriers.

With regard to stormwater management, WisDOT is required to properly address stormwater management issues, and would identify stormwater management controls that minimize the impact of a Lake Parkway extension on the quality and rate of stormwater runoff. The stormwater management procedures are defined in TRANS 401 of the Wisconsin Administrative Code. In terms of the quality of stormwater runoff, total

suspended solids in stormwater runoff must be reduced by a minimum of 80 percent compared to no runoff management controls. In terms of the rate of stormwater runoff, peak runoff discharge rates must be maintained or reduced to the maximum extent practicable compared to the rate prior to implementation of an extension. In addition to the administrative code requirements, a cooperative agreement between WisDOT and the Wisconsin Department of Natural Resources requires the two agencies to work together to identify stormwater management controls during preliminary engineering and environmental impact studies. WisDOT also includes other agencies impacted by stormwater runoff, like the Milwaukee Metropolitan Sewerage District, in the identification of stormwater management controls.

With regard to the subject wetlands, a Lake Parkway extension should be located so as to avoid any wetland losses where practical, and to minimize adverse impacts to wetlands that may result from an extension. Compensatory mitigation will be required for any wetlands that would be impacted by an extension. Such compensatory mitigation would be determined by WisDOT in coordination with Federal agencies and the Wisconsin Department of Natural of Resources, should an extension be implemented. Compensatory mitigation will provide functional replacement of the types of wetlands impacted and result in a no net-loss of wetlands, replacing a minimum of every acre lost. Wetland compensatory mitigation sites are typically established adjacent to, or in the general vicinity of, any impacted wetlands so that the wetland compensatory mitigation replaces any impacted wetland types, functions, and values.

With regard to landfills, WisDOT will avoid contaminated areas where practical when designing a Lake Parkway extension, should an extension ultimately be implemented. Where impractical to avoid contaminated areas, WisDOT would attempt to minimize the disturbance of contaminated soils or water. Any contaminated soils or water encountered during construction of an extension would require special handling and disposal.

- Four persons commented on aspects of the existing Lake Parkway and IH 794. Two persons suggested that the Daniel Hoan Memorial Bridge connecting IH 794 in downtown Milwaukee to the Lake Parkway should be repaired and re-decked, rather than removed and replaced. Two persons suggested that WisDOT should consider constructing a grade-separated interchange on the existing Lake Parkway at Oklahoma Avenue to replace the existing overpass with jughandle ramp access.

Response: The Daniel Hoan Memorial Bridge (Hoan Bridge) connects IH 794 in downtown Milwaukee to the Lake Parkway across the Milwaukee River inlet. WisDOT is conducting preliminary and final engineering to repair and re-deck the Hoan Bridge, with construction scheduled to begin in 2013. With regard to the existing Lake Parkway intersection at Oklahoma Avenue, WisDOT recently implemented an alternative design, which provides a free flow right turn going northbound on the Lake Parkway from Oklahoma Avenue and a free flow movement for the two southbound traffic lanes on Lake Parkway through the intersection. Regardless of whether or not an extension is implemented, WisDOT would be responsible for considering any additional alternative designs at Oklahoma Avenue, such as a grade-separated interchange.

- Three persons questioned whether a local cost sharing would be required for a Lake Parkway extension. Two of the total three persons suggested that it may be appropriate for the South Shore communities to contribute a portion of the necessary funding for an extension.

Response: WisDOT has an established procedure for determining whether a local cost share would be required when constructing a new road. This procedure currently requires cost sharing when there is or will be 40 percent or more local traffic utilizing the new road. Local traffic is defined as traffic that uses or will use a segment of road and that has an origin or destination within one-half mile of the road's limits. The Commission staff has estimated that the forecasted local traffic—within one-half mile of the project limits—would likely be substantially less than 40 percent of the traffic utilizing a Lake Parkway extension. Thus, based on the current requirement, a local cost share may not be required for an extension. Assuming there would not be a local cost share requirement, funding for an extension would likely come from a combination of State and Federal funding sources.

- Two persons suggested that transit service improvements such as park-ride facilities should be considered over or near a Lake Parkway extension.

Response: The current year 2035 regional transportation system plan for the seven-county Southeastern Wisconsin Region has long recognized the need for public transit as part of a balanced, multimodal transportation system. The public transit element of the year 2035 regional transportation plan recommends a nearly doubling of transit service in the

Region by the year 2035, including transit service improvements (development of rapid and express transit) and an expansion of transit service area, frequency, and hours of operation. Should a Lake Parkway extension ultimately proceed to implementation, the Commission staff could work with Milwaukee County and the Milwaukee County Transit System to review the Milwaukee County short-range transit development plan and the transit element of the long-range regional transportation plan, to determine how these plans should change with implementation of a Lake Parkway extension. These potential changes would be considered with respect to transit service improvements over the existing Lake Parkway and a Lake Parkway extension, including the consideration of park-ride facilities.

- Two persons questioned the need for a right-of-way width of 130 feet for a Lake Parkway extension.

Response: The cross-section for a Lake Parkway extension includes an approximate right-of-way width of 130 feet, which was used to determine potential right-of-way acquisitions and impacts of an extension. The cross-section is essentially the same as the existing typical cross-sections on the Lake Parkway between Edgerton and St. Francis Avenues, with the one difference being that an extension includes a multi-use trail to accommodate bicycles and pedestrians, while the existing Lake Parkway does not. It should be noted that it may be possible to reduce the right-of-way width by about 25 feet, particularly between roadway crossing treatments, by decreasing the median width by about 25 feet.

- One person suggested that the wetlands delineated on the maps for the preliminary recommendations of a Lake Parkway extension were outdated.

Response: The wetlands delineated on the maps for the preliminary recommendations of a Lake Parkway extension utilize the most recent Wisconsin Wetlands Inventory (WWI) data available at the time of the study, which are from the year 2005. Field delineation of the wetlands that would be impacted by a Lake Parkway extension would be conducted by WisDOT during preliminary engineering and environmental impact studies, should a Lake Parkway extension be implemented.

- One person suggested that a Lake Parkway extension should be connected directly to General Mitchell International Airport.

Response: Access to General Mitchell International Airport from a Lake Parkway extension would be provided via two major arterial roadways—Layton Avenue and College Avenue—both connecting to the Airport via Howell Avenue, another major arterial roadway. Should an extension ultimately proceed to implementation, additional access to the Airport from an extension, including consideration of connecting transit to the Airport from an extension, would need to be considered by WisDOT, the affected local and County governments, and the Airport itself.

- One person suggested that a Lake Parkway extension should accommodate emergency vehicles by providing emergency vehicle preemption, proper lighting, and adequate emergency access.

Response: Accommodating emergency vehicles is an important consideration when designing any new roadway. Should a Lake Parkway extension proceed to implementation, WisDOT would work with affected local and County governments to determine the most appropriate accommodations for emergency vehicles.

- One person questioned whether locating a Lake Parkway extension on undeveloped land adjacent to the We Energies right-of-way had been considered to minimize the amount of utilities that would need to be relocated for an extension.

Response: The alignment of the preliminary recommended Lake Parkway extension is located outside the We Energies right-of-way where there would be adequate undeveloped land, in an attempt to avoid the need to relocate utilities wherever possible, while also attempting to minimize impact to existing and planned development along the Lake Parkway extension. The segment of the proposed Lake Parkway extension just south of College Avenue is within the We Energies right-of-way in an attempt to minimize the potential impact on the site for a proposed U.S. Postal Service facility southwest of the intersection of Pennsylvania and College Avenues. Should the proposed U.S. Postal Service facility not be implemented, it may be possible to locate an extension outside the We Energies right-of-way along that segment.

- One person questioned whether the Interplant Solids Pipeline owned by MMSD would need to be relocated for a Lake Parkway extension.

Response: During the study, the Commission staff had discussions with MMSD staff regarding potential impacts to the Interplant Solids Pipeline (ISP) owned by MMSD. As a result of those discussions, it was determined that a Lake Parkway extension could likely be constructed above the ISP—similar to the existing Lake Parkway—if access to the ISP is maintained. Should an extension ultimately proceed to implementation, WisDOT would conduct a more detailed evaluation of the extension during preliminary engineering and environmental impact studies. During those studies, WisDOT would develop alternative designs for the extension and would identify and attempt to reduce the specific impacts associated with those design alternatives, including any specific impacts to the ISP.

- One person questioned whether the multi-use path proposed along a Lake Parkway extension would connect to existing trails and paths.

Response: The preliminary recommendation for a Lake Parkway extension includes a multi-use path located in the buffer area to the east of the travelled way for an extension. The specific location for the multi-use trail, along with locations for the provision of access to existing trails and paths, would be determined by WisDOT during preliminary engineering, should an extension ultimately be implemented.

- One person questioned whether the planned widening of Pennsylvania Avenue from two to four traffic lanes between College Avenue and Rawson Avenue would still be needed if a Lake Parkway extension is implemented.

Response: The planned widening of Pennsylvania Avenue from two to four traffic lanes between College Avenue and Rawson Avenue has proceeded through preliminary engineering and final engineering and design. This widening is scheduled to be implemented during the year 2012.

- One person suggested that Federal funding allocated to the City of Milwaukee for its Downtown Streetcar project be reallocated to fund a portion of the cost for a Lake Parkway extension.

