NDSU | UPPER GREAT PLAINS TRANSPORTATION INSTITUTE
ADVANCED TRAFFIC ANALYSIS CENTER

Fort Totten Walkability Assessment

Final Report

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Prepared for:
Spirit Lake Nation
Fort Totten, ND

Prepared by:
Advanced Traffic Analysis Center
Upper Great Plains Transportation Institute
North Dakota State University
Fargo, North Dakota

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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, 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 the Spirit Lake Nation as completed 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 Fort Totten when it comes to walking in the area.

SITE SELECTION

At the request of the Spirit Lake Nation, UGPTI's Advanced Traffic Analysis Center (ATAC) assessed an approximately three-mile-long loop of sidewalks and crosswalks in Fort Totten. The loop includes access to the high school, health services center, and several tribal offices. Figure 1 shows a map of the loop. Dotted lines indicate locations without a sidewalk/crosswalk.

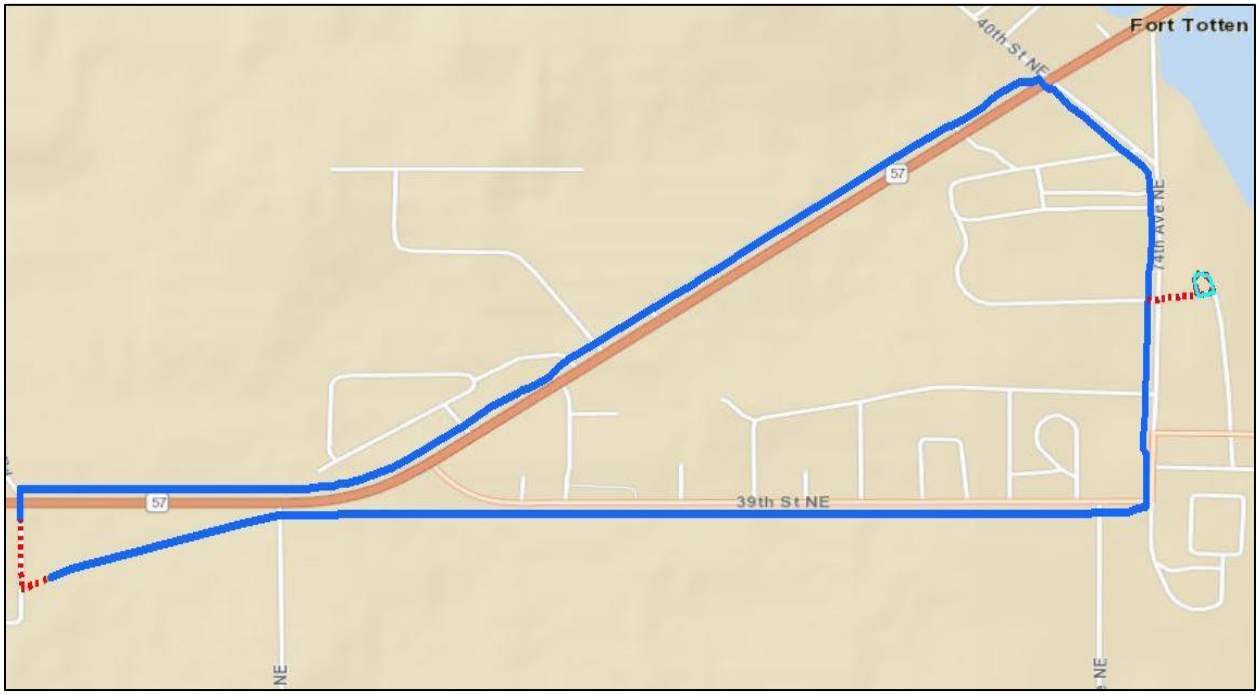


Figure 1. Assessment route map

ASSESSMENT TOOL

ATAC staff used the Walkability Checklist from www.pedbikeinfo.org 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 November 26th, 2019. The assessment began at the Spirit Lake Tribal Planning office and continued around the 3-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

The assessment team observed several people walking on the sidewalk, apparently on their regular lunchtime strolls. Several Spirit Lake Nation officials and community members participated in the training as well as the assessment and provided valuable comments. The loop presents a convenient opportunity for users to walk/run a 5K.

