

June 5, 2024 – Utilities Commission Meeting

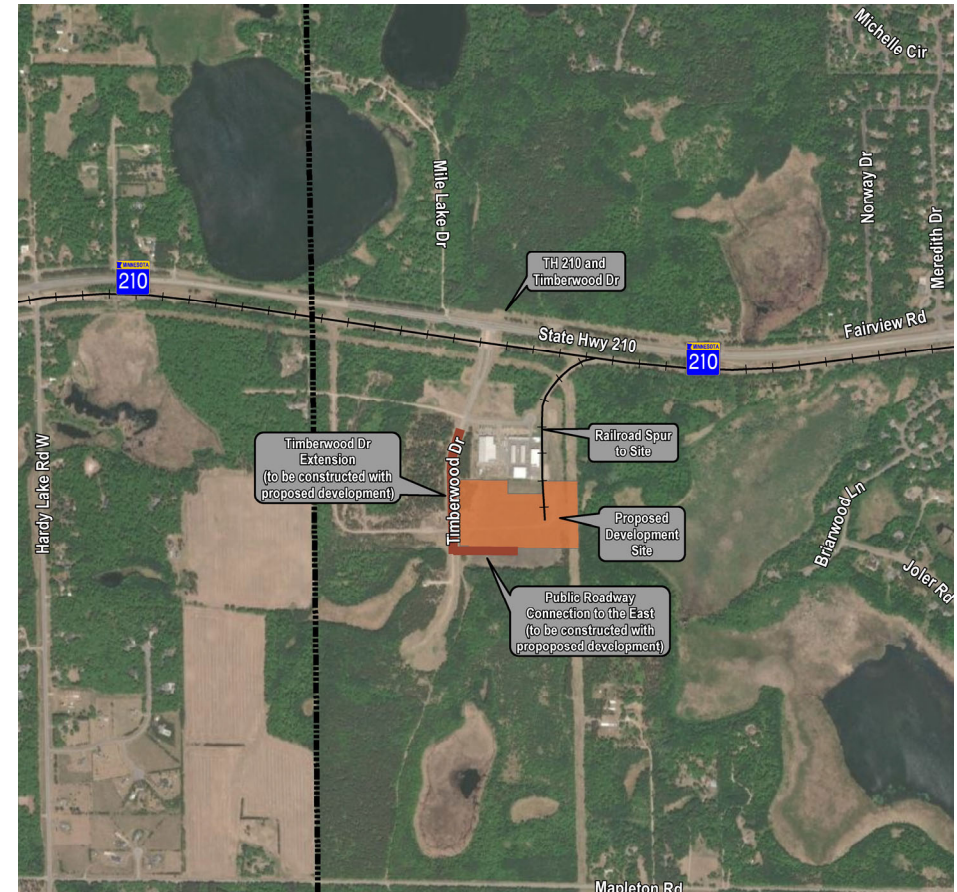
Timberwood Drive Traffic Impact Study

Baxter, MN



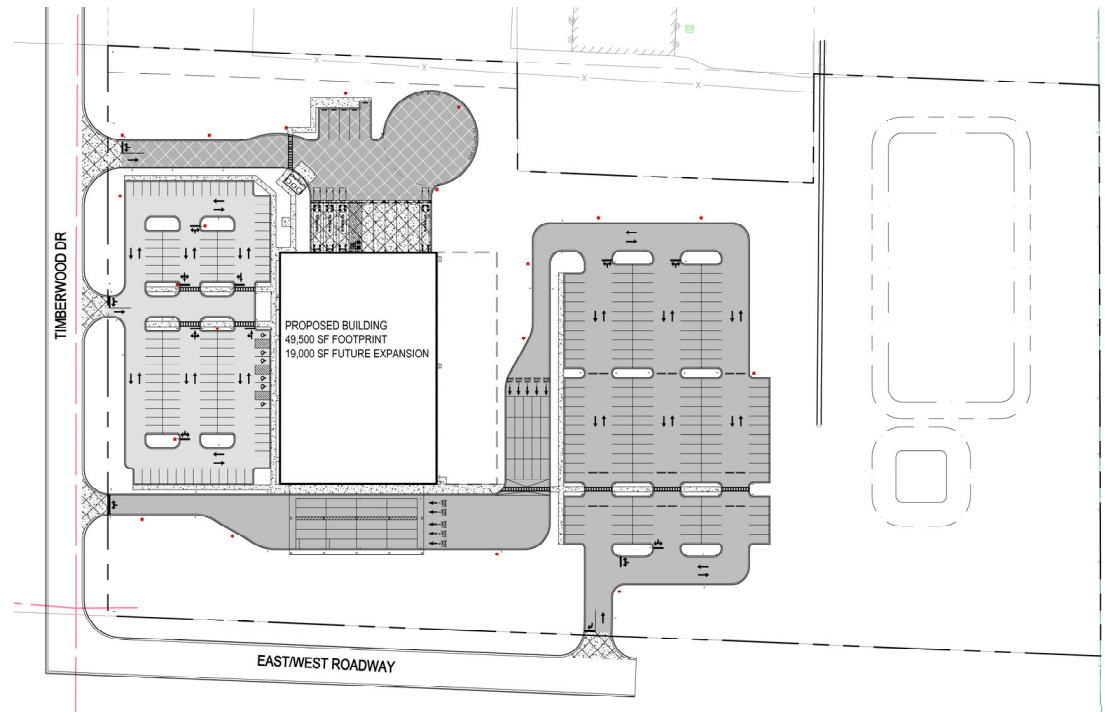
Study Area

- **TH 210 at Timberwood Drive**
 - Collected traffic counts in March 2024
 - Minor street stop controlled
 - Existing eastbound and westbound turn lanes
 - Existing northbound left and right turn lanes
 - Existing BNSF railroad crossing just south of the intersection (6 trains per day)
- **Proposed Development**
 - 49,500 SF distribution center
 - Potential for a 19,000 SF expansion
- **Roadway Extensions with Development**
 - Timberwood Dr will be extended to the southern limits of the property
 - Another east-west public roadway will be constructed along the south side of the site, which will eventually provide access further to the east



Proposed Development

- **Proposed Distribution Center**
 - 49,500 SF
 - Potential for 19,000 SF expansion
- **Estimated 760 daily trips**
 - 90 in the AM peak hour (7 to 8 AM)
 - 92 in the midday peak hour (12 to 1 PM)
 - 12 in the PM peak hour (4:15 to 5:15 PM)
 - Approximately 5% heavy trucks
 - 1,055 daily trips with expansion (approx. 39% more trips)