Response: In 2009, Federal legislation allocated $54.9 million of Federal Interstate Cost Estimate (ICE) funding to the City of Milwaukee specifically for a Downtown Streetcar project.

FINAL RECOMMENDATIONS FOR LAKE PARKWAY EXTENSION

Should the Advisory Committee determine to continue to recommend an extension of the Lake Parkway following review of the public comment received, the Advisory Committee could determine to include possible refinements in the Advisory Committee's final recommendations. Based on the public comment received on the study Advisory Committee's preliminary recommendations for a Lake Parkway extension, the Commission staff has compiled a list of possible refinements to the preliminary recommendations that may be considered by the Advisory Committee.

Possible refinements to the Advisory Committee's preliminary recommendations, which could potentially be included in the Advisory Committee's final recommendations for a Lake Parkway extension, include the following:

1) A recommendation that WisDOT consider a grade-separated interchange as an alternative roadway crossing treatment at College Avenue, in addition to the Committee's recommended overpass with jughandle ramp access. A conceptual design for a possible alternative grade-separated interchange at College Avenue is presented as Appendix D to this study report.
2) A recommendation that WisDOT consider an alternative location for a Lake Parkway extension west of the UPR rail right-of-way between the College Avenue and Drexel Avenue crossing treatments—in addition to the Committee's recommended location east of the UPR rail right-of-way—to minimize the impact to residences along that segment.
3) A recommendation that the Southeastern Wisconsin Regional Planning Commission work with Milwaukee County and the Milwaukee County Transit System to review the Milwaukee County short-range transit development plan and the transit element of the long-range regional transportation plan, to determine how these plans should change with implementation of a Lake Parkway extension. These potential changes would be considered with respect to transit service improvements over the existing Lake Parkway and a Lake Parkway extension, including the consideration of park-ride facilities.
4) A recommendation that the State of Wisconsin work with Milwaukee County and other transit operators in southeastern Wisconsin to resolve the existing transit funding crisis. A lack of adequate transit funding, particularly State funding, has resulted in transit service reductions and significant fare increases. In an advisory referendum in 2008, residents of Milwaukee County approved a one-percent sales tax for parks, public transit, and emergency medical

services. To improve, expand, and even to preserve the Milwaukee County Transit System, the State will need to implement local dedicated transit funding or restore the provision of stable, adequate State transit funding.

5) A recommendation that WisDOT study a speed limit greater than 40 miles per hour on the Lake Parkway extension, or on a portion of the Lake Parkway extension. The Committee recognizes that it may be desirable for an extension to have a speed limit greater than 40 miles per hour, particularly given that the development along a Lake Parkway extension is generally less dense than along the existing Lake Parkway to the north.

6) A recommendation that WisDOT study and implement noise barriers to minimize the noise impact from a Lake Parkway extension. The Committee recognizes that WisDOT has an established procedure for identifying the need, feasibility, and location of potential noise barriers, and encourages WisDOT to work with affected local governments during this identification process.

7) A recommendation that WisDOT identify proper stormwater management controls for a Lake Parkway extension to minimize the impact of a Lake Parkway extension on the quality and rate of stormwater runoff. The Committee recognizes that WisDOT has an established procedure for identifying stormwater management controls, and encourages WisDOT to work with the Milwaukee Metropolitan Sewerage District and affected local governments during this identification process.

8) A recommendation that WisDOT design a Lake Parkway extension so as to avoid wetland losses where practical, and to minimize adverse impacts to wetlands that may result from an extension. The Committee recognizes that compensatory mitigation will be required for any wetlands impacted by a Lake Parkway extension so that functional replacement of the types of wetlands impacted is provided, resulting in a no net-loss of wetlands.

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APPENDICES

Appendix A

COMPARATIVE ANALYSES OF ALTERNATIVE ROADWAY CROSSING TREATMENTS FOR A LAKE PARKWAY EXTENSION

1. At-grade intersections versus grade-separated interchanges
    - Advantages to at-grade intersections:
        - o Lower construction costs,
        - o Would require less right-of-way acquisition, and
        - o Less impacts to primary environmental corridors and wetlands.

    - Advantages to grade-separated interchanges:
        - o Allow free flow of traffic,
        - o Higher capacity facility,
        - o Higher speed facility (travel time would be about 1.5 minutes less between STH 100 and Layton Avenue),
        - o Would carry about 10 to 20 percent more traffic (3,000-4,000 vehicles per average weekday), reducing traffic on other streets, and
        - o Safer facility.

2. Comparison of alternative crossing treatments at Lake Parkway extensions:
    - **Layton and Edgerton Avenues**:

Evaluation Measures	At-Grade Intersection at Edgerton Avenue and Maintain Half Interchange at Layton Avenue	Full Interchange at Layton Avenue and Remove Current Connection at Edgerton Avenue	Adding Southbound On-Ramp at Layton Avenue and Providing Northbound On-and Off-Ramps at Edgerton Avenue
Acquisition/Relocation of Residential Structures	0	0	0
Right-of-way Acquisition (acres)	3.5	3.8	5.1
Estimated Capital Cost	$8.5 million	$12.7 million	$12.8 million

        - o The alternative consisting of the adding of a southbound on-ramp at Layton Avenue and providing northbound on-and off-ramps at Edgerton Avenue was suggested by the City of Cudahy following the Advisory Committee meeting held on June 13, 2011.
        - o By eliminating access to the Lake Parkway extension at Edgerton Avenue, the Lake Parkway between Edgerton and Layton Avenues is estimated to carry approximately 12 percent less traffic (2,000 vehicles per average weekday), and Pennsylvania Avenue between Edgerton and Layton Avenues is estimated to carry approximately 10 to 25 percent more traffic (2,000-5,000 vehicles per average weekday). There would not be a significant change in traffic volumes on the Lake Parkway extension and Pennsylvania Avenue between College and Edgerton Avenues.

- The alternative consisting of a full interchange at Layton Avenue would provide access to both directions of the Lake Parkway on a major east-west arterial.
- Providing on- and off-ramps for the Lake Parkway extension only on Layton Avenue would also allow for better understandability of travelers wanting to access or exit the Lake Parkway.
- The two alternatives maintaining access to Edgerton Avenue would continue to provide direct access to a major industrial area in the City of Cudahy.
- Constructing a northbound off-ramp to Layton Avenue as part of the alternative consisting of a full interchange at Layton Avenue may minimally impact the proposed Cobalt retail development to be located south of Layton Avenue and between the existing Lake Parkway and Pennsylvania Avenue.
- All alternatives may disturb the remediated landfill site located between the existing Lake Parkway and Pennsylvania Avenues.
- All alternatives would require a new bridge structure over the Edgerton Channel.

- **Grange Avenue**: one alternative crossing treatment considered – an overpass with no access to the Lake Parkway extension.
  - Estimated cost is $11.2 million.
  - Potential security concerns remain with elevated structure adjacent to 128th Air Refueling Wing Facilities.
    1. May need to construct barrier walls along the Lake Parkway extension at this location.
    2. The above estimated cost would be reduced by $6.8 million, or about 61 percent less, if the entrance to the 128th Air Refueling Wing facilities can be relocated and the Lake Parkway extension is constructed at-grade.
    3. The above estimated cost would be increased by $12.6 million, or about 112 percent more, if the Lake Parkway extension is constructed below Grange Avenue.

- **College Avenue (CTH ZZ)**:
  - There are limitations for constructing an at-grade intersection or standard diamond interchange along a Lake Parkway extension at College Avenue, including the proximity of the Union Pacific Railroad (UPR) rail line, existing businesses northwest of the intersection of Pennsylvania and College Avenues, and the proposed U.S. Postal Service facility southwest of the intersection of Pennsylvania and College Avenues.
  - Thus, the two alternative crossing treatments considered include an overpass with no access to a Lake Parkway extension and an overpass with jughandle ramp access to a Lake Parkway extension.
  - The relative advantages of an overpass with no access include:
    1. Lower construction cost ($18.2 million vs. $32.3 million).
    2. May be safer than an intersection at the jughandle ramp.
    3. Would provide more efficient travel on a Lake Parkway extension.
    4. Less right-of-way is needed (9.9 acres vs. 13.6 acres).
  - The relative advantages of an overpass with jughandle ramp access include:
    1. Would provide access to major east-west arterial roadway.

2. Would provide better access to a Lake Parkway extension; otherwise, the nearest access would be via Rawson Avenue (1 mile south) or via Edgerton or Layton Avenues (1.5 miles north).
3. Would serve existing industrial development, the proposed U.S. Postal Service site, and other planned development.

- Additional considerations:
  1. The intersection for the jughandle ramp at College Avenue (west of the UPR rail line) would not likely impact operation of the planned roundabout on College Avenue (east of the UPR rail line).
  2. Both alternative crossing treatments would avoid impacting the proposed U.S. Postal Service development.
  3. Both alternative crossing treatments would potentially impact about 2.6 acres of wetlands.

