



Roadway plans to be submitted with final plat

If roundabout is being constructed with roadway plans (CDR2516) then a Final Roundabout design report is needed

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Roadway plans and final roundabout report to be submitted with final plat

Lighting, landscaping and grading will need to be addressed with Final design & roundabout report. Be sure to follow NCHRP 1043 & Wisconsin Facilities Development Manual
<https://wisconsin.gov/rdwy/fdm/fd-11-26.pdf#fd11-26> for design parameters

RE: Rolling Meadows Parkway/Prairie Song Drive Roundabout Configurations and Traffic Operations

Dear Mr. Mark,

Matrix Design Group (Matrix) is pleased to provide this letter summarizing the traffic operations of the proposed roundabout at Rolling Meadows Parkway/Prairie Song Drive. This letter is prepared based on the *Rolling Meadows/Bull Hill Master Traffic Impact Study & Antelope Ridge at Bull Hill Traffic Impact Study* (August 2025), prepared by Matrix.

Location

This roundabout will be located approximately 3,500-ft south of Bradley Road on the future Rolling Meadows Parkway. According to the MTIS, Rolling Meadows is classified as a non-residential collector north of the roundabout and residential collector south of the roundabout. The daily volume is 16,350 vehicles on this roadway. Figure 1 shows the location of this roundabout. Figure 2 shows the traffic operations and turn lane configurations. Figure 3 shows the vehicle fastest path with the speed summary table. Templates for the roundabout fastest path diagram and vehicle tracking path can be found in the appendix. The roundabout design layout has been evaluated using the WB-50 truck turning templates to confirm that adequate space is provided for truck maneuvering.

Figure 1 – Location

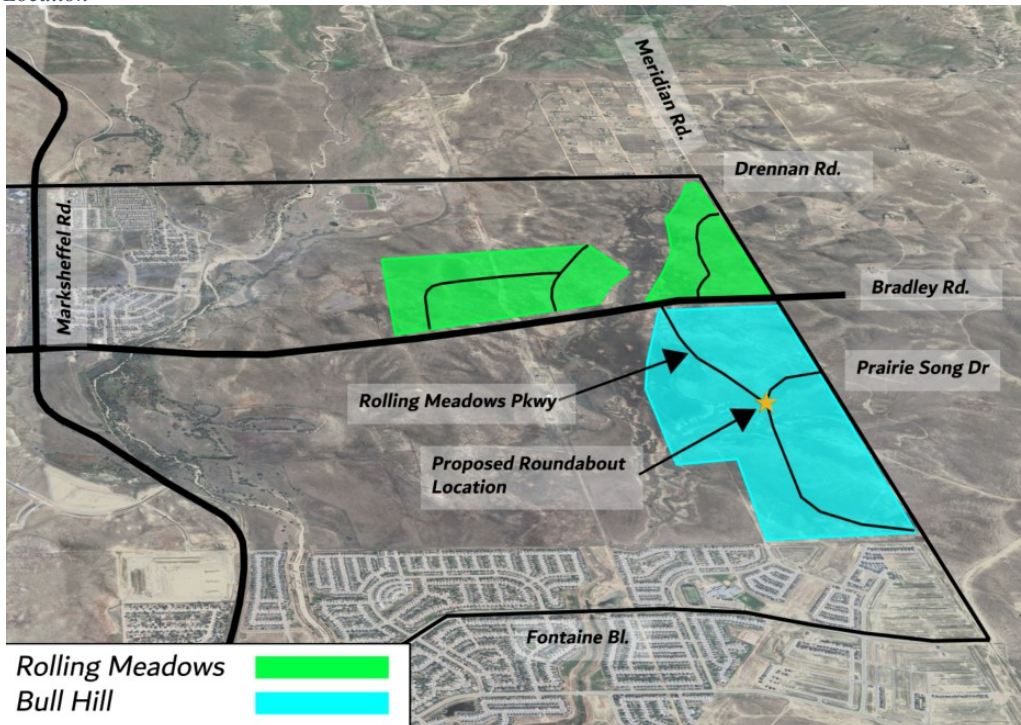
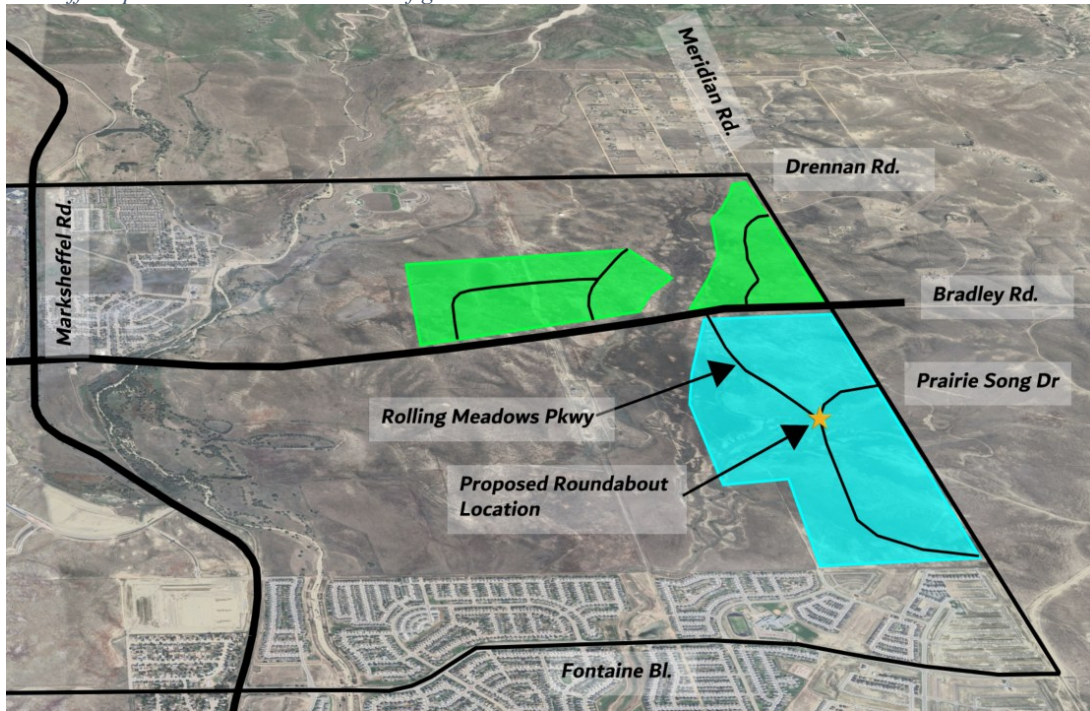
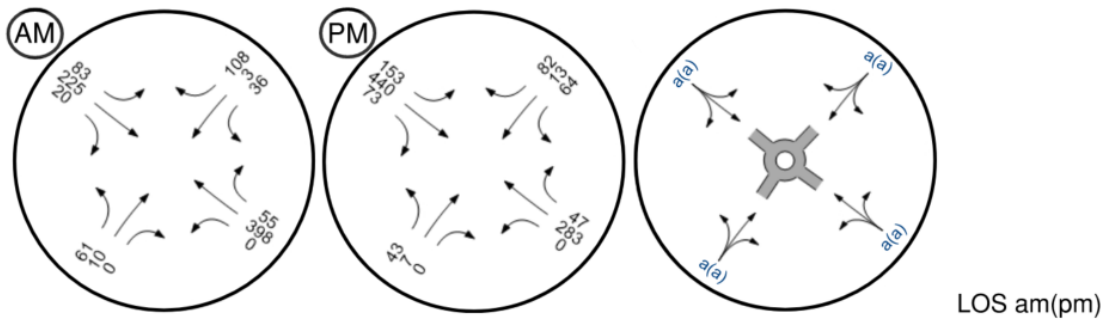


