NDSU | UPPER GREAT PLAINS TRANSPORTATION INSTITUTE
ADVANCED TRAFFIC ANALYSIS CENTER

Langdon Walkability Assessment 2022

Final Report

January 2023

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Cavalier County Health District
Langdon, ND

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INTRODUCTION

A community is considered walkable if it is easy as well as safe for pedestrians to walk for recreation, exercise, and to school, stores, parks, the post office, etc. Additionally, a walkable community encourages safe use of existing infrastructure while expanding transportation options for users with varied ranges of mobility. This report documents a walkability assessment of Langdon, ND, as completed in 2022 by Upper Great Plains Transportation Institute (UGPTI). The goal of this assessment is to bring all stakeholders together to identify the problems facing the community of Langdon when it comes to walking in the area.

SITE SELECTION

At the request of the Cavalier County Health District, UGPTI's Advanced Traffic Analysis Center (ATAC) assessed an approximately one-mile-long loop of roadway, sidewalks and crosswalks along and near ND Highway 5 in Langdon. The loop included roadways with access to the walk-in clinic, hospital, grocery stores, convenience stores, restaurants, hotel, cemetery, etc. The loop presents an opportunity for users to walk/run a mile. Figure 1 shows a map of the loop.

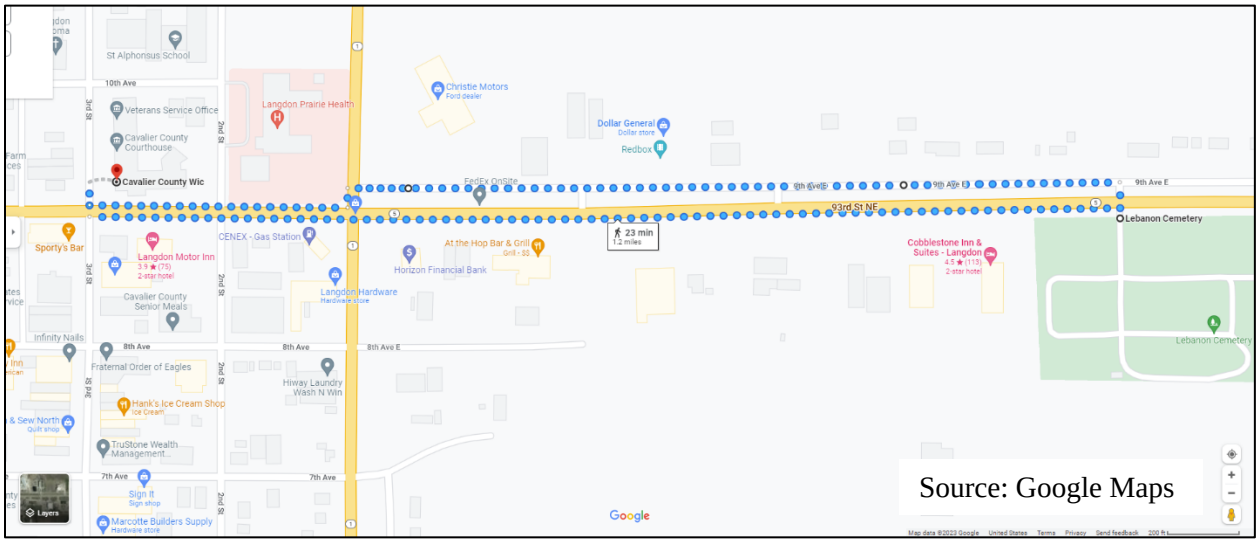

Figure 1. Assessment route map

ASSESSMENT TOOL

ATAC staff used the Walkability Checklist from www.nhtsa.gov as an assessment tool. A brief training prior to the site visit/assessment included background information regarding the checklist and detailed information regarding the rating scale used in the assessment. The checklist includes the following main questions:

1. Did you have room to walk?
2. Was it easy to cross streets?
3. Did drivers behave well?
4. Was it easy to follow safety rules?
5. Was your walk pleasant?

Each of these questions includes a rating from 1 to 6 categorized as below:

1. Awful
2. Many Problems
3. Some Problems
4. Good
5. Very Good
6. Excellent

The corresponding total ratings add up to a range of 5-30 as classified below:

1. 26 – 30 Celebrate! You have a great neighborhood for walking.
2. 21 – 25 Celebrate a little. Your neighborhood is pretty good.
3. 16 – 20 Okay, but it needs work.
4. 11 – 15 It needs a lot of work. You deserve better than that.
5. 5 – 10 It's a disaster for walking!