- **Trip generation estimates provided by the developer**
 - Based on similar sites around the country
 - Site operates in shifts, which generally avoid peak roadway hours due to site logistics and to improve efficiency for trips entering/exiting



Warrant Analysis

- **Analyzed all-way stop and traffic signal warrants under 4 scenarios**
 - 2024 Existing
 - 2025 Build Conditions
 - 2030 Build Conditions
 - 2030 Build Conditions with Site Expansion (68,500 SF total)
- **The intersection of TH 210 and Timberwood Dr does not meet all-way stop or traffic signal warrant volume thresholds for a single hour of the day under any scenario.**

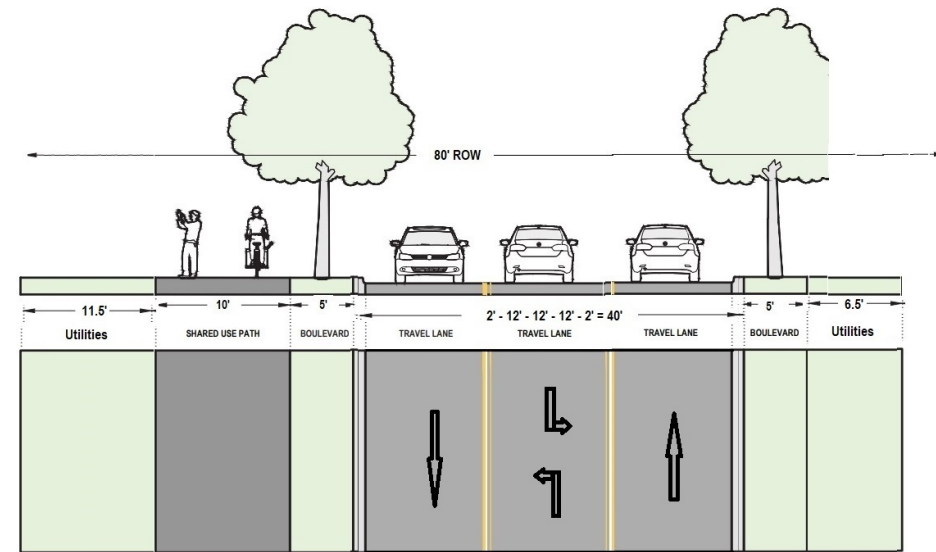
Year	All-Way Stop Warrant	Signal Warrant 1 (8-hour)	Signal Warrant 2 (4-hour)	Signal Warrant 1 (Peak Hour)
2024 Existing	Not Met	Not Met	Not Met	Not Met
	0 of 8 hours	0 of 8 hours	0 of 4 hours	0 of 1 hours
2025 Build	Not Met	Not Met	Not Met	Not Met
	0 of 8 hours	0 of 8 hours	0 of 4 hours	0 of 1 hours
2030 Build	Not Met	Not Met	Not Met	Not Met
	0 of 8 hours	0 of 8 hours	0 of 4 hours	0 of 1 hours
2030 Build w/ Expansion	Not Met	Not Met	Not Met	Not Met
	0 of 8 hours	0 of 8 hours	0 of 4 hours	0 of 1 hours