- **Rawson Avenue**:

Evaluation Measures	At-Grade Intersection	Grade-Separated Interchange	Underpass with No Access
Acquisition/Relocation of Residential Structures	1	1	1
Right-of-way Acquisition (acres)	15.4	21.1	15.4
Impacts to Wetland (acres)	1.6	2.0	1.6
Estimated Capital Cost	$18.8 million	$36.7 million	$13.3 million

- All alternatives would potentially impact the existing stormwater facilities along the western edge of the existing multi-family development north of Rawson Avenue.
- All alternatives would potentially require the relocation of American Transmission Company (ATC) transmission lines north of Rawson Avenue to avoid acquiring or relocating residential structures within the existing multi-family development. The ATC lines may be avoided south of Rawson Avenue.
- By not providing access to the Lake Parkway extension at Rawson Avenue, the Lake Parkway between Drexel and College Avenues is estimated to carry approximately 7 to 14 percent less traffic (2,000-4,000 vehicles per average weekday), and Pennsylvania Avenue between Rawson Avenue and College Avenue is expected to carry approximately 35 percent more traffic (3,000 vehicles per average weekday). There would not be a significant change in traffic volume on Pennsylvania Avenue between Drexel and Rawson Avenues.

- **Drexel Avenue**:

Evaluation Measures	At-Grade Intersection	Grade-Separated Interchange
Acquisition/Relocation of Residential Structures	0	0
Right-of-way Acquisition (acres)	15.3	21.0
Impacts to Primary Environmental Corridor (acres)	7.5	7.6
Impacts to Wetland (acres)	3.0	4.0
Impacts to Park/Recreational Land—Oak Creek Parkway (acres)	8.8	14.0
Estimated Capital Cost	$12.0 million	$35.2 million

- **Forest Hill Avenue** – one alternative crossing treatment considered – an overpass with no access to the Lake Parkway extension.

- **Puetz Road**:

Evaluation Measures	At-Grade Intersection	Grade-Separated Interchange	Overpass with No Access
Acquisition/Relocation of Residential Structures	0	0	0
Right-of-way Acquisition (acres)	15.3	20.9	11.9
Impacts to Primary Environmental Corridor (acres)	14.7	20.3	11.9
Impacts to Wetland (acres)	5.1	7.5	4.9
Impacts to Park/Recreational Land—Oak Creek Parkway (acres)	2.0	2.0	2.0
Estimated Capital Cost	$12.6 million	$35.3 million	$15.7 million

  - All alternatives would also impact land owned by the Milwaukee Metropolitan Sewerage District that was purchased for conservation purposes—about 6.3 acres for the at-grade intersection alternative, about 9.0 acres for the grade-separated interchange alternative, and about 5.8 acres for the overpass with no access alternative.
  - By not providing access to the Lake Parkway extension at Puetz Road, the Lake Parkway extension between Puetz Road and Drexel Avenue is estimated to carry approximately 55 to 60 percent less traffic (11,000-15,000 vehicles per average weekday), Pennsylvania Avenue between Puetz Road and Drexel Avenue is expected to carry approximately 100 to 250 percent more traffic (4,000-5,000 vehicles per average weekday), and Howell Avenue between Puetz Road and Drexel Avenue is expected to carry approximately 20 to 30 percent more traffic (7,000-10,000 vehicles per average weekday). A majority

of the traffic that would have utilized Puetz Road to enter and exit the Lake Parkway extension would instead utilize Drexel Avenue. There would not be a significant change in the traffic volumes on the Lake Parkway extension, Pennsylvania Avenue, and Howell Avenue between STH 100 and Puetz Road.

- **Ryan Road** – one alternative crossing treatment considered – cul-de-sacs on Ryan Road on both sides of a Lake Parkway extension.

- **STH 100**:

Evaluation Measures	At-Grade Intersection West of Pennsylvania Avenue	At-Grade Intersection At Pennsylvania Avenue
Acquisition/Relocation of Residential Structures	0	0
Right-of-way Acquisition (acres)	5.5	8.5
Impacts to Primary Environmental Corridor (acres)	2.0	2.1
Impacts to Wetland (acres)	0.0	0.2
Estimated Capital Cost	$2.8 million	$4.3 million

  - The City of Oak Creek indicated that they prefer that the at-grade connection be constructed west of Pennsylvania Avenue.

