NORTH DUSABLE LAKE SHORE DRIVE STUDY SPOTLIGHT

LEVEL 3 SCREENING SAFETY

Level 3 Screening Criteria: Results

February 2023

The North DuSable Lake Shore Drive (NDLSD) Phase I Study is currently evaluating the five remaining NDLSD Build Alternatives ("Level 3 Screening"). As part of this evaluation, nearly 30 different criteria are being considered, including Performance, Social, Economic and Environmental factors. The project team has separated criteria into two categories: 1) Distinguishing criteria contain results that vary amongst alternatives, and 2) Non-distinguishing criteria contain results that are the same or similar amongst alternatives. This Study Spotlight addresses several non-distinguishing Level 3 Screening criteria associated with each of the remaining alternatives under consideration, including traffic safety and user experience for people walking and bicycling in the study area, as well as traffic safety for people driving along the Outer Drive. For additional details regarding the overall Phase I Study, please visit the project website at northdusablelakeshoredrive.org.

TRAFFIC SAFETY FOR PEOPLE WALKING AND BICYCLING

All of the five remaining alternatives propose improvements to the Lakefront Trail, including separated trails for people walking and bicycling and grade separated access (i.e. underpasses or bridges) at junctions. Improved existing east-west access points as well as new proposed access points will provide access every ¼ mile throughout the study area (as called for in the Lakefront Protection Ordinance). Several existing east-west access locations within the project limits do not currently comply with Americans with Disabilities Act (ADA) requirements; all improved and new access points will meet these standards. Each of these improvements to the Lakefront Trail are common among all alternatives and intended to improve access and circulation to, from, and within Lincoln Park for people walking and bicycling.

These improvements also provide traffic safety benefits for people walking and bicycling. Separated trails will enhance safety by providing dedicated facilities for users travelling at varying speeds, such as higher-speed bicyclists on bike trails, runners and walkers on pedestrian trails, and casual visitors strolling along lakefront promenades. Grade separated facilities at junctions will also eliminate conflicts that currently exist between pedestrians, bicyclists, and motorists where paths cross.

The proposed Lakefront Trail and access point design concepts are the same or similar for all of the remaining alternatives; therefore, ***the traffic safety benefits for people walking and bicycling are the same across each of the remaining alternatives***.

Typical Lakefront Trail Improvements

USER EXPERIENCE FOR PEOPLE WALKING AND BICYCLING

As noted above, all of the remaining alternatives propose access improvements for people walking and bicycling to, from, and within Lincoln Park. One design technique that will be used improve access is to reduce the overall size of junction, where possible, to both decrease crossing distances for people walking and bicycling as well as increase usable green space within Lincoln Park. Although it will not be possible to decrease the total crossing distance at all access points for people walking and bicycling, every access location will feature increased vertical clearances and wider pathways to enhance user comfort, circulation, and safety. Comparative renderings at the Buena Avenue underpass illustrate these improvements:

Existing

Proposed

TRAFFIC SAFETY FOR PEOPLE DRIVING ALONG THE OUTER DRIVE

As part of Level 3 Screening, a comparative analysis of safety benefits along the mainline Outer Drive near the Fullerton Parkway Junction was completed using the Highway Safety Manual (HSM) quantitative tool. The analysis assessed the relative differences in predicted crashes between the No Action and remaining alternatives. The HSM tool considers inputs such as traffic volumes, horizontal and vertical geometry, weaving zones at ramps, and cross section elements such as number of lanes, lane widths, clear zones, and distances to inside and outside barriers. With these values, the HSM tool generates an estimate of how many crashes will occur in the analyzed section using statistical models developed for similar roadway types.

Common safety improvements are proposed for all remaining alternatives, including consistent 11-foot lane widths, increased distances to median and roadside barriers, and the addition of clear zones along the outer edges of mainline NDLSD. Clear zones are typically a dedicated space beyond a roadway's limits that is clear of obstructions. Clear zones have also been referred to as "safety setback" areas throughout this project.

The analysis also considered the varying ramp configurations of the alternatives, including the presence of outside and center median ramps. The Addition, Exchange, Flex, and Double Flex alternatives all propose center median ramps for buses and/or tolled vehicles to enter dedicated lane(s) on the Outer Drive. The Addition and Exchange alternatives propose a dedicated bus-only lane in each direction along the Drive, and therefore, restrict auto users from entering these lanes. The relative comparison of results for the Outer Drive safety analysis is to the right.

As shown in the table, all of the remaining alternatives reduce predicted total crashes, including all injury crash types, compared to the No Action. The Essential provides the relative best safety improvement by minimizing the number of ramp weaving/mixing zones, along with the other safety improvements common to all alternatives. The Flex and Double Flex alternatives result in the same predicted number of crashes, as there is no statistical difference in safety associated with the number of dedicated managed lanes. The Flex and Double Flex alternatives also show the greatest reductions in all injury crashes across the remaining alternatives. The Exchange has the relative least predicted safety benefit, due to the restricted capacity of three lanes for general purpose traffic, as contrasted with the other alternatives that allow general vehicular access to four lanes along much of the Outer Drive.

Alternative	% Change in Predicted Crashes Compared to No Action			
	Fatal and Serious Injury Crashes	Other Injury Crashes	Property Damage Only Crashes	Total Crashes
The Essential	**-21%**	**-23%**	**-16%**	**-18%**
The Addition	**-19%**	**-22%**	**-13%**	**-16%**
The Exchange	**-15%**	**-18%**	**0%**	**-5%**
The Flex / Double Flex	**-26%**	**-24%**	**-1%**	**-16%**

NEXT STEPS

The NDLSD project will continue to advance through Level 3 Screening, which will conclude with the selection of a preferred alternative. Following the preferred alternative determination, additional design and details related to the configuration of park features will be completed and coordinated with the Chicago Park District. These detailed designs will also consider recommendations resulting from the Summer 2022 online survey and Public Life Study activities.

Additional safety analyses will also be completed for the preferred alternative to more fully document the expected safety benefits of the NDLSD project for all users.