Figure 2 – Traffic Operations and Turn Lane Configurations



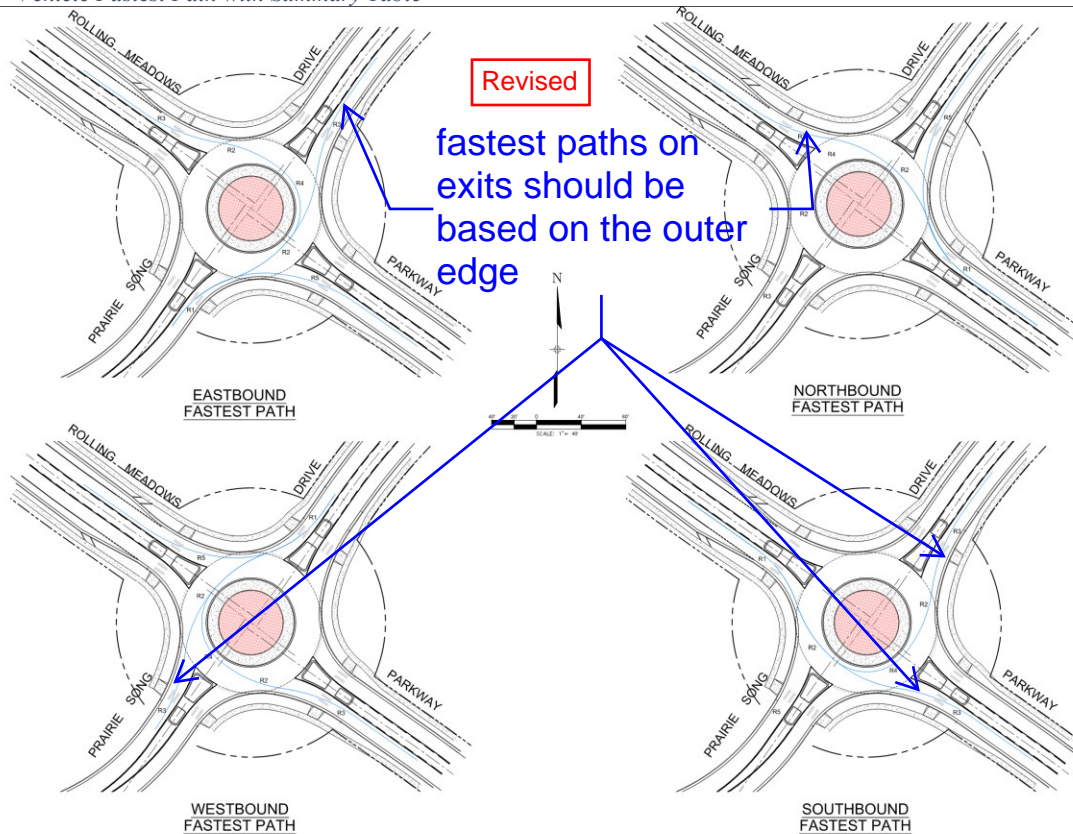
Rolling Meadows Parkway/Prairie Song Drive



Include Synchro/Rodel/VISSIM analyses (operational, capacity and LOS)

Operational, capacity and LOS analysis are part of the MTIS submitted with the PUDSP

Figure 3– Vehicle Fastest Path with Summary Table



Is this figure & table needed, since we have the fastest path exhibit at the end of the report?

Removed from this area in the report

FASTEST PATH SUMMARY TABLE (mph)				
	EASTBOUND	WESTBOUND	SOUTHBOUND	NORTHBOUND
No.	SPEED	SPEED	SPEED	SPEED
R1	19	19	19	19
R2	22	22	22	22
R3	24	24	24	24
R4	15	15	15	15
R5	24	24	24	24

As shown in Figures 2 and Figure 3, the intersection of Rolling Meadows Parkway and Prairie Song Drive is projected to operate at an acceptable level of service during both the AM and PM peak hours in the horizon (2055) year. The proposed roundabout will accommodate the anticipated traffic volumes, operate effectively and all design vehicles can navigate the roundabout without encroaching on prohibited areas.

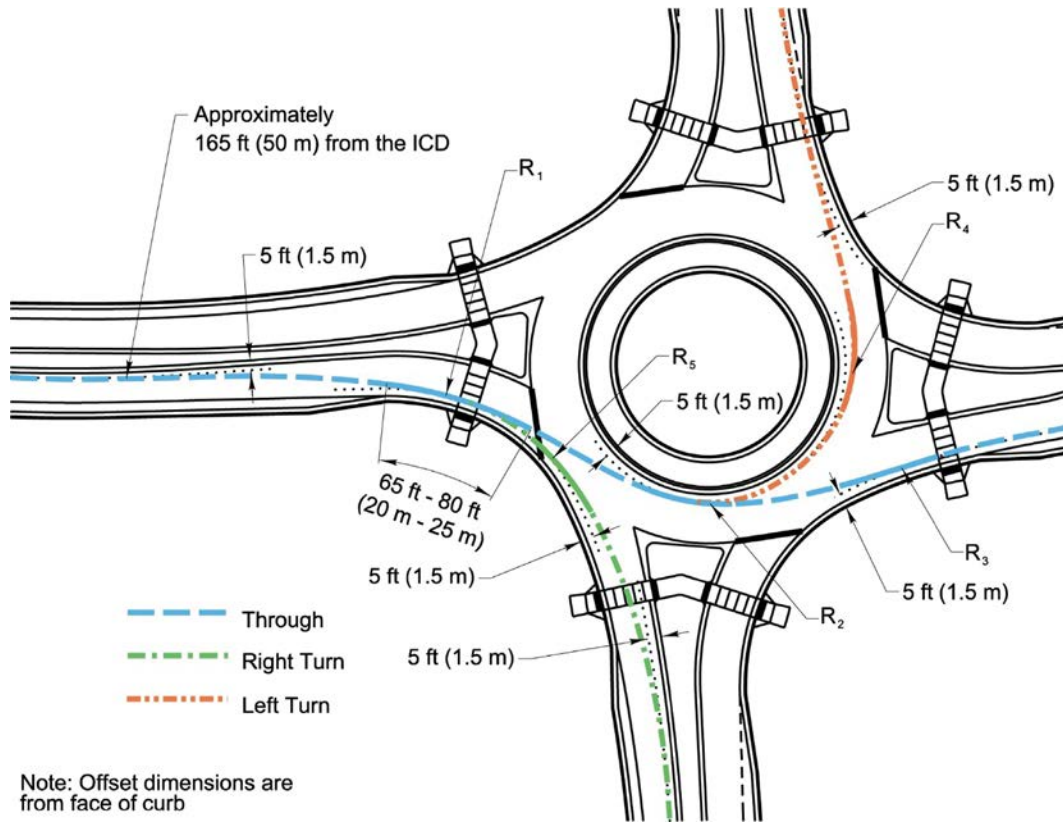
Please feel free to contact me at (719) 575-0100 or at navid.shafieirad@matrixdesigngroup.com if you have any questions.

Sincerely,
Navid Shafieirad
 Navid Shafieirad, P.E., PTOE
 Traffic Engineer
 Matrix Design Group, Inc.

