**This template is intended to be used to develop Purpose and Need Statements for Categorical Exclusion (CE) levels of environmental documentation. While not required by regulation, NDOT often prepares Purpose and Need Statements to be used in conjunction with Project Descriptions and Project Details as transportation projects are developed, including asset preservation and modernization projects.**

**The intent of the Purpose and Need Statement is to present the purpose of the project and to provide data to support the need for the project. The Purpose and Need Statement is often used as a project development tool, except when otherwise required, e.g. CE-3.**

*Instructions: Green text represents, notes, guidance, or examples to aid with the completion of this document. The green text shall be deleted from the draft or final versions of this document. Black text represents standard statements used for particular types of work or situations. Adjust or remove standard statements or add statements as needed.*

**Purpose & Need**

The purpose of this project is to preserve the transportation asset, improve the reliability of the transportation system and perpetuate the mobility of the traveling public. *(The given purpose statement may not be appropriate for every project. If it is a safety project, remove “preserve the transportation asset” and replace with:* “reduce the frequency and severity of crashes”. *Modify this statement as needed for your project. If both situations exist, address both the preservation and crash reduction. May need to add or delete info.)*

*The needs described in this document do not necessarily comprise every type of need that could exist on the project. This document focuses on describing the primary needs that warrant the creation of the project, typically, but not limited to, roadway surfacing and bridge work.*

The need for pavement work on this project is based on information from the NDOT’s Pavement Management System, Materials & Research Pavement Design section, and District \_ *(If safety project,* The need for this project is based on information from the Strategic Safety Infrastructure Projects Team, Traffic Engineering Division and District \_).  These entities have determined that the pavement distresses present on this section of (Hwy) are significant enough to warrant rehabilitation or reconstruction.

*(IF PREVENTATIVE MAINTENANCE, use the following…)* The need for this project is based on information from the NDOT’s Pavement Management System, Materials & Research Pavement Design section and District \_.  These entities have determined that pavement preservation activities are required on this segment of (Hwy) in order to extend the life of the pavement.

 *(If JOINT SEAL, M&R has sent the following Need…)* This project is needed to retard infiltration of moisture into the existing pavement, resulting in premature deterioration of the pavement, base and subgrade.

The existing asphalt is \_\_ years old, and will be \_\_ years old at the time of construction, and therefore at or beyond the end of its anticipated service life. The asphalt on this segment is currently rutted between \_\_ mm and \_\_ mm. In the most recent five years, an average of $\_\_\_\_ per lane per mile has been spent annually on maintenance activities, including patching, armor coating, and shoulder maintenance. The existing roadway has large areas of patching and wide, depressed thermal cracks. The existing concrete pavement is experiencing Alkali Silica Reaction and joint deterioration as a result.  The pavement must be resurfaced to eliminate further infiltration of water, one of three necessary components for continued reaction and deterioration. This project will address pavement on (Hwy) with a Nebraska Serviceability Index (NSI)[[1]](#footnote-1) of \_\_ and a Present Serviceability Index (PSI)[[2]](#footnote-2) of \_\_. Other metrics to consider: Cracking Index[[3]](#footnote-3), Thermal Cracking Index[[4]](#footnote-4), International Roughness Index (IRI)[[5]](#footnote-5). *(Note: If pavement metrics do not contribute to the need of the project, do not include them.)*

*If recent maintenance projects or regular projects are “masking” the true condition of the pavement, this should be stated. For example, in above history description, the 2009 micro-surfacing could give false indication of rutting depth, PSI or NSI. Review condition history to see how it was prior to maintenance.*

The existing shoulders do not meet minimum design standards for surfaced shoulder width. *Add this statement to be consistent with our discussion on bridge clear roadway width when the MDS is driving the need and not the pavement determination. Unwarranted 28’ top construction must have a need associated with the work. (Unwarranted 28’ tops include those locations that do not require a 28’ top by minimum design standards or the Needs Study criteria for alternate routes AND are not using a recycle strategy to accomplish the widening.) A need statement is not required when the pavement determination is driving the work.*

The need for bridge work on this project is based on information from the NDOT’s Bridge Inventory Rating System, Bridge Division, and District \_.

*If bridge work is being performed, must provide need statement for work. Many bridges are receiving approach slab work, turndowns, grade beams, etc. The statement below may be used to substantiate a need in the absence of any better information:*

*Examples:*

*Bridge Replacement or Rehabilitation:* The Structure will be insert age years old at the time of construction and requires replacement/rehabilitation. The proposed work will help achieve the State and National performance targets as outlined in NDOT’s Draft Transportation Asset Management Plan.

*For Information only: The performance targets include:*

* *No more than 10% of the total deck area of bridges in the state on the National Highway System (NHS) is located on bridges that have been classified as structurally deficient.*
* *Maintain 95% of bridges on the State system and NHS in good or fair condition.*

*Bridge Widening:* This structure shall be widened to meet current Nebraska Minimum Design Standards, Title 428 of the Nebraska Administrative Code.

*Maintenance Activities, Deck Patching & Overlay, Replace Expansion Joints, Re-modeling Buttress:* The condition of this bridge makes it a candidate for preventative maintenance activities. The proposed work is in accordance with NDOT’s approved bridge preservation program.

*Replacing or Installing Approaches and other Maintenance Activities such as Deck Patching & Overlay, Replace Expansion Joints, Re-modeling Buttress:* The condition of this bridge makes it a candidate for preventative maintenance activities and for the restoration of a suitable riding surface. The proposed work is in accordance with NDOT’s approved bridge preservation program.

1. NSI is a pavement condition index used to gauge the overall health of a pavement section.  It is a calculated numerical value based on pavement distresses such as transverse, wheel path, and longitudinal cracking.  Its value ranges on a scale of 0 to 100, with 0 being “very poor” condition and 100 being “very good” condition. [↑](#footnote-ref-1)
2. PSI is a pavement condition index related to ride quality.  The PSI is a function of pavement roughness, cracking, faulting, and rutting.  Its value ranges on a scale of 0 to 5, with 0 being “very poor” condition and 5 being “very good” condition. [↑](#footnote-ref-2)
3. The Cracking Index is a rating value used to qualify the amount of cracking based on the severity and extent noted during a visual inspection, with 0 being “good” and anything over 50 being “poor”. [↑](#footnote-ref-3)
4. The Transverse/Thermal Cracking Index is expressed as an index on a scale of 0 to 100 with 0 being the best condition and 100 the worst. The index reflects the severity and extent of transverse cracking on a bituminous pavement. [↑](#footnote-ref-4)
5. The International Roughness Index (IRI) measures the smoothness of a pavement section in mm/m. The smaller the number, the smoother the pavement is, with 0 being “very good” and anything greater than 4.22 being “very poor”. [↑](#footnote-ref-5)