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Appendix B

Map B-1

PREFERRED CROSSING TREATMENT FOR LAKE PARKWAY EXTENSION AT LAYTON AVENUE (CTH Y) AND EDGERTON AVENUE

POTENTIAL CENTERLINE FOR LAKE PARKWAY EXTENSION

POTENTIAL LAKE PARKWAY EXTENSION

POTENTIAL NEW SOUTHBOUND ON-RAMP AT LAYTON AVENUE AND NEW NORTHBOUND ON- AND OFF-RAMPS AT EDGERTON AVENUE

N

GRAPHIC SCALE

0 200 400 600 800 Feet

NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

Map B-2

PREFERRED CROSSING TREATMENT FOR LAKE PARKWAY EXTENSION AT COLLEGE AVENUE

POTENTIAL CENTERLINE FOR LAKE PARKWAY EXTENSION

POTENTIAL LAKE PARKWAY EXTENSION WITH JUGHANDLE RAMP ACCESS AT COLLEGE AVENUE

SECONDARY ENVIRONMENTAL CORRIDOR

WETLANDS

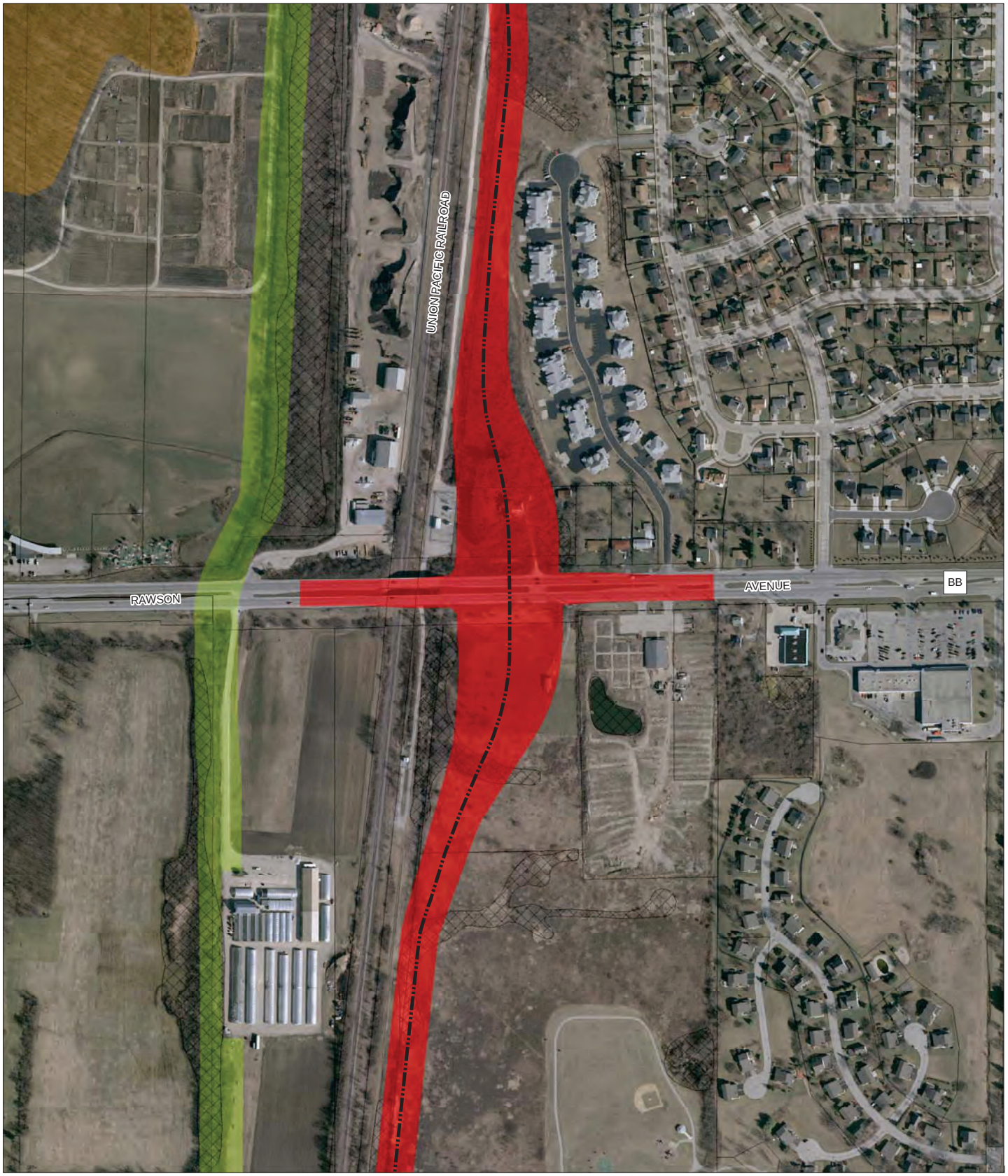
GRAPHIC SCALE

0 100 200 300 400 500 Feet

NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

Map B-3

PREFERRED CROSSING TREATMENT FOR LAKE PARKWAY EXTENSION AT RAWSON AVENUE



POTENTIAL CENTERLINE FOR LAKE PARKWAY EXTENSION

POTENTIAL LAKE PARKWAY EXTENSION

SECONDARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

WETLANDS

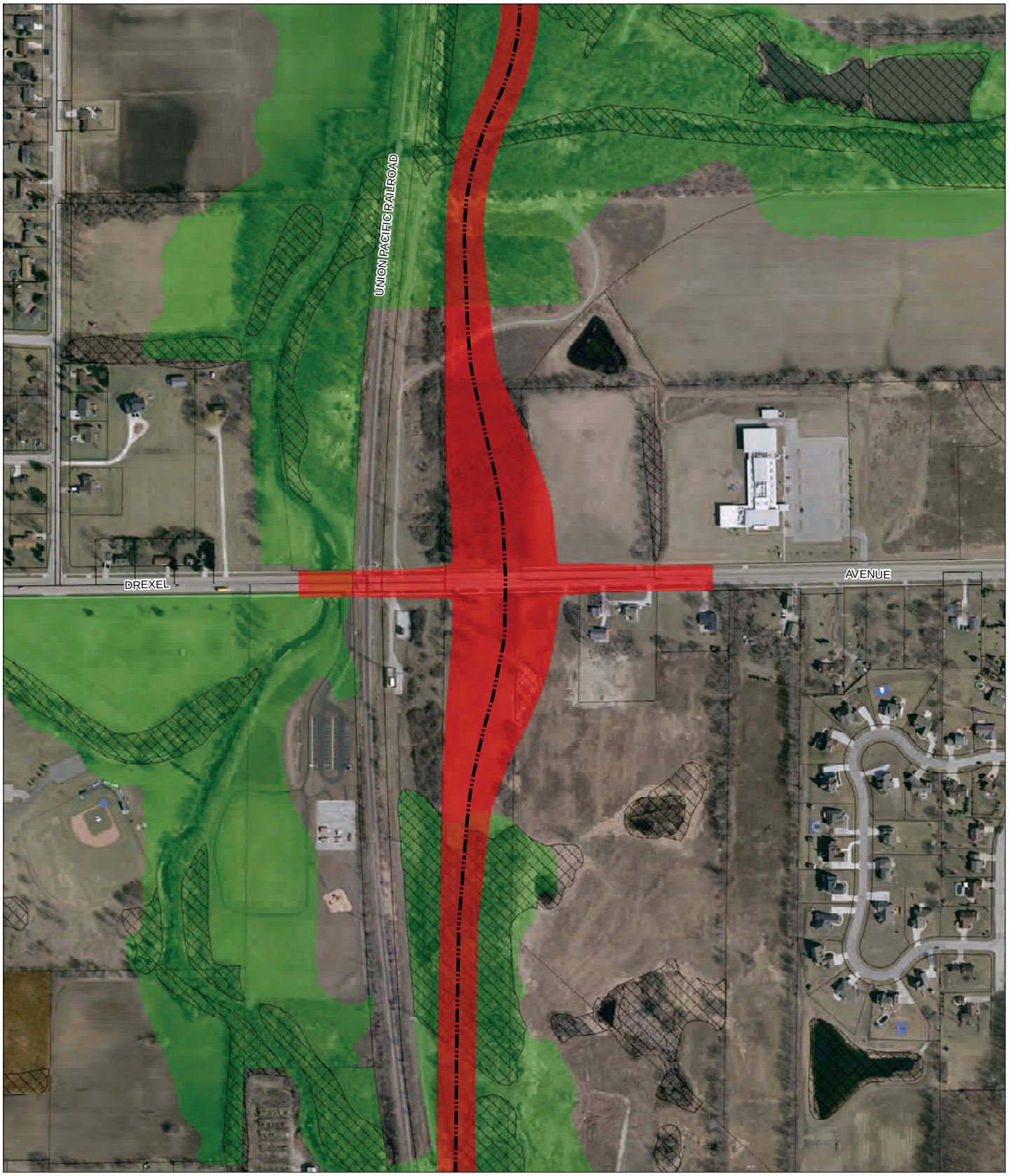
GRAPHIC SCALE

0 150 300 450 600 Feet

NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

Map B-4

PREFERRED CROSSING TREATMENT FOR LAKE PARKWAY EXTENSION AT DREXEL AVENUE



POTENTIAL CENTERLINE FOR LAKE PARKWAY EXTENSION

POTENTIAL LAKE PARKWAY EXTENSION

PRIMARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

WETLANDS

N

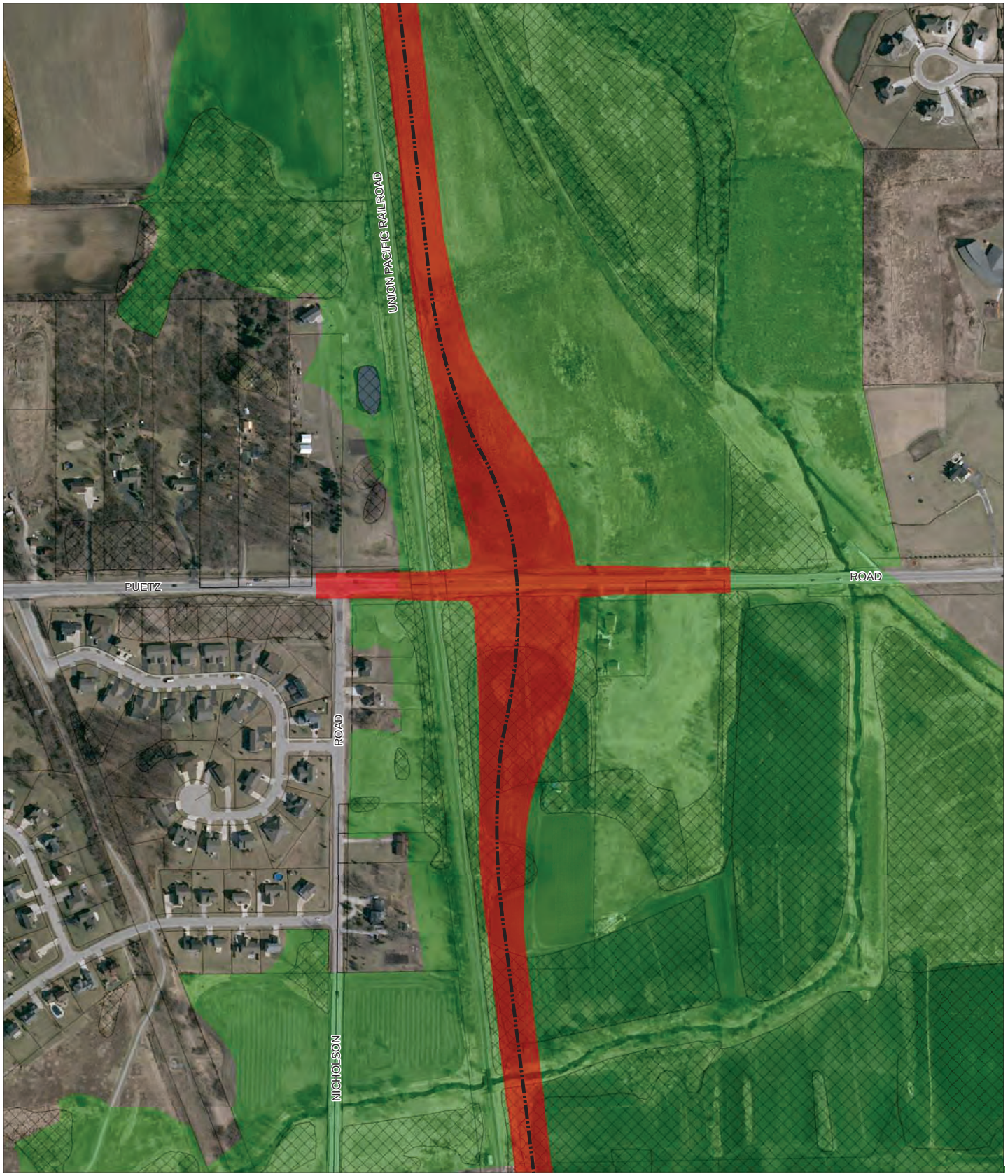
GRAPHIC SCALE

0 150 300 450 600 Feet

NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

Map B-5

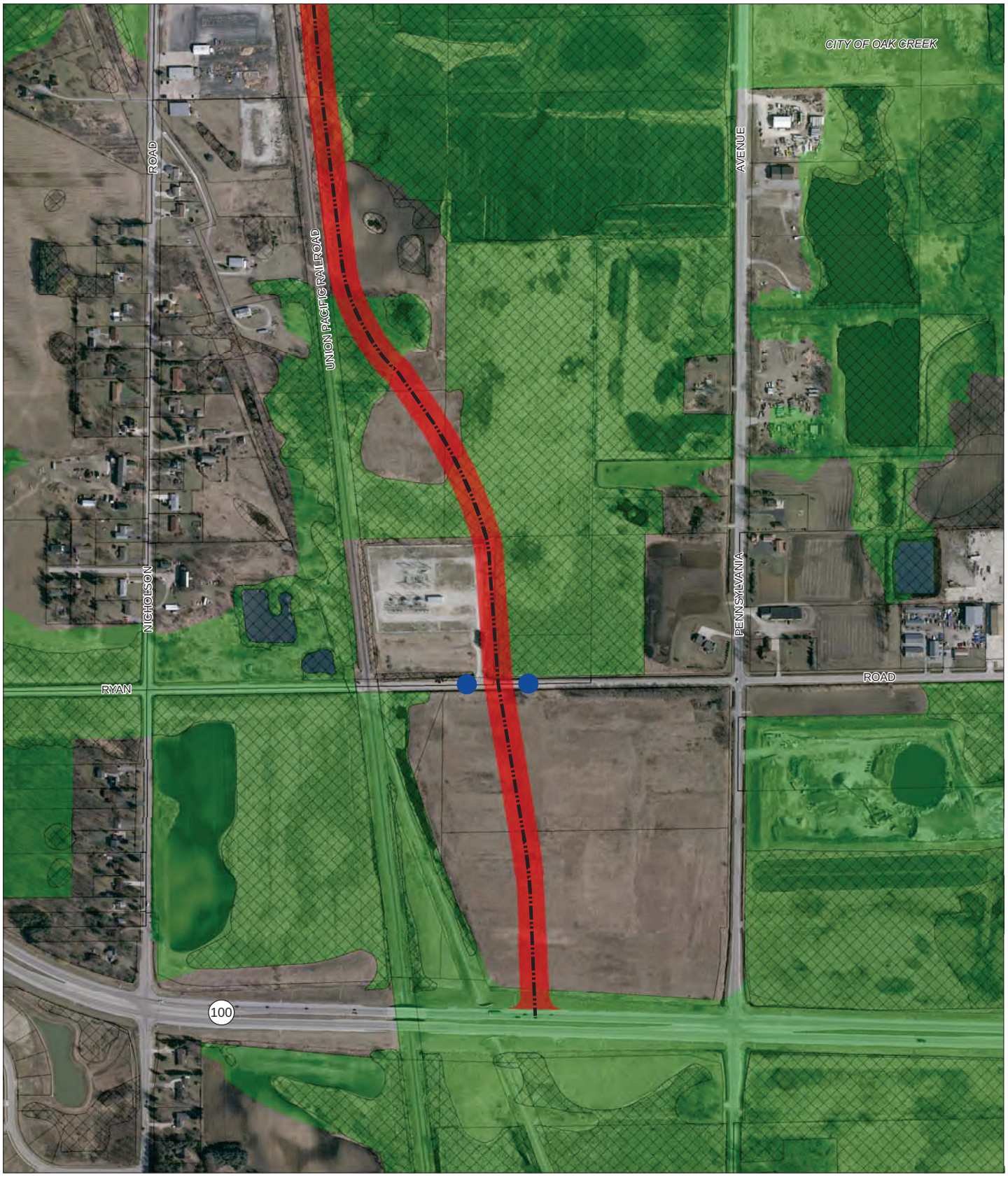
PREFERRED CROSSING TREATMENT FOR LAKE PARKWAY EXTENSION AT PUETZ ROAD



NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

Map B-6

PREFERRED CONNECTION OF LAKE PARKWAY EXTENSION AT STH 100



POTENTIAL CENTERLINE FOR LAKE PARKWAY EXTENSION

POTENTIAL LAKE PARKWAY EXTENSION

POTENTIAL CUL-DE-SAC OF RYAN ROAD

PRIMARY ENVIRONMENTAL CORRIDOR

SURFACE WATER

WETLANDS

N

GRAPHIC SCALE

0 200 400 600 800 Feet