- Attachments:
 Roundabout Plan Layout
 Vehicle Tracking Path
 Fastest Path Diagram

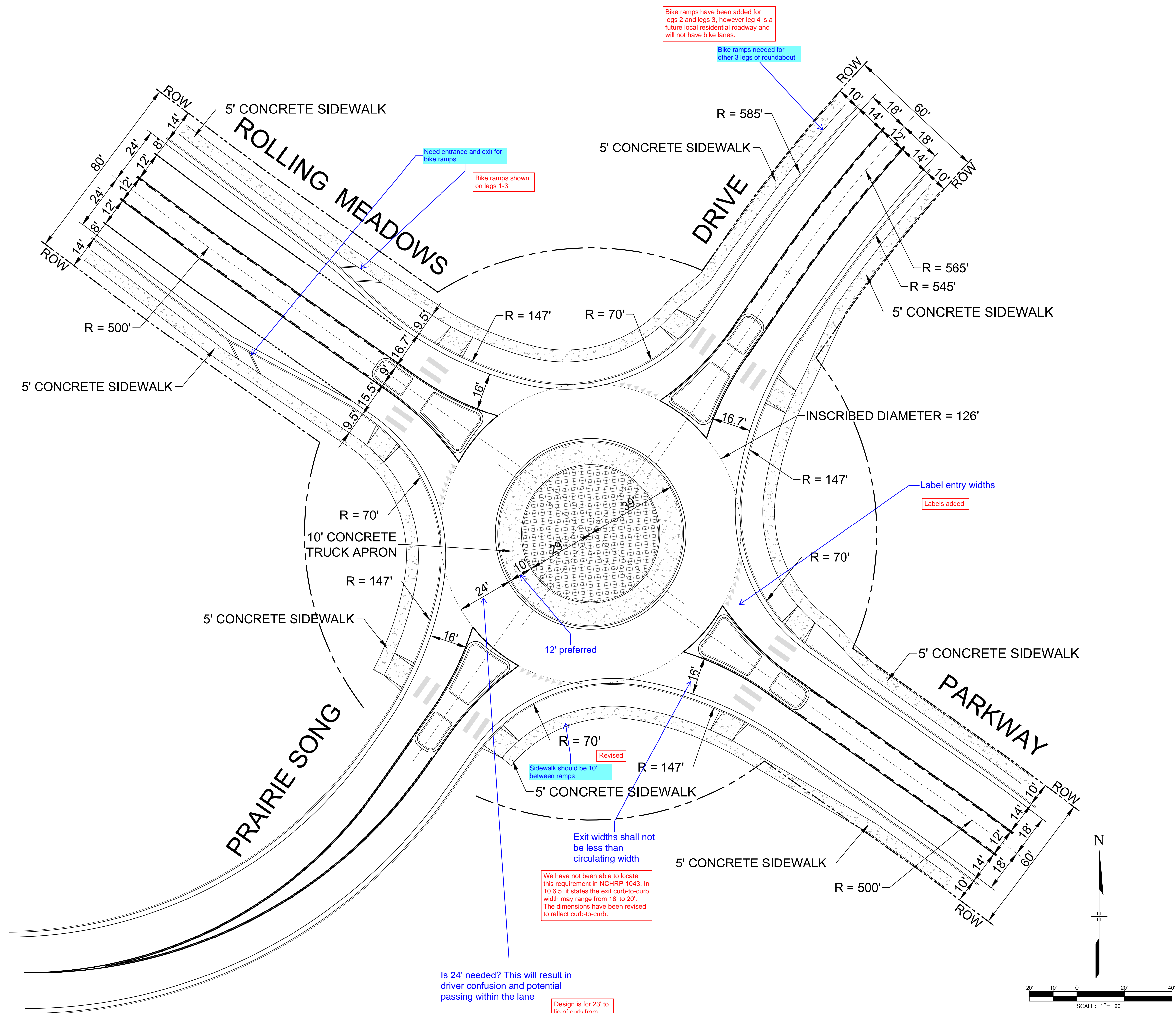
Guide for Roundabouts

Exhibit 9.7. Fastest paths at a single-lane roundabout.



SOURCE: Adapted from Georgia Department of Transportation (3).

FILE LOCATION: C:\S\Matrix\Projects\24.1129.029 Rolling Meadows-Bull Hill Phase-1 PUDSP\100 Dwg\108 Working



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APPROVAL:

VICINITY MAP:

PROJECT:

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

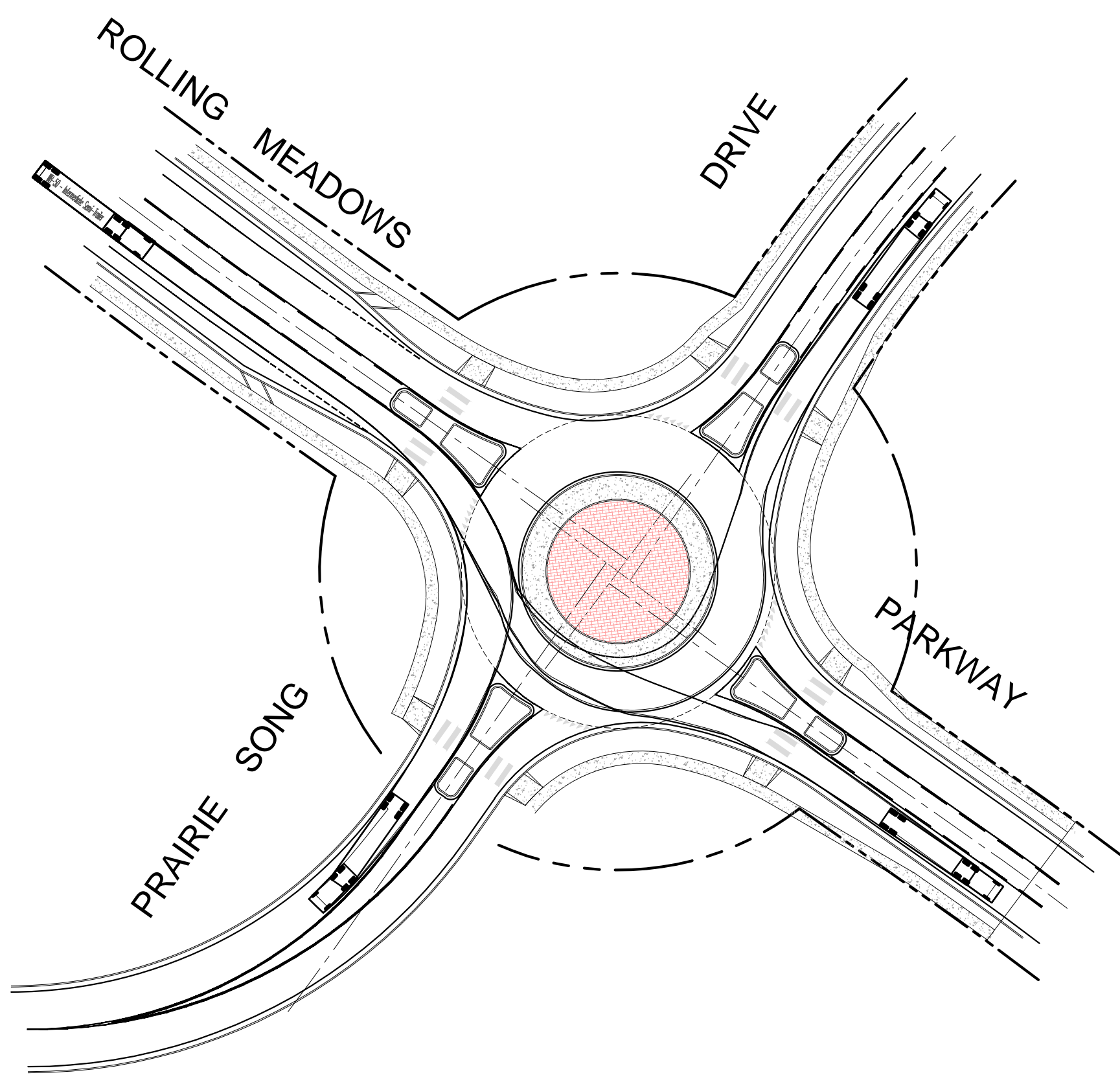
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 DRAWN BY: mjh
 CHECKED BY: mjh
 APPROVED BY: rf