The team observed an overgrowth of trees and shrubs along the sidewalks. The overgrowth encroached upon the walkable areas of the sidewalk as can be seen in Figure 2. Note that the assessment was completed during the fall. During spring, summer and early fall, the overhanging branches can be expected to drop further and encroach on the sidewalk even more. This overgrowth is not only as a sidewalk-constricting nuisance, but is a hazard with the potential of injuring the sidewalk users, especially during low-light hours of the day.



Figure 2. Overhanging trees along ND57

At several locations, as can be seen in Figure 3, the sidewalk had deteriorated, leading to the substantial loss of the wearing course and allowing the subgrade to surface. In these locations, the sidewalk had the appearance of a gravel path. Such conditions, especially during wet weather, are not conducive to walking or running. The issue is particularly precarious for those using wheelchairs and strollers.



Figure 3. Discontinuity in sidewalk

At some locations, as seen in Figure 4, ramps connecting the sidewalk to the crosswalk were missing. They appear to have never been constructed.



Figure 4. Missing ramp near Four Winds High School

At several locations, as seen in Figure 5, the sidewalk was icy.



Figure 5. Slippery road condition

At multiple locations, signs were missing, graffiti-covered or otherwise vandalized as can be seen figures 6 and 7.



Figure 6. Damaged bike route sign



Figure 7. Sign post missing sign

The team observed pet dogs unleashed in the vicinity of the apparent owner's house. This creates an uninviting walking environment that is further exacerbated by a lack of lighting at night or during low-light hours.



Figure 8. Unleashed pet dog

In some places, puddles of water were on the sidewalk. The area under water in Figure 9 appears to have been damaged/cracked. Also, note the missing sign on the post to the right.



Figure 9. Puddle of water on damaged sidewalk

At other locations, most of the walking surface had weathered and weeds were seen growing where the sidewalk used to be.



Figure 10. Weathered sidewalk and weeds

At some locations, landings were missing next to the pedestrian push buttons as can be seen in Figures 11 and 12. At such locations, it can be very difficult to reach the push button especially for children and other vulnerable members of the community. The landings appear to have never been built.



Figure 11. A location missing landing for the pedestrian push button



Figure 12. Another location with missing landing for pedestrian push button

At several locations, the team found the sidewalk to be discontinuous, especially across driveways. Another location of discontinuity was where the sidewalk led into a parking lot and the difference in the parking lot and the sidewalk was not discernible.



Figure 13. Discontinuous sidewalk



Figure 14. Different top layers used for sidewalk

In some locations, different top layers (asphalt and concrete) were observed on the sidewalk. A mix of materials as seen in Figure 14 may present challenges for repair and maintenance.

ASSESSMENT RESULTS

On an average, participants rated their walk and the infrastructure at about 15 as seen in figures below. The assessment results also show that most of participants agree that the infrastructure is in need of a lot of work.