NOTE: The area delineated on this map represents the footprint of the right-of-way that would potentially be needed to construct a Lake Parkway extension and ramps providing access to the extension, and does not provide the location of the actual roadway and ramps

POTENTIAL BENEFITS, IMPACTS, AND COSTS OF A LAKE PARKWAY EXTENSION

1. Benefits

- **Traffic**

  - Map C-1 shows the year 2035 forecast traffic volumes on the potential Lake Parkway extension, and on the adjacent planned arterial street and highway system with implementation of the extension.

  - Forecast year 2035 average weekday traffic volumes for the Lake Parkway extension:

    - Between STH 100 and Puetz Road – 9,000 vehicles per average weekday.

    - Between Puetz Road and Layton Avenue – 24,000 to 29,000 vehicles per average weekday.

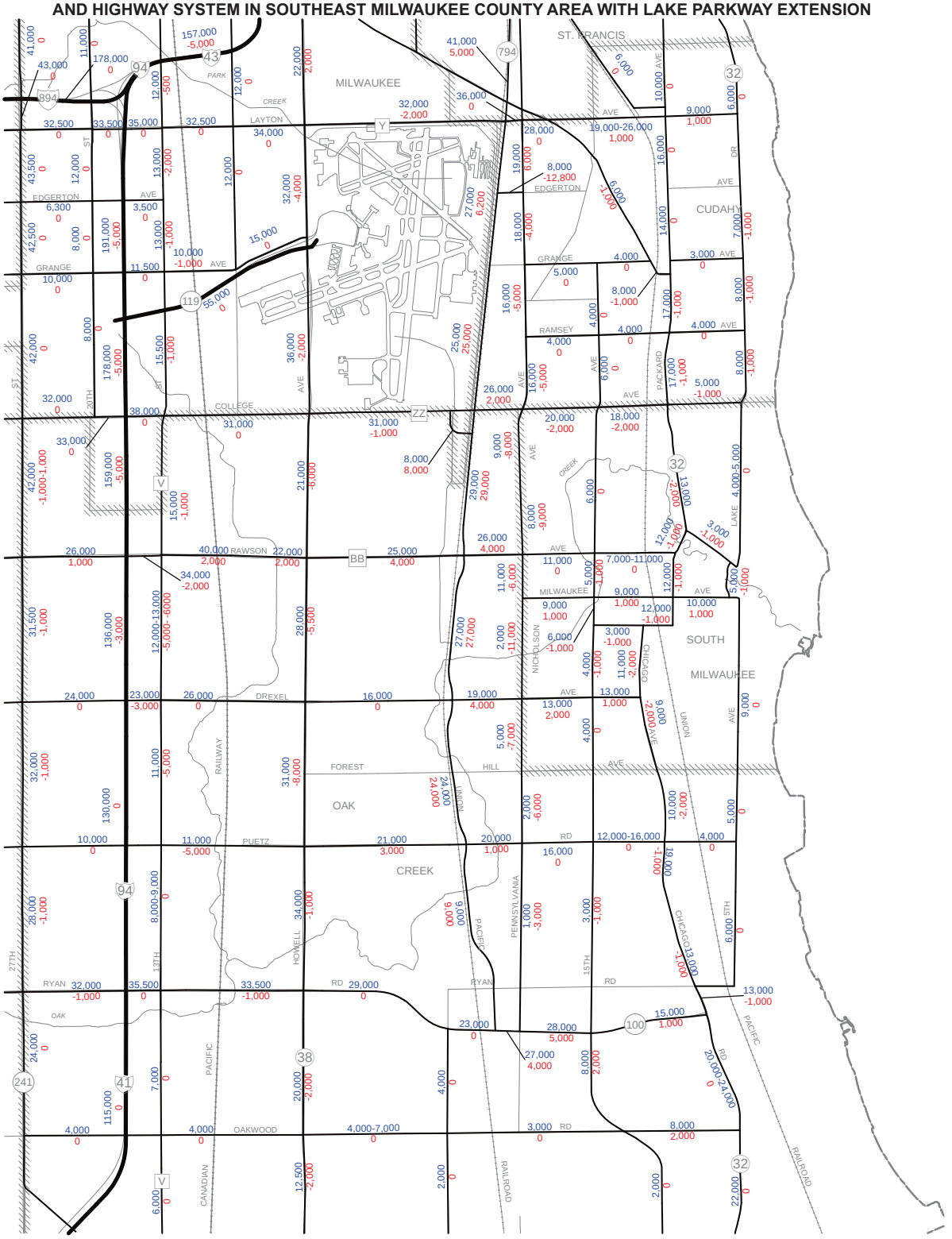
    - North of Layton Avenue – The forecast year 2035 average weekday traffic volumes on the existing Lake Parkway would increase by about 5,000 vehicles per average weekday with implementation of the extension.

  - The segments of adjacent arterial streets and highways with estimated significant reductions in forecast year 2035 average weekday traffic volumes as a result of the implementation of the Lake Parkway extension are provided in Table C-1. In general, traffic volumes on segments of north-south arterial roadways adjacent to the Lake Parkway extension—Pennsylvania Avenue, Howell Avenue, 13th Street, Puetz Road, and STH 32 (Chicago Avenue)—are estimated to be significantly reduced.

  - The segments of adjacent arterial streets and highways with estimated significant increases in forecast year 2035 average weekday traffic volumes as a result of the implementation of the Lake Parkway extension are also provided in Table C-1. Traffic volumes on segments of east-west roadways that would be used to access the Lake Parkway extension—Rawson Avenue, Drexel Avenue, Puetz Road, and STH 100—are estimated to increase. In addition, traffic volumes on Pennsylvania Avenue between Edgerton Avenue and Layton Avenue are estimated to significantly increase mainly due to northbound traffic exiting the Lake Parkway at Edgerton Avenue and then travelling along Pennsylvania Avenue to Layton Avenue.