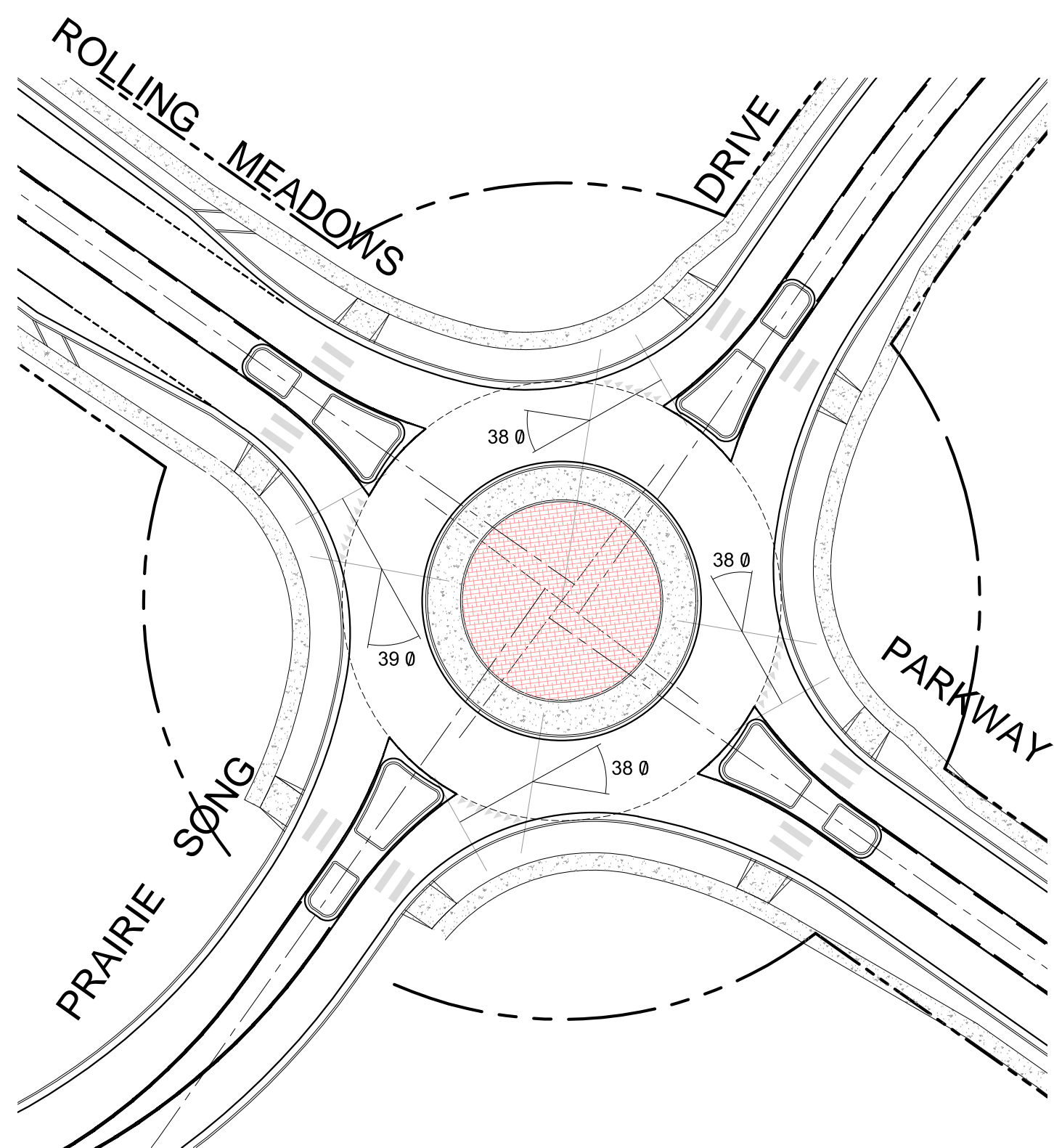
SHEET TITLE: ROUNDABOUT CONCEPT EXHIBIT

ROUNDABOUT PLAN LAYOUT

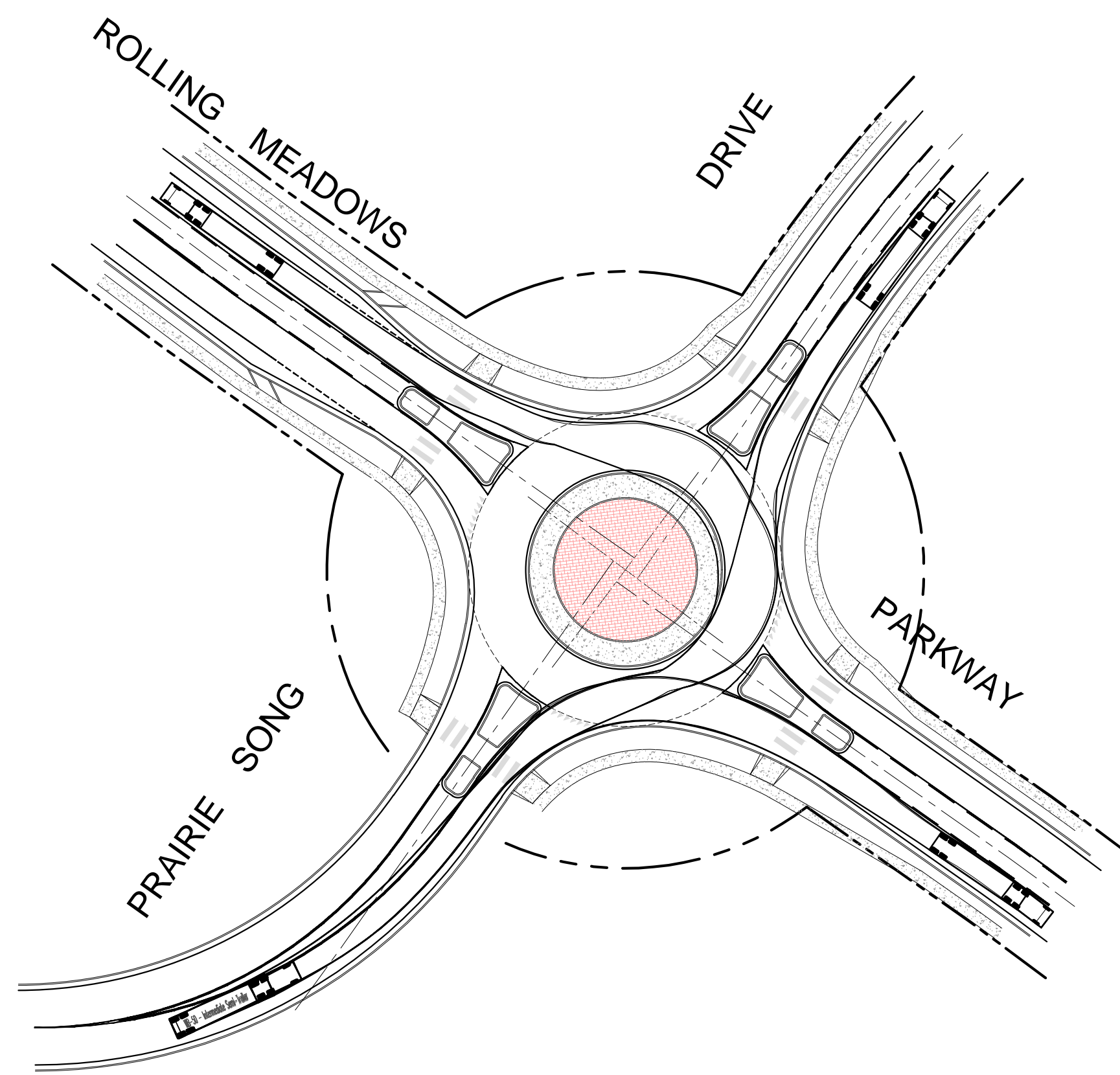
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