SITE VISIT/ASSESSMENT

ATAC staff completed the training, site visit, and assessment on August 25, 2022. The assessment began at the Cavalier County Courthouse building and continued around the one-mile loop. The checklists were completed following the assessment. Participants also provided written comments. The comments covered issues including both those identified during the assessment and those observed at other times of the year.

OBSERVATIONS

Cavalier County officials and several community members participated in the training as well as the assessment and provided valuable comments. Participants varied widely in age and in levels of fitness and daily walking habits. Figure 2 shows participants receiving pre-assessment training from ATAC staff.

Figure 2. Assessment participants receiving training from ATAC staff

As figure 3 shows, the assessment started outside of the Cavalier County Courthouse building on Third Street.

Figure 3. Beginning of the assessment outside of the Cavalier County Courthouse building

At several locations, as seen in Figure 4, the pedestrian related infrastructure was found to be in a general state of disrepair. Cracked concrete, exposed aggregates, and worn out crosswalk/pavement markings were observed.

Figure 4. Ramps, sidewalk and crosswalk at Third Street across ND Highway 5

At several locations, as seen in Figure 5, the sidewalks/crosswalks were never installed. The participants are seen walking through parking lots instead.

Figure 5. Missing ramps, crosswalk and sidewalk along ND Highway 5

Participants are seen crossing ND Highway 1 at a driveway across from Ninth Avenue East (frontage road) instead of at ND Highway 5 because of a lack of sidewalks/crosswalks, as seen in Figure 6.

Figure 6. Pedestrians crossing ND Highway 1 at Ninth Avenue East

There is no sidewalk along ND Highway 5 on the north side of the street as it passes through Langdon, as seen in Figure 7.

Figure 7. A view of the northwest quadrant and the southbound leg of the intersection of ND Highway 1 and ND Highway 5

The participants continued the assessment along the frontage road, walking in travel lanes opposing the traffic because of the lack of sidewalk facilities along Ninth Avenue East, as seen in Figure 8.

Figure 8. Participants walking on Ninth Avenue East

Throughout the assessment, drivers were observed to be courteous toward pedestrians, as seen in Figure 9.

Figure 9. Courteous behavior of drivers in the area

A lot of debris, mud and road hazards were observed especially along ND Highway 5 during the assessment as participants continued the walk facing traffic along the south side of the road as seen in figures 10 and 11.

Figure 10. Participants continuing assessment along south side of ND Highway 5

Most of the debris was observed on the shoulder where a pedestrian/bicyclist may be using the roadway.

Figure 11. Debris and mud along the south side shoulder of ND Highway 5

Figure 12. Participants helping in picking up metal debris from the shoulder

Participants, at times, were observed picking up debris from the roadway. As seen in Figure 12, the debris picked up included metal that could be dangerous for all types of road users. As seen in Figure 13, a puddle of water was observed at the southeast quadrant of the intersection of ND Highway 1 and ND Highway 5. Participants reported that no rain had been received.

Figure 13. Puddled water at the southeast quadrant of the intersection of ND Highway 1 & ND Highway 5

Due to the lack of crosswalk/sidewalk, the participants were observed scattered across the south side of ND Highway 5 while crossing ND Highway 1 as seen in Figure 14.

Figure 14. Lack of crosswalk/sidewalk on the south side of ND Highway 5 at ND Highway 1

Figure 15. Sidewalk along the south side of ND Highway 5

As seen in Figure 15, in some locations along the south side of ND Highway 5, the differences among greenspace/furnishing zone, pedestrian zone, and frontage zone/parking lot were not apparent.

Figure 16. Guide sign obstructing the sidewalk

Figure 17. Route sign and utility pole obstructing sidewalk

In some locations along the south side of ND Highway 5, guide signs and utility poles were observed obstructing the sidewalk as seen in figures 16 and 17, forcing pedestrians off of the sidewalk and otherwise posing splinter- and creosote-related dangers.

Figure 18. Debris strewn across ramp and potentially hazardous grate

Figure 19. Debris and weeds on the sidewalk

In some locations, truncated domes in curb ramps and the sidewalk were strewn with gravel, debris, and weeds as seen in figures 18 and 19. Also, at the same location, an almost parallel storm water grate was observed.