Map C-1

YEAR 2035 FORECAST AVERAGE WEEKDAY TRAFFIC VOLUMES ON THE PLANNED ARTERIAL STREET AND HIGHWAY SYSTEM IN SOUTHEAST MILWAUKEE COUNTY AREA WITH LAKE PARKWAY EXTENSION



YEAR 2035 FORECAST AVERAGE WEEKDAY TRAFFIC VOLUMES

20,000 WITH LAKE PARKWAY EXTENSION

-2,000 CHANGE RESULTING FROM LAKE PARKWAY EXTENSION

ARTERIAL STREET OR HIGHWAY

SURFACE ARTERIAL

FREEWAY

Source: SEWRPC

CTH/RWH/rwh/edl
02/14/12
I:\Tran\WORK\Lake Parkway Extension\Mtg 6 - 111411\Map 5 - Traffic Volumes 021412.mxd

Table C-1

SEGMENTS OF ARTERIAL STREET AND HIGHWAY WITH ESTIMATED SIGNIFICANT CHANGES IN FORECAST YEAR 2035 TRAFFIC VOLUMES IN SOUTHEAST MILWAUKEE COUNTY RESULTING FROM IMPLEMENTATION OF A LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100

Segments with Significant Reductions in Forecast Year 2035 Traffic Volumes

Roadway	Limits	Year 2035 Forecast Traffic Volumes (Vehicles Per Average Weekday)		Estimated Reduction in Traffic Volumes Resulting from Potential Lake Parkway Extension	
		Without Lake Parkway Extension	With Lake Parkway Extension	Vehicles Per Average Weekday	Percent Reduction
Pennsylvania Avenue	Edgerton Avenue to College Avenue	21,000 to 22,000	16,000 to 18,000	4,000 to 5,000	18-24
	College Avenue to Milwaukee Avenue	17,000	8,000 to 11,000	6,000 to 9,000	32-52
	Milwaukee Avenue to Puetz Road	8,000 to 13,000	2,000 to 5,000	6,000 to 11,000	58-85
	Puetz Road to STH 100	4,000	1,000	3,000	75
Howell Avenue (STH 38)	College Avenue to Drexel Avenue	27,000 to 33,500	21,000 to 28,000	5,500 to 6,000	16-22
	Drexel Avenue to Puetz Road	39,000	31,000	8,000	21
13th Street	Rawson Avenue to Puetz Road	16,000 to 18,000	11,000 to 13,000	5,000 to 6,000	28-33
Puetz Road	13th Street to Howell Avenue	16,000	11,000	5,000	31
Chicago Avenue (STH 32)	College Avenue to Marquette Avenue	11,000 to 13,000	9,000 to 11,000	2,000	15-18

Segments with Significant Increases in Forecast Year 2035 Traffic Volumes

Roadway	Limits	Year 2035 Forecast Traffic Volumes (Vehicles Per Average Weekday)		Estimated Increase in Traffic Volumes Resulting from Potential Lake Parkway Extension	
		Without Lake Parkway Extension	With Lake Parkway Extension	Vehicles Per Average Weekday	Percent Increase
Pennsylvania Avenue	Layton Avenue to Edgerton Avenue	13,000	19,000	6,000	46
Rawson Avenue	Howell Avenue to Pennsylvania Avenue	21,000 to 22,000	25,000 to 26,000	4,000	18-19
Drexel Avenue	Lake Parkway Extension to Pennsylvania Avenue	15,000	19,000	4,000	26
Puetz Road	Howell Avenue to Lake Parkway Extension	18,000	21,000	3,000	17
STH 100	Lake Parkway Extension to 15th Avenue	23,000	27,000 to 28,000	4,000 to 5,000	17-22

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- The estimated effect of the Lake Parkway extension on future congestion on adjacent arterial streets and highways is as follows:
    - The level of projected future congestion is expected to improve from moderate congestion to no congestion on Pennsylvania Avenue between College Avenue and Edgerton Avenue, and on Howell Avenue between Puetz Road and Drexel Avenue.
    - The level of projected future congestion is expected to increase from no congestion to moderate congestion on Pennsylvania Avenue between Layton Avenue and Edgerton Avenue, and on STH 100 between the Lake Parkway extension and 15th Avenue. However, the forecast traffic volumes on these facilities would only modestly exceed the traffic volume threshold of moderate congestion.
- The estimated effect of Lake Parkway extension traffic diversion on planned roadway widening.
    - Implementation of the Lake Parkway extension would avoid the need for the planned widening from two to four traffic lanes on Pennsylvania Avenue between Rawson Avenue and Milwaukee Avenue and on 13th Street between Rawson Avenue and Puetz Road, and the potential widening from two to four traffic lanes on Pennsylvania Avenue between Milwaukee Avenue and STH 100 and on 13th Street between Puetz Road and STH 100.
- Improvement in accessibility as a result of Lake Parkway extension:
    - The travel time between STH 100 and Layton Avenue would be 10 minutes with implementation of the Lake Parkway extension and 15 minutes without implementation of a Lake Parkway extension (a reduction of 5 minutes).

- **Safety**
    - Comparison of expected crash rates on a Lake Parkway extension to crash rates on arterials which would carry traffic in the absence of a Lake Parkway extension:
        - SEWRPC staff compared estimated crash rates for segments of a Lake Parkway extension and Pennsylvania Avenue—the primary arterial which would carry

traffic in the absence of a Lake Parkway extension—between Layton Avenue and STH 100.

- The crash rate on the Lake Parkway extension is expected to be about half the crash rate on Pennsylvania Avenue between Layton Avenue and STH 100 (88 crashes per 100 million vehicle-miles travelled estimated for the Lake Parkway extension compared to 166 crashes per 100 million vehicle-miles travelled on Pennsylvania Avenue).

- The intersection crash rates at the College Avenue jughandle ramp and STH 100 intersections with the Lake Parkway extension would be expected to be slightly higher than the crash rates of the at-grade intersections along Pennsylvania Avenue (71 crashes per 100 million approaching vehicles estimated for the Lake Parkway extension compared to 53 crashes per 100 million approaching vehicles on Pennsylvania Avenue).

- For the crossings with grade-separated interchanges, it is expected that the intersection crash rates where the crossing roadways intersect the ramps of the Lake Parkway extension would be higher than the intersection crash rates of the at-grade intersections along Pennsylvania Avenue (69 crashes per 100 million approaching vehicles estimated for the Lake Parkway extension compared to 53 crashes per 100 million approaching vehicles on Pennsylvania Avenue). However, it would be anticipated that the total number of intersection crashes would be less with the provision of a grade-separated interchange compared to an at-grade intersection as the through traffic on the Lake Parkway extension would freely flow through an interchange and not conflict with the traffic on the crossing roadways.

- Therefore, it would be expected that there would be a significant overall reduction in vehicle crashes, and improvement in traffic safety, with the implementation of the Lake Parkway extension.

2. Impacts

- **Right-of-Way Impacts**

  - Table C-2 provides a summary of the estimated right-of-way impacts attendant to the potential Lake Parkway extension.

  - **Property and Structure Acquisitions/Relocations**

    - The Lake Parkway extension is estimated to require the acquisition of about 118 acres of right-of-way.

    - The Lake Parkway extension is estimated to require the acquisition or relocation of 1 residential structure, and 0 commercial, industrial, or institutional structures.

  - **Structure Disruptions**

    - A "disruption" is defined as any residential unit, commercial or industrial structure, or institutional structure located within about 200 feet of the right-of-way required for the Lake Parkway extension.

    - The Lake Parkway extension is estimated to disrupt 56 residential units, 12 commercial or industrial structures, and 0 institutional structures.

  - **Primary Environmental Corridors, Secondary Environmental Corridors, and Isolated Natural Resource Areas**

    - Primary environmental corridors, secondary environmental corridors, and isolated natural resource areas have been identified and delineated as areas within Southeastern Wisconsin in which the best remaining elements of the natural resource base occur.

    - The Lake Parkway extension is estimated to impact 41 acres of primary environmental corridor, 0 acres of secondary environmental corridor, and 0 acres of isolated natural area.

  - **Wetlands**

    - The Lake Parkway extension is estimated to impact 27 acres of wetlands.

    - However, based on an analysis by SEWRPC staff, there appear to be suitable wetland mitigation locations in the vicinity of the Lake Parkway extension.

Table C-2

POTENTIAL IMPACTS OF LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100

Evaluation Measure	Recommended Lake Parkway Extension
Right-of-Way Impacts	
Acquisitions/Relocations	
• Residential Structures	1
• Commercial Structures	0
• Institutional Structures	0
• Acres	118
Primary Environmental Corridors (acres)	41
Secondary Environmental Corridors (acres)	0
Isolated Natural Resource Areas (acres)	0
Wetlands (acres)	27
Prime Agricultural Land (acres)	0
Park/Recreational Land—Oak Creek Parkway (acres)	20
Disruptions[a]	
Residential Units	56
Commercial/Industrial Structures	12
Institutional Structures	0

[a] *A "disruption" is defined as any residential unit, or commercial or institutional structure located within about 200 feet of the right-of-way required for the Lake Parkway extension.*

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- **Floodplain**

  - The Lake Parkway extension would cross the floodway of the Oak Creek at three locations and an unnamed tributary located near Grange Avenue at one location, and the jughandle ramp, which would provide access to the Lake Parkway extension at College Avenue, would potentially cross the floodway of the Mitchell Field Drainage Ditch at one location.