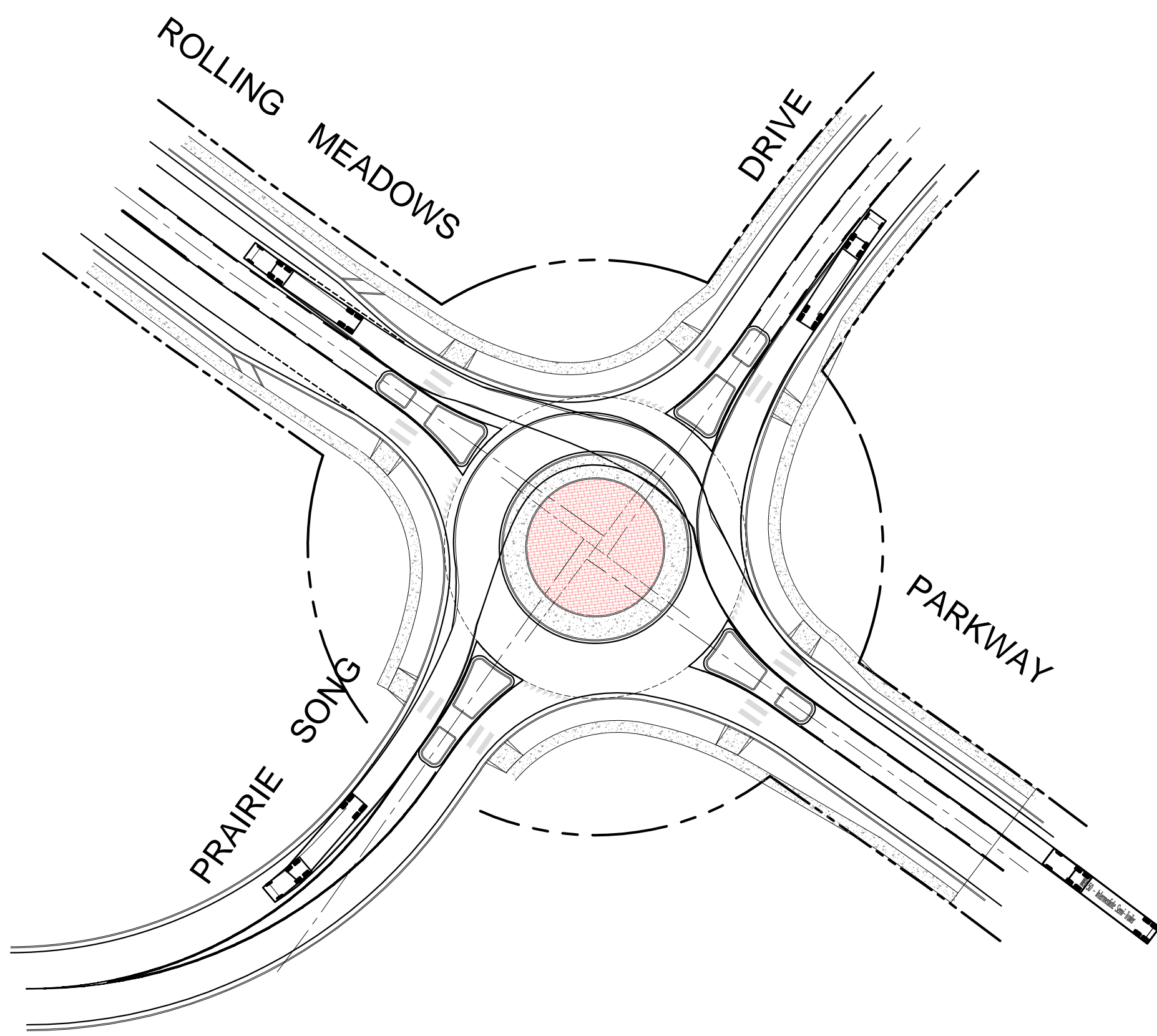
EASTBOUND
VEHICLE TRACKING PATH



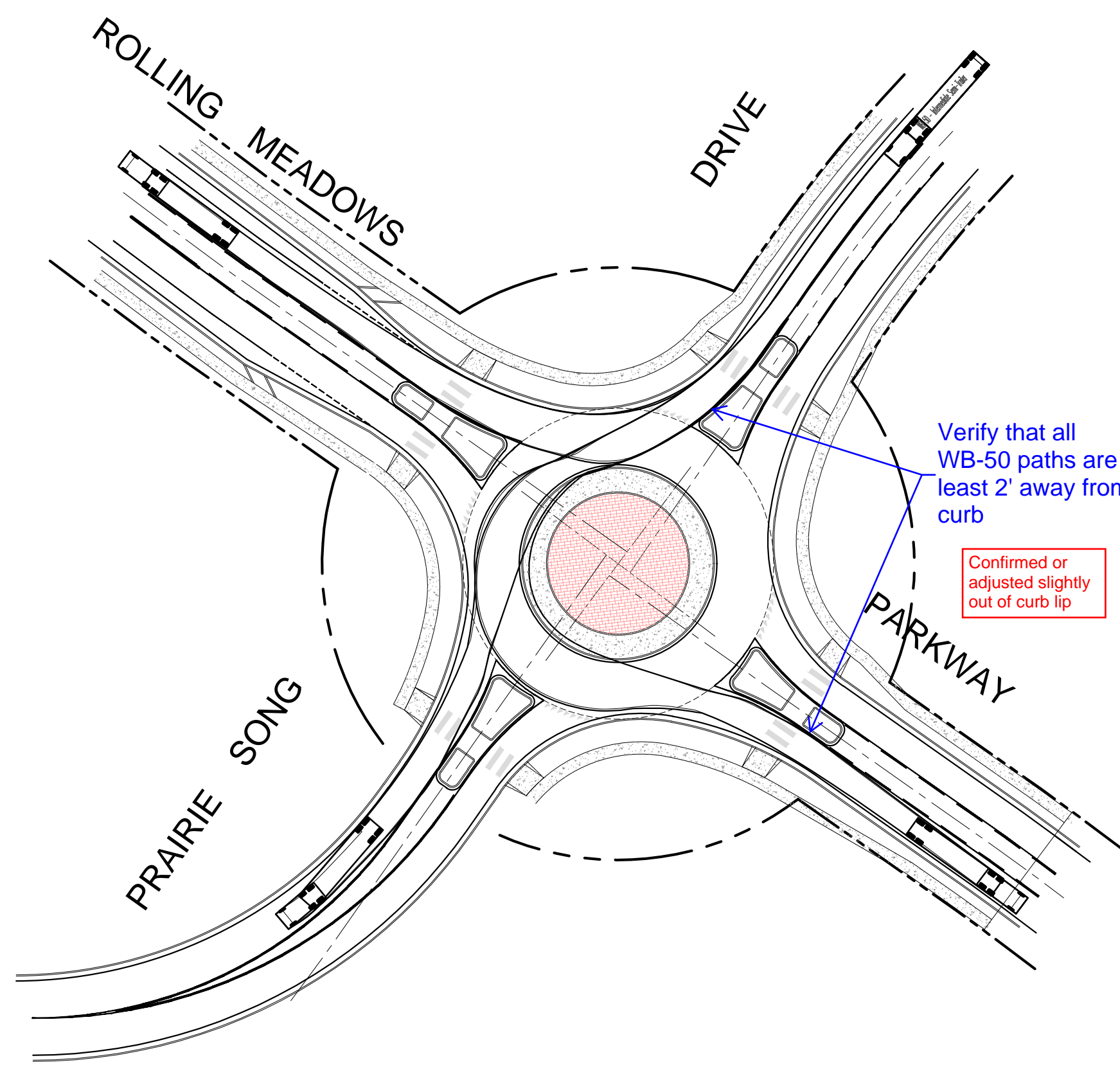
APPROACH
ANGLE DIAGRAM
SCALE: 1" = 40'