Along Third Street, sidewalk displacements, likely due to frost heaving, were observed presenting potential tripping hazards as shown in Figure 20.

Figure 20. Sidewalk displacement along Third Street

ASSESSMENT RESULTS

A total of 16 checklists were completed during this assessment. Based on the compiled results, participants rated their walk and the infrastructure at about an average of 21 as seen in Figure 21 below. As seen in Figure 22, the two most frequently reported problems were:

1. Needed striped crosswalk or traffic signal
2. No sidewalk, paths, or shoulder

These reports and other results highlight the lack of pedestrian-related infrastructure along most of the assessed loop. The assessment results also show that most of participants agree that the infrastructure is in need of work (see Figure 23).

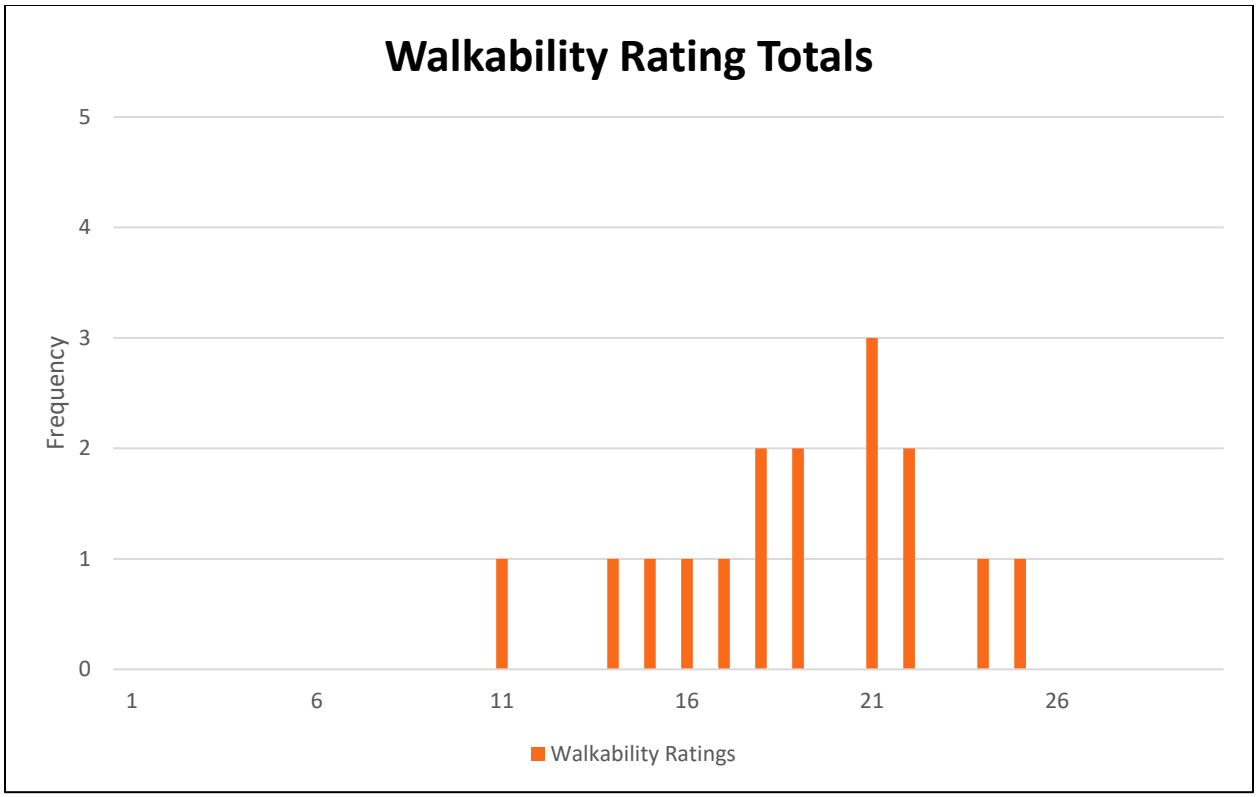

Figure 21. Walkability ratings totals chart

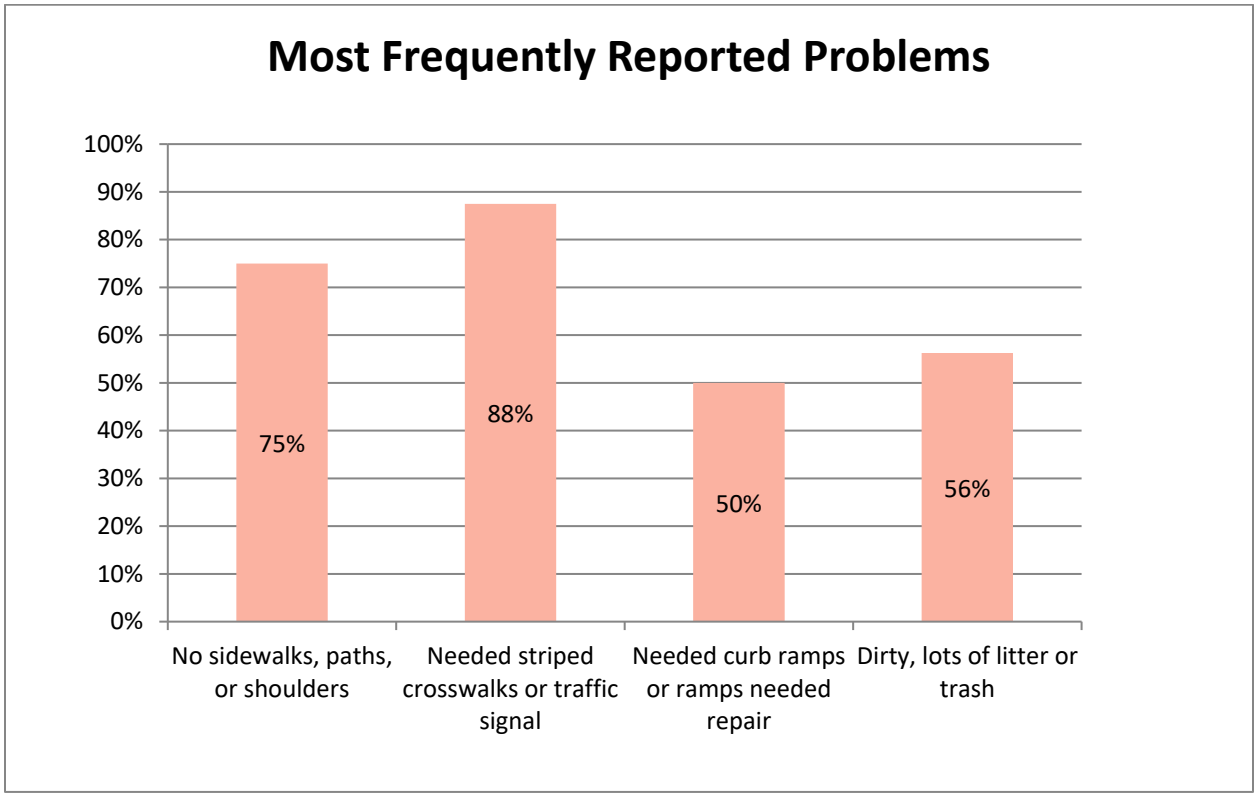

Figure 22. Most frequently reported problems chart

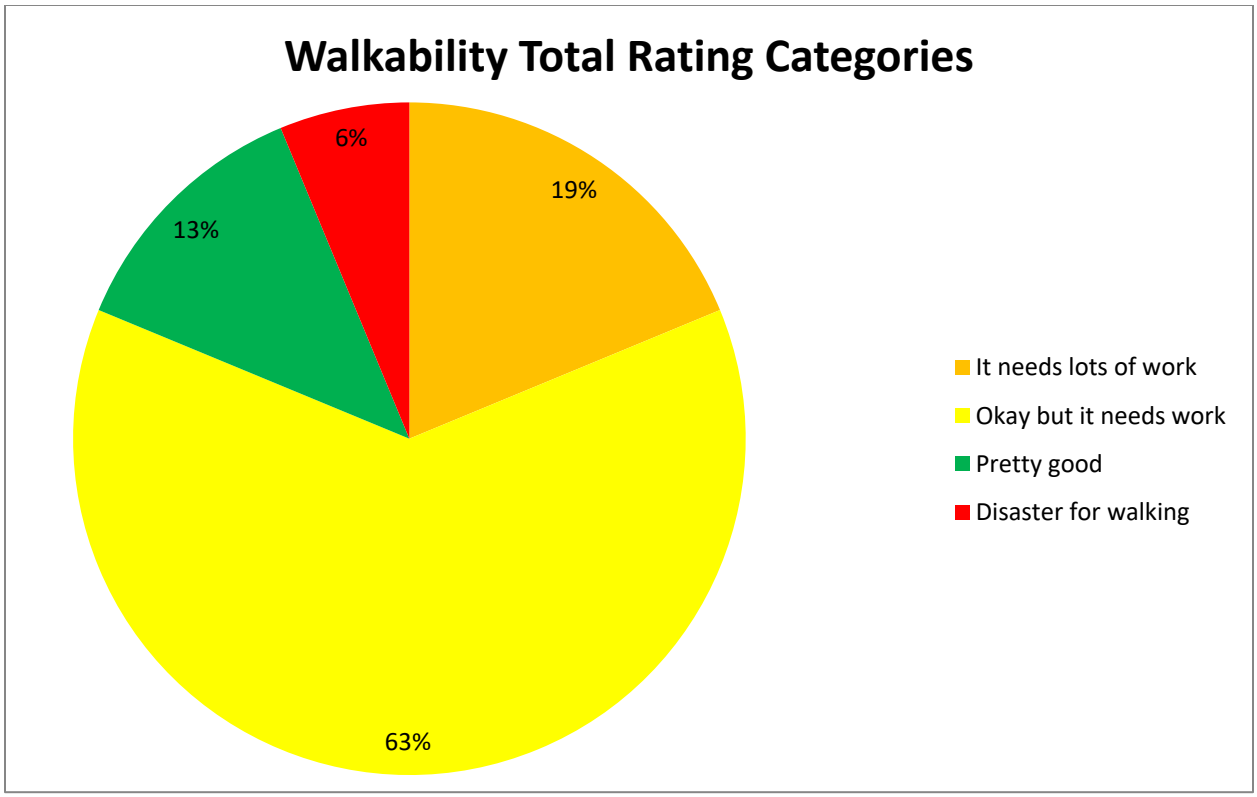

Figure 23. Walkability total ratings categories chart

RECOMMENDATIONS

Based on the observations, assessment results, and participant comments, ATAC has the following recommendations.

Build/Repair