    - The floodway is the channel of a waterway, and those portions of the floodplain adjoining the channel required to carry the discharge during a 100-year flood event.

    - To avoid impacting the floodway, it is anticipated that the Lake Parkway extension and jughandle ramp would be built on structures over the floodway areas.

  - The Lake Parkway extension is estimated to impact about 34.2 acres of floodfringe area.

    - The floodfringe is the area outside of the floodway that is estimated to be covered with flood water during a 100-year flood event.

    - Per Wisconsin Administrative Code:

      - Adequate floodproofing measures would be required for the Lake Parkway extension within the floodfringe areas.

      - The Lake Parkway extension would need to be designed to be compatible with the local floodplain development plans.

- **Parkland and Other Recreational Areas**

  - The Lake Parkway extension is estimated to impact about 19.5 acres of the Oak Creek Parkway.

  - In addition, the Lake Parkway extension is estimated to impact 1.3 acres of an existing conservation easement between the City of Oak Creek and the Milwaukee Metropolitan Sewerage District (MMSD) on a parcel owned by the City just north of Ryan Road between Pennsylvania Avenue and the UPR right-of-way.

- The existing conservation easement prohibits the construction of a roadway on the parcel. However, the parcel may be condemned through eminent domain to allow the construction of Lake Parkway extension through the parcel.

- The Lake Parkway extension is also estimated to impact 12.1 acres of land owned by MMSD that was purchased for conservation purposes.

- **Prime Agricultural Land**

  - The Lake Parkway extension will not require acquisition of any designated prime agricultural lands.

  - The Lake Parkway extension is estimated to require acquisition of 44.3 acres of existing agricultural land. About 22.1 acres are lands planned for urban development, and the remaining 22.2 acres are located within the primary environmental corridor.

- **Critical Species Areas**

  - The Lake Parkway extension is estimated to impact 1.7 acres of an area identified for potential expansion of the Bluestem Goldenrod, which is designated as a State endangered plant. However, the Bluestem Goldenrod is not currently found in this area.

  - Therefore, the Lake Parkway extension would not be expected to directly impact the Bluestem Goldenrod at the location of the potential alignment.

- **Utility Impacts**

  - We Energies, American Transmission Company, the MMSD, and West Shore Pipelines have utilities within the We Energies right-of-way that is adjacent to the UPR rail line between Layton Avenue and Forest Hill Avenue. South of Forest Hill Avenue, the We Energies right-of-way diverges to the east away from the UPR right-of-way.

  - We Energies-Electric

    - Between Edgerton Avenue and Rawson Avenue – Lake Parkway extension would potentially impact, and require the relocation of,

existing electric distribution lines located within the We Energies right-of-way.

- Between Rawson Avenue and Forest Hill Avenue – Lake Parkway extension would be located outside of the We Energies right-of-way, and would avoid significantly impacting the existing electric facilities within the utility right-of-way.

- We Energies-Gas

  - Between Edgerton Avenue and Rawson Avenue – Lake Parkway extension would potentially impact, and potentially require the relocation of, existing underground gas lines and four regulator/valve stations.

  - Rawson Avenue and Forest Hill Avenue – Lake Parkway extension can be located outside of the We Energies right-of-way to avoid significantly impacting existing gas facilities within the utility right-of-way.

- American Transmission Company (ATC)

  - Between a point 1,000 feet north of College Avenue and Rawson Avenue – Lake Parkway extension would potentially impact, and require the relocation of, ATC's existing double-circuit, 138 kV electric transmission lines.

    - ATC staff indicated that a narrower than desired easement for their transmission lines between the UPR rail line and the Lake Parkway extension may be feasible. However, ATC staff provided a list of possible concerns and issues:

      - ATC would need to coordinate any maintenance or improvement work to their lines with the Wisconsin Department of Transportation and the UPR.

      - Relocating the transmission lines may affect the need and location of relocation of other utilities' facilities within the We Energies right-of-way.

      - ATC would need to acquire an easement from UPR.

- Relocating the transmission lines would need to follow Federal Aviation Administration and Milwaukee County height restrictions along General Mitchell International Airport.

- The relocated transmission lines would need to be constructed to maintain adequate clearance of lines above potential structures at and south of College Avenue.

- Protective barriers would be needed along the Lake Parkway extension at the base of ATC poles.

- Should a narrower than desired ATC easement not be feasible to allow both the relocated ATC transmission lines and the Lake Parkway extension to be located within the UPR and We Energies right-of-way:

  - The transmission lines could be buried. However, burying the lines would be undesirable due to:

    - Higher cost (potentially 20 times higher than relocating on overhead poles),

    - Difficult to maintain,

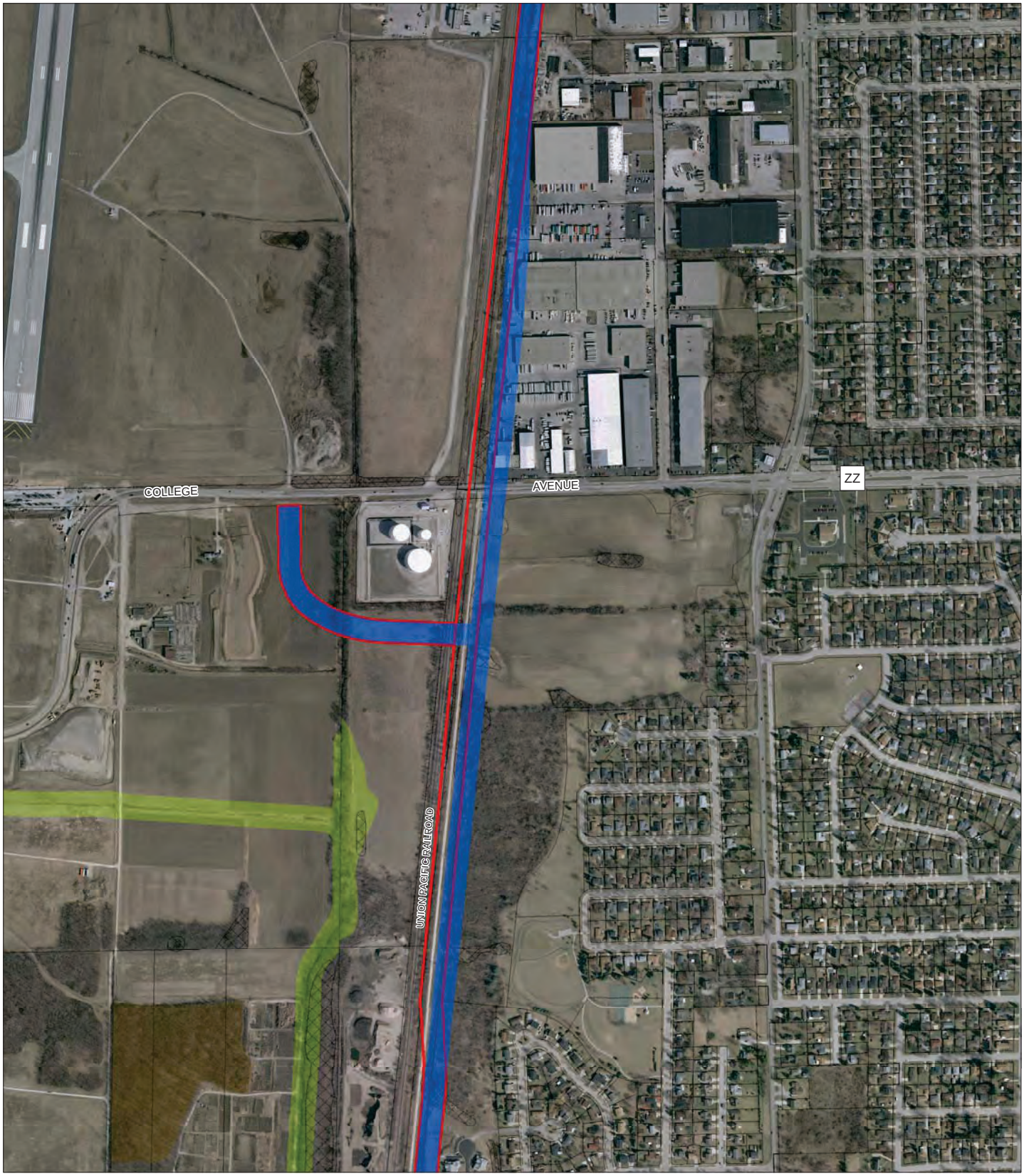
    - Need for higher capacity lines, and

    - Need for additional time for design and construction.

  - The Lake Parkway extension could be located partially outside the We Energies right-of-way between a point 1,000 feet north of College Avenue and Rawson Avenue to potentially avoid impacting existing ATC transmission lines, as shown on Map C-2. The west edge of the Lake Parkway right-of-way is located along the line of existing ATC transmission poles and lines.