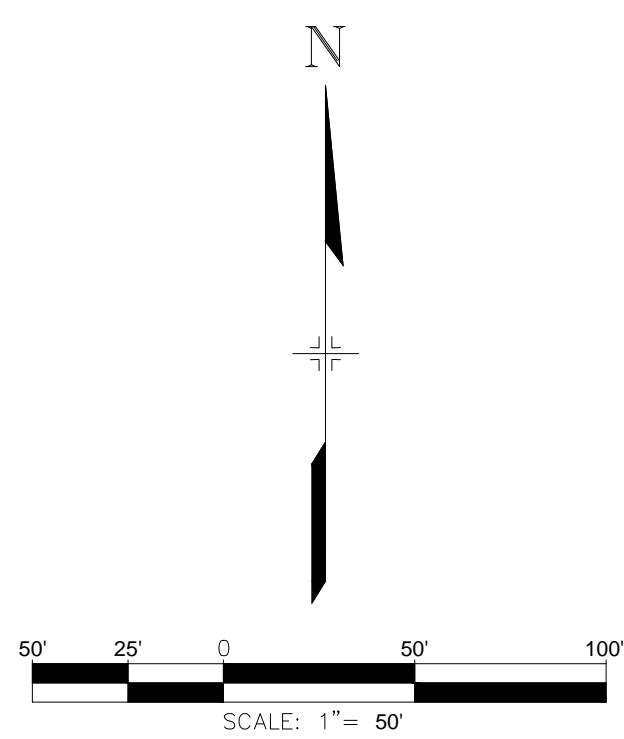
NORTHBOUND
VEHICLE TRACKING PATH



WESTBOUND
VEHICLE TRACKING PATH



SOUTHBOUND
VEHICLE TRACKING PATH



NOTE:
A WB50 VEHICLE USED FOR THIS EXHIBIT

Provide WB-67 paths also, for indication of areas of concern

A WB-67 has been added for reference and shown in eastbound/westbound movements. Per section 3.3 of the NCHRP, the design vehicle for an urban roundabout shall be a bus or single-unit truck (WB-50 used). Although the design or control vehicle for an urban roundabout is not a WB-67, and no commercial parcels are proposed passed the roundabout, we have shown the WB-67 going eastbound/westbound for reference.

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PROJECT:

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DRAWING INFORMATION:
PROJECT NO: 24.1129.029 Rolling Meadows-Bull Hill Phase-1 PUDSP
DRAWN BY: mhh
CHECKED BY: mhh
APPROVED BY: rf

SHEET TITLE: ROUNDABOUT CONCEPT EXHIBIT

VEHICLE TRACKING PATH

PCD FILE NO.:

APPROVAL:

VICINITY MAP:



PROJECT:

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DRAWN BY: mhh

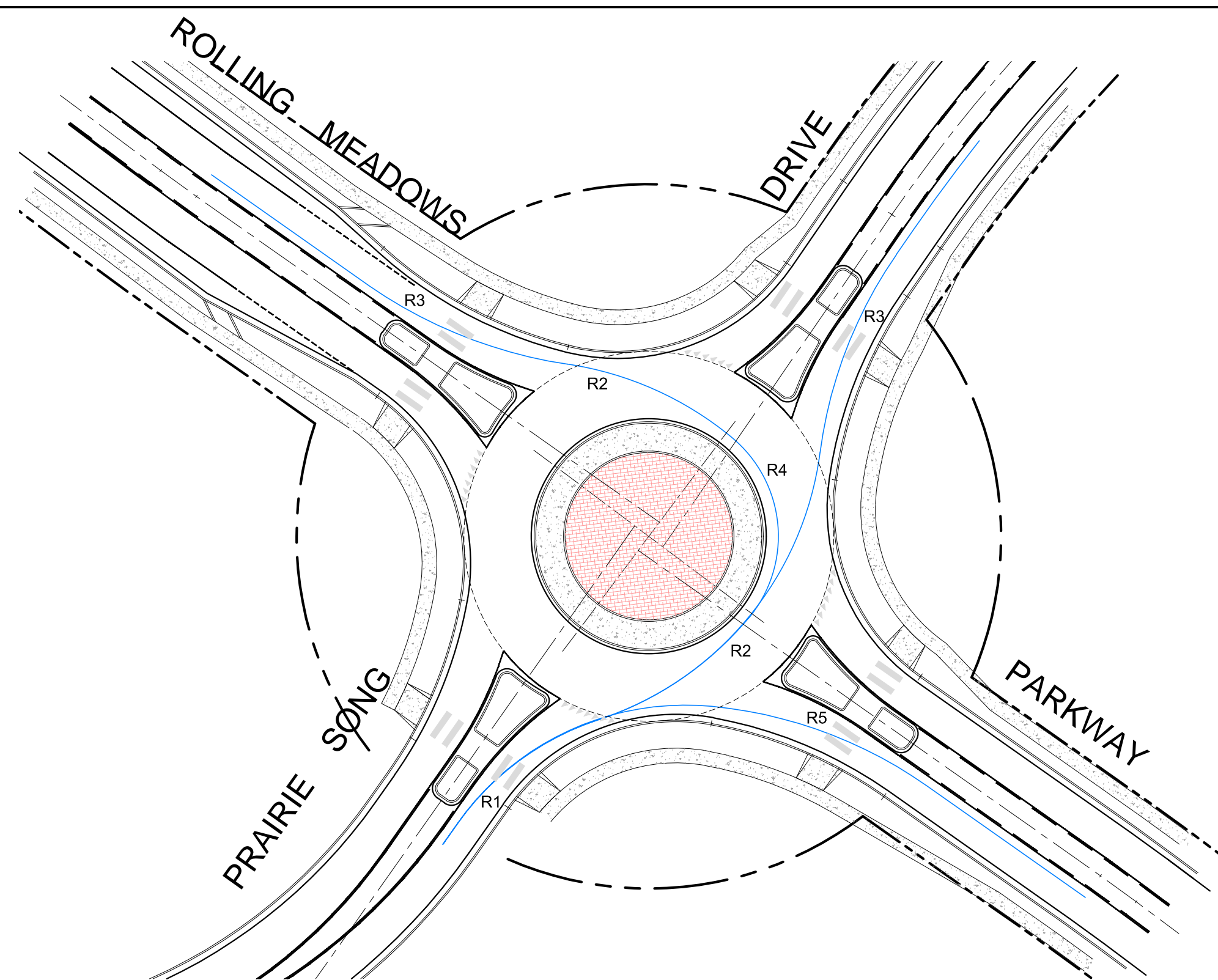
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APPROVED BY: rf