Sections of the sidewalks that are in poor condition should be rebuilt to current standards. New facilities should be installed in locations where missing. In doing so, special attention needs to be paid to state highways. Although outside of town, these highways provide high-speed connectivity over long distances but within built-up albeit rural areas, the same highways need to accommodate access to businesses and other functions for all users including non-motorized users.

It would likely be beneficial to complete several smaller related work items at the same time, including:

- Repair of ramps and displaced sidewalks
- Pavement/crosswalk marking updates/maintenance
- Sign post relocation
- Ensuring clear demarcation of various zones within the right-of-way

Relocate Utility Pole

Obstructive utility poles should be relocated to provide a clear pedestrian zone for non-motorized users. In this case close collaboration between transportation agencies and electric service providers would be paramount.

Slope/Drainage Review

Slope and drainage at the intersection of ND Highway 1 and ND Highway 5 should be reviewed to ensure that puddling of water as observed is not a frequent issue. Apart from being a nuisance, such issues may pose safety concerns especially during the winter, when it may lead to icy conditions.

Other nearby areas should also be assessed to ensure that grates for storm water drainage are such that they are not parallel to the direction of travel for bicyclists.

Needs Assessment

As and when traffic volume grows, a needs assessment should be completed to determine if a traffic signal is warranted at the intersection of ND Highway 1 and ND Highway 5. Also, a needs assessment should be completed to determine if a midblock crosswalk is warranted along ND Highway 5, especially where such a crosswalk would connect high-pedestrian-demand locations such as where grocery shops are across the highway from residential areas.

Maintenance

A review of current maintenance practices should be completed to see if additional litter removal needs to be scheduled for state highways through the City of Langdon. Road users should be highly discouraged from tracking mud and debris onto the paved lanes and shoulder, thereby reducing road hazards.

Adopt-A-Highway

Concerned citizens from the area should consider participating in the North Dakota Department of Transportation’s Adopt-A-Highway program thereby reducing litter/road hazards and saving taxpayers’ dollars.

REFERENCES

Walkability Checklist. (n.d.). Retrieved August 1, 2022, from https://www.nhtsa.gov/sites/nhtsa.gov/files/walkingchecklist.pdf