Map C-2

POTENTIAL ALIGNMENT OF LAKE PARKWAY EXTENSION IF NECESSARY TO AVOID AMERICAN TRANSMISSION COMPANY TRANSMISSION LINES BETWEEN A POINT ABOUT 1,000 FEET NORTH OF COLLEGE AVENUE AND RAWSON AVENUE



POTENTIAL RIGHT-OF-WAY FOR LAKE PARKWAY EXTENSION IF NECESSARY TO AVOID AMERICAN TRANSMISSION COMPANY TRANSMISSION LINES

PREFERRED RIGHT-OF-WAY FOR LAKE PARKWAY EXTENSION

SECONDARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

WETLANDS

N

GRAPHIC SCALE

0 200 400 600 800 1,000 Feet

- Avoiding impacting the ATC transmission lines would reduce the estimated cost of utility relocation by about $1.5 to $2.8 million by potentially eliminating the need to relocate the existing ATC transmission lines, and also potentially We Energies gas facilities, between a point 1,000 feet north of College Avenue and Rawson Avenue.

- However, locating the Lake Parkway extension outside of the We Energies right-of-way to avoid impacting the ATC transmission lines would be undesirable because it would:

    - Require the acquisition of about 9.9 acres of land outside of the We Energies right-of-way (3.6 acres of commercial and industrial land, 5.7 acres of the proposed U.S. Postal Service site, and 0.6 acres of residential land);

    - Require the acquisition or relocation of 3 existing commercial buildings and potentially disrupt the operations of the businesses impacted; and

    - Add about $6.5 million in right-of-way acquisition costs and $0.5 million in construction costs.

- Between Rawson Avenue and Forest Hill Avenue – Lake Parkway extension can be located outside of the We Energies right-of-way, and would avoid significantly impacting existing ATC facilities within the utility right-of-way.

- Milwaukee Metropolitan Sewerage District (MMSD)
    - Between Edgerton Avenue and Rawson Avenue – Lake Parkway extension may potentially be constructed above four existing buried 16-inch pipes, should MMSD be able to maintain access to these pipes from the surface.
    - Between Rawson Avenue and Forest Hill Avenue – Lake Parkway extension can be located outside of the We Energies right-of-way, and would avoid significantly impacting existing MMSD facilities within the utility right-of-way.
- West Shore Pipeline
    - From Layton Avenue to about 650 feet south of Layton Avenue, the Lake Parkway extension may impact an existing idle petroleum pipeline by implementation of a southbound on-ramp to the Lake Parkway extension.
    - From about 650 south of Layton Avenue to a point midway between College Avenue and Rawson Avenue, the pipeline is west of the UPR rail line and would not likely be impacted by the Lake Parkway extension.

- **Other Potential Issues**
    - Impacts of proximity of Lake Parkway extension to existing at-grade railroad crossings:
        - Based on the availability of adequate land at most roadway crossings of the Lake Parkway extension, it is anticipated that none of the at-grade intersections and ramps of the grade-separated interchanges are anticipated to be located less than the minimum ideal distance of 125 feet from existing at-grade railroad crossings, per the Wisconsin Department of Transportation's Facilities Design Manual.
        - There would not be adequate separation between the UPR rail line and an at-grade intersection or a grade-separated interchange of the Lake Parkway extension at College Avenue, due to the existing and planned development adjacent to the We Energies right-of-way. However, the provision of the

jughandle ramp at College Avenue allows an adequate separation from the existing UPR rail line.

- Impacts to General Mitchell International Airport (GMIA):
  - The Lake Parkway extension would need to be constructed to follow Federal Aviation Administration (FAA) and Milwaukee County height restrictions for new structures built along and near GMIA.
    - FAA would need to review and approve the construction of any structure that could affect the navigable airspace.
    - Milwaukee County has an ordinance restricting the height of new facilities adjacent to GMIA.
      - Height restrictions are 35 feet above existing ground adjacent to GMIA, and are higher further away from GMIA.
      - A variance to the ordinance could potentially be granted by Milwaukee County should FAA approve the construction of a new facility.
    - Five locations of potential concern along GMIA were identified and analyzed by SEWRPC staff:
      - 300 feet north of Grange Avenue, where two runways converge;
      - At Grange Avenue, where the Lake Parkway extension would overpass the roadway;
      - 1,700 feet north of College Avenue, where an east-west runway is planned;
      - At College Avenue, where the Lake Parkway extension would overpass the roadway; and
      - 850 feet north of College Avenue, where the jughandle ramp would cross the existing UPR rail line.
    - Analysis by SEWRPC staff did not identify any height restriction issue that would make constructing the Lake Parkway extension infeasible.

- Ultimately, the implementing agency (WisDOT) would need to submit plans during preliminary engineering and environmental impact study for FAA review and determination of whether the Lake Parkway extension can be built along and near GMIA.

- Per FAA requirements, the Lake Parkway extension would need to be constructed in a manner that would not attract wildlife.

  - This could affect the location and type of stormwater management facilities and landscaping features that could be provided adjacent to GMIA.

- Impacts to 128th Air Refueling Wing of the Wisconsin Air National Guard resulting implementation of the Lake Parkway extension:

  - Three areas of potential concern were identified by 128th Air Refueling Wing representatives:

    - Potential effect of Lake Parkway extension along Grange Avenue.

      - Implementation of the Lake Parkway extension is not anticipated to require the acquisition of any land owned by the 128th Refueling Wing intended for development.

    - Need to maintain security of existing and future facilities.

      - Where the Lake Parkway extension would be elevated adjacent to their facilities, 128th Air Refueling Wing Representatives desire the use of barrier walls along the extension.

    - Need for suitable locations for secured access to their facilities.

      - 128th Air Refueling Wing is currently planning to move their existing secured gate along Grange Avenue to just west of Pennsylvania Avenue.

      - Lake Parkway extension (along with the existing UPR rail line) would be behind the relocated secured gate.

      - Secured gate could also be relocated to other existing GMIA entrances located at College Avenue and Layton Avenue.

- WisDOT should work with the 128th Air Refueling Wing and GMIA during preliminary engineering and environmental impact study to accomplish the appropriate exchange of land to allow the secured access to the 128th Air Refueling Wing facilities to be relocated to College Avenue and Layton Avenue and the secured access at Grange Avenue to be closed. This would allow the Lake Parkway extension to be constructed at-grade with cul-de-sacs provided on Grange Avenue on each side of the extension.

- Impacts on proposed new U.S. Postal facility to be located southwest of the intersection of Pennsylvania Avenue and College Avenue resulting from implementation of the Lake Parkway extension:

  - The alignment of the Lake Parkway extension is located within the UPR rail and We Energies right-of-ways along the property of the proposed new U.S. Postal facility, and is not expected to have a direct impact on the proposed facility.

  - The access to the Lake Parkway extension on College Avenue would be via a jughandle ramp that would intersect College Avenue west of the UPR rail line, and is not expected to affect the proposed entrances to the proposed new U.S. Postal facility.

- Impacts to access of adjacent businesses and residences located along roadways intersecting the Lake Parkway extension:

  - SEWRPC staff identified properties that may have reductions in access to allow for the provision of safe and adequate access to the Lake Parkway extension.

    - The access of six properties would potentially be reduced to right-in and right-out access due to the closing of existing median openings or the need for medians for the provision of left-turn lanes (one on College Avenue, three on Drexel Avenue, and two on Puetz Road).

    - Four properties that currently have two driveways may potentially be required to reduce their access to one driveway (one on College Avenue, one on Rawson Avenue, one on Drexel Avenue, and one on Puetz Road).

    - Due to portions of their property potentially being acquired for implementation of the Lake Parkway extension, two properties may

potentially be required to relocate their existing driveway (one on Rawson Avenue and one on Drexel Avenue).

- In addition, WisDOT may restrict new access onto crossing roadways within 1,000 to 1,320 feet from the ramps of grade-separated interchanges.

3. Costs

- **Capital Costs (Year 2010 Dollars)**

  - The estimated capital costs for the potential Lake Parkway extension between Edgerton Avenue and STH 100 is provided in Table C-3.

Table C-3

ESTIMATED CAPITAL COSTS FOR THE POTENTIAL LAKE PARKWAY EXTENSION BETWEEN EDGERTON AVENUE AND STH 100

Item	Capital Costs
Construction[a]	$192.8 million
Right-of-Way[b]	5.7 million
Utility Relocation[b]	8.7 million
Total	$207.2 million

[a] *Construction costs include the estimated costs for roadway construction (including interchanges, bridges, traffic signals, storm sewer, retaining walls, earthwork, restoration, and wetland mitigation) and engineering and contingencies.*

[b] *Right-of-way acquisition and highway easements within utility right-of-way are included in the capital cost estimates for right-of-way. The estimated costs to relocate any existing utility facilities, including gas lines, electric distribution lines, and electric transmission line poles and towers, are included in the capital cost estimates for utility relocation.*

* * *

CONCEPTUAL DESIGN FOR POSSIBLE GRADE-SEPARATED INTERCHANGE FOR LAKE PARKWAY EXTENSION AT COLLEGE AVENUE (CTH ZZ)

POTENTIAL EDGE OF TRAVELLED WAY FOR LAKE PARKWAY EXTENSION

POTENTIAL RAMPS FOR GRADE-SEPARATED INTERCHANGE AT COLLEGE AVENUE

POTENTIAL 130-FOOT RIGHT-OF-WAY FOR LAKE PARKWAY EXTENSION

SECONDARY ENVIRONMENTAL CORRIDOR

WETLANDS

N

GRAPHIC SCALE

0 100 200 300 400 500 Feet