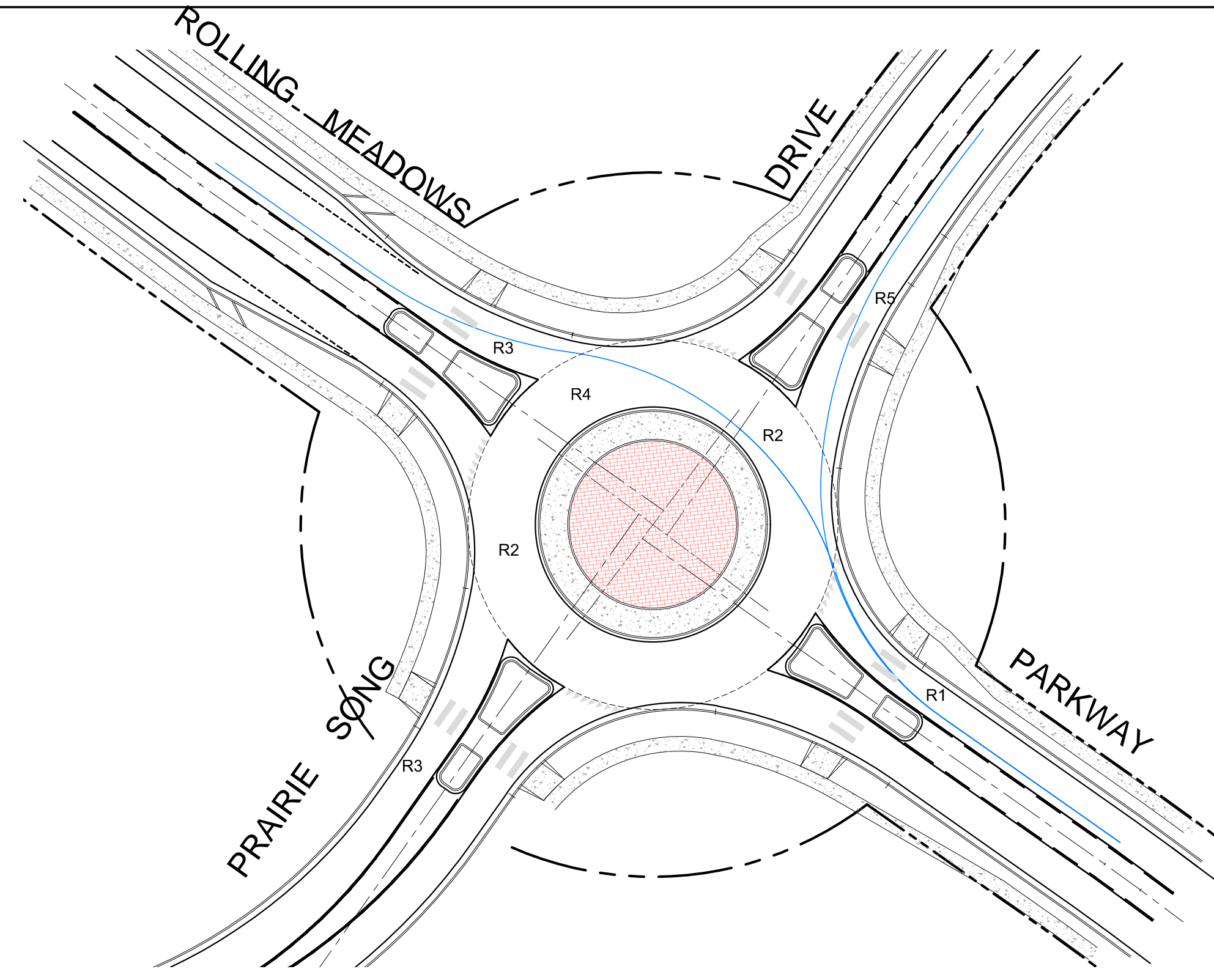
SHEET TITLE: ROUNDABOUT CONCEPT EXHIBIT

FASTEST PATH DIAGRAM

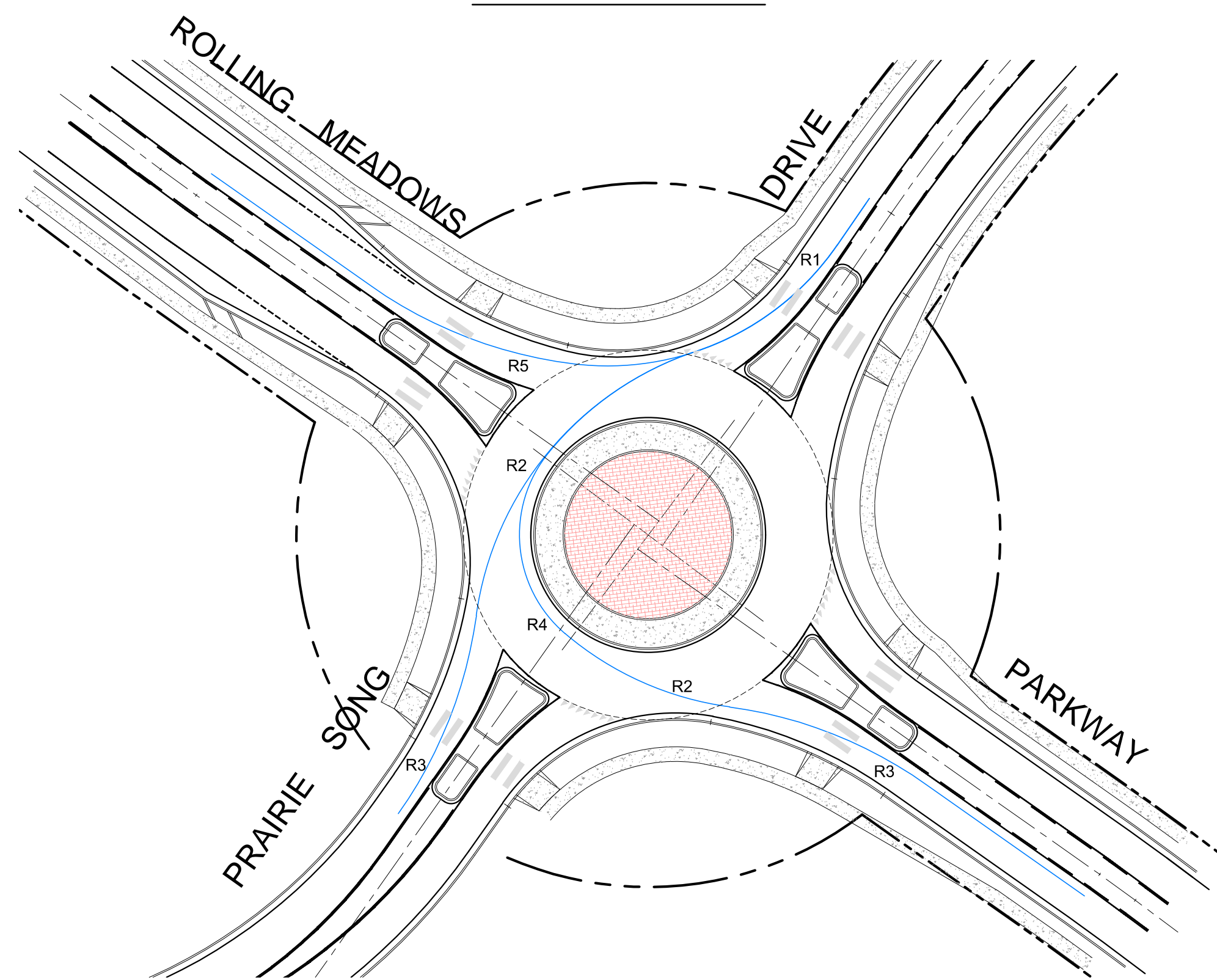
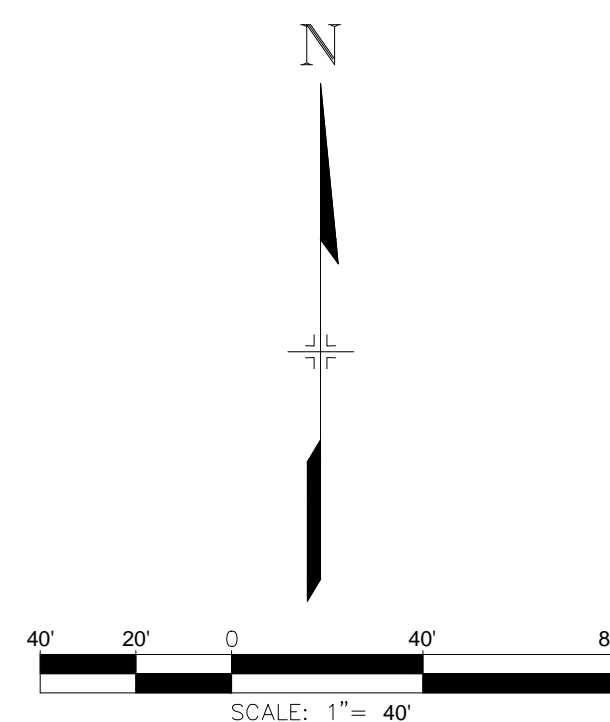
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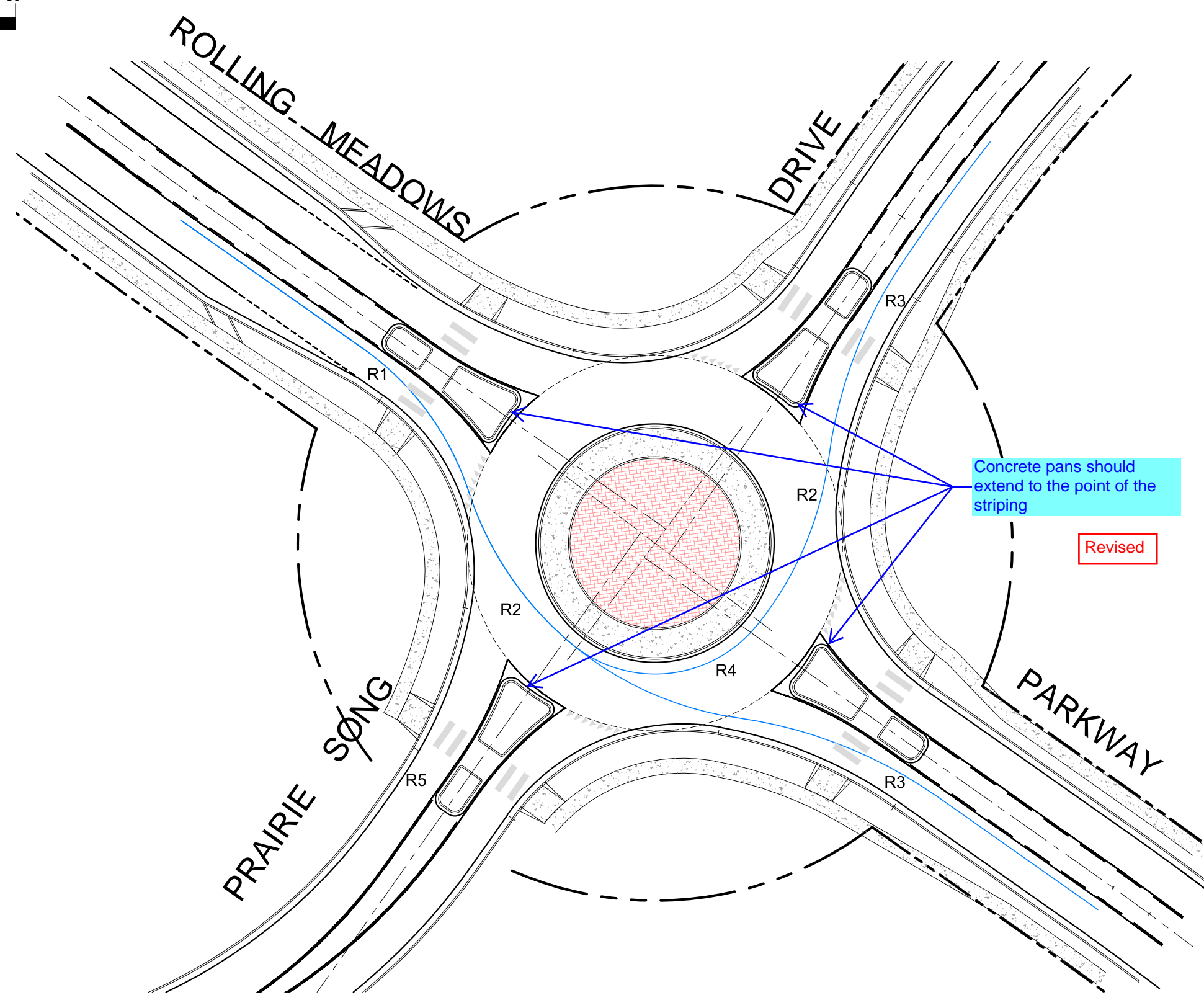
**EASTBOUND
FASTEST PATH**



**NORTHBOUND
FASTEST PATH**



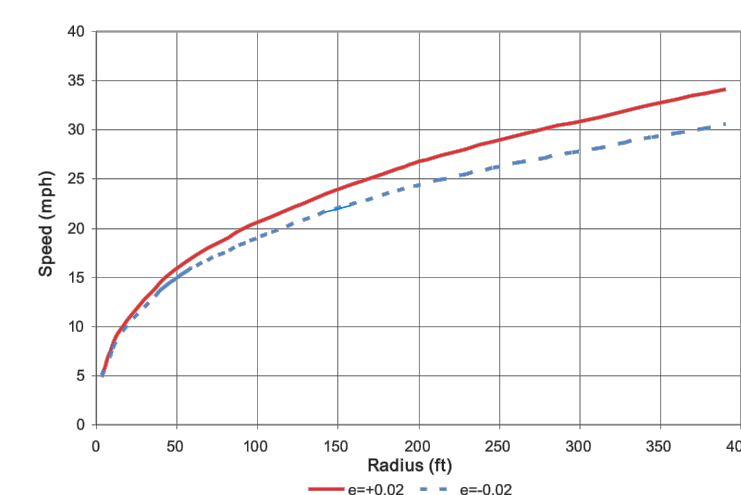
**WESTBOUND
FASTEST PATH**



**SOUTHBOUND
FASTEST PATH**

Also provide complete preliminary roundabout parameters sheet:
<https://wisconsindot.gov/rdwy/fdm/fd-11-26-att.pdf#fd11-26a5.1> (see page 5)
<https://wisconsindot.gov/rdwy/fdm/files/fd-11-26-a0902-File01.xlsx>

Added to report



SPEED RADIUS RELATIONSHIP
(Exhibit 6-11)

FASTEST PATH SUMMARY TABLE				
No.	EASTBOUND RADIUS	WESTBOUND RADIUS	SOUTHBOUND RADIUS	NORTHBOUND RADIUS
R1	95'	95'	95'	95'
R2	111'	111'	111'	111'
R3	154'	154'	154'	154'
R4	44'	44'	44'	44'
R5	152'	152'	152'	152'

FASTEST PATH SUMMARY TABLE (mph)				
No.	EASTBOUND SPEED	WESTBOUND SPEED	SOUTHBOUND SPEED	NORTHBOUND SPEED
R1	19	19	19	19
R2	22	22	22	22
R3	24	24	24	24
R4	15	15	15	15
R5	24	24	24	24