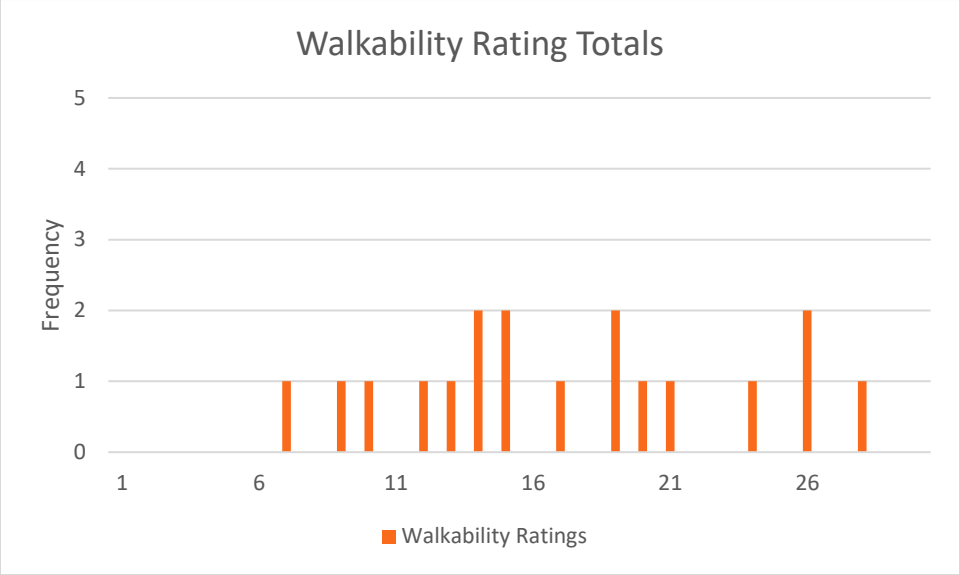


Figure 15. Walkability ratings totals chart

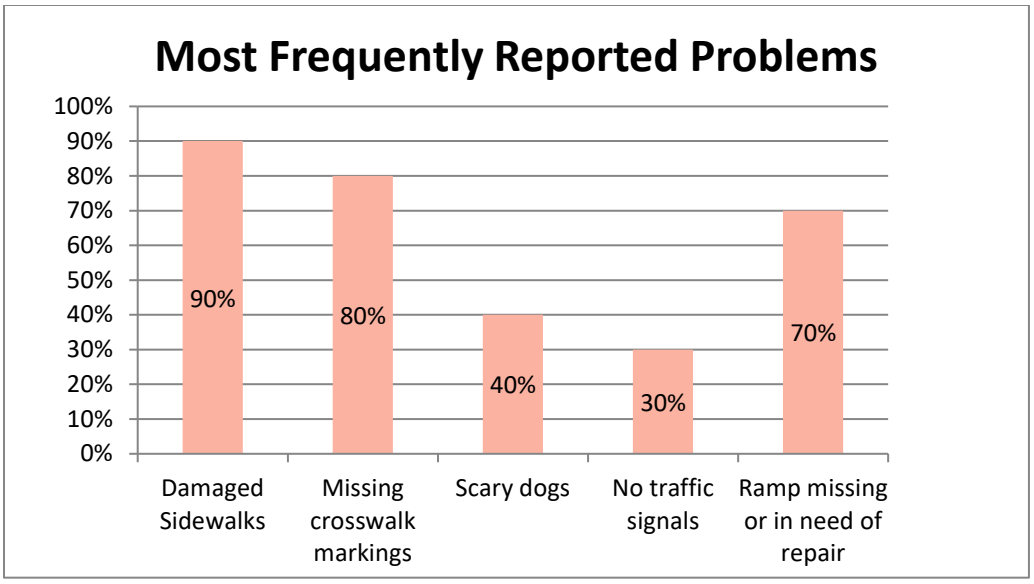


Figure 16. Most frequently reported problems chart

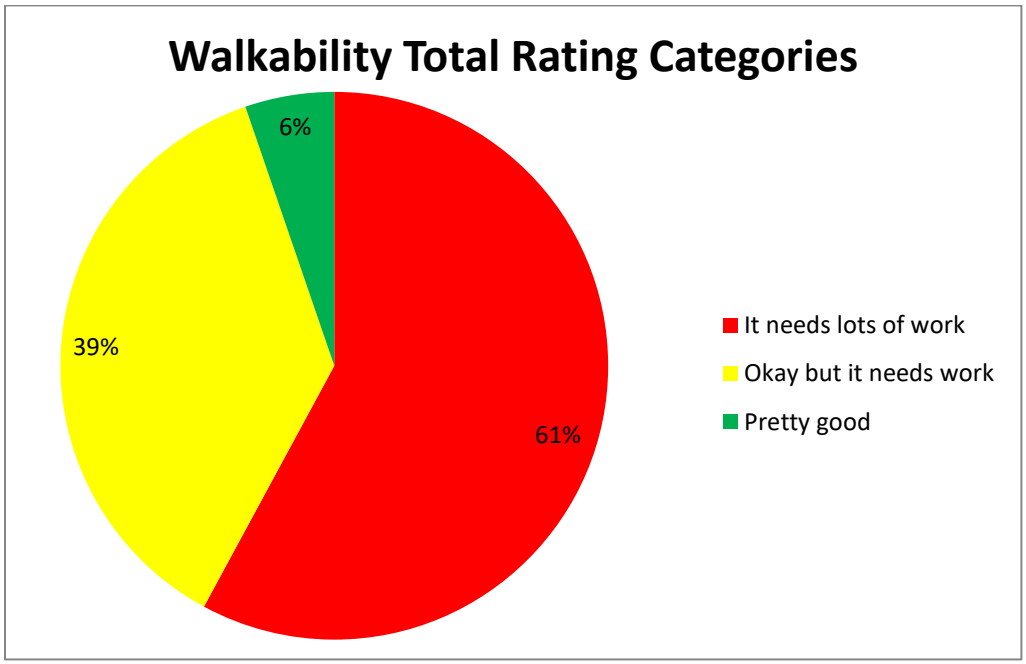


Figure 17. Walkability total ratings categories chart

RECOMMENDATIONS

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

REBUILD

Sections of the sidewalks that are in poor condition should be rebuilt to current standards. In doing so, there be no discontinuities across driveways or along parking lots. It would likely be beneficial to complete several smaller related work items at the same time, including:

- installation of missing ramps
- pavement marking updates
- missing sign installation
- damaged sign replacement

LIGHTING

Lighting along the sidewalks should be reviewed, especially at locations where the sidewalk is offset by a large distance from the roadway. Additional lighting is necessary to make the sidewalk safe for users.

NEEDS ASSESSMENT

A needs assessment should be completed to determine if a traffic signal is warranted along any of the locations. The needs assessment should include items such as potential alternatives and countermeasures to ensure that all field equipment and installations are up to current standards and guidelines.

MAINTENANCE

A review of maintenance practices should be completed. In addition to using plows, brushing of snow away from the walking surface should be considered. De-icing and traction improvement strategies should be instituted to maintain sidewalks and shared-use paths in safe walking