Intersection Operations

- **Analyzed 6 scenarios**
 - 2023 Existing
 - 2025 No Build Conditions
 - 2025 Build Conditions (year of opening; 49,500 SF distribution center)
 - 2030 No Build Conditions
 - 2030 Build Conditions (5 years after the year of opening ; 49,500 SF distribution center)
 - 2030 Build Conditions with distribution center expansion (68,500 SF total)
- **Under all scenarios, the intersection operates acceptably**
 - Northbound left turn – LOS D in the AM, LOS C or better otherwise
 - Northbound right turn – LOS C in the AM, LOS B or better otherwise
 - Westbound left turn – LOS A throughout the day
- **Overall, the proposed distribution center does not have a significant impact on overall traffic operations at the intersection**
 - No intersection control or geometric changes are needed at the intersection of TH 210 and Timberwood Drive.
 - Timberwood Drive and the public roadway access to the east will need to be constructed to provide access to the site.
 - No significant impacts when the site expands in the future

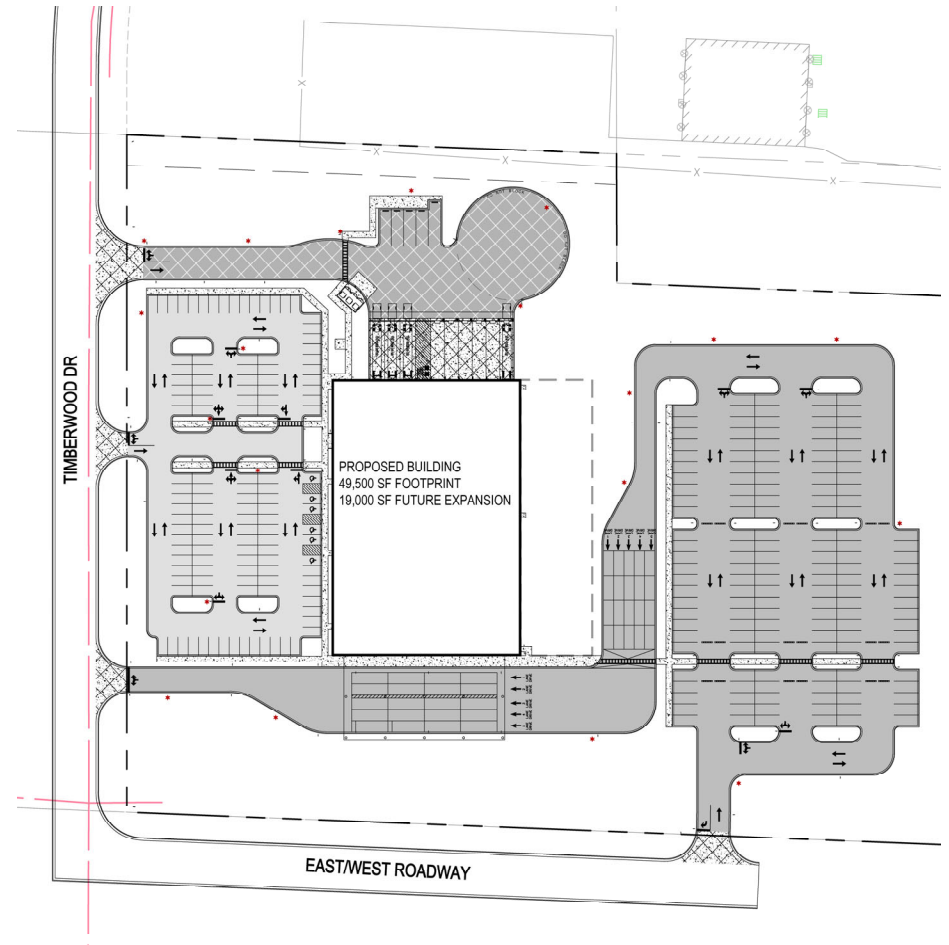
Roadway Extension Cross-Sections

- **Potential Future ADT**
 - Timberwood Drive – 8,200 to 8,900 vehicle per day
 - New public roadway – 2,000 to 2,500 vehicles per day
 - Based on land uses from the 2015 City of Baxter Comprehensive Plan
- **2020 Baxter Bicycle and Pedestrian Crossing Policy** called for a grade separated trail along Timberwood Dr and the new east-west public roadway
- **Recommended both roadways as 3-lane with a two-way center left turn lane**
 - Adequate capacity for vehicle volume long-term
 - 130' existing ROW on Timberwood Drive; offset 3-lane roadway to plan for future expansion to 4-lane
 - 80' ROW on new public roadway



Access Review

- **Four Proposed Accesses**
 - Three on Timberwood Drive
 - One on the public access roadway on the south side of the site on the new east-west public roadway
- **Proposed accesses are acceptable**
 - City Code 10-5-2(D) requires driveways to be 100 feet from each other and 100 feet from intersections
 - Accesses on Timberwood Drive are all at least 175 feet from each other or intersections
 - Access on the new east-west public roadway is approximately 600 feet from Timberwood Drive



Questions/Comments?