conditions. Other considerations include regular maintenance of nearby trees/shrubbery and weed control. Trash receptacles could be installed at regular intervals along the entire path to encourage users to keep the area clear of any garbage.

PET ORDINANCE

A local ordinance be considered to assure that pets that many assessment participants considered scary (e.g. unleased pets) are kept away from the walking area at all times unless leashed.

REFERENCES

Walkability Checklist. (n.d.). Retrieved August 1, 2016, from http://www.pedbikeinfo.org/cms/downloads/walkability_checklist.pdf

APPENDIX

Comments

1. Did you have room to walk?
    - Areas the path fills with water, trash, and snow
    - Overhanging trees (Along HWY 57 by four winds high school)
    - There are no pathway after Ryan's hill
    - No sidewalks
    - No ramps on 1 sidewalk
2. Was it easy to cross streets?
    - Needed striped crosswalks at every intersection
    - Ramp needed N of ND57
    - Curve blocked visibility near rec center
    - Need more curb ramps – only a few were found on walk
    - Speed bumps for traffic
    - Some roads in poor condition to walk and no sidewalks
3. Did drivers behave well?
    - Did not see many drivers while on walk
    - No yield to pedestrian signs
    - Drivers drove too past
4. Was it easy to follow safety rules?
    - Cross walks not marked well
    - No street lights
    - Need more crosswalks
5. Was your walk pleasant?
    - Scary dogs
    - Ice on the path
    - Overhanging trees
    - Dirty, lots of trash
    - Would like to see more